Model SH-MF1 Machine Code: M052/M053/M054 Field Service Manual

Safety Notices

Important Safety Notices

Prevention of Physical Injury

- 1. Before disassembling or assembling parts of the machine and peripherals, make sure that the machine power cord is unplugged.
- 2. The wall outlet should be near the machine and easily accessible.
- 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 machine 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 machine starts operation.
- 5. The inside and the metal parts of the fusing unit become extremely hot while the machine is operating. Be careful to avoid touching those components with your bare hands.

Health Safety Conditions

Toner is non-toxic, but if you get either of them in your eyes by accident, it may cause temporary eye discomfort. Try to remove with eye drops or flush with water as first aid. If unsuccessful, get medical attention.

Observance of Electrical Safety Standards

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

- 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.

MARNING

 To prevent a fire or explosion, keep the machine away from flammable liquids, gases, and aerosols. A fire or an explosion might occur.

Lithium Batteries

Incorrect replacement of lithium battery(s) on the FCU, controller board and memory board unit may pose risk of explosion. Replace only with the same type or with an equivalent type recommended by the manufacturer. Discard used batteries in accordance with the manufacturer's instructions.

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.

MWARNING

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:





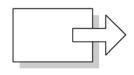


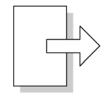
3b_laser

Symbols and Abbreviations

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

10	See or Refer to	
ℰ℧	Clip ring	
©	E-ring	
P	Screw	
	Connector	
Sign and the sign	Clamp	
SEF	Short Edge Feed	
LEF	Long Edge Feed	
-	Core Technology manual	





Short Edge Feed (SEF)

Long Edge Feed (LEF)

Cautions, Notes, etc.

The following headings provide special information:

MARNING

• Failure to obey warning information could result in serious injury or death.

ACAUTION

• Obey these guidelines to ensure safe operation and prevent minor injuries.



• This information provides tips and advice about how to best service the machine.

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1. Product Information

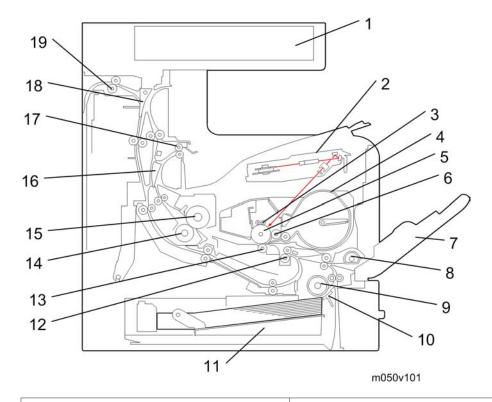
Specifications

See "Appendices" for the following information:

- General Specifications
- Supported Paper Sizes

1

Mechanical Component Layout

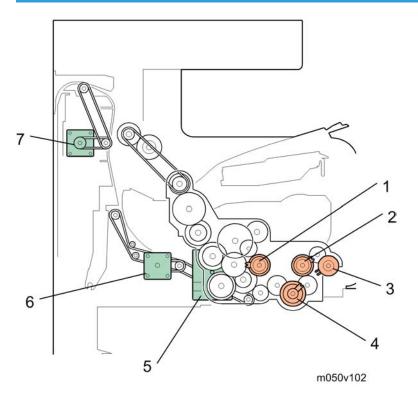


- 1. Scanner unit
- 2. Laser unit
- 3. Charge roller
- 4. Cartridge (AIO-type)
- 5. Drum
- 6. Development roller
- 7. By-pass feed tray
- 8. By-pass feed roller
- 9. Paper feed roller

- 10. Friction pad
- 11. Paper tray
- 12. Registration roller
- 13. Transfer roller
- 14. Pressure roller
- 15. Hot roller
- 16. Junction gate 1*1
- 17. Paper exit roller*2
- 18. Junction gate 2*3
- 19. Inverter roller
- *1: Junction gate 1 is not movable for the finisher model (M054).

- *2: Paper exit roller is not used for the finisher model (MO54).
- *3: Junction gate 2 is not movable for the standard model (M052).

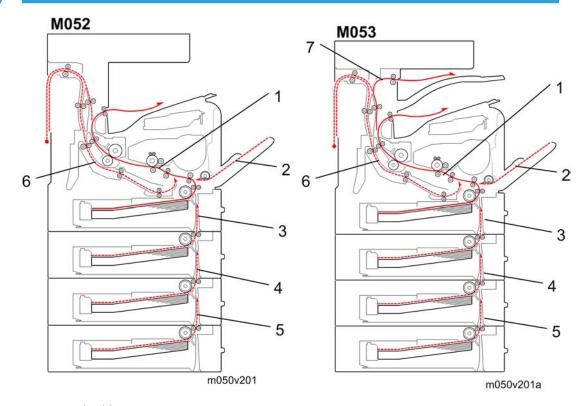
Drive Layout



- 1. Registration clutch
- 2. Relay clutch
- 3. By-pass clutch
- 4. Paper feed clutch
- 5. Main motor
- 6. Duplex motor
- 7. Inverter motor

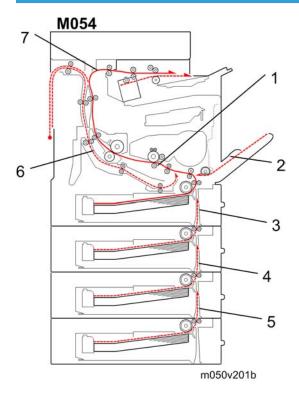
Paper Path

Standard Model (M052)/ Fax and 1 Bin Tray Unit Model (M053)



- 1. Paper feed from tray 1
- 2. Paper feed from by-pass tray
- 3. Paper feed from optional PFU (tray2)
- 4. Paper feed from optional PFU (tray3)
- 5. Paper feed from optional PFU (tray4)
- 6. Paper feed through duplex unit
- 7. Paper exit to 1 bin tray (M053 only)

Finisher Model (M054)

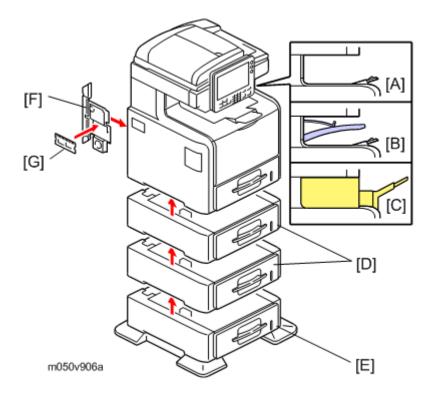


- 1. Paper feed from tray 1
- 2. Paper feed from by-pass tray
- 3. Paper feed from optional PFU (tray2)
- 4. Paper feed from optional PFU (tray3)
- 5. Paper feed from optional PFU (tray4)
- 6. Paper feed through duplex unit
- 7. Paper exit to internal finisher (M054 only)

Machine Configuration

Machine Configuration

	M052	M053	M054
Fax Unit	Option	Standard	Option
1 Bin Tray Unit	Not available	Standard	Not available
Internal Finisher	Not available	Not available	Standard

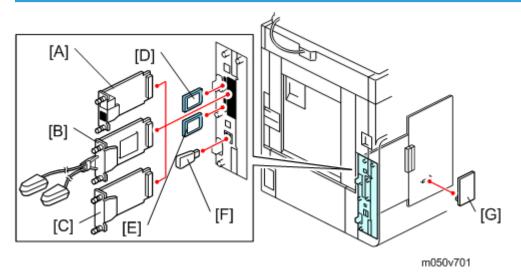


ltem	Machine Code	Remarks
Main Unit [A]	M052	Standard model
Main Unit [B]	M053	Fax and 1 bin tray unit model
Main Unit [C]	M054	Finisher model
Paper Feed Unit TK 1090 [D]	M375	Option

ī	

Paper Feed Unit TK1100 [E]	M376	Option
Fax Option Type SP5200 [F]	M381	Standard for M053 Option for M052 and M054
Memory Unit Type B [G]	G578	SAF memory: Requires the Fax Option.

Controller Devices



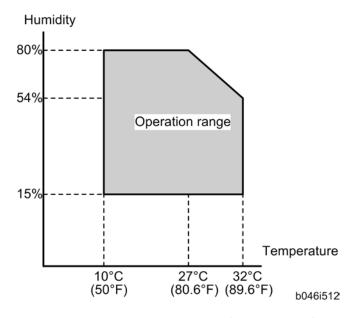
ltem	Machine Code	Remarks
VM Card [E]	-	Standard
Security Card [D]	-	Standard
Copy Data Security Unit Type F [G]	B829	Option
Remote Communication Gate A	D459	Option
IPDS Unit Type 5210 [D]	D571	Controller Option
Gigabit Ethernet Board Type A/ Type C [A]	Туре А: G874 Туре С: M397	Controller Option
IEEE802.11 a/g Interface Unit Type J, K [B]	D377	Controller Option

Browser Unit Type E [E]	D430	Controller Option
File Format Converter Type E [C]	D3 <i>77</i>	Controller Option
Bluetooth Interface Unit Type D [F]	D566	Controller Option

Installation Requirements

Environment

-Temperature and Humidity Chart-



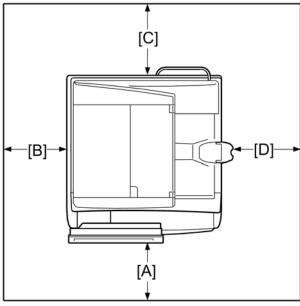
- Temperature Range: 10°C to 32°C (50°F to 89.6°F)
- Humidity Range: 15% to 80% RH
- Ambient Illumination: Less than 1,500 lux (Do not expose to direct sunlight.)
- Ventilation: Room air should turn over at least 3 times/hr/person
- Ambient Dust: Less than 0.1 mg/m³
- Do not install the machine where it will be exposed to direct sunlight or to direct airflow (from a fan, air conditioner, air cleaner, etc.).
- Do not install the machine where it will be exposed to corrosive gas.
- Install the machine at locations lower than 2,000 m (6,560 ft.) above sea level.
- Place the machine on a firm and level base.
- Do not install the machine where it may be subjected to strong vibration.

Machine Level

Front to back:	Within 5 mm (0.2") of level
Right to left:	Within 5 mm (0.2") of level

Minimum Operational Space Requirements

Place the machine near the power source, providing clearance as shown.



m050v261

A: Front - 350 mm (29.6")

B: Left - 100 mm (3.9")

C: Rear -300 mm (3.9")

D: Right - 100 mm (3.9")

Power Requirements



- Make sure that the wall outlet is near the machine and easily accessible. After completing
 installation, make sure the plug fits firmly into the outlet.
- Avoid multiple connections to the same power outlet.
- Be sure to ground the machine.

Input voltage:

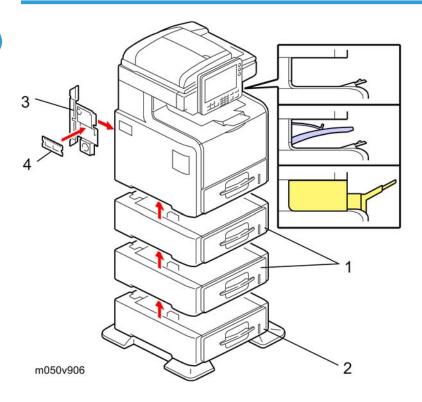
North America:	120 – 127 V, 60 Hz, 12 A
Europe/Asia:	220 – 240 V, 50/60 Hz, 8 A

Image quality guaranteed at rated voltage $\pm\ 10\%.$

Operation guaranteed at rated voltage \pm 15%.

Optional Unit Combinations

Machine Options



No.	Options	Remarks
1	Paper Feed Unit TK 1090	Two units can be installed in the mainframe.
2	Paper Feed Unit TK1100	This unit has casters.

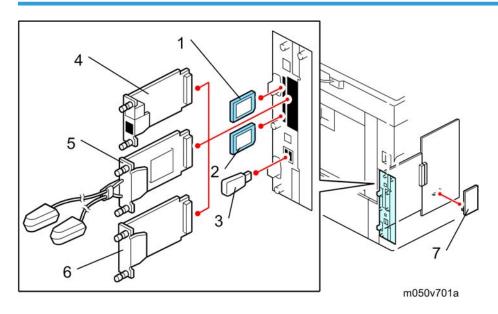
Fax Options

No.	Options	Remarks
3	Fax Option Type SP5200	Standard for M053 Options for M052/M054

9

No.		Options	Remarks
4	Memory Unit Type B		SAF memory: Requires the fax option.

Controller and Other Options



Controller Options

No.	Options	Remarks	
1	IPDS Unit Type 5210	SD slot 1 (upper)	
2	Browser Unit Type E	SD slot 2 (lower) during installation only	
3	Bluetooth Interface Unit Type D	One of USB slots	
4	Gigabit Ethernet Board Type A/ Type C		
5	IEEE802.11 a/g Interface Unit Type J, K	IF slot (one from three options)	
6	File Format Converter Type E	, ,	

Other Options

No.	Options	Remarks
7	Copy Data Security Unit Type F	-
-	Remote Communication Gate A	-

Copier

Accessory Check

Description	Q'ty
AIO	1
Power Cord	1
VM Card	1
Extender (finisher support tray; M054 only)	1
Paper Size and Tray Decals	1
Warranty Sheet (NA only)	1
User Registration Card (NA only)	1
Help Desk Card (NA only)	1
EULA (16 languages)	1

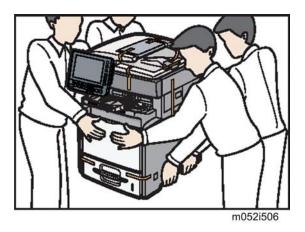
Installation Procedure



• Make sure that the copier remains unplugged during installation.

Copier settings

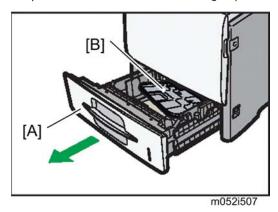
1. Remove the plastic bag.



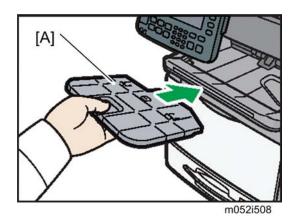
2. Lift the machine by the inset grips on its sides.



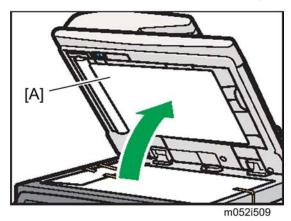
- At least four people are needed to lift the machine.
- 3. Lower the machine slowly and carefully to prevent trapping your hands.
- 4. Remove the adhesive tape attached on the machine's exterior.
- 5. Only for M054 model, do the following steps from 1) and 2).



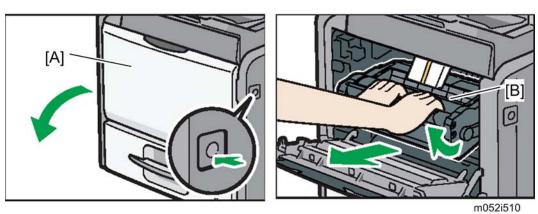
• 1) Pull out tray 1 [A], and then remove the extender [B] for the internal finisher from tray 1.



• 2) Attach the extender [A] to the finisher tray.



- 6. Lift the ARDF [A], and then remove the protective materials attached on the exposure glass.
- 7. Close the ARDF.

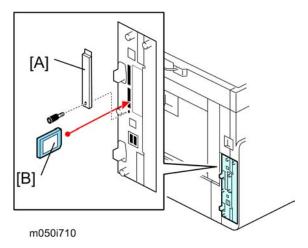


- 8. Open the front door [A] pressing the button.
- 9. Remove the AIO [B], and then remove the protective material attached on the machine's interior.

RTB 21 Delete

these steps

- 10. Install the AIO into the machine.
- 11. Close the front door.



- 12. Remove the SD slot cover [A] (*x 1).
- 13. Install the VM card [B] provided in the accessories in the SD slot 2 (lower).
- 14. Attach the SD slot cover [A] (F x 1).
- 15. Plug in the machine, and then turn on the machine.
- 16. Start the SP mode.
- 17. Select SP5-801-001 and execute the initialization.
- 18. Exit the SP mode, and then start the UP mode.
- 19. Select the "@Remote Service" ("User Tool" > "System Settings > Administrator Tools" > "Extended Security" > @Remote Service") and select "Prohibit".
- 20. Exit the UP mode, and then start the SP mode.
- 21. Select SP5-870-003 and execute initialization for @Remote.
- 22. Select SP5-907-001 and specify the "Plug & Play".
- 23. Select SP5-870-001 and execute writing certification for @Remote S.
- 24. Select SP5-302-002 and specify the time zone.
- 25. Select SP5-307-001, 003, and 004 and specify the daylight-saving-time settings.
- 26. Exit the SP mode and turn the main switch off and on.
- 27. Start the UP mode.
- Specify the date and time with "Set Date" or "Set Time" (User Tool" > "System Settings" > "Set Date"
 or "Set Time").
- 29. Turn the main switch off and on.
- 30. Check the operations.

31. Make a full size copy, and check if the side-to-side and leading edge registrations are correct. If they are not, adjust the registrations.

Fax Settings only for M053 model

Initializing the Fax unit

When you press the Fax key for the first time after installation, the error "SRAM problem occurred / SRAM was formatted" will show on the LCD for initializing the program of the fax unit. Turn the main power switch off/on to clear the error display.

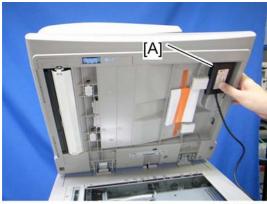


- If another error occurs after initialization, this can be a functional problem.
- 1. Select fax SP1-101-016 and specify the country code.
- 2. Select fax SP3-101-001 and specify the service station.

When Using an Smart Card Reader

If a customer wants to use a smart card reader, follow the installation procedure below. The smart card reader must be placed on the specific place. If not, some antenna or transmitter in the main machine may be interrupted.

1. ARDF rear cover (**p.159)



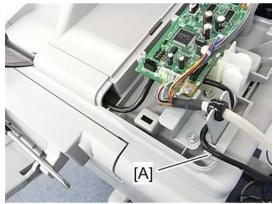
m022i136a

2. Attach the smart card reader [A].



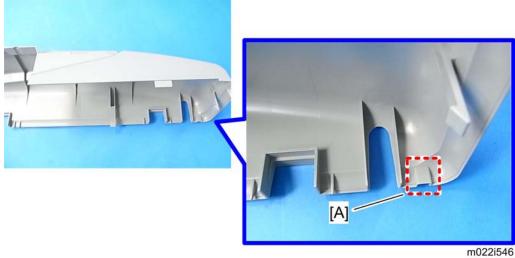
m022i544

1. Release the hook, and then put the cable outside.



m022i545

2. Route the cable $\left[A\right]$ as shown above.



- 3. Remove the part [A] of the ARDF rear cover with nippers or a similar tool.
- 4. Reassemble the machine.
- 5. For details about connecting a smart card device to the machine, refer to the installation procedure provided with the smart card device.

Meter Click Charge

Basically, there are two ways to set up this function.

Meter click charge enabled (SP 5-930-001 set to "enabled") and Parts replacement operation type enabled (SP5-067-001 set to "0: Service"): The counter can be displayed and printed by the customer. The technician can then call the customer and ask them to read the counter.

Meter click charge disabled (SP 5-930-001 set to "disabled"; this is the default setting) and Parts replacement operation type enabled (SP5-067-001 set to "1: User", this is the default setting): The counter cannot be displayed or printed by the customer. To check the counter, the technician must print the SMC report (SP 5-990).



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

ltem	SP No.	Function	Default
RTB 52 Corrections to this table Meter Click Charge Setting	SP5-930-001	Enables or disables Meter Click Charge. When enabled: The counter menu shows immediately after you push the "Menu" key. The "Counter Method" (SP5-045) sets the type of the counter. You can print the counter from the counter menu. When disabled: The counter menu does not show.	"0": OFF
Meter Click Charge: Life Disp: Maintenance Kit	SP5-930-002	Enables or disables the PM alert for the maintenance kit. If this SP is enabled, an alert message is displayed when the maintenance kit needs to be replaced.	"1": No alert

Meter Click Charge: Life Disp:AIO	SP5-930-003	Enables or disables the PM alert for the AIO. If this SP is enabled, an alert message is displayed when the AIO needs to be replaced.	"1": No alert
Counter method	SP5-045-001	Specifies if the counting method used in meter charge mode is based on develaibopments or prints.	"1": Prints
Parts Replacement Operation Type	SP5-067-001	Selects the service maintenance or user maintenance for the maintenance kit.	"1: User "
Service Tel: Telephone / Facsimile	SP5-812-001 and -002	-001: shows or sets the telephone number of the service representative002: shows or sets the fax number of the service station. The number is printed on the counter list when the "Meter Click Charge" is enabled. User can send a fax message with the counter list.	-

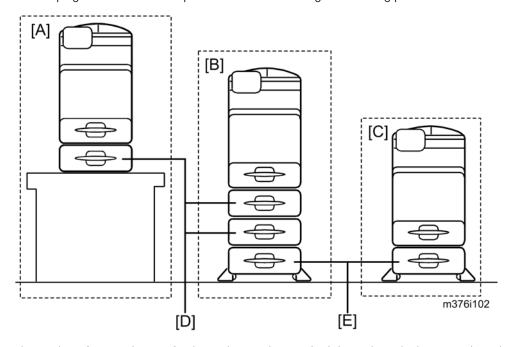
2

Paper Feed Unit TK1090 (M375)

Installation Procedure

ACAUTION

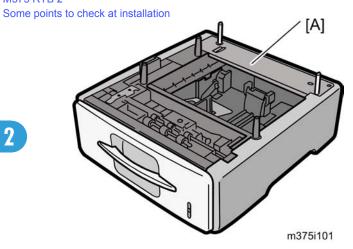
• Unplug the main machine's power cord before starting the following procedure.



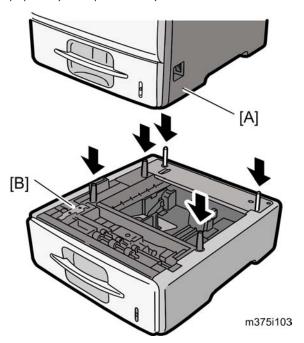
The number of optional paper feed units that can be attached depends on the location where the machine is installed.

- [A]: Only one paper feed unit (M375 [D]) can be installed on a desk.
- [B]: Up to three units (M375 [D] and M376 [E]) can be installed on the floor. Attach the optional paper feed unit with casters (M376 [E]) to the bottom of the machine to install the machine directly on the floor.
- [C]: Attach the optional paper feed unit with casters (M376 [E]) to the bottom of the machine to install the machine directly on the floor.

M375 RTB 2



- 1. Remove all tapes and cardboard on the paper feed unit [A].
- 2. Pull the paper tray part way out of the paper feed unit, remove the tape and cardboard in the paper tray, and push the tray back in.



- 3. Set the machine [A] on the paper feed unit [B].
 - Two people are required to lift the machine.



- When installing a second paper feed unit, place on the first paper feed unit before placing the copier onto the pair of paper feed units
- 4. Remove the paper(s) tray from the paper tray unit(s).

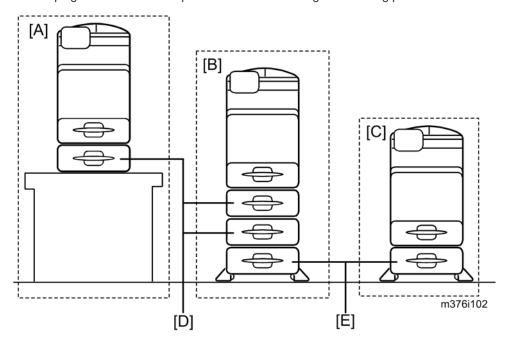
- 5. Load paper into the paper tray(s). Adjust the side and end fences as necessary. If loading $8^{1}/_{2}$ "x 14" paper, remove the end fence and set it into the special compartment.
- 6. Set the paper tray(s) back into the paper tray unit(s).

Paper Feed Unit TK1100 (M376)

Installation Procedure

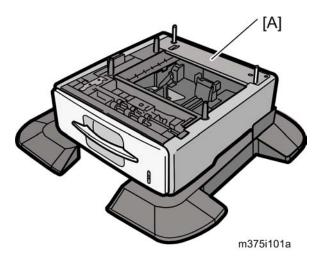
CAUTION

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

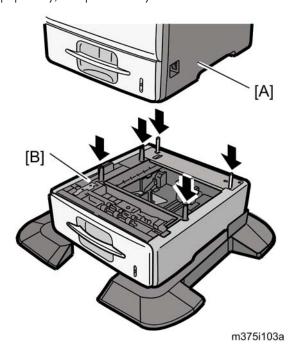


The number of optional paper feed units that can be attached depends on the location where the machine is installed.

- [A]: Only one paper feed unit (M375 [D]) can be installed on a desk.
- [B]: Up to three units (M375 [D] and M376 [E]) can be installed on the floor. Attach the optional paper feed unit with casters (M376 [E]) to the bottom of the machine to install the machine directly on the floor.
- [C]: Attach the optional paper feed unit with casters (M376 [E]) to the bottom of the machine to install the machine directly on the floor.



- 1. Remove all tapes and cardboard on the paper feed unit [A].
- 2. Pull the paper tray part way out of the paper feed unit, remove the tape and cardboard in the paper tray, and push the tray back in.



- 3. Set the machine [A] on the paper feed unit [B].
 - Two people are required to lift the machine.



 When installing a second paper feed unit, place on the first paper feed unit before placing the copier onto the pair of paper feed units

- 4. Remove the paper(s) tray from the paper tray unit(s).
- 5. Load paper into the paper tray(s). Adjust the side and end fences as necessary. If loading $8^{1}/2$ "x 14" paper, remove the end fence and set it into the special compartment.
- 6. Set the paper tray(s) back into the paper tray unit(s).

When installing the three units (M375 and M376)



1. Attach the six brackets and six screws as shown above.



m375i105

2. Attach the screws into the paper feed units as shown above.

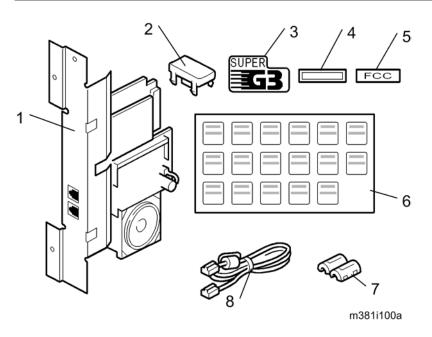
2

Fax Option Type SP5200 (M381)

Component Check

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

No.	Description	Q'ty
1	FCU	1
2	Fax Key top	2
3	G3 Decal	1
4	Serial Number Decal	1
5	FCC Decal (NA only)	1
6	Multi-Language Decals (EU only)	1
7	Ferrite Core	1 (Excluding NA)
8	Telephone Cord (NA only)	1
-	EMC Address Card (EU only)	1

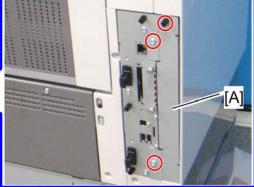


Installation Procedure

ACAUTION

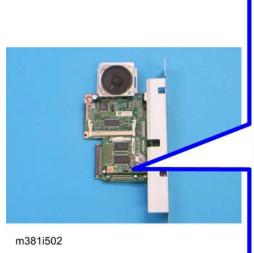
- Before installing this fax unit:
- Print out all data in the printer buffer.
- Turn off the main power switch and disconnect the power cord and the network cable.

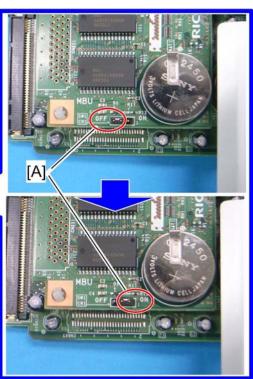




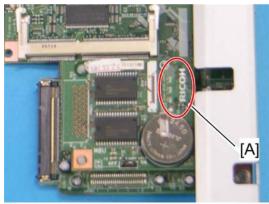
m381i501

1. Remove the FCU slot cover [A] (*x 3).



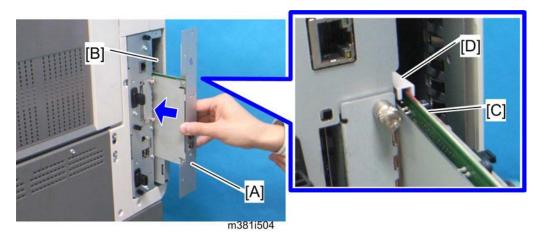


2. Switch the MBU battery jumper switch [A] to "ON" position.

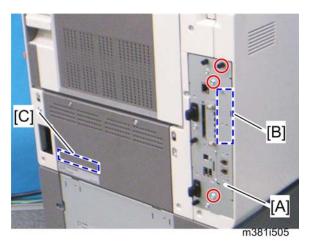


m381i503

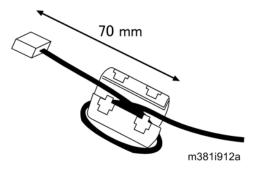
3. Press down the place [A] on the MBU board.



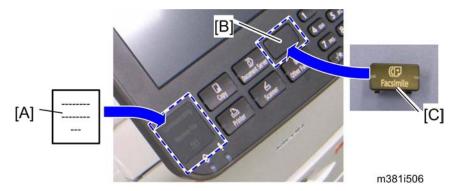
- 4. Install the FCU [A] into the FCU slot [B] of the machine.
 - Align the top edge [C] of the FCU board with the rail [D] in the FCU slot when installing the FCU.



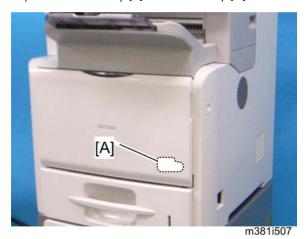
- 5. Secure the FCU [A] (* x 3).
 - Use two screws which have already been removed in step 1.
- 6. Attach the serial number decal on the area [B] of the FCU bracket and FCC decal (NA only) on the area [C] above the serial number decal of the machine.
- 7. Connect the telephone cord to the "LINE" jack.



- For EU/AA, attach the ferrite core to the telephone cord before connecting the telephone cord to the "LINE" jack.
- For NA, use the core attached telephone cord (No.9) in the accessories of the fax unit option.



- 8. Attach an appropriate multi-language decal [A] (EU only).
- 9. Replace the blank key [B] with the fax key [C].



- 10. Attach the decal [A] (SUPER G3) to the front door.
- 11. Put the power plug into the outlet and turn on the main power of the machine.

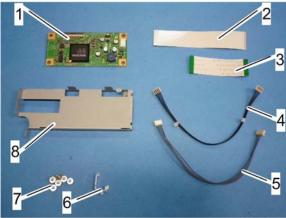


- Make sure that the outlet is grounded.
- "SRAM formatted" shows on the operation panel after you have turned the main switch on. Turn the main switch off and on again for normal use.
- 12. Enter the "User Tools" mode and set date and time.

RTB 36 Wrong SP numbers

- 13. Do SP1000-001 in the fax SP mode and enter the serial number for the fax unit.
- 14. Enter the correct country code with SP1401-001 (NCU Country/ Area Code Setting).
- 15. Exit the SP mode, and turn the machine off and on.

Components Check



b829i601

Copy Data Security Unit Type F (B829)

No.	Description	Q'ty
1	ICIB-3	1
2	Flexible cable: Long (Not used)	1
3	Flexible cable: Short (Not used)	1
4	Harness with bands (Not used)	1
5	Harness (Not used)	1
6	Saddle Clamp (Not used)	1
7	Screws: M3x6	6
8	Bracket (Not used)	1

Installation

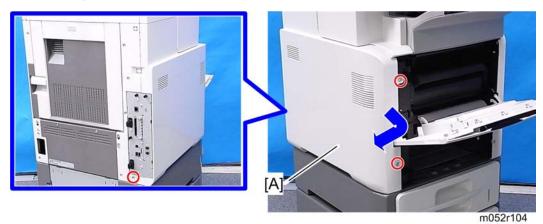
ACAUTION

- Unplug the main machine power cord before you do the following procedure.
- 1. Open the front door.

9



2. Pull out the tray 1 [A].



3. Remove the left cover [A] of the machine (\mathcal{F} x 3).



....

- 4. Move the scanner I/F cable aside [A] (\rat{F} x 1, $\rat{ }$ x 2).
- 5. Move the harness guide [B] aside (🏲 x 3).



- 6. Attach ICIB-3 [A] to CN107 [B] on the BICU (F x 1).
- 7. Reassemble the machine.

User Tool Setting

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



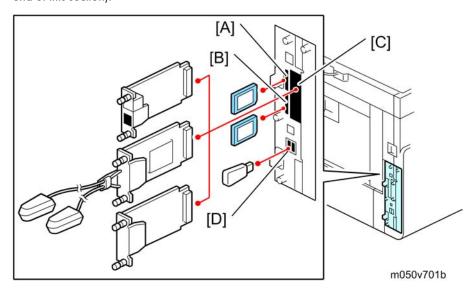
- The machine will issue an SC165 error if the machine is powered on with the ICIB-3 removed and the "Data Security for Copying" feature set to "ON".
- The machine will issue an uncertain SC165 error if ICIB-3 is defective when the machine is powered on and the "Data Security for Copying" feature is set to "OFF".
- When you remove this option from the machine, first set this feature 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. Also, SC165 will appear every time the machine is
 switched on, and the machine cannot be used.
- 5. Make sure that the machine can recognize the option.

Controller Options

Overview

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

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



SD Card Slots

- Slot 1 (upper slot) [A] is used for Security Card (standard) or IPDS Unit.
 If IPDS Unit is to be installed, first merge IPDS application into the Security Card with SP mode.
- Slot 2 (lower slot) [B] is used for VM card (standard) or service only (for example, updating the firmware).

I/F Card Slot

The I/F card slot [C] is used for one of the optional I/F connections (only one can be installed):
 Gigabit Ethernet, IEEE802.11a/g (Wireless LAN), or File Format Converter.

USB Slots

• Both USB slots [D] are used for the Bluetooth option and a card authentication device.

SD Card Appli Move



The PostScript3 application and fonts cannot be moved to another SD card. However, other
applications can be moved onto the PostScript3 SD card.

Overview

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

SD slot 1 (upper) is used to store application programs. But there are two possible applications (Security Card (Data Overwrite Security and HDD Encryption Unit), IPDS). You cannot run application programs from Slot 2. However you can move application programs from SD slot 2 (lower slot) to SD slot 1 (upper slot) with the following procedure.

Make sure that the target SD card has enough space.

- 1. Enter SP5873 "SD Card Appli Move".
- Then move the application from the SD Card in SD slot 2 (lower slot) to the SD Card in SD slot 1 (upper slot).



- 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.
- Keep the SD card in a safe place after you copy 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 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.
- Make sure that an SD card is in SD slot 1 (upper slot). The application program is copied to this SD card.
- 3. Insert the SD card with the application program in SD slot 2 (lower slot). 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 slot 2 (lower slot).
- 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).

☆ Important

- 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 slot 2 (lower slot). The application program is copied back into this card.
- 3. Insert the SD card with the application program in SD slot 1 (upper slot). 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 slot 2 (lower slot).



- 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).

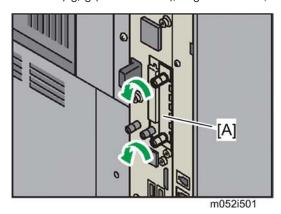
File Format Converter (D377)

Installation Procedure

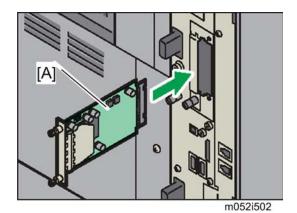
ACAUTION

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

You can only install one of the following network interfaces or printer enhanced option at one time: (IEEE 802.11 a/g, g (Wireless LAN), Gigabit Ethernet, or File Format Converter).



1. Remove the I/F-slot cover [A] (*x 2).



- 2. Install the file format converter [A] into the I/F-slot 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	"O"

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

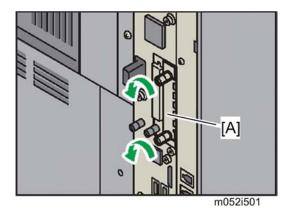
IEEE 802.11 a/g, g (D377: Wireless LAN)

Installation Procedure

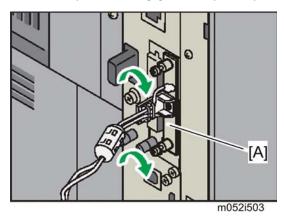
ACAUTION

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

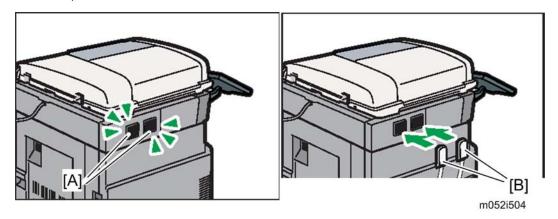
You can only install one of the following network interfaces or printer enhanced option at one time: (IEEE 802.11 a/g, g (Wireless LAN), Gigabit Ethernet, or File Format Converter).



1. Remove the I/F-slot cover [A] from the I/F-slot (\slashed{F} x 2).

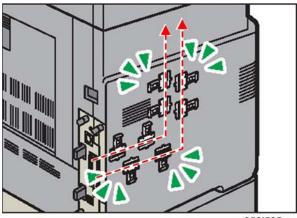


- 2. Install the wireless LAN board [A] (Knob-screw \times 2) into the I/F-slot.
- 3. Make sure that the machine can recognize the option (see 'Check All Connections' at the end of this section).



4. Peel off the cover from the double-sided tape on the Velcro fasteners [A], and then attach the fasteners [A] at the scanner left cover of the machine.

5. Attach the antennas [B] to the fasteners on the scanner left cover.



m052i505

- 6. Attach eight clamps as shown above.



• 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.

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" 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.

Region A (mainly Europe and Asia)

• Range: 1-13, 36, 40, 44 and 48 channels (default: 11)

In some countries, only the following channels are available:

• Range: 1-11 channels (default: 11)

Region B (mainly North America)

• Range: 1-11, 36, 40, 44 and 48 channels (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. 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 a/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.

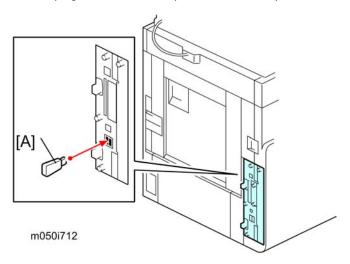
5840-008	Transmission Speed	Sets the transmission speed to one of the following: Auto, 54 Mbps, 48 Mbps, 36 Mbps, 24 Mbps, 18 Mbps, 12 Mbps, 9 Mbps, 6 Mbps, 11 Mbps, 5.5 Mbps, 2 Mbps, 1 Mbps (default: Auto)	
5840-011	WEP Key Select	Used to select the WEP key (Default: 00).	
UP mode	Name	Function	
	SSID	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 Interface Unit Type D (D566)

Installation Procedure

ACAUTION

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



- 1. Install the Bluetooth [A] into the one of USB slots.
- 2. Make sure that the machine can recognize the option (see 'Check All Connections' at the end of this section).

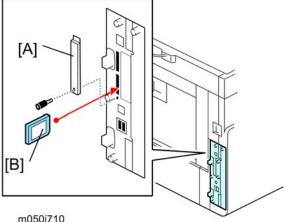
Browser Unit Type E (D430)

Installation Procedure



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

Do not leave the SD card in the SD slot 2 after installing this application.



- 11105017 10
- 1. Remove the SD slot cover [A] for SD slots (*\bar{p} x 1).
- 2. Turn the SD-card label face [B] to the right (rear view), then push it slowly into SD slot 2 until you hear a click.
- 3. Plug in the machine 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 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 the hard key that you want to use for the Browser Unit. As a default, this function is assigned to the "Other Functions" key (the bottom key of the function keys).
- 18. Touch "OK".
- 19. Touch "Exit" twice to go back to the copy screen.

Browser RTB 2 Procedure

modified

- 20. Turn off the main power switch.
- 21. Install the key top for "Browser Unit" to the key slot on the operation panel where you want.
- 22. Remove the SD card from the SD slot 2.
- 23. Attach the slot cover [A] (F x 1).
- 24. Keep the SD card in a safe place after you install the application program from the card to HDD. This is because that 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.
- 25. Turn off and on the machine.

Update Procedure

- 1. Remove the SD slot cover for SD slots (*x 1).
- 2. Turn the SD-card label face to the right (rear view), then push it slowly into the SD 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 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 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.

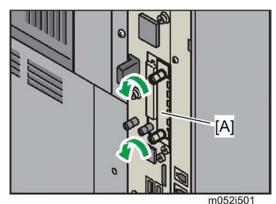
Gigabit Ethernet Board Type A (G874)/ Type C (M397)

Installation Procedure

ACAUTION

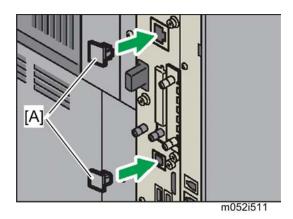
Unplug the main machine power cord before you do the following procedure.

You can only install one of the following network interfaces or printer enhanced option at one time: (IEEE 802.11 a/g, g (Wireless LAN), Gigabit Ethernet, or File Format Converter).

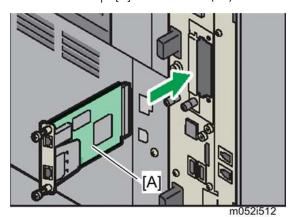


....

1. Remove the I/F-slot cover [A] from the I/F-slot (*\beta x 2).



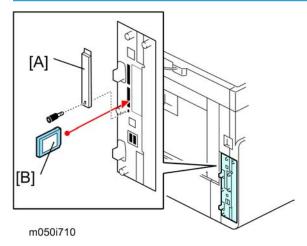
2. Attach the two caps [A] to the Ethernet (10/100 Base-T) port and the USB port as shown above.



- 3. Install the Gigabit Ethernet board [A] (Knob-screw \times 2) into the I/F-slot.
- 4. Attach the ferrite core to the LAN cable, and connect the LAN cable to the machine.
- 5. Connect the USB cable to the USB connector.
- Make sure that the machine can recognize this option (see 'Check All Connections' at the end of this section).

IPDS Unit Type 5210 (D571)

Installation Procedure



- 1. Remove the SD slot cover [A] (*x 1).
- 2. Install the IPDS card [B] in SD slot 2 (lower slot).
- 3. Plug in the machine, and then turn on the machine.
- 4. Enter the SP mode, and then select SP5-873-001 "Move Exec".
- 5. Follow the messages shown on the operation panel.
- 6. Turn the main switch off.
- 7. Remove the IPDS card from SD slot 2 (lower slot).
 - Keep the IPDS card in a safe place after you copy the application program from one card to another card.
- 8. Turn the main switch on.
- 9. Check that the application programs run normally.
- 10. Attach the SD slot cover [A] (*x 1).

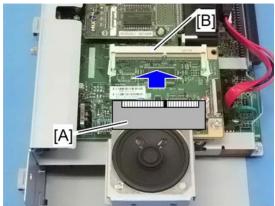
Memory Unit Type B 32MB (G578)

Installation Procedure

ACAUTION

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

1. Fax unit (p.142 "Controller Unit")



g578t501

- 2. Push the memory unit [A] (32 MB) in the memory slot [B] until both lock levers lock the memory unit.
- 3. Reassemble the machine.

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.

3. Preventive Maintenance

Maintenance Tables

User Maintenance

The customer can replace all PM items with the Maintenance Kit.

The user can maintain this machine. For more see "Printer Engine Service Mode".

The operation panel shows "Replace Maintenance Kit" when the PM counter reaches 120 k. After the user replaces the fusing unit in the maintenance kit, the machine automatically resets the PM counter.

Item	Quantity	Remarks
Fusing unit	1	-
Transfer roller	1	-
Paper feed roller	5	For standard and optional tray(s)
Friction pad	5	For standard and optional tray(s)

Service Maintenance

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. Clear the PM counters with SP7-804.
- 4. Exit the SP mode.

