Model G-P2

Machine Code: G160

SERVICE MANUAL

Feb. 24th, 2006

Subject to change

Read This First

Safety Notices

Important Safety Notices

Prevention of Physical Injury

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

Health Safety Conditions

Toner and developer are non-toxic, but if you get either of them in your eyes by accident, it may cause temporary eye discomfort. Immediately wash eyes with plenty of water. If unsuccessful, get medical attention.

Observance of Electrical Safety Standards

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

Lithium Batteries

Incorrect replacement of lithium battery(s) on the EGB and controller board 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.

Safety and Ecological Notes for Disposal

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

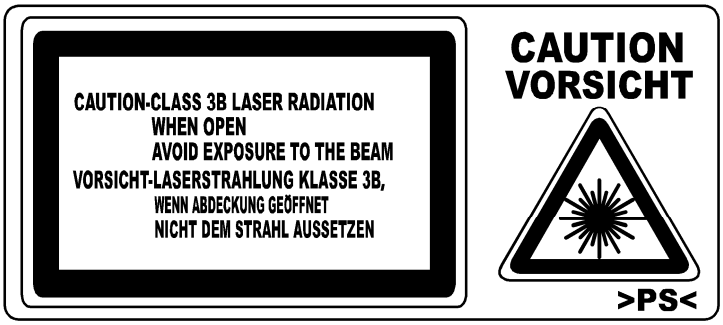
LASER SAFETY

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

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

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

CAUTION MARKING:



Symbols, Abbreviations, and Trademarks

Symbols and Abbreviations

This manual uses the symbols and abbreviations shown below.

Symbol	Meaning
	Refer to section number
	Clip ring
	Screw
	Connector
	Clamp
SEF	Short Edge Feed
LEF	Long Edge Feed

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Table of Contents

Installation Procedure

Installation Requirements

The installation procedure for G-P2 (G160/G161) is the same as G-P1 (G104/G105). For details, refer to the Quick Installation Guide for G-P2 (G160/G161).

Optional Unit Installation

The following options are available for this machine. Refer to the Hardware Guide for how to install these options:

- Paper Tray Unit (G392)
- HDD (G395)
- IEEE802.11b Interface Unit (Wireless LAN: G813)
- IEEE 1284 Interface Board (B679)
- Bluetooth Interface Unit (B826)
- Gigabit Ethernet Board (G874-01)
- VM Card (G874-08)
- USB Host Interface Unit (B825)
- Data Overwrite Security Unit (G874-21)
- PictBridge Interface (G874-19)
- 128 MB DIMM (B584)
- 256 MB DIMM (G818)
- NVRAM (User account enhancement: G395)

Preventive Maintenance

User Replaceable Items

The user replaces the following items if the service contract requires that the user does some of the PM.

Item	Remarks
PCU	50 KP (YMC, BK)
Transfer Belt Unit	100 KP
Waste Toner Bottle	50 KP
Maintenance Kit ▪ Fusing Unit ▪ Transfer Roller ▪ Paper Feed Roller x 3 ▪ Friction Pad x 3 ▪ Dust Filter x 2	100 KP

Chart: A4 (LT), 5%

Mode: Continuously Printing

Environment: Recommended temperature and humidity

Yield changes depend on circumstances and print conditions

An error message shows when a maintenance counter gets to the value in the PM table when the machine's default settings are used.

It is not necessary to reset counters for each part if the technician does the PM. The machine detects new components automatically and resets the necessary counters.

Service Maintenance

Recommended Cleaning Procedure

1. Turn off the main switch.
2. Remove the waste toner bottle.
3. Remove the PCUs.
4. Remove the transfer belt unit. Do not touch the transfer belt surface.
5. Remove the fusing unit.
6. Remove the standard paper tray.
7. Clean the paper path.
8. Clean all printer rollers with dry cloth only.

   Note

   - Do not clean the transfer roller.
9. Use a blower brush to clean the laser unit windows.
10. Vacuum the interior of the printer.
11. Carefully clean the area around the transfer roller.

Replacement And Adjustment

Before You Start

This section shows the differences between G-P1 (G104/G105) and G-P2 (G160/G161). For other items procedures, refer to the service manual for G-P1 (G104/G105).

CAUTION

- Turn off the main power switch and unplug the machine before you do the procedures in this section.

Important

Remove these before you do a removal procedure:

- 4 toner bottles (cyan, magenta, yellow, and black)
- Waste toner bottle
- Standard paper tray

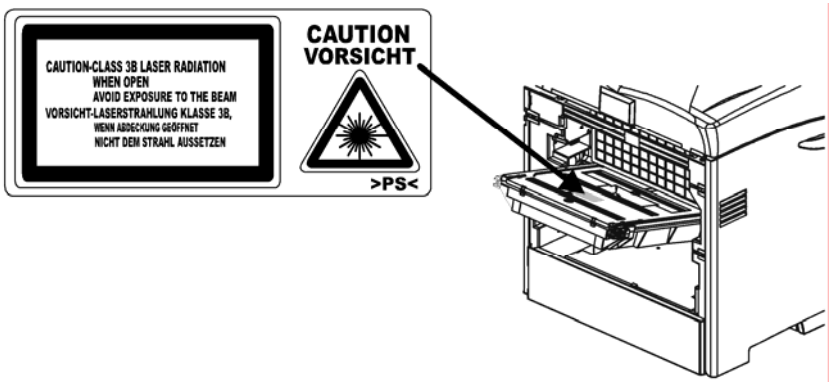
Laser Optics

⚠WARNING

- Turn off the main power switch and unplug the printer before you do the procedures in this section. Laser beams can cause serious eye injury.

Caution Decal Locations

The caution decal is attached as shown below



⚠WARNING

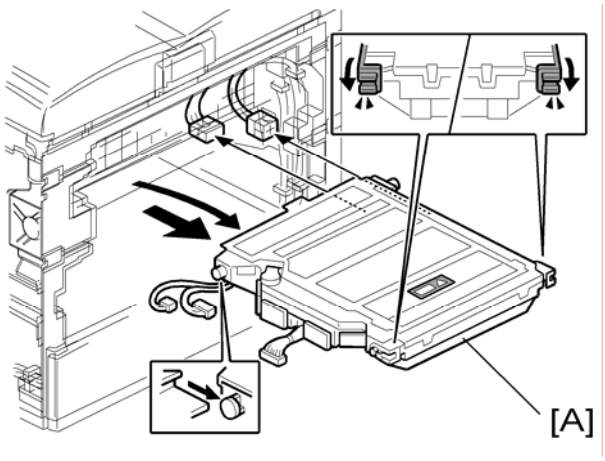
- Make sure to turn off the main power switch and disconnect the power plug from the power outlet before you do any disassembly or adjustment of the laser unit. This printer uses a class 3B laser beam with a wavelength of 655 nm and an output of 7 mW. The laser can cause serious eye injury.

LD Unit

Replacement

Preparation

- Print the SMC report with SP 5990 2 before you replace the LDU.



1. **Electrical board unit (see the Service Manual for G-P1 (G104/G105): 'Electrical Components – Electrical Board Unit')**
2. **LDU [A]**

Color Registration Adjustment

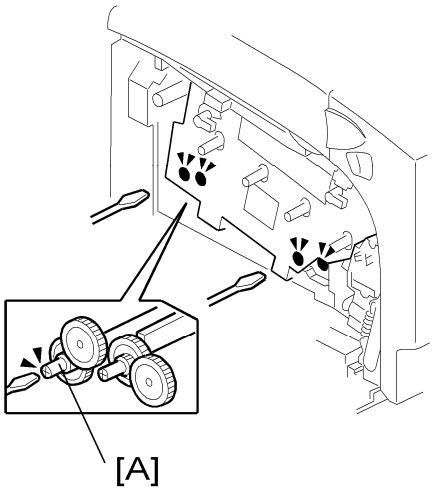
Note

- You must manually do the color registration adjustment after you install the new LDU.
- When the polygon mirror motor or LDB unit is defective, only replace the defective parts. At this time, if only the motor is changed it is not necessary to do this adjustment procedure.

1. **Print the SMC report with SP 5990 2 before you replace the LDU. Find the values for SP 2181 1, SP 2181 11, 2181 21, and 2181 31.**
2. **Do SP 2111 2 (Pro. Position Adj > Execute) to roughly adjust the line position after you install the new LDU. "Result = OK" shows on the LCD if this is done correctly. If not, do it again until you get "OK".**
3. **Do SP2111 3 (Skew Adjust. > Execute) to measure the skew values for each color. "Result = OK" shows on the LCD if this is done correctly. If not, do it again until you get "OK".**
4. **Check the skew values with SP 2181: Then write down the values. (You can also check these if you print the SMC report again with SP 5990 2. The values will**

probably be different from the values on the report that you printed in step 1.)

- SP 2181 1 for black skew
- SP 2181 11 for magenta
- SP 2181 21 for cyan
- SP 2181 31 for yellow



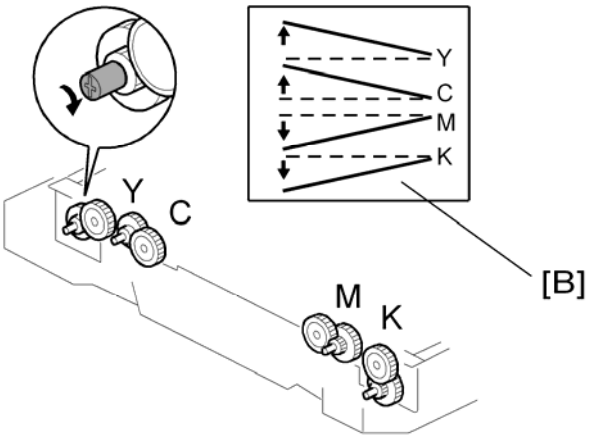
5. **Open the left cover**
6. **Adjust the skew adjustment cam [A] for each color with a screwdriver. You must adjust the skew values for each color until they are all the same as the value for magenta that you found in step 1, before you replaced the LDU.**
   - For example: If the new value for K (after step 4) is –300 and the old value for magenta (in step 1) is –250, you must adjust the skew for K until it is –250.
   - Turn the cam as shown in the “Cam Rotation Direction” column below to increase the skew value.
   - Turn it in the opposite direction from this to decrease the skew value.
   - “Adjustment value” shows the change when you turn the cam one click.

Color	Cam Rotation Direction	Adjustment Value
Yellow	CW	14 µm
Cyan	CW	10 µm
Magenta	CCW	10 µm
Black	CCW	10 µm

Note

- The adjustment values in the table are not exact values. These are approximate values.

- CW: Clockwise, CCW: Counter-clockwise



- The diagram shows the effect on line skew [B] when you turn the cam in a counter clockwise direction.

7. **Close the left cover. Then measure the skew values again with SP 2111 3. (To do this, repeat step 3.)**
   - If these are close to the value for magenta that you found in step 1 (within one click in the above table), go to the next step. If not, do SP 2111 3 again until you get a good result.
8. **Do SP 2111 1 to finely adjust the line position for each color.**
   - Try SP 2111 2 if “Result = OK” does not show.
9. **When you get “Result = OK”, this adjustment is completed.**

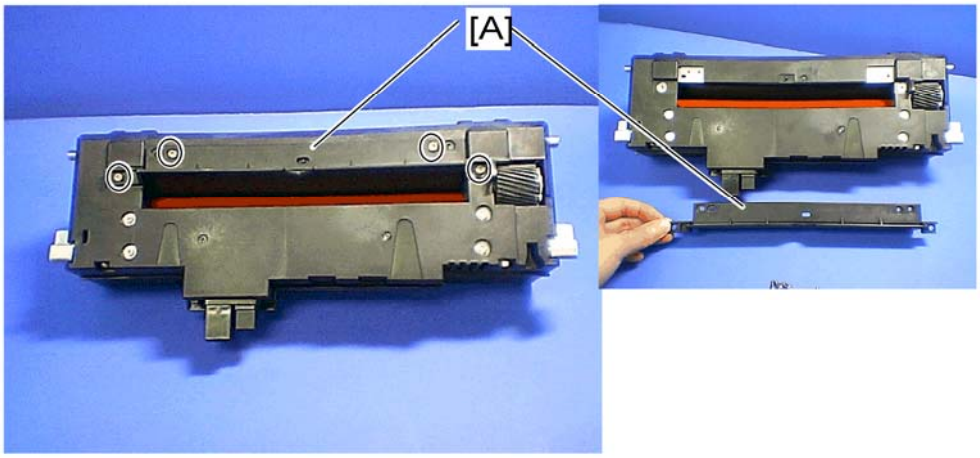
Fusing

⚠CAUTION

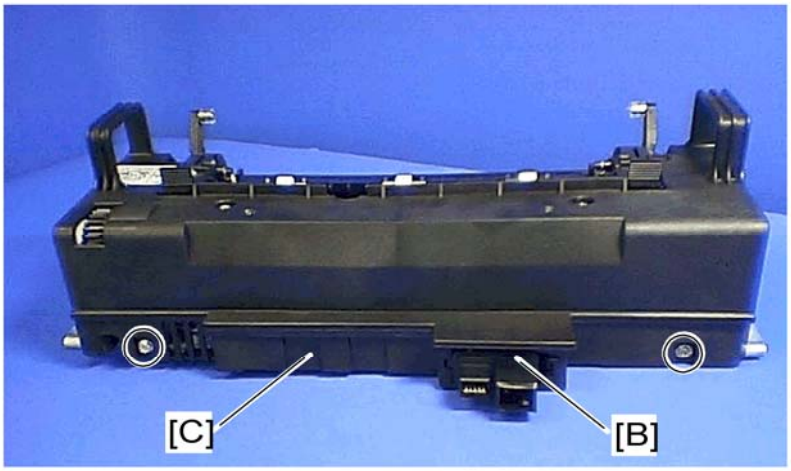
- **Make sure that the fusing unit is cool before you touch it. The fusing unit can be very hot.**
- **Make sure to restore the insulators, shields, etc after you service the fusing unit.**

Thermistor and Thermostat

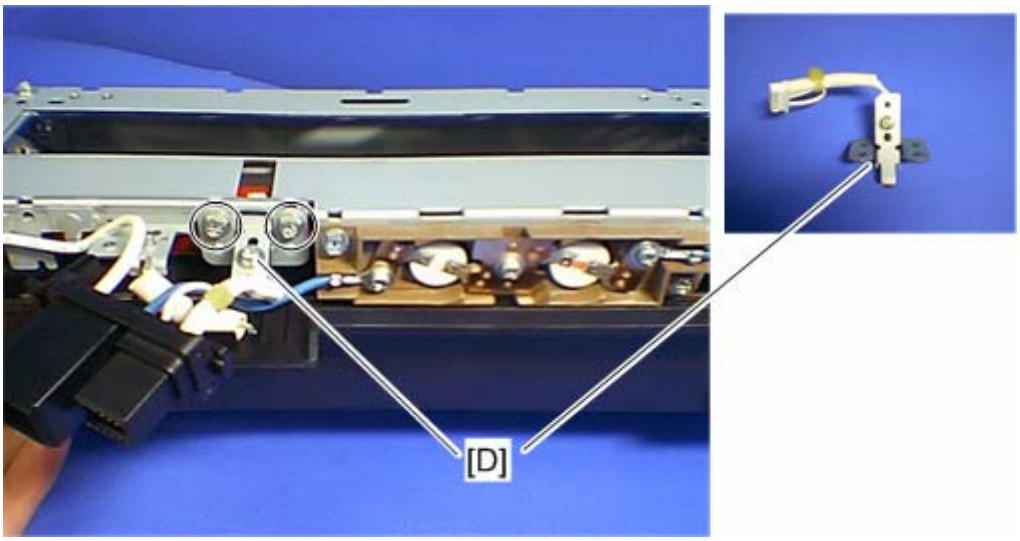
1. **Front door**
2. **Fusing unit (see the Service Manual for G-P1 (G105/G16): 'Fusing Unit')**



3. **Fusing unit guide plate [A] (x 4)**



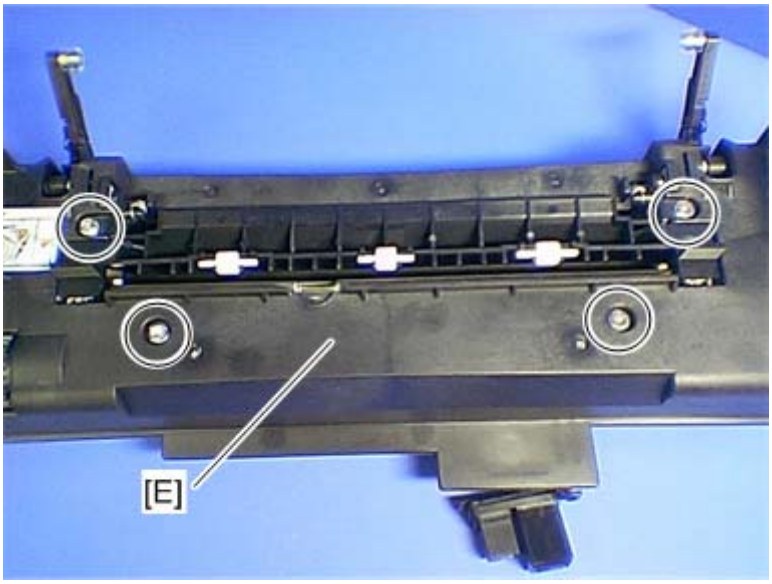
4. **Release the connector [B] from the fusing lower cover [C] (hook x 1).**
5. **Fusing lower cover [C] (x 2)**



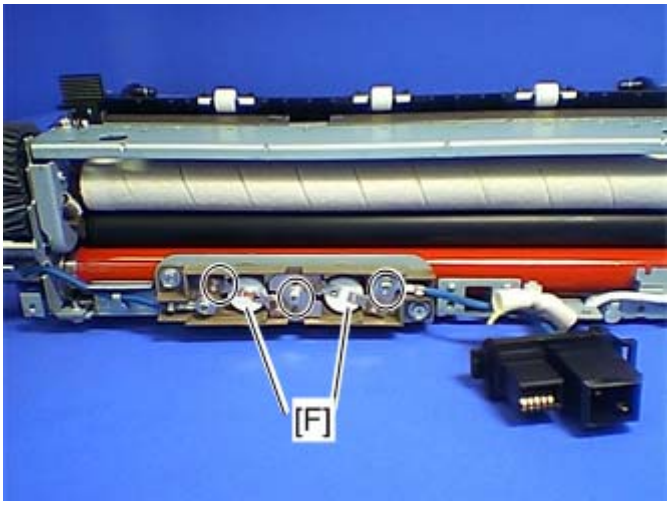
6. **Thermistor with bracket [D] (x 2, x 1)**

Note

- Do not remove the thermistor from the bracket when removing it. The pressure of the thermistor plate to the fusing belt is adjusted properly in the factory. If you remove it, some image problem may occur.