Item	SP
All Units	7-804-002
Fusing Unit	7-804-003
Transfer Roller	7-804-004
Paper Feed Roller	7-804-005

For the fusing unit, there is a new unit detection mechanism. It is not necessary to reset PM counter.

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.

Operation Check

Check if the sample image has been copied normally.

2

4. Replacement and Adjustment

Precautions

General



• Turn off the main power switch and unplug the machine before starting replacement.

Before turning off the main power switch, check that no mechanical component is operating. Mechanical components may stop out of their home positions if you turn off the main power switch while they are operating. The component may be damaged if you try to remove it when it is not in the home position.

AIO

The AIO consists of the OPC drum, charge roller, development unit, cleaning components and toner tank. Observe the following precautions when handling the AIO.

- Never touch the drum surface with bare hands. If the drum surface is dirty or if you have accidentally touched it, wipe it with a dry cloth, or clean it with wet cotton and then wipe it dry with a cloth.
- 2. Never use alcohol to clean the drum. Alcohol will dissolve the drum surface.
- 3. Store the AIO in a cool dry place.
- 4. Do not expose the drum to corrosive gases (ammonia, etc.).
- 5. Do not shake a used AIO, as this may cause toner to spill out.
- 6. Dispose of used AIO components in accordance with local regulations.

Transfer Roller

- 1. Never touch the surface of the transfer roller with bare hands.
- 2. Be careful not to scratch the transfer roller, as the surface is easily damaged.

Scanner Unit

- 1. Use alcohol or glass cleaner to clean the exposure and scanning glass. This will reduce the static charge on the glass.
- 2. Use a blower brush or a water-moistened cotton pad to clean the mirrors and lenses.

- 4. Do not disassemble the lens unit. This will cause the lens and copy image to get out of focus.
- 5. Do not turn any of the LED positioning screws. This will put the LED out of position.

Laser Unit

- 1. Do not loosen or adjust the screws securing the LD drive board on the LD unit. This will put the LD unit out of adjustment.
- 2. Do not adjust the variable resistors on the LD unit. These are adjusted at the factory.
- 3. The polygonal mirror and F-theta lens are very sensitive to dust.
- 4. Do not touch the toner shield glass or the surface of the polygonal mirror with bare hands.

Fusing Unit

- 1. After installing the fusing thermistor, make sure that it is in contact with the hot roller and that the roller can rotate freely.
- 2. Be careful to avoid damage to the hot roller stripper pawls and their tension springs.
- 3. Do not touch the fusing lamp and rollers with bare hands.
- 4. Make sure that the fusing lamp is positioned correctly and that it does not touch the inner surface of the hot roller.

Paper Feed

- 1. Do not touch the surface of the paper feed rollers.
- 2. To avoid misfeeds, the side and end fences in each paper tray must be positioned correctly so as to align with the actual paper size.

Lithium Batteries

ACAUTION

Incorrect replacement of lithium battery(s) on the controller or on the fax unit poses risk of
explosion. Replace only with the same type or with an equivalent type recommended by the
manufacturer. Discard used batteries in accordance with the manufacturer's instructions.

4

4

Halogen-free Cable

ACAUTION

• Use extreme caution while handling cables.

To comply with local regulations, halogen-free cables are used in this machine. Halogen-free cables are environment-friendly, but no stronger than conventional cables. These cables may be damaged in any of the following cases:

- The cable is caught between hard objects such as brackets, screws, PCBs, and exterior covers.
- The cable is rubbed on a hard object such as brackets, screws, PCBs, and exterior covers.
- The cable is scratched with a hard object such as brackets, screws, PCBs, exterior covers, screwdrivers, and fingernails.

Special Tools and Lubricants

Part Number	Description	Q'ty
A1849501	Optics Adjustment Tools (2 pcs/set)	1 set
A2929500	Test Chart – S5S (10 pcs/set)	1 set
VSSM9000	Digital Multimeter – Fluke 87	1
A2579300	Grease Barrierta – S552R	1
52039502	Silicon Grease 501	1
B6455010	SD Card	1

4

4

Adjusting Copy Image Area

Adjust the copy image area under any of the following conditions:

- 1. After clearing engine data (SP5-801-002).
- 2. After replacing any of the following components:
 - First scanner or second scanner
 - Lens block
 - Scanner motor
 - Polygon mirror motor
 - Paper tray

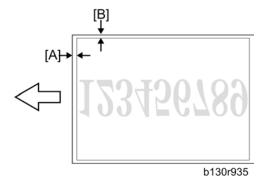
Printing

Make sure that the paper is correctly loaded in each paper tray before starting the adjustment procedures in this section.

Adjusting Registration

Use the Trimming Area Pattern (SP5-902-001 > 10) for this adjustment.

- 1. Print out the test pattern with the paper fed from the regular paper tray.
- 2. Print out the test pattern with the paper fed from the by-pass tray.
- 3. Print out the test pattern by selecting duplex printing.



4. Measure the distance between the leading edge of the image area and the leading edge of the paper [A].



 The diagram shows the paper on the copy tray. Note that the paper is output with the face down.

SP	Specification
SP1-001-001 (All Trays)	0 ± 2 mm
SP1-001-002 (By-pass)	0 ± 2 mm
SP1-001-003 (Duplex)	0 ± 4 mm

- 5. Adjust the leading edge registration (SP1-001).
- 6. Measure the distance between the side edge of the image area and the side edge of the paper [B].

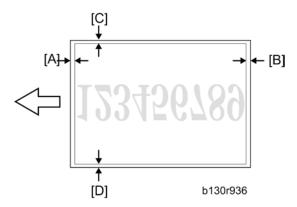
SP	Specification
SP1-002-001 (1st tray)	0 ± 2 mm
SP1-002-002 (2nd tray)	0 ± 2 mm
SP1-002-005 (By-pass)	0 ± 4 mm
SP1-002-006 (Duplex)	0 ± 4 mm

- 7. Adjust the side-to-side registration (SP1-002).
- 8. Specify "O" (zero) in SP5-902-001 after finishing the adjustment procedure.

Adjusting Blank Margin

Use the Trimming Area Pattern (SP5-902-001 > 10) for this adjustment.

1. Print out the test pattern.



2. Measure the distance between the four edges of the image area and the four edges of the paper [A][B][C][D].



- The diagram shows the paper on the copy tray. Note that the paper is output with the face down.
- 3. Adjust the blank margin (SP2-101).

SP	Specification
SP2-101-001 (Leading Edge) [A]	2 ± 1.5 mm
SP2-101-002 (Trailing Edge) [B]	2 +2.5/-1.5 mm
SP2-101-003 (Left Side) [C]	2 ± 1.5 mm
SP2-101-004 (Right Side) [D]	2 +2.5/-1.5 mm



- The "Left Side" and "Right Side" comes to your left-hand side and right-hand side respectively when you view the copied image with the leading edge upwards.
- 4. Specify "0" (zero) in SP5-902-001 after finishing the adjustment procedure.

Adjusting Main-Scan Magnification

Use the Grid Pattern (Single Dot) (SP5-902-001 > 5) for this adjustment.

SP	Specification
SP2-998-001 (Main Mag-print)	100 ± 1%

- 1. Print out the test pattern.
- 2. Measure the sides of squares. Each side should be 2.7-mm long.)
- 3. Adjust the main-scan magnification (SP2-998-001: Main Mag-print).
- 4. Specify "0" (zero) in SP5-902-001 after finishing the adjustment procedure.

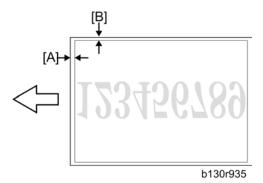
Scanning

Preparation:

- Before adjusting scanning, adjust printing (Printing " in this section).
- To adjust scanning, use the A4 test chart.

Adjusting Registration

- 1. Place the test chart on the exposure glass. Make sure that the test chart is aligned with the rear and left scales on the exposure glass.
- 2. Make a copy.



3. Measure the distance between the leading edge of the image area and the leading edge of the paper [A].



- The diagram shows the paper on the copy tray. Note that the paper is output with the face down.
- 4. Adjust the leading-edge scan registration. (SP4-010-001).

SP	Specification
SP4-010-001 (Leading Edge Registration Adj)	0 ± 2 mm

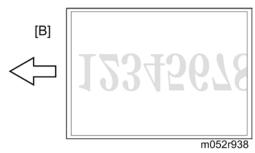
- 5. Measure the distance between the side edge of the image area and the side edge of the paper [B].
- 6. Adjust the side-to-side registration (SP4-011-001).

SP	Specification
SP4-011-001 (Main Scan Reg)	0 ± 2.5 mm

4

Adjusting Magnification





- 1. Place the test chart on the exposure glass. Make sure the test chart is aligned with the rear and left scales on the exposure glass.
- 2. Make a copy.
- 3. Compare the copy with the original.
- 4. Adjust the main-scan and sub-scan magnifications. The original image [A] is magnified in the sub-scan direction [B] when you specify a larger value.



• The diagrams show the paper on the copy tray. Note that the paper is output with the face down.

SP	Specification
SP4-008-001 (Sub Scan Magnification Adj)	± 1.0%

DF Image Adjustment

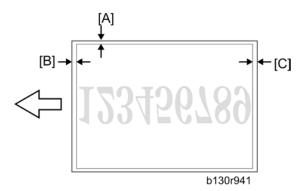


• Perform the adjustment procedure in this section only when the ARDF is installed on the copier.



b130r967

- 1. Make a temporary test chart as shown in the above diagram. Use the "A4/8.5 x 11" paper to make it.
- 2. Place the temporary test chart on the ARDF.
- 3. Make a copy.



- 4. Measure the distance between the side edge of the image area and the side edge of the paper [A].
 - (The diagram shows the paper on the copy tray. Note that the paper is output with the face down.)
- Adjust the side-to-side registration (S to S/Front Regist: SP6-006-001, S to S/Rear Regist: SP6-006-002). The image area moves to the rear side of the copier when you specify a larger value.
- 6. Measure the distance between the leading of the image area and the leading edge of the paper [B].
- 7. Adjust the leading edge registration (Leading Regist: SP6-006-003). The image area moves to the right side of the copier when you specify a larger value.
- 8. Measure the distance between the trailing edge of the image area and the trailing edge of the paper [C].
- 9. Adjust the erased area on the trailing edge (Trailing Erase: SP6-006-007).
- 10. Compare the copy with the original.
- 11. Adjust the sub-scan magnification (SP6-017-001). The specification is $\pm 1.0\%$.

4

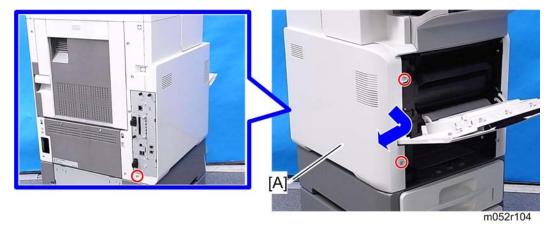
Exterior Covers

Left Cover

1. Open the frond door.



2. Pull out the tray 1 [A].



3. Left cover [A] (** x 3)

Right Cover

1. Open the frond door.



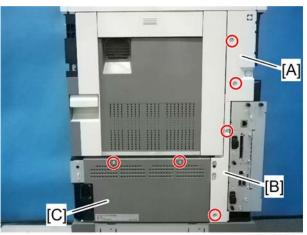
2. Pull out the tray 1 [A].



3. Right cover [A] (🗗 x 3)

Rear Lower Cover

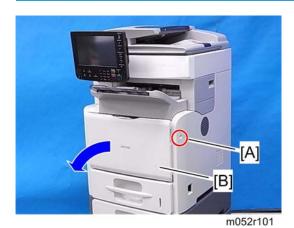
- 1. Right cover (FRight Cover)
- 2. Left cover (Left Cover)



m052r108

- 3. Rear left upper cover [A] (** x 2)
- 4. Rear left lower cover [B] (** x 2)
- 5. Rear lower cover [C] (* x 2)

Front Door



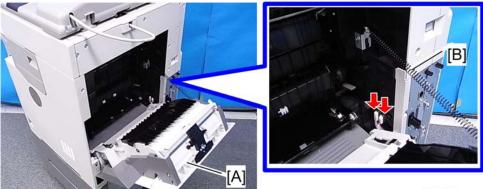
- 1. Press the front cover release button [A].
- 2. Open the front door [B].
- 3. Pull out the tray.
- 4. Right cover (Right Cover)

m052r102

[B]

- 5. Release the spring [A].
- 6. Release the right arm [B] of the front cover.
- 7. Front door [C]

Duplex Unit



m052r105

- 1. Open the duplex unit [A].
- 2. Release the spring [B] and two harnesses of the duplex unit.

4



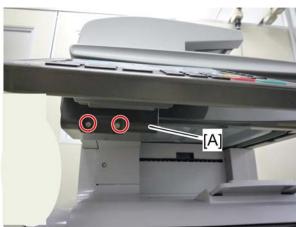
3. Duplex unit [A]

Operation Panel Unit

Operation Panel Unit

Operation Panel Frame Cover Removal

For M052 model



- m052r280
- 1. Operation panel lower cover [A] (F x 2)
- 2. Remove the operation panel upper cover.

For M053/ M054 model

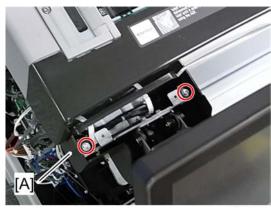
1. Internal finisher (For M054 model) (IPp.176)





m052r540

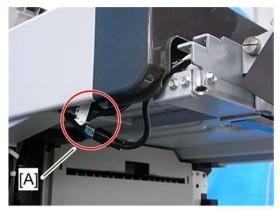
- 2. Operation panel frame upper cover [A] ($\mathscr{F} \times 2$)
- 3. Operation panel arm upper cover [B] ($\slash\hspace{-0.4em}P\slash\hspace{-0.4em}x$ 2)



m052r541

4. Operation panel frame lower cover [A] (** x 2)

Operation Panel Unit Removal



m052r542

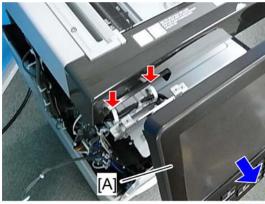
5. Disconnect the harness and USB cable [A].





m052r543

6. Remove the three screws.

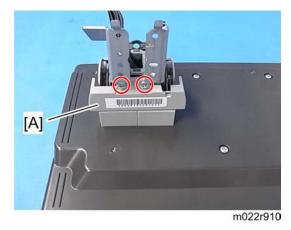


m052r544

7. Operation panel unit [A] (🖨 x 2)

Key Tops

1. Operation panel unit (**P**p.81)

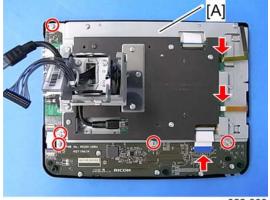


2. Operation panel arm holder [A] ($\rat{p} \times 2$)



m022r909

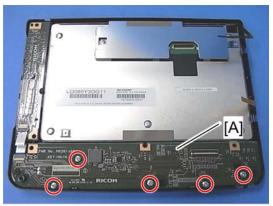
3. Operation panel rear cover [A] ($\mathcal{F} \times 7$)



m022r908

4. Operation panel bracket [A] (🎤 x 5, 📬 x 3)

4



m022r907

5. Release the Key: main board [A] ($\mathcal{F} \times 5$)



m022r906

6. Key tops [A] (hooks)

Touch Panel Position Adjustment

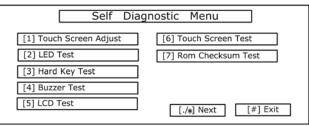


- It is necessary to calibrate the touch panel at the following times:
- When you replace the operation panel.
- When you replace the controller board.

· When the touch panel detection function does not operate correctly

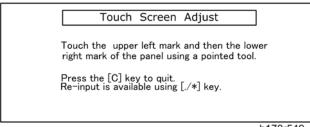
Do not use items [2] to [9] on the Self-Diagnostic Menu. These items are for design use only.

1. Press , press "1" "9" "9" "3" key, press "Clear/Stop" key 5 times to open the Self-Diagnostics menu.



b178r548

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



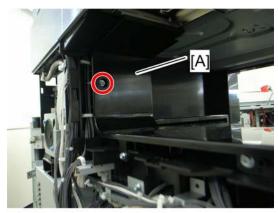
b178r549

- 4. Press the lower right mark when "o" shows.
- 5. Press [#] OK on the screen (or press ⁽¹⁾) when you are finished.
- 6. Touch [#] Exit on the screen to close the Self-Diagnostic menu. Save the calibration settings.

Output Tray (M052/M053 models only)

- 1. Left cover (1,77)
- 2. Right cover (**p.77)
- 3. Only for M053, remove the 1 bin tray unit (**p.199).

4



m050r504

4. Inner left cover [A]



5. Output tray [A] (🗗 x 4)

Scanner Unit

Scanner Front Cover

- 1. Open the ARDF.
- 2. Operation panel unit (**p.81)

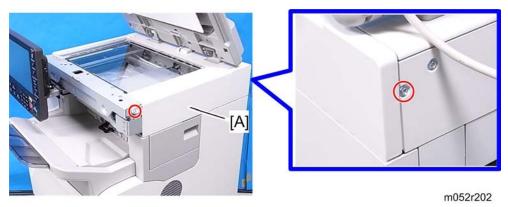


- 3. Release the hook [A] under the scanner unit.
- 4. Scanner front cover [B] (*\begin{align*} x 1, hook x 1, boss x 2) \end{align*}

Scanner Right and Left Covers

Scanner Right Cover

1. Scanner front cover (**p.88)



2. Scanner right cover [A] (* × 2)

4

Scanner Left Cover

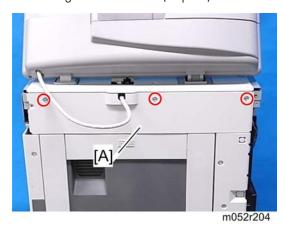
1. Scanner front cover (**p.88)



2. Scanner left cover (F x 2)

Scanner Rear Cover

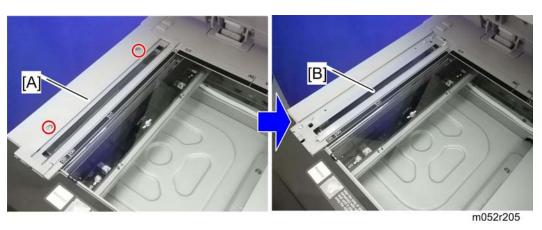
- 1. Scanner front cover (**p.88)
- 2. Scanner right and left covers (IPp.88)



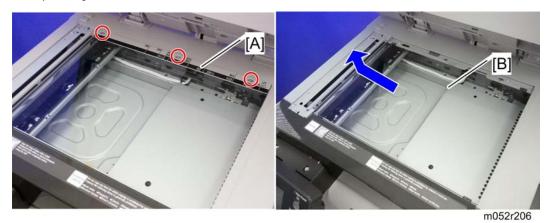
3. Scanner rear cover [A] (🗗 x 3)

Exposure Glass

1. Open the ARDF.

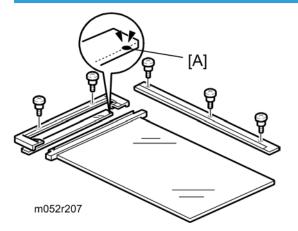


- 2. Glass cover [A] (🗗 x 2)
- 3. DF exposure glass [B]



- 4. Rear scale [A] (🗗 x 3)
- 5. Exposure glass [B] with the left scale

When reassembling the ARDF exposure glass

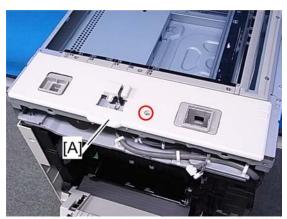


Position the blue marker [A] at the rear-right corner when you reattach the ARDF exposure glass.

LED Board

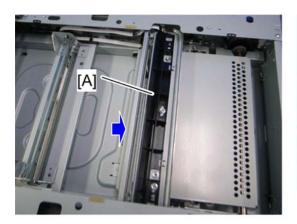


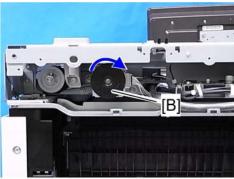
- Do not touch a new LED board directly by hands. Oily spots on the LED board will cause poor scanning quality.
- 1. ARDF (**p.158)



m052r208

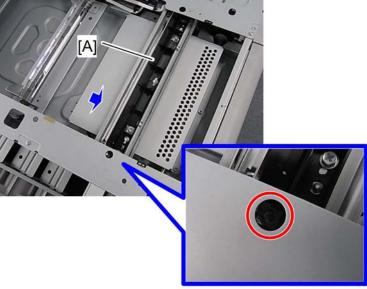
- 2. Scanner top rear cover (🗗 x 1)
- 3. Exposure glass (**p.89)





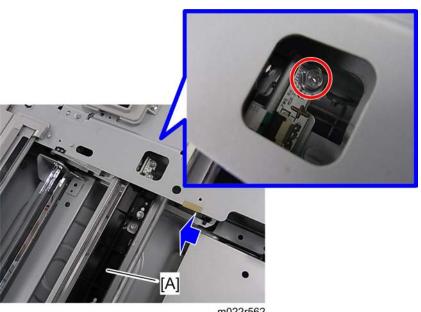
m052r209

4. Move the 1st scanner carriage [A] to the right side by rotating the scanner motor [B] clockwise in view of the rear.



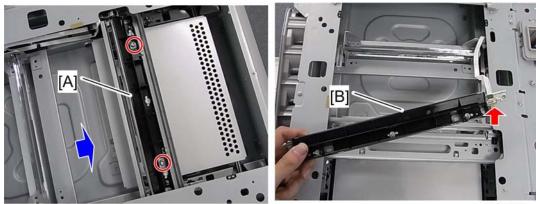
m022r561

5. Remove the screw at the front side of the 1st scanner carriage.



m022r562

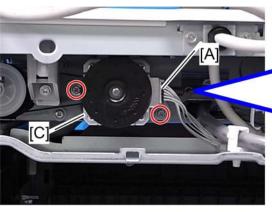
- 6. Move back the 1st scanner carriage [A] to the left side by rotating the scanner motor counterclockwise in view of the rear.
- 7. Remove the screw at the rear side of the 1st scanner carriage.

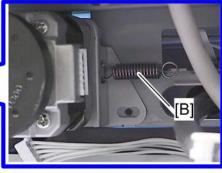


- m052r210
- 8. Move the 1st scanner carriage [A] to the cutout position [B] by rotating the scanner motor clockwise.
- 9. LED board [B] (🔊 x 2, 📬 x 1)

Scanner Motor

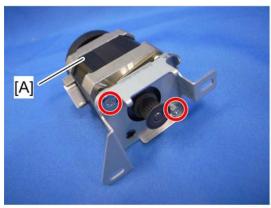
1. Scanner rear cover (**p.89)





m052r211

- 2. Disconnect the harness [A] and remove the spring [B]
- 3. Scanner motor bracket [C] (** x 2, timing belt x 1)



m022r545

4. Scanner motor [A] (*x 2)



• Do the scanner image adjustment after replacing the scanner motor (see "Image Adjustment").

Sensor Board Unit (SBU)

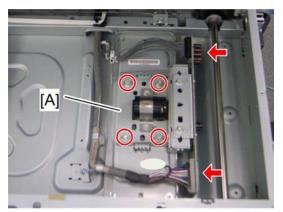
- 1. Scanner top rear cover (**p.91 "LED Board")
- 2. Exposure glass (**p.89)

4



3. Bracket [A] (F x 5)

RTB 61 Modified



m052r558

4. Sensor board unit [A] (* x 4, * x 2)

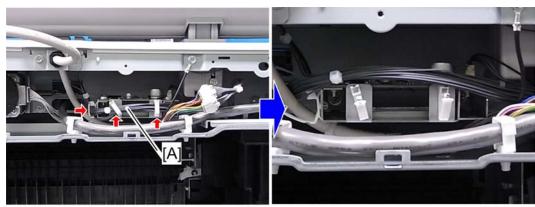
When reassembling

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

- SP4-008 (Sub Scan Magnification Adj): See "Image Adjustment: Scanning" (**p.73).
- SP4-010 (Leading Edge Registration Adj): See "Image Adjustment: Scanning" (p.73)).
- SP4-011 (Main Scan Reg): See "Image Adjustment: Scanning" (p.73).
- 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.

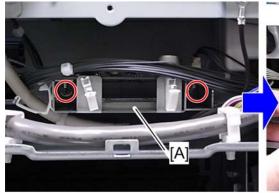
LED Drive Board

1. Scanner rear cover (p.89)



m052r213

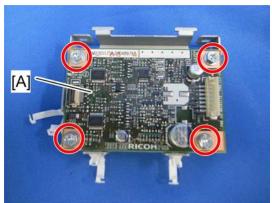
2. Release the harness [A] from three clamps, and then take it aside.





m052r214

3. LED drive board bracket [A] (\mathscr{F} x 2, CIII x 2)

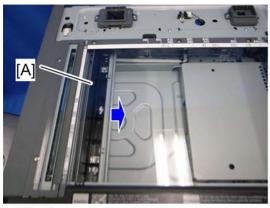


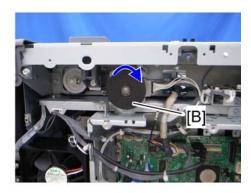
m022r548

4. LED drive board [A] (\nearrow x 4)

Scanner HP Sensor

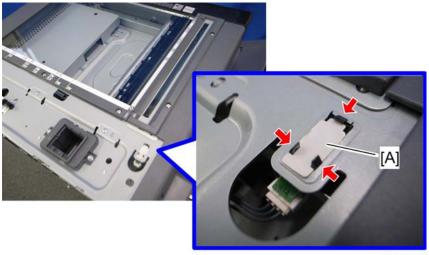
- 1. ARDF (**p**.158)
- 2. Scanner top rear cover (**p.91 "LED Board")





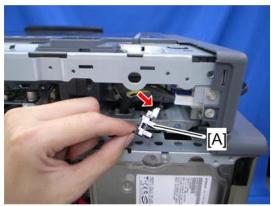
m022r551

3. Move the 1st scanner carriage [A] to the right side by rotating the scanner motor [B].



m022r552

4. Remove the mylar [A].

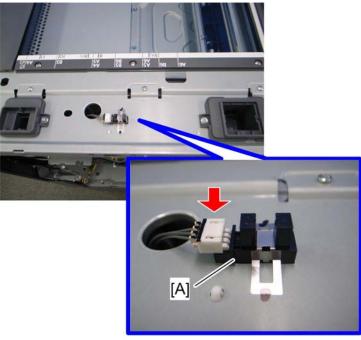


m022r553

5. Scanner HP sensor [A] (🗗 x 1, hooks).

Cover Sensor

- 1. ARDF (**p**.158)
- 2. Scanner top rear cover (**p.91 "LED Board")

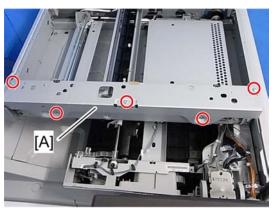


m022r550

3. Cover sensor [A] (🗂 x 1, hooks)

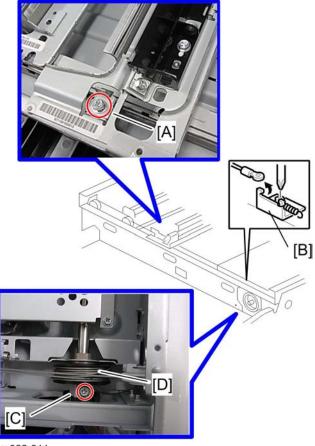
Front Scanner Wire

- 1. Exposure glass (**p.89)
- 2. ARDF (**p.158)
- 3. Scanner top rear cover (p.91 "LED Board")



m022r917

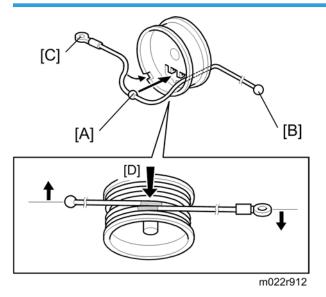
4. Scanner front frame [A] (\nearrow x 5)



m022r911

- 5. Front scanner wire holder [A] (F x 1)
- 6. Front scanner wire bracket [B] (🏲 x 1)
- 7. Front scanner wire, white clip [C] and scanner drive pulley [D] ($\ref{p} \times 1$)

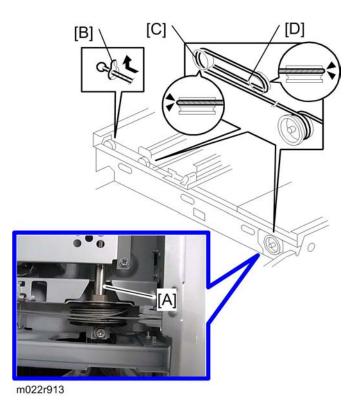
Reinstalling the Front Scanner Wire



- 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). Wind the left end clockwise.



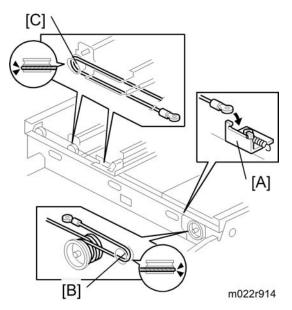
• The two blue marks [D] come together when you have done this. Stick the wire to the pulley with tape. This lets you easily handle the assembly at the time of installation.



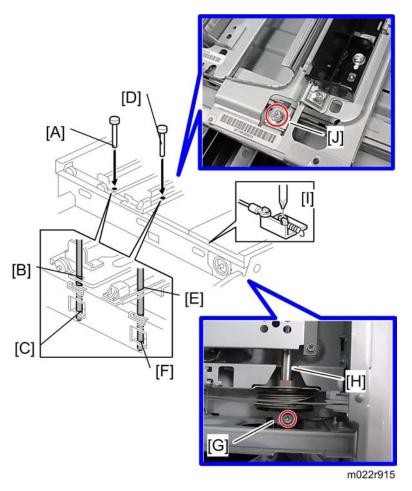
4. Install the drive pulley on the shaft [A].



- Do not secure the pulley to the shaft 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].



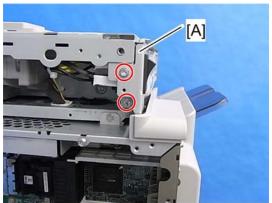
- 7. Remove the tape from the drive pulley.
- 8. Insert a scanner-positioning pin [A] through the 2nd carriage hole [B] and the left holes [C] in the front rail. Insert another scanner positioning pin [D] through the 1st carriage hole [E] and the right holes in the front rail [F].
- 9. Insert two more scanner positioning pins through the holes in the rear rail.
- 10. Install the white clip [G] and drive pulley to the shaft [H] (\mathcal{F} x 1).
- 11. Screw the scanner wire bracket to the front rail [1].
- 12. Screw the scanner wire holder [J].
- 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.89)
- 2. ARDF (**p.158)
- 1. Scanner top rear cover (p.91 "LED Board")



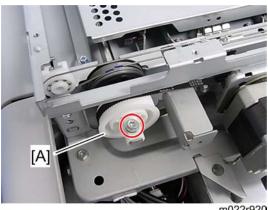
m022r918

2. Main power switch bracket [A] (🔊 x 2)



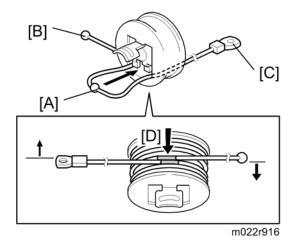
m022r919

3. Scanner rear frame [A] (*x 5)



- m022r920
- 4. White pulley [A] (*\beta x 1)
- 5. Follow steps 5 through 7 in the "Front Scanner Wire" Section. You can remove the rear scanner wire with the same manner for replacing the front scanner wire.

Reinstalling the Rear 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). Wind the right end [C] counterclockwise.



- The two blue 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 8 through 13 again in the "Reinstalling the Front Scanner Wire" Section.

Laser Optics

MARNING

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

Caution Decal Locations

Caution decals are attached as shown below.

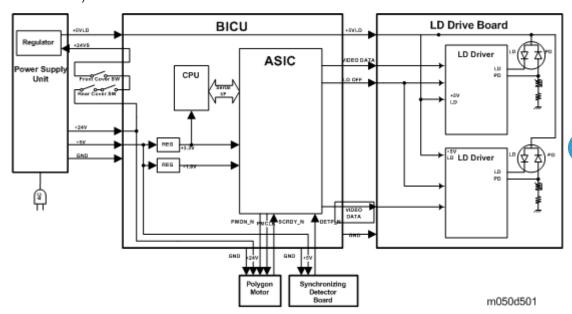


MARNING

 Be sure to turn off the main power switch and disconnect the power plug from the power outlet before beginning any disassembly or adjustment of the laser unit. This machine uses a class IIIb laser beam with a wavelength of 785 nm and an output of 6.2 mW. The laser can cause serious eye injury.

Safety Switches for Laser Unit

- Laser Exposure
- LD Safety Switch



A safety switch turns off when the front cover or the rear door is opened. As a result, the relay on the PSU cuts off the power supply (+5V) to the LD board. (The electric circuits go through the engine board) This system prevents unexpected laser emission, and ensures user safety and technician safety.

Laser Unit

The removal procedure of the "Preparation before Removing the Laser Unit" differs depending on the models. Refer to the target model under the "Preparation before Removing the Laser Unit".

Preparation before Removing the Laser Unit

For M052 models

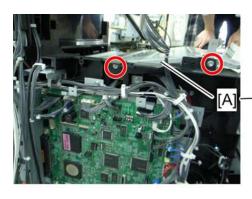
1. Output tray (p.86)

For M053 models

- 1. 1 bin tray unit (**p.199).
- 2. Output tray (**p**.86)

For M054 model

1. Internal finisher (**p.176)





m050r524

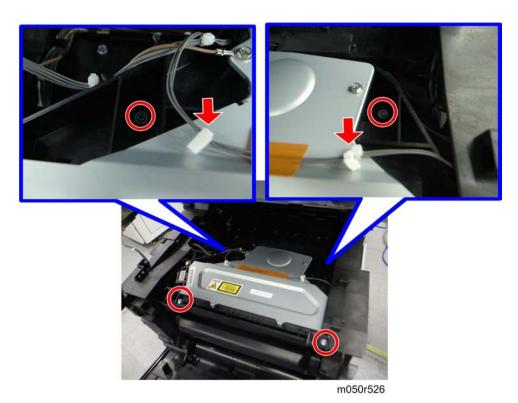
2. Finisher stay [A] (🗗 x 4)

Removing the Laser Unit for All Models



m050r525

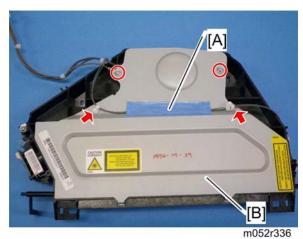
1. Remove the two ground cables (F x 1).



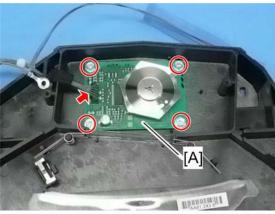
2. Laser unit (🗗 x 4, 🗂 x 2, 🖨 x 2)

Polygon Motor

1. Laser unit (**1**p.109)



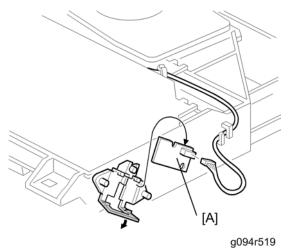
- 2. Remove the tape [A] on the laser unit cover.
 - Keep this tape. This tape is necessary when reassembling the laser unit.



4. Polygon motor [A] (\mathscr{F} x 4, \mathfrak{C} x 1)

Laser Synchronization Detector

1. Laser unit (**p**.109)



2. Laser synchronization detector [A] (🗂 x 1)

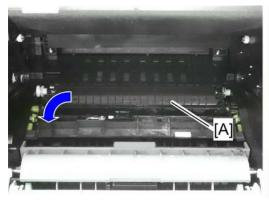
4

Paper Transfer

Transfer Roller



- 1. Open the front door.
- 2. AIO [A]



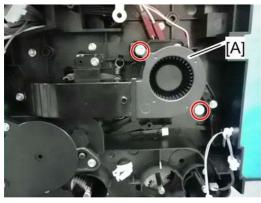


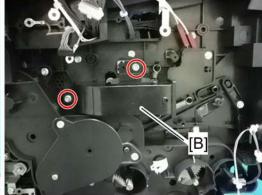
- 3. Pull the transfer roller holder [A].
- 4. Transfer roller [B]

Drive Section

Gearbox

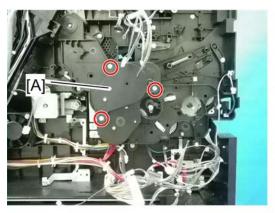
- 1. Left cover (p.77)
- 2. BICU bracket (p. 151)

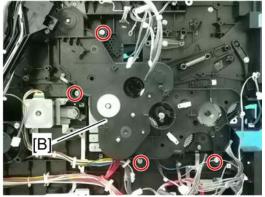




m052r215

- 4. AIO fan duct [B] (🗗 x 2)



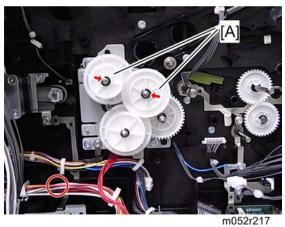


m052r216

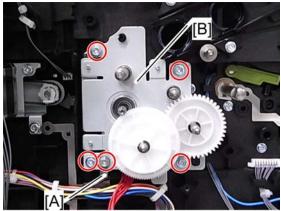
- 5. Gearbox cover [A] (🗗 x 3)
 - Hold the gearbox cover [A] while removing it. Otherwise, the spring inside the gearbox cover suddenly comes off.
- 6. Gearbox [B] (🗗 x 3)
 - Hold the gearbox [B] while removing it. Otherwise, the spring inside the gearbox suddenly comes off.

Main Motor

1. Gearbox (**P**p.114)

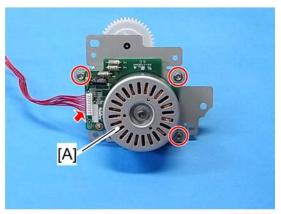


2. Drive gears [A] (© x 1 each)



m052r218

- 3. Ground plate [A] (🗗 x 1)
- 4. Main motor bracket [B] (🏲 x 4)

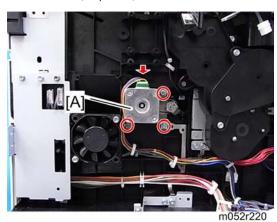


m052r219

5. Main motor [A] (🗗 x 1)

Duplex Motor

1. BICU bracket (**p**.151)



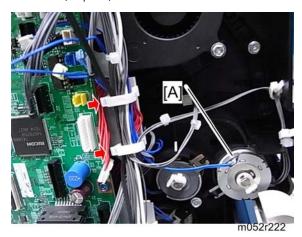
2. Duplex motor bracket (🎤 x 3, 📬 x 1)



3. Duplex motor [A] (\rat{F} x 2, timing belt x 1)

By-pass Feed Clutch

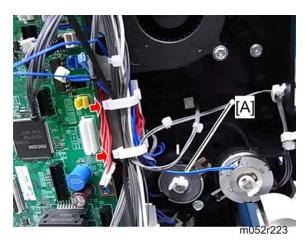
1. Left cover (1 p.77)



2. By-pass feed clutch [A] (♠ x 1, ♣ x 1, ♠ x 1,

Relay Clutch

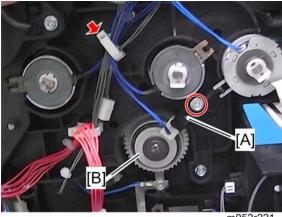
1. Left cover (**P**p.77)



1. By-pass feed clutch [A] (♠ x 1, ♣ x 1, ♠ x 1)

Paper Feed Clutch

1. BICU bracket (**p.151)

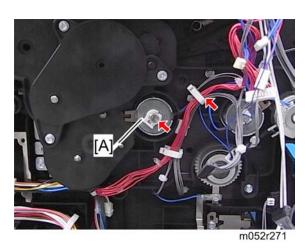


- m052r221
- 2. Clutch holder [A] (🗗 x 1)
- 3. Paper feed clutch [B] (🖨 x 1)

Registration Clutch

1. BICU bracket (**P**p.151)





2. Registration clutch [A] (♣ x 1, ♡ x 1)

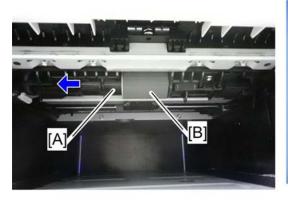
Paper Feed

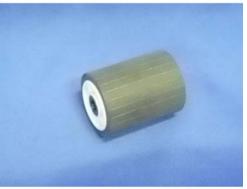
Paper Feed Roller



m052r331

1. Pull out the tray 1 [A].



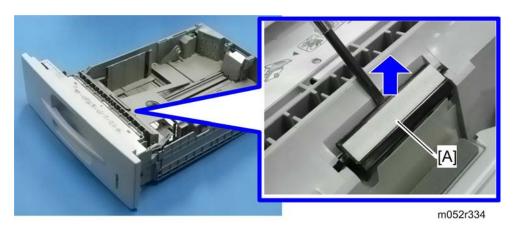


m052r229

- 2. Slide the paper feed roller shaft to the left.
- 3. Paper feed roller [B]

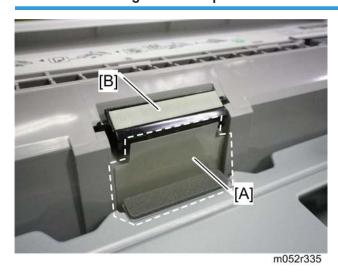
Friction Pad

1. Pull out the tray 1.



2. Friction pad [A] (hooks, spring x 1)

When reassembling the friction pad

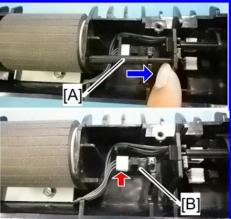


When reinstalling the friction pad, make sure that the mylar [A] is placed outside the friction pad.

Paper End Sensor

1. Pull out the tray 1.



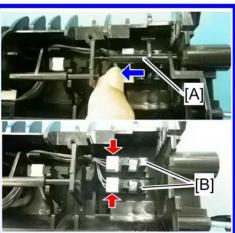


- 2. Filler [A] for the paper end sensor
- 3. Paper end sensor [B] (hooks, 📬 x 1)

Remaining Paper Sensors

1. Pull out the tray 1.

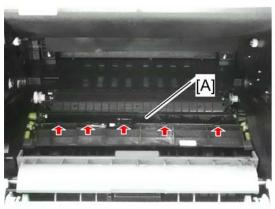


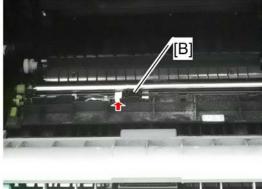


- 2. Filler [A] for the remaining paper sensors
- 3. Remaining paper sensors [B] (hooks, 🗂 x 1 each)

Registration Sensor

1. AIO (IPp.113 "Transfer Roller")

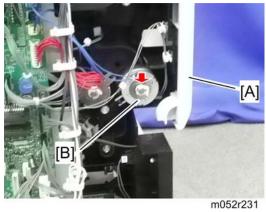




- 1. Registration roller guide cover [A] (hooks)
- 2. Registration sensor [B] (x 1)

By-pass Paper Sensor

1. Left cover (1 p.77)





2. Close the front door [A].

- 3. By-pass feed clutch [B] (🖾 x 1)
- 4. By-pass paper sensor [C] (hooks, 📬 x 1)

Duplex Relay Sensor

1. BICU bracket (**p.151)



3. Duplex relay sensor [A] (hooks, 📬 x 1)

When reassembling the duplex relay sensor



m052r272

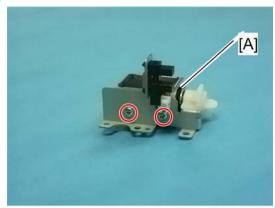
Keep the duplex relay sensor filler [A] downward with a thin tool when installing the duplex relay sensor. Otherwise, the sensor filler interrupts the duplex relay sensor installation.

Junction Gate 1 Solenoid

- 1. Open the duplex unit.
- 2. Left cover (1 p.77)
- 3. BICU bracket (**p.151)



- 4. Lift up the filler [A] of the fusing exit sensor when removing the junction gate 1 bracket.
- 5. Junction gate 1 solenoid bracket [B] (** x 2, ** x 2, ** x 2, ** spring x 1)



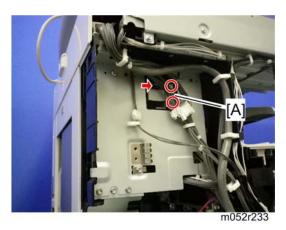
m052r277

6. Junction gate 1 solenoid [A] (🎤 x 2)

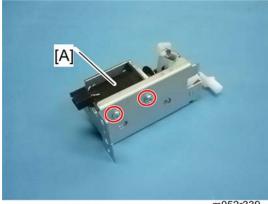
Junction Gate 2 Solenoid

1. Left cover (1 p.77)





2. Junction gate 2 solenoid bracket [A] (\square x 1, \mathscr{F} x 2)

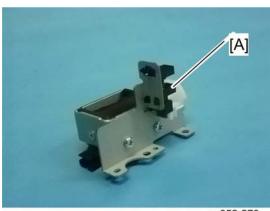


m052r339

3. Junction gate 2 solenoid [A]

Fusing Exit Sensor (M053 model only)

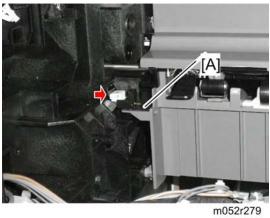
- 1. Left cover (1 p.77)
- 2. BICU bracket (**p.151)
- 3. Junction gate 1 solenoid bracket (*p.124 "Junction Gate 1 Solenoid")



4. Fusing exit sensor [A]

Paper Overflow Sensor (M052/M053 models only)

1. Output tray (**p.86)



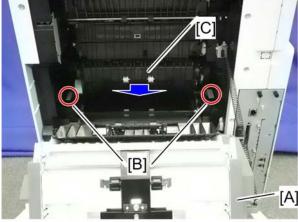
2. Paper overflow sensor [A] (hooks, 📬 x 1)

Fusing

Fusing Unit

ACAUTION

• Before handling the fusing unit, make sure that the unit is cool enough. The fusing unit can be very



m052r300

- 1. Open the duplex unit.
- 2. Release the lock levers.
- 3. Fusing unit.

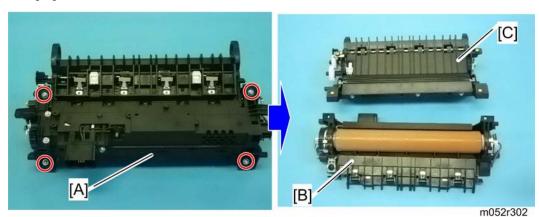
Hot Roller and Pressure Roller Sections

1. Fusing unit (**p** p.128)





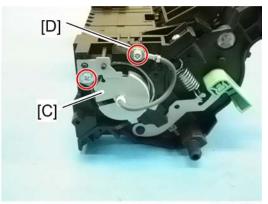
- 2. Fusing left cover [A] (* x 1)
- 3. Fusing right cover [B] (F x 1)



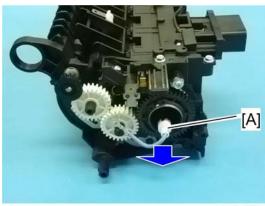
4. Separate the fusing unit [A] into two sections (** x 4): the hot roller section [B] and the pressure roller section [C]

Fusing Lamp

- 1. Fusing unit (p.128)
- 2. Fusing left and right covers (**p.128 "Hot Roller and Pressure Roller Sections")



- 3. Lamp left stay [A] (🗗 x 1)
- 4. Remove the screw [B] on the left terminal of the fusing unit.
- 5. Lamp right stay [C] (F x 1)
- 6. Remove the screw [D] on the right terminal of the fusing unit.



m052r304

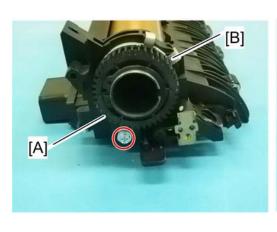
7. Fusing lamp [A]

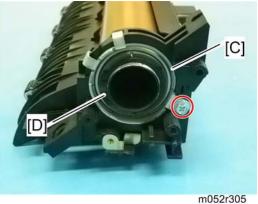
Hot Roller

ACAUTION

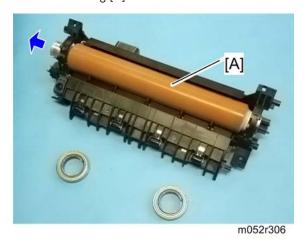
- Do not touch the fusing lamp and rollers with your bare hands.
- 1. Hot roller section (**p.128 "Hot Roller and Pressure Roller Sections")
- 2. Fusing lamp (p. 129)







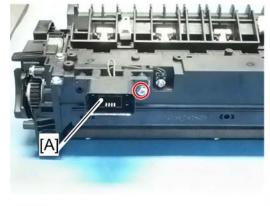
- 3. Hot roller gear [A] (c-ring x 1)
- 4. Hot roller left stay [B] (> x 1)
- 5. Hot roller right stay [C] (*x 1)
- 6. Remove the c-ring [D].

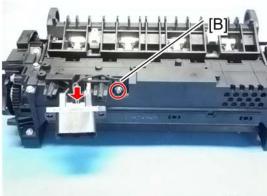


- 7. Hot roller [A] (bearing x 2, insulator x 2)
 - Slowly pull out the hot roller from the hot roller section not to damage the hot roller due to the five stripper pawls on the hot roller section.

Fusing Thermistor

1. Fusing unit (p.128)

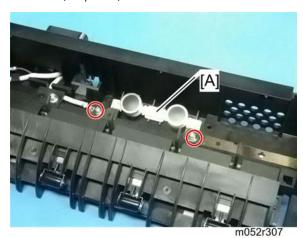




- 2. Fusing drawer connector [A] (F x 1)
- 3. Fusing thermistor [B] (> x 1, 📬 x 1)

Thermostats

1. Hot roller (p.130)



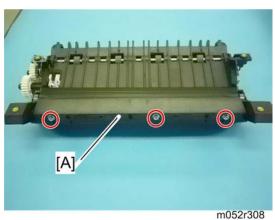
2. Thermostats [A] (🗗 x 2)

ACAUTION

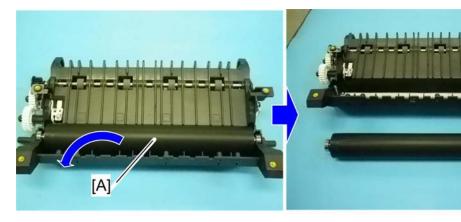
• Do not recycle thermostats that are already opened. Safety is not guaranteed if you do this.

Pressure Roller

1. Pressure roller section (** p.128 "Hot Roller and Pressure Roller Sections")



2. Fusing entrance guide [A] (** x 3)

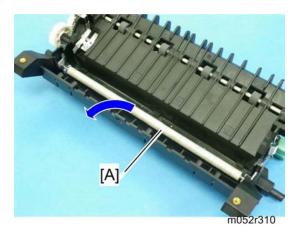


m052r309

3. Pressure roller [A] (bearing x 2)

Fusing Cleaning Roller

- 1. Pressure roller section (p. 128)
- 2. Pressure roller (**p.132r)

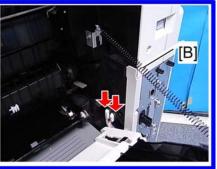


3. Fusing cleaning roller [A]

Duplex Unit

Duplex Unit





m052r105

- 1. Open the duplex unit [A].
- 2. Release the spring [B] and two harnesses of the duplex unit.

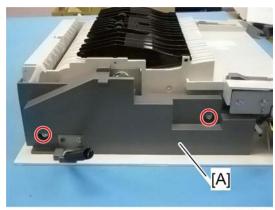


m052r106

3. Duplex unit [A]

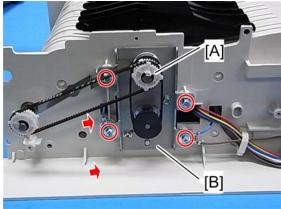
Duplex Inverter Motor

1. Duplex unit (**p.135)



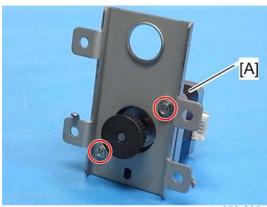
m052r236

2. Duplex left cover [A] (F x 2)



m052r234

- 3. Gear [A] (\mathfrak{C} x 1, timing belt x 2)
- 4. Duplex inverter motor bracket [B] (\mathscr{F} x 4, 📬 x 1)
 - Two of these screws secure the ground cables (blue and gray cords).

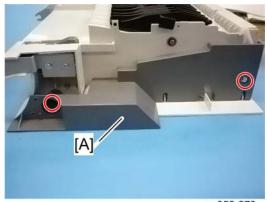


m052r235

5. Duplex inverter motor [A] (** x 2)

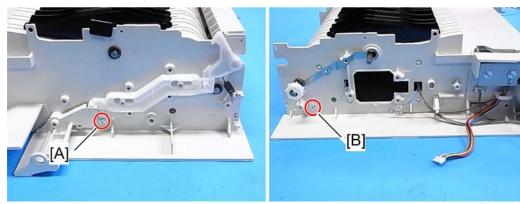
Duplex Exhaust Fan

- 1. Duplex unit (**p.135)
- 2. Duplex left cover (** p.135 "Duplex Inverter Motor")



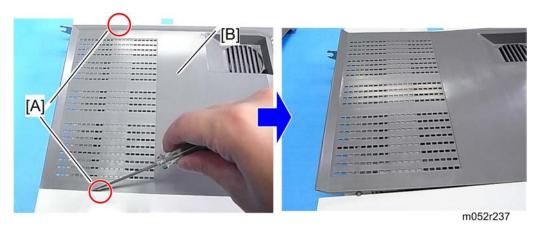
m052r273

3. Duplex right cover [A] (* x 2)

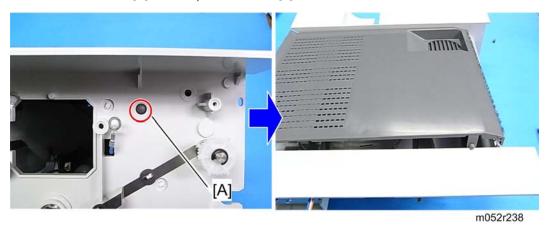


m052r274

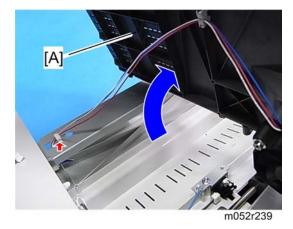
4. Remove screw [A] on the left of the duplex unit and screw [B] on the right of the duplex unit.



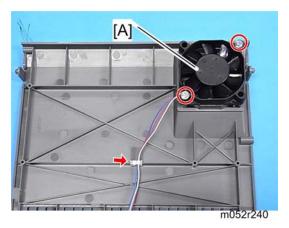
5. Release the two bosses [A] of the duplex rear cover [B].



6. Release the boss [A] on the left side.



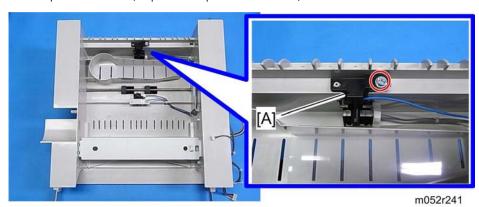
7. Slowly turn over the duplex rear cover [A], and then remove it (> x 1).



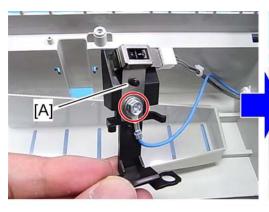
8. Duplex exhaust fan [A] (🗗 x 2, 🖼 x 1).

Duplex Inverter Sensor

- 1. Duplex unit (p. 135)
- 2. Duplex rear cover (**p.137 "Duplex Exhaust Fan")



1. Sensor holder [A] (🗗 x 1)

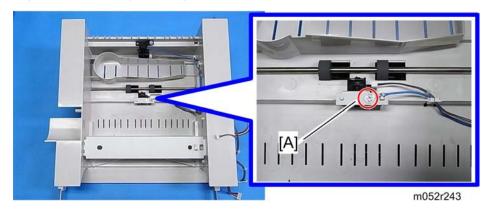




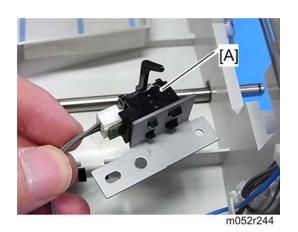
- 2. Ground plate [A] (🗗 x 1)
- 3. Duplex inverter sensor [B] (hooks, 📬 x 1)

Duplex Entrance Sensor

- 1. Duplex unit (**p.135)
- 2. Duplex rear cover (*p.137 "Duplex Exhaust Fan")



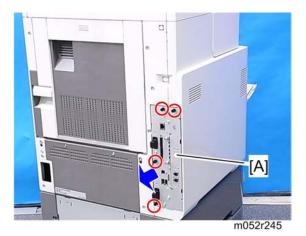
3. Duplex entrance sensor bracket [A] (🗗 x 1)



4. Duplex entrance sensor [A] (hooks, \square x 1)

Electrical Components

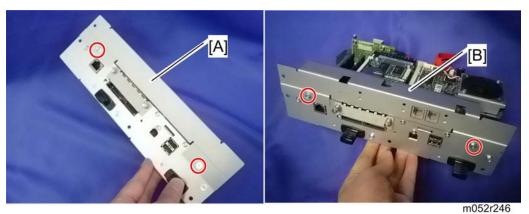
Controller Unit



1. Controller unit [A] (F x 4)

HDD Unit

1. Controller unit (Pp.142)

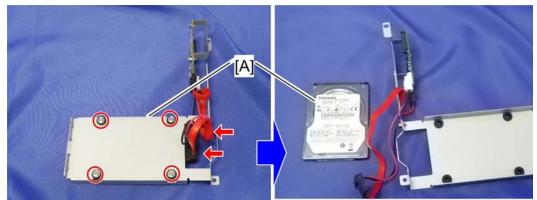


2. Fax slot bracket [A] (\ref{P} x 2) or fax unit [B] if it has been installed (\ref{P} x 2)



m052r247

3. HDD unit bracket [A] (🗗 x 4)

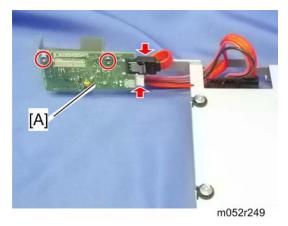


m052r248

4. HDD unit [A] (🗗 x 4, 🗂 x 2)

HDD Control Board

- 1. Controller unit (IPp.142)
- 2. HDD unit bracket (IPp.142 "HDD Unit")



NVRAM

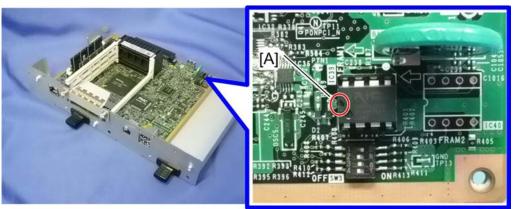
- 1. Controller unit (IPp.142)
- 2. HDD unit bracket (** p.142 "HDD Unit")



3. NVRAM [A]

T

When reinstalling a new NVRAM



m052r251

Make sure that you have the SMC report (factory settings). This report comes with the machine.

- 1. Print the SMC data ("ALL") using SP5-990-001.
- 2. Turn off the main switch.
- 3. Remove the VM card from SD card Slot 2 (Lower).
- 4. Insert a blank SD card into Slot 2 (Lower), and then turn on the main power switch.
- 5. Upload the NVRAM data to the blank SD card using SP5-824-001 (NVRAM Data Upload).
- 6. Turn off the main power switch, and then unplug the AC power cord.
- 7. Remove the SD Card containing the NVRAM data from Slot 2 (Lower).
- 8. Replace the NVRAM on the Controller Board with a new one.
- 9. Plug in the AC power cord, and then turn on the main power switch

- When you do this, SC995-02 (Defective NVRAM) will be displayed. However, do not turn
 off the main power switch. Continue this procedure.
- 10. Re-insert the SD card that you removed in Step 7 back into Slot 2 (Lower)
- 11. Download the old NVRAM data from the SD card onto the new NVRAMs using SP5-825-001 (NVRAM Data Download).



- This will take about 2 or 3 minutes.
- 12. Turn off the main power switch, and then remove the SD card from Slot 2 (Lower).
- 13. Insert the VM card into Slot 2 (Lower).
- 14. Turn on the main power switch.

15. Print the SMC data ("ALL") using SP5-990-001, and make sure that it matches the SMC data you printed out in Step 1 above (except for the value of the total counter).



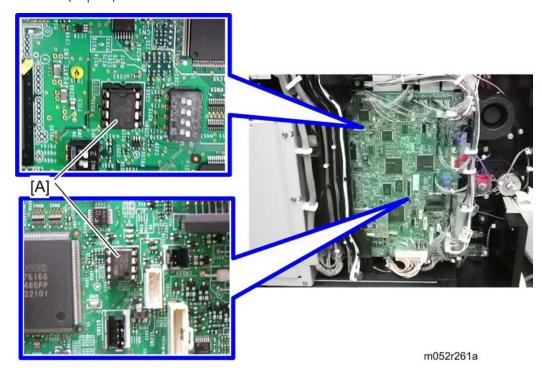
• The value of the total counter is reset to "0" when the NVRAM is replaced.

Mportant (

- Do all of the following if SP5-824-001 (NVRAM Data Upload) and SP5-825-001 (NVRAM Data Download) cannot be performed for some reason:
- 1. Replace the NVRAM and Security SD card together as a set with new ones.
- 2. Manually enter all data on the SMC report (factory settings).
- 3. Install the new Security SD card functions (Data overwrite and HDD encryption) again. See RTB #RGene039 for the procedure.

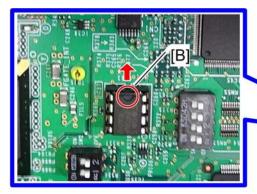
EEPROMs

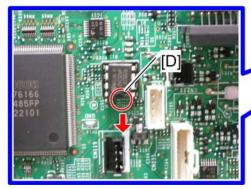
1. Left cover (1 p.77)

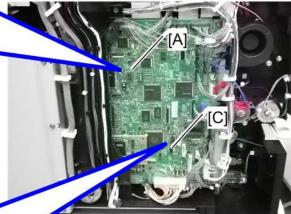


2. EEPROMs [A]

When reinstalling a new EEPROM







m052r261

- 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 2 (lower slot). Then turn the main power on.
- 5. Copy the EEPROM data to an SD card (SP5-824-001) if possible.
- 6. Turn off the main switch. Then unplug the power cord.
- 7. Replace the EEPROM on the BICU and reassemble the machine.
- 8. Install a new EEPROM (labeled FRAMO) in the upper slot [A] with the half-disk mark [B] facing the upward and EEPROM (labeled FRAM1) in the lower slot [C] with the half-disk mark [B] facing the downward.



- Make sure that a FRAMO EEPROM and FRAM1 EEPROM are installed in the correct position.
- 9. Plug in the power cord. Then turn the main switch on.
- 10. Copy the data from the SD card to the EEPROM (SP5-825-001) if you have successfully copied them to the SD card.
- 11. Turn the main switch off. Then remove the SD card from SD card slot 2 (lower slot).

- 12. Turn the main switch on.
- 13. Specify the SP and UP mode settings.

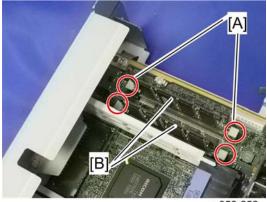
If NVRAM Data Upload and Download cannot be done for BICU EEPROMs:

Do all of the following procedure if **SP5-824-001** (NVRAM Data Upload) and SP5-825-001 (NVRAM Data Download) cannot be performed for some reason:

1. Manually enter all data on the SMC report (factory settings).

DIMM RAM

1. Controller unit (p.142)



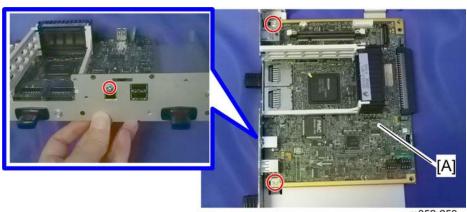
m052r252

2. Release the locks [A], and then remove the DIMM RAM(s) [B]

Controller Board

- 1. Controller unit (p. 142)
- 2. DIMM RAMs (p. 148)
- 3. HDD unit bracket (IPp.142 "HDD Unit")
- 4. NVRAM (p. 144)

1



m052r253

5. Controller board with rails [A] (F x 3)



m052r259

- 6. Two Rails [A]
- 7. Controller board [B]

When installing a new controller board

- 1. Remove the NVRAM from the old controller board.
- 2. Install the NVRAM on a new controller board after you replace the controller board.
- 3. Reassemble the machine.
- 4. Turn on the main power of the machine



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

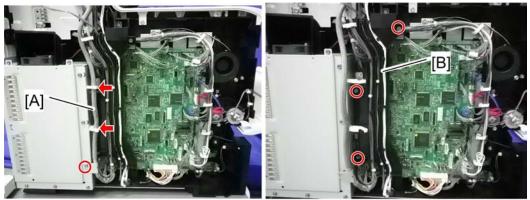
ACAUTION

- Keep NVRAM 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.

BICU

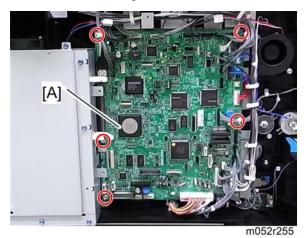
BICU

1. Left cover (1 p.77)



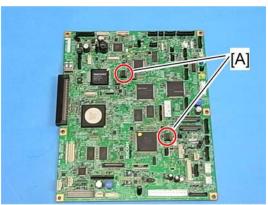
b829i602

- 2. Take aside the scanner I/F cable [A] (\rat{F} x 1, $\rat{ }$ x 2).
- 3. Take aside the harness guide [B] (*x 3).



4. BICU [A] (🗗 x All, 🖨 x all, 🗗 x 6)

1



m052r255a

5. EEPROMs [A]

When installing a new BICU

- 1. Remove the EEPROM from the old BICU.
- 2. Install the EEPROM on the new BICU after you replace the BICU.
- 3. Reassemble the machine.
- 4. Turn on the main power of the machine.
- 5. "SC995-01" occurs.
- 6. Enter the SP mode, and then select SP5-811-004.
- 7. Enter the serial number with SP5-811-004, and then exit the SP mode.
- 8. Turn the main power of the machine off and on.



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

ACAUTION

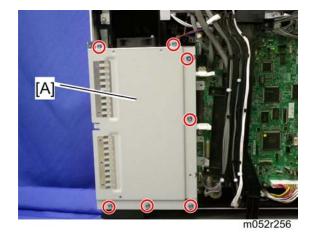
 Keep an EEPROM away from any objects that can cause static electricity. Static electricity can damage EEPROM data.

BICU Bracket

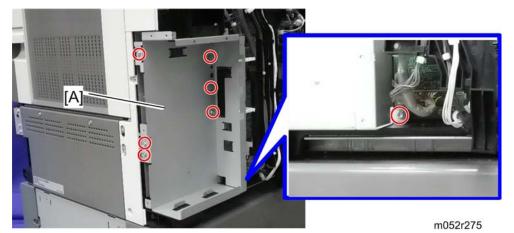
- 1. Left cover (1 p.77)
- 2. Controller unit (IPp.142)



3. Take aside the scanner I/F cable [A] ($\mbox{\ensuremath{\not\sim}} \times 1$, $\mbox{\ensuremath{\ensuremath{\bowtie}}} \times 2$).

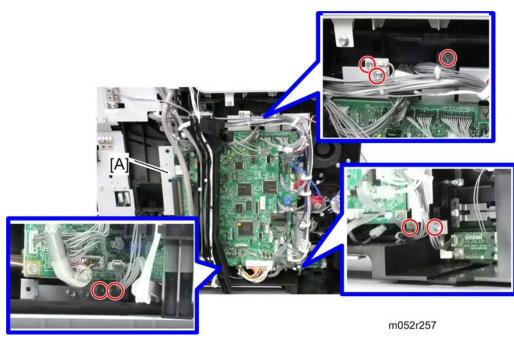


4. Controller box cover [A] (🗗 x 7)



5. Controller box [A] (🗗 x 6)

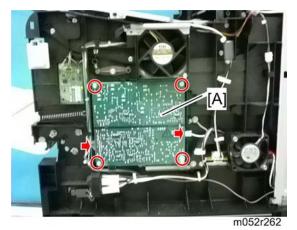




6. BICU bracket [A] (🗗 x all, 🖨 x all, 🗗 x 7)

HVPS (High Voltage Power Supply)

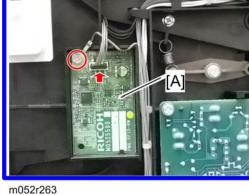
1. Right cover (1 p.77)

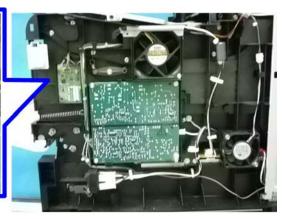


2. HVPS [A] (🔊 x4, 📬 x 2)

RFID Board

1. Right cover (**P**p.77)

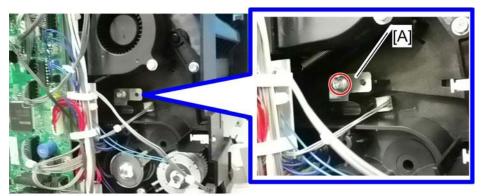




2. RFID board [A] (□ x 1, x 1, hook)

Toner End Sensor

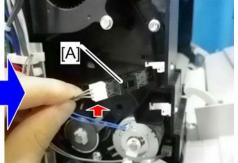
1. Left cover (**p**.77)



m052r264

2. Sensor holder [A] (🗗 x 1)





m052r338

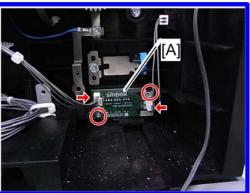
3. Toner end sensor [A] (X 1)

4

Paper Size Sensor Board

1. Left cover (1 p.77)





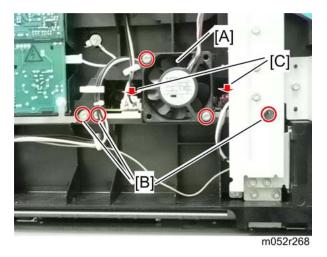
2. Paper size sensor board [A] (🖾 x 2, 🎉 x 2)

PSU

- 1. Left cover (1 p.77)
- 2. Right cover (**p.77)



- 3. Rear left middle cover [A] (F x 2)
- 4. Rear left lower cover [B] (** × 2)
- 5. Rear lower cover [C] (F x 2)
- 6. Duplex unit (p. 135)

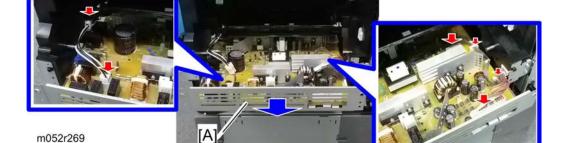


- 7. Take aside the PSU fan [A] on the right of the machine ($\mathcal{F} \times 2$).
- 8. Remove three screws [B] and disconnect two cables [C] on the right of the PSU.



9. PSU cover [A]

- 10. Pull the PSU [B] little bit.
 - Do not pull the PSU fully at this time. Some cables and harnesses are connected.



RTB 95

Caution: Some parts of the PSU retain

See the diagrams in this RTB for details.

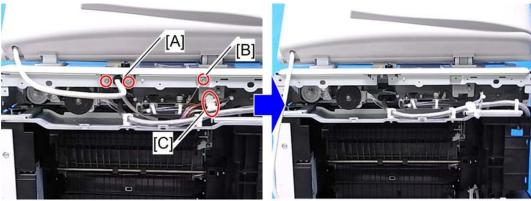
charge for a long period after disconnecting

- 12. Pull out the PSU [A] from the machine.

ARDF

ARDF

1. Scanner rear cover (Fp.89)



m052r260

- 2. IF cable bracket [A] (** x 2)
- 3. Remove the ground cable [B] (\mathcal{F} x 1).
- 4. Disconnect two connectors [C].

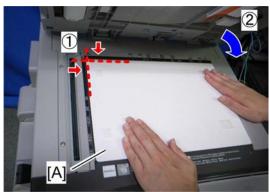


m052r520

- 5. Remove the screw [A].
- 6. Lift the ARDF [B].

4

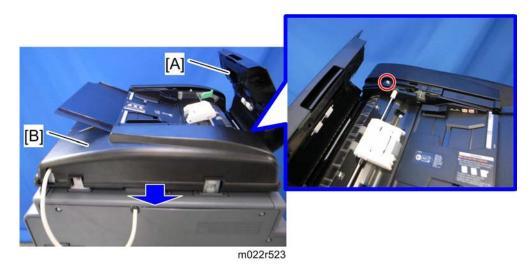
When installing the Platen Sheet



m022i537

When setting the platen cover [A], it is necessary to have a gap (1 to 2 mm) on the upper side and on the left side.

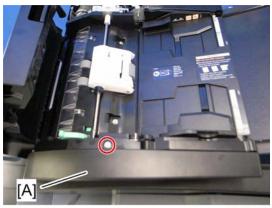
ARDF Rear Cover



- 1. Open the ARDF left cover [A].
- 2. ARDF rear cover [B] (🗗 x 1)

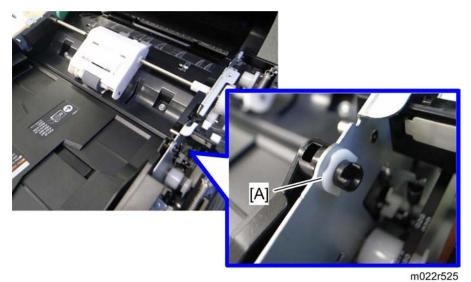
ARDF Front Cover and Original Tray

1. ARDF rear cover (Pp.159)

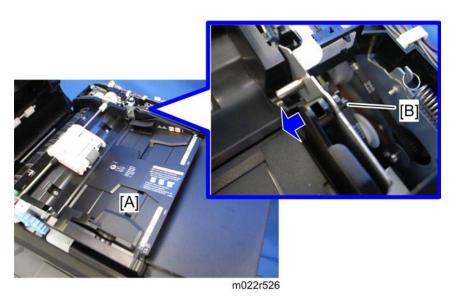


m022r524

2. ARDF front cover [A] (🗗 x 1)



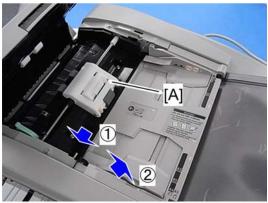
3. Remove the snap ring [A].



4. Remove the original tray [A], and release the rear shaft [B].

Original Feed Unit

1. Open the ARDF left cover (**p.159 "ARDF Rear Cover").



m022r816

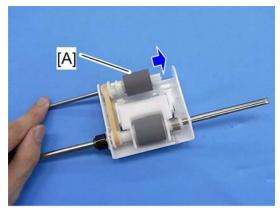
2. Original feed unit [A].

Pick-Up Roller

1. Original feed unit (1 p.161)

m022r817

2. Slide the shaft [A] (hook x 1).

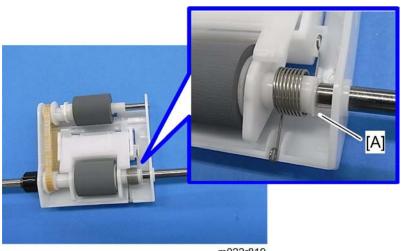


m022r818

3. Pick-up roller [A]

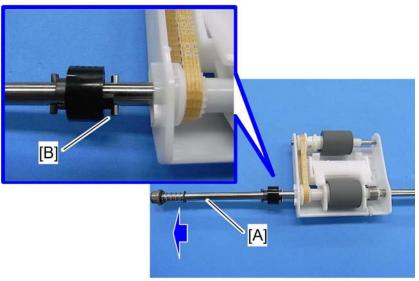
Feed Roller

1. Original feed unit (**p.161)



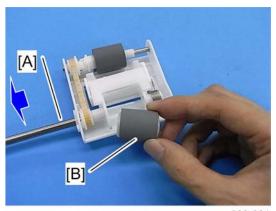
m022r819

2. Remove the clip [A].



m022r820

3. Slide the shaft [A], and then remove the pin [B].

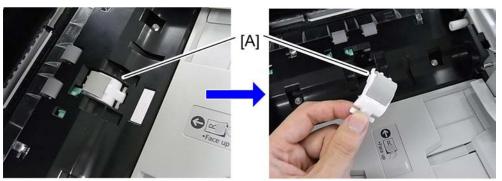


m022r821

4. Slide the shaft [A], and then remove the feed roller [B].

ARDF Friction Pad

1. Original feed unit (**p.161)

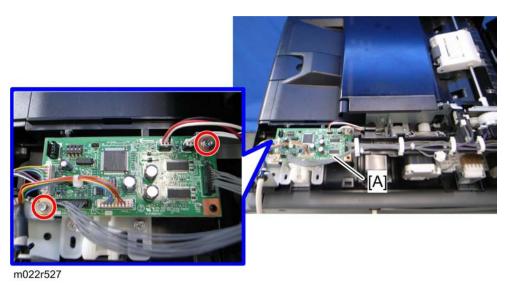


m022r822

2. ARDF friction pad [A] (hooks)

ARDF Drive Board

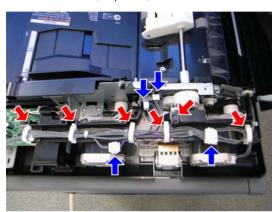
1. ARDF rear cover (**p.159)



2. ARDF drive board [A] (*x 2, all * s)

Original Set Sensor and ARDF Top Cover Sensor

1. ARDF rear cover (**p.159)



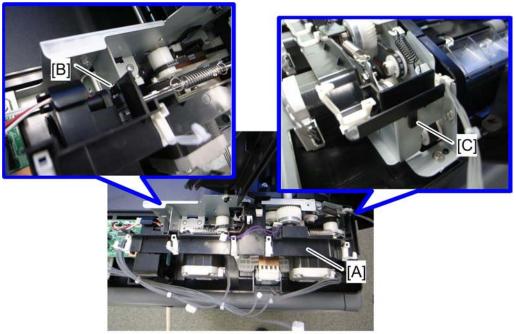
m022r528

2. Release the six clamps and disconnect the four connectors.



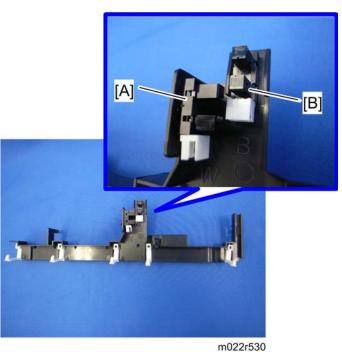
m022r826

3. Remove the screw.



m022r529

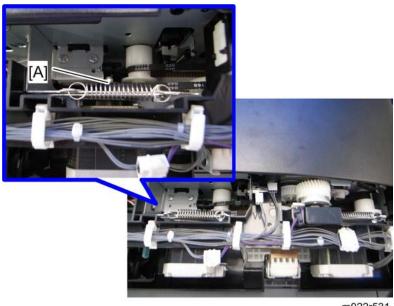
4. Remove the harness guide [A], and release the hooks [B] [C].



- 5. ARDF top cover sensor [A] (hooks)
- 6. Original set sensor [B] (hooks)

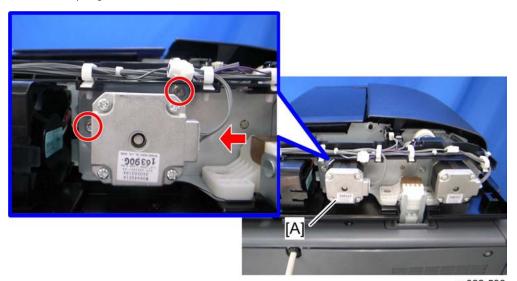
ARDF Feed Motor

1. ARDF rear cover (Pp.159)



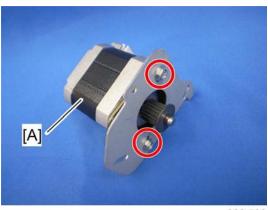
m022r531

2. Remove the spring [A].



m022r532

3. ARDF feed motor with bracket [A] ($\mbox{\ensuremath{\not{P}}} \times 2$, $\mbox{\ensuremath{\not{\square}}} \mbox{\ensuremath{\not{\square}}} \times 1)$

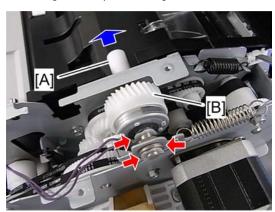


m022r533

4. ARDF feed motor [A] (*x 2)

ARDF Feed Clutch

- 1. ARDF rear cover (Pp.159)
- 2. Harness guide (** p. 165 "Original Set Sensor and ARDF Top Cover Sensor")



m022r827

3. Slide the shaft [A], and then ARDF feed clutch [B] ($\overline{\otimes}$ x 2, bushing x 1)

ARDF Transport Motor

1. ARDF rear cover (1 p. 159)



m022r534

2. Remove the spring [A].



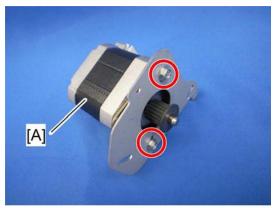
m022r535

- 3. Disconnect the harness of the transport motor [A].
- 4. Release the hook [B] of the harness guide.



m022r536

5. ARDF transport motor with bracket [A] (\ref{eq} x 2)

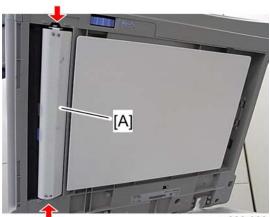


m022r533

6. ARDF transport motor [A] (\ref{P} x 2)

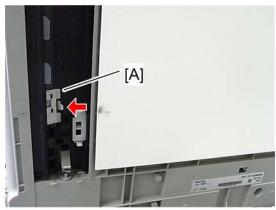
ARDF Registration Sensor

1. Open the ARDF.



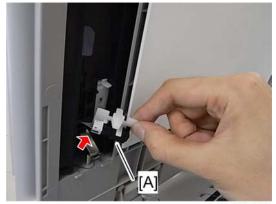
m022r828

2. Bracket [A] (hook x 2)



m022r829

3. ARDF registration sensor holder [A] (hook x 1)

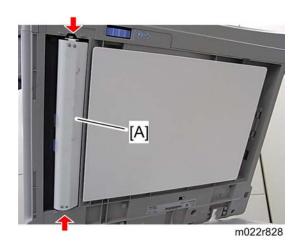


m022r830

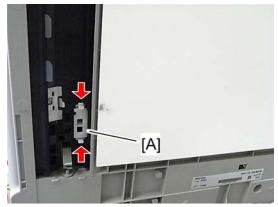
4. ARDF registration sensor (🖼 x 1, hooks)

ARDF Inverter Sensor

1. Open the ARDF.



2. Bracket [A] (hook x 2)



m022r831

3. ARDF inverter sensor holder [A] (hook \times 2)



4. ARDF inverter sensor (🗂 x 1, hooks)

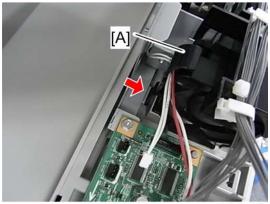
ARDF Cooling Fan

1. ARDF rear cover (**p.159)



m022r823

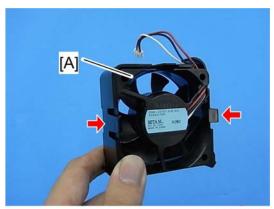
2. Disconnect the four connectors.



m022r824

3. ARDF cooling fan cover [A] (hook \times 1)

4



m022r825

4. ARDF cooling fan [A] (hook x 2)

When installing the cooling fan

Make sure that the cooling fan is installed with its decal facing the left of the machine.

Internal Finisher



• This section is for the finisher model (M054).

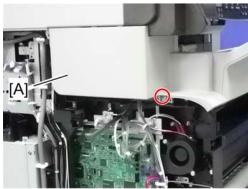
Internal Finisher

- 1. Left cover (**p**.77)
- 2. Right cover (1 p.77)



m052r536

3. Remove the two screws.



m052r516

4. Finisher left cover [A] (** x 1)

Λ



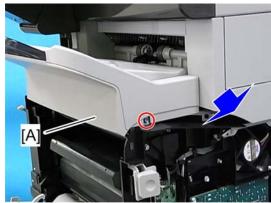
m052r537

5. Disconnect the connector.



m052r538

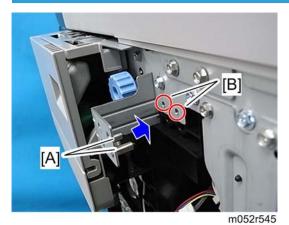
6. Remove the screw.



m052r539

7. Slide the internal finisher [A] to the right, and then remove it ($\mbox{\ensuremath{\not\sim}}\ x\ 1).$





Make sure that the pins [A] are installed in the holes [B].