7. **Fusing upper cover [E] (x 4)**



8. Thermostat [F] x 2 (x 3)

Note

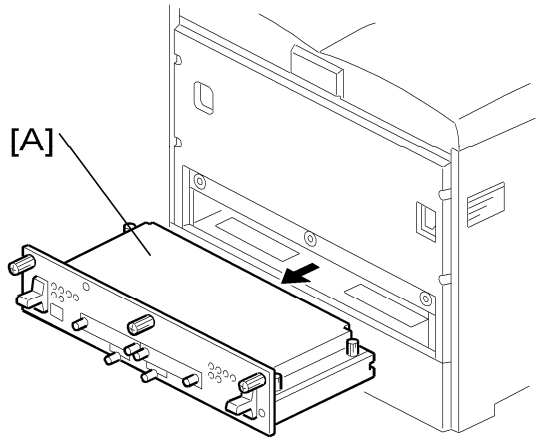
- Do not recycle a thermostat that is already opened. Safety is not guaranteed if you do this.

Electrical Components

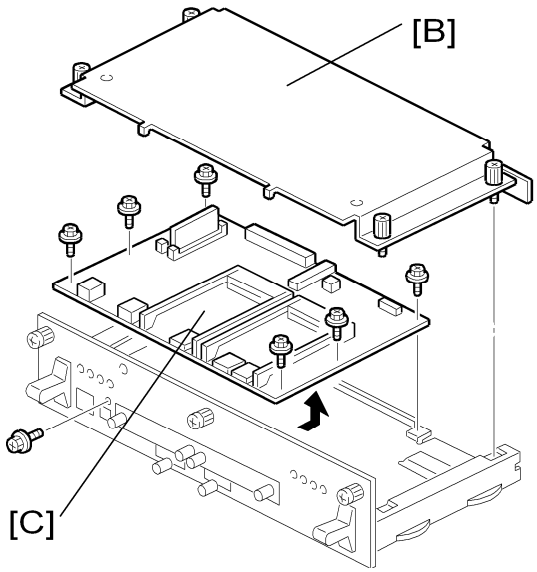
⚠CAUTION

- Before you replace the EGB (Engine Board), the controller, or the NVRAM, print out the SMC reports (“SP Mode Data” and “Logging Data”).
- After you replace the EGB (Engine Board) or the controller, remove the NVRAM from the old board and install it on the new board. If the NVRAM on the old board is defective, replace the NVRAM (see ‘NVRAM Replacement Procedure’).

Controller Board



1. Controller unit [A] (x 3)



2. Controller unit cover [B] (x 4)

3. **Controller board [C] (x 7)**

Note

- Remove the NVRAM from the old board. Then install it on the new board.

CAUTION

- Keep NVRAMs away from objects that can cause static electricity. The data in NVRAMs can be corrupted by static electricity.
- Make sure the NVRAM is correctly installed on the board. A half-disk is engraved on one side of the NVRAM, and a guide mark is on one side of the NVRAM slot. When you install the NVRAM, the half-disk and the guide mark must be on the same side.

Installing the new NVRAM

When the NVRAM on the controller board is detective, you must replace the detective NVRAM to new NVRAM.

1. **Controller board (see Controller Board)**
2. **Remove the defective NVRAM.**
3. **Install the new NVRAM on the controller board.**
4. **Reassemble the machine.**
5. **Plug in and turn on the main power**
6. **Set the date and time with the timer setting in the UP (Maintenance < Menu) after installing a new controller board.**

CAUTION

- If the date and time setting is not done, the WebImage Moniter can not be available.

Troubleshooting

Process Control Results

The table below lists the process control results shown in SP 3821.

Number	Result	Notes
10	Success	No error
21	ID sensor correction error	SC 400
22	ID sensor: LED adjustment error	SC 418
31	Charge bias correction error	SC 300 to 307
51	High Vmin (Bk), High K2 (Color) error	SP 3145 (see the note below the table)
52	Low K2 (Color) error	SP 3146 (see the note below the table)
53	High K5 error	SP 3147 (see the note below the table)
54	Low K5 error	SP 3147 (see the note below the table)
55	High development gamma	Gamma > 5.0 (see the note below the table)
56	Low development gamma	Gamma < 0.5 (see the note below the table)
57	Development bias adjustment error	Vk >150V (see the note below the table)
58	Development bias adjustment error	Vk < -150V (see the note below the table)
90	No process control	-
99	Not successful	Interrupt during the process control (e.g. Door open)

Note

- This error code does not usually occur. If no problem is observed with image density and/or development gamma, nothing needs to be done. If an image problem such as low image density is observed, check the following points: Transfer belt/PCU/ID sensor/Toner bottle

The 8 numbers on the LCD in SP 3821 indicate the process control result for each color. There are two numbers for each color. The numbers are shown from left to right on the display as follows: Black, Magenta, Cyan, Yellow. For example, if process control for each color is successful: 10 (Black), 10 (Magenta), 10 (Cyan), 10 (Yellow)

Service Call Conditions

Summary

1. All SCs are logged.
2. First disconnect then reconnect the connectors before you replace the PCBs if the problem concerns electrical circuit boards.
3. First check the mechanical load before you replace motors or sensors if the problem concerns a motor lock.

There are 4 levels of service call conditions.

Level	Definition	Reset Procedure
A	To prevent damage to the machine, the main machine cannot be operated until a service representative has reset the SC.	Do SP 5810, and then turn the main power switch off and on.
B	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.	Turn the operation switch or main switch off and on.
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.

SC Code Descriptions

Note

- Remove the NVRAM from the old board and install it on the new one when you replace the EGB or the controller board.

- The SC level is indicated under SC number in the list below.
- The numbers (1, etc.) in the “Possible Cause/Requirement Action” column indicate the required actions.

Engine SC

SC [Level]	Symptom	Possible Cause/Required Action
195 [D]	Incorrect serial number	
	When checking the registered product number, it does not match the printer's product number.	▪ Registered product number does not match the printer's product number. 1. Ask your service key man.
202 [D]	Polygon motor error: Time out with the polygon motor activated	
	After the polygon motor turns on or changes the speed, SCRDY_N is not active within 10 seconds.	▪ Disconnected cable from the polygon motor drive board or defective connection ▪ Defective polygon motor or drive board
203 [C]	Polygon motor error: Time out with the polygon motor inactivated	
	After the polygon motor turns off or changes the speed, SCRDY_N is not inactive within 10 seconds.	▪ Disconnected cable from the polygon motor drive board or defective connection ▪ Defective polygon motor or drive board
204 [C]	Polygon motor error: XSCRDY signal error	
	PMRDY_N signal consecutively detects that the polygon motor is an inactive state while LDB unit scans.	▪ Disconnected cable from the polygon motor drive board or defective connection ▪ Defective polygon motor or drive board 1. Check the connectors. 2. Replace the polygon motor. 3. Replace the polygon motor drive board.
205 [D]	Polygon motor error: XSCRDY signal not stable	
	PMRDY_N signal consecutively detects that the polygon motor is an inactive state while the polygon motor turns on or changes the speed.	▪ Disconnected cable from the polygon motor drive board or defective connection ▪ Defective polygon motor or drive board. 1. Check the connectors. 2. Replace the polygon motor. 3. Replace the polygon motor drive board.
210 [C]	Trailing edge laser detection error: [K]	
	The laser synchronizing detection signal for LDB [K]	▪ Disconnected cable from the laser synchronizing detection unit or defective

SC [Level]	Symptom	Possible Cause/Required Action
	of the trailing edge is not detected for one second after the LDB unit turned on when detecting the main scan magnification.	connection ▪ Defective laser synchronizing detector ▪ Defective LDB ▪ Defective EGB 1. Check the connectors. 2. Replace the laser-synchronizing detector. 3. Replace the LDB. 4. Replace the EGB.
211 [C]	Trailing edge laser detection error: [Y]	
	The laser synchronizing detection signal for LDB [Y] of the trailing edge is not detected for one second after the LDB unit turned on when detecting the main scan magnification.	Same as SC 210
212 [C]	Trailing edge laser detection error: [M]	
	The laser synchronizing detection signal for LDB [M] of the trailing edge is not detected for one second after the LDB unit turned on when detecting the main scan magnification.	Same as SC 210
213 [C]	Trailing edge laser detection error: [C]	
	The laser synchronizing detection signal for LDB [C] of the trailing edge is not detected for one second after the LDB unit turned on when detecting the main scan magnification.	Same as SC 210

SC [Level]	Symptom	Possible Cause/Required Action
220 [D]	Laser Synchronizing Detection Error: LDB of the leading edge [K]	
	The laser synchronizing detection signal for LDB [K] of the leading edge is not output for two seconds after LDB unit turns on while the polygon motor is rotating normally.	▪ Disconnected cable from the laser synchronizing detection unit or defective connection ▪ Defective laser synchronizing detector ▪ Defective LDB ▪ Defective EGB 1. Check the connectors. 2. Replace the laser-synchronizing detector. 3. Replace the LDB. 4. Replace the EGB.
222 [D]	Leading edge laser detection error: [Y]	
	The laser synchronizing detection signal for LDB [Y] of the leading edge is not output for two seconds after LDB unit turns on while the polygon motor is rotating normally.	Same as SC 221
224 [D]	Leading edge laser detection error: [M]	
	The laser synchronizing detection signal for LDB [M] of the leading edge is not output for two seconds after LDB unit turns on while the polygon motor is rotating normally.	Same as SC 221
226 [D]	Leading edge laser detection error: [C]	
	The laser synchronizing detection signal for LDB [C] of the leading edge is not output for two seconds after	Same as SC 221

SC [Level]	Symptom	Possible Cause/Required Action
	LDB unit turns on while the polygon motor is rotating normally.	
230 [C]	FGATE: On error [K]	
	The PFGATE ON signal does not assert within 5 seconds after processing the image in normal job or MUSIC for [K] starts.	▪ Defective connection between the controller board and EGB ▪ Defective cable between the EGB and LDB 1. Check the connectors. 2. Replace the LDB. 3. Replace the EGB.
231 [C]	FGATE: Off error [K]	
	▪ The PFGATE ON signal still asserts within 5 seconds after processing the image in normal job or MUSIC for [K] ends. ▪ The PFGATE ON signal still asserts when the next job starts.	▪ Defective connection between the controller board and EGB ▪ Defective cable between the EGB and LDB 1. Check the connectors. 2. Replace the LDB. 3. Replace the EGB.
232 [C]	FGATE: On error [Y]	
	The PFGATE register of GAVD does not assert within 5 seconds after processing the image in normal job or MUSIC for [Y] started.	Same as SC 230
233 [C]	FGATE: Off error [Y]	
	▪ The PFGATE ON signal still asserts within 5 seconds after processing the image in normal job or MUSIC for [K] ends. ▪ The PFGATE ON signal still asserts when the	Same as SC 231

SC [Level]	Symptom	Possible Cause/Required Action
	next job starts.	
234 [C]	FGATE: On error [M]	
	The PFGATE register of GAVD does not assert within 5 seconds after processing the image in normal job or MUSIC for [M] started.	Same as SC 230
235 [C]	FGATE: Off error [M]	
	▪ The PFGATE ON signal still asserts within 5 seconds after processing the image in normal job or MUSIC for [M] ends. ▪ The PFGATE ON signal still asserts when the next job starts.	Same as SC 231
236 [C]	FGATE: On error [C]	
	The PFGATE register of GAVD does not assert within 5 seconds after processing the image in normal job or MUSIC for [C] started.	Same as SC 230
237 [C]	FGATE: Off error [C]	
	▪ The PFGATE ON signal still asserts within 5 seconds after processing the image in normal job or MUSIC for [C] ends. ▪ The PFGATE ON signal still asserts when the next job starts.	Same as SC 231
240 [D]	LDB error [K]	
	The EGB detects LDB error a	▪ Defective LDB

SC [Level]	Symptom	Possible Cause/Required Action
	few times consecutively when LDB unit turns on after LDB initialization.	1. Replace the LDB.
241 [D]	LDB error [Y]	
	The EGB detects LDB error a few times consecutively when LDB unit turns on after LDB initialization.	Same as SC240
242 [D]	LDB error [M]	
	The EGB detects LDB error a few times consecutively when LDB unit turns on after LDB initialization.	Same as SC240
243 [D]	LDB error [C]	
	The EGB detects LDB error a few times consecutively when LDB unit turns on after LDB initialization.	Same as SC240
270 [D]	LDU shutter error	
	Sensor output does not change even if 1 second passes after the LDU shutter motor is on.	▪ Sensor defective or LDU shutter motor defective 1. Replace the LDU shutter sensor or shutter motor.
300 [D]	High voltage power board: Charge voltage output error [K]	
	The measured voltage is not proper when EGB measures the charge output for each color.	▪ Defective charge roller ▪ Defective connectors ▪ Disconnected harness ▪ Defective high voltage power 1 1. Check the connectors. 2. Replace the PCU for black. 3. Replace the drum positioning plate. 4. Replace the high voltage power 1.
301	High voltage power board: Charge voltage output error [M]	

SC [Level]	Symptom	Possible Cause/Required Action
[D]	The measured voltage is not proper when EGB measures the charge output for each color.	▪ Defective charge roller ▪ Defective connectors ▪ Disconnected harness ▪ Defective high voltage power 1 1. Check the connectors. 2. Replace the PCU for magenta. 3. Replace the drum positioning plate. 4. Replace the high voltage power 1.
302 [D]	High voltage power board: Charge voltage output error [C]	
	The measured voltage is not proper when EGB measures the charge output for each color.	▪ Defective charge roller ▪ Defective connectors ▪ Disconnected harness ▪ Defective high voltage power 1 1. Check the connectors. 2. Replace the PCU for cyan. 3. Replace the drum positioning plate. 4. Replace the high voltage power 1.
303 [D]	High voltage power board: Charge voltage output error [Y]	
	The measured voltage is not proper when EGB measures the charge output for each color.	▪ Defective charge roller ▪ Defective connectors ▪ Disconnected harness ▪ Defective high voltage power 1 1. Check the connectors. 2. Replace the PCU for yellow. 3. Replace the drum positioning plate. 4. Replace the high voltage power 1.
304 [D]	Charge AC bias error [K]	
	The charge current less than 200 µA is detected.	▪ Defective charge roller ▪ Defective connectors ▪ Disconnected harness ▪ Defective high voltage power 1 1. Check the connectors. 2. Replace the PCU for black. 3. Replace the drum positioning plate.

SC [Level]	Symptom	Possible Cause/Required Action
		4. Replace the high voltage power 1.
305 [D]	Charge AC bias error [M]	
	The charge current less than 200 µA is detected.	▪ Defective charge roller ▪ Defective connectors ▪ Disconnected harness ▪ Defective high voltage power 1 1. Check the connectors. 2. Replace the PCU for magenta. 3. Replace the drum positioning plate. 4. Replace the high voltage power 1.
306 [D]	Charge AC bias error [C]	
	The charge current less than 200 µA is detected.	▪ Defective charge roller ▪ Defective connectors ▪ Disconnected harness ▪ Defective high voltage power 1 1. Check the connectors. 2. Replace the PCU for cyan. 3. Replace the drum positioning plate. 4. Replace the high voltage power 1.
307 [D]	Charge AC bias error [Y]	
	The charge current less than 200 µA is detected.	▪ Defective charge roller ▪ Defective connectors ▪ Disconnected harness ▪ Defective high voltage power 1 1. Check the connectors. 2. Replace the PCU for yellow. 3. Replace the drum positioning plate. 4. Replace the high voltage power 1.
325 [D]	Color development motor error	
	▪ LOCK signal is not detected for more than two seconds while the motor START signal is	▪ Color development motor slip due to the increase of the load torque 1. Adjust the load torque properly by replacing or cleaning the development

SC [Level]	Symptom	Possible Cause/Required Action
	on. ▪ LOCK signal is not cancelled within two seconds after the motor is off.	unit. 2. Replace or repair the development motor if the load torque is normal.
360 [D]	TD sensor: Output maximum error [K]	
	Vt is more than the maximum value (4.5) for three times consecutively.	▪ Defective connector connection ▪ Increasing toner density 1. Replace the PCU.
361 [D]	TD sensor: Output maximum error [M]	
	Same as SC 360	
362 [D]	TD sensor: Output maximum error [C]	
	Same as SC 360	
363 [D]	TD sensor: Output maximum error [Y]	
	Same as SC 360	
364 [D]	TD sensor: Output minimum error [K]	
	Vt is less than the minimum value (0.5) for three times consecutively.	▪ Defective connector connection ▪ Decreasing toner density 1. Replace the PCU.
365 [D]	TD sensor Output minimum error [M]	
	Same as SC 364	
366 [D]	TD sensor: Output minimum error [C]	
	Same as SC 364	
367 [D]	TD sensor: Output minimum error [Y]	
	Same as SC 364	
368 [D]	TD sensor: Initial control voltage error [K]	
	▪ Vt is less than 1 V even though the control power voltage is adjusted to the maximum. ▪ Vt is more than 1 V even though the control power voltage is adjusted to the	▪ Defective connector connection ▪ Defective TD sensor ▪ The toner density in the developer is different from the initial condition. 1. Replace the PCU.