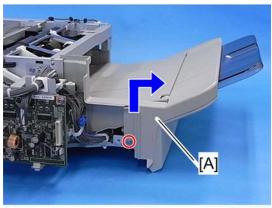
Finisher Output Tray Unit

1. Internal finisher (p.176)



2. Finisher right cover [A] (🗗 x 1)

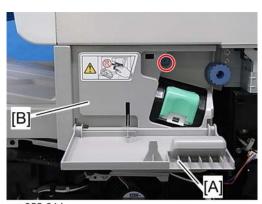




m052r313

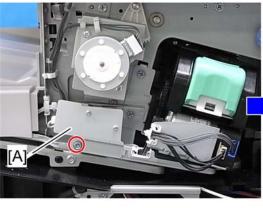
3. Finisher output tray unit [A] (F x 1)

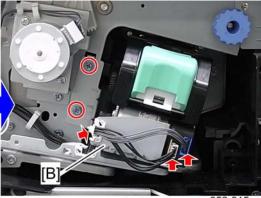
Stapler Unit



m052r314

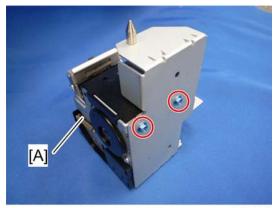
- 1. Open the stapler door [A].
- 2. Finisher right cover [B] (** x 1)





m052r315

- 3. Stapler door switch bracket [A]
- 4. Stapler unit bracket [B] ($\mathscr{F} \times 2$, $\overset{\triangle}{\hookrightarrow} \times 1$, $\overset{\square}{\square} \times 2$)



m022r636

5. Stapler unit [A] (🗗 x 2)

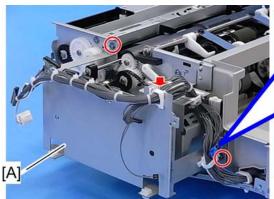
Gathering Roller Motor

1. Internal finisher (**P**p.176)





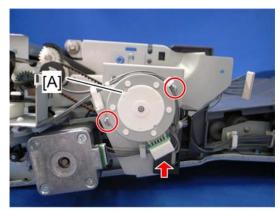
2. Finisher main board [A] (🌶 x 2, 📬 x all)





m052r317

3. Finisher main board bracket [A] ($\rat{p} \times 2$, $\rat{less} \times 3$)

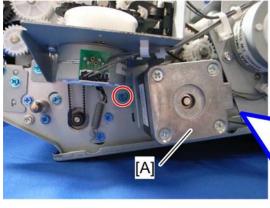


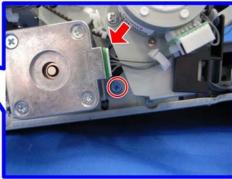
m022r637

4. Gathering roller motor [A] (\mathscr{F} x 2, \mathfrak{CII} x 1)

Finisher Paper Exit Motor

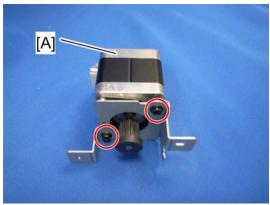
1. Internal finisher (Pp. 176)





m022r638

2. Paper exit motor bracket [A] (🎤 x 2, 🗂 x 1)



m022r639

3. Paper exit motor [A] (\rat{P} x 2)

Shift Roller Motor

- 1. Internal finisher (Pp.176)
- 2. Finisher paper exit motor bracket (IPp. 182 "Finisher Paper Exit Motor")

4

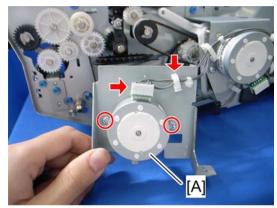






m022r790

3. Shift roller motor bracket [A] (\rat{P} x 2)



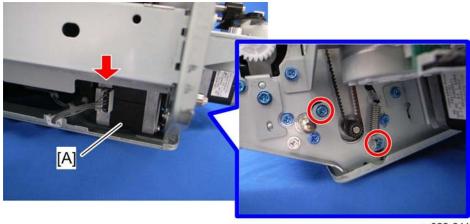
m022r640

4. Shift roller motor [A] ($\ref{p} \times 2$, $\ref{10} \times 1$, $\ref{10} \times 1$

Finisher Transport Motor

1. Internal finisher (**p.176)



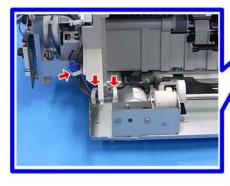


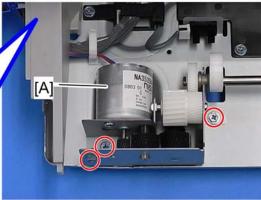
m022r641

2. Finisher transport motor (🎤 x 2, 📬 x 1)

Tray Lift Motor

- 1. Internal finisher (**P**p.176)
- 2. Finisher output tray unit (IPp. 178)





m052r318

3. Tray lift motor bracket [A] ($\ref{p} \times 3$, $\ref{1.0} \times 1$, $\ref{1.0} \times 3)$

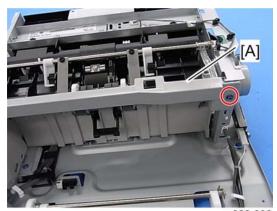




4. Tray lift motor [A] (\mathcal{F} x 2)

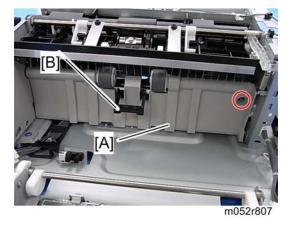
Jogger Fence HP Sensor

- 1. Internal finisher (**p.176)
- 2. Finisher output tray unit (IPp.178)



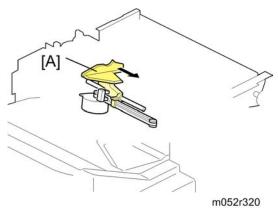
m022r806

3. Finisher top front cover [A] (** x 1).



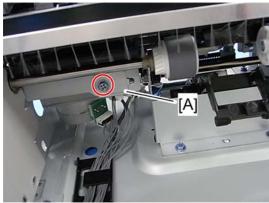
4. Paper exit cover [A] (🗗 x 1)

• Pull up the paper sensor actuator [B] when removing the guide plate.



moozio

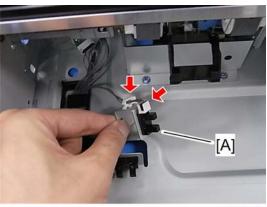
5. Move the left jogger [A] to the center.



m022r808

6. Jogger fence HP sensor bracket [A] (\rat{P} x 1).



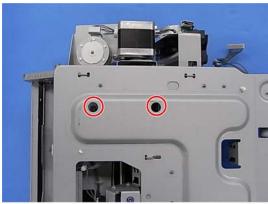


m022r809

7. Jogger fence HP sensor [A] (🗗 x 1, 🖨 x 1, hooks)

Jogger Motor

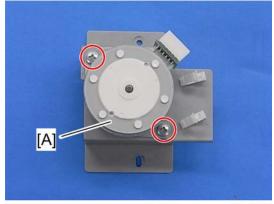
- 1. Internal finisher (**P**p.176)
- 2. Finisher output tray unit (**p.178)
- 3. Finisher transport motor (**p.183)
- 4. Jogger fence HP sensor bracket (***p.185 "Jogger Fence HP Sensor")



m022r810

5. Remove the two screws.

6. Jogger motor bracket [A] (\square x 1, \square x 2)



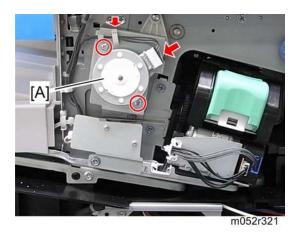
m022r813

7. Jogger motor [A](** x 2)

Exit Guide Plate Motor

1. Finisher right cover (p.179 "Stapler Unit")

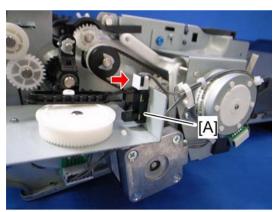




2. Exit guide plate motor [A] (*x 2, *\frac{1}{2} x 1, *\frac{1}{2} x 1)

Shift Roller HP Sensor

- 1. Internal finisher (**P**p.176)
- 2. Finisher main board bracket (*** p.180 "Gathering Roller Motor")

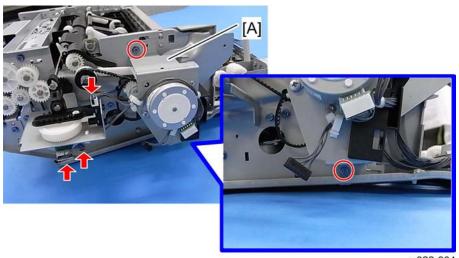


m022r642

3. Shift roller HP sensor [A] (🗂 x 1, hooks)

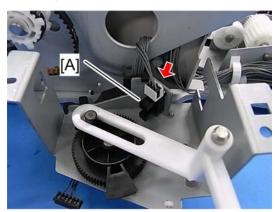
Gathering Roller HP Sensor

- 1. Internal finisher (**p**.176)
- 2. Finisher main board bracket (**p.180 "Gathering Roller Motor")



m022r804

3. Gathering roller motor bracket [A] ($\rat{P} \times 2$, $\rat{CP} \times 2$, $\rat{CP} \times 2$)



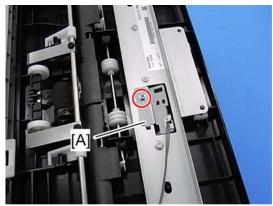
m022r805

4. Gathering roller HP sensor [A] (🗗 x 1, hooks)

Finisher Entrance Sensor

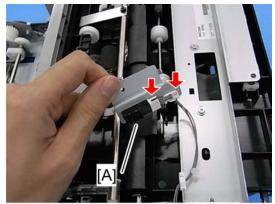
1. Internal finisher (**P**p.176)





m022r798

2. Finisher entrance sensor bracket [A] (${\cal F} \times 1$)



m022r799

3. Finisher entrance sensor [A] (\square x 1, \square x 1)

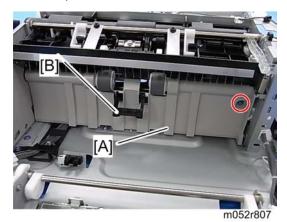
Finisher Exit Sensor

- 1. Internal finisher (IPp. 176)
- 2. Finisher output tray unit (Fr. p. 178)



m022r806

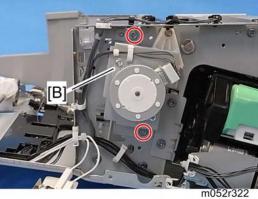
3. Finisher top front cover [A] (*x 1).



4. Paper exit cover [A] (** x 1)

• Pull up the paper sensor actuator [B] when removing the guide plate.



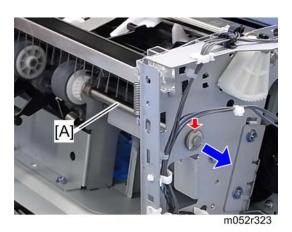


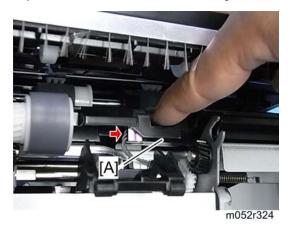
5. Stapler door switch bracket [A] (🏲 x 1)

6. Exit guide plate motor bracket [B] (F x 2)

1



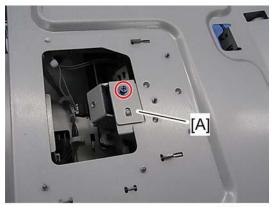




8. Finisher paper exit sensor [A] (hooks, 📬 x1)

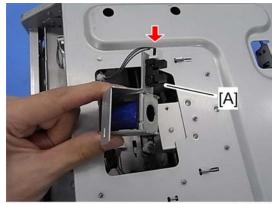
Finisher Paper Sensor

1. Internal finisher (p.176)



m022r800

2. Finisher paper sensor bracket [A] ($\rat{p} \times 1$)

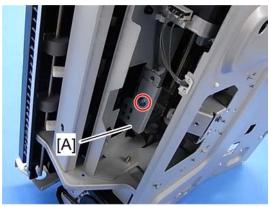


m022r801

3. Finisher paper sensor [A] (🗗 x 1, hooks)

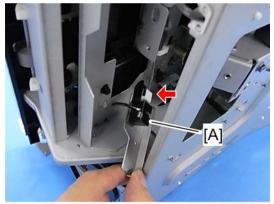
Staple Tray Paper Sensor

1. Internal finisher (**P**p.176)



m022r802

2. Staple tray paper sensor bracket [A] (\rat{p} x 1)



m022r803

3. Staple tray paper sensor [A] (🗗 x 1, hooks)

Tray Lower Limit Sensor

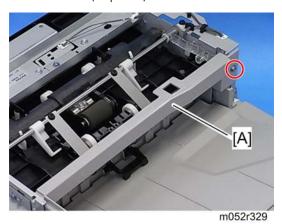
- 1. Internal finisher (IPp.176)
- 2. Finisher output tray unit (**p.178)



3. Tray lower limit sensor [A] (\square x 1, hooks).

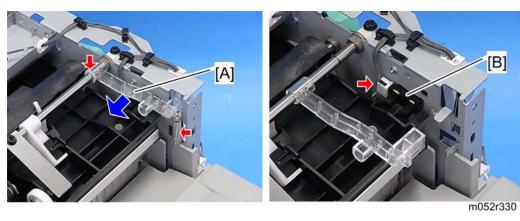
Exit Guide Plate HP Sensor

1. Internal finisher (**P**p.176)



2. Finisher top front cover [A]

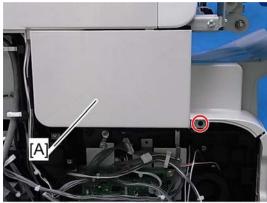




- 3. Slide the exit guide plate stopper [A] to the left (${\overline{\mathbb{O}}}\times 1$, spring x 1).
- 4. Exit guide plate HP sensor [B] (hooks, 📬 x 1)

Finisher Main Board

1. Left cover (1 p.77)



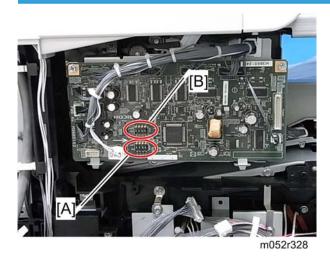
m052r326

2. Finisher left cover [A] (** x 1)



3. Finisher main board [A] (\mathscr{F} x 2, CII x all)

When reinstalling a new finisher main board



Check the DIP switches (SW100: [A], SW101: [B]) on the old main board. If the settings on the new finisher main board are different from the old finisher main board, change the settings on the new board (they must be the same as the settings on the old board).

4

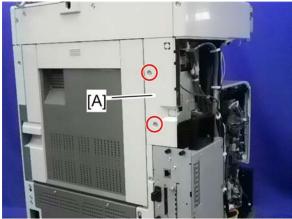
1 Bin Tray Unit



• This section is for the fax and 1 bin tray unit model (M053).

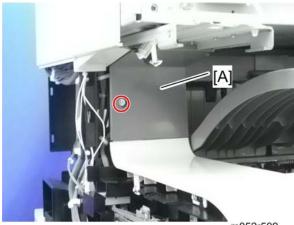
1 Bin Tray Unit

- 1. Left cover (1 p.77)
- 2. Right cover (1 p.77)
- 3. Scanner front cover (IPp.88)
- 4. Scanner left cover (1 p.89)



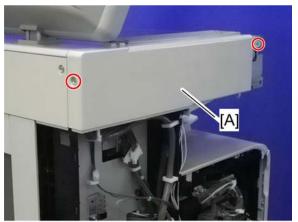
m052r510

5. Rear left middle cover [A] (\mathcal{F} x 2)



m052r509

6. Inner left cover [A] (F x 1)



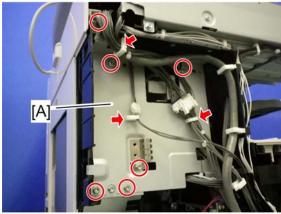
m052r528

7. Scanner left cover (F x 2)



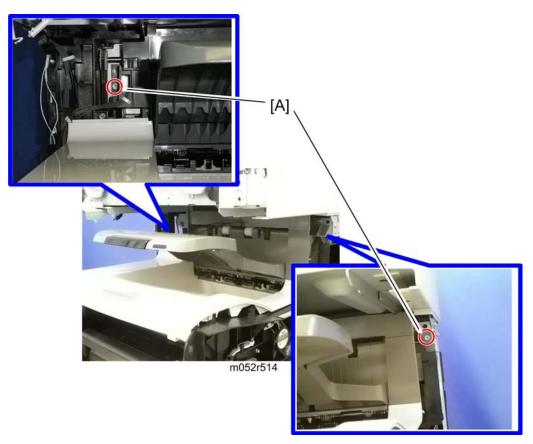
m052r529

8. Controller fan duct [A] (hooks)

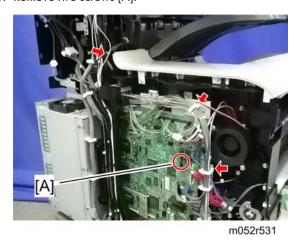


m052r530

9. Bracket (🌶 x 6, 🖨 x 3)

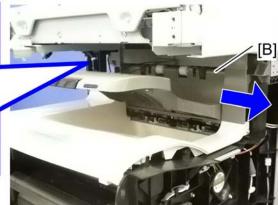


10. Remove two screws [A].



11. Disconnect the harness [A] from the CN232 on the BICU.

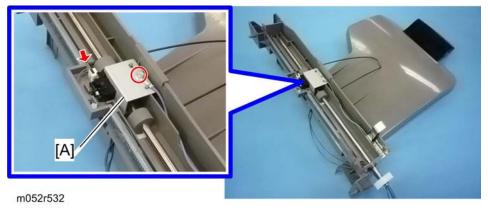




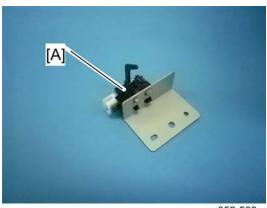
- 12. Remove the timing belt [A].
- 13. Slide the bin tray unit [B] to the left.

1 Bin Tray Paper Exit Sensor

1. 1 bin tray unit (**p**.199)



2. Sensor bracket [A] (** x1, 📬 x 1)

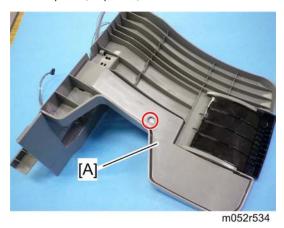


m052r533

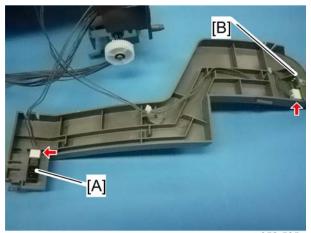
3. 1 bin tray paper exit sensor [A] (hooks)

1 Bin Tray Paper Sensor and LED Board

1. 1 bin tray unit (1 p.199)



2. 1 bin unit bottom cover [A] (\ref{p} x 1, hooks)



m052r535

- 3. 1 bin tray paper sensor [A] (hooks, 📬 x 1)
- 4. 1 bin tray LED board [B] (€ × 1)

5. System Maintenance Reference

Service Program

Mportant (

- Do not let the user access the SP mode or the SSP mode. Only service representatives are allowed
 to access these modes. The machine operation is NOT guaranteed after any person other than
 service representatives accesses the SP mode.
- 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.

Using SP and SSP Modes

The following two modes are available:

- SP Mode (Service Program Mode): The SP Mode includes the programs that are necessary for standard maintenance work. To enter the SP mode, consult your supervisor.
- SSP Mode (Special SP Mode): The SSP Mode includes SP-Mode programs and some special programs. You need some extra knowledge to use these special programs. For details, consult your supervisor.

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

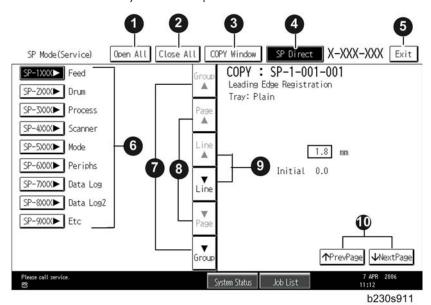
Select one of the Service Program modes (System, Printer, Scanner, or Fax) from the touch panel as shown in the diagram below after you access the SP mode. This section explains the functions of the System/Printer/Scanner SP modes. Refer to the Fax service manual for the Fax SP modes.



b230s910

SP Mode Button Summary

Here is a short summary of the touch-panel buttons.



Opens all SP groups and sublevels.

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) in the copy window to return to the SP mode screen,

4	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 SP Mode number.)			
5	Press two times to leave the SP mode and return to the copy window to resume normal operation.			
6	Press any Class 1 number to open a list of Class 2 SP modes.			
7	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).			
9	Press to scroll the show the previous or next line (line by line).			
10	Press to move the highlight on the left to the previous or next selection in the list.			

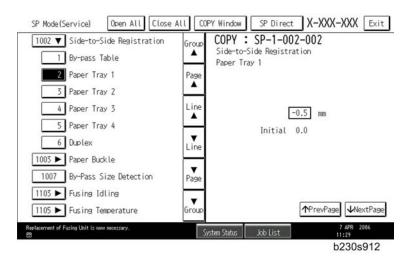
Switching Between SP Mode and Copy Mode for Test Printing

- 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.
- 5. 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.
- 6. 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 3 and then press SP Mode (highlighted) in the copy window to return to the SP mode display.
- 7. 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.

 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: $52-59 \text{ g/m}^2$

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, 59-68lb

Paper Type

N: Normal paper

MTH: Middle thick paper

TH: Thick paper

Paper Feed Station

P: Paper tray

B: By-pass table

[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

S: Simplex

D: Duplex

Process Speed

L: Low speed

M: Medium speed

H: High speed

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

U Note

• 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.

5

System SP1-xxx

SP1-XXX (Feed)

	[Leading Edge Registration] Leading Edge Registration Adjustment			
	(Tray Location, Paper Type), Paper Type -> Plain, Thick 1, Thick 2, Thick3 or Thin			
1001	Adjusts the leading edge registration by changing the registration motor operation timing for each mode.			
	Increasing a value: an image is mov	ved to the ti	railing edge of paper.	
	Decreasing a value: an image is moved to the leading edge of paper.			
001	By-pass:Plain	*ENG		
002	By-pass: Thick 1	*ENG		
003	By-pass: Thick2	*ENG	[-50 to 50 / 0 / 0.1 mm/step]	
004	By-pass: Thick3	*ENG		
005	By-pass: Thin	*ENG		
006	Tray 1:Plain	*ENG		
007	Tray 1:Thick 1	*ENG	[-50 to 50 / 0 / 0.1 mm/step]	
008	Tray 1:Thick2	*ENG		
009	Tray1:Thick3	*ENG		
010	Tray 1:Thin	*ENG	1	
011	Tray2:Plain	*ENG		
012	Tray2:Thick1	*ENG		
013	Tray2:Thick2	*ENG	[-50 to 50 / 0 / 0.1 mm/step]	
014	Tray2:Thick3	*ENG		
015	Tray2:Thin	*ENG		

016 Tray3:Plain *ENG 017 Tray3:Thick1 *ENG 018 Tray3:Thick2 *ENG 019 Tray3:Thick3 *ENG 020 Tray3:Thin *ENG 021 Tray4:Plain *ENG 022 Tray4:Thick1 *ENG 023 Tray4:Thick2 *ENG 024 Tray4:Thick3 *ENG 025 Tray4:Thin *ENG 026 Duplex:Plain *ENG 027 Duplex:Thick1 *ENG 028 Duplex:Thick2 *ENG				
018 Tray3:Thick2 *ENG [-50 to 50 / 0 / 0.1 mm/step] 019 Tray3:Thick3 *ENG 020 Tray3:Thin *ENG 021 Tray4:Plain *ENG 022 Tray4:Thick1 *ENG 023 Tray4:Thick2 *ENG 024 Tray4:Thick3 *ENG 025 Tray4:Thin *ENG 026 Duplex:Plain *ENG 027 Duplex:Thick1 *ENG [-50 to 50 / 0 / 0.1 mm/step]	016	Tray3:Plain	*ENG	
019 Tray3:Thick3 *ENG 020 Tray3:Thin *ENG 021 Tray4:Plain *ENG 022 Tray4:Thick1 *ENG 023 Tray4:Thick2 *ENG 024 Tray4:Thick3 *ENG 025 Tray4:Thin *ENG 026 Duplex:Plain *ENG 027 Duplex:Thick1 *ENG [-50 to 50 / 0 / 0.1 mm/step]	017	Tray3:Thick1	*ENG	
020 Tray3:Thin *ENG 021 Tray4:Plain *ENG 022 Tray4:Thick1 *ENG 023 Tray4:Thick2 *ENG 024 Tray4:Thick3 *ENG 025 Tray4:Thin *ENG 026 Duplex:Plain *ENG 027 Duplex:Thick1 *ENG [-50 to 50 / 0 / 0.1 mm/step]	018	Tray3:Thick2	*ENG	[-50 to 50 / 0 / 0.1 mm/step]
021 Tray4:Plain *ENG 022 Tray4:Thick1 *ENG 023 Tray4:Thick2 *ENG 024 Tray4:Thick3 *ENG 025 Tray4:Thin *ENG 026 Duplex:Plain *ENG 027 Duplex:Thick1 *ENG [-50 to 50 / 0 / 0.1 mm/step]	019	Tray3:Thick3	*ENG	
022 Tray4:Thick1 *ENG 023 Tray4:Thick2 *ENG 024 Tray4:Thick3 *ENG 025 Tray4:Thin *ENG 026 Duplex:Plain *ENG 027 Duplex:Thick1 *ENG [-50 to 50 / 0 / 0.1 mm/step]	020	Tray3:Thin	*ENG	
023 Tray4:Thick2 *ENG [-50 to 50 / 0 / 0.1 mm/step] 024 Tray4:Thick3 *ENG 025 Tray4:Thin *ENG 026 Duplex:Plain *ENG 027 Duplex:Thick1 *ENG [-50 to 50 / 0 / 0.1 mm/step]	021	Tray4:Plain	*ENG	
024 Tray4:Thick3 *ENG 025 Tray4:Thin *ENG 026 Duplex:Plain *ENG 027 Duplex:Thick1 *ENG [-50 to 50 / 0 / 0.1 mm/step]	022	Tray4:Thick1	*ENG	
025 Tray4:Thin *ENG 026 Duplex:Plain *ENG 027 Duplex:Thick1 *ENG [-50 to 50 / 0 / 0.1 mm/step]	023	Tray4:Thick2	*ENG	[-50 to 50 / 0 / 0.1 mm/step]
026 Duplex:Plain *ENG 027 Duplex:Thick1 *ENG [-50 to 50 / 0 / 0.1 mm/step]	024	Tray4:Thick3	*ENG	
027 Duplex:Thick1 *ENG [-50 to 50 / 0 / 0.1 mm/step]	025	Tray4:Thin	*ENG	
	026	Duplex:Plain	*ENG	
028 Duplex:Thick2 *ENG	027	Duplex:Thick 1	*ENG	[-50 to 50 / 0 / 0.1 mm/step]
	028	Duplex:Thick2	*ENG	

	[Side-to-Side Registration]			
1002	Adjusts the side-to-side registration by changing the laser main scan start position for each mode and tray.			
	Increasing a value: an image is moved to the rear edge of paper.			
	Decreasing a value: an image is moved to the front edge of paper.			
001	By-pass	*ENG		
002	Tray 1	*ENG		
003	Tray 2	*ENG	[-50 to 50 / 0.0 / 0.1 mm/step]	
004	Tray 3	*ENG	[-30 to 30 / 0.0 / 0.1 mm/step]	
005	Tray 4	*ENG		
006	Duplex	*ENG		

	[Paper Buckle] Paper Buckle Adjustment				
1003	(Tray Location, Paper Type), Paper Type -> Plain, Thick 1, Thick 2, Thick3 or Thin				
	Adjusts the amount of paper buckle at the registration roller by changing the paper feed timing.				
001	By-pass:Plain	*ENG			
002	By-pass: Thick1	*ENG			
003	By-pass: Thick2	*ENG	[-70 to 70 / 0 / 0.1 mm/step]		
004	By-pass: Thick3	*ENG			
005	By-pass: Thin	*ENG			
006	Tray 1 : Plain	*ENG			
007	Tray 1:Thick 1	*ENG			
008	Tray 1:Thick2	*ENG	[-70 to 70 / 0 / 0.1 mm/step]		
009	Tray 1:Thick3	*ENG			
010	Tray 1:Thin	*ENG	_		
011	Tray2:Plain	*ENG			
012	Tray2:Thick1	*ENG			
013	Tray2:Thick2	*ENG	[-70 to 70 / 0 / 0.1 mm/step]		
014	Tray2:Thick3	*ENG			
015	Tray2:Thin	*ENG			
016	Tray3:Plain	*ENG			
017	Tray3:Thick1	*ENG			
018	Tray3:Thick2	*ENG	[-70 to 70 / 0 / 0.1 mm/step]		
019	Tray3:Thick3	*ENG			
020	Tray3:Thin	*ENG			

021	Tray4:Plain	*ENG	
022	Tray4:Thick1	*ENG	
023	Tray4:Thick2	*ENG	[-70 to 70 / 0 / 0.1 mm/step]
024	Tray4:Thick3	*ENG	
025	Tray4:Thin	*ENG	
026	Duplex:Plain	*ENG	
027	Duplex:Thick1	*ENG	[-70 to 70 / 0 / 0.1 mm/step]
028	Duplex:Thick2	*ENG	

1103	[PreRotate Temp] Fusing Pre-rotation Temperature		
001	-	*ENG	[0 to 180 / 150 / 1°C /step]
	Specifies the temperature for the fusing pre-rotation.		

1105	[Fusing Temperature] Fusing Temperature Adjustment				
	(Printing Mode, Paper Type, Simplex/Duplex)				
001	Reload Temp	*ENG	[100 to 180 / 135 / 1 deg/step]		
001	Specifies the hot roller target temperature for the ready condition.				
002	Stand-by Temp	*ENG	[140 to 205 / 175 / 1 deg/step]		
002	Specifies the hot roller target temperature for the standby condition.				
010	Print:Plain	*ENG	[150 to 215 / 200 / 1 deg/step]		
010	Specifies the hot roller target temperature for the plain paper feeding condition.				
011	Print:Thin	* ENG	[150 to 215 / 170 / 1 deg/step]		
011	Specifies the hot roller target temperature for the thin paper feeding condition.				
010	Print:Thick	* ENG	[150 to 215 / 195 / 1 deg/step]		
012	Specifies the hot roller target temperature for the thick paper feeding condition.				
012	Print:Small Size	* ENG	[150 to 215 / 190 / 1 deg/step]		
013	Specifies the hot roller target temperature for the small paper feeding condition.				

	Ready:LL	*ENG	[140 to 205 / 200 / 1 deg/step]		
100	Specifies the hot roller target temperature after the ready condition in low temperature and low humidity condition.				
	Ready:MM	*ENG	[140 to 205 / 200 / 1 deg/step]		
101	Specifies the hot roller target temperature and medium humidity condition.	re after the	ready condition in medium temperature		
	Ready:HH	*ENG	[140 to 205 / 195 / 1 deg/step]		
102	Specifies the hot roller target temperature after the ready condition in high temperature and high humidity condition.				
	Ready:T AL	*ENG	[140 to 205 / 175 / 1 deg/step]		
103	Specifies the hot roller target temperature for the plain paper feeding condition in low temperature condition (absolute temperature).				
104	Ready:T AM	*ENG	[140 to 205 / 195 / 1 deg/step]		
	Specifies the hot roller target temperature for the plain paper feeding condition in medium temperature condition (absolute temperature).				
105	Ready:T AH	*ENG	[140 to 205 / 190 / 1 deg/step]		
	Specifies the hot roller target temperature for the plain paper feeding condition in high temperature condition (absolute temperature).				

1159	[Fusing Jam]			
	SC Detection	*ENG	[0 or 1 / 0 / 1]	
Enables or disables the fusing consecutive jam (three times) SC detection.				
	0: Off, 1: On			

1902	[OHP Clutch Rotate]		
001	-	*ENG	[1 or 2 / 1 / 1/step]

SP1953 RTB 54

System SP2-xxx

SP2-XXX (Drum)

2001	[Charge Roller Bias] Adjusts the reference voltage for the charge roller bias.				
2001					
001	-	*ENG	[1000 to 2000 / 1550 / 1 V/step]		

2112	[Main-scan Mag] Main-scan Maginification Adjustment					
2112	Adjusts the magnification rate in the main-scan direction.					
001	-	*ENG	[-5 to 5 / 0 / 0.1%/step]			

2113	[Sub-scan Mag] Sub-scan Maginification Adjustment					
	Adjusts the magnification rate in the sub-scan direction.					
001	-	*ENG	[-5 to 5 / 0 / 0.1%/step]			

2201	[DV Roller Bias] Development DC Bias Adjustment				
2201	Adjusts the reference voltage for the development roller bias.				
001	-	*ENG	[100 to 800 / 600 / 1 V/step]		

	2301	[Transfer Current Adj] Transfer Roller Current Adjustment		
	001	-	*ENG	[-3 to 3 / 0 / 1 µA]
Adjusts the current for the transfer roller.				

		[Test Pattern]
2902		Selects a test pattern.
		To print a test patter, press "Copy Window" button on the LCD and then press "Start" button on the operation panel.

5

	Pattern Selection	- [0 to 30 / 0 / 1/step]
003	0 None 1: Vertical Line (1dot) 2: Vertical Line (2dot) 3: Horizontal (1dot) 4: Horizontal (2dot) 5: Grid Vertical Line 6: Grid Horizontal Line 7: Grid pattern Small 8: Grid pattern Large 9: Argyle Pattern Small 10: Argyle Pattern Large 11. Independent Pattern (1dot) 12. Independent Pattern (2dot) 13. Independent Pattern (4dot) 14. Trimming Area 15: Hound's Tooth Check (Vertical)	16: Hound's Tooth Check (Horizontal) 17: Band (Horizontal) 18: Band (Vertical) 19: Checker Flag Pattern 20: Density Pattern 21: Full Dot Pattern 22: Full White Pattern 23: Grayscale Horizontal 24: Grayscale (Horizontal Margin) 25: Grayscale Vertical 26: Grayscale (Vertical Margin) 27: Grayscale 28: Grayscale (Margin) 29: Grayscale Grid 30: Grayscale (Grid Margin)

System SP3-xxx

SP3-XXX (Process)

3926	[Filming Prevent]				
001	-	-	[0 or 1 / 0 / 1 /step] 0: Off, 1: On		
	Turns on or off the filiming prevention.				

E

System SP4-xxx

SP4-XXX (Scanner)

4008	[Sub Scan Magnification Adj.]				
4006	Adjusts the sub-scan magnification by changing the scanner motor speed.				
001	-	*ENG	[-1.0 to 1.0 / 0 / 0.1%/step] FA		

	[Leading Edge Registration Adj]			
4010	Adjusts the leading edge registration by changing the scanning start timing in the sub-scan direction.			
001	-	*ENG	[-2.0 to 2.0 / 0 / 0.1 mm/step] FA	

	[Main Scan Regist]		
4011	Adjusts the side-to-side registration by changing the scanning start timing in the main scan direction.		
001	-	*ENG	[-2.5 to 2.5 / 0 / 0.1 mm/step] FA

	[Scale Edge Mask]			
4012	Sets the blank margin at each side for erasing the original shadow caused by the gap between the original and the scale.			
	L: Leading, T: Trailing, R: Rear, F: Front			
001	Book: Sub LEdge	*ENG		
002	Book: Sub TEdge		[0.4-2.0./0./0.1/.4]EA	
003	Book: Main REdge		[0 to 3.0 / 0 / 0.1 mm/step] FA	
004	Book: Main FEdge			

	[Scanner Free Run]
4013	Performs the scanner free run with the exposure lamp on or off in the following mode.
	Full color mode / Full Size / A4 or LT

001	Lamp: OFF	*ENIC	OFF or ON
002	Lamp: ON	LING	OFF OF ON

4014		[Scan]			
4	Execute the scanner free fun with each mode.		mode.		
	001	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	Dust Detect: On/Off	*ENG	Turns the DF scan glass dust check on/ off. [0 or 1 / 0 / 1 / step] 0: OFF, 1: ON
002	Dust Detect: Lvl	*ENG	Selects the detect level. [0 to 8 / 4 / 1 /step] 0: lowest detection level 8: highest detection level
003	Dust Correct: Lvl	*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

4400	[Original Edge Mask]	*ENG			
	Set the Mask for Original.				
These SPs set the area to be masked during platen (book) mode scan		aten (book) mode scanning.			
	L: Leading, T: Trailing, R: Rear, F: Front				

001	Book: Sub LEdge	
002	Book: Sub TEdge	
003	Book: Main REdge	
004	Book: Main FEdge	[0 to 3.0 / 0 / 0.1 mm/step]
005	ADF: Sub LEdge	
007	ADF: Main REdge	
008	ADF: Main FEdge	

4417	[IPU Test Pattern]		
4417	Selects the IPU test pattern.		
001	Test Pattern	[0 to 28 / 0 / 1/step]	
	0: Scanned image 1: Gradation main scan A 2: Gradation main scan B 3: Gradation main scan C 4: Gradation main scan D 5: Gradation sub scan (1) 6: Grid pattern (1) 7: Slant grid pattern 8: Gradiation sub scan (2) 9: Gradiation sub scan (3) 10: Patch 16 (1) 11: Patch 16 (2) 12: Patch 64 13: Grid pattern (2) 14: Patch	15: Gray pattern (1) 16: Gray pattern (2) 17: Gray Pattern (3) 18: Shading pattern 19: Thin line pattern 20: Scanned + Grid pattern 21: Scanned + Gray scale 22: Scanned + Patch 23: Scanned + Slant Grid C 24: Scanned + Slant Grid D 25: Gray scale 18 (txt) 26: Gray scale 18 (pht) 27: Gray scale 18 (pht): r-Linear	

4429	[Select Copy Data Security]
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001	Copying		
002	Scanning	*ENG	[0 to 3 / 3 / 1 /step]
003	Fax Operation		

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.			

4460	[Degital AE] Adjust the background level.			
4400				
001	Low Limit Value	*FNC	[0 to 1023 / 364 / 1 /step]	
002	Background Level	*ENG	[512 to 1535 / 932 / 1 /step]	

	[Print Coverage]
4540	This SP corrects the print 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	*ENG		
005-008	YR Phase: Option/R/G/B	*ENG		
009-012	YG Phase: Option/R/G/B	*ENG		
013-016	GY Phase: Option/R/G/B	*ENG		
017-020	GC Phase: Option/R/G/B	*ENG		
021-024	CG Phase: Option/R/G/B	*ENG		
025-028	CB Phase: Option/R/G/B	*ENG	Specifies the printer vector correction value.	
029-032	BC Phase: Option/R/G/B	*ENG	[0 to 255 / 0 / 1 /step]	
033-036	BM Phase: Option/R/G/B	*ENG		
037-040	MB Phase: Option/R/G/B	*ENG		
041-044	MR Phase: Option/R/G/B	*ENG		
045-048	RM Phase: Option/R/G/B	*ENG		
049-052	WHITE: Option/R/G/B	*ENG		
053-056	BLACK: Option/R/G/B	*ENG		
4550	4550 [Scanner Appl.:Text/Print] DFU			
4551	[Scanner Appl.: Text] DFU			
4552	[Scanner Appl.:Txt Dropout] DFU			
4553	[Scanner Appl.:Text/Photo] DFU			

4554

4565

4570

[Scanner Appl.: Photo] **DFU**

[Scanner Appl.: GrayScale] **DFU**

[Scan Appl.: Color: Text/Photo] **DFU**

4571	[Scan Appl.: Color: Glossy Photo] DFU		
4572	[Scan Appl.: AutoColor] DFU		
4580	[FAX Appl.: Text/Chart] DFU		
4581	[FAX Appl.: Text] DFU		
4582	[FAX Appl.: Text/Photo] DFU		
4583	[FAX Appl.: Photo] DFU		
4584	[FAX Appl.: Original 1] DFU		
4585	[FAX Appl.: Original 2] DFU		
4600	[SBU Version Display]		
001	SBU ID	-	Displays the ID of the SBU.
002	GASBU-N ID	-	Displays the ID of the GASBU.
003	VSP5100 ID	-	Displays t he ID of the VSP5100.
4602	[Scanner Memory Access]		
001	Scanner Memory Access	-	Enables the read and write check for the SBU registers.
4603	[AGC Execution]		
001	HP Detection Enable	-	Executes the AGC.
002	HP Detection Disable	-	DFU
4604	[FGATE Open/Close] DFU		
4609	[Gray Balance Set: R]		

001	Book Read	-	[-512 to 511 / -80 / 1 digit/step]
002	DF Read	-	[-512 to 511 / -80 / 1 digit/step]

4610	[Gray Balance Set: G]		
001	Book Read	-	[-512 to 511 / -85 / 1 digit/step]
002	DF Read		

4611	[Gray Balance Set: B]		
001	Book Read		[510, 511 / 00 / 1 1 1 1
002	DF Read	_	[-512 to 511 / -80 / 1 digit/step]

4623	[Black Level 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 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 Adj. Display] BE: Blue Even signal, BO: Blue Odd signal			
001	Latest: BE Color	-	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	Latest: BO Color	-	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]	

4628	[Analog Gain Adj. Display]				
4020	Displays the gain value of the amplifiers on the controller for Red.				
001	Latest: RE Color	-	[0 to 7 / 0 / 1 digit/step]		

4420	[Analog Gain Adj. Display]			
Displays the gain value of the amplifiers on the controller for Green.			s on the controller for Green.	
001	Latest: GE Color - [0 to 7 / 0 / 1 digit/step]			

	4420	[Analog Gain Adj. Display]				
Displays the gain value of the amplifiers on the controller for Blue.			s on the controller for Blue.			
	001	Latest: BE Color	-	[0 to 7 / 0 / 1 digit/step]		

4631	[Digital Gain Adj. Display]				
 4031	Displays the gain value of the amplifiers on the controller for Red.				
001	Latest: RE Color -		[0 + 1002 / 0 / 1 divit/+]		
002	Latest: RO Color	-	[0 to 1023 / 0 / 1 digit/step]		

4632	[Digital Gain Adj. Display]
4032	Displays the gain value of the amplifiers on the controller for Green.

001	Latest: GE Color	-	[0 to 1023 / 0 / 1 digit/step]
002	Latest: GO Color	-	[0 10 1023 / 0 / 1 aigii/ siep]

4633	[Digital Gain Adj. Display]				
4033	Displays the gain value of the amplifiers on the controller for Blue.				
001	Latest: BE Color				
002	Latest: BO Color	-	[0 to 1023 / 0 / 1 digit/step]		

4645	[Scan Adjust Error]		
001	White level	-	[0.5 45525 / 0 / 1 / 5 5 5 7 5 7 5 7 5
002	Black level	-	[0 to 65535 / 0 / 1 digit/step]

4647	[Scanner Hard Error]				
4047	Displays the result of the SBU connection check.				
001	Power-ON	-	[0 to 35535 / 0 / 1digit /step] 0: OK, Other: SBU connection check failure If the SBU connection check fails, SC144 occurs.		

4654	[Black Level Adj. Display] RE: Red Even signal, RO: Red Odd signal		
001	Last Correct Value: RE Color *ENG		Displays the black offset value 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 for the odd red signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]

4655	[Black Level Adj. Display]	
4033	GE: Green Even signal, GO: Green Odd signal	

001	Last Correct Value: GE Color	*ENG	Displays the black offset value 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 for the odd green signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]

4656	[Black Level Adj. Display] BE: Blue Even signal, BO: Blue Odd signal		
001	Last Correct Value: BE Color	*ENG	Displays the black offset value 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 for the odd blue signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]

4658	[Analog Gain Adj. Display]			
4036	Displays the previous gain value of the amplifiers on the controller for Red.			
001	1 Last Correct Value: RE Color *ENG [0 to 7 / 0 / 1 digit/step]			

4659	[Analog Gain Adj. Display]			
4039	Displays the previous gain value of the amplifiers on the controller for Green.			
001	001 Last Correct Value: GE Color *ENG [0 to 7 / 0 / 1 digit/step]			

4660	[Analog Gain Adj. Display]				
Displays the previous gain value of the amplifiers on the controller for Blue.					
001	Last Correct Value: BE Color	*ENG	[0 to 7 / 0 / 1 digit/step]		

4661	[Digital Gain Adj. Display] RE: Red Even signal, RO: Red Odd signal		
001	Last Correct Value: RE Color	*ENG	[0 + 1022 / 0 / 1 distalated]
002	Last Correct Value: RO Color	*ENG	[0 to 1023 / 0 / 1 digit/step]

4662	[Digital Gain Adj. Display] GE: Green Even signal, GO: Green Odd signal		
001	Last Correct Value: GE Color	*ENG	[0 1022 / 0 / 1 di-it/]
002	Last Correct Value: GO Color	*ENG	[0 to 1023 / 0 / 1 digit/step]

4663	[Digital Gain Adj. Display] 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 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 for the odd red signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]	

4674	[Black Level 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 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 for the odd green signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]
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4675	[Black Level 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 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 for the odd blue signal in the CCD circuit board (color printing speed). [0 to 16383 / 0 / 1 digit/step]		

4677	7	[Analog Gain Adj. Display]				
4077	/	Displays the factory setting values of the gain adjustment for Red.				
	001	Factory Setting: RE Color *ENG [0 to 7 / 0 / 1 digit/step]				

4678	[Analog Gain Adj. Display]				
40/0	Displays the factory setting values of the gain adjustment for Green.				
001	Factory Setting: GE Color	*ENG	[0 to 7 / 0 / 1 digit/step]		

4679	[Analog Gain Adj. Display]				
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	[Digital Gain Adj. Display]
4000	Displays the gain value of the amplifiers on the controller for Red.