SC [Level]	Symptom	Possible Cause/Required Action
	minimum.	
369 [D]	TD sensor: Initial control voltage error [M]	
	Same as SC 368	
370 [D]	TD sensor: Initial control voltage error [C]	
	Same as SC 368	
371 [D]	TD sensor: Initial control voltage error [Y]	
	Same as SC 368	
372 [D]	TD sensor: Initial adjustment error [K]	
	Vt is not (A ±0.2) when initial setting for TD sensor is executed. A = SP3011-001 for [K]	▪ Defective connector connection ▪ Defective TD sensor ▪ The toner density in the developer is different from the initial condition. 1. Replace the PCU.
373 [D]	TD sensor: Initial adjustment error [M]	
	Vt is not (A ±0.2) when initial setting for TD sensor is executed. A = SP 3011 2 for [M]	Same as 372
374 [D]	TD sensor: Initial adjustment error [C]: same as 372	
	Vt is not (A ±0.2) when initial setting for TD sensor is executed. A = SP 3011 3 for [C]	Same as 372
375 [D]	TD sensor: Initial adjustment error [Y]: same as 372	
	Vt is not (A ±0.2) when initial setting for TD sensor is executed. A = SP 3011 4 for [Y]	Same as 372
380 [C]	Drum gear position sensor error	
	When receiving the input signal of drum gear position sensor is not correctly done, SC380 is logged.	▪ Dirty or defective drum gear position sensor 1. Clean the drum gear position sensor. 2. Replace the drive unit.

SC [Level]	Symptom	Possible Cause/Required Action
396 [D]	Drum motor error [K]	
	The LOCK signal is not detected for 2 seconds more while the start signal of the drum motor for black PCU is output.	▪ OPC motor slip due to the excessive load 1. Clean the PCU. 2. Check the cable from the Black OPC/ Development motor. Replace it if necessary. 3. Replace the EGB. 4. Replace the Black OPC/Development motor.
397 [D]	Drum motor error [CMY]	
	The LOCK signal is not detected for 2 seconds more while the start signal of the drum motor for color PCU is output.	Same as SC 396
400 [D]	ID sensor correction error	
	Regular Vsp is not (4 ±0.5V) when ID sensor correction is executed.	▪ Defective ID sensors ▪ Dirty ID sensors or transfer belt ▪ ID sensor life is over. 1. Replace the ID sensors.
418 [D]	ID sensor: LED adjustment error	
	LED PWM adjustment is not [A] for three times consecutively. [A] = 50 < [A] < 400	▪ Defective ID sensors ▪ Dirty ID sensors or transfer belt ▪ ID sensor life is over. 1. Replace the ID sensors.
442 [D]	Transfer belt contact error	
	The transfer belt contact sensor does not detect the movement of actuator at the sensor while the polygon motor rotates.	▪ Dirty transfer belt contact sensor ▪ Defective transfer belt contact motor ▪ Disconnected connector of transfer belt contact sensor or motor ▪ Disconnected cable 1. Replace the transfer belt contact sensor. 2. Replace the transfer belt contact motor.

SC [Level]	Symptom	Possible Cause/Required Action
452 [D]	Transfer roller contact error	
	The transfer roller contact sensor does not detect the movement of actuator at the sensor while the polygon motor rotates.	▪ Defective transfer roller contact sensor ▪ Defective transfer roller contact motor ▪ Defective IOB 1. Replace the transfer roller contact sensor. 2. Replace the transfer roller contact motor. 3. Replace the IOB.
490 [D]	High Voltage Power 1: High voltage output error	
	Error signal is detected for 10 times consecutively.	▪ One of the DC bias outputs for each PCU is shorted or one of the transfer belt bias outputs for [Y], [M] and [C]. ▪ Power leaking ▪ Defective connection ▪ Disconnected cable ▪ Defective PCU ▪ Defective High Voltage Power 1 1. Replace the High Voltage Power 1. 2. Reset the cables and components. 3. Replace the PCU.
491 [D]	High Voltage Power 2: High voltage output error	
	Error signal is detected for 10 times consecutively.	▪ One of the separation bias output, development bias output and transfer belt cleaning bias output is shorted or one of the transfer belt bias output for [K] and transfer roller bias output is shorted. ▪ Power leaking ▪ Defective connection ▪ Defective PCU ▪ Defective High Voltage Power 2 1. Replace the High Voltage Power 2. 2. Reset the cables and components. 3. Replace the PCU.

SC [Level]	Symptom	Possible Cause/Required Action
531 [D]	Paper feed / Fusing motor error	
	▪ LOCK signal is not detected for more than two seconds while the motor START signal is on. ▪ LOCK signal is not cancelled within two seconds after the motor is off.	▪ Defective paper feed/ fusing motor 1. Replace the paper feed/ fusing motor.
532 [D]	Fan motor error	
	The fan motor “On” signal is not detected for the components below after the drum motor for black is set to “On”. ▪ PSU fan ▪ Fusing unit fan ▪ Polygon motor fan ▪ Drive unit fan ▪ Exit paper fan	▪ Defective fan motor 1. If the error occurs again, one of the fans is defective. Remove the covers, find the defective fan and replace it.
541 [A]	Thermistor error	
	The thermistor output is less than 0 °C for six seconds.	▪ Disconnected thermistor ▪ Defective connector connection
542 [A]	Print ready temperature error	
	▪ The heating roller temperature increase that is less than 67 degrees for 9 seconds is detected five times consecutively. ▪ The fusing temperature does not reach the print	▪ Defective thermistor ▪ Thermistor coming off ▪ Incorrect power supply input at the main power socket ▪ Defective fusing lamp

SC [Level]	Symptom	Possible Cause/Required Action
	ready temperature within 15 seconds after the fusing lamp was controlled.	
543 [A]	High temperature detection: Software	
	The thermistor detects 230°C for 0.2 seconds.	▪ Defective thermistor ▪ Defective I/O board ▪ Defective EGB
544 [A]	High temperature detection: Hard	
	The thermistor detects 250°C.	▪ Defective thermistor ▪ Defective I/O board ▪ Defective EGB ▪ Defective fusing unit, PSU, or EGB 1. Replace the fusing unit. 2. Replace the PSU.
545 [A]	Heating lamp error	
	The fusing lamp is full-powered for 8 seconds after the heating roller reaches the print ready temperature.	▪ Deformed thermistor ▪ Thermistor coming off ▪ Defective fusing lamp
547 [D]	Zero cross error	
	▪ The zero cross signal is detected three times even though the heater relay is off when turning on the main power. ▪ The zero cross signal is not detected for three seconds even though the heater relay is on after turning on the main power or closing the front	▪ Defective fusing lamp relay ▪ Defective fusing lamp relay circuit ▪ Unstable power supply 1. Check the power supply source. 2. Replace the PSU.

SC [Level]	Symptom	Possible Cause/Required Action
	door. ▪ The detection error occurs twice or more in the ten zero cross signal detections. This error is defined when the detected zero cross signal is less than 17 for 200 ms.	
557 [C]	Zero cross frequency error	
	The detection error occurs ten times in a row in ten zero cross signal detections. This error is defined when the detected zero cross signal is more than 28 for 200 ms. This SC is only logged. In this case, the power frequency is defined as 60 Hz.	▪ Noise (high frequency) 1. Check the power supply source.
559 [A]	Continuous paper jam at Fusing unit	
	The paper jam occurs three times consecutively at the fusing unit only when the SP 1159 1 is set to "1 (ON)". If not, this SP does not occur. The jam counter is cleared when a sheet of paper is fed normally.	▪ Defective fusing entrance sensor ▪ Defective EGB 1. Replace the fusing entrance sensor. 2. Replace the EGB.
687 [D]	Controller board command error	
	A command from the controller board is not received.	▪ Loose connection ▪ Defective controller board ▪ Defective EGB 1. Check the connection of the controller board.

SC [Level]	Symptom	Possible Cause/Required Action
		2. Replace the controller board. 3. Replace the EGB.
690 [D]	EGB data error	
	The data transfer in the EGB is interrupted by some incident (e.g. cover open etc.) during the data transfer.	▪ Defective EGB 1. Replace the EGB.

Controller Error

The following table shows the controller error codes. These codes show at these times if an error occurs:

- Power-on
- After the power-on self diagnostic test

Important

- Always try turning the main switch off and on and check if the problem persists.

SC [Level]	Symptom	Possible Cause/Required Action
636	SD Card Error	
-001 [B]	Expanded authentication module error	
	There is no expanded authentication module in the machine. The SD card or the file of the expanded authentication module is broken. There is no DESS module in the machine.	▪ No expanded authentication module ▪ Defective SD card ▪ No DESS module 1. Install the expanded authentication module. 2. Install the SD card. 3. Install the DESS module.
-002 [B]	Version error	
	The version of the expanded authentication module is not correct.	▪ Incorrect module version 1. Install the correct file of the expanded authentication module.

SC [Level]	Symptom	Possible Cause/Required Action
670 [D]	Engine start-up error	
	A command from the controller board is not received.	▪ Defective engine board. 1. Replace the engine board.
818 [B]	Watchdog error	
	While the system program is running, no other programs can run (due to a bus hold or endless loop).	▪ Defective system program ▪ Defective controller board 1. Reinstall the system program. 2. Replace the controller board.
819	Kernel stop	
[0696e] [B]	Process error	
	System completely down	▪ Defective RAM DIMM ▪ Defective controller ▪ Software error 1. Check and/or replace the RAM DIMM. 2. Replace the controller.
[0766d] [B]	VM full error	
	Unexpected system memory size	▪ Defective RAM DIMM ▪ Defective controller ▪ Software error 1. Check and/or replace the RAM DIMM. 2. Replace the controller.
[4361] [B]	Cache error	
	Cache error in the CPU	▪ Defective CPU 1. Replace the controller board.
[----] [B]	The others	
	Error in OS	▪ Defective memory ▪ Defective flash memory ▪ Defective CPU 1. Replace the controller board.
820	Self-Diagnostic Error: CPU	
[B]	[0001-0015] [000A-000D]: Detailed error code	
	During the boot monitor	▪ Defective CPU device

SC [Level]	Symptom	Possible Cause/Required Action
	program and self-diagnostic, any exception or cut-in are not supposed to happen. If these happen, it is defined as SC.	▪ Defective boot monitor program or self-diagnostic program 1. Replace the controller board. 2. Reinstall the system firmware.
[B]	[00FF]: Detailed error code	
	Cache access error in the CPU	▪ Defective CPU ▪ Defective local bus 1. Turn the main power switch off and on. 2. Reinstall the system program. 3. Replace the controller board.
[B]	[0601, 0602, 0605, 0606, 0607, 0609]: Detailed error code	
	Exceptional command does not operate even though it is executed on purpose.	▪ Defective CPU devices 1. Replace the controller board.
[B]	[060A-060E]: Detailed error code	
	Cut-in command does not operate when it is executed.	▪ Defective CPU devices ▪ Defective ASIC devices 1. Replace the controller board.
[B]	[0610]: Detailed error code	
	Timer cut-in does not operate even though it is set.	▪ Defective CPU devices 1. Replace the controller board.
[B]	[0612]: Detailed error code	
	Cut-in in ASIC occurs.	▪ Defective ASIC ▪ Defective devices in which ASIC detects cut-in. 1. Replace the controller board.
[B]	[06FF]: Detailed error code	
	The pipeline clock frequency rate is different from the prescribed value.	▪ Defective CPU devices ▪ Mode bit data error, which is used for initializing CPU. 1. Replace the controller board.
[B]	[0702]: Detailed error code	

SC [Level]	Symptom	Possible Cause/Required Action
	The result when the program is executed in the command cache is different from desirable value.	▪ Insufficient CPU cache ▪ Insufficient memory process speed 1. Replace the controller board. 2. Replace the RAM DIMM.
[B]	[0709, 070A]: Detailed error code	
	Even you write the data in the only cache of memory, the data is actually written in another area (not cache) of memory.	▪ Defective CPU devices ▪ Incorrect SPD ▪ Boot mode setting error 1. Replace the controller board. 2. Replace the RAM DIMM.
[B]	[0801, 0804, 0807, 0808, 0809, 80A]: Detailed error code	
	An error occurs when checking the TLB.	▪ Defective CPU devices 1. Replace the controller board.
[B]	[4002-4005]: Detailed error code	
	The calculation error in the CPU occurs.	▪ Defective CPU 1. Replace the CPU.
821	Self-Diagnostic Error: ASIC	
[0B00] [B]	ASIC error	
	The write-&-verify check error has occurred in the ASIC.	▪ Defective controller board 1. Replace the controller.
[0B06] [B]	ASIC not detected	
	The ASIC of the I/O is not detected.	▪ ASIC (controller board defective) ▪ Poor connection between North Bridge and PCI I/F. 1. Replace controller board.
[0B10] [B]	SHM register check error	
	Failed to initialize or could not read connection bus. Data in SHM register incorrect.	▪ Defective bus connection ▪ Defective SHM 1. Replace controller board
[0D05] [B]	Timer error between ASIC and CPU	
	The CPU checks if the ASIC timer works properly compared with the CPU timer.	▪ System firmware problem ▪ Defective RAM-DIMM ▪ Defective controller

SC [Level]	Symptom	Possible Cause/Required Action
	If the ASIC timer does not function in the specified range, this SC code is displayed.	▪ Reinstall the controller system firmware. 1. Replace the RAM-DIMM. 2. Replace the controller board.
822	Self-Diagnostic Error: HDD	
[3003] [B]	Timeout error/ [3004]: Command error	
	When the main switch is turned on or starting the self-diagnostic, the HDD stays busy for the specified time or more.	▪ Loose connection ▪ Defective HDD ▪ Defective controller 1. Check that the HDD is correctly connected to the controller. 2. Replace the HDD. 3. Replace the controller.
823	Self-diagnostic Error: NIB	
[6101] [B]	MAC address check sum error	
	The result of the MAC address check sum does not match the check sum stored in ROM.	▪ Defective controller 1. Replace the controller.
[6104] [B]	PHY IC error	
	The PHY IC on the controller cannot be correctly recognized.	Same as SC823-[6101]
[6105] [B]	PHY IC loop-back error	
	An error occurred during the loop-back test for the PHY IC on the controller.	Same as SC823-[6101]
824 [B]	Self-diagnostic Error: NVRAM	
	The controller cannot recognize the standard NVRAM installed or detects that the NVRAM is defective.	▪ NVRAM damaged or abnormal ▪ Backup battery has discharged ▪ NVRAM socket damaged 1. Replace the NVRAM.
826	Self-diagnostic Error: RTC/Optional NVRAM	

SC [Level]	Symptom	Possible Cause/Required Action
[1501] [B]	Clock error	
	▪ An RTC device is recognized, and the difference between the RTC device and the CPU exceeds the defined limit. ▪ No RTC device is recognized.	▪ RTC defective ▪ NVRAM without RTC installed ▪ Backup battery discharged 1. Replace the NVRAM with another NVRAM with an RTC device.
[15FF] [B]	RTC not detected	
	The RTC device is not detected.	▪ NVRAM without RTC installed ▪ Backup battery discharged 1. Replace the NVRAM with another NVRAM with an RTC device.
827	Self-diagnostic Error: RAM	
[0201] [B]	Verification error	
	Error is detected during a write/verify check for the standard RAM (SDRAM DIMM).	▪ Loose connection ▪ Defective SDRAM DIMM ▪ Defective controller 1. Replace the SDRAM DIMM. 2. Replace the controller.
[0202] [B]	Resident memory error	
	The SPD values in all RAM DIMM are incorrect or unreadable.	▪ Defective RAM DIMM ▪ Defective SPD ROM on RAM DIMM ▪ Defective 12C bus 1. Replace the RAM DIMM.
828	Self-diagnostic Error: ROM	
[0101] [B]	Boost lap code error	
	The boot monitor and OS program stored in the ROM DIMM is checked. If the check sum of the program is incorrect, this SC code is displayed.	▪ Defective ROM DIMM ▪ Defective controller 1. Replace the ROM DIMM. 2. Replace the controller.

SC [Level]	Symptom	Possible Cause/Required Action
[0104] [B]	ROMFS error	
	All areas of the ROM DIMM are checked. If the check sum of all programs stored in the ROM DIMM is incorrect, this SC code is displayed.	▪ Defective ROM DIMM 1. Replace the ROM DIMM.
829	Self-diagnostic Error: Optional RAM	
[0401] [B]	Verification error (Slot 1)	
	The data stored in the RAM in Slot 1 does not match the data when reading.	▪ Not specified RAM DIMM installed ▪ Defective RAM DIMM 1. Replace the RAM DIMM. 2. Replace the controller board.
[0402]	Composition error (Slot 1)	
	The result of checking the composition data of the RAM in Slot 1 on the controller is incorrect.	▪ Not specified RAM DIMM installed ▪ Defective RAM DIMM 1. Replace the RAM DIMM. 2. Replace the controller board.
851 [B]	IEEE1394 interface error	
	The 1394 interface is unusable.	▪ Defective IEEE1394 ▪ Defective controller. 1. Replace the IEEE1394 interface board. 2. Replace the controller.
853 [B]	Wireless LAN or Bluetooth card not detected at starting communication	
	The wireless LAN or Bluetooth card is not detected before communication is established, though the wireless LAN or Bluetooth board is detected.	▪ Loose connection 1. Check the connection. 2. Insert the wireless LAN or Bluetooth card to its board.
854 [B]	Wireless LAN or Bluetooth card not detected during operation	
	The wireless LAN or Bluetooth card is not detected after communication is	▪ Loose connection 1. Check the connection. 2. Insert the wireless LAN or Bluetooth

SC [Level]	Symptom	Possible Cause/Required Action
	established, though the wireless LAN or Bluetooth board is detected.	card to its board.
855 [B]	Wireless LAN or Bluetooth card error	
	An error is detected in the wireless LAN or Bluetooth card.	▪ Loose connection ▪ Defective wireless LAN or Bluetooth card 1. Check the connection. 2. Replace the wireless LAN or Bluetooth card.
856 [B]	Wireless LAN or Bluetooth board error	
	An error is detected in the wireless LAN or Bluetooth board.	▪ Defective wireless LAN or Bluetooth board ▪ Loose connection 1. Check the connection. 2. Replace the wireless LAN or Bluetooth board.
857 [B]	USB interface error	
	The USB interface cannot be used due to a driver error.	▪ Defective USB driver ▪ Loose connection 1. Check the connection. 2. Replace the controller.
860 [B]	HDD: Initialization error	
	The controller detects that the hard disk fails.	▪ HDD not initialized ▪ Defective HDD 1. Reformat the HDD (SP5832). 2. Replace the HDD.
861 [D]	HDD: Reboot error	
	The HDD does not become ready within 30 seconds after the power is supplied to the HDD.	▪ Loose connection ▪ Defective cables ▪ Defective HDD ▪ Defective controller 1. Check the connection between the HDD and controller. 2. Check and replace the cables.

SC [Level]	Symptom	Possible Cause/Required Action
		3. Replace the HDD. 4. Replace the controller.
863 [D]	HDD: Read error	
	The data stored in the HDD cannot be read correctly.	▪ Defective HDD ▪ Defective controller 1. Replace the HDD. 2. Replace the controller.
864 [D]	HDD: CRC error	
	While reading data from the HDD or storing data in the HDD, data transmission fails.	▪ Defective HDD 1. Replace the HDD.
865 [D]	HDD: Access error	
	An error other than SC863 and SC864 is detected while operating the HDD.	▪ Defective HDD 1. Replace the HDD.
866 [B]	SD card authentication error	
	A correct license is not found in the SD card.	▪ SD-card data is corrupted. 1. Store correct data in the SD card.
867 [D]	SD card error	
	The SD card for an application is ejected from the slot.	▪ The SD card for an application is ejected from the slot. 1. Install the SD card.
868 [D]	SD card access error [File system error, Device error]	
	SD card error occurs when SD card is activated.	▪ Defective SD card ▪ Defective SD card controller 1. For a file system error, format the SD card on your PC. 2. For a device error, turn the mains switch off and on. 3. Replace the SD card. 4. Replace the controller.
870 [B]	Address data error	
	An error is detected in the	▪ Defective software program

SC [Level]	Symptom	Possible Cause/Required Action
	data copied to the address book over a network.	▪ Defective HDD ▪ Incorrect path to the sever 1. Initialize the address book data (SP5846-50). 2. Initialize the user information (format the hard disk with SP5832). 3. Replace the HDD.
872 [B]	HDD mail data error	
	An error is detected in the mail receiving data area of the HDD at machine initialization.	▪ Defective HDD ▪ Power failure during an access to the HDD 1. Initialize the HDD (SP5-832-001). 2. Replace the HDD.
873 [B]	HDD mail transfer error	
	An error is detected in the mail transmitting data area of the HDD at machine initialization.	▪ Defective HDD ▪ Power failure during an access to the HDD 1. Initialize the HDD (SP5-832-001). 2. Replace the HDD.
874 [D]	Delete All error 1: HDD	
	An error is detected while the all data of the HDD or NVRAM are formatted physically by the Data Overwrite Security Unit (B735).	▪ Not installed Data Overwrite Security Unit (SD card) ▪ Defective HDD 1. Install the Data Overwrite Security Unit (B735). 2. Replace the HDD.
875 [D]	Delete All error 2: Data area	
	An error is detected while the all data of the HDD or NVRAM are formatted logically by the Data Overwrite Security Unit (B735).	▪ The logical format for HDD fails. 1. Turn the main switch off/on and try the operation again.
876	Log Data Error	
001	Log Data Error 1	

SC [Level]	Symptom	Possible Cause/Required Action
[D]	▪ An error was detected in the handling of the log data at power on or during machine operation. This can be caused by switching the machine off while it is operating. 1. Initialize the HDD with SP5832-004.	
002 [D]	Log Data Error 2	
	▪ The DESS module is not installed when the DESS module is set to ON. 1. Replace the DESS module. 2. Turn off the DESS module function.	
003 [D]	Log Data Error 3	
	▪ Invalid encryption key log due to defective NVRAM data 1. Initialize the HDD with SP5832-004. 2. Disable the log encryption setting.	
004 [D]	Log Data Error 4	
	▪ Unusual encryption function log due to the defective NVRAM data 1. Initialize the HDD with SP5832-004.	
005 [D]	Log Data Error 5	
	▪ NVRAM or HDD, which is used in other machine, is installed. 1. Reinstall the previous NVRAM or HDD. 2. Initialize the HDD with SP5832-004.	
099 [D]	Log Data Error 99	
	▪ Other than above causes 1. Ask your supervisor.	
877 [B]	HDD Data Overwrite Security SD card error	
	The all delete cannot be executed even though the Data Overwrite Security Unit (B735) is installed and activated.	▪ Defective SD card (B735) ▪ Not installed SD card (B735) 1. Replace the NVRAM and then install the new SD card (B735). 2. Check and reinstall the SD card (B735).
900 [D]	Electric counter error	
	Abnormal data is stored in the counters.	▪ Defective NVRAM ▪ Defective controller 1. Turn the main switch off and on. 2. Check the connection between the

SC [Level]	Symptom	Possible Cause/Required Action
		NVRAM and controller. 3. Replace the NVRAM. 4. Replace the controller.
920 [B]	Printer function error	
	The error that causes the malfunction in the software application is detected.	▪ Turn the main switch off/on, or install Printer Application firmware ▪ Unexpected hardware structure (insufficient memory or hard disk space.)
921 [B]	Printer font error	
	No font is detected in the machines that have the font in the SD card when the printer application is run.	▪ Install the System, Printer Application, NIB, and Web System firmware.
990 [D]	Software performance error 1	
	The software makes an unexpected operation.	▪ Defective software ▪ Defective controller ▪ Software error 1. Reinstall the controller and/or engine main firmware. 2. See the Note at the end of the SC table.
991 [C]	Software performance error 2	
	Unexpected software error detected, which does not affect operation of the machine	The machine does not stop and the SC code is not displayed. The machine automatically recovers. However, the SC code is logged in the engine summary sheet (SMC).
992 [D]	SC not defined	
	SC that is not controlled in the system occurs.	▪ Defective system software
998 [D]	Application start error	
	No applications start within 60 seconds after the power is turned on.	▪ Loose connection of RAM, DIMM and SD card in slot 1 ▪ Defective controller ▪ Software problem

SC [Level]	Symptom	Possible Cause/Required Action
		1. Check if the RAM, DIMM and SD card in slot 1 are properly connected. 2. Reinstall the controller system firmware. 3. Replace the controller.

Note

- If a problem always occurs in a specific condition (for example. printer driver setting, image file), the problem may be caused by a software error. In this case, the following data and information needs to be sent back to your product specialist.
  - Symptom / Possible Causes / Action taken
  - Summary sheet (SP mode “1 Service/Printer SP”, SP 1004 [Print Summary])
  - SMC - All (SP 5990 2)
  - SMC - Logging (SP 5990 4)
  - 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

Troubleshooting Guide

Note

- Remove the NVRAM from the original engine control board and install it on the new one when you replace the engine control board.

Blank Print

Symptom	Possible cause	Necessary actions
No image is printed.	Defective LDU	Replace the LDU.
	Defective PCU	Replace the PCU.
	Defective transfer belt unit	Replace the transfer belt unit.
	Incorrect action of transfer roller	Check the guide and the transfer roller.
	Defective high voltage supply board	Replace high voltage supply board 1 or 2.
	Defective engine board (EGB)	Replace the engine board (EGB).

All-black Print

Symptom	Possible cause	Necessary actions
All the paper is black.	Incorrectly installed PCU	Install the PCU correctly.
	Defective PCU	Replace the PCU.
	Defective high voltage supply board	Replace high voltage supply board 1 or 2.
	Defective LDU	Replace the LDU.
	Defective engine board (EGB)	Replace the engine board (EGB).
	Defective main board	Replace the main board.

Missing CMY Color

Symptom	Possible cause	Necessary actions
C, M, or Y is missing.	Defective PCU	Replace the PCU.
	Loose connection between	Replace the drum positioning

Symptom	Possible cause	Necessary actions
	printer cartridge and engine board (EGB)	cover. (See 'Replacement and Adjustment – Electrical Components – Electrical Board Unit'.)
	Transfer belt not contacting PCU	Check the belt tension unit.
	Defective the color OPC motor	Replace the color OPC motor.
	Defective engine board (EGB)	Replace the engine board (EGB).

Light Print

Symptom	Possible cause	Necessary actions
Printed images are too weak.	Loose connection between transfer roller and high voltage supply unit	Check the connection between the transfer roller and the high voltage supply unit.
	Dust in the laser beam path	Clean the laser beam path.
	Transfer belt not contacting PCU	Check the transfer unit.
	Defective PCU	Replace the PCU.
	Defective transfer roller	Repair the transfer roller.
	Defective fusing unit	Replace the fusing unit.
	Defective engine board (EGB)	Replace the engine board (EGB).

Repeated Spots or Lines on Prints

The same spots or lines appear at regular intervals.

Interval	Possible cause	Necessary actions
At intervals of 35.0 mm (1.38 inches)	Defective charge roller	Replace the PCU.
At intervals of 35.8 mm (1.41 inches)	Defective OPC cleaning brush roller	Replace the PCU.

Interval	Possible cause	Necessary actions
At intervals of 40.5 mm (1.59 inches)	Defective belt entrance roller	Replace the transfer belt unit.
At intervals of 41.1 mm (1.62 inches)	Defective belt transfer roller	Replace the transfer belt unit.
At intervals of 47.1 mm (1.86 inches)	Defective toner mixing auger	Replace the PCU.
At intervals of 56.5 mm (2.23 inches)	Defective development roller	Replace the PCU
At intervals of 72.8 mm (2.87 inches)	Defective belt tension roller	Replace the transfer belt unit.
At intervals of 82.2 mm (3.24 inches)	Defective transfer belt drive roller	Replace the transfer belt unit.
At intervals of 82.5 mm (3.25 inches)	Defective transfer roller	Replace the transfer roller.
At intervals of 94.2 mm (3.71 inches)	Defective OPC drum or pressure roller	Replace the PCU or the fusing unit
At intervals of 141.4 mm (5.57 inches)	Defective fusing belt	Replace the fusing unit.

Dark Vertical Line on Prints

Symptom	Possible cause	Necessary actions
.		
A dark line appears. The line is parallel to the paper feed direction of one CMY color.	Defective PCU	Replace the PCU.
A dark line appears. The line is parallel to the paper feed direction of any color (not C, M, or Y).	Dust in the laser beam path	Clean the laser beam path.
	Defective transfer belt unit	Replace the transfer belt unit.
	Defective fusing unit	Replace the fusing unit.

White Horizontal Lines or Bands

Symptom	Possible cause	Necessary actions

Symptom	Possible cause	Necessary actions
White lines or bands appear in images of all toner colors.	Defective PCU	Replace the PCU.
	Defective transfer belt unit	Replace the transfer belt unit.
	Defective transfer roller	Replace the transfer roller.

Missing Parts of Images

Symptom	Possible cause	Necessary actions
Some parts of images are missing.	Defective PCU	Replace the PCU.
	Defective transfer belt unit	Replace the transfer belt unit.
	Defective transfer roller	Replace the transfer roller.
	Defective fusing unit	Replace the fusing unit.

Dirty Background

Symptom	Possible cause	Necessary actions
Backgrounds of one CMYK color are too dense.	Defective PCU	Replace the PCU.
Backgrounds of more than one CMYK are too dense.color	Defective high voltage supply board	Replace the high voltage supply board (1 or 2).

Partial CMY Color Dots

Symptom	Possible cause	Necessary actions
Unexpected dots of the same color appear at irregular intervals.	Defective PCU	Replace the PCU.
	Defective transfer belt unit	Replace the transfer belt unit.
	Defective fusing unit	Replace the fusing unit.

Dark Irregular Streaks on Prints

Symptom	Possible cause	Necessary actions
Unexpected streaks appear at irregular intervals.	Defective transfer belt	Replace the transfer belt unit.

CMY Color Irregular Streaks

Symptom	Possible cause	Necessary actions
Unexpected streaks of the same color appear at irregular intervals.	Defective PCU	Replace the PCU.
	Defective transfer belt unit	Replace the transfer belt unit.

Ghosting

Symptom	Possible cause	Necessary actions
The same or similar image appears two or more times. They get weaker and weaker.	Defective PCU	Replace the PCU.
	Defective transfer unit	Replace the transfer unit.

Unfused or Partially Fused Prints

Symptom	Possible cause	Necessary actions
Some parts of images are not fused very well.	Non-standard paper in use	Use recommended paper.
	Incorrect media type mode	Select an appropriate media mode.
	Defective fusing unit	Replace the fusing unit.

Image Skew

Symptom	Possible cause	Necessary actions
Images are skewed	Incorrect installation of paper	Install the paper correctly.
	Incorrect paper guide position	Adjust the paper guide correctly.
	Defective registration roller	Repair the paper feed unit.
	Incorrect action of transfer roller	Check the transfer roller.
	Defective engine board (EGB)	Replace the engine board (EGB).
	Unclean separation pad	Clean the separation pad.
	Defective spring	Replace the spring for the friction pad.

Background Stain

Symptom	Possible cause	Necessary actions
The reverse side of the paper is not clean.	Unclean transfer roller	Clean the transfer roller.
	Unclean paper path	Clean the paper path.
	Unclean registration roller	Clean the registration roller.
	Unclean fusing unit exit	Clean the fusing unit exit.
	Defective fusing unit	Replace the fusing unit.

No Printing on Paper Edge

Symptom	Possible cause	Necessary actions
Images are not printed in the areas around the paper edges.	Defective PCU	Replace the PCU.
	Defective toner cartridge	Replace the toner cartridge.
	Defective transfer belt unit	Replace the transfer belt unit.
	Transfer belt not contacting PCU	Check the transfer unit.

Image not centered when it should be

Symptom	Possible cause	Necessary actions
Images do not come to the center.	Incorrect installation of paper	Install the paper correctly.
	Incorrect paper guide position	Adjust the paper guide correctly.
	Incorrect margin setting	Adjust the margin setting.
	Defective engine control board	Replace the engine control board.

Electrical Component Defects

Sensors

No.	Sensor Name/ Sensor Board Name	Active	CN No./ Pin No.	Condition	Symptom
1	Color Drum Gear Position Sensor	H	CN222/2	Open	SC380
				Shorted	
2	Black Drum Gear Position Sensor	H	CN222/5	Open	SC380
				Shorted	
3	Toner End Sensor (K) Toner End Sensor (M) Toner End Sensor (C) Toner End Sensor (Y)	L	CN222/8 CN230/13 CN230/26 CN230/29	Open	Toner end cannot be detected.
				Shorted	Toner end is detected even if there is enough toner.
4	Transfer Belt Contact Sensor	H	CN222/11	Open	SC442
				Shorted	
5	Transfer Roller Contact Sensor	L	CN222/14	Open	SC452
				Shorted	
6	TD Sensor (K) TD Sensor (M) TD Sensor (C) TD Sensor (Y)	A	CN222/20 CN225/4 CN230/4 CN230/20	Open	SC368 (K) SC369 (M) SC370 (C) SC371 (Y)
				Shorted	
8	Transfer Belt Rotation	L	CN222/27	Open	Automatic line position adjustment error: Transfer belt unit speed cannot be detected, causing image skew.
				Shorted	
10	Front Door Sensor	H	CN206/1	Open	“Close Front/Left Cover” is displayed.
				Shorted	Front cover open cannot be detected.
11	Waste Toner Overflow Sensor	H	CN230/10	Open	Waste Toner near full is indicated.
				Shorted	Waste toner full cannot

No.	Sensor Name/ Sensor Board Name	Active	CN No./ Pin No.	Condition	Symptom
					be detected even if the waste toner bottle is full.
12	Left Cover Sensor	H	C230/15	Open	“Close Front/Left Cover” is displayed.
				Shorted	Left cover open cannot be detected.
13	Temperature/Humidity Sensor	A A	CN231/1 CN231/3	Open Shorted	Printed image is wrong, such as rough image, dirty background or weak image.
14	Paper Size Sensor	L	CN214/17 CN214/15 CN214/14 CN214/13	Open Shorted	Paper size error
15	Fusing Entrance Sensor	L	CN213/6	Open	Paper jam is not detected even if there is paper
				Shorted	Paper jam is detected even if there is no paper.
16	Duplex Jam Sensor 1	L	CN213/1	Open	Paper jam is not detected even if there is paper
				Shorted	Paper jam is detected even if the there is no paper.
17	Duplex Jam Sensor 2	L	CN213/3	Open	Paper jam is not detected even if there is paper
				Short	Paper jam is detected even if the there is no

No.	Sensor Name/ Sensor Board Name	Active	CN No./ Pin No.	Condition	Symptom
					paper.
18	By-pass Paper Detection Sensor	L	CN211/22	Open	Paper is not detected on the by-pass tray
				Shorted	Paper is detected even if there is no paper on the by-pass tray.
19	By-pass Paper Size Sensor	L	CN211/17 CN211/16 CN211/20 CN211/19	Open	Paper size error
				Shorted	
20	Inverter Sensor	L	CN211/2	Open	Paper jam Z
				Shorted	
21	Fusing Exit Sensor	L	CN210/13	Open	Paper jam A
				Shorted	
22	Paper Overflow Sensor	L	CN210/10	Open	The paper overflow message is not displayed even when a paper overflow condition exists, causing paper jam.
				Shorted	The paper overflow message is displayed.
23	Paper Exit Sensor	L	CN210/7	Open	Paper Jam A
				Shorted	
24	ID Sensors	A	CN209	Open	SC400/418
				Shorted	
25	Fusing Thermistor	A	CN209/1	Open	SC541
				Shorted	
26	Fusing Set Sensor	L L	CN209/3 CN209/4	Open	“Reset Fusing Unit correctly” is displayed.
				Shorted	
27	Top Cover Sensor	H	CN208/2	Open	“Close Top Cover” is displayed.
				Shorted	Top cover open cannot

No.	Sensor Name/ Sensor Board Name	Active	CN No./ Pin No.	Condition	Symptom
					be detected.
28	LDU Shutter Sensor	H	CN207/17	Open	SC270
				Shorted	
29	Registration Sensor	L	CN207/14	Open	Paper Jam A
				Shorted	
30	Paper Width Sensor	H	CN207/11	Open	Always, small paper is detected, causing slow printing.
				Shorted	Small paper size is not detected.
31	Paper Height Sensor 1/2	H	CN207/5 CN207/8	Open	Remaining paper volume is wrong on Web Image Monitor.
				Shorted	
32	Paper End Sensor	H	CN2072	Open	Paper end is detected even if paper is placed in the paper tray.
				Shorted	Paper end is not detected even if there is no paper in the paper tray, causing a paper jam.

Blown Fuse Conditions

Power Supply Unit

Fuse	Rating		Symptom when turning on the main switch
	115V	220V-240V	
FU1	15A/125V	8A/250V	No response.
FU2	8A/125V	4A/250V	No response.
FU3	1A/250V	1A/250V	Tray Heater does not turn on.
FU4	4A/250V	4A/250V	No display.
FU5	6.3A/250V	6.3A/250V	SC270 is displayed.
FU6	6.3A/250V	6.3A/250V	SC270 is displayed.