001	Latest: RE Color	*ENG	[0 to 1023 / 0 / 1 digit/step]
002	Latest: RO Color	*ENG	

4681	[Digital Gain Adj. Display]				
4001	Displays the gain value of the amplifiers on the controller for Green.				
001	Latest: GE Color	*ENG	[0 1002 / 0 / 1 dimit/]		
002	Latest: GO Color	*ENG	[0 to 1023 / 0 / 1 digit/step]		

4682	[Digital Gain Adj. Display]				
4002	Displays the gain value of the amplifiers on the controller for Blue.				
001	Latest: BE Color	*ENG	[0., 1002 / 0 / 1 / 5 / 4]		
002	Latest: BO Color	*ENG	[0 to 1023 / 0 / 1 digit/step]		

	[DF Density Adjustment]		
4688	Adjusts the white shading pa	rameter wl	hen scanning an image with the ARDF.
	Adjusts the density level if the	ID of outp	outs made in the DF and Platen mode is different.
001	-	*ENG	[50 to 150 / 100 / 1%/ step]

4600	4690	[White Level Peak Read]			
4090		Displays the peak level of the white level scanning.			
0	001	RE	-	[0 1002 / 0 / 1 dinit/]	
0	002	RO	-	[0 to 1023 / 0 / 1 digit/step]	

4691	[White Level Peak Read]			
4071	Displays the peak level of the white level 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.		
001	BE	-	[0., 1000 / 0 / 1 / tota/]
002	ВО	-	[0 to 1023 / 0 / 1 digit/step]

4693	[Black Level Peak Read]		
4093	Displays the peak level of the black level scanning.		
001	RE	-	[0 +- 1022 / 0 / 1 dimit/++]
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	-	[0.1.1002 / 0 / 1.	
002	GO	-	[0 to 1023 / 0 / 1 digit/step]	

4695	[Black Level Peak Read]			
4093	Displays the peak level of the black level scanning.			
001	BE	-	[0 to 1000 / 0 / 1 digit/storn]	
002	ВО	-	[0 to 1023 / 0 / 1 digit/step]	

4802	[DF Shading FreeRun]		
001	Lamp OFF	Executes the scanner free run of shading	
002	Lamp ON	movement with exposure lamp on or off. Press "OFF" to stop this free run. Otherwise, the free run lasts.	

4804	[Home Position Operation]		
001	-	-	Executes the scanner HP detection.

4806	[Carriage Move]		
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 250 / 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] DFU		
002	Execution Flag	-	[0 or 1 / 0 / 1 /step]

4810	[PWM] DFU
4811	[LED White Level Peak Read] DFU

[LED White Level Peak Read] ${f DFU}$

[LED White Level Peak Read] **DFU** 4812

4903	[Image Quality Adj]			
001	I-Dot Erase: Text 0 ENG [0 to 7 / 0 / 1 /step]			
	Select the independent dot erase level for the text image scanning.			
002	I-Dot Erase: Original 0 ENG [0 to 7 / 0 / 1 /step]			
	Select the independent dot erase level for the copied original scanning.			

4905	[Select Gradation Level] DFU	
4905	Changes the parameters for error diffusion.	

001 - *ENG [0 to 255 / 0 / 1 /step]

4918	[Manual Gamma Adj] Not used		
009	-	-	

	[IPU Image Path Select]				
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	[Scan:Text/Photo Detection Level]			
4994	Selects the definition level between Text and Photo for high compression PDF.			
001	High Compression PDF	*ENG	[0 to 2 / 1 / 1 /step] 0: Text priority 1: Normal 2: Photo priority	

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4996	[White Paper Detect Level]				
	Adjusts the white paper detect level for fax.				
001	-	*ENG	[0 to 6 / 3 / 1 /step]		

System SP5-xxx

SP5-XXX (Mode)

5024	[mm/inch Display Selection]				
3024	Display units (mm or inch) for custom paper sizes.				
001	-	*CTL	[0 or 1 / 0 / -] 0: mm (Europe/Asia) 1: inch (USA)		

[Accounting Counter]

Selects the counting method.

NOTE: The counting method can be changed only once, regardless of whether the counter value is negative or positive.

[O or 1 / O / -]

*CTL 0: Developments RTB 28

Description changed

5051	[Toner Refill Detection Display]			
Enables or disables the toner refill detection display.				
			[0 or 1 / 0 / -] Alphanumeric	
001	-	*CTL	0: ON	
			1: OFF	

[Display IP Address]

Display or does not display the IP address on the operation panel.

*CTL [0 or 1 / 0 / -]
0: OFF 1: ON

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5056	[Coverage Counter Display]		
3030	Display or does not display the coverage counter on the operation panel.		
001	-	*CTL	[0 or 1 / 0 / -] 0: Not display, 1: Display

5061	[Toner Remaining Icon Display Change]		
3001	Display or does not display the remaining toner display icon on the LCD.		
001	-	*CTL	[0 or 1 / 0 / -] 0: Not display, 1: Display

5062	[Parts Replacement Alert Display]			
3002	Display or does not display the	play the maintenance kit yield on the LCD.		
001	Maintenance Kit	*CTL	[0 or 1 / 1 / -] 0: No display, 1: Display	

5066	[PM Parts Display] Display or does not display the "PM parts" button on the LCD.		
001	-	*CTL	[0 or 1 / 1 / -] 0: No display, 1: Display

	[Parts Replacement Operation Type]			
5067	Selects the service maintenance or user maintenance for the maintenance kit.			
	If the user service is selected, PM alart is displayed on the LCD.			
001	Maintenance Kit	*CTL	[0: Service] or [1: User]	

5071	[Set Bypass Paper Size Display]				
	Display or does not display the by-pass paper size on the LCD.				
001	-	1 ^(II	[0 or 1 / 0 / -] 0: No display, 1: Display		

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)]	
		1		
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.			
	I			
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.			
	I			
5127	[APS Mode]	*CTL	[0: Not disabled/ 1: Disabled]	
001	This program disables the APS.			

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 used 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 S before you go into the printer SP mode.			
001	-	*CTL	[0 or 1 / 0 / -] 0: Disabled 1: Enabled	

	[RK4 Disconnection Operation]			
5186	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	-	*EN G	[0 or 1 / 0 / 1 /step] 0: Disable 1: Enable	

5188	[Copy Nv Version]				
3100	Displays the version number of the NVRAM on the controller board.				
001	-	-	-		

5195

[0 or 1 / 0 / -] 0: Productivity priority *CTL 1: Tray priority

Selects the paper feed mode.

Productivity priority: 001

This changes the feeding tray as soon as the machine detects the priority tray even the paper still remains in the feeding tray.

Tray 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 SP is activated only when a customer selects the "Auto Paper Selsct".

5199	[Paper Exit After Staple End.]		
001	-	*CTL	[0 or 1 / 0 / -] 0: OFF, 1: ON
	 If this setting is "1: ON", the finisher stapling whe number). If this setting is "0: OFF", 	paper is fe on the mach	ut from the finisher without stapling. Ed out without stapling at the maximum number of ine gets a multiple printing job (over maximum ed out with stapling at the maximum number of the gets a multiple printing job (over maximum

5212	[Page Numbering]	*CTL	
	This program adjusts the position of the second side page numbers. A "- value" moves the page number positions to the left edge. A "+ value" moves the page number positions to the right edge.		
003	Duplex Printout Right/Left Position	[-10 tc	10 / 0 / 1 mm/step]
004	Duplex Printout High/Low Position	[-10 to	0 10 / 0 / 1 mm/step]

	[Set Time]				
	Adjusts the RTC (real time clock) time setting for the local time zone.				
	Examples: For Japan (+9 GMT), enter 54	0 (9 hours x 60 min.)		
	DOM: +540 (Tokyo)				
5302	NA: -300 (New York)				
0002	EU: + 60 (Paris)				
	CH: +480 (Peking)				
	TW: +480 (Taipei)				
	AS: +480 (Hong Kong)				
	KO: +540 (Korea)				
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	
Enables or disables the summer time mode. Note		e mode.	
	 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". 		

SP5305 RTB 19f (Ver 2.05): New SP

	Rule Set (Start)	-			
	Specifies the start setting for the summer time mode.				
	There are 8 digits in this SP. For the eight-digit setting for -2 or -		to 9, the "0" cannot be input in the first digit, so s a seven-digit setting.		
	1st and 2nd digits: The month. [[1 to 12]			
	3rd digit: The week of the mont	h. [1 to 5]			
003	4th digit: The day of the week. [0 to 6 = Sunday to Saturday]				
003	5th and 6th digits: The hour. [00	0 to 23]			
	7th digit: The length of the advo	anced time	. [0 to 9 / 1 hour /step]		
	8th digit: The length of the advanced time. [0 to 5 / 10 minutes /step]				
	For example: 3500010 (EU default)				
	The timer is advanced by 1 hour at am 0:00 on the 5th Sunday in March				
	The digits are counted from the left.				
	Make sure that SP5-307-1	1 is set to "	1".		
	Rule Set (End)	-	-		
	Specifies the end setting for the	summer tir	ne mode.		
	There are 8 digits in this SP.				
	1st and 2nd digits: The month. [1 to 12]				
004	3rd digit: The week of the month. [0 to 5]				
004	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	t to "00".			
	The digits are counted from	m the left.			
	Make sure that SP5-307-	l is set to "	1".		
	I.				

540	[Access Control] DFU
340	When installing the SDK application, SAS (VAS) adjusts the following settings.

	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.			
	[0 to 3 / 0 / 1]			
103	0: View			
	1: Edit			
	2: Edit/Delete			
	3: Full control			
	Note: This SP setting is ignore	ed on a ma	chine that is not using document server.	
	Authentication Time	*CTL	[0 to 255 / 0 / 1 second]	
104	Specifies the time for the auth	entication	timeout.	
	0 = 60 seconds, 1 to 255 = displayed time (seconds)			
			Selects the log out type for the extend authentication device.	
162	Extend Certification Detail	*CTL	Bit 0: Log-out without an IC card	
			0: Not allowed (default)	
			1: Allowed	
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.	
220	SDK3 Unique ID	*CTL		
221	SDK3 Certification Method	*CTL		
	SDK certification device	*CTL	-	
230	Bit 0: SDK authentication O: Off (Default), 1: On (SDK authentication enabled) Selects the SDK authentication setting.			
	Bit 2: Administrator log in setting			
	0: Off (Default), 1: On	-		

	Detail Option	*CTL	-		
	Enalbes or disables the log out confirmation option.				
	Bit 0: Log out confirmation option				
240	0: 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	-	*CTL	Clears all counters for users.

5411	[LDAP Certification]		
004	Easy Certification	*CTL	Determines whether easy LDAP certification is done. [0 to 1 / 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 to 1 / 1 / 1] O: Password NULL not permitted. 1: Password NULL permitted.
006	Detail Option	*CTL	-

5413	[Lockout Setting]		
001	Lockout On/Off	*CTL	Switches on/off the lock on the local address book account. [0 to 1 / 0 / 1] 0: Off, 1: On
002	Lockout Threshold	*CTL	Sets a limit on the frequency of lockouts for account lockouts. [1 to 10 / 5 / 1]

003	Cancellation On/Off	*CTL	Determines whether the system waits the prescribed time for input of a correct user ID and password after an account lockout has occurred. [0 to 1 / 0 / 1] 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 9999 / 60 / 1 min.]

5414	[Access Mitigation]		
001	Mitigation On/Off	*CTL	Switches on/off masking of continuously used IDs and passwords that are identical. [0 to 1 / 0 / 1] 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.]

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]
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.]

5416	[Access Information]		
001	Access User Max Num	*CTL	Limits the number of users used by the access exclusion and password attack detection functions. [50 to 200 / 200 / 1 users]
002	Access Password Max Num	*CTL	Limits the number of passwords used by the access exclusion and password attack detection functions. [50 to 200 / 200 / 1 passwords]
003	Monitor Interval	*CTL	Sets the processing time interval for referencing user ID and password information. [1 to 10 / 3 / 1 sec.]

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]
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.]
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.]
004	Attack Max Num	*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]

	[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. [0 to 1 / 0 / 1] 0: On, 1: Off		
011	DocumentServer	*CTL	Determines whether certification is required before a user can use the document server. [0 or 1/0/1] 0: On, 1: Off		
021	Fax	*CTL	Determines whether certification is required before a user can use the fax application. [0 or 1/0/1] 0: On, 1: Off		
031	Scanner	*CTL	Determines whether certification is required before a user can use the scan applications. [0 or 1/0/1] 0: On, 1: Off		
041	Printer	*CTL	Determines whether certification is required before a user can use the printer applications. [0 or 1/0/1] 0: On, 1: Off		
051	SDK1	*CTL	[0 or 1 / 0 / 1] 0: ON. 1: OFF		
061	SDK2		Determines whether certification is required		
071	SDK3		before a user can use the SDK application.		

	5430	Auth Dialog Message Change		
	001	Message Change On/Off	*CTL	[0 or 1 / 0 / 1]
002 Message Text Download				

003 Message Text ID

5431	External Auth User Preset		
010	Tag	*CTL	-
011	Entry		
012	Group		
020	Mail		
030	Fax		
031	Fax Sub		
032	Folder		
033	Protect Code		
034	SMTP Auth		
035	LDAP Auth		
036	SMB FTP Folder Auth		
037	Acnt Acl		
038	Document Acl		
040	Cert Crypt		
050	User Limit Count		

5481	[Authentication Error Code]				
3461	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
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5490	[MF KeyCard (Japan only)]		
001	Job Permit Setting	*CTL	Sets up operation of the machine with a keycard. [0 to 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 9999: Alarm goes off when Value (1 to 9999) x 1000 > PM counter	
002	Original Count Alarm	0: No o	/ 0 / -] alarm sounds m sounds after the number of originals passing the ARDF > 10,000

5504	[Jam Alarm]	*CTL	-
	Sets the alarm to sound for the specified jam level (document misfeeds are not included).		
	[0 to 3 / 3 / 1 /step]		
001	0: Zero (Off)		
001	1: Low (2.5K jams)		
	2: Medium (3K jams)		
	3: High (6K jams)		

	[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 sheets (for example, default 1500 sheets). The error alarm occurs when the SC error alarm counter reaches "5".		
001	-	*CTL	[0 to 255 / 27 / 100 copies /step]

5507	[Supply Alarm]	*CTL	-	
3307	Enables or disables the notifying a supply call via the @Remote.			
001	Paper Supply Alarm	0 : Off, 1:	On	
002	Staple Supply Alarm	0: Off, 1:	On	
004	Maintenance Kit Alarm	0: Off, 1:	On	
009	Cartridge Supply Alarm	0: Off, 1:	On	
080	Toner Call Timing	Changes the timing of the "Toner Supply Call" via the @Remote, when the following conditions occur. O: At replacement 1: At near end		
128	Interval :Others			
133	Interval :A4			
134	Interval :A5			
142	Interval :B5	[250 to 10000 / 1000 / 1 /step]		
164	Interval :LG			
166	Interval :LT			
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 jams required to initiate a call. This setting is enabled only when SP5508-004 is set to "1".	
013*	Door Open: Time Length	[3 to 30 / 10 / 1 /step]
	Sets the length of time the door rema	ins open before the machine initiates a call. 5-508-004 is set to "1".

	[SC/Alarm Setting] With @Remote in use, these SP codes can be set to issue an SC call when an SC error occurs. If this SP is switched off, the SC call is not issued when an SC error occurs.	
5515		
001	SC Call	[0 or 1 / 1 / -] 0: Off, 1: On
002	Service Parts Near End Call	[0 or 1 / 1 / -]
003	Service Parts End Call	0: Off, 1: On
004	User Call	
006	Communication Test Call	[0 or 1 / 1 / -] 0: Off, 1: On
007	Machine Information Notice	
008	Alarm Notice	[0 or 1 / 1 / -] 0: Off, 1: On

009	Non Genuin Tonner Alarm	
010	Supply Automatic Ordering Call	[0 or 1 / 1 / -]
011	Supply Manegement Report Call	0: Off, 1: On
012	Jam/Door Open Call	



- Memory Clear (SP5-801)
- The following tables list the items that are cleared. The serial number information, meter charge setting and meter charge counters are not cleared.

5730	[Extended Function Setting]	
010	Expiration Prior Alarm	[0 to 999 / 20 / 1 day/step]
	Specifies the expiration alarm timing.	

5731	[Counter Effect] Japan only	
001	Change MK1 Cnt (Paper -> Combine)	[0 or 1 / 0 / 1 /step] 0: Off, 1: On
	Specifies the expiration alarm timing.	

5733	[MICR Setting] SP 5733 RTB 50:	
001	Model Switching	0: RICOH Standard Model/ 1: Secure PCL MICR Model/ 2: IPDS MICR
	Selects a MICR model.	
002	Print Availability with MICR Toner	0: Do not print/ 1: Print
	Selects the print availability	when using MICR toner.

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 Setting	Initializes the DCS (Delivery Control Service) settings.
015	Clear UCS Setting	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 Clr	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.

5802	[Free Run]	
001	-	DFU

5803	[Input Check]	See "Input Check Table" in this section.
5804	[Output Check]	See "Output Check Table" in this section.

5807	[Destin./Model]		
002	-	DFU	

	[Fusing SC Clear]		
5810	Note		
	Turn the main switch off a	and on afte	er resetting the SC code.
001	-	-	Resets a type A service call condition.

5811	[Machine Serial] Machine Serial Number Display		
002	Display	*ENG	Displays the machine serial number.
004	BICU	*ENG	Inputs the serial number.

[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 charact	ers (both n	umbers and alphabetic characters can be input).	
	Facsimile	*CTL	-	
002	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).			
	Supply	*CTL	-	
003	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]		
	0: Remote service off		
	1: CSS remote service on		
	2: @Remote service on		
	CE Call		
	Performs the CE Call at the st	art or end	of the service.
002	[0 or 1 / 0 / 1 /step]		
002	0: Start of the service		
	1: End of the service		
	NOTE: This SP is activated or	nly when S	P 5816-001 is set to "2".

	Function Flag
	Enables or disables the remote service function.
003	[0 to 1 / 0 / 1 /step]
	0: Disabled, 1: Enabled
	NOTE: This SP setting is changed to "1" after @Remote registor has been completed.
	SSL Disable
	Uses or does not use the RCG certification by SSL when calling the RCG.
007	[0 to 1 / 0 / 1 /step]
	0: Uses the RCG certification
	1: Does no use the RCG certification
	RCG Connect Timeout
008	Specifies the connect timeout interval when calling the RCG.
	[1 to 90 / 30 / 1 second /step]
	RCG Write Timeout
009	Specifies the write timeout interval when calling the RCG.
	[1 to 100 / 60 / 1 second /step]
	RCG Read Timeout
010	Specifies the read timeout interval when calling the RCG.
	[1 to 100 / 60 / 1 second /step]
	Port 80 Enable
011	Enables/disables access via port 80 to the SOAP method.
	[0 or 1 / 0 / –]
	0: Disabled, 1: Enabled
	RFU (Remote Frimware Update) Timing
	Selects the RFU timing.
013	[0 or 1 / 1 / -]
	O: RFU is executed whenever update request is received.
	1: RFU is executed only when the machine is in the sleep mode.

	RCG-C Registed			
	This SP displays the Embedded RC Gate installation end flag.			
021	0: Installation not completed			
	1: Installation completed			
	Connect Type (N/M)			
	This SP displays and selects the Embedded RC Gate connection method.			
023	[0 or 1 / 0 / 1 /step			
	0: Internet connection			
	1: Dial-up connection			
0/1	Cert. Expire Timing DFU			
061	Proximity of the expiration of the certification.			
	Use Proxy			
062	This SP setting determines if the proxy server is used when the machine communicates with the service center.			
	Proxy Host			
063	This SP sets the address of the proxy server used for communication between Embedded RC Gate-N and the gateway. Use this SP to set up or display the customer proxy server address. The address is necessary to set up Embedded RC Gate-N.			
003	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			
064	This SP sets the port number of the proxy server used for communication between Embedded RC Gate-N and the gateway. This setting is necessary to set up Embedded RC Gate-N.			
	Note			
	This port number is customer information and is not printed in the SMC report.			

Proxy User Name This SP sets the HTTP proxy certification user name. **Note** 065 • 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. Note 066 • 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 067 Displays the status of the certification update. 0 The certification used by Embedded RC Gate is set correctly. The certification request (setAuthKey) for update has been received from the GW 1 URL and certification is presently being updated. The certification update is completed and the GW URL is being notified of the 2 successful update. The certification update failed, and the GW URL is being notified of the failed 3 update. The period of the certification has expired and new request for an update is being 4 sent to the GW URL. A rescue update for certification has been issued and a rescue certification setting 11 is in progress for the rescue GW connection. The rescue certification setting is completed and the GW URL is being notified of 12 the certification update request. The notification of the request for certification update has completed successfully, 13 and the system is waiting for the certification update request from the rescue GW URL.

	14	The notification of the certification request has been received from the rescue GW controller, and the certification 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 certification has failed, and the GW URL is being notified of the failure of this event.		
	17	The certification update request has been received from the GW URL, the GW URL was notified of the results of the update after it was completed, but a certification error has been received, and the rescue certification is being recorded.		
	18	The rescue certification of notified of the failure of t	of No. 17 has been recorded, and the GW URL is being he certification update.	
	CERT	T: 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.		
068	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 No		Notification that GW URL does not exist.		
069	CERT	: Up ID	The ID of the request for certification.	
083	Firmware Up Status Displays the status of the		Displays the status of the firmware update.	
085	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 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 certifi		
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	CERT: Issuer	Displays the common name of the issuer of the @Remote 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. Afte 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: Luxembourg, 10: Spain		

Line Type Authentication Judgment

Press [Execute].

151

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

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:

- 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:		
107	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.		
	Access Point		
163	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 alphanumeric characters		
	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]		
164	0: Sharing Fax		
	1: No Sharing Fax		
	Note		
	 If this setting is changed, the copier must be cycled off and on. 		
	 SP5816 187 determines whether the off-hook button can be used to interrupt a RCG-M transmission in progress to open the line for fax transaction. 		

173	Modem Serial Number	This SP RCG -N	displays the serial number registered for the A.		
	Retransmission Limit				
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.				
	It these transactions cannot be the time restriction.	complete	ed within the allowed time, do this SP to cancel		
	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.				
	Regist: Status				
	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.				
201	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	externa	RCG has not started.		
202	Letter Number		entry of the number of the request needed for the ded RCG.		
203	Confirm Execute	Confirm Execute Executes the inquiry request to the @Remote GW URL.			

	Confirm Result		
	Displays a number that indicates the result of the inquiry executed with SP5816 203.		
	0: Succeeded		
	1: Inquiry number error		
	2: Registration in progress		
204	3: Proxy error (proxy enabled)		
	4: Proxy error (proxy disabled)		
	5: Proxy error (Illegal user nam	e 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.		
	0: Succeeded		
	2: Registration in progress		
	3: Proxy error (proxy enabled)		
207	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. Code Cause Meaning -11001 Chat parameter error Illegal Modem Parameter -11002 Chat execution error 208 -11003 Unexpected error Inquiry, registration attempted without -12002 acquiring device status. Operation Error, Incorrect Attempted registration without execution of -12003 Setting an inquiry and no previous registration. Attempted setting with illegal entries for -12004 certification and ID2. Attempted dial up overseas without the -2385 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 Error Caused by Response -2392 Parameter error from GW URL -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]		

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	' ·	tails, see th	ot for counters and the serial number) from the e "NVRAM Data Upload/Download" in the eld Service Manual.
001	-	#	-

[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	-	#	-

5828	[Network Setting]	*CTL	-
050	1284 Compatibility (Centro)	Enables or disables 1284 Compatibility. O or 1 / 1 / 1 / step] O: Disabled, 1: Enabled	
052	ECP (Centro)	Enables or disables ECP Compatibility. [0 or 1 / 1 / 1 / step] 0: Disabled, 1: Enabled • This SP is activated only when SP5-828-50 is set to "1"	
065	Job Spooling	Enables/disables Job Spooling. [O or 1 / 0 / 1 / step] O: Disabled, 1: Enabled	

066	Job Spooling Clear: Start Time	Treatment of the job when a spooled job exists at power on. 0: ON (Data is cleared) 1: OFF (Automatically printed)
069	Job Spooling (Protocol)	Validates or invalidates the job spooling function for each protocol. 0: Validates 1: Invalidates bit0: LPR bit1: FTP bit2: IPP bit3: SMB bit4: BMLinkS bit5: DIPRINT bit6: sftp bit7: (Reserved)
090	TELNET (0: OFF 1: ON)	Enables or disables the Telnet protocol. [O or 1 / 1 / –] O: Disable, 1: Enable
091	Web (0: OFF 1: ON)	Enables or disables the Web operation. [O or 1 / 1 / -] O: Disable, 1: Enable
145	Active IPvó Link Local Address	This is the IPv6 local address link referenced on the 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	
149	Active IPv6 Stateless Address 2	These SPs are the IPv6 status addresses (1 to 5) referenced
151	Active IPv6 Stateless Address 3	on the Ethernet or wireless LAN (802.11b) in the format: "Status Address" + "Prefix Length"
153	Active IPv6 Stateless Address 4	The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
155	Active IPv6 Stateless Address 5	
		This SP is the IPv6 manually set address referenced on the Ethernet or wireless LAN (802.11b) in the format:
156	IPv6 Manual Address	"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

[HDD]

5832

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 Link1 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 Link1 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"

*CTL

001	HDD Formatting (ALL)	
002	HDD Formatting (IMH)	
003	HDD Formatting (Thumbnail)	
004	HDD Formatting (Job Log)	
005	HDD Formatting (Printer Fonts)	
006	HDD Formatting (User Info)	Initializes the hard disk. Use this SP mode only if
007	Mail RX Data	there is a hard disk error.
008	Mail TX Data	
009	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:On)		0: Disable, 1: Enable		
001	With this function disabled, the settings related to the capture feature cannot be initialized, displayed, or selected.				
000	Panel Setting		0: Displayed, 1: Not displayed		
002	Displays or does not display the capture function buttons.				
	5836-71 to 5836-78, Copier and Printer Document Reduction				
	The following 6 SP modes set the default reduction for stored documents sent to the document management server via the MLB.				
	Enabled only when optional MLB (Media Link Board) is installed.				
072	Reduction for Copy B&W Text		0: 1 , 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3		
073	Reduction for Copy B&W Other		0: 1 , 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3		
075	Reduction for Printer B&W		0: 1, 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3		
078	Reduction for Printer B&W 1200		1: 1/2, 3: 1/4, 4: 1/6, 5: 1/8 (2: skipped)		

	5836-82 to 5836-85, Stored document format		
	The following 6 SP modes set Sets the default format for stored documents sent to the document management server via the MLB.		
	Enabled only when optional	MLB (Media Li	nk Board) is installed.
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		0: JFIF/JPEG, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR
085	Format for Printer B&W		0: 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 the MLB with JPEG selected of		sent to the document management server via
	Enabled only when optional	MLB (Media Li	nk Board) is installed.
101	Primary srv IP address		dress for the primary capture server. This is sted by the remote system.
102	Primary srv scheme	This is basical	ly adjusted by the remote system.
103	Primary srv port number	This is basical	ly adjusted by the remote system.
104	Primary srv URL path	This is basical	ly adjusted by the remote system.
111	Secondary srv IP address		dress for the secondary capture server. This ljusted by the remote system.
112	Secondary srv scheme	This is basical	ly adjusted by the remote system.
113	Secondary srv port number	This is basical	ly adjusted by the remote system.
114	Secondary srv URL path	This is basical	ly adjusted by the remote system.
120	Default Reso Rate Switch	This is basical	ly adjusted by the remote system.
	Reso: Copy (Mono)	[0 to 5 / 3 /	1/step]
122	Selects the resolution for BW copy mode. The system. 0: 600dpi/ 1: 400dpi/ 2: 300dpi/ 3: 200		

		1			
	Reso: Print (Mono)	This is basically adjusted by the remote system.			
124		[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: 3	300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi			
		This is basically adjusted by the remote system.			
	Reso: Fax (Mono)	[0 to 6 / 3 / 1/step]			
126	Selects the resolution for BW	/ fax mode. This is basically adjusted by the remote system.			
	0: 600dpi/ 1: 400dpi/ 2: 3	300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi/ 6: 75dpi			
	D C (C)	This is basically adjusted by the remote system.			
	Reso: Scan (Color)	[0 to 6 / 4 / 1/step]			
127	Selects the resolution for color scanning mode. This is basically adjusted by the remote system.				
	0: 600dpi/ 1: 400dpi/ 2: 3	300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi/ 6: 75dpi			
	Reso: Scan (Mono)	This is basically adjusted by the remote system.			
		[0 to 6 / 3 / 1/step]			
128	Selects the resolution for BW scanning mode. This is basically adjusted by the remote system.				
	0: 600dpi/ 1: 400dpi/ 2: 300dpi/ 3: 200dpi/ 4: 150dpi/ 5: 100dpi/ 6: 75dpi				
	All Addr Info Switch	[0 to 1 / 1 / 1]			
141	•	n is performing slowly due to a large number of resources in only 2000 documents can be queued for sending to the 6-142 below.)			
	Stand-by Doc Max Number	[10 to 10000 / 2000 / 1]			
142		mber of documents to be held on stand-by before they are dowever, the maximum number (10,000) cannot be set en disabled (switched off).			

5837	[Program Checksum]		
	-	-	Displays the program checksum result.

5840	[IEEE 802.11]		
006	Channel MAX	*CTL	Sets the maximum 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 maximum end of the range for each area. Adjust the upper 4 bits to set the maximum number of channels. EU: [1 to 13 / 13 / 1/step] NA: [1 to 11 / 11 / 1/step] AS: [1 to 14 / 14 / 1/step]
007	Channel MIN	*CTL	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. EU: [1 to 13 / 1 / 1/step] NA/ AS: [1 to 11 / 1 / 1/step] AS: [1 to 14 / 14 / 1/step]

			[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 0B - 9M Fix
	Transmission opeed	CIL	O x OA - 6M Fix
			0 x 07 - 11 M Fix
			0 x 05 - 5.5M Fix
			0 x 03 - 3.5M Tix 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	*CTL	Selects the WEP key.
			[00 to 11 / 00 / 1 binary]
011			00: Key #1
			01: Key #2 (Reserved)
			10: Key #3 (Reserved)
			11: Key #4 (Reserved)
			Adjusts the fragment threshold for the
			IEEE802.11 card.
042	Fragment Thresh	*CTL	[256 to 2346 / 2346 / 1]
			This SP is displayed only when the IEEE802.11
			card is installed.
			Determines whether the CTS self function is
	11 070 0 15	*CTL	turned on or off.
043	11g CTS to Self		[0 to 1 / 1 / 1] 0: Off, 1: On
			This SP is displayed only when the IEEE802.11 card is installed.
			Cara is ilisiulicu.

044	11g Slot Time	*CTL	Selects the slot time for IEEE802.11. [0 to 1 / 0 / 1] 0: 20 µm, 1: 9 µm This SP is displayed only when the IEEE802.11 card is installed.
045	WPA Debug Lvl	*CTL	Selects the debug level for WPA authentication application. [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			
011	Staple Std 1		Specifies supply names. These appear	
012	Staple Std2	*CTL	on the screen when the user presses the	
013	Staple Std3		Inquiry button in the user tools screen.	
014	Staple Std4			

5842	[GWWS Analysis] 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	Adjusts the USB transfer rate. [0001 or 0004 / 0004 / -] 0001: Full speed, 0004: Auto Change

002	Vendor ID	*CTL	Displays the vendor ID.
003	Product ID	*CTL	Displays the product ID.
004	Dev Release Number	*CTL	Displays the device release version number.
005	Fixed USB Port	*CTL	Displays the fixed USB Port.
006	PnP Model Name	*CTL	Displays the PnP Model Name.
007	PnP Serial Number	*CTL	Displays the PnP Serial Number.
100	Notify Unsupport	*CTL	Displays a message of the unspported USB device for the USB host slot. [O or 1 / 1 / -] O: Not displayed, 1: Displayed

5845	[Delivery Server Setting]	*CTL	-		
3843	Provides items for delivery server settings.				
001	FTP Port No.	[0 to 6553	35 / 3670 / 1 /step]		
001	Sets the FTP port number used when in	mage files to	the Scan Router Server.		
002	IP Address (Primary)		0.000.000.000 to 255.255		
002	Use this SP to set the Scan Router Server address. The IP address under the transfer tab can be referenced by the initial system setting.				
	Delivery Error Display Time	[0 to 999 / 300 / 1 second /step]			
006		this setting to determine the length of time the prompt message is displayed when cerror occurs during document transfer with the NetFile application and an external ice.			
	IP Address (Secondary)	Range: 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]		
	Allows changing the model of the delivery server registered by the I/O device. 0: Unknown 1: SG1 Provided			
009				
	2: SG1 Package			
	3: SG2 Provided			
	4: SG2 Package			
010	Delivery Svr. Capability	[0 to 255 / 0 / 1 /ste	ep]	
	Bit7 = 1 Comment information exits			
	Bit6 = 1 Direct specification of mail ac	ddress possible		
	Bit5 = 1 Mail RX confirmation setting	possible		
	Bit4 = 1 Address book automatic update function exists Changes the capability of			
	Bit3 = 1 Fax RX delivery function exists the registered that the I/O device registered.			
	Bit2 = 1 Sender password function ex	iists		
	Bit 1 = 1 Function to link MK-1 user ar	nd 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 /ste	ep]	
	Changes the capability of the registered that the I/O device registered.			
011	Bit7 = 1 Address book usage limitation (Limitation for each authorized user) Bit6 = 1 RDH authorization link Bit5 to 0: Not used			
010	Server Scheme (Primary) DFU			
013	This is used for the scan router program.			
014	Server Port Number (Primary) DFU			
014	This is used for the scan router program.			
015	Server URL Path (Primary) DFU			
	This is used for the scan router progra	m.		

016	Server Scheme (Secondary) DFU
010	This is used for the scan router program.
017	Server Port Number (Secondary) DFU
017	This is used for the scan router program.
018	Server URL Path (Secondary) DFU
018	This is used for the scan router program.
	Rapid Sending Control
022	Enables or disables the prevention function for the continuous data sending error.
	[0 to 1 / 0 / -]
	0: Disable, 1: Enable

5846	[UCS Settings]	*CTL	-		
	Machine ID (For Delivery Server)		Displays ID		
001	displayed and cannot be cha	'		livery server directory. The value is only created from the NIC MAC or IEEE 1394 byte binary.	
	Machine ID Clear (For Delive	ry Server)		Clears ID	
002	this SP if the connection of the	of the device used as the on of the device to the de		name in the file transfer directory. Execute livery server is unstable. After clearing the ally by cycling the machine off and on.	
	Maximum Entries			[2000 to 20000/ 2000 / 1 /step]	
003	Changes the maximum number	er of entri	es that l	UCS can handle.	
	f a value smaller than the present value is set, the UCS he data (excluding user code information) is displayed			•	
	Delivery Server Retry Timer		[0 to 255 / 0 / 1 /step]		
006	Sets the interval for retry atten	npts when	the de	livery server fails to acquire the delivery	
	Delivery Server Retry Times			[0 to 255 / 0 / 1 /step]	
007	Sets the number of retry attem server address book.	pts when	the del	ivery server fails to acquire the delivery	

008	Delivery Server Maximum Entries	[2000 to 50000 / 2000 / 1 /step]	
	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]	
020	Sets the maximum entries for the address book	of the WSD (WS-scanner).	
	Floder Auth Change	[0 to 1 / 0 / 1]	
021	This SP determines whether the user login information (Login User name and Password) or address (destination setting in the address book for Scan-to-SMB) is used to permit folder access. The machine must be cycled off/on for this setting to take effect if it is changed.		
	0: Uses operator login information (initial value of main machine)		
	1: Uses address authorization information		
022	Initial Value of Upper Limit Count	[0 to 999 / 500 / 1]	
022	Sets the initial value of upper limit count.		
0.40	Addr Book Migration (USB to HDD)		
040	Not used in this machine.		

Fill Addr Acl Info.

This SP must be executed immediately after installation of an HDD unit in a basic machine that previously had no HDD. The first time the machine is powered on with the new HDD installed, the system automatically takes the address book from the NVRAM and writes it onto the new HDD. However, the new address book on the HDD can be accessed only by the system administrator at this stage. Executing this SP by the service technician immediately after power on grants full address book access to all users.

Procedure

041

- 1. Turn the machine off.
- 2. Install a 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 address book can be accessed by only the system administrator or key operator.
- 6. Enter the SP mode and do SP5846-041. After this SP executes successfully, any user can access the address book.

043	Addr Book Media	Displays the slot number where an address book data is in. [0 to 30 / - /1] 0: Unconfirmed 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	Clears the distribution address book information, except the user code.	
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-	
053	Clear Backup Info	protected.	
	Glodi Backop IIIIo	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		
060	0: Checks both upper/lower case characters		
	1: Japan Only		
	2: Japan Only		
	3: Japan Only		
	4 to 7: Not Used		
	Complexity Option 1		
	Use this SP to set the conditions for password entry to access the local address book. Specifically, this SP limits the password entry to upper case and sets the length of the password.		
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	SP5847-1 through SP5847-7 changes the default settings of image data transferred externally by the Net File page reference function. [0 to 5 / 2 / 1 / step] SP5847-21 sets the default for JPEG image quality of image files handled by NetFile. "Net files" are jobs to be printed from the document server using a PC and the DeskTopBinder software.		
002	Rate for Copy B&W Text		0: 1x
003	Rate for Copy B&W Other		1: 1/2x
005	Rate for Printer B&W		2: 1/3x 3: 1/4x 4: 1/6x 5: 1/8x
007	Rate for Printer B&W 1200dpi		0: 1x 1: 1/2x 2: 1/3x 3: 1/4x 4: 1/6x 5: 1/8x
021	Network Quality Default for JPEG Sets the default value for the quality of JPEG images sent as NetFile pages. This function is available only with the MLB (Media Link Board) option installed. [5 to 95 / 50 / 1 / step]		

	[Web Service]	*CTL -	
5848	SP5848-2 sets the 4-bit switch assignment for the access control setting. Setting of 0001 has no effect on access and delivery from Scan 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 Ctrl: user Directory (only Lower 4 bits)		
007	Access Ctrl: Comm. Log Fax (Lower 4 bits)		
009	Access Ctrl: Job Ctrl (Lower 4 bits)	Switches access control on and off. 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	
	Repository: Download Image	Specifies the max size of the image data that the	
100	Max. Size	machine can download.	
		[1 to 1024 / 1024 / 1 MB /step]	

210	Setting: LogType: Job1	
211	Setting: LogType: Job2	
212	Setting: LogType: Access	
213	Setting: Primary Srv	DFU
214	Setting: Secondary Srv	Dro
215	Setting: Start Time	
216	Setting: Interval Time	
217	Setting: Timing	

5849	[Installation Date]	*CTL	-
001	Display		nter Clear Day" has been changed to on Date" or "Inst. Date".
002	Switch to Print	Determines whether the installation date is printed on the printout for the total counter. [0 or 1 / 1 / -] 0: OFF (No Print) 1: ON (Print)	
003	Total Counter	-	

	[Bluetooth Mode]
5851	Sets the operation mode for the Bluetooth Unit. Press either key.
	[O:Public] [1: Private]

	[Stamp Data Download]
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.
	U Note
	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		
001	Switches the debug log feature of feature is switched on.	on and off.	The debug log cannot be captured until this		
	Target (2: HDD 3: SD)	2: HDD,	3: SD Card		
002	Selects the storage device to save debug logs information when the conditions set with SP5-858 are satisfied.				
	[2 to 3 / 2 / 1 /step]				
	Save to HDD				
	Saves the debug log of the input SC number in memory to the HDD.				
005	A unique file name is generated to avoid overwriting existing file names on the SD Card. Up to 4MB can be copied to an SD Card. 4 MB segments can be copied one by one to each SD Card.				
	Save to SD Card				
006	Saves the debug log of the input	SC numbe	r in memory to the SD card.		
009	Copy HDD to SD Card (Latest 4 MB)				
010	Copy HDD to SD Card (Latest 4 MB Any Key)				
011	Erase HDD Debug Data				
012	Erase SD Card Debug Data				
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 destination selected by SP5857-002. SP5858-3 stores one SC specified by number. Refer to Section 4 for a list of SC error codes.			
001	002 Controller SC Error		off the debug save for SC codes generated by gine errors. 0 / 1 / step] : ON	
002			off the debug save for SC codes generated by roller errors. 0 / 1 / step] : ON	
003	Any SC Error	[0 to 655	35 / 0 / 1 /step]	
004 Jam			off the debug save for jam errors. 0 / 1 / step] : ON	

3639 [Debug Save Key No.] CIL -	5859	[Debug Save Key No.]	*CTL	-
---------------------------------------	------	----------------------	------	---

001	Key 1	
002	Key 2	
003	Key 3	
004	Key 4	There CD: all accounts and under 10 leave for less files for
005	Key 5	These SPs allow you to set up to 10 keys for log files for functions that use common memory on the controller
006	Кеу б	board. [-9999999 to 9999999 / 0 / -]
007	Key 7	[-7777777 10 7777777
008	Key 8	
009	Key 9	
010	Key 10	

5860	[SMTP/POP3/IMAP4]	*CTL	-	
020	O20 Partial Mail Receive Timeout Sets the amount of time to wait before savir received mail is discarded if the remaining prescribed time.		[1 to 16	68 / 72 / -]
			•	
021 MDN Response RFC2298 Compliance [0 to 1 / 1 / -]				[0 to 1 / 1 / -]
Determines whether RFC2298 compliance is switched 0: No 1: Yes 022 SMTP Auth. From Field Replacement		ed on for MDN reply mail.		
		nent		[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	
025	SMTP Auth. Direct Setting			[0 or 1 / 0 / -]

Selects the authentication method for SMPT.

Bit switch:

Bit 0: LOGIN

- Bif 0: LOGIN
- Bit 1: PLAIN
- Bit 2: CRAM MD5
- Bit 3: DIGEST MD5
- Bit 4 to 7: Not used

U Note

• This SP is activated only when SMTP authorization is enabled by UP mode.

S/MIME: MIME Header
Setting

Selects the MIME header type of an E-mail sent by S/MIME.

[0 to 2 / 0 / 1]
0: Microsoft Outlook Express standard
1: Internet Draft standard
2: RFC standard

5866	[E-mail Report] DFU		
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	Rewrites the common certification used for the @Remote.

	Initialize	*CTL	-		
	Initializes the set certification.				
003	When the GW controller board is replaced with a new one for repair, you must execute the "Initiralize (-003)" and "Writing (-001)" just after the new board replacement.				
	NOTE: Turn off and on the main power switch after the "Initiralize (-003)" and "Writing (-001)" have been done.				

5873	[SD Card Appli Move]		
()() Move Exec		This SP copies the application programs from the original SD card in SD card slot 2 to an SD card in SD card slot 1.	
002	Undo Exec	This SP copies back the application programs from an SD card in SD Card Slot 2 to the original SD card in SD card slot 1. Use this menu when you have mistakenly copied some programs by using "Move Exec" (SP5873-1).	

5875	[SC Auto Reboot]		
001	Reboot Setting	*CTL	Enables or disables the automatic reboot function when an SC error occurs. [O or 1/O/-] 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. 1: 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.
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5881	[Fixed Phrase Block Erasing]		
001	001		Deletes the fixed phrase.

5885	[WIM Settings] Web Image Monitor Settings									
3003	Close or disclose the functions	of web im	age monitor.							
020	Document Server ACC Ctrl	*CTL	O: OFF, 1: ON Bit Meaning O: Forbid all document server access (1) 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							
050	Document Server List Def. Style	*CTL	Selects the display type for the document box list. [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]							
100	Signature Setting	*CTL	Selects whether the signature is added to the scanned documents with the WIM when they are transmitted by an e-mail. [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
200	Detect Mem Leak	*CTL	This SP determines how Web Image Monitor memory leaks are handled. A "1" setting enables the function. Bit 0: Displays memory status at session timeouts. Bit 1: Displays memory status at the start/end of PF handler only. Bit 2-7: Not used
201	DocSvr Timeout	*CTL	This SP sets the length of time for session timeout. The default is 30 min. The time can be reduced to shorten the time between memory leak detections. [1 to 255 / 30 / 1 min.]