IOB

Fuse	Rating	Symptom when turning on the main switch
FU1	1A	SC270 is displayed.
FU2	3.15A	Toners are not supplied.
FU3	3.15A	Optional Paper Tray Unit dose not work.

LEDs

Controller

Number	Normal	Controller software download	Error
LED 1	Off	Blinking	Off
LED 2	Blinking	Blinking	Lit or Off

Service Tables

Service Program Mode

CAUTION

- Before accessing the service menu, do the following:
  1. Confirm that there is no print data in the printer buffer (the Data In LED must not be lit or blinking).
  2. If there is some data in the buffer, wait until all data has been printed.

Note

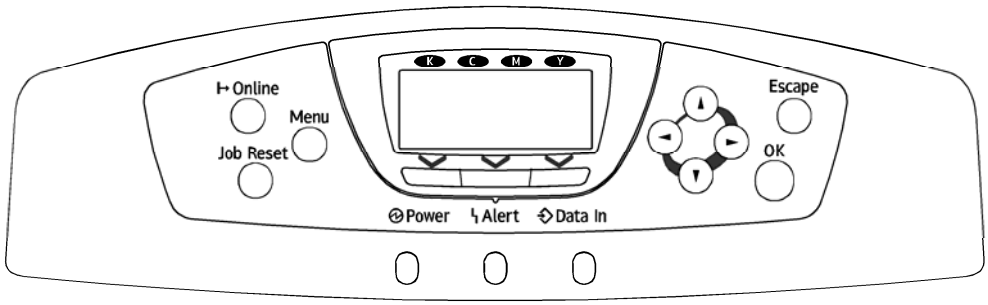
- This machine has SSP mode, which is restricted for supervisor use only. However, most of them are also used for the factory adjustments. Do not change those SSP settings until it is advised to do so by the technical information.

Service Mode Operation

Note

- The Service Program Mode is for use by service representatives only so that they can properly maintain product quality. If this mode is used by anyone other than service representatives for any reason, data might be deleted or settings might be changed. In such case, product quality cannot be guaranteed any more.

Entering the Service Mode



Note

- If you switch the machine off, any jobs stored on the hard disk using the sample print and protected print features will be deleted.
- Check first with the user tools to see if there are any jobs stored with these features (Menu key - Sample Print, or Protected Print).

Method: Press the “Up/Down arrow” keys together for about 5 seconds, and then press the “OK” key.

“SYSTEMver x.xx/ 1. Service” appears on the display.

Note

- The machine automatically goes off line when you enter the service mode.

Accessing the Required Program

Use the “Up/Down arrow” keys to scroll through the menu listing.

1. Service: Controller service modes
2. Engine: Engine service modes
3. End: Exit service mode

To select an item, press the “OK” key. Then the sub-menu shows.

Scroll through the sub menu items using the “◁ ▷” keys.

To go back to a higher level, press the “Escape” key.

Inputting a Value or Setting for a Service Program

Enter the required program mode as explained above. The setting appearing on the display is the current setting.

Select the required setting using the “◁ ▷” keys, then press the “OK” key. The previous value remains if the “OK” key is not pressed.

Exiting Service Mode

Select “End” from the service mode main menu, then press the “OK” key.

Note

- To make the settings effective, turn the main switch off and on after exiting service mode.

Remarks

Display on the Control Panel Screen

Since the maximum number of characters which can be displayed on the control panel screen is limited (12 or 17 characters), the description of SP modes displayed on the screen needs to be abbreviated. The following are the major abbreviations used for the SP modes for which the full description is over 12 or 17 characters.

1. Paper Type

N: Plain paper 1, N2 or Normal 2: Plain paper 2 (plain & recycled)

TC: Thick paper, Thick 1: Thick paper 1, Thick 2: Thick paper 2

TN: Thin paper

SP: Special paper

2. Color Mode [Color]

[K]: Black in B&W mode

[Y], [M], or [C]: Yellow, Magenta, or Cyan in Full Color mode

[YMC]: Only for Yellow, Magenta, and Cyan

[FC], [CI]: Full Color mode

[FC, K], [FC, Y], [FC, M], or [FC, C]: Black, Yellow, Magenta, or Cyan in full color mode

3. Process Speed

LS: Low speed xx

RS: Regular speed xxx

HS: High speed xxx

As shown in the following table, the process speed (mm/s) depends on the print mode (B&W or Color), resolution, and/or type of paper selected. Some SP mode settings depend on the process speed.

Mode	Resolution (dpi)	Line speed (mm/s)		Print speed (ppm)	
		G160	G161	G160	G161
B/W	600 x 600 1,200 x 600	155	182	25	30
	1,200 x 1,200	77.5	91	12.5	15
Color	600 x 600 1,200 x 600	155	91	25	30
	1,200 x 1,200	77.5	91	12.5	15
OHP/Thick	600 x 600 1,200 x 600 1,200 x 1,200	77.5	91	12.5	15

4. Count Unit

R: Rotation

S: Prints

5. Environment

LL: Low temperature and Low humidity

ML: Medium temperature and Low humidity

MM: Medium temperature and Medium humidity

MH: Medium temperature and High humidity

HH: High temperature and High humidity

7. 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.)

DFU: Design/Factory Use only - Do not touch the SP mode in the field.

“P” in the right hand side of the mode number column means that this SP mode relates to the Printer Controller. If “P” is not in the column, this SP mode relates to the Printer Engine.

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 (Engine and Printer Controller). If you do a RAM clear, this SP mode will be reset to the default value. “EGB”, “CTL” and “NV” indicate which NVRAM contains the data.

- EGB: NVRAM on the EGB board
- CTL: NVRAM on the controller board
- NV: NVRAM on the NVRAM expansion board (user account enhancement kit)

The settings of each SP mode are explained in the right-hand column of the SP table in the following manner.

[Adjustable range / Default setting / Step] Alphanumeric

Note

- If “Alphanumeric” is written to the right of the bracket as shown above, the setting of the SP mode is displayed 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.

Bit Switch Programming

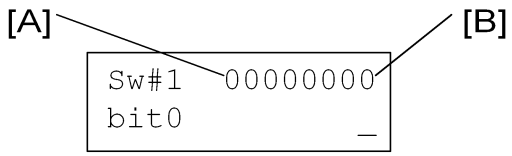
Do not change the bit switches unless you are told to do this by the manufacturer.

1. **Start the SP mode. Select the “Service” menu with "△/▽" keys.**
2. **Press the "OK" key three times.**
3. **To select a bit switch, press the "◁/▷" keys.**
4. **Push the OK key.**
5. **Set the value with these keys:**
   - [Left] [Right]: Moves the cursor to one of the adjacent bits.
   - [Up] [Down]: Changes a bit between "0" and "1".
   - [Escape]: Goes out of the program without saving changes.

- [OK]: Goes out of the program and saves changes.

Note

  - The digit at the left [A] is bit 7 and the digit at the right [B] is bit 0.



6. **Push the "Escape" key one or more times until the menu “SP mode (Service)” is shown.**
7. **Select “End” and push the OK key.**

Service Mode Table

Controller Service Mode

1001	**[Bit Switch]**		
1001 001	Bit Switch 1	*CTL	Adjusts bit switch settings. **DFU**
1001 002	Bit Switch 2	*CTL	Bit 0 to 2: Not used. Do not change the settings. Bit 3: Changing the print language (PCL <-> PS) ▪ 0: Enabled ▪ 1: Disabled (No change) Bit 4 to 7: Not used. Do not change the settings.
1001 003	Bit Switch 3	*CTL	Bit 0: PostScript3 Euro glyph ▪ 0: Disabled ▪ 1: Enabled (Even if there is no Euro Glyph in the ROM, it is possible to load the Euro Glyph data.) Bit 1: Not used. Do not change the setting. Bit 2:PCL5e/5c (HP4000/HP8000) The left space command is set to “0”, the machine is changed to “1” ▪ 0: Disabled ▪ 1: Enabled Bit 3: PCL5e/GL2: pen # of PW ▪ 0: Normal ▪ 1: Patch Bit 4: Tray selecting ▪ 0: The tray is determined by auto tray selection ▪ 1: Like HP/SV Bit 5 to 7: Not used. Do not change the settings.
1001 004	Bit Switch 4	*CTL	Adjusts bit switch settings. **DFU**
1001 005	Bit Switch 5	*CTL	Bit 0 to 2: Not used. Do not change the settings. Bit 3: Enables the “%%” command of the PostScript detection condition for the auto print language selection function. ▪ 0: Enabled

			▪ 1: Disabled Bit 4 to 7: Not used. Do not change the settings.
1001 006	Bit Switch 6	*CTL	Adjusts bit switch settings. **DFU**
1001 007	Bit Switch 7	*CTL	
1001 008	Bit Switch 8	*CTL	

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.

1007	**[Supply Display]**		
1007 001	Development	*CTL	[0 or 1 / **1** / 1 /step]
1007 002	PCU	*CTL	[0 or 1 / **1** / 1 /step]
1007 003	Transfer	*CTL	[0 or 1 / **1** / 1 /step]
1007 004	Int. Transfer	*CTL	[0 or 1 / **1** / 1 /step]
1007 005	Transfer Roller	*CTL	[0 or 1 / **1** / 1 /step]
1007 006	Fuser	*CTL	[0 or 1 / **1** / 1 /step]
1007 007	Fuser Oil	*CTL	[0 or 1 / **1** / 1 /step]

1101	**[ToneCtlSet]**		
1101 001	Tone (Factory)	*CTL	Recalls a set of gamma settings. This can be either a) the factory setting, b) the previous setting, or c) the current setting.
1101 2	Tone (Prev.)	*CTL	
1101 3	Tone (Current)	*CTL	

1102	**[ToneCtlSet]**	***CTL**	
	Sets the printing mode (resolution) for the printer gamma adjustment. The		

	asterisk (*) shows which mode is set. ▪ 00: *1200x1200Photo ▪ 01: 600x600Text ▪ 02: 1200x1200Text ▪ 03: 1200x600Text ▪ 04: 600x600Photo ▪ 05: 1200x600Photo

1103	**[PrnColorSheet]**		
1103 001	ToneCtlSheet		Prints the test page to check the color balance before and after the gamma adjustment.
1103 002	ColorChart		

1104	**[ToneCtlValue]**		
	Adjusts the printer gamma for the mode selected in the Mode Selection menu.		
1104 001	Set Black 1	*CTL	[0 to 255 / **16** / 1/step]
1104 021	Set Cyan 1	*CTL	
1104 041	Set Magenta 1	*CTL	
1104 061	Set Yellow 1	*CTL	
1104 002	Set Black 2	*CTL	[0 to 255 / **32** / 1/step]
1104 022	Set Cyan 2	*CTL	
1104 042	Set Magenta 2	*CTL	
1104 062	Set Yellow 2	*CTL	
1104 003	Set Black 3	*CTL	[0 to 255 / **48** / 1/step]
1104 023	Set Cyan 3	*CTL	
1104 043	Set Magenta 3	*CTL	
1104 063	Set Yellow 3	*CTL	
1104 004	Set Black 4	*CTL	[0 to 255 / **64** / 1/step]
1104 024	Set Cyan 4	*CTL	
1104 044	Set Magenta 4	*CTL	
1104 064	Set Yellow 4	*CTL	
1104 005	Set Black 5	*CTL	[0 to 255 / **80** / 1/step]
1104 025	Set Cyan 5	*CTL	
1104 045	Set Magenta 5	*CTL	
1104 065	Set Yellow 5	*CTL	

1104 006	Set Black 6	*CTL	[0 to 255 / **96** / 1/step]
1104 026	Set Cyan 6	*CTL	
1104 046	Set Magenta 6	*CTL	
1104 066	Set Yellow 6	*CTL	
1104 007	Set Black 7	*CTL	[0 to 255 / **112** / 1/step]
1104 027	Set Cyan 7	*CTL	
1104 047	Set Magenta 7	*CTL	
1104 067	Set Yellow 7	*CTL	
1104 008	Set Black 8	*CTL	[0 to 255 / **128** / 1/step]
1104 028	Set Cyan 8	*CTL	
1104 048	Set Magenta 8	*CTL	
1104 068	Set Yellow 8	*CTL	
1104 009	Set Black 9	*CTL	[0 to 255 / **144** / 1/step]
1104 029	Set Cyan 9	*CTL	
1104 049	Set Magenta 9	*CTL	
1104 069	Set Yellow 9	*CTL	
1104 010	Set Black 10	*CTL	[0 to 255 / **160** / 1/step]
1104 030	Set Cyan 10	*CTL	
1104 050	Set Magenta 10	*CTL	
1104 070	Set Yellow 10	*CTL	
1104 011	Set Black 11	*CTL	[0 to 255 / **176** / 1/step]
1104 031	Set Cyan 11	*CTL	
1104 051	Set Magenta 11	*CTL	
1104 071	Set Yellow 11	*CTL	
1104 012	Set Black 12	*CTL	[0 to 255 / **192** / 1/step]
1104 032	Set Cyan 12	*CTL	
1104 052	Set Magenta 12	*CTL	
1104 072	Set Yellow 12	*CTL	
1104 013	Set Black 13	*CTL	[0 to 255 / **208** / 1/step]
1104 033	Set Cyan 13	*CTL	
1104 053	Set Magenta 13	*CTL	
1104 073	Set Yellow 13	*CTL	
1104 014	Set Black 14	*CTL	[0 to 255 / **224** / 1/step]
1104 034	Set Cyan 14	*CTL	

1104 054	Set Magenta 14	*CTL	
1104 074	Set Yellow 14	*CTL	
1104 015	Set Black 15	*CTL	[0 to 255 / **240** / 1/step]
1104 035	Set Cyan 15	*CTL	
1104 055	Set Magenta 15	*CTL	
1104 075	Set Yellow 15	*CTL	

1105	**[ToneCtlSave]**
	Saves the print gamma (adjusted with the Gamma Adj.) as the new Current Setting. Before the machine stores the new “current setting”, it moves the data stored as the “current setting” to the “previous setting” memory-storage location.

1106	**[Toner Limit Value]**		
	Adjusts the maximum toner amount for image development.		
1106 001	TonerLimitValue	*CTL	[100 to 400 / **260** / 1%/step]

1108	**[Ext. Toner Save]**		
1108 001	Mode 1: Text		**DFU**
1108 002	Mode 2: Text		
1108 003	Mode 1: Image		
1108 004	Mode 2: Image		
1108 005	Mode 1: Line		
1108 006	Mode 2: Line		
1108 007	Mode 1: Paint		
1108 008	Mode 2: Paint		

Engine Service Mode

SP1-XXX (Feed)

1001	**[Lead Edge Reg.]** Leading Edge Registration (Tray or By-pass, Paper Type, Process Speed) Paper Type ->N: Plain paper 1, N2 or Normal 2: Plain paper 2, Thick2: Thick paper 2 (see the Specifications table for details on these paper weights)

	Process Speed: LS: Low speed, RS: Regular speed		
	Note ▪ Adjusts the leading edge registration. This SP changes the registration clutch operation timing for each mode. ▪ A +ve value sets the registration start timing earlier. ▪ A –ve value sets the registration start timing later. The value of the normal paper in RS is the standard value. The values of papers other than normal are added to the value of the normal paper in RS.		
1001 001	Tray 1: Normal: LS	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1001 002	Tray 1: Normal: RS	*EGB	[-10.0 to 10.0 / **-3.0** / 0.1 mm/step]
1001 003	Tray 1: Thick	*EGB	[-10.0 to 10.0 / **1.5** / 0.1 mm/step]
1001 004	Tray 1: OHP	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1001 005	Tray 2: Normal: LS	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1001 006	Tray 2: Normal: RS	*EGB	[-10.0 to 10.0 / **-3.0** / 0.1 mm/step]
1001 007	Tray 2: Thick	*EGB	[-10.0 to 10.0 / **1.5** / 0.1 mm/step]
1001 008	Tray 2: OHP	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1001 009	Tray 3: Normal: LS	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1001 010	Tray 3: Normal: RS	*EGB	[-10.0 to 10.0 / **-3.0** / 0.1 mm/step]
1001 011	Tray 3: Thick	*EGB	[-10.0 to 10.0 / **1.5** / 0.1 mm/step]
1001 012	Tray 3: OHP	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1001 013	By-pass: N: LS	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1001 014	By-pass: N: RS	*EGB	[-10.0 to 10.0 / **-3.0** / 0.1 mm/step]
1001 015	By-pass: Thick	*EGB	[-10.0 to 10.0 / **1.5** / 0.1 mm/step]
1001 016	By-pass: OHP	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1001 017	Duplex: Normal: LS	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1001 018	Duplex: Normal: RS	*EGB	[-10.0 to 10.0 / **-3.0** / 0.1 mm/step]
1001 019	Duplex: Thick	*EGB	[-10.0 to 10.0 / **1.0** / 0.1 mm/step]
1001 020	Duplex: N2: LS	*EGB	[-10.0 to 10.0 / **1.0** / 0.1 mm/step]
1001 021	Duplex: N2: RS	*EGB	[-10.0 to 10.0 / **1.0** / 0.1 mm/step]
1001 022	Tray 1: Normal 2: LS	*EGB	[-10.0 to 10.0 / **1.0** / 0.1 mm/step]
1001 023	Tray 1: Normal 2: RS	*EGB	[-10.0 to 10.0 / **1.0** / 0.1 mm/step]
1001 024	Tray 1: Thick 2	*EGB	[-10.0 to 10.0 / **1.5** / 0.1 mm/step]
1001 025	Tray 1: Thin: LS	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1001 026	Tray 1: Thin: RS	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]