5007	[SD Get Counter]											
5887	This SP determines whether the	ROM can	be updated.									
001	-	*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]. 3. Touch [Execute] in the message when you are prompted.									

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)
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5893	[SDK Application Counter]		
3093	Displays the counter name of e	ach SDK	application.
001	SDK-1	*CTL	-
002	SDK-2	*CTL	-
003	SDK-3	*CTL	-
004	SDK-4	*CTL	-
005	SDK-5	*CTL	-
006	SDK-6	*CTL	-

5894	[External Counter Setting] DFU		
001	001 Switch Charge Mode		[0 to 2 / 0 / 1/step]

5902	[Test Print]	Test Print]								
001	1 Sheet Test	-	-							
Print the test pattern (selected with SP5902-003) a sheet of paper.										
002	Cont Test OFF or ON	-	-							
	Print the test pattern (selected w	vith SP590	02-003) continuously until the "OFF" button is							
003	Test Pattern	-	-							
	Select a test pattern.									

0. (No print) 1. Vertical Line (1 dot) 2. Vertical Line (2dot) 3. Horizontal Line (1 dot) 4. Horizontal Line (2dot) 5. Grid Vertical Line 6. Grid Horizontal Line 7. Grid Pattern Small 8. Grid Pattern Large 9. Argyle Pattern Small 10. Argyle Pattern Large 11. Independent Pattern (1 dot) 12. Independent Pattern (2dot) 13. Independent Pattern (4dot) 14. Trimming Area 15. Hound's Tooth Check (Vertical)	16. Hound's Tooth Check (Horizontal) 17. Band (Horizontal) 18. Band (Vertical) 19. Checker Flag Pattern 20. Density Pattern 21. Full Dot Pattern 22. Full White Pattern 23. Grayscale Horizontal 24. Grayscale (Horizontal Margin) 25. Grayscale Vertical 26. Grayscale (Vertical Margin) 27. Grayscale 28. Grayscale (Margin) 29. Grayscale Grid 30. Grayscale (Grid Margin)

5907	[Plug & Play Maker/Model Name]
001	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 whi operation panel keys have not been of the display.		ine is in standby mode (and the e another application can gain control

5930	Meter Click Charge
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001	Meter Click Charge	*ENG	[0 or 1 / 0 / -] 0: OFF, 1: ON		
	Enables or disables the Meter Charge mode. When enabling the Meter Charge mode, the "Counter" menu is added to the user menu.				
002	Life Disp: Maintenance Kit		[0 or 1 / 0 / -] 0: OFF, 1: ON		
003	Life Disp: AIO		[0 or 1 / 0 / -] 0: OFF, 1: ON		
Í					

5967	[Copy Server Set Function]	*CTL	0: ON, 1: OFF
	Enables and disables the document ser data from being left in the temporary a must switch the main switch off and on	rea of the H	3 3 ,

5974	[Cherry Server]		
J7/4	Specifies which version of Scan	Router,	"Lite" or "Full", is installed.
001	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 controller board, these SP codes must be set to "1".		
001	On Board NIC	[0 to 2 / 0 / 1 /step] 0: Disable, 1: Enable, 2: Function limitation 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
		O. Disable, T. Litable

5987	[Contract Type]	
001	Brand ID 0: OFF / 1: ON	This SP detects that a mechanical counter device is removed. If it is detected, SC610 occurs.

5990	[SP print mode]		
3990	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	-	
024	SDK/J Summary	-	
025	SDK/J Application Info	-	

System SP6-xxx

SP6-XXX (Peripherals)

6006	[ADF Adjustment]				
	Adjusts the side-to-side and leading registration of originals with the ARDF.				
001	S to S Registration: 1st	*5510	[20+20/0/0]/+]		
002	S to S Registration: 2nd	ENG	[-3.0 to 3.0 / 0 / 0.1 mm/step]		
003	Leading Edge Registration *ENG [-5.0 to 5.0 / 0 / 0.1 mm/step]				
	Adjusts the amount of paper buckle to	o correct o	riginal skew for the front and rear sides.		
006	Buckle: Duplex: 2nd *ENG [-2.5 to 2.5 / 0 / 0.1 mm/step]				
	Adjusts the erase margin at the original trailing edge. Trailing Edge Erase *ENG [-10 to 10 / 0 / 0.1 mm/step]				
007					

	[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 (see "Input Check" in this section).

	[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 (see "Output Check" in this section).

6009	[ADF Free Run]		
0009	Performs a DF free run in simplex, dup	olex mode or	stamp mode.
001	Free Run: Simplex Mode	-	OFF ON
002	Free Run: Duplex Mode	-	OFF or ON

[DF Magnification		[DF Magnification Adj.]	ation Adj.]		
	0017	Adjusts the magnification in the sub-scan direction for the ARDF.			
	001	01 DF Magnification Adj. *CTL [-5.0 to 5.0 / 0 / 0.1 %/step]		[-5.0 to 5.0 / 0 / 0.1 %/step]	

	[Jogger Fence Fine Adj]			
6132	This SP adjusts the distance between the jogger fences and the sides of the stack on the finisher stapling tray in the Finisher. The adjustment is done perpendicular to the direction of paper feed.			
003	A4 SEF	*ENG		
005	B5 SEF	*ENG	[-1.5 to 1.5 / 0 / 0.5 mm/step] + Value: Increases distance between jogger	
008	LG SEF	*ENG	fences and the sides of the stack.	
009	LT SEF	*ENG	- Value: Decreases the distance between the jogger fences and the sides of the stack.	
012	Other	*ENG	leader terress and me stace of me stack.	

4107	[Finisher Free Run]			
6137	Execute the finisher free run.			
001	Free Run 1		[0 to 1 / 0 / 1 /step]	
002	Free Run 2	*ENIC		
003	Free Run 3	*ENG		
004	Free Run 4			

6145 [FIN (BLO) Input Check] Finisher Input Check	
	Displays the signals received from sensors and switches of the finisher (see "Input Check" in this section).

6146	[FIN (BLO) Ouput Check] Finisher Output Check
	Displays the signals received from sensors and switches of the finisher (see "Output Check" in this section).

6830	Extra Staples DFU	
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001	0 to 50 (Initail:0)	CTL*	[0 to 50 / 0 / 1/sheet]		
001	Specifies the additional number of sheets for the finisher stapling.				
	Extra Suddles Not used				
002	0 to 50 (Initail:0)	CTL*	[0 to 50 / 0 / 1/sheet]		
002	Specifies the additional number of sheets for the finisher booklet stapling.				

System SP7-xxx

SP7-XXX (Data Log)

7001	[Operation Time]		
7001	Displays the rotation time of the main motor.		
001	001 - *ENG [0 to 99999999 / 0 / 1/step]		[0 to 99999999 / 0 / 1/step]

	7401	[Total SC Counter]			
	7401	Displays the number of SC codes detected.			
	001	*CTL [0 to 9999 / 0 / 1/step]		[0 to 9999 / 0 / 1/step]	

	[SC History]		
The 10 most recently detected SC Codes are not displayed on the screen, on the SMC (logging) outputs.			are not displayed on the screen, but can be seen
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		

5

[SC991 History]					
7404	Logs the SC Code 991 detected.				
	The 10 most recently detected SC Code 991 are not displayed on the screen, but can be seen on the SMC (logging) outputs.				
001	Latest				
002	Latest 1				
003	Latest 2				
004	Latest 3				
005	Latest 4	*CTL			
006	Latest 5	CIL	-		
007	Latest 6				
800	Latest 7				
009	Latest 8				
010	Latest 9				

7502	[Total Paper Jam Counter]			
7302	Displays the total number of jams detected.			
001	-	* CTL	[0 to 9999 / 0 / 1 sheet/step]	

7503	[Total Original Jam Counter]			
7303	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
	Displays the number of jams according to the location where jams were detected.

001	At Power On	*CTL	
003	Tray 1: ON	*CTL	
004	Tray 2: ON	*CTL	
005	Tray 3: ON	*CTL	
006	Tray 4: ON	*CTL	
008	Bypass Tray: ON	*CTL	
009	Duplex: ON	*CTL	
013	T2 Transport: ON	*CTL	For details, "Jam Detection" in main chapter.
014	T3 Transport: ON	*CTL	
017	Registration: ON	*CTL	
020	Paper Exit: ON	*CTL	
024	Inverter: ON (IN)	*CTL	
025	Inverter: ON (OUT)	*CTL	
026	Duplex Entrance: ON	*CTL	
027	Duplex Exit: ON	*CTL	

028	1 bin Relay: ON	*CTL	
029	1 bin Paper Exit: ON	*CTL	
053	T2 Transport: OFF	*CTL	
054	T3 Transport: OFF	*CTL	
055	T4 Transport: OFF	*CTL	
057	Registration: OFF	*CTL	
060	Paper Exit: OFF	*CTL	For details, "Jam Detection" in main chapter.
064	Inverter: OFF (IN)	*CTL	
065	Inverter: OFF (OUT)	*CTL	
066	Duplex Entrance: OFF	*CTL	
067	Duplex Exit: OFF	*CTL	
068	1 bin: Relay: OFF	*CTL	
069	1 bin: Paper Exit: OFF	*CTL	
230	FIN: No Exit Response	*CTL	
240	FIN: Entrance SN: ON	*CTL	
241	FIN: Entrance SN: OFF	*CTL	
242	FIN: Paper Exit	*CTL	
243	FIN: Jogger Motor	*CTL	
244	FIN: Shift Roller Motor	*CTL	For details, "Jam Detection" in
245	FIN: Gathering Roller Motor	*CTL	main chapter.
246	FiN Exit Guide Plate Motor	*CTL	
247	FiN Tray Lift Motor	*CTL	
248	FiN Stapler Motor	*CTL	
249	FiN Pick-up Solenoid	*CTL	
250	FIN: Entrance SN: OFF	*CTL	

7505	[ARDF Paper Jam Location] ON: On check, OFF: Off Check Displays the number of jams according to the location where jams were detected.		
001	At Power On	*CTL	
004	Registration: ON	*CTL	
008	Inverter: OFF	*CTL	For details, "Jam Detection" in main chapter.
054	Inverter: ON	*CTL	
058	Registration: OFF	*CTL	

[Jam Count by Paper Size]			
7506	to the paper size.		
006	A5 LEF		
044	HLT LEF		
133	A4 SEF		
134	A5 SEF		
142	B5 SEF	*CTL	[0 to 9999 / 0 / 1 sheet/step]
164	LG SEF		
166	LT SEF		
172	HLT SEF		
255	Others		

7507	[Plotter Jam History]
/30/	Displays the 10 most recently detected paper jams.

001	Latest		
002	Latest 1		
003	Latest 2		
004	Latest 3		
005	Latest 4	*CTL	
006	Latest 5	* CIL	"CIL -
007	Latest 6		
008	Latest 7		
009	Latest 8		
010	Latest 9		

7508	[Original Jam History]				
7306	Displays the 10 most recently o	Displays the 10 most recently detected original 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				

7404	[Part Replacement Operation ON/OFF]	
7624	Selects the PM maintenance for a part.	

001	Maintenance Kit	*CTL	[0 or 1 / 1 / -] 0: No (Not PM maintenance)
			1: Yes (PM maintenance)

	[ROM No./Firmware Versio	n]
7801	Displays the ROM version nu devices.	mbers of the main machine and connected peripheral
255	-	Displays all versions and ROM numbers in the machine.

7803	[PM Counter Display]
-001 to -020	Displays the number of sheets printed for each current maintenance unit. PM counters click up based on the number of A4 (LT) LEF size sheets printed.
001	Paper
002	Fusing Unit: Pages
003	Fusing Unit: Distance
004	Fusing Unit: Usage Rate
005	Transfer Roller: Pages
006	Tranfer Roller: Distance
007	Tranfer Roller: Usage Rate
008	Feed Roller: Pages
010	Feed Roller: Usage Rate

7804	[PM Counter Reset]
	Clears the PM counter. Press the Enter key after the machine asks "Execute?", which will reset the value of the current PM counter (SP7-803) to "O".
001	Paper
002	All
003	Fusing Unit

004	Transfer Roller
005	Paper Feed Roller

7807	[SC/Jam Counter Reset]		
7 607	Clears the counters related to S	SC codes a	nd paper jams.
001	-	*CTL	-

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 diagn	ostics.	
001	-	*CTL	-

7836	Total Memory Size		
7630	Displays the memory capacity	of the conti	roller system.
001	-	*CTL	-

	[DF Glass Dust Check]		
7852	Counts the number of occurrences (0 to 65 glass of the ARDF or resets the dust detection (ARDF Scan Glass Dust Check) is switched	on counter.	
001	Dust Detection Counter	*CTL	[0 to 9999 / - / 1 /step]
002	Dust Detection Clear Counter	*CTL	[0 to 9999 / - / 1 /step]

	[Assert Info]		
7901	Records the location where a pro- SP is used for problem analysis. D		ected in the program. The data stored in this
001	File Name		
002	Number of Lines	*CTL	-
003	Location		

7904	[Near End Timing]		
001	Maintenance Kit	*CTL	[0 to 2 / 1 / 1/step] 0: Early, 1: Normal, 2: Late
	Selects the near end alarm timing.		

7931	[AIO Information] SP7931 RTB 50: Descri	iption modified
7751	Displays the AIO information.	
001	Machine Serial ID	*ENG
002	Cartridge Ver	*ENG
003	Brand ID	*ENG
004	Area ID	*ENG
005	Class ID	*ENG
006	Color ID	*ENG
007	Maintenance ID	*ENG
008	New AIO	*ENG
009	Recycle Count	*ENG
010	EDP Code	*ENG
011	Serial No.	*ENG

012 Toner Remaining *ENG 013 Toner End *ENG 014 Refill Flag *ENG 015 R: Totaol Counter *ENG 016 E: Totaol Counter *ENG 017 Unit Output Counter *ENG 018 Install Date *ENG 019 Toner End Date *ENG 020 Conductor Time 1 *ENG 021 Conductor Time 2 *ENG 022 Conductor Time 3 *ENG 023 Conductor Time 4 *ENG				
014 Refill Flag *ENG 015 R: Totaol Counter *ENG 016 E: Totaol Counter *ENG 017 Unit Output Counter *ENG 018 Install Date *ENG 019 Toner End Date *ENG 020 Conductor Time 1 *ENG 021 Conductor Time 2 *ENG 022 Conductor Time 3 *ENG	012	Toner Remaining	*ENG	
015 R: Totaol Counter *ENG 016 E: Totaol Counter *ENG 017 Unit Output Counter *ENG 018 Install Date *ENG 019 Toner End Date *ENG 020 Conductor Time 1 *ENG 021 Conductor Time 2 *ENG 022 Conductor Time 3 *ENG	013	Toner End	*ENG	
016 E: Totaol Counter *ENG 017 Unit Output Counter *ENG 018 Install Date *ENG 019 Toner End Date *ENG 020 Conductor Time 1 *ENG 021 Conductor Time 2 *ENG 022 Conductor Time 3 *ENG	014	Refill Flag	*ENG	
017 Unit Output Counter *ENG 018 Install Date *ENG 019 Toner End Date *ENG 020 Conductor Time 1 *ENG 021 Conductor Time 2 *ENG 022 Conductor Time 3 *ENG	015	R: Totaol Counter	*ENG	
018 Install Date *ENG 019 Toner End Date *ENG 020 Conductor Time 1 *ENG 021 Conductor Time 2 *ENG 022 Conductor Time 3 *ENG	016	E: Totaol Counter	*ENG	
019 Toner End Date *ENG 020 Conductor Time 1 *ENG 021 Conductor Time 2 *ENG 022 Conductor Time 3 *ENG	017	Unit Output Counter	*ENG	
020 Conductor Time 1 *ENG 021 Conductor Time 2 *ENG 022 Conductor Time 3 *ENG	018	Install Date	*ENG	
021 Conductor Time2 *ENG 022 Conductor Time3 *ENG	019	Toner End Date	*ENG	
022 Conductor Time3 *ENG	020	Conductor Time 1	*ENG	
	021	Conductor Time2	*ENG	
023 Conductor Time4 *ENG	022	Conductor Time3	*ENG	
	023	Conductor Time4	*ENG	

7941	[AIO Information: Log]		
001	Log1: Serial No.	: Serial No.	
002	Log1: Refill Flag	*ENG	Dil
003	Log 1 : Install Date	EING	Displays the AIO information log 1.
004	Log 1 : R:Total Counter		
005	Log2: Serial No.		
006	Log2: Refill Flag	*5510	Displays the AIO information log 2.
007	Log2: Install Date		
008	Log2: R:Total Counter	er	
009	Log3: Serial No.		
010	Log3: Refill Flag	*ENG	Diambara the AIO information 1 2
011	Log3: Install Date	EING	Displays the AIO information log 3
012	Log3: R:Total Counter		

013	Log4: Serial No.			
014	Log4: Refill Flag	*ENG		
015	15 Log4: Install Date		Displays the AIO information log 4.	
016	Log4: R:Total Counter	punter		
017	Log5: Serial No.			
018	Log5: Refill Flag	*5510	Disabase the AIO information by F	
019	Log5: Install Date	*ENG Displays the AIO informat		
020	Log5: R:Total Counter			

7993	[Total Counter]		
001	-	*ENG	-
	Displays the total counter for the OEM model.		

System SP8-xxx

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
SP8211 to SP8216	The number of pages scanned to the document server.
SP8401 to SP8406	The number of pages printed from the document server
SP8691 to SP8696	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	
P:	Print application.	when 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.

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	

Abbreviation	What it means	
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.)	
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)	
lFax	Internet Fax	
ImgEdt	Image Edit performed on the original with the copier GUI, e.g. border removal, adding stamps, page numbers, etc.	
К	Black (YMCK)	
LS	Local Storage. Refers to the document server.	
LSize	Large (paper) Size	
Mag	Magnification	
МС	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	

Abbreviation	What it means	
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	
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	

Note

• 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
8 002	C:Total Jobs	*CTL	used 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 is used.
8 005	S:Total Jobs	*CTL	
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	These SPs count the number of jobs stored to the document
8 013	F:Jobs/LS	*CTL	server by each application, to reveal how local storage is being used for input.
8 014	P:Jobs/LS	*CTL	[0 to 9999999
8 015	S:Jobs/LS	*CTL	The L: counter counts the number of jobs stored from within
8 016	L:Jobs/LS	*CTL	the document server mode screen at the operation panel.
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	
8 032	C:Pjob/DesApl	*CTL	These SPs reveal what applications were used to
8 033	F:Pjob/DesApl	*CTL	output documents from the document server.
8 034	P:Pjob/DesApl	*CTL	[0 to 9999999/ 0 / 1] The L: counter counts the number of jobs printed from
8 035	S:Pjob/DesApl	*CTL	within the document server mode screen at the
8 036	L:Pjob/DesApl	*CTL	operation panel.
8 037	O:Pjob/DesApl	*CTL	

- 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.

+		
T:TX Jobs/LS	*CTL	These SPs count the applications that stored files on
C:TX Jobs/LS	*CTL	the document server that were later accessed for transmission over the telephone line or over a
F:TX Jobs/LS	*CTL	network (attached to an e-mail, or as a fax image by I-Fax).
P:TX Jobs/LS	*CTL	[0 to 9999999/ 0 / 1]
S:TX Jobs/LS	*CTL	Note: Jobs merged for sending are counted
L:TX Jobs/LS	*CTL	separately. The L: counter counts the number of jobs scanned
O:TX Jobs/LS	*CTL	from within the document server mode screen at the operation panel.
	C:TX Jobs/LS F:TX Jobs/LS P:TX Jobs/LS S:TX Jobs/LS L:TX Jobs/LS	C:TX Jobs/LS *CTL F:TX Jobs/LS *CTL P:TX Jobs/LS *CTL S:TX Jobs/LS *CTL L:TX Jobs/LS *CTL

- 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 email, the O: counter increments.

8 051	T:TX Jobs/DesApl	*CTL	
8 052	C:TX Jobs/DesApl	*CTL	These SPs count the applications used to send files from the document server over the telephone line or
8 053	F:TX Jobs/DesApl	*CTL	over a network (attached to an e-mail, or as a fax image by I-Fax). Jobs merged for sending are
8 054	P:TX Jobs/DesApl	*CTL	counted separately.
8 055	S:TX Jobs/DesApl	*CTL	[0 to 9999999/ 0 / 1] The L: counter counts the number of jobs sent from
8 056	L:TX Jobs/DesApl	*CTL	within the document server mode screen at the
8 057	O:TX Jobs/DesApl	*CTL	operation panel.

• 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 finishin application.	g methods	. The finishing method is specified by the
	C:FIN Jobs	*CTL	[0 to 9999999/ 0 / 1]
8 062 These SPs total finishing meth by the application.		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: Finishing feature	s for fax jobs are not available at this time.			
	P:FIN Jobs	*CTL [0 to 9999999/ 0 / 1]			
8 064	These SPs total finishing by the application.	g methods for print jobs only. The finishing method is specified			
	S:FIN Jobs	*CTL [0 to 9999999/ 0 / 1]			
8 065	These SPs total finishing by the application.	g methods for scan jobs only. The finishing method is specified			
	Note: Finishing feature	s for scan jobs are not available at this time.			
	L:FIN Jobs	*CTL [0 to 9999999/ 0 / 1]			
These SPs total finishing methods for jobs output from within the docume mode screen at the operation panel. The finishing method is specified fr 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	Not used			
8 06x 5	Z-Fold	Not used			
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.			
8 06x 8	Inside-Fold	Not used			
8 06x 9	Three-IN-Fold	Not used			

8 06x 10	Three-OUT-Fold	Not used
8 06x 11	Four-Fold	Not used
8 06x 12	KANNON-Fold	Not used
8 06x 13	Perfect-Bind	Not used
8 06x 14	Ring-Bind	Not used

	T:Jobs/PGS	*CTL	[0 to 9	999999/ 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 9	999999/ 0 /1]	
8 072	These SPs count and calc	ulate the num	nber of c	opy jobs by size based on the number	
	F:Jobs/PGS	*CTL	[0 to 9	999999/ 0 /1]	
8 073	These SPs count and calc	ulate the num	nber of fo	ax jobs by size based on the number	
	P:Jobs/PGS	*CTL	[0 to 9	999999/ 0 /1]	
8 074	These SPs count and calc of pages in the job.	culate the number of print jobs by size based on the number			
	S:Jobs/PGS		[0 to 9	999999/ 0 /1]	
8 075	These SPs count and calculate the number of scan jobs by size based on the number of pages in the job.				
	L:Jobs/PGS	*CTL	[0 to 9	999999/ 0 /1]	
8 076	These SPs count and calculate the number of jobs printed from within the docume server mode window at the operation panel, by the number of pages in the job.				
	O:Jobs/PGS	*CTL [0 to 9999999/ 0 / 1]		999999/ 0 /1]	
8 077	These SPs count and calculate the number of "Other" application jobs (Web 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.

	T:FAX TX Jobs	*CTL	[0 to 9999999/ 0 / 1]	
8 111	These SPs count the total number of jobs (color or black-and-white) sent by fax, eith 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.

	T:IFAX TX Jobs	*CTL	[0 to 9999999/ 0 / 1]	
8 121	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	ı is not availal	ple at this time.	
	F: IFAX TX Jobs	*CTL	[0 to 9999999/ 0 / 1]	
8 123	These SPs count the number of jobs (color or black-and-white) sent (not stored on document server), as fax images using I-Fax. Note: Color fax sending is not available at this time.			
8 12x 1	B/W			

- 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.

	T:S-to-Email Jobs	*CTL	[0 to 9999999/ 0 / 1]	
8 131	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 no			
	S: S-to-Email Jobs *CTL [0 to 9999999/ 0 / 1]			
8 135	These SPs count the number of jobs (color or black-and-white) scanned and a 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 black-and-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).

8 141	T:Deliv Jobs/Svr	*CTL	[0 to 9999999/ 0 / 1]		
	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		e SPs count the total number of jobs (color or black-and-white) scanned and sent 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 nu with Scan-to-PC.	mber of jo	obs (color or black-and-white) scanned and sent	
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
8 185	S:Scan to Media Jobs		the 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 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	jobs. Large size paper (A3/D	LT) scanned	oages input with the scanner for scan and copy for fax transmission are not counted. SMC Report, and in the User Tools display.		
	F: LSize Scan PGS	*CTL	[0 to 9999999/ 0 / 1]		
8 203	These SPs count the total number of large pages input with the scanner for for transmission.				
	Note: These counters are displayed in the SMC Report, and in the User Tools display.				

	S:LSize Scan PGS *CTL [0 to 9999999/ 0 / 1]				
8 205	These SPs count the total number of large pages input with the scanner for scan jobs o Large size paper (A3/DLT) scanned for fax transmission are not counted.				
	Note: These counters are disp	layed in the	SMC Report, and in the User Tools display.		

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 side scanning.				
8 221 1	Front	is the same as the scanning. With an ADF the count is the same	at can sco ne number at cannot ne as the n	for scanning: In both sides simultaneously, the Front side count of pages fed for either simplex or duplex scan both sides simultaneously, the Front side umber of pages fed for duplex front side is determined by which side the user loads face	

8 221 2 Back Same as With an	of rear sides fed for scanning: ADF that can scan both sides simultaneously, the Back count is the the number of pages fed for duplex scanning. ADF that cannot scan both sides simultaneously, the Back count is a as the number of pages fed for duplex rear-side scanning.
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- 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 of pages scanned by each ADF mode to determine the work load on the ADF.				
8 231 1	Large Volume		Selectable. Large copy jobs that cannot be loaded in the ADF at one time.		
8 231 2	SADF	Selec	table. Feeding pages one by one through the ADF.		
8 231 3	Mixed Size	Selec	table. Select "Mixed Sizes" on the operation I.		
8 231 4	Custom Size	Selec	table. 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	Simp	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	These SPs count the total numb regardless of which application		ed pages by original type for all jobs,

8 242	C:Scan PGS/Org		*CTL	[0 to 9999999/ 0 / 1]				
0 242	These SPs count	the number o	f pages scann	pages scanned by original type for Copy jobs.				
8 243	F:Scan PGS/O	rg	*CTL	[0 to 9999999/ 0 / 1]				
8 243	These SPs count	the number o	f pages scann	ed by original	type for Fax j	obs.		
0.045	S:Scan PGS/O	rg	*CTL	[0 to 999999	9/0/1]			
8 245	These SPs count	the number o	f pages scann	ed by original	type for Scan	jobs.		
	L:Scan PGS/O	rg	*CTL	[0 to 999999	9/0/1]			
8 246	These SPs count server mode scr the Copy mode	een at the ope						
8 241			8 242	8 243	8 245	8 246		
8 24x 1: Text		Yes	Yes	Yes	Yes	Yes		
8 24x 2: Text/F	24x 2: Text/Photo Yes		Yes	Yes	Yes	Yes		
8 24x 3: Photo	x 3: Photo Yes		Yes	Yes	Yes	Yes		
8 24x 4: GenCo	GenCopy, Pale Yes		Yes	No	Yes	Yes		
8 24x 5: Map		Yes	Yes	No	Yes	Yes		
8 24x 6: Norma	8 24x 6: Normal/Detail Yes		6: Normal/Detail Yes		No	Yes	No	No
8 24x 7: Fine/Super Fine Yes		No	Yes	No	No			
8 24x 8: Binary Yes		No	No	Yes	No			
8 24x 9: Grayscale Yes		No	No	Yes	No			
8 24x 10: Colo	r	Yes	No	No	Yes	No		
8 24x 11: Othe	۲r	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
8 254	P:Scan PGS/ImgEdt	*CTL	are:
8 255	S : Scan PGS/ImgEdr	*CTL	Erase> Border Erase> Center
8 256	L:Scan PGS/ImgEdt	*CTL	Image Repeat
8 257	O:Scan PGS/ImgEdt	*CTL	Centering Positive/Negative [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.

8 281	T:So	can PGS/TWAIN	*CTL		Ps count the number of pages scanned using IN driver. These counters reveal how the		
				TWAIN	I driver is used for delivery functions.		
8 285	S:S	can PGS/TWAIN	*CTL	-	999999/0/1]		
				1	At the present time, these counters perform		
				identico	al counts.		
8 291	T:So	can PGS/Stamp	*CTL	These S	Ps count the number of pages stamped with		
0.000	F.C	DCC /C:	* CTI	the stamp in the ADF unit.			
8 293	F:50	can PGS/Stamp	*CTL	[0 to 99	99999/0/1]		
				-	The L: counter counts the number of pages stored		
0.005		DOC /C:	* CTI	from within the document server mode screen at the			
8 295	5:5	can PGS/Stamp	*CTL	operati	on 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		1			er of pages scanned by all applications. Use ize (scanning) and output (printing) page size		

		1	
	C:Scan PGS/Size	*CTL	[0 to 9999999/ 0 / 1]
These SPs count by size the total number of pages scanned by the Copy app Use these totals to compare original page size (scanning) and output (printing size [SP 8-442].			
	F:Scan PGS/Size	*CTL	[0 to 9999999/ 0 / 1]
8 303	These SPs count by size the total number of pages scanned by the Fax application. Use these totals to compare original page size (scanning) and output page size [SP 8-443].		
	S:Scan PGS/Size	*CTL	[0 to 9999999/ 0 / 1]
8 305	These SPs count by size the total number of pages scanned by the Scan application. Use these totals to compare original page size (scanning) and output page size [SP 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)		

	T:Scan PGS/Rez	*CTL	[0 to 9999999/ 0 / 1]	
8 311	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	TI CD vil I (v. II ii
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. [0 to 9999999 / 0 / 1]
8 384	P:Total PrtPGS	*CTL	The L: counter counts the number of pages stored
8 385	S:Total PrtPGS	*CTL	from within the document server mode screen at the operation panel. Pages stored with the Store File
8 386	L:Total PrtPGS	*CTL	button from within the Copy mode screen go to the C: counter.
8 387	O:Total PrtPGS	*CTL	C. couriler.

- 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 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
8 403	F:PrtPGS/LS	*CTL	used 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	This SP counts the amount of paper (front/back counted as 1 page) used for duplex printing. Last pages printed only on one side are not counted. [O to 9999999/0/1]
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	T:PrtPGS/Dup Comb	*CTL	[0 to 9999999/ 0 / 1]	
8 421	These SPs count by binding and combine, and n-Up settings the number of p processed for printing. This is the total for all applications.			
8 422	C: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 by the copier application.			

	F:PrtPGS/Dup Comb		*CTL	[0 to 9999999/ 0 / 1]	
8 423	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the fax application.				
	P:PrtPGS/Dup Comb		*CTL	[0 to 9999999/ 0 / 1]	
8 424	These SPs count by bin processed for printing	-		oine, and n-Up settings the number of pages pplication.	
	S:PrtPGS/Dup Comb		*CTL	[0 to 9999999/ 0 / 1]	
8 425	These SPs count by bin processed for printing	-		oine, and n-Up settings the number of pages application.	
	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 page 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 bin processed for printing			oine, and n-Up settings the number of pages cations	
8 42x 1	Simplex> Duplex				
8 42x 4	Simplex Combine				
8 42x 5	Duplex Combine				
8 42x 6	2>	2 pag	ges on 1	side (2-Up)	
8 42x 7	4>	4 pag	ges on 1	side (4-Up)	
8 42x 9	8>	8 pag	ges on 1	side (8-Up)	
8 42x 10	9>	9 pages on 1 side (9-Up)			
8 42x 11	16>	16 pc	ages 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:

Вос	oklet	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

8 431	T:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ 0 / 1]		
	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 the copy application.	mber of pages output with the three features below with			
	P:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ 0 / 1]		
8 434	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]		
These SPs count the total number of pages output from within mode window at the operation panel with the three features		• .			
	O:PrtPGS/ImgEdt	*CTL	[0 to 9999999/ 0 / 1]		
8 437	These SPs count the total number of pages output with the three features below with Other applications.				

8 43x 1	Cover/Slip Sheet	Total number of covers or slip sheets inserted. The count for a 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.

8 441	T:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ 0 / 1]			
0 441	These SPs count by print paper size the 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	per size th	ne number of pages printed by the copy			
	F:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ 0 / 1]			
8 443	These SPs count by print pa application.	aper size the number of pages printed by the fax				
	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	5	ne number of pages printed by the scanner				
	L:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ 0 / 1]			
8 446	These SPs count by print paper size the number of pages printed from within the document server mode window at the operation panel.					
	O:PrtPGS/Ppr Size	*CTL	[0 to 9999999/ 0 / 1]			
8 447	These SPs count by print pa	per size th	ne number of pages printed by Other			

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.

PrtPGS/Ppr Tray			*CTL	[0 to 9999999/ 0 / 1]
8 451	These SPs count t	the number of sheets fed from each paper feed station.		
8 451 1	Bypass Tray	Вура	ss Tray	
8 451 2	Tray 1	Macl	nine	
8 451 3	Tray 2	Pape	r Tray Unit (O	ption)
8 451 4	Tray 3	Paper Tray Unit (Option)		
8 451 5	Tray 4	Paper Tray Unit (Option)		
8 451 6	Tray 5	Not used		
8 451 7	Tray 6	Not u	ısed	
8 451 8	Tray 7	Not used		
8 451 9	Tray 8	Not used		
8 451 10	Tray 9	Not used		

8 451 11	Tray 10	Not used
8 451 12	Tray 1 1	Not used
8 451 13	Tray 12	Not used
8 451 14	Tray 13	Not used
8 451 15	Tray 14	Not used
8 451 16	Tray15	Not used

	T:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ 0 / 1]		
	These SPs count by paper type the number pages printed by all applications.				
8 461	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, cha	pter cover	s, slip sheets) are also counted.		
	During duplex printing, poprinted on one side count	•	ed on both sides count as 1, and a page		
8 462	C:PrtPGS/Ppr Type	*CTL	[0 to 9999999/ 0 / 1]		
0 402	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]		
0 403	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 numb	er 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	Special				
8 46x 4	Thick				

8 46x 5	Normal (Back)
8 46x 6	Thick (Back)
8 46x 7	OHP
8 46x 8	Other

0 471	PrtPGS/Mag	*CTL	[0 to 9999999/ 0 / 1]	
8 471 These SPs count by magnification rate the number of pages printed.		number of pages printed.		
8 471 1	< 49%	< 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]			

	T:PrtPGS/Emul		*CTL	[0 to 9999999/ 0 / 1]		
8 511	These SPs count by printer		r emulation mode the total number of pages printed.			
	P:PrtPGS/Emul		*CTL	[0 to 9999999/ 0 / 1]		
8 514	These SPs coun	t by printe	r emulation	mode the total number of pages printed.		
8 51x 1	RPCS					
8 51x 2	RPDL					
8 51x 3	PS3					
8 51x 4	R98					
8 51x 5	R16					
8 51x 6	GL/GL2					
8 51x 7	R55					
8 51x 8	RTIFF					
8 51x 9	PDF					
8 51x 10	PCL5e/5c					
8 51x 11	PCL XL					
8 51x 12	IPDL-C					
8 51x 13	BM-Links	Japan O	nly			
8 51x 14	Other					
8 51x 15	IPDS					

- \bullet 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.

	T:PrtPGS/FIN	*CTL	[0 to 9999999 / 0 / 1]
8 521	These SPs count by finishing rapplications.	node the t	otal number of pages printed by all

	C:PrtPGS/FIN	*CTL	[0 to 9999999 / 0 / 1]			
8 522	These SPs count by finishing mode the total number of pages printed by the Copy application.					
	F:PrtPGS/FIN	*CTL	[0 to 9999999 / 0 / 1]			
8 523	application.		ed faxes are currently not available.			
	P:PrtPGS/FIN	*CTL	[0 to 9999999 / 0 / 1]			
8 524	These SPs count by finishing rapplication.	mode the t	total number of pages printed by the Print			
	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 (not used)					
8 52x 5	Z-Fold (not used)					
8 52x 6	Punch					
8 52x 7	Other					
8 52x 8	Inside-Fold (not used)					
8 52x 9	Three-IN-Fold (not used)	Three-IN-Fold (not used)				
8 52x 10	Three-OUT-Fold (not used)					
8 52x 11	Four-Fold (not used)	Four-Fold (not used)				
8 52x 12	KANNON-Fold (not used)					

8 52x 13	Perfect-Bind (not used)
8 52x 14	Ring-Bind (not used)

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	Staples	*CTL	This SP counts the amount of staples used by the machine. [0 to 9999999 / 0 / 1]	
8 551	T:FIN Books (not used)		*CTL	Not used
8 551 1	Perfect-Bind			
8 551 2	Ring-Bind			
8 552	C:Prt Books/FIN (not used)		*CTL	Not used
8 552 1	Perfect-Bind			
8 552 2	Ring-Bind			
8 554	T:FIN Books (not used)		*CTL	Not used
8 554 1	Perfect-Bind			
8 554 2	Ring-Bind			

8 556	L:Prt Books/ FIN (not used)	*CTL	Not used
8 552 6	Perfect-Bind		
8 552 6	Ring-Bind		

	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					

	O:Counter		*CTL	[0 to 9999999/ 0 / 1]
8 591	These SPs count the Other (O:) applica			luplex pages printed. These totals are for
8 591 1	A3/DLT (not used)	-		
8 591 2	Duplex			

	Coverage Counter *CTL [0 to 9999999/ 0 / 1]				
8 601	These SPs count the total coverage for each color and the total printout pages for each printing mode.				
8 601 1	B/W				
8 601 11	B/W Printing Pages	-			

8 617	SDK Apli Counter	*CTL	[0 to 9999999/ 0 / 1]	
0017	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			

8 621	Func Use Counter	*CTL	-
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001 to 064	Function-001 to Function-064
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	T:FAX TX PGS	*CTL	[0 to 9999999/ 0 / 1]	
8 631	These SPs count by color mode the number of pages sent by fax to a telephone number.			
	F:FAX TX PGS	*CTL	[0 to 9999999/ 0 / 1]	
8 633	These SPs count by color mode the number of pages sent by fax to a telephone number.			
8 63x 1	B/W			

- 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.			
	[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			

- 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] These SPs count by color mode the total number of pages attached to an e-mail for the Scan application only.			
8 655				
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.			
	S:Deliv PGS/Svr	[0 to 9999999/ 0 / 1]		
8 665	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.

	T:Deliv PGS/PC	*CTL	[0 to 9999999/ 0 / 1]		
8 671	These SPs count by color mode the total number of pages sent to a folder on a PC (Scan-to-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. [0 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.)

8 691	T:TX PGS/LS	*CTL	These SPs count the number of pages sent from the
8 692	C:TX PGS/LS	*CTL	document server. The counter for the application that was used to store the pages is incremented.
8 693	F:TX PGS/LS	*CTL	[0 to 9999999 / 0 / 1]
8 694	P:TX PGS/LS	*CTL	The L: counter counts the number of pages stored from within the document server mode screen at the operation
8 695	S:TX PGS/LS	*CTL	panel. Pages stored with the Store File button from within
8 696	L:TX PGS/LS	*CTL	the Copy mode screen go to the C: counter.

U Note

- 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	These SPs count the number of pages sent by the physical port used to send them. For example, if a 3-page original is sent to 4 destinations via ISDN G4, the count for ISDN (G3, G4) is 12.		
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 num	mber of pages sent 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]	
0.705	S: Deliv PGS/WSD	*CTL	- [0 to 9999999/ 0 / 1]	
These SPs count the number of pages scanned by each		ed by each scanner mode.		
x 1	/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 scanner mode.					
x 1	B/W	-				
x 2	Color	-				

	RX PGS/Port	*CTL	[0 to 9999999/ 0 / 1]			
8 741	These SPs count the num them.	aber of pages received by the physical port used to receive				
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	-				

	Dev Counter *CTL [0 to 9999999/ 0 / 1]						
8 771	' '	hese SPs count the frequency of use (number of rotations of the development roller or black and other color toners. RTB 88: Description modified					
8 771 1	Total						

	Toner_Bottle_In	fo.	*ENG	[0 to 9999999/ 0 / 1]	
8 781	These SPs displo	rdy replaced AIOs.			
	NOTE: Currently, the data in SP7-833-011 through 014 and the data in SP8-781-001 through 004 are the same. RTB 88: Description modified				
8 781 1	ВК	The number of AIOs			

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]			
8 801	These SPs display the perd toner supply at any time.	cent of tone	r remaining. This SP allows the user to check the			
	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	K					
	CVr Cnt: 0-10%	*ENG	[0 to 9999999/ 0 / 1]			
8 851	These SPs display the number of scanned sheets on which the coverage is from 0% to 10%.					
8 851 11	0 to 2%: BK					
8 851 21	3 to 4%: BK					
8 851 31	5 to 7%: BK					
8 851 41	8 to 10%: BK					
	CVr Cnt: 11-20%	*ENG	[0 to 9999999/ 0 / 1]			
8 861	These SPs display the number of scanned sheets on which the coverage is from 11% to 20%.					
8 861 1	ВК					
	CVr Cnt: 21-30%	*ENG	[0 to 9999999/ 0 / 1]			
8 871	These SPs display the number of scanned sheets on which the coverage of each color is from 21% to 30%.					
8 871 1	ВК					

	CVr Cnt: 31%-	*ENG	[0	to 9999999/ 0 / 1]		
8 881	These SPs display the num higher.	ber of scan	ined	sheets on which the coverage is 31% or		
8 881 1	ВК					
8 891	Page/Toner Bottle	*ENG	[0	to 9999999/ 0 / 1]		
0 071	These SPs display the amount of the remaining current toner.					
8 891 1	ВК					
8 901	Page/Toner_Prev1	*ENG	}	[0 to 9999999/ 0 / 1]		
8 901	These SPs display the amount of the remaining previous toner.					
8 901 1	BK					
0.011	Page/Toner_Prev2	*ENG	}	[0 to 9999999/ 0 / 1]		
8 911	These SPs display the amount of the remaining 2nd previous toner.					
8 9 1 1 1	BK					
0.001	Cvr Cnt/Total	*CTL	[0	to 9999999/ 0 / 1]		
8 921	Displays the total coverage and total printout number.					
8 921 1	Coverage (%) Bk					
8 921 11	Coverage /P: Bk					
	Machine Status	*CTL	[0	to 9999999/ 0 / 1]		
8 941				achine spends in each operation mode. eed to investigate machine operation for		

improvement in their compliance with ISO Standards.

operating).

Operation Time

8 941 1

Engine operation time. Does not include time while

controller is saving data to HDD (while engine is not

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		
0 931	These SPs count the r	number of even	ts when the machine mo	anages data registration.
8 951 1	User Code/User ID	User code reg	gistrations.	
8 951 2	Mail Address	Mail address	registrations.	
8 951 3	Fax Destination	Fax destinatio	n registrations.	[0 to 9999999/ 0 / 1]
8 951 4	Group	Group destina	ation registrations.	[0 10 99999997 0 / 1]
8 951 5	Transfer Request	Fax relay destination registrations for relay TX.		
8 951 6	F-Code	F-Code box r	egistrations.	

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.	