1001 027	Tray 1: Special	*EGB	[-10.0 to 10.0 / **1.5** / 0.1 mm/step]
1001 028	Tray 2: Normal 2: LS	*EGB	[-10.0 to 10.0 / **1.0** / 0.1 mm/step]
1001 029	Tray 2: Normal 2: RS	*EGB	[-10.0 to 10.0 / **1.0** / 0.1 mm/step]
1001 030	Tray 2: Thick 2	*EGB	[-10.0 to 10.0 / **1.5** / 0.1 mm/step]
1001 031	Tray 2: Thin: LS	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1001 032	Tray 2: Thin: RS	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1001 033	Tray 2: Special	*EGB	[-10.0 to 10.0 / **1.5** / 0.1 mm/step]
1001 034	Tray 3: Normal 2: LS	*EGB	[-10.0 to 10.0 / **1.0** / 0.1 mm/step]
1001 035	Tray 3: Normal 2: RS	*EGB	[-10.0 to 10.0 / **1.0** / 0.1 mm/step]
1001 036	Tray 3: Thick 2	*EGB	[-10.0 to 10.0 / **1.5** / 0.1 mm/step]
1001 037	Tray 3: Thin: LS	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1001 038	Tray 3: Thin: RS	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1001 039	Tray 3: Special	*EGB	[-10.0 to 10.0 / **1.5** / 0.1 mm/step]
1001 040	By-pass: N2: LS	*EGB	[-10.0 to 10.0 / **1.0** / 0.1 mm/step]
1001 041	By-pass: N2: RS	*EGB	[-10.0 to 10.0 / **1.0** / 0.1 mm/step]
1001 042	By-pass: Thick 2	*EGB	[-10.0 to 10.0 / **1.5** / 0.1 mm/step]
1001 043	By-pass: Thin: LS	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1001 044	By-pass: Thin: RS	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1001 045	By-pass: Special	*EGB	[-10.0 to 10.0 / **1.5** / 0.1 mm/step]

1002	**[S-to-S Reg.] Side-to-Side Registration**		
1002 001	By-pass	*EGB	Adjusts the side-to-side registration for each mode. This SP changes the laser main scan start position. [-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1002 002	Tray 1	*EGB	
1002 003	Tray 2	*EGB	
1002 004	Tray 3	*EGB	
1002 005	Duplex	*EGB	

1003	**[Paper Buckle]** Paper Buckle (Tray or By-pass, Paper Type, Process Speed) Paper Type ->N: Plain paper 1, N2 or Normal 2: Plain paper 2, Thick2: Thick paper 2 (see the Specifications table for details on these paper weights) Process Speed-> LS: Low speed, RS: Regular speed		
1003 001	Tray 1: Normal: LS	*EGB	Adjusts the amount of paper buckle at the registration roller for each mode. This SP
1003 002	Tray 1: Normal: RS	*EGB	

1003 003	Tray 1: Thick	*EGB	changes the paper feed timing.
1003 004	Tray 1: OHP	*EGB	[-10.0 to 10.0 / **0.0** / 0.1 mm/step]
1003 005	Tray 2: Normal: LS	*EGB	
1003 006	Tray 2: Normal: RS	*EGB	
1003 007	Tray 2: Thick	*EGB	
1003 008	Tray 2: OHP	*EGB	
1003 009	Tray 3: Normal: LS	*EGB	
1003 010	Tray 3: Normal: RS	*EGB	
1003 011	Tray 3: Thick	*EGB	
1003 012	Tray 3: OHP	*EGB	
1003 013	By-pass: N:LS	*EGB	
1003 014	By-pass: N:RS	*EGB	
1003 015	By-pass: Thick	*EGB	
1003 016	By-pass: OHP	*EGB	
1003 017	Duplex: Normal: LS	*EGB	
1003 018	Duplex: Normal: RS	*EGB	
1003 019	Duplex: Thick	*EGB	
1003 020	Duplex: N2: LS	*EGB	
1003 021	Duplex: N2: RS	*EGB	
1003 022	Tray 1: Normal 2: LS	*EGB	
1003 023	Tray 1: Normal 2: RS	*EGB	
1003 024	Tray 1: Thick 2	*EGB	
1003 025	Tray 1: Thin: LS	*EGB	
1003 026	Tray 1: Thin: RS	*EGB	
1003 027	Tray 1: Special	*EGB	
1003 028	Tray 2: Normal 2: LS	*EGB	
1003 029	Tray 2: Normal 2: RS	*EGB	
1003 030	Tray 2: Thick 2	*EGB	
1003 031	Tray 2: Thin: LS	*EGB	
1003 032	Tray 2: Thin: RS	*EGB	
1003 033	Tray 2: Special	*EGB	
1003 034	Tray 3: Normal 2: LS	*EGB	
1003 035	Tray 3: Normal 2: RS	*EGB	
1003 036	Tray 3: Thick 2	*EGB	

1003 037	Tray 3: Thin: LS	*EGB	
1003 038	Tray 3: Thin: RS	*EGB	
1003 039	Tray 3: Special	*EGB	
1003 040	By-pass: N2: LS	*EGB	
1003 041	By-pass: N2: RS	*EGB	
1003 042	By-pass: Thick 2	*EGB	
1003 043	By-pass: Thin: LS	*EGB	
1003 044	By-pass: Thin: RS	*EGB	
1003 045	By-pass: Special	*EGB	

1004	**[Mt Speed]** Drive Motor Speed **DFU** (Unit, Process Speed, Paper Type) Paper Type ⇒ N: Plain paper 1, N2 or Normal 2: Plain paper 2, Thick2: Thick paper 2 (see the Specifications table for details on these paper weights) Process Speed ⇒ LS: Low speed, RS: Regular speed CW: Clockwise, CCW: Counterclockwise PFU: Optional paper tray unit		
1004 001	DEV / OPC [K]: LS	*EGB	Adjusts the black development and OPC motor speed. [-4.00 to 4.00 / **-1.35** / 0.01%/step]
1004 002	DEV / OPC [K]: RS	*EGB	
1004 003	DEV [CMY]: LS	*EGB	Adjusts the color development motor speed. [-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 004	DEV [CMY]: RS	*EGB	
1004 005	OPC [CMY]: LS	*EGB	Adjusts the color OPC motor speed. [-4.00 to 4.00 / **-1.35** / 0.01%/step]
1004 006	OPC [CMY]: RS	*EGB	
1004 007	Fusing: LS	*EGB	Adjusts the paper exit and fusing motor speed. [-4.00 to 4.00 / **P2a: 1.4, P2b: 0.95** / 0.01%/step]
1004 008	Fusing: RS	*EGB	
1004 009	Transfer Belt: LS	*EGB	Adjusts the transfer belt motor speed. [-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 010	Transfer Belt: RS	*EGB	
1004 011	PFU: LS	*EGB	Adjusts the speed of the feed motor in the optional paper tray unit. [-4.00 to 4.00 / **P2a: -0.36, P2b: -1.06** / 0.01%/step]
1004 012	PFU: RS	*EGB	[-4.00 to 4.00 / **P2a: -0.36, P2b: -0.27** /

			0.01%/step]
1004 013	Duplex: LS: Add	*EGB	Adjusts the duplex motor speed.
1004 014	Duplex: RS: Add	*EGB	[-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 015	Duplex: LS	*EGB	Adjusts the duplex motor speed. [-4.00 to 4.00 / **P2a: -0.36, P2b: 0.41** / 0.01%/step]
1004 016	Duplex: RS	*EGB	[-4.00 to 4.00 / **P2a: -0.36, P2b: 1.21** / 0.01%/step]
1004 017	Reverse: LS: CW	*EGB	Adjusts the inverter motor speed.
1004 018	Reverse: RS: CW	*EGB	[-4.00 to 4.00 / **1.4** / 0.01%/step]
1004 019	Reverse: LS: CCW	*EGB	Adjusts the inverter motor speed.
1004 020	Reverse: RS: CCW	*EGB	[-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 021	DEV / OPC [K]: LS: N2	*EGB	Adjusts the black development and OPC motor speed. [-4.00 to 4.00 / **-1.35** / 0.01%/step]
1004 022	DEV / OPC [K]: RS: N2	*EGB	
1004 023	DEV [CMY]: LS: N2	*EGB	Adjusts the color development motor speed.
1004 024	DEV [CMY]: RS: N2	*EGB	[-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 025	OPC [CMY]: LS: N2	*EGB	Adjusts the color OPC motor speed.
1004 026	OPC [CMY]: RS: N2	*EGB	[-4.00 to 4.00 / **-1.35** / 0.01%/step]
1004 027	Fusing: LS: N2	*EGB	Adjusts the paper exit and fusing motor speed. [-4.00 to 4.00 / **0.6** / 0.01%/step]
1004 028	Fusing: RS: N2	*EGB	
1004 029	Trans. Belt: LS: N2	*EGB	Adjusts the transfer belt motor speed.
1004 030	Trans. Belt: RS: N2	*EGB	[-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 031	PFU: LS: Normal 2	*EGB	Adjusts the speed of the feed motor in the optional paper tray unit. [-4.00 to 4.00 / **-1.14** / 0.01%/step]
1004 032	PFU: RS: Normal 2	*EGB	
1004 033	Duplex: LS: Add: N2	*EGB	Adjusts the duplex motor speed.
1004 034	Duplex: RS: Add: N2	*EGB	[-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 035	Duplex: LS: N2	*EGB	Adjusts the duplex motor speed.
1004 036	Duplex: RS: N2	*EGB	[-4.00 to 4.00 / **-0.36** / 0.01%/step]
1004 037	Reverse: LS: CW: N2	*EGB	Adjusts the inverter motor speed.
1004 038	Reverse: RS: CW: N2	*EGB	[-4.00 to 4.00 / **0.6** / 0.01%/step]
1004 039	Rever.: LS: CCW: N2	*EGB	Adjusts the inverter motor speed.
1004 040	Rever.: RS: CCW: N2	*EGB	[-4.00 to 4.00 / **0.0** / 0.01%/step]

1004 041	DEV / OPC [K]: LS: TC	*EGB	Adjusts the black development and OPC motor speed. [-4.00 to 4.00 / **-1.35** / 0.01%/step]
1004 042	DEV [CMY]: LS: TC	*EGB	Adjusts the color development motor speed. [-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 043	OPC [CMY]: LS: TC	*EGB	Adjusts the color OPC motor speed. [-4.00 to 4.00 / **-1.35** / 0.01%/step]
1004 044	Fusing: LS: Thick	*EGB	Adjusts the paper exit and fusing motor speed. [-4.00 to 4.00 / **0.6** / 0.01%/step]
1004 045	Trans. Belt: LS: TC	*EGB	Adjusts the transfer belt motor speed. [-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 046	PFU: LS: Thick	*EGB	Adjusts the speed of the feed motor in the optional paper tray unit. [-4.00 to 4.00 / **-1.14** / 0.01%/step]
1004 047	Duplex: LS: Add: TC	*EGB	Adjusts the duplex motor speed. [-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 048	Duplex: LS: Thick	*EGB	Adjusts the duplex motor speed. [-4.00 to 4.00 / **-0.36** / 0.01%/step]
1004 049	Reverse: LS: CW: TC	*EGB	Adjusts the inverter motor speed. [-4.00 to 4.00 / **0.6** / 0.01%/step]
1004 050	Rever.: LS: CCW: TC	*EGB	Adjusts the inverter motor speed. [-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 051	DEV / OPC [K] LS:TC2	*EGB	Adjusts the black development and OPC motor speed. [-4.00 to 4.00 / **-1.35** / 0.01%/step]
1004 052	DEV [CMY]: LS: TC2	*EGB	Adjusts the color development motor speed. [-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 053	OPC [CMY]: LS: TC2	*EGB	Adjusts the color OPC motor speed. [-4.00 to 4.00 / **-1.35** / 0.01%/step]
1004 054	Fusing: LS: TC 2	*EGB	Adjusts the paper exit and fusing motor speed. [-4.00 to 4.00 / **0.6** / 0.01%/step]
1004 055	T. Belt: LS: TC 2	*EGB	Adjusts the transfer belt motor speed. [-4.00 to 4.00 / **0.0** / 0.01%/step]

1004 056	PFU: LS: Thick 2	*EGB	Adjusts the speed of the feed motor in the optional paper tray unit. [-4.00 to 4.00 / **-1.14** / 0.01%/step]
1004 057	Duplex: LS: Thick 2	*EGB	Adjusts the duplex motor speed. [-4.00 to 4.00 / **-0.36** / 0.01%/step]
1004 058	DEV / OPC [K]: LS: SP	*EGB	Adjusts the black development and OPC motor speed. [-4.00 to 4.00 / **-1.35** / 0.01%/step]
1004 059	DEV [CMY]: LS: SP	*EGB	Adjusts the color development motor speed. [-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 060	OPC [CMY]: LS: SP	*EGB	Adjusts the color OPC motor speed. [-4.00 to 4.00 / **-1.35** / 0.01%/step]
1004 061	Fusing: LS: SP	*EGB	Adjusts the paper exit and fusing motor speed. [-4.00 to 4.00 / **0.6** / 0.01%/step]
1004 062	Trans. Belt: LS: SP	*EGB	Adjusts the transfer belt motor speed. [-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 063	PFU: LS: SP	*EGB	Adjusts the speed of the feed motor in the optional paper tray unit. [-4.00 to 4.00 / **-1.14** / 0.01%/step]
1004 064	Duplex: LS: SP	*EGB	Adjusts the duplex motor speed. [-4.00 to 4.00 / **-0.36** / 0.01%/step]
1004 065	DEV / OPC [K]: LS: TN	*EGB	Adjusts the black development and OPC motor speed. [-4.00 to 4.00 / **-1.35** / 0.01 %/step]
1004 066	DEV / OPC [K]: RS: TN	*EGB	
1004 067	DEV [CMY]: LS: Thin	*EGB	Adjusts the color development motor speed. [-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 068	DEV [CMY]: RS: Thin	*EGB	
1004 069	OPC [CMY]: LS: Thin	*EGB	Adjusts the color OPC motor speed. [-4.00 to 4.00 / **-1.35** / 0.01%/step]
1004 070	OPC [CMY]: RS: Thin	*EGB	
1004 071	Fusing: LS: Thin	*EGB	Adjusts the paper exit and fusing motor speed. [-4.00 to 4.00 / **P2a: 1.4, P2b: 1.05** / 0.01%/step]
1004 072	Fusing: RS: Thin	*EGB	
1004 073	Trans. Belt: LS: TN	*EGB	Adjusts the transfer belt motor speed. [-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 074	Trans. Belt: RS: TN	*EGB	

1004 075	PFU: LS: Thin	*EGB	Adjusts the speed of the feed motor in the optional paper tray unit. [-4.00 to 4.00 / **-0.36** / 0.01%/step]
1004 076	PFU: RS: Thin	*EGB	
1004 077	Duplex: LS: Thin	*EGB	Adjusts the duplex motor speed. [-4.00 to 4.00 / **-0.36** / 0.01%/step]
1004 078	Duplex: RS: Thin	*EGB	
1004 079	DEV / OPC [K]: LS: OHP	*EGB	Adjusts the black development and OPC motor speed. [-4.00 to 4.00 / **-1.35** / 0.01 %/step]
1004 080	DEV [CMY]: LS: OHP	*EGB	Adjusts the color development motor speed. [-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 081	OPC [CMY]: LS: OHP	*EGB	Adjusts the color OPC motor speed. [-4.00 to 4.00 / **-1.35** / 0.01%/step]
1004 082	Fusing: LS: OHP	*EGB	Adjusts the paper exit and fusing motor speed. [-4.00 to 4.00 / **0.6** / 0.01%/step]
1004 083	T.Belt: LS: OHP	*EGB	Adjusts the transfer belt motor speed. [-4.00 to 4.00 / **0.0** / 0.01%/step]
1004 084	PFU: LS: OHP	*EGB	Adjusts the speed of the feed motor in the optional paper tray unit. [-4.00 to 4.00 / **-1.14** / 0.01%/step]
1004 085	Duplex: LS: OHP	*EGB	Adjusts the duplex motor speed. [-4.00 to 4.00 / **-0.36** / 0.01%/step]

1006	**[Phase Adjust.]** Phase Adjustment		
1006 001	Angle	*EGB	Adjusts the phase angle between the K drum and the CMY drums. [-180 to 180 / **0** / 1/step] **DFU**

1104	**[Fusing Cont.]** Fusing Control		
1104 001	Control Method	*EGB	[0 or 1 / **1** / -]
	Selects the fusing control method. 0: ON/OFF Control, 1: PID Control (Phase control)		
1104 022	Max. Wait Time	*EGB	[0 to 255 / **30** / 1 sec/step]
	Adjusts the maximum waiting time for the target printing temperature of fusing unit. After this interval, printing will start if the temperature did not get to the		

	target.		
1104 023	Paper Feed. Temp.	*EGB	[0 to 30 / **P2a: 5, P2b: 10** / 1/step]
	Adjusts the increase in the temperature of the fusing unit between the ready condition and the start of paper feed at the start of a new job.		
1104 024	1st Add Time: LS		[0 to 50 / **0** / 0.1 sec/step]
	For print jobs at low speed. If the interval between jobs is less than this setting, then the temperature change (1104 025) for the first page of a new job is not applied.		
1104 025	1st Add Temp.	*EGB	[0 to 20 / **P2a: 2, P2b: 8** / 1°C/step]
	Adds this value to the basic fusing temperature, for the first page of a new job. This extra temperature is necessary because when the printer starts the first page, the fusing unit is not warm enough.		
1104 026	1st Temp. Maint.	*EGB	[0 to 50 / **P2a: 15, P2b: 8** / 1 sec/step]
	Adjusts the time for maintaining the temperature change that is set with 1104 025.		
1104 027	1st Print Inter.	*EGB	[0 to 100 / **P2a: 0.2, P2b: 0** / 0.1 sec/step]
	For print jobs at regular speed. If the interval between jobs is less than this setting, then the temperature change (1104 025) for the first page of a new job is not applied.		
1104 028	Paper Feed. Temp.	*EGB	[0 to 30 / **5** / 0.1 deg/step]
	Adjusts the increase in the temperature of the fusing unit between the ready condition and the start of paper feed at the start of a new job (B/W mode).		
1104 029	1st PrtDecTmpTime	*EGB	[0 to 255 / **P2a: 0, P2b: 3** / 1 sec/step]
	Adjusts the time for decreasing 1°C when the temperature decline to the target printing temperature.		
1104 030	PreRot.Thre.Temp.	*EGB	[0 to 255 / **20** / 1 deg/step]
	Adjusts the threshold temperature for the added idling rotation.		
1104 031	1st PrtDecTmpTime	*EGB	[0 to 255 / **2** / 1 sec/step]
	Adjusts the added idling rotation time. This SP is activated when the fusing temperature does not reach the specified temperature with SP1104-30.		