0.000	Admin. Counter List	*CTL	[0 to 99999	999/0/1]
8 999	Displays the total coverage	printout numb	er for each color.	
8 999 1	Total			
8 999 3	Copy: BW			
8 999 7	Printer BW			
8 999 10	Fax Print: BW			
8 999 13	Duplex			
8 999 15	Coverage: BW (%)			
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: Col	or		
8 999 105	Scanner Transmission: BW	,		

Input and Output Check

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							

Mianframe

Reading 5803 **Description** 0 Cover Open (Front door or duplex 5803 1 Open Closed Main Motor:Lock Not lock Lock 5803 2 58033 Polygon Motor:Lock Not lock Lock 5803 4 Duplex Fan :Lock Not lock Lock Main Fan :Lock 5803 5 Not lock Lock 58036 PSU Fan :Lock Not lock Lock 58037 Controller Fan :Lock Not lock Lock 58038 Not set Set Tray Set (Tray 1) 5803 9 Fusing Temp: Error No error Frror 5803 10 Toner End Sensor Not end End 5803 11 Paper Overflow Sensor 5803 12 Regist Sensor Paper not detected Paper detected Paper Exit Entrance SN (Fusing Exit 5803 13 Paper not detected Paper detected Sensor)

5

5000	5	Read	ling	
5803	Description	0	1	
5803 14	Duplex Entrance SN	Paper not detected	Paper detected	
5803 15	Duplec Relay SN	Paper not detected	Paper detected	
5803 16	Duplec Inverter SN	Paper not detected	Paper detected	
5803 17	Paper End Sensor	Not end	End	
5803 18	Paper Height Sensor	See "Table 3" de	ccribed below.	
5803 19	Paper Size Sensor	See "Table 1" de	ccribed below.	
5803 20	Bypass Paper End	Not end	End	
5803 21	AIO FAN:Lock	Not lock	Lock	
5803 22	Fusing Thermistor 2	Not used		
5803 23	Transfer Thermistor	Displays current ambient temperature.		
5803 24	Fusing Thermistor	Displays current fusing temperature.		
5803 25	Fusing Unit Set	7E: Set Blank: Not set		
5803 26	HVPS: Transfer:IFB	μΑ		
5803 27	HVPS: Charge:VFB	V		
5803 28	HVPS: Develop:VFB	V		
5803 29	Voltage Frequency	Off	On	
5803 30	PSU Fan2:Lock	Not lock	Lock	
5803 31	1bin Relay Sensor	Paper not detected	Paper detected	
5803 33	1bin Paper Set SN	Paper not detected	Paper detected	
5803 34	1bin Paper Exit SN	Paper not detected	Paper detected	
5803 35	Mecha Counter:Set	Not installed	Installed	
5803 36	Key Counter:Set	Not installed Installed		
5803 37	Key Card:Set	Not installed	Installed	

5000	D	Read	ling
5803	Description	0	1
5803 41	PFU1:Tray Set Sensor	Not set	Set
5803 42	PFU1:Paper End Sensor	Not end	End
5803 43	PFU1:T2 Transport SN	Paper not detected	Paper detected
5803 44	PFU1:Paper Size Sensor	See "Table 2" de	ccribed below.
5803 45	PFU1:T2 Paper Height SN	See "Table 3" de	ccribed below.
5803 46	PFU2:Tray Set Sensor	Not set	Set
5803 47	PFU2:Paper End Sensor	Not end	End
5803 48	PFU2:T2 Transport SN	Paper not detected	Paper detected
5803 49	PFU2:Paper Size Sensor	See "Table 2" deccribed below.	
5803 50	PFU2:T2 Paper Height SN	See "Table 3" de	ccribed below.
5803 51	PFU3Tray Set Sensor	Not set	Set
5803 52	PFU3:Paper End Sensor	Not end	End
5803 53	PFU3:T2 Transport SN	Paper not detected	Paper detected
5803 54	PFU3:Paper Size Sensor	See "Table 2" de	ccribed below.
5803 55	PFU3:T2 Paper Height SN	See "Table 3" de	ccribed below.
5803 200	Scanner HP Sensor	Not HP	НР
5803 201	Platen Cover Sensor	Open	Close

Table 1: Paper Size Sensors (Tray 1)

0: Interrupted, 1: Not interrupted

Models		F	aper size sensor	
North America	Europe/Asia	3 (bit2)	2 (bit1)	1 (bitO)
A4	A4	0	1	0
LT	LT	1	0	1

Exe	Exe	0	0	1
HLT	A5	1	1	0
-	A6	1	0	0

Table 2: Paper Size Sensors (PFU 1, 2, 3)

0: Interrupted, 1: Not interrupted

Models		Paper size sensor		
North America	Europe/Asia	1 (bit2)	2 (bit1)	3 (bit0)
A4	A4	0	1	0
LT	LT	1	0	1
Exe	Exe	1	0	0
HLT	A5	0	1	1
-	A6	0	1	1

Table 2: Paper Remaining Sensors

Amount of paper	Remaining paper sensor 1	Remainng paper sensor 2
1-49 sheets (10%)	OFF	OFF
50-249 sheets (50%)	OFF	ON
250-449 sheets (90%)	ON	ON
450-550 sheets (100%)	ON	OFF

ARDF

4007	Description	Reading	ing
6007	Description	0	1
6007 9	Original Set Sn	Paper not detected	Paper detected
6007 13	Registration Sn	Paper not detected	Paper detected
6007 15	Feed Cover	ADF cover close	ADF cover open

	6007 17	Reverse Sn	Paper not detected	Paper detected	
ı					- 1

Internal Finisher

6145	Description	Reading	
0143	Description	0	1
6145 1	Entrance Sensor	Paper not detected	Paper detected
6145 2	Paper Exit Sensor	Paper not detected	Paper detected
6145 3	Jogger Fence HP Sensor	Paper not detected	Paper detected
6145 4	Shift Roller HP Sensor	Paper not detected	Paper detected
6145 5	Gathering Roller Sensor	Paper not detected	Paper detected
6145 6	Exit Guide Plate Sensor	Paper not detected	Paper detected
61457	Staple Tray Paper Sensor	Paper not detected	Paper detected
6145 8	Shift Tray Paper Sensor	Paper not detected	Paper detected
6145 9	Shift Tray Full Sensor	Paper not detected	Paper detected
6145 10	Stapler HP Sensor	Paper not detected	Paper detected
6145 11	Staple Near End Sensor	Paper not detected	Paper detected
6145 12	Staple Self Priming Sensor	Paper not detected	Paper detected
6145 13	Front Door SW	Front door closed	Front door open

Output Check Table

Copier

5804	Display	Description
5801 1	All OFF	
5801 2	Main Motor:H	

5804 3	Main Motor:L	-
5804 4	Duplex Motor:H	-
5804 5	Duplex Motor:L	-
5804 6	Duplex Inverter Motor:H	-
58047	Duplex Inverter Motor:L	-
5804 8	Dplx Inverter Motor:Rev:H	-
5804 9	Dplx Inverter Motor:Rev:L	-
5804 10	Polygon Motor:H	-
5804 11	Polygon Motor:L	-
5804 12	PSU FAN:H	-
5804 13	Main FAN:H	-
5804 14	Relay CL	-
5804 15	Paper Feed CL	-
5804 16	Bypass Feed CL	-
5804 17	Regist CL	-
5804 18	Duplex Junction SOL	-
5804 19	LD1	LD1 unit in the laser unit
5804 20	LD2	LD2 unit in the laser unit
5804 21	LD1 and LD2	-
5804 22	New Fusing Unit Fuse	Breaks the new unit fuse of the fusing unit.
5804 23	Controller FAN:H	-
5804 24	HVPS:Charge	-
5804 25	HVPS:Develop	-
5804 26	HVPS:Transfer+ (positive)	-
5804 27	HVPS:Transfer- (negative)	-

5804 28	RFID:ON/OFF	-
5804 29	RFID:Communication	-
5804 30	PSU FAN2:H	-
5804 31	Main FAN:L	-
5804 32	Duplex FAN:H	-
5804 33	Duplex FAN:L	-
5804 34	1bin SOL	-
5804 35	Controller FAN:L	-
5804 36	Mecha Counter	-
5804 37	Mecha Counter	-
5804 38	Key Card	-
5804 39	PSU FAN:L	-
5804 40	PSU FAN2:L	-
5804 41	PFU :All OFF	-
5804 42	PFU1:Motor:H	-
5804 43	PFU1:Motor:L	-
5804 44	PFU1:Paper Feed CL	-
5804 45	PFU2:Motor:H	-
5804 46	PFU2:Motor:L	-
5804 47	PFU2:Paper Feed CL	-
5804 48	PFU3:Motor:H	-
5804 49	PFU3:Motor:L	-
5804 50	PFU3:Paper Feed CL	-
5804 51	AIO FAN:H	-
5804 52	AIO FAN:L	-
5804 53	Main Motor:Rev:H	-

5804 54	Main Motor:Rev:L	-
5804 202	Scanner Lamp	

ARDF

6008	Display	Description
6008 3	Feed Motor: Forward	-
6008 4	Feed Motor: Reverse	-
6008 5	Relay Motor: Forward	-
6008 9	Feed Clutch	-
6008 11	Junction Gate Solenoid	-

Internal Finisher

6146	Display	Description
6146 001	Carry Motor	Transport Motor
6146 002	Exit Motor	-
6146 003	Jogger Motor	-
6146 004	Sft Motor	Shift Roller Motor
6146 005	Hitroll Motor	Gathering Roller Motor
6146 006	Exit Guide Plate Motor	-
6146 007	Tray Motor	Tray Lift Motor
6146 008	Staple Motor	-
6146 009	Stopper Solenoid	Pick-up Solenoid

Printer Service Mode

SP1-XXX (Service Mode)

1001	Bit Swi	Bit Switch				
001	Bit Swi	tch 1	0	1		
	bit 0	DFU	-	-		
	bit 1	DFU	-	-		
	bit 2	DFU	-	-		
	bit 3	No I/O Timeout	0: Disable	1: Enable		
Enable: The machine I/O Timeout setting will ho			o effect. I/O T	imeouts will never		
	bit 4	SD Card Save Mode	0: Disable	1: Enable		
		Enable: Print jobs will be saved to an SD Card in the	GW SD slot.			
	bit 5	DFU	-	-		
	bit 6	DFU	-	-		
	bit 7	[RPCS,PCL]: Printable area frame border	0: Disable	1: Enable		
		Prints all RPCS and PCL jobs with a border around the printable area.				

Bit Switch			
	Bit Switch	Bit Switch	Bit Switch

002	Bit Switch 2		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	Applying a Collate Type	0: Shift Collate	1: Normal Collate
		A collate type (shift or normal) will be applied to all define a collate type.	jobs that do no	t explicitely
		Note: If BitSwitch 5-0 is enabled, this BitSwitch has no effect.		
	bit 3	[PCL5e/c,PS]: PDL Auto Switching	0: Enable	1: Disable
		Disable: The machine ability to change the PDL proc	essor mid-job.	
		Some host systems submit jobs that contain both PS of switching is disabled, these jobs will not be printed p		f Auto PDL
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	Bit Switch
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003	Bit Switch 3		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	[PCL5e/c]: Legacy HP compatibility	0: Disable	1: Enable
		Enable: Uses the same left margin as older HP models such as HP4000/HP8000. In other words, the left margin defined in the job (usually " <esc>*r0A") will be changed to "<esc>*r1A"</esc></esc>		
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	Bit Swit	Bit Switch				
004	Bit Switch 4 DFU		0	1		
	bit 0	DFU	-	-		
	bit 1	DFU	-	-		
	bit 2	DFU	-	-		
	bit 3	IPDS print-side reversal	0: Disable	1: Enable		
	If enabled, the simplex pages of IPDS jobs will be printed on the front side bec of printing on the back side of the page. This might reduce printing speed.					
	bit 4	DFU	-	-		
	bit 5	DFU	-	-		
	bit 6	DFU	-	-		
	bit 7	DFU	-	-		

1001	Bit Switch				
005	Bit Switch 5	0	1		

		Show "Collate Type", "Staple Type" and "Punch Type" buttons on the operation panel.	0: Disable	1: Enable	
	bit 0	If enabled, users will be able to configure a Collate Type, Staple Type, and Punch			
		After enabling this BitSw, the settings will appear und	der:		
		"User Tools > Printer Features > System"			
	bit 1	Multiple copies if a paper size or type mismatch occurs	0: Disable (Single copy)	1: Enable (Multiple copy)	
	If a paper size or type mismatch occurs during the printing of multiple copies, or single copy is output by default. Using this BitSw, the device can be configured print all copies even if a paper mismatch occurs.				
	bit 2	Prevent SDK applications from altering the contents of a job.	0: Disable	1: Enable	
		If this BitSw is enabled, SDK applications will not be able to alter print data. This is achieved by preventing SDK applications from accessing a module called the "GPS Filter".			
		Note: The main purpose of this BitSw is for troublesh applications on data.	ooting the effe	cts of SDK	
	bit 3	[PS] PS Criteria	0: Pattern3	1: Pattern 1	
		Change the number of PS criterion used by the PS ir job is PS data or not.	nterpreter to de	termine whether a	
		Pattern3: includes most PS commands.			
		Pattern 1: A small number of PS tags and headers			
	bit 4	Increase max number of the stored jobs to 1000 jobs.	0: Disable (100)	1: Enable (1000)	
		Enable: Changes the maximum number of jobs that can be stored on the HDD via Job Type settings to 1000. The default is 100.			
	bit 5	DFU	-	-	

	bit 6	Method for determining the image rotation for the edge to bind on.	0: Disable	1: Enable		
		If enabled, the image rotation will be performed as they were in the specifications of older models for the binding of pages of mixed orientation jobs.				
		The old models are below:				
	- PCL: Pre-04A models					
		- PS/PDF/RPCS:Pre-05S models				
	bit 7	Letterhead mode printing	0: Disable	1: Enable (Duplex)		
		Routes all pages through the duplex unit.				
If this is disabled, simplex pages or the last page of an one not routed through the duplex unit. This could result in probability printed pages.						
	Only affects pages specified as Letterhead paper.					

1001	Bit Switch		
006	Bit Switch 6 DFU	-	-

1001	Bit Switch				
007	Bit Switch 7		0	1	
		Print path 0: Disable 1: Ena			
bit 0 If enabled, simplex pages (in mixed simplex/duplex PS/PC page of an odd paged duplex job (PS, PCL5, PCL6) are alw duplex unit. Not having to switch paper paths increases the bit 1 to 7 DFU		are always ro	uted through the		
		DFU	-	-	

1001	Bit Switch
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800	Bit Switch 8		0	1
	bit 0 to 2 DFU		-	-
	bit 3	[PCL,PS]: Allow BW jobs to print without requiring User Code	0: Disable	1: Enable (allow BW jobs to print without a user code)
		BW jobs submitted without a user code will be printed authentication is enabled. Note: Color jobs will not be printed without a valid user.		code
	bit 4 to 7	DFU	-	-

1001	Bit Swit	Bit Switch		
009	Bit Switch 9		0	1
	PDL Auto Detection timeout of jobs submitted via USB or Parallel Port (IEEE 1284). bit 0 To be used if PDL auto-detection fails. A failure of PD necessarily mean that the job cannot be printed. This whether to time-out immediately (default) upon failure		0: Disable (Immediatel y)	1: Enable (10 seconds)
			s bit switch tells the device	
	bit 1	bit 1 DFU		-
		Job Cancel	Disabled (Not cancelled)	Enabled (Cancelled)
bit 2 If this bit switch, all jobs will be cancelled after a job Note: If this bit SW is enabled, printing under the fiproblems: Job submission via USB or Parallel Port Spool printing (WIM >Configuration > Device)		lowing condition	Ü	
	bit 3 to 7	DFU	-	-

1003	[Clear Setting]	
1003 001	Initialize System	Initializes settings in the System menu of the user mode.
1003 003	Delete Program	DFU

1004	[Print Summary]	
1004 001	Service Summary	Prints the service summary sheet (a summary of all the controller settings).

1005	[Display Version]	
1005 001	Printer Version	Displays the version of the controller firmware.

1006	[Sample/Locked Print]	
1006 001	Enables and disables the document server. When you select "0," the document server is enabled or disabled in accordance with Copy Service Mode SP5-967. When you select "1," the document server is enabled regardless of Copy Service Mode SP5-967.	

1100	[Media Print Device Setting]	
1101 001	0: Disable 1: Enable	Selects the setting for the media print device.

Scanner Service Mode

SP1-xxx (System and Others)

1001	[Scan NV Version]		
1001	Displays the scanner firmware version stored in NVRAM.		
1001 5	-	*CTL	-

1004	[Compression Type]		
1004	Selects the compression type for binary picture processing.		picture processing.
1004 1	Compression Type	*CTL	[1 to 3 / 1 / 1/step] 1: MH, 2: MR, 3: MMR

	[Erase margin]				
1005	Creates an erase margin for all edges of 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.			

1011	[Org Count Display]	*CTL	[0 or 1 / 0 / -] 0: No display, 1: Display	
1011 1	This SP codes switches the original	original count display on/off.		

1012	[User Info Release]	*CTL	[0 or 1 / 1 / -] 0: Do not release, 1: Release
1012 1	This SP code sets the machine to Destination (E-mail/Folderone) Sender name Mail Text Subject line File name		or not release the following items at job end.

1013	[Scan to Media Setting]	*CTL	[0 or 1 / 1 / -] 0: Disable, 1: Enable
1013 1	mounted on the left rear corner	of the mo	media function option (USB 2.0/SD Slot) schine. Operators can scan documents to either erted into this unit. This SP must be enabled (set to

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	Comp1: 5-95		[5 to 95 / 20 / 1 /step]			
2021 2	Comp2: 5-95		[5 to 95 / 40 / 1 /step]			
2021 3	Comp3: 5-95	*CTL	[5 to 95 / 65 / 1 /step]			
2021 4	Comp4: 5-95		[5 to 95 / 80 / 1 /step]			
2021 5	Comp5: 5-95		[5 to 95 / 95 / 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)	*CTI	[5 to 95 / 25 / 1 /step]	
2024 2	Compression Ratio (High)	CIL	[5 to 95 / 20 / 1 /step]	

	[Compression ratio of ClearLight PDF JPEG2000]					
2025	Selects the compression ratio for clearlight PDF JPEG2000 for the two settings that can be selected at the operation panel.					
2025 1	Compression Ratio (Normal)	*CTL	[5 to 95 / 25 / 1 /step]			
2025 2	Compression Ratio (High)	CIL	[5 to 95 / 20 / 1 /step]			

Fax Service Mode

See the "Filed Service Manual" of Fax Option Type SP5200 about following information;

- Service Tables
- Bit Switches
- NCU Parameters
- Dedicated Transmission Parameters
- Service RAM Addresses

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 slot 2 on the rear side of the controller box.

Type of Firmware

There are several 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
ADF	ADF control	ADF Main Control Board	ADF
Finisher	Finisher control	Finisher	Finisher 1
NIB/DESS	Network Interface/ Security control	Flash ROM on the controller board	NetworkSupport
Security & Encryption	HDD encryption/ Data Overwrite	Standard Security & Encryption unit SD card	HDD Format Option
Language (16 languages)	Language firmware Two languages can be selected from 16 languages.	Operation Panel	Language1/ Language2
RPCS	Page description language (RPCS for XPS driver data process)	Flash ROM on the controller board	RPCS
PS3/ PDF Adobe	Page description language (PostScript3)	Flash ROM on the controller board	PS/ PDF
PCL	Page description language (PCL)	Flash ROM on the controller board	PCL/ PCLXL

Summary Font	Summary fonts	Flash ROM on the controller board	FONT
PCL Font	PCL fonts	Flash ROM on the controller board	FONT1
PS Font	PostScript3 fonts	Flash ROM on the controller board	FONT2
Netfile Application	Feature application	Flash ROM on the controller board	NetworkDocBox
Fax Application	Feature application	Flash ROM on the controller board	Fax
Printer Application	Feature application	Flash ROM on the controller board	Printer
Scanner Application	Feature application	Flash ROM on the controller board	Scanner
Remote Fax	Fax control	Flash ROM on the controller board	RFax
WebSys	Web Service application	Flash ROM on the controller board	Web Support
WebDocBox	Document server application	Flash ROM on the controller board	Web Uapl
Java VM	Java VM platform	Standard Java VM SD card	SDK1

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 "0" 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.

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 "M052" folder onto the card.

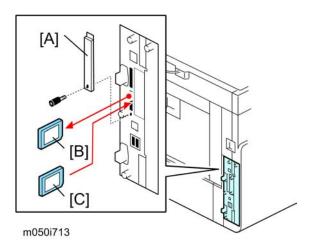
If the card already contains folders up to "M052"", copy the necessary firmware files (e.g. M052xxxx.fwu) into this folder.



 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 SD slot cover [A] (*x 1).
- 3. Remove the VM card [B] from SD slot 2 (lower slot).
- 4. Insert the SD card [C] into SD slot 2. Make sure the label on the SD card faces the left side of the machine.
- 5. 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.
- 6. Disconnect the network cable from the copier if the machine is connected to a network.
- 7. Switch the main power switch on. After about 45 seconds, the initial version update screen appears on the LCD in English.
- 8. 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.
- 9. 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.
- 10. 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.
- 11. 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.
- 12. Press in the SD card to release it. Then remove it from the slot.
- 13. Reinstall the VM card from SD slot 2 (lower slot).
- 14. Attach the SD slot cover (*x 1).
- 15. 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 (see "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.

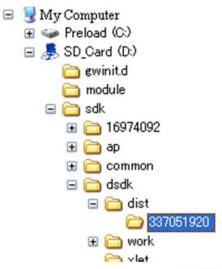
In this case, insert the card again and switch on the machine to continue the firmware download automatically from the card without the menu display.

Update Procedure for App2Me Provider

Follow this procedure to update App 2 Me if a new version is available.

1. Push the [User/Tools] key on the operation panel.

- 2. If an administrator setting is registered for the machine, Step 3 and Step 4 are required. Otherwise, skip to step 5.
- 3. Push [Login/Logout] on the operation panel.
- 4. Login with the administrator user name and password.
- 5. Touch "Extended Feature Settings" twice on the LCD.
- 6. Touch each of the applications until the status changes to "Stop".
- 7. Turn the machine off, and then remove the VM Card.



d377i501

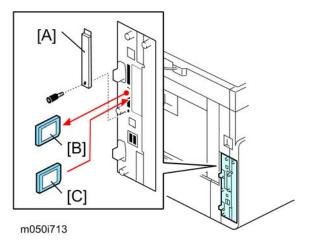
- 8. Prepare the newer App2Me Provider zip file from the Firmware Download Center, and then unzip the zip file (The folder name is "337051920").
- 9. Copy the App2Me Provider folder into the specified path for the VM card. The path is: "SD_Card Drive\ sdk\dsdk\dist\337051920"
- 10. Remove the SD slot cover for SD cards (\mathcal{F} x 1).
- 11. Turn the SD card label face to the left of the machine, and then push it slowly into SD slot 2 (lower slot) until you hear a click.
- 12. Attach the SD slot cover (F x 1).
- 13. Turn the main power switch on.
- 14. Press [User Tools] on the operation panel.
- 15. Touch the "Extended Feature Settings" button twice.
- 16. Touch the "Extended Feature Info" tab on the LCD.
- 17. Touch the "App2Me" line.
- 18. Set the setting of the "Auto Start" to "On".
- 19. Touch the "Exit" button.

20. Exit the [User Tools/Counter] settings.



- App2Me and all other running applications on the VM card must be shut down before removing
 the VM card in order to update the firmware, back up NVRAM, install the browser unit, or execute
 application move or undo with SP5873.
- After the VM card is re-inserted, App2Me (and any other VM card applications used by the
 customer) must be switched on after the machine is switched on.

Browser Unit Update Procedure



- 1. Remove the SD slot cover [A] for SD cards (*x 1).
- 2. Remove the VM card from SD slot 2 [B] (lower slot).
- Turn the SD-card [C] label face of the browser unit to the left of the machine. Then push it slowly
 into SD slot 2 (lower slot) until you hear a click.
- 4. Plug in and turn on the main power switch.
- 5. 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.
- 6. Push the "Login/ Logout" key.
- 7. Login with the administrator user name and password.
- 8. Touch "Extended Feature Settings" twice on the LCD.
- 9. Touch "Uninstall" on the LCD.
- 10. Touch the "Browser" line.
- 11. Confirmation message appears on the LCD.

- 12. Touch "Yes" to proceed.
- 13. Reconfirmation message appears on the LCD.
- 14. Touch "Yes" to uninstall the browser unit.
- 15. You will see "Uninstalling the extended feature... Please wait.", and then "Completed".
- 16. Touch "Exit" to go back to the setting screen.
- 17. Exit "User/Tools" setting, and then turn off the main power switch.
- 18. Remove the SD card of the browser unit from SD slot 2 (lower slot).
- 19. Overwrite the updated program in the "sdk" folder of the browser unit application with PC.
- 20. Do the "Installation Procedure" to install the browser unit.

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.

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.

• 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 SD slot 2 (lower slot) to the card in SD slot 1 (upper slot).
- 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 SD slot cover (*x 1).
- 5. Keep the SD card in a safe place 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 slot 1 (upper slot). The application program is copied into this SD card.
- 3. Insert the SD card (having stored the application program) to SD slot 2 (lower slot). 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 slot 2 (lower slot).
- 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).

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. Insert the original SD card in SD slot 2 (lower slot). The application program is copied back into this card.
- 3. Insert the SD card (having stored the application program) to SD slot 1 (upper slot). 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 slot 2 (lower slot).



- 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

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 (x 1).
- 4. Insert the SD card into SD 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.

- 2. Remove the SD slot cover (F x 1).
- 3. Insert the SD card with the NVRAM data into SD 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

5

Card Save Function

Overview

Card Save:

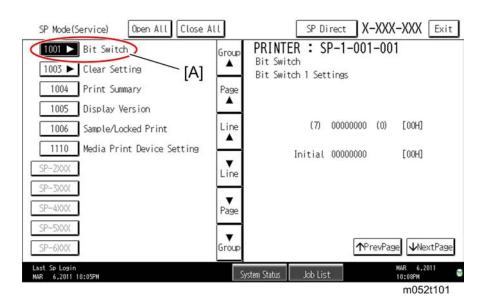
- The Card Save function is used to save print jobs received by the printer on an SD card with no print output. Card Save mode is toggled using printer Bit Switch #1 bit number 4. Card Save will remain enabled until the SD card becomes full, or until all file names have been used.
- Captures are stored 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:

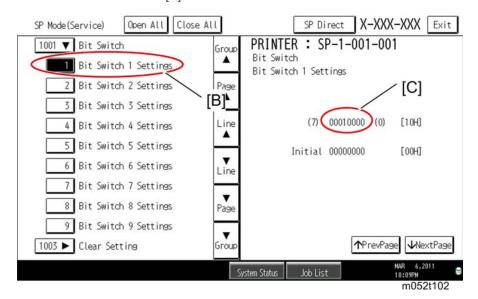
Card Save cannot be used with PJL Status Readback commands. PJL Status Readbacks will not
work. In addition they will cause the Card Save to fail.

Procedure

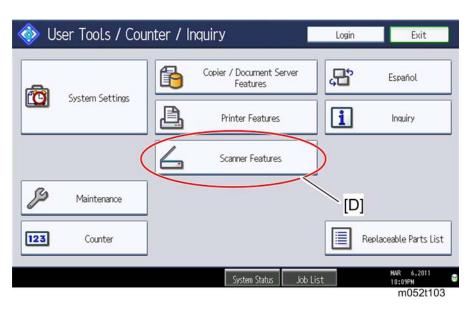
- 1. Turn the main power switch OFF.
- 2. Insert the SD card into slot 2. Then turn the power ON.
- 3. Enter SP mode.
- 4. Select the "Printer Sp".



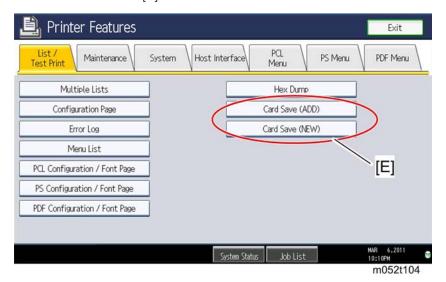
5. Select SP-1001 "Bit Switch" [A].



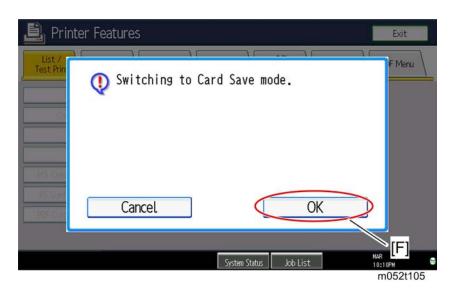
- 6. Select "Bit Switch 1 Settings" [B] and use the numeric keypad to turn bit 4 ON and then press the "#" button to register the change. The result should look like: 00010000 [C]. By doing this, Card Save option will appear in the "List/Test Print" menu.
- 7. Press "Exit" to exit SP Mode.
- 8. Press the "User Tools/Counter" button.



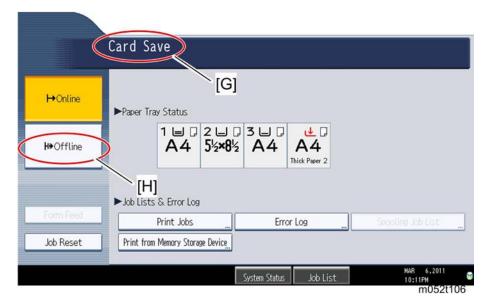
9. Select "Printer Features" [D].



10. Card Save (Add) and Card Save (New) [E] should be displayed on the screen. Select Card Save (Add) or Card Save (New).



- 11. Press "OK" and then exit the "User Tools/Counter" menu.
- 12. Press the "Printer" button.



- 13. "Card Save" [G] should be displayed in the top left of the display panel.
- 14. Send a job to the printer. The Communicating light should start blinking as shown below.
- 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" [H] and then the "Clear/Stop" button to exit Card Save mode.
- 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.

Using SP Modes

Adjusting Registration and Magnification

To adjust the registration and magnification, you need to use several service programs. The chart shows an example of the procedure to adjust the machine in the basic configuration.

- 1. Output a pattern (SP5-902).
- 2. Adjust the sub-scan registration (SP1-001).
- 3. Adjust the main-scan registration of each paper tray (SP1-002).
- 4. Output a scanned image.
- 5. Adjust the main-scan magnification (SP2-112).
- 6. Adjust the sub-scan magnification (SP2-113).
- 7. Adjust the main-scan registration of the scanner (SP4-011).
- 8. Adjust the sub-scan registration of the scanner (SP4-010).

Test Pattern Print (SP 5902)

Executing Test Pattern Printing

1. Specify the pattern number and press the OK key.

RTB 36

2. Press the copy start key. The copy mode is activated

This procedure is not correct.

- 3. Specify copy settings and press the Okey.
- 4. To return to the SP mode, press the ® key.

Test Patterns

	Test Patterns Using BICU	
No.	No. Pattern	
0	(No print)	
1	Vertical Line (1 dot)	
2	Vertical Line (2dot)	
3	Horizontal Line (1 dot)	

	Test Patterns Using BICU
4	Horizontal Line (2dot)
5	Grid Vertical Line
6	Grid Horizontal Line
7	Grid Pattern Small
8	Grid Pattern Large
9	Argyle Pattern Small
10	Argyle Pattern Large
11	Independent Pattern (1dot)
12	Independent Pattern (2dot)
13	Independent Pattern (4dot)
14	Trimming Area
15	Hound's Tooth Check (Vertical)
16	Hound's Tooth Check (Horizontal)
17	Band (Horizontal)
18	Band (Vertical)
19	Checker Flag Pattern
20	Density Pattern
21	Full Dot Pattern
22	Full White Pattern
23	Grayscale Horizontal
24	Grayscale (Horizontal Margin)
25	Grayscale Vertical
26	Grayscale (Vertical Margin)
27	Grayscale
28	Grayscale (Margin)

Test Patterns Using BICU	
29	Grayscale Grid
30	Grayscale (Grid Margin)

SMC Print (SP 5990)

SP 5990 outputs machine status lists.

- 1. Select SP 5990.
- 2. Select a menu:
 - 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, 24 SDK/J Summary, 25 SDK/J
 Application Info
- 3. Press the "Execute" key.
 - Specify copy settings and press the ® key. The machine status lists is output.
- 4. To return to the SP mode, press the Okey.

6. Troubleshooting

Service Call Conditions

Summary

There are 4 levels of service call conditions.

Level	Definition	Reset Procedure	
A	A To prevent damage to the machine, the main machine cannot be operated until the SC has been reset by a service representative (see the note below). Enter SP mode, go introduced press [Execute], turn to power switch off and		
В	SCs that disable only the features that use the defective item. Although these SCs are not shown to the user under normal conditions, they are displayed on the operation panel only when the defective feature is selected.	s are not shown to they are displayed Turn the operation switch or main	
С	C The SC history is updated. The machine can be operated as usual. The SC will not be displayed Only the SC history is updated.		
D	Turning the main switch off then on resets SCs displayed on the operation panel. These are redisplayed if the error occurs again.	Turn the operation switch off and on.	

When a Level "D" SC code occurs

When a Level D SC occurs, a screen opens on the operation panel to tell the operator:

- An error occurred
- The job in progress will be erased
- The machine will reboot automatically after approximately 30 seconds.

The operator can wait until the machine reboots automatically or touch "Reset" on the screen to reset the machine immediately and go back to the copy screen.

If the operator does not touch "Reset"

The next message tells the operator that the machine will reset automatically and that the previous job was lost and must be started again. After reading the message, the operator touches "Confirm" on the screen. The next screen shows the number and title of the SC code, and stops until the operator turns the machine off and on.

If the operator touches "Reset"

If the operator touches "Reset" to bypass the 30-second interval for the machine to reboot, the machine reboots immediately and the operation panel displays the copy screen.

Mportant !

Do not try to use the operation panel during an automatic reboot. If the Remote Service System is in
use, the SC code is sent immediately to the Service Center

SC Code Descriptions



- If a problem concerns a circuit board, disconnect and reconnect the connectors and then test the
 machine. Often a loose or disconnected harness is the cause of the problem. Always do this before
 you decide to replace the PCB.
- If a motor lock error occurs, check the mechanical load before you decide to replace the motor or sensors.
- When a Level "A" or "B" SC occurs while in an SP mode, the machine cannot display the SC number. If this occurs, check the SC number after leaving the SP mode.
- The machine reboots automatically when the machine issues a Level "D" SC code. This is done for Level "D" SC codes only.

ACAUTION

• Never turn off the main power switch when the power LED is lit or flashing. To avoid damaging the hard disk or memory, press the operation switch to switch the power off, wait for the power LED to go off, and then switch the main power switch off.

UNote

The main power LED lights or flashes while the platen cover or ARDF is open, while the main
machine is communicating with a fax machine or the network server, or while the machine is
accessing the hard disk or memory for reading or writing data.

SC1xx: Scanning

101	D	Exposure lamp error 1
101	D	The standard white level setting dropped below the specified range during scanning.

White plate dirty
Spurious electrical noise on power supply line
Exposure lamp connection loose, broken, defective
Exposure lamp defective
Lamp stabilizer connection, loose, broken, defective
Lamp stabilizer defective
High voltage power supply harness loose, broken, defective
SBU defective
BCU defective
SIO defective

120	D	Scanner home position error 1
		The scanner HP sensor did not turn off during scanner initialization or copying.
121	D	Scanner home position error 2
121		The scanner HP sensor did not turn on during scanner initialization or copying.
		Scanner motor harness loose, broken, defective at scanner motor or at BCU Scanner HP concer barrees loose broken, defective at HP concer or at PICU
		Scanner HP sensor harness, loose, broken, defective at HP sensor or at BICU Scanner motor or motor driver board defective
		Scanner motor drive board defective
		Scanner HP sensor defective

141	D	Black level correction error
141		Black level correction could not be set properly during automatic adjustment.
		Harnesses at the SBU or BICU loose, broken, defective.
		SBU defective

1.40	_	White level correction error
142	D	White level correction could not be set properly during automatic adjustment.

Harnesses at SBU or BICU loose, broken, defective
Anti-condensation heater (option) in scanner unit not operating
Exposure lamp harness, loose, broken, defective
Exposure lamp defective
Scanner drive error
SBU defective

143	SBU auto adjust error
	The machine could not acquire the white or black peak level setting at power on.
	Harnesses at SBU or BICU loose, broken, defective
	Anti-condensation heater (option) in scanner unit not operating
	Exposure lamp harness, loose, broken, defective
	Exposure lamp defective
	Scanner drive error
	SBU defective

		SBU connection error
144	D	Connection to the SBU could not be confirmed, possibly due to a defect in the BICU detection port.
		Harness connection at BICU or SBU loose, broken, defective
		BICU defective
		SBU defective

161		IPU Error 1
	D	The self-diagnostic test detected an error at the BICU at power on, or after the machine returned from energy save mode.
		Harness between SBU and BICU loose or broken
		BICU defective
		SBU defective

161	D	IPU Error 2
-002		The machine does not detect RI answer from BICU.
		Harness between SBU and BICU loose or broken
		BICU defective
		SBU defective

		Copy Data Security Unit error
165	В	An error occurred when the machine attempted to recognize the Copy Data Security Unit board.
		Check installation of Copy Data Security (CDS) Unit
		CDS unit not correct type for the machine
		CDS unit defective

		Serial Number Mismatch	
		Serial number stored in the memory does not have the correct code.	
		NVRAM defective	
195	D	BCU replaced without original NVRAM	
		Reinstall the original NVRAM in the replaced BCU.	
		Turn off and on the main power switch of the copier if a new NVRAM is installed in the BCU.	

SC2xx: Laser Exposure

	D	Polygon motor error 1: ON timeout
202		The polygon mirror motor did not reach the targeted operating speed within 10 sec. after turning on or changing speed
		Polygon motor error 1: OFF timeout
203	D	The polygon mirror motor did not leave READY status within 3 sec. after polygon motor switched off.

204		Polygon motor error 1: XSCRDY signal error
	D	The XSCRDY signal remained HIGH four times consecutively while the LD unit was firing.
		Polygon motor/driver board harness loose or broken
		Polygon motor/driver board defective
		Laser unit defective
		BICU defective

220	D	Laser synchronization detection error 1: LDO
		The laser synchronizing detection signal for the start position of the LD was not output for 500 ms after LDB unit turned on with the polygon motor rotating normally.
		Laser synchronizing detection board harness loose or broken.
		Laser synchronization detection board defective
		LDB unit defective
		BICU defective

221	D	Laser synchronization detection error 2: Other than LDO
		The laser synchronizing detection signal for the start position of the LD other than LDO was not output for 500 ms after LDB unit turned on with the polygon motor rotating normally.
		 Laser synchronizing detection board harness loose or broken. Laser synchronization detection board defective LDB unit defective BICU defective

230	D	FGATE ON error
		The FGATE signal did not assert within the prescribed time. (The BICU generates the FGATE signal and sends it to the LD unit when the registration sensor switches on.)
231	D	FGATE OFF error
		The FGATE signal did not go off within the prescribed time. (The BICU generates the FGATE signal and sends it to the LD unit when the registration sensor switches on.)

BICU, Controller board harness loose or broken
BICU defective
Controller board defective

240	В	LD error
240		The IPU detected a problem at the LD unit.
		LD unit harness broken, defective
		BICU harness broken defective
		LD unit defective
		BCU defective

SC3xx: Image Processing – 1

312	D	Charge level output error
312		The PWM output level was detected higher or lower than 50% for 200 ms.
		 HVPS (High Voltage Power Supply) board harness loose, broken. Terminal loose or broken at the charge rollers T

320	D	Development bias leak
		A development bias leak signal is detected.
		 Poor connection at the development bias terminal High voltage supply board defective

SC4xx: Image Processing - 2

440	D	Transfer roller leak error 1
		A transfer roller current leak signal wad detected higher or lower than 50% for 200 ms. (The current feedback signal for the transfer roller was not detected within the correct time.)

High voltage supply board set incorrectly or defective
Transfer roller set incorrectly or damaged
Transfer roller set incorrectly

SC5xx: Paper Feed and Fusing

500	В	Main motor lock The machine does not detect motor lock signal for 250 ms during motor's operating. The machine does not detect motor lock signal for 1 second at rotating the main motor.
		 An obstruction has blocked operation of the main motor Main motor harness loose or broken Main motor or main motor driver board defective

530	D	Exhaust fan error
531	D	Duplex exhaust fan error
532	D	PSU fan 1 error
533	D	PSU fan 2 error
534	D	AIO fan error
535	D	Controller fan error
		The motor lock signal error is detected for 2 seconds after the motor lock signal was first detected.
		Disconnected or defective harness Defective each fan

541	Α	Fusing thermistor open (center)
		The temperature of the hot roller remained below 0°C for 7 sec at the center of the hot roller.
		 Fusing thermistor out of its position because of incorrect installation Fusing thermistor disconnected or defective

542	Α	Fusing temperature warm-up error (center)
		The fusing temperature does not reach the standby temperature within 24 sec. at the center of the hot roller after the main switch turned on.
		The condition which the fusing temperature does not increase by 7°C for 2 seconds is detected five times consecutively.
		Fusing thermistor defective or out of position
		Fusing lamp disconnected
		Fusing lamp defective

The fusing thermistor detected a fusing temperature over 235°C for 1 sec. at the center of the hot roller.
TRIAC short on PSU (PSU defective) BICU board defective

544	А	Fusing overheat error 2 (center)
		A fusing temperature over 250°C is detected at the center of the hot roller by the fusing temperature monitor circuit in the BCU board.
		TRIAC short on PSU (PSU defective)
		BICU board defective
		Power supply voltage unstable

		Heating roller fusing lamp consecutive full power 1
545	A	When the fusing unit is not running in the ready condition, the heating roller fusing lamp keeps on full power for 12 seconds.
		Broken heating roller thermostat Broken heating roller fusing lamp

547	D	Zero cross signal detection error
34/		Zero cross signals were not detected within the prescribed time.

- PSU, BICU harness loose or brokenPSU defective

		Consecutive fusing unit paper jams
		Three consecutive paper jams occurred in the fusing unit.
559	A	The paper jam counter for the fusing unit reaches 3 times. The paper jam counter clears after the paper feeds correctly.
		Note: This SC is issued only if SP1159 is set to "1".
		Remove the paper jam in the fusing unit.
		Make sure that the paper path in the fusing unit is clear.

SC6xx: Device Communication

610	D	Mechanical counter error: K
		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 Defective BICU

620	D	Communication error between BICU and ADF
		A break occurred in the connection between the BICU and ADF
		ADF disconnected
		ADF defective
		BICU harness connection loose, broken
		BICU defective
		External noise

621	D	Communication timeout between BICU and finisher
		A break (LOW) signal was received from the finisher.
		Finisher serial cable connection loose, broken BICU defective
		Finisher main board defective
		External noise

622	D	Paper tray unit communication error
623	D	2nd Paper tray unit communication error
624	D	3rd Paper tray unit communication error
		While the BICU communicates with an optional unit, an SC code is displayed if one of following conditions occurs.
-	-	The BICU receives the break signal which is generated by the peripherals only just after the main switch is turned on.
		When the BICU does not receive an OK signal from a peripheral after sending a command to it.
		Harness disconnected or broken
		BICU defective
		External noise
		Main board defective in the peripherals

	CTL	BICU control data transfer abnormal
		A sampling of the control data sent from the BCU reveals an abnormality.
		Controller board defective
641		External noise
	D	BCU board defective
		Check the connection between the controller board and BICU.
		Replace the controller board.
		Replace the BICU.

652	В	ID2 mismatching
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653
B
ID2 error
ID2 stored in the NVRAM is incorrect.

• Used NVRAM installed
Clear the ID2 in the NVRAM, and then input a correct ID2.

The machine failed to detect a match between the read/write data for the EEPROM on the BICU after 3 attempts.

• EEPROM installed incorrectly
• EEPROM defective. Turn the machine power off/on after replacing the EEPROM.
• BICU defective.

Engine board mismatch error

Engine board and controller mismatch detected.

• Wrong engine board installed.
• Wrong controller board installed.
• Check the type of engine board and controller board.

Replace the BICU.

Replace the controller board.

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680	D	BICU serial communication error: Time out
-001		BICO serial communication error. Time our

-002	D	BICU serial communication error: Retry error BICU serial communication error: Download error	
-003	D		
-004	D	BICU serial communication error: UART error	
The serial communication error occurs in the BICU.			
Noise		• Noise	
	Defective BICU		
	Replace the BICU.		

681	D	RFID: Communication error	
Communication error occurs when the RFID board starts to com chip.		Communication error occurs when the RFID board starts to communicate with the ID chip.	
		Retry of RFID communication fails three times after the machine has detected the RFID communication error.	
 Defective RFID board Disconnected ASAP I/F No memory chip on the AIO Noise 		Defective RFID board	
		Disconnected ASAP I/F	
		No memory chip on the AIO	
		Noise	

683	С	RFID: Unit check error The machine gets RFID communication error even the AIO has not been installed in the machine.	
		External noise	

687	D	Memory address (PER) command error	
		The BICU did not receive a memory address command from the controller with the prescribed time once the paper reached the registration sensor.	
Harness connection at BICU, Control Defective BICU Defective Controller Board			

688	D	Print request (PRREQ) command error
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690	D	GAVD communication error	
	GAVD error is detected after turning on the machine or recovering from the save mode.		
Defective BICU		Defective BICU	

SC7xx: Peripherals

The jogger fence motor in the finisher is not operating.

• Jogger motor drive is obstructed (jammed paper, paper scraps, etc.)

• The motor harness loose or broken

• Jogger fence HP sensor dirty, loose, defective

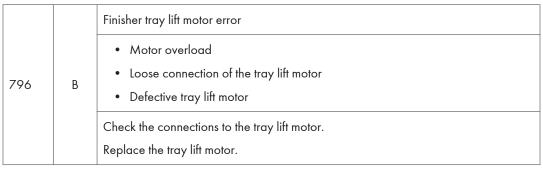
• Jogger fence motor defective

740	В	Corner stapler motor error	
		The corner stapler motor in the finisher is not operating.	
Staple jam Number of sheets in stack exceeds allowed number of sheets for stapling		Staple jam Number of sheets in stack exceeds allowed number of sheets for stapling	
		Stapler motor obstructedStapler motor defective	

790	D	PFU installation error	
		Four paper feed units or more are installed in the main machine.	
		Install three paper feed units or less in the main machine.	

793	D Gathering roller error: Internal finisher	
Gathering roller HP sensor does not detect the gathering rolle		Gathering roller HP sensor does not detect the gathering roller at initialization.
		Gathering roller HP sensor does not detect the gathering roller when the gathering roller returns to its home position from the paper stack position.
Note		Note
Paper jam message is displayed at 1st error det		Paper jam message is displayed at 1st error detection.
SC is issued at 2nd error detection.		SC is issued at 2nd error detection.
		Motor overload
		Loose connection of the exit guide plate motor
		Defective exit guide plate motor
		Defective gathering roller HP sensor
Check the connections to the exit guide plate motor.		Check the connections to the exit guide plate motor.
		Replace the exit guide plate motor.
		Replace the gathering roller HP sensor.
		Finisher exit guide plate motor error
		Motor overload
794	В	Loose connection of the exit guide plate motor
794	. Б	Defective exit guide plate motor
		Check the connections to the exit guide plate motor.
		Replace the exit guide plate motor.
		Finisher shift roller motor error
		Motor overload
		Loose connection of the shift roller motor
795	В	Defective shift roller motor
		Check the connections to the shift roller motor.

Replace the shift roller motor.



		Stack height lever solenoid error
		Stack height lever sensor does not turn on when the stack height lever solenoid turns off. Note
797	В	 Paper jam message is displayed at 1st error detection. SC is issued at 2nd error detection.
		 Loose connection of the stack height lever solenoid Defective stack height lever solenoid Defective stack height lever sensor

SC8xx: Controller

	CTL	Energy saving I/O sub-system error
0.1.4		The energy saving I/O sub-system detects an error.
816	D	Controller board defective
		Replace the controller board.

81 <i>7</i>	С	Boot loader error		
		The boot loader cannot read one of the following: Self-diagnostic module, kernel, or one of the files of the root file system, or the check of one of these items on the controller board failed.	 File or module on the controller board is corrupted. File or module on the controller board is illegal. Replace the controller board. 	

819	С	Fatal kernel error	
		Due to a control error, a RAM overflow occurred during system processing.	Controller board defectiveInsufficient memoryExpanded memory defective

Note: For more details about this SC code error, execute SP5990 to print an SMC report so that you can read the error code. The error code is not displayed on the operation panel.

820	D	Self-diagnostics error: CPU	
		Cut-in in ASIC occurs.	
		Defective ASIC	
		Defective devices in which ASIC detects cut-in.	
		Damaged boot monitor program or self-diagnostic program	
		Replace the controller board.	
		Reinstall the boot monitor or self-diagnostic program.	

833	С	Self-diagnostic error 8: Engine I/F ASIC	
[OF30] [OF31]		ASIC (Mandolin) for system control could not be detected. After the PCI configuration, the device ID for the ASIC could not be checked.	
		Replace the BICU.	
[OF41]		ASIC (Mandolin) for system control could not be detected. After the PCI configuration, the device ID for the ASIC could not be checked.	
		Replace the BICU.	
		Could not initialize or read the bus connection.	
[50B1]		Check for loose connections at the mother board.	
		Replace the BICU.	
		Value of the SSCG register is incorrect.	
[50B2]		Check for loose connections at the mother board.	

Replace the BICU.

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842	В	B Flash ROM verification error		
		Verification error of the flash ROM on the controller board occurs.		
		Note		
		This SC is logged at 1st error detection	1.	
		SC819 is issued at 2nd error detection	1.	
Defective flash ROM (controller board))		
851	D	IEEE 1394 I/F Abnormal		
		IEEE1394 interface error.	IEEE1394 interface board defective Controller board defective	
853	D	Wireless LAN board error 1		
		At startup the wireless LAN board could be accessed, but the wireless LAN board (IEEE 802.11b or Bluetooth) could not access the controller board.	Wireless LAN board not installed when the machine was turned on	
854	D	Wireless LAN board error 2		
		The board that holds the wireless LAN board can be accessed, but the wireless LAN board (802.11b/Bluetooth) itself cannot be accessed while the machine is operating	Wireless LAN board has been removed during machine operation.	
855	D	Wireless LAN board error 3		
		An error was detected for the wireless LAN board (802.11b or Bluetooth).	Wireless LAN board defective Wireless board connection not tight	
856	D	Wireless LAN board error		
		An error is detected for the wireless LAN board (802.11b or Bluetooth).	Wireless LAN board defective PCI connector loose	

857	D	USB I/F Error	
		The USB driver is unstable and generated an error. The USB I/F cannot be used. The USB driver can generate three types of errors: RX, CRC, and STALL errors. Only the STALL error can generate this SC code.	USB 2.0 disconnectedController board defective

858	Α	Data encryption conversion error		
		A serious error occurred during data encryption.		
0	А	Key acquisition error	Replace the controller board	
1	Α	HDD key setting error	Turn the machine power off/on If the error reoccurs, replace the controller board	
2	Α	NVRAM read/write error	Replace the NVRAM	
30	А	NVRAM error	Turn the machine power off/on If the error reoccurs, replace the controller board	
31	А	Other error	• See SC991	

859	В	HDD data encryption error		
		Encryption of data on the hard disk failed.		
8	В	HDD check error • Format the HDD		
6	В	Power loss during encryption • Format the HDD		
10	В	Data read/write error • See SC863 below		

860 B HDD error 1

		I		
		The hard disk connection is	Cable defecti	between HDC and HDD loose or ve
		not detected because it is	• HDD p	ower connector loose or defective
		defective or has not been	• HDD n	ot formatted
		formatted	• HDD d	lefective
			• Replac	e the controller board
861	В	HDD error 2		
		The HDD did not enter the ready status within 30 sec. after power on.	defecti HDD p	between HDC and HDD loose or ve power connector loose or defective lefective the controller board
863	В	HDD error 3		
		Startup without HD data lead. on the hard disk is not read co to a bad sector on the HDD		Format the HDDHDD defectiveController board defective
		HDD error 4		
864	D	HD data CRC error. During op the HD, the HD responded wit error.		HDD defective
		HDD error 5		
865	D	HDD responded to an error do operation for a condition other for SC863 or 864.	-	HDD defective.
		CD 1 1.5		
		SD card error 1: Recognition 6	error	
866	D	The SD card in the slot contain	ıs illegal	Use only SD cards that contain the

correct data.

program data.

		SD card error 2: SD card removed	
867	D	The SD card in the boot slot when the machine was turned on was removed while the machine power was on.	Insert the SD card, then turn the machine off and on.
		SD card error 3: SD card access	
868	D	An error occurred while an SD card was used.	 SD card not inserted correctly SD card defective Controller board defective Note: If you want to try to reformat the SD card, use SD Formatter Ver 1.1.
870	В	Address Book Data Error	
		Address book data stored on the hard disk was detected as abnormal when it was accessed from either the operation panel or the network.	 Initialize the address book data (SP5-846-050). Initialize the user information (SP5-832-006). Replace the HDD.HDD defective
872	В	HDD mail RX data abnormal	
		An error was detected at power on. The data received during mail receive could be neither read nor written.	HDD sector corrupted. Reformat with SP5832 007. If this does not repair the problem, replace the HDD.
		HDD mail TX data error	
873	В	An error was detected on the HDD immediately after the machine was turned on, or power was turned off while the machine used the HDD.	 Do SP5832-8 (Format HDD – Mail TX Data) to initialize the HDD. Replace the HDD

		Delete All error 1: HDD	
874	D	A data error was detected for the HDD/ NVRAM after the Delete All option was used. Note: The source of this error is the Data Overwrite Security Unit D362 running from an SD card.	 Turn the main switch off/on, and try the operation again. Install the Data Overwrite Security Unit again. HDD defective
		Delete All error 2: Data area	
875	D	An error occurred while the machine deleted data from the HDD.	Turn the main switch off/on, and
		Note: The source of this error is the Data Overwrite Security Unit D362 running from an SD card.	try the operation again.
876	D	Log data abnormal	
		An error was detected in the handling of the log data at power on or during machine operation. This can be caused if you turn the machine off while it is operating.	 Software error. Update the firmware NVRAM defective HDD defective
		Data Overwrite Security SD card error	
877	D	The 'all delete' function did not execute but the Data Overwrite Security Unit (D362) is installed and activated.	 Replace the NVRAM Reinstall the DOS from the SD card SD card defective
		TPM electronic recognition error	
878	D	The main machine firmware failed to recog because USB flash is not operating or a sys module was updated incorrectly.	 Keplace the controller
881	D	Authentication area error	
		Authentication application error is detected	d.

Error data in an authentication application reaches the management limit.

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SC9xx: Others

900	D	Electrical total counter error		
		The total count contains something that is not a number.	 NVRAM incorrect type NVRAM defective NVRAM data scrambled Unexpected error from external source 	
920	D	Printer Error 1		
		An internal application error was detected and operation cannot continue.	Software defective Insufficient memory	
	В	Printer error 2		
921		When the application started, the necessary font was not on the SD card.	Font not on the SD card	
		Software performance error		
	D	The software attempted to perform an unexployed, 2) incorrect internal parameter, 3) insu	•	
990		Turn the machine power off/on Reinstall the controller and/or main firmware Note: When this SC occurs, the file name, address, and data will be stored in NVRAM. This information can be checked by using SP7-403. Note the above data and the situation in which this SC occurs. Then report the data and conditions to your technical control center.		
991	С	Software continuity error		

	The software attempted to perform an
	unexpected operation. However, unlike
	SC990, the object of the error is continuity
	of the software.

• No operation required.

Note: This SC code does not appear on the panel, and is only logged.

992	D	Unexpected Software Error		
		Software encountered an unexpected operation not defined under any SC code.	 Software defective An error undetectable by any other SC code occurred 	

995	D	CPM setting error
001		Defective BICU
	-001	Input the serial number with SP5811-004, and turn the main power switch off/on.
		Defective NVRAM on the controller Defective controller
	-002	Install a new NVRAM, and turn off and on the main power switch after SC995-002 has occurred.
		2. Reinstall the previous NVRAM or download the information with SP5825-001, after that turn the main power off and on.
		Incorrect type controller installed
	-003	Defective controller
		Replace the controller board with the correct type.
	-004	Incorrect model controller installed.
	-004	Replace the controller with the correct model.

997	В	Application function selection error	
		Application selected by the operator did not start or end normally due to a software problem. An option required by the application may not be installed.	
		 Confirm which devices are required for the application. Make sure all devices are configured correctly. If the problem is with the fax unit, the nesting of the fax group may be too complicated 	

	Application start error	
	No applications start within 60 sec. after the power is turned on.	
		Loose connection of RAM-DIMM, ROM-DIMM
000		Defective controller
998 D	D	• Software problem: check the setting of SP5875-001. If the setting is set to "1 (OFF)", change it to "0 (OFF)".
		Check if the RAM-DIMM and ROM-DIMM are correctly connected.
		Reinstall the controller system firmware.
		Replace the controller.

Note 1

If a problem always occurs under specific conditions (for example. printer driver setting, image file), the problem may be caused by a software error. In this case, the following data and information need 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

Electrical Component Defects

Blown Fuse Conditions

Power Supply Unit

Fuse	Rating 120V	Symptom when turning on the main switch	
FU101	15A/250V	No response. (5V power to the PSU is not supplied.)	
FU102	10A/250V	No response. (5V power to the PSU is not supplied.)	
FU201	10A/250V	24V power to the BICU is not supplied. "Cover Open" message is displayed even if the cover is closed.	
FU202	10A/250V	24V power to the BICU is not supplied. The power to the finisher or optional PFU cannot be supplied.	
FU203	10A/250V	24V and 12V power to the BICU are not supplied. SC may be issued.	
FU208	5A/250V	5V power to the BICU is not supplied.	

ACAUTION

• For continued protection against risk of fire, replace only with same type and rating of fuse.

6

Jam Detection

Paper Jam Display

SP7-507 shows the paper jam history.

CODE :011 SIZE :05h TOTAL:000034

DATE: Fri Feb 25 11:44:50 2011

b230t503

- 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
	At Power ON	Tray 1	A1
7504 1		Vertical transport sensor at the 1st paper feed unit does not turn off at power-on.	Y1
		Vertical transport sensor at the 2nd paper feed unit does not turn off at power-on.	Y2
		Vertical transport sensor at the 3rd paper feed unit does not turn off at power-on.	Y3

Jam Code SP	Display	Description	LCD Display
		Registration sensor does not turn off at power- on.	В
		Paper exit sensor does not turn off at power- on.	B/Z1
+	At Power ON	Duplex inverter sensor does not turn off at power-on.	Z1
		Duplex entrance sensor does not turn off at power-on.	Z1
		Duplex relay sensor does not turn off at power-on.	Z1/Z2
		1 bin relay sensor does not turn off at power- on.	Z1
↓	At Power ON	1 bin paper exit sensor does not turn off at power-on.	Z1
•		Finisher entrance sensor does not turn off at power-on.	R/Z1
		Finisher paper exit sensor does not turn off at power-on.	R
75043	Tray 1: ON	Paper is not fed from tray 1.	A1
7504 4	Tray 2: ON	Paper is not fed from tray 2 (PFU).	Y1
7504 5	Tray 3: ON	Paper is not fed from tray 3 (PFU).	Y2
75046	Tray 4: ON	Paper is not fed from tray 4 (PFU).	Y3
7504 8	Bypass: ON	Paper is not fed from the by-pass tray.	A2
7504 9	Duplex: ON	Paper is not fed from the duplex unit.	Z2
7504 13	T2 Transport: ON	Vertical transport sensor does not detect paper from tray 2 (PFU).	Y2
7504 14	T3 Transport: ON	Vertical transport sensor does not detect paper from tray 3 (PFU).	Y3

Jam Code SP	Display	Description	LCD Display
7504 17	Registration: ON	Registration sensor does not detect paper.	A1
7504 20	Paper Exit: ON	Paper exit sensor does not detect paper.	B/C
7504 24	Inverter: ON (IN)	Inverter sensor does not detect paper.	С
7504 25	Inverter: ON (OUT)	Inverter sensor does not detect paper again after paper has passed this sensor.	Z1
7504 26	Duplex Entrance: ON	Duplex entrance sensor does not detect paper.	Z1
7504 27	Duplex Relay: ON	Duplex relay sensor does not detect paper.	Z1
7504 28	1bin Relay: ON	1 bin relay sensor does not detect paper.	B/C
7504 29	1 bin Paper Exit: ON	1 bin paper exit sensor does not detect paper.	Z1
7504 53	T2 Transport: OFF	Paper stays at the vertical transport sensor of the 1st PFU.	A1/Y1
7504 54	T3 Transport: OFF	Paper stays at the vertical transport sensor of the 2nd PFU.	A1/Y1/ Y2
7504 55	T4 Transport: OFF	Paper stays at the vertical transport sensor of the 3rd PFU.	A1/Y1/ Y2/Y3
7504 57	Registration: OFF	Paper stays at the registration sensor of the 1st PFU.	В
7504 60	Paper Exit: OFF	Paper stays at the paper exit sensor.	B/Z1
7504 64	Inverter: OFF (IN)	Paper stays at the paper exit sensor.	Z1
7504 65	Inverter: OFF (OUT)	Paper stays again at the paper exit sensor paper has passed this sensor.	Z1
7504 66	Duplex Entrance: OFF (In)	Paper stays at the duplex entrance sensor.	Z1
7504 67	Duplex Exit: OFF (Out)	Paper stays again at the duplex entrance after paper has passed this sensor.	Z1/Z2
7504 68	1 bin: Relay: OFF	Paper stays at the 1 bin relay sensor.	Z1

Jam Code SP	Display	Description	LCD Display
7504 69	1 bin: Paper Exit: OFF	Paper stays at the 1 bin paper exit sensor.	Z1
7504 230	FIN: No Exit Response	The machine does not receive the completion data of the finisher paper exit	R/Z1
7504 240	FIN: Entrance SN: ON	Paper does not reach to the finisher entrance sensor.	R/Z1
7504 241	FIN: Entrance SN: OFF	Paper stays at the finisher entrance sensor.	R/Z1
7504 242	FIN: Paper Exit	Paper jam occurs at the finisher paper exit sensor.	R
7504 243	FIN: Jogger Motor	Paper jam occurs at the jogger motor.	R
7504 244	FIN: Shift Roller Motor	Paper jam occurs at the shift roller motor.	R/Z1
7504 245	FIN: Position Roller Motor	Paper jam occurs at the gathering roller motor.	R
7504 246	FIN: Exit Guide Motor	Paper jam occurs at the exit guide plate motor.	R
7504 247	FIN: Output Tray Motor	Paper jam occurs at the tray lift motor.	R
7504 248	FIN: Stapler Motor	Paper jam occurs at the stapler motor.	R
7504 249	FIN: Paddle Roller SOL	Paper jam occurs at the stack height lever solenoid.	R
7504 250	FIN: Entrance SN: OFF	The command from the machine is incorrect.	R/Z1

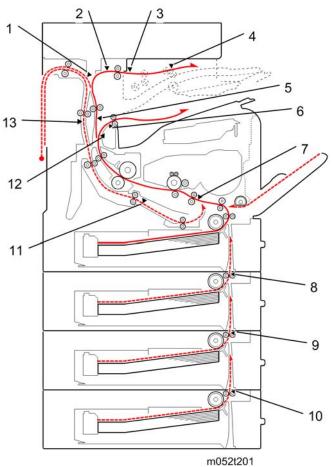
Paper Size Code

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

Size Code	Paper Size	Size Code	Paper Size
132	A3 SEF	172	HLT SEF
133	A4 SEF	255	Others
134	A5 SEF	-	-

Jam Code SP	Display	Description	LCD Display
7505 1	At Power ON	DF registration sensor detects paper at power-on.	Р
		DF inverter sensor detects paper at power-on.	Р
7505 4	Registration: ON	DF registration sensor does not detect paper.	Α
7504 8	Inverter: OFF	Paper stays at the DF inverter sensor.	А
7504 54	Inverter: ON	DF inverter sensor does not detect paper.	
7504 58	Registration: OFF Paper stays at the DF registration sensor.		Υ

Paper Jam Detection Sensor Location



- 1. Duplex inverter sensor
- 2. 1 bin tray paper exit sensor (M052/M053 only)
- 3. Finisher entrance sensor (M054 only)
- 4. Finisher paper exit sensor (M054 only)
- 5. Relay sensor
- 6. Paper overflow sensor (M052/M053 only)

- 7. Registration sensor
- 8. Vertical transport sensor (PFU1)
- 9. Vertical transport sensor (PFU2)
- 10. Vertical transport sensor (PFU3)
- 11. Duplex relay sensor
- 12. Fusing exit sensor
- 13. Duplex entrance sensor

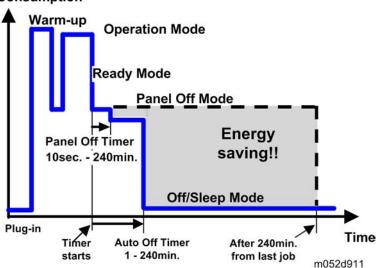
7. Energy Saving

Energy Save

Energy Saver Modes

Customers should use energy saver modes properly, to save energy and protect the environment.

Power Consumption



The area shaded grey in this diagram represents the amount of energy that is saved when the timers are at the default settings. If the timers are changed, then the energy saved will be different. For example, if the timers are all set to 60 min., the grey area will disappear, and no energy is saved before 60 min. expires.

Timer Settings

The user can set these timers with User Tools (System settings > Timer setting)

- Panel off timer (10 sec 240 min): Panel Off Mode. Default setting: 1 min.
- Auto off timer (1 240 min): Off/Sleep Mode. Default setting: 60 min.

Normally, Panel Off timer < Auto Off timer. But, for example, if Auto Off timer < or = Panel Off timer, the machine goes immediately to Off mode when the Auto Off timer expires. It skips the Panel Off mode.

Example

• Panel off: 2 min.

- Sleep: 1 min.
- The machine goes to sleep mode after 1 minute. Panel Off is not used.

Return to Stand-by Mode

Panel Off Mode

• 1 sec.

Off/Sleep Mode

Recovery time.

• 20 sec.

Recommendation

We recommend that the default settings should be kept.

- If the customer requests that these settings should be changed, please explain that their energy
 costs could increase, and that they should consider the effects on the environment of extra energy
 use.
- If it is necessary to change the settings, please try to make sure that the Auto Off timer is not too long. Try with a shorter setting first, such as 30 min., then go to a longer one (such as 60 min.) if the customer is not satisfied.
- If the timers are all set to the maximum value, the machine will not begin saving energy until 240
 minutes has expired after the last job. This means that after the customer has finished using the
 machine for the day, energy will be consumed that could otherwise be saved.
- If you change the settings, the energy consumed can be measured using SP8941, as explained below.

Energy Save Effectiveness

SP 8941 (Machine Status) keeps a record of the amount of time that the machine spends in each mode.

- 8941-001: Operating mode
- 8941-002: Standby mode
- 8941-003: Energy saver mode (Panel off)
- 8941-004: Low power mode
- 8941-005: Sleep mode

With this data, and the power consumption values from the specifications, we can estimate the amount of energy that is used by the machine.

This should only be used as a reference value, because the power consumption specifications are measured in a controlled environment with a constant power supply.

To get an exact measurement at the customers site, a watt meter must be used to measure the actual energy consumed.

To use SP8941 to calculate the energy consumed:

- At the start of the measurement period, read the values of SP8941 001 to 005.
- At the end of the measurement period, read the values of SP8941 001 to 005 again.
- Find the amount of time spent in each mode (subtract the earlier measurement from the later measurement).
- Multiply this by the power consumption spec for each mode.
- Convert the result to kWh (kilowatt hours)

Here is an example calculation.

Machine Condition	SP8941: Machine Status	Time at Start (min.)	Time at End (min.)	Running time (hour) (2-1)/ 60 = 3	Power consumption Spec. (W)	Power consumption (KWH) ($3x4$)/1000 = 5
Operating	001: Operatin g Time	21089.0	21386.0	4.95	898	4.45
Stand by (Ready)	002: Standby Time	306163.0	308046.0	31.38	179	5.62
Energy save (Panel off)	003: Energy Save Time	74000	75111.0	18.52	148.09	2.74
Low power	004: Low Power Time	148000	150333	38.88	111	4.32
Sleep	005: Off Mode Time	508776.0	520377.0	193.35	1.8	0.35
Total						17.47

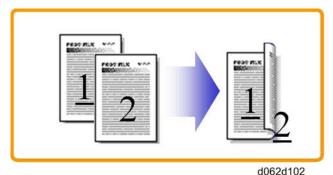
Paper Save

Effectiveness of Duplex/Combine Function

Duplexing and the combine functions reduce the amount of paper used. This means that less energy overall is used for paper production, which improves the environment.

1. Duplex:

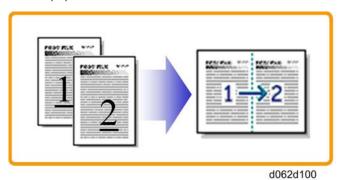
Reduce paper volume in half!



\$100,000,00

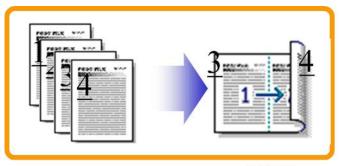
2. Combine mode:

Reduce paper volume in half!



3. Duplex + Combine:

Using both features together can further reduce paper volume by 3/4!



d062d101

To check the paper consumption, look at the total counter and the duplex counter.

The total counter counts all pages printed.

- For one duplex page, the total counter goes up by 2.
- For a duplex job of a three-page original, the total counter goes up by 3.

The duplex counter counts pages that have images on both sides.

- For one duplex page, the duplex counter goes up by 1.
- For a duplex job of a three-page original, the duplex counter will only increase by 1, even though
 two sheets are used.

How to calculate the paper reduction ratio

How to calculate the paper reduction ratio, when compared with Single-sided copying, with no 2-in-1 combine mode

Paper reduction ratio (%) = Number of sheets reduced: A/Number of printed original images: B x 100

- Number of sheets reduced: A
 - = Output pages in duplex mode/2 + Number of pages in Single-sided with combine mode + Number of pages in Duplex with combine mode x 3/2

$$A = ((2)/2 + (3) + (4) \times 3/2$$

- Number of printed original images: B
 - = Total counter + Number of pages in Single-sided with combine mode + Number of pages in Duplex with combine mode

$$B = (1) + (3) + (4)$$

- (1) Total counter: SP 8581 001 (pages)
- (2) Single-sided with duplex mode: SP 8421 001 (pages)
- (3) Single-sided with combine mode: SP 8421 004 (pages)
- (4) Duplex with combine mode: SP 8421 005 (pages)

Model SH-MF1 Machine Code: M052/M053/M054 Appendices

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1. Appendix: Specifications

Specifications

General Specifications

Mainframe



- In this section, each model codes stand for the following models.
- MF1: Standard model
- MF1m: Fax and 1 bin unit model
- MF1f: Finisher model

Configuration:	Desktop
Print Process:	Laser beam scanning and mono-component development electro- photographic printing
Copy Speed:	MF1: 47 cpm (LT SEF), 45 cpm (A4 SEF) MF1m/MF1f: 52 cpm (LT SEF), 50 cpm (A4 SEF)
Number of scans:	1
Resolution:	Scan: 600 x 600 dpi (book)/ 600 x 300 dpi (ARDF) Print: 1200 x 600 dpi, 600 x 600 dpi
Gradation:	Scan: 600 dpi / 10 bits/pixel Print: 600 dpi / 2 bits/pixel
Original type:	Sheets, book, objects
Maximum original size:	A4/11" x 17"
Original reference position:	Left rear corner
First Copy Time:	10 seconds or less (A4, LT, SEF)

Warm-up Time:	20 seconds or less		
Print Paper Capacity: (80 g/m², 20lb)	Standard tray: 550 she By-pass tray: 100 shee Optional paper feed u mainframe.)		ts can be installed in the
	See "Supported Paper	Sizes"	
	-	Minimum	Maximum
Print Paper Size:	Standard Tray	98 x 140 mm	216 x 356 mm
	By-pass	64 x 140 mm	216 x 900 mm
	Optional Tray	98 x 160 mm	216 x 356 mm
Printing Paper Weight:	Standard tray: 52-220 By-pass tray: 52-220 Optional paper feed tr Duplex: 60-163 g/m ²	g/m ² (14-59 lb) ay: 52-220 g/m ² (14-5	9 lb)
Output Paper Capacity:	1 Bin Tray (MF1m):	LT/80 g/m ² / 20 lb) LT/80 g/m ² / 20 lb) AF1f):	
Memory:	Standard: 1GB		
Power Source:		More than 12 A (for Nor O Hz: More than 8 A (for	·
Power Consumption:	120 V: 1500 W or less 220-240 V: 1500 W Energy Saver: 5 W or less for MF1/1 8W or less for MF1m	or less	
Noise Emission: (Sound Power Level)		mainframe, 75.8 dB (A) f 3 (A) for mainframe, 76.0	•

Dimensions (W x D x H):	MF1/MF1m: 460 x 510 x 686 mm (18.1" x 20. operation panel) MF1f: 460 x 615 x 686 mm (18.1" x 24. operation panel)	
Weight:	MF1: 40 kg or less (88.2 lb) MF1m: 50 kg or less (110.3 lb) MF1f 55 kg or less (121.3 lb)	
Continuous copy:	Up to 999 sheets	
	Arbitrary: From 25 to 400% (1% step) for Boo From 25 to 200% (1% step) for ARI Fix	
	North America	EU/ASIA
Zoom:	65%	50%
	78%	71%
	93%	93%
	100%	100%
	129%	141%
	155%	200%
Memory:	1 GB	
HDD:	128 GB	

Printer

Printer Languages:	PCL5e, PCL6, PS3, IPDS (option)	

Resolution:	PCL5e: 600 x 600 dpi (1 bit), 300 x 300 dpi PCL6: 1200 x 600 dpi (1 bit), 600 x 600 dpi (1 bit) PS3: 1200 x 600 dpi (1 bit), 600 x 600 dpi (1 bit) IPDS: 600 x 600 dpi (1 bit), 300 x 300 dpi (1 bit)
Resident Fonts:	PCL5e/6: 45 fonts + 13 International fonts Adobe PostScript 3: 136 fonts IPDS: 108 fonts (option)
Host Interfaces:	Ethernet (100 Base-TX/ 10 Base-T): Standard USB2.0 (Type A/B): Standard IEEE802.11a/g, g (Wireless LAN): Optional Gigabit Ethernet (1000 Base-T): Optional Bluetooth: Optional
Network Protocols:	TCP/IP (IPv4, IPv6), Bonjour, IPX/SPX

Scanner

	B&W:
	over 30ipm (A4, SEF, 200dpi, Mono 1 bit, MH compression with ADF)
Scanning Speed	Color:
	over 30ipm (A4, SEF, 200dpi with FC letter/ photo/ JPEG standard compression with ADF)
Standard Scanner	DF: 600 x 300 dpi
Resolution:	Book: 600 x 600 dpi
Network Interface:	100/10Base-TX, IEEE802.11a/g

ARDF

	C:l	Size	A4 to A5, LG to HLT
D C: /// : L.	Simplex	Weight	52 to 128 g/m² (14 to 34 lb.)
Paper Size/Weight:	Size		A4 to A5, LG to HLT
	Duplex	Weight	60 to 105 g/m² (17 to 28 lb.)
Table Capacity:	50 sheets (80 g/m ² , 20	0 lb.)
Separation:	Friction pa	d	
Original Transport:	Roller trans	sport	
Original Feed Order:	From the to	p original	
Power Source:	DC 24V, 5	V from the so	canner unit
Power Consumption:	35 W or le	ess	
Dimensions (W x D x H):	450 x 400	x 110 mm (17.7" x 15.7" x 4.3")
Weight:	5 kg (11 lb	o.) or less	

Internal Finisher

Paper Size:	A6 to LG
Paper Weight:	52 to 256 g/m² (14 to 68 lb.)
Tray Capacity:	250 sheets: A4, LT or smaller
Staple capacity:	50 sheets (A4, LT or smaller)
Staple position:	1 position
Staple replenishment:	Cartridge (5000 staples)

FCU

|--|

Circuit:	PSTN				
Circuii.	PBX				
Connection:	Direct couple				
	Book (Face down)				
	Maximum Length: 356 mm [14 inch]				
	Maximum Width: 216 mm [8.5 inch]				
	ARDF (Face up)				
Original Size:	(Single-sided document)				
Original Size.	Length: 139 - 1200 mm [5.5 - 47.2 inch]				
	Width: 139 - 216 mm [5.5 - 8.5 inch]				
	(Double-sided document)				
	Length: 160 - 356 mm [6.3 - 14.0 inch]				
	Width: 139 - 216 mm [5.5 - 8.5 inch]				
Scanning Method:	Flat bed, with CCD				
	G3:				
	8 x 3.85 lines/mm, 200 x 100 dpi (Standard character),				
	8 x 7.7 lines/mm, 200 x 200 dpi (Detail character),				
B 1 ::	8 x 15.4 lines/mm (Fine character: optional),				
Resolution:	16 x 15.4 lines/mm, 400 x 400 dpi (Super Fine character:				
	optional)				
	₩Note				
	Optional Expansion Memory required				
Transmission Time:	G3: 3 s at 28800 bps; Measured with G3 ECM using memory for an ITU-T #1 test document (Slerexe letter) at standard resolution				
Data Compression:	MH, MR, MMR, JBIG				
Protocol:	Group 3 with ECM				
AA 11 s	V.34, V.17 (TCM), V.29, V.17 (QAM),				
Modulation:	V.27ter (PHM), V.8, V.21 (FSK)				

Data Rate:	G3: 33600/31200/28800/26400/24000/21600/ 19200/16800/14400/12000/9600/7200/4800/2400 bps Automatic fallback
I/O Rate:	With ECM: 0 ms/line Without ECM: 5, 10, 20, or 40 ms/line
Memory Capacity:	ECM: 128 KB SAF Standard: 4 MB With optional Expansion Memory: 28 MB Page Memory Standard: 4 MB (Print: 2 MB + Scanner: 2 MB) With optional Expansion Memory: 8 MB (Print 4 MB + Scanner: 4 MB)

Capabilities of Programmable Items

The following table shows the capabilities of each programmable items.

Item	Max.
Total Destinations in Address Book	2000
Groups	100
Destination per Group	500
Destinations for All Files	500
Programs	100
Auto Document	6
Special Senders	30
Specific Senders	30

The following table shows how the capabilities of the document memory will change after the Expansion Memory are installed.

	Without the Expansion Memory	With the Expansion Memory	
Memory Transmission file	400	400	

Maximum number of page for memory transmission	1000	1000	
Memory capacity for memory transmission	320	2240	
(See the Note below)			



 Measured using an ITU-T #1 test document (Slerexe letter) at standard resolution, auto image density mode, and Text mode.

IFAX Specifications

	Local area network
Connectivity:	Ethernet 100base-Tx/10base-T
	IEEE802.11a/g (wireless LAN), 1000 Base-T
	Main scan: 400 dpi, 200 dpi
	Sub scan: 400 dpi, 200 dpi, 100 dpi
Resolution:	U Note
	To use 400 dpi, IFAX SW01 Bit 4 must be set to "1".
	1 s (through a LAN to the server)
	Condition: ITU-T #1 test document (Selerexe Letter)
	MTF correction: OFF
Transmission Time:	TTI: None
Transmission fille.	Resolution: 200 x 100 dpi
	Communication speed: 10 Mbps
	Correspondent device: E-mail server
	Line conditions: No terminal access
Document Size:	Maximum message width is A4/LT.
	Single/multi-part
E-mail File Format:	MIME conversion
	Image: TIFF-F (MH, MR, MMR)

IP-FAX Specifications

Network:	Local Area Network Ethernet/10base-T, 100base-TX IEEE802.11a/g (wireless LAN), 1000 Base-T
Scan line density:	8 x 3.85 lines/mm, 200x100dpi (standard character), 8 x 7.7lines/mm, 200x200dpi (detail character), 8 x 15.4lines/mm (fine character: optional expansion memory required), 16 x 15.4lines/mm, 400x400dpi (super fine character: optional expansion memory required)
Original size:	A4
Maximum scanning size:	A4, 216 x 356 mm, Irregular, 216 x 1200 mm
Transmission protocol:	Recommendation: T.38, TCP, UDP/IP communication, SIP (RFC 3261 compliant), H.323 v2
Compatible machines:	IP-Fax compatible machines

IP-Fax transmission function:	Specify IP address and send fax to an IP-Fax compatible fax through a network. Also capable of sending fax from a G3 fax connected to the public telephone lines via a VoIP gateway.
IP-Fax reception function:	Receive a fax sent from an IP-Fax compatible fax through a network. Also capable of receiving fax from a G3 fax connected the public telephone lines via a VoIP gateway.

Option Specifications

Paper Feed Unit (M375/M376)

Paper Feed System:	Friction pad			
Paper Height Detection:	4 steps (100%, 70%, 30% and 10% (Near end))			
Capacity:	550 sheets			
Paper Weight:	52 to 220 g/m ² (14 to 80 lb.)			
Paper Size:	A5/HLT to A4/LG SEF			
Power Source:	DC 24V, 5V (from the main frame)			
Power Consumption:	Less than 20 W			
Dimensions (W x D x H):	M375: 450 mm x 515.6 mm x 150 mm (17.8" × 20.3" × 5.9") M376: 450 mm x 515.6 mm x 220 mm (17.8" × 20.3" x 8.7")			
Weight:	M375: 9 kg (19.9 lb.) or less M376: 12 kg (26.5 lb.) or less			

Supported Paper Sizes

D	C: /\A/ 1\	Main Tray		PFU		By-pass Tray		-
Paper	Size (W x L)	NA	E/A	NA	E/A	NA	E/A	Duplex
A4 SEF	210 x 297 mm	Υ	Υ	Υ	Υ	Y#	Y#	Υ
A5 SEF	148 x 210 mm	Y#	Υ	Y#	Υ	Y#	Y#	Υ
A6 SEF	105 x 148 mm	Y#	Υ	Y#	Υ	Y#	Y#	Υ
B5 SEF	182 x 257 mm	Y#	Y#	Y#	Y#	Y#	Y#	Υ
B6 SEF	128 x 182 mm	Y#	Y#	Y#	Y#	Y#	Y#	Υ
Letter SEF	8.5" x 11"	Υ	Υ	Υ	Υ	Y#	Y#	Υ
Legal SEF	8.5" x 14"	Y	Υ	Υ	Υ	Y#	Y#	Υ
Half Letter SEF	5.5" x 8.5"	Y	Y#	Υ	Y#	Y#	Y#	Υ
Executive SEF	7.25" x 10.5"	Y	Υ	Υ	Y	Y#	Y#	Y
F/GL SEF	8" x 13"	Y#	Y#	Y#	Y#	Y#	Y#	Y
Foolscap SEF	8.5" x 13"	Y#	Y#	Y#	Y#	Y#	Y#	Υ
Folio SEF	8.25" x 13"	Y#	Y#	Y#	Y#	Y#	Y#	Y
16K SEF	7.25" x 10.5"	Y#	Y#	Y#	Y#	Y#	Y#	Y
Custom	mm	98 x 216			70 x 216		102 x 216	
(Width)	inch	3.94" x 8.5" 2.76" x 8		¢ 8.5"	4.02" x 8.5"			
Custom	mm	148 x 355.6				127 x	1260	148 x 355.6
(Length)	inch	5.83" x 14"				5.00" x	49.61"	5.83" x 14"
Com 10 Env.	4.13" x 9.5"	Y#	Y#	Y#	Y#	Y#	Y#	N
Monarch Env.	3.88" x 7.5"	Y#	Y#	Y#	Y#	Y#	Y#	N
C6 Env.	114 x 162 mm	Y#	Y#	Y#	Y#	Y#	Y#	N

D	S:== /\\/ \	Main Tray		PFU		By-pass Tray		Dunlau
Paper	Size (W x L)	NA	E/A	NA	E/A	NA	E/A	Duplex
C5 Env.	162 x 229 mm	Y#	Y#	Y#	Y#	Y#	Y#	Ν
DL Env.	110 x 220 mm	Y#	Y#	Y#	Y#	Y#	Y#	N

Y: Supported: the sensor detects the paper size.

Y#: Supported: the user specifies the paper size.

N: Not supported

Software Accessories

The printer drivers and utility software are provided on one CD-ROM. An auto-run installer allows you to select which components to install.

Printer Drivers

Printer Language	Windows XP	Widows Vista	Windows 7	Macintosh
PCL 5e/6	Yes	Yes	Yes	No
PS3	Yes	Yes	Yes	Yes



- The PS3 drivers are all genuine AdobePS drivers, which uses Microsoft PS. A PPD file for each operating system is provided with the driver.
- The PS3 driver for Macintosh supports Mac OS 7.6 or later versions.

TWAIN Driver

This driver is required to scan an original using a scanner. To use the machine as a network TWAIN scanner, this driver must be installed.

System Requirements

Operating system *1

- Windows XP/Vista/7
- Windows Server 2003/2003 R2/2008/2008 R2
 - *1 Operates in 32-bit compatibility mode on 64-bit operating systems

Display resolution

• 800 × 600 pixels, 256 colors or higher

LAN-Fax Driver

This driver is required to use LAN-Fax functions.

System Requirements

Operating system *1

- Windows XP/Vista/7
- Windows Server 2003/2003 R2/2008/2008 R2

Display resolution

• VGA 640 × 480 pixels or more

1

2. Appendix: Preventive Maintenance

Maintenance Tables

Preventive Maintenance Items

To enable the machine for maintenance by the service technician, the meter-charge mode must be set to "enabled" with SP5930 and "0: Service" with SP5-067-001.

The table below shows the PM items serviced by the service technician.

After completing a PM procedure, reset the PM counter for the replaced part with SP7-804.

Mainframe

Paper

Chart: A4 (LT)/5%

Mode: 2 copies / original (prints/job)

Ratio 25%

Environment: Normal temperature and humidity

Yield may change depending on circumstances and print conditions.

Symbol keys: C: Clean, R: Replace, L: Lubricant, I: Inspect

ltem	6/25 K	120 K	EM	Remarks
Scanner				
Reflector	-	-	С	Optics cloth
1st/2nd/3rd mirrors	-	-	С	Optics cloth
Front and Rear Rails	-	-	С	Dry cloth
Exposure Glass	-	-	С	Dry cloth; alcohol
ADF Exposure Glass	-	-	С	Dry cloth; alcohol
PCDU				
AIO	R	-	-	
Transfer				

ltem	6/25 K	120 K	EM	Remarks
Transfer Roller	-	R	-	
Fusing				
Fusing Unit	-	R	-	
Paper Path				
Paper Feed Roller	-	R	С	Damp cloth
Friction Pad	-	R	С	Dry cloth
Registration Roller	-	-	С	Damp cloth
Dust Shield Glass	-	-	С	Optical cloth, Blower

Other 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).

ARDF

ltem	EM	Remarks
Pick-up Roller	С	Damp cloth; alcohol
Feed Roller	С	Damp cloth; alcohol
Friction Pad	С	Damp cloth; alcohol
Sensors	С	Blower brush
White Plate	С	Dry or damp cloth
Transport Roller	С	Damp cloth; alcohol
Exit Roller	С	Damp cloth; alcohol
Inverter Roller	С	Damp cloth; alcohol
Idle Rollers	С	Damp cloth; alcohol

Internal Finisher

Item	EM	Remarks
Sensors	С	Blower brush
Rollers	С	Damp cloth; alcohol

One-tray Paper Feed Unit (M375/M376)

ltem	EM	Remarks
Feed Roller	С	Dry cloth
Separation Roller	С	Dry cloth
Pick-up Roller	С	Dry cloth
Relay Roller	С	Damp cloth
Bottom Plate Pad	С	Damp cloth
Sensors	С	Blower brush

1 Bin Tray

Items	EM	Remarks
Rollers	С	Damp cloth
Exit Tray	С	Damp cloth
Exit Sensor	С	Blower brush
Paper Sensor	С	Blower brush
Bearing	С	S552R

MEMO