1105	**[Fusing Temp.]** Fusing Temperature (Paper Type, Mode, Color, Process Speed) Paper Type -> N: Plain paper 1, N2: Plain paper 2, TC: Thick, TN: Thin, SP: Special, OHP, ENV: Envelope, GL: Glossy paper, TK2: Thick paper 2

	Mode -> Simple [one-sided] or Duplex Color -> K: Black only, FC: Full color Process Speed -> LS: Low speed, RS: Regular speed Reload: Print ready, between jobs		
	Adjusts the fusing unit temperature for each mode.		
1105 022	Reload Temp.	*EGB	[100 to 200 / **160** / 1°C/step]
1105 025	TC1: Simple: [K]	*EGB	[120 to 180 / **160** / 1°C/step]
1105 026	TC1: Duplex: [K]	*EGB	
1105 027	TC1: Simple: [FC]	*EGB	
1105 028	TC1: Duplex: [FC]	*EGB	
1105 029	TC2: Simple: [K]	*EGB	
1105 031	TC2: Simple: [FC]	*EGB	
1105 033	N: Simple: [K]: LS	*EGB	[120 to 180 / **145** / 1°C/step]
1105 034	N: Simple: [K]: RS	*EGB	[120 to 180 / **160** / 1°C/step]
1105 035	N: Duplex: [K]: LS	*EGB	[120 to 180 / **145** / 1°C/step]
1105 036	N: Duplex: [K]: RS	*EGB	[120 to 180 / **160** / 1°C/step]
1105 037	N: Simple: [FC]: LS	*EGB	[120 to 180 / **145** / 1°C/step]
1105 039	N: Simple: [FC]: RS	*EGB	[120 to 180 / **160** / 1°C/step]
1105 040	N: Duplex: [FC]: LS	*EGB	[120 to 180 / **145** / 1°C/step]
1105 042	N: Duplex: [FC]: RS	*EGB	[120 to 180 / **160** / 1°C/step]
1105 043	Check Temp. Time	*EGB	[0 to 10 / **2.0** / 0.1 sec/step]
	Adjusts the rotation time before checking the fusing unit temperature. If the main switch is turned on and off for a short time, it might be possible that the checked temperature is high even though the whole of the fusing unit is not high enough for printing condition.		
1105 049	N2: Simple: [K]: LS	*EGB	[120 to 180 / **150** / 1°C/step]
1105 050	N2: Simple: [K]: RS	*EGB	[120 to 180 / **165** / 1°C/step]
1105 051	N2: Duplex: [K]: LS	*EGB	[120 to 180 / **150** / 1°C/step]
1105 052	N2: Duplex: [K]: RS	*EGB	[120 to 180 / **165** / 1°C/step]
1105 053	N2: Simple: [FC] LS	*EGB	[120 to 180 / **150** / 1°C/step]
1105 054	N2: Simple: [FC] RS	*EGB	[120 to 180 / **165** / 1°C/step]
1105 055	N2: Duplex: [FC] LS	*EGB	[120 to 180 / **150** / 1°C/step]
1105 056	N2: Duplex: [FC] RS	*EGB	[120 to 180 / **165** / 1°C/step]
1105 057	TN: Simple: [K]: LS	*EGB	[120 to 180 / **135** / 1°C/step]

1105 058	TN: Simple: [K]: RS	*EGB	[120 to 180 / **150** / 1°C/step]
1105 059	TN: Duplex: [K]: LS	*EGB	[120 to 180 / **135** / 1°C/step]
1105 060	TN: Duplex: [K] RS	*EGB	[120 to 180 / **150** / 1°C/step]
1105 061	TN: Simple: [FC] LS	*EGB	[120 to 180 / **135** / 1°C/step]
1105 062	TN: Simple: [FC] RS	*EGB	[120 to 180 / **150** / 1°C/step]
1105 063	TN: Duplex: [FC] LS	*EGB	[120 to 180 / **135** / 1°C/step]
1105 064	TN: Duplex: [FC] RS	*EGB	[120 to 180 / **150** / 1°C/step]
1105 065	SP1: Simple: [K] LS	*EGB	[120 to 180 / **165** / 1°C/step]
1105 067	SP1: Duplex: [K] LS	*EGB	[120 to 180 / **165** / 1°C/step]
1105 069	SP1: Simp.: [FC] LS	*EGB	[120 to 180 / **165** / 1°C/step]
1105 071	SP1: Dupl.: [FC] LS	*EGB	[120 to 180 / **165** / 1°C/step]
1105 073	ENV: Simple: [K] RS	*EGB	[120 to 180 / **170** / 1°C/step]
1105 074	ENV: Simple: [FC] RS	*EGB	
1105 075	GL: Simple: [K] LS	*EGB	[120 to 180 / **155** / 1°C/step]
1105 076	GL: Duplex: [K] LS	*EGB	
1105 077	GL: Simple: [FC] LS	*EGB	[120 to 180 / **155** / 1°C/step]
1105 078	GL: Duplex: [FC] LS	*EGB	
1105 089	OHP: [K]: LS	*EGB	[120 to 180 / **160** / 1°C/step]
1105 090	OHP: [FC]: LS	*EGB	
1105 091	TK2: Duplex: [K]	*EGB	[120 to 180 / **150** / 1°C/step]
1105 092	TK2: Duplex: [FC]	*EGB	

1106	**[Fusing Temp.]** Fusing Temperature H. Roller: Heat Roller		
1106 002	H. Roller Temp.		Displays the heating roller temperature at this time. [0 to 230 / **0** / 1°C/step]

1159	**[Fusing JAM SC]** Fusing JAM SC Setting		
1159 001	Fusing JAM SC	*EGB	Turns on or off the fusing jam SC to detect the three consecutive paper jams at fusing unit. [0 or 1 / **0** / 1 /step] 0: OFF

			1: ON

1911	**[Print Speed Ctl]** Print Speed Control for small paper sizes (A5 or smaller) (Sheets of paper, Interval time or Temperature, Process Speed) Simple [one-sided] or Duplex Process Speed -> LS: Low speed, RS: Regular speed See section 6 for more about these SPs.		
1911 001	PPM Down: RS: S	*EGB	The print speed (PPM) is reduced after the machine has printed this number of pages continuously. [0 to 99 / **15** / 1 sheet/step]
1911 002	PPM Down: LS: S	*EGB	
1911 003	PPM Down Inter.	*EGB	The print speed goes back to the normal speed after this interval. [0 to 255 / **30** / 1 sec/step]
1911 004	S-size Temp. 1	*EGB	The temperature is decreased by this amount to prevent overheating the fusing unit for small size paper. [0 to 200 / **2** / 1°C/step]
1911 006	S-size Temp. 2	*EGB	[0 to 200 / **5** / 1°C/step]]
1911 008	S-size Temp. 3	*EGB	
1911 014	S-size Temp.: S1	*EGB	These SPs control when the above temperature reductions are done. [0 to 255 / **P2a**: **30, P2b: 25** / 1 sheet/step]
1911 016	S-size Temp.: S2	*EGB	[0 to 255 / **P2a: 20, P2b: 10** / 1 sheet/step]
1911 018	S-size Temp.: S3	*EGB	[0 to 255 / **P2a: 50, P2b: 15** / 1 sheet/step]
1911 020	Simple Temp. 3	*EGB	This SP controls when the temperature reduction of SP1911-022 is done. [0 to 500 / **P2a: 0, P2b: 15** / 1 sheet/step]
1911 021	Simple Temp. 1	*EGB	Adjusts the temperature reduction for one-sided printing. [0 to 200 / **2** / 1°C/step]]
1911 022	Simple Temp. 2	*EGB	Adjusts the temperature reduction 2 for one-sided printing. [0 to 200 / **5** / 1°C/step]]
1911 023	Simple Temp.:S1	*EGB	This SP keeps the target print temperature

			for specified printouts with this SP. [0 to 500 / **100** / 1 sheet/step]
1911 024	Simple Temp.:S2	*EGB	This SP controls when the temperature reduction of SP1911-021 is done. [0 to 500 / **P2a: 30, P2b: 10** / 1 sheet/step]
1911 025	Duplex Temp. 1	*EGB	Adjusts the temperature reduction for duplex printing. [0 to 200 / **2** / 1°C/step]]
1911 026	Duplex Temp. 2	*EGB	[0 to 200 / **5** / 1°C/step]]
1911 027	Duplex Temp.: S1	*EGB	This SP keeps the target print temperature for specified printouts with this SP in duplex printing. [0 to 500 / **80** / 1 sheet/step]
1911 028	Duplex Temp.: S2	*EGB	This SP controls when the temperature reduction of SP1911-025 is done. [0 to 500 / **P2a: 20, P2b: 10** / 1 sheet/step]
1911 029	Duplex Temp.: S3	*EGB	This SP controls when the temperature reduction of SP1911-026 is done. [0 to 500 / **P2a: 0, P2b: 15** / 1 sheet/step]
1911 040	Dec.Tmp Keep Time	*EGB	Keeps the temperature reduction for the time specified with this SP even the process control interrupts the multiple printing job. [0 to 500 / **P2a: 0, P2b: 60** / 1 sec/step]

1912	**[Fusing Rotat.]** Fusing Unit Roller Rotation Control Paper Type -> TC1: Thick paper 1, TC2: Thick paper 2, OHP, SP: Special, GL: Glossy paper		
1912 001	Rotation	*EGB	[0 or 1 / **1** / -] 0: Off 1: On.
	When the printer is in the ready condition, the nip between the hot roller and pressure roller is in the same position. This may cause deformation of the rollers. Therefore, a temporary rotation prevents this problem. SP 1912 001 turns this feature on or off. SP1912-003 and 004 control this rotation. Pre-rotation: Fusing idling		
1912 002	Prerotat. Speed	*EGB	[0 to 2 / **2** / -]

	Adjusts the speed of the fusing-unit rollers during fusing idling. 0: 1/3 regular speed, 1: Low speed, 2: Regular speed		
1912 003	Rotation Freque.	*EGB	[1 to 24 / **4** / 1 hour/step]
	Adjusts the frequency of the fusing-unit roller rotation if the machine is in the ready condition for a very long interval.		
1912 004	Rotation Inter.	*EGB	[0 to 25 / **0.1** / 0.1 sec/step]
	Adjusts the duration of the fusing-unit roller rotation		
1912 005	Prerotat. Temp.	*EGB	[0 to 200 / **100** / 1°C/step]
	Fusing idling is not done if the fusing unit temperature is above this value.		
1912 006	Prerotat. Inter.	*EGB	[0 to 180 / **1** / 1 min/step]
	Adjusts the duration of fusing idling immediately after the power is turned on.		
1912 007	Ex. Rotation Time	*EGB	[0 to 10 / **5** / 1 sec/step]
	Adjusts the time for extra rotation of the fusing unit rollers at the end of a job. If the fusing motor stops before the fusing lamp turns off, the temperature can become very high.		
1912 008	Prerotat. Ext.	*EGB	[0 to 255 / **0** / 1 sec/step]
	Adjusts the additional time for pre-rotation of the fusing rollers.		
1912 010	TC1: Rotat. Ext.	*EGB	[0 to 255 / **10** / 1 sec/step]
	Adjusts the additional time of the fusing roller pre-rotation for thick paper 1.		
1912 011	TC2 Rotat. Ext.	*EGB	[0 to 255 / **15** / 1 sec/step]
	Adjusts the additional time of the fusing roller pre-rotation for thick paper 2.		
1912 012	OHP: Rotat. Ext.	*EGB	[0 to 255 / **15** / 1 sec/step]
	Adjusts the additional time of the fusing roller pre-rotation for OHP.		
1912 013	SP: Rotat. Ext.	*EGB	[0 to 255 / **15** / 1 sec/step]
	Adjusts the additional time of the fusing roller pre-rotation for special paper.		
1912 014	GL: Rotat. Ext.	*EGB	[0 to 255 / **10** / 1 sec/step]
	Adjusts the additional time of the fusing roller pre-rotation for glossy paper.		
1912 015	LL: RotSpd. Sel	*EGB	[0 or 1 / **1** / 1 sec/step] 0: OFF, 1: ON
	Turns on or off the rotation speed switching of the pre-rotation in LL condition. When the "ON" is set, pre-rotation speed is the one-third of normal speed.		
1912 016	LM: RotSpd. Select	*EGB	[0 or 1 / **1** / 1 sec/step] 0: OFF, 1: ON
	Turns on or off the rotation speed switching of the pre-rotation in LM condition.		

	When the "ON" is set, pre-rotation speed is the one-third of normal speed.		
1912 017	MM/HH: RotSpd. Sel	*EGB	[0 or 1 / **1** / 1 sec/step] 0: OFF, 1: ON
	Turns on or off the rotation speed switching of the pre-rotation in MM/HH condition. When the "ON" is set, pre-rotation speed is the one-third of normal speed.		

1913	**[Heating Roller]** Heating Roller Control		
1913 002	Stand-by Temp.	*EGB	[0 to 200 / **150** / 1°C/step]
	Adjusts the heating roller temperature when the machine is in the ready condition.		

1916	**[Nip Measure]** Fusing Nip Width Measurement **DFU**		
1916 001	Nip Measure Exe.		[0 or 1 / **0** /-] 0: Not execute, 1: Execute
	Performs the nip width measurement.		
1916 002	Prerotation Time	*EGB	[0 to 60 / **10** / 1 sec/step]
	Adjusts the rotation time of the fusing unit rollers before the nip measurement.		

1917	**[Environ. Adapt.]** Fusing Idling: Environment Correction The machine automatically adjusts the duration of fusing idling, depending on room temperature measured by the temperature/humidity sensor (Paper Type, Temperature Environment, Value of Temperature/ Rotation Time) Paper Type ⇒ N1: Plain paper 1, N2: Plain paper 2, T1: Thick paper 1, T2: Thick paper 2, SP: Special (see the Specifications table for details on these paper weights) Temperature Environment -> H: High temperature, L: Low temperature Value of Temperature/ Time: Dec.: Decrease, Inc.: Increase		
1917 001	LL/MM Border	*EGB	Adjusts the threshold degree between LL (Low temperature and Low humidity) and MM (Middle temp. and middle humidity). [0 to 35 / **23 /** 1°C/step]
1917 002	LM Temp Adj.	*EGB	Adjusts the additional temperature for LM condition. This temperature is added to the fusing temperature of MM condition.

			[0 to 30 / **4 /** 1°C/step]
1917 003	H: Rotat. Time Dec.	*EGB	Adjusts the rotation time decrease at high temperature. [-120 to 0 / **0** / 1 sec/step]
1917 004	N1: H: Temp. Dec.	*EGB	Adjusts the temperature decrease for plain paper 1 at high temperature. [-50 to 0 / **0** / 1°C/step]
1917 005	N1: L: Temp. Inc.	*EGB	Adjusts the temperature increase for plain paper 1 at low temperature. [0 to 30 / **10** / 1°C/step]
1917 006	L: Rotat. Time Inc.	*EGB	Adjusts the rotation time increase at low temperature. [0 to 120 / **0** / 1 sec/step]
1917 007	H: Standard Temp.	*EGB	Sets the threshold temperature detected as high temperature. [25 to 40 / **30** / 1°C/step]
1917 008	L: Standard Temp.	*EGB	Sets the threshold temperature detected as low temperature. [-15 to 30 / **18** / 1°C/step]
1917 09	L: Rotation Dec.	*EGB	Adjusts the rotation time decrease at low temperature. [0 to 100 / **20** / 1 sec/step]
1917 010	N2: H: Temp. Dec.	*EGB	Adjusts the temperature decrease for plain paper 2 at high temperature. [-50 to 0 / 0 / 1 sec/step]
1917 011	N2: L: Temp. Inc.	*EGB	Adjusts the temperature increase for plain paper 2 at low temperature. [0 to 30 / **P2a: 10, P2b: 13** / 1°C/step]
1917 012	TN: H: Temp. Dec.	*EGB	Adjusts the temperature decrease for thin paper at high temperature. [-50 to 0 / **0** / 1 sec/step]
1917 013	TN: L: Temp. Inc.	*EGB	Adjusts the temperature increase for thin paper at low temperature. [0 to 30 / **P2a: 7, P2b: 10** / 1°C/step]
1917 014	TC1: H: Temp. Dec.	*EGB	Adjusts the temperature decrease for thick

			paper 1 at high temperature. [-50 to 0 / **0** / 1 sec/step]
1917 015	TC1: L: Temp. Inc.	*EGB	Adjusts the temperature increase for thick paper 1 at low temperature. [0 to 30 / **P2a: 7, P2b: 10** / 1°C/step]
1917 016	TC2: H: Temp. Dec.	*EGB	Adjusts the temperature decrease for thick paper 2 at high temperature. [-50 to 0 / **0** / 1 sec/step]
1917 017	TC2: L: Temp. Inc.	*EGB	Adjusts the temperature increase for thick paper 2 at low temperature. [0 to 30 / **P2a: 7, P2b: 10** / 1°C/step]
1917 018	OHP: H: Temp. Dec.	*EGB	Adjusts the temperature decrease for OHP at high temperature. [-50 to 0 / **0** / 1 sec/step]
1917 019	OHP: L: Temp. Inc.	*EGB	Adjusts the temperature increase for OHP at low temperature. [0 to 30 / **P2a: 7, P2b: 10** / 1°C/step]
1917 020	SP: H: Temp. Dec.	*EGB	Adjusts the temperature decrease for special paper at high temperature. [-50 to 0 / **0** / 1 sec/step]
1917 021	SP: L: Temp. Inc.	*EGB	Adjusts the temperature increase for special paper at low temperature. [0 to 30 / **P2a: 7, P2b: 10** / 1°C/step]
1917 022	ENV:H:Temp. Inc.	*EGB	Adjusts the temperature increase for envelop at high temperature. [-50 to 0 / **0** / 1°C/step]
1917 023	ENV:L:Temp. Inc.	*EGB	Adjusts the temperature increase for envelop at low temperature. [0 to 30 / **7** / 1°C/step]
1917 024	GL:H:Temp. Inc.	*EGB	Adjusts the temperature increase for glossary paper at high temperature. [-50 to 0 / **0** / 1°C/step]
1917 025	GL:L:Temp. Inc.	*EGB	Adjusts the temperature increase for glossary paper at low temperature. [0 to 30 / **7** / 1°C/step]

SP2-XXX (Drum)

2101	**[Color Regist.]** Color Registration Correction ([Color], M: Main scan, S: Sub scan)		
	You can adjust these SPs if the color registration is not good after the Line Position Adjustment (also known as 'MUSIC') is done. The [K] value (-001) is the standard value in the main scan adjustment. The values other than [k] value are added to [K] value. So, [K] value normally does not need to be adjusted in the main scan adjustment.		
2101 001	[K]: M Regist. Dot	*EGB	Adjusts the side edge registration by a dot for each mode. [-128 to 127 / **0** / 1 dot/step]
2101 002	[M]: M Regist. Dot	*EGB	
2101 003	[C]: M Regist. Dot	*EGB	
2101 004	[Y]: M Regist. Dot	*EGB	
2101 005	[K]: M Reg. SubD	*EGB	Adjusts the side edge registration by 1/16 dot. [-15 to 15 / **0** / 1/16dot/step]
2101 006	[K-M]: M Reg. SubD	*EGB	
2101 007	[K-C]: M Reg. SubD	*EGB	
2101 008	[K-Y]: M Reg. SubD	*EGB	
2101 013	[K-M]: S Reg. 600	*EGB	[-128 to 127 / **0** / 1 line/step]
2101 014	[K-C]: S Reg. 600	*EGB	
2101 015	[K-Y]: S Reg. 600	*EGB	
2101 016	[K-M]: S Reg. 1200	*EGB	
2101 017	[K-C]: S Reg. 1200	*EGB	
2101 018	[K-Y]: S Reg. 1200	*EGB	

2102	**[Magnifi. Adj.]** Magnification Adjustment Color, M Magnifi.: Main scan magnification		
	Adjusts the main scan magnification correction for each color.		
2102 001	[K]:M Magnifi.	*EGB	[-1.00 to 1.00 / **0.00** / 0.001 %/step]
2102 002	[M]:M Magnifi.	*EGB	
2102 003	[C]:M Magnifi.	*EGB	
2102 004	[Y]:M Magnifi.	*EGB	
2102 005	PLL	*EGB	Adjusts the PLL (phase lock loop). [-1.00 to 1.00 / **0.00** / 0.001 %/step]

2103	**[Trim Adjust.]** Erase Margin Adjustment Lead Ed: Leading Edge, Trail. Ed: Trailing Edge, Left/Right Ed: Left/ Right Edge		
2103 001	Lead Ed. Width	*EGB	Adds this value to the leading edge erase margin position in the sub scan direction. [-127 to 127 / **71** / 1 line/step]
2103 002	Trail. Ed. Width	*EGB	Adds this value to the trailing edge erase margin position in the sub scan direction. [-127 to 127 / **71** / 1 line/step]
2103 003	Left Ed. Width	*EGB	Adds this value to the left edge erase margin position in the main scan direction. [-127 to 127 / **47** / 1 dot/step]
2103 004	Right Ed. Width	*EGB	Adds this value to the right edge erase margin position in the main scan direction. [-127 to 127 / **47** / 1 dot/step]
2103 005	Lead Ed.Width/SP1	*EGB	Adds this value to the leading edge erase margin position in the sub scan direction for special paper or thin paper. [-127 to 127 / **95** / 1 line/step]

2104	**[Magnifi. Adj.]** Magnification Adjustment ([Color], Main Scan Magnification)		
2104 001	[K]: M Magnifi.	*EGB	Adjusts the main scan magnification. [-1.00 to 1.00 / **0.00** / 0.01%/step]
2104 002	[M]: M Magnifi.	*EGB	
2104 003	[C]: M Magnifi.	*EGB	
2104 004	[Y]: M Magnifi.	*EGB	

2105	**[LD Power Cont.]** LD Power Control ([Color], Process Speed) Process Speed -> LS: Low speed, RS: Regular speed		
2105 001	[K] 0	*EGB	Adjusts the LD power. [10 to 200 / **100** / 1%/step] **DFU**
2105 002	[M] 0	*EGB	
2105 003	[C] 0	*EGB	
2105 004	[Y] 0	*EGB	
2105 009	[K] 0: LS	*EGB	Adjusts the LD power at low speed. [10 to 200 / **100** / 1%/step] **DFU**
2105 010	[M] 0: LS	*EGB	
2105 011	[C] 0: LS	*EGB	

2105 012	[Y] 0: LS	*EGB	

2106	Polygon Motor Stop Time		
2106 001		*EGB	Adjusts the time to stop the polygon motor after job end. [0 to 180 / **10** / 1 sec/step]

2109	**[LD BeamPattern]** LD Beam Pattern		
2109 001	Picture Addition		Adds the picture to the LD test pattern. [0 or 1 / **0** /-] 0: Not execute, 1: Execute
2109 002	Pattern Select		Selects the LD test pattern. [0 to 24 / **0** / 1/step]
2109 004	Color Select		Selects the color for the LD test pattern. [0 to 4 / **0** / 1/step]

2111	**[Manual Execut.]** Manual Line Position Adjustment Execution		
2111 001	Position Adjust.		Performs the line position adjustment.
2111 200	Pro. Position Adj.		Performs an approximate line position adjustment.
2111 003	Skew Adjust.		Performs the skew adjustment.
2111 004	ID S. Adjust.		Tests the ID sensor.
2111 005	Area.Magni.Clr.		Clears the area magnification setting.

2120	**[LD Off Check]**		
			Displays the LD off check state.

2143	**[ID S. Display]** ID Sensor Display The ID sensor assembly has three sensors: Left, Center, Right		
2143 001	PWM: Left	*EGB	Displays the PWM value for each sensor. [0 to 512 / **0** / 1/step]
2143 002	PWM: Center	*EGB	
2143 003	PWM: Right	*EGB	
2143 004	Avg: Left	*EGB	Displays the average output from each sensor.
2143 005	Avg: Center	*EGB	

2143 006	Avg: Right	*EGB	[0.00 to 5.00 / **0.00** / 0.01 volt/step]
2143 007	Max: Left	*EGB	Displays the maximum output from each sensor. [0.00 to 5.00 / **0.00** / 0.01 volt/step]
2143 008	Max: Center	*EGB	
2143 009	Max: Right	*EGB	
2143 010	Min: Left	*EGB	Displays the minimum output from each sensor. [0.00 to 5.00 / **0.00** / 0.01 volt/step]
2143 011	Min: Center	*EGB	
2143 012	Min: Right	*EGB	
2143 013	Max2: Left	*EGB	Displays the maximum 2 output from each sensor. [0.00 to 5.00 / **0.00** / 0.01 volt/step]
2143 014	Max2: Center	*EGB	
2143 015	Max2: Right	*EGB	
2143 016	Min2: Left	*EGB	Displays the maximum 2 output from each sensor. [0.00 to 5.00 / **0.00** / 0.01 volt/step]
2143 017	Min2: Center	*EGB	
2143 018	Min2: Right	*EGB	

2150	**[Area Magni. Cor]** Area Magnification Correction ([Color], Area)		
2150 001	[K]: Area 1	*EGB	Adjusts the magnification correction for each area. [-127 to 127 / **0** / 1 sub-dot/step]
2150 002	[K]: Area 2	*EGB	
2150 003	[K]: Area 3	*EGB	
2150 004	[K]: Area 4	*EGB	
2150 005	[K]: Area 5	*EGB	
2150 006	[K]: Area 6	*EGB	
2150 007	[K]: Area 7	*EGB	
2150 008	[K]: Area 8	*EGB	
2150 009	[K]: Area 9	*EGB	
2150 010	[K]: Area 10	*EGB	
2150 011	[K]: Area 11	*EGB	
2150 012	[K]: Area 12	*EGB	
2150 013	[M]: Area 1	*EGB	Adjusts the magnification correction for each area. [-127 to 127 / **0** / 1 sub-dot/step]
2150 014	[M]: Area 2	*EGB	
2150 015	[M]: Area 3	*EGB	
2150 016	[M]: Area 4	*EGB	
2150 017	[M]: Area 5	*EGB	
2150 018	[M]: Area 6	*EGB	

2150 019	[M]: Area 7	*EGB	
2150 020	[M]: Area 8	*EGB	
2150 021	[M]: Area 9	*EGB	
2150 022	[M]: Area 10	*EGB	
2150 023	[M]: Area 11	*EGB	
2150 024	[M]: Area 12	*EGB	
2150 025	[C]: Area 1	*EGB	Adjusts the magnification correction for each area. [-127 to 127 / **0** / 1 sub-dot/step]
2150 026	[C]: Area 2	*EGB	
2150 027	[C]: Area 3	*EGB	
2150 028	[C]: Area 4	*EGB	
2150 029	[C]: Area 5	*EGB	
2150 030	[C]: Area 6	*EGB	
2150 031	[C]: Area 7	*EGB	
2150 032	[C]: Area 8	*EGB	
2150 033	[C]: Area 9	*EGB	
2150 034	[C]: Area 10	*EGB	
2150 035	[C]: Area 11	*EGB	
2150 036	[C]: Area 12	*EGB	
2150 037	[Y]: Area 1	*EGB	Adjusts the magnification correction for each area. [-127 to 127 / **0** / 1 sub-dot/step]
2150 038	[Y]: Area 2	*EGB	
2150 039	[Y]: Area 3	*EGB	
2150 040	[Y]: Area 4	*EGB	
2150 041	[Y]: Area 5	*EGB	
2150 042	[Y]: Area 6	*EGB	
2150 043	[Y]: Area 7	*EGB	
2150 044	[Y]: Area 8	*EGB	
2150 045	[Y]: Area 9	*EGB	
2150 046	[Y]: Area 10	*EGB	
2150 047	[Y]: Area 11	*EGB	
2150 048	[Y]: Area 12	*EGB	

2151	**[Area Width]** Area Width Correction ([Color], Area)		
2151 001	[K]: Area 1	*EGB	[0 to 1024 / **355** / 1 dot/step]

2151 002	[K]: Area 2	*EGB	
2151 003	[K]: Area 3	*EGB	[0 to 1024 / **472** / 1 dot/step]
2151 004	[K]: Area 4	*EGB	
2151 005	[K]: Area 5	*EGB	
2151 006	[K]: Area 6	*EGB	
2151 007	[K]: Area 7	*EGB	
2151 008	[K]: Area 8	*EGB	
2151 009	[K]: Area 9	*EGB	
2151 010	[K]: Area 10	*EGB	
2151 011	[K]: Area 11	*EGB	[0 to 1024 / **355** / 1 dot/step]
2151 012	[K]: Area 12	*EGB	
2151 013	[M]: Area 1	*EGB	[0 to 1024 / **355** / 1 dot/step]
2151 014	[M]: Area 2	*EGB	
2151 015	[M]: Area 3	*EGB	[0 to 1024 / **472** / 1 dot/step]
2151 016	[M]: Area 4	*EGB	
2151 017	[M]: Area 5	*EGB	
2151 018	[M]: Area 6	*EGB	
2151 019	[M]: Area 7	*EGB	
2151 020	[M]: Area 8	*EGB	
2151 021	[M]: Area 9	*EGB	
2151 022	[M]: Area 10	*EGB	
2151 023	[M]: Area 11	*EGB	[0 to 1024 / **355** / 1 dot/step]
2151 024	[M]: Area 12	*EGB	
2151 025	[C]: Area 1	*EGB	[0 to 1024 / **355** / 1 dot/step]
2151 026	[C]: Area 2	*EGB	
2151 027	[C]: Area 3	*EGB	[0 to 1024 / **472** / 1 dot/step]
2151 028	[C]: Area 4	*EGB	
2151 029	[C]: Area 5	*EGB	
2151 030	[C]: Area 6	*EGB	
2151 031	[C]: Area 7	*EGB	
2151 032	[C]: Area 8	*EGB	
2151 033	[C]: Area 9	*EGB	
2151 034	[C]: Area 10	*EGB	
2151 035	[C]: Area 11	*EGB	[0 to 1024 / **355** / 1 dot/step]

2151 036	[C]: Area 12	*EGB	
2151 037	[Y]: Area 1	*EGB	[0 to 1024 / **355** / 1 dot/step]
2151 038	[Y]: Area 2	*EGB	
2151 039	[Y]: Area 3	*EGB	[0 to 1024 / **472** / 1 dot/step]
2151 040	[Y]: Area 4	*EGB	
2151 041	[Y]: Area 5	*EGB	
2151 042	[Y]: Area 6	*EGB	
2151 043	[Y]: Area 7	*EGB	
2151 044	[Y]: Area 8	*EGB	
2151 045	[Y]: Area 9	*EGB	
2151 046	[Y]: Area 10	*EGB	
2151 047	[Y]: Area 11	*EGB	[0 to 1024 / **355** / 1 dot/step]
2151 048	[Y]: Area 12	*EGB	

2152	**[Area Shading]** Area Shading Correction Setting ([Color], Area)		
2152 006	[K]: Area 0	*EGB	[0.10 to 2.00 / **1.00** / 0.01/step]
2152 007	[K]: Area 1	*EGB	
2152 008	[K]: Area 2	*EGB	
2152 009	[K]: Area 3	*EGB	
2152 010	[K]: Area 4	*EGB	
2152 011	[K]: Area 5	*EGB	
2152 012	[K]: Area 6	*EGB	
2152 013	[K]: Area 7	*EGB	
2152 014	[K]: Area 8	*EGB	
2152 015	[K]: Area 9	*EGB	
2152 016	[K]: Area 10	*EGB	
2152 017	[M]: Area 0	*EGB	[0.10 to 2.00 / **1.00** / 0.01/step]
2152 018	[M]: Area 1	*EGB	
2152 019	[M]: Area 2	*EGB	
2152 020	[M]: Area 3	*EGB	
2152 021	[M]: Area 4	*EGB	
2152 022	[M]: Area 5	*EGB	
2152 023	[M]: Area 6	*EGB	

2152 024	[M]: Area 7	*EGB	
2152 025	[M]: Area 8	*EGB	
2152 026	[M]: Area 9	*EGB	
2152 027	[M]: Area 10	*EGB	
2152 028	[C]: Area 0	*EGB	[0.10 to 2.00 / **1.00** / 0.01/step]
2152 029	[C]: Area 1	*EGB	
2152 030	[C]: Area 2	*EGB	
2152 031	[C]: Area 3	*EGB	
2152 032	[C]: Area 4	*EGB	
2152 033	[C]: Area 5	*EGB	
2152 034	[C]: Area 6	*EGB	
2152 035	[C]: Area 7	*EGB	
2152 036	[C]: Area 8	*EGB	
2152 037	[C]: Area 9	*EGB	
2152 038	[C]: Area 10	*EGB	
2152 039	[Y]: Area 0	*EGB	[0.10 to 2.00 / **1.00** / 0.01/step]
2152 040	[Y]: Area 1	*EGB	
2152 041	[Y]: Area 2	*EGB	
2152 042	[Y]: Area 3	*EGB	
2152 043	[Y]: Area 4	*EGB	
2152 044	[Y]: Area 5	*EGB	
2152 045	[Y]: Area 6	*EGB	
2152 046	[Y]: Area 7	*EGB	
2152 047	[Y]: Area 8	*EGB	
2152 048	[Y]: Area 9	*EGB	
2152 049	[Y]: Area 10	*EGB	

2153	**[MUSIC Setting]** Timing for Automatic Line Position Adjustment (MUSIC)		
2153 001	Auto Execution	*EGB	Enables or disables the automatic line position adjustment. If this SP is 0, the adjustment is never done. [0 or 1 / **1** / -] Alphanumeric 0: Off, 1: On
2153 002	Process Control	*EGB	Enables or disables the adjustment after

			process control is done. [0 or 1 / **1** / -] Alphanumeric 0: Off, 1: On
2153 003	Initialization	*EGB	Enables or disables the adjustment immediately after the power is turned on or when recovering from energy save mode. [0 or 1 / **1** / -] Alphanumeric 0: Off, 1: On
2153 004	Data In	*EGB	Enables or disables the adjustment immediately after the machine starts to receive print job data. The adjustment is done if one of the conditions set with SP2153-012, -013 and –015 is satisfied. [0 or 1 / **1** / -] Alphanumeric 0: Off, 1: On
2153 005	Cut In	*EGB	Enables or disables the adjustment during printing. The adjustment is done if one of the conditions set with SP2153-012, -013 and –015 is satisfied. [0 or 1 / **1** / -] Alphanumeric 0: No, 1: Yes
2153 006	Job End	*EGB	Enables or disables the adjustment after printing. [0 or 1 / **0** / -] Alphanumeric 0: Off, 1: On
2153 008	Trans. Belt Speed 2	*EGB	Enables or disables the transfer belt speed correction during the adjustment. The transfer belt speed is affected by changes in temperature. A change of the transfer belt speed during the adjustment causes color registration errors. This SP keeps the transfer belt speed constant. [0 or 1 / **1** / -] Alphanumeric 0: Off, 1: On
2153 009	P-P Synch.		Turns on or off the line position adjustment between sheets of paper.

			[0 or 1 / **1** / -] 0: OFF, 1: ON
2153 010	Manual Cut In	*EGB	If this number of pages was printed after the previous adjustment was done, then the adjustment is done again. The number of sheets is counted in SP7806-003 and –004. [10 to 999 / **190** / 1 page/step]
2153 012	MUSIC Temp.	*EGB	If the room temperature changes by this amount or more after the previous adjustment was done, then the adjustment is done again. [2 to 30 / **5** / 1°C/step]
2153 013	Passage Time	*EGB	If this amount of time has passed after the previous adjustment was done, then the adjustment is done again. [0 to 1440 / **360** / 1 min/step]
2153 015	Maginificat. Error	*EGB	Sets the threshold (magnification error) from previous MUSIC for executing MUSIC. [0 to 10 / **1** / 0.1%/step]

2181	**[MUSIC Result]** Result of Automatic Line Position Adjustment ([Color],Value, Unit) Value-> Skew, Bent, M. Scan Erro.: Main Scan Error, S. Scan Erro.: Sub Scan Error, M. Cor: Main Scan Correction, S. Cor: Sub Scan Correction Unit-> Dot, SubD.: Sub Dot, 600/ 1200 dpi		
	The following SPs display the result of MUSIC for each mode.		
2181 001	[K]: Skew	*EGB	[-5000 to 5000 / **0** / 1 µm/step]
2181 002	[K]: Bent	*EGB	
2181 003	[K]: M. Scan Erro.	*EGB	
2181 004	[K]: S. Scan Erro.	*EGB	
2181 005	[K]: M Cor.: Dot	*EGB	[-127 to 127 / **0** / 1 dot/step]
2181 006	[K]: M Cor.: SubD.	*EGB	
2181 007	[K]: S Cor.: 600	*EGB	[-127 to 127 / **0** / 1 line/step]

2181 008	[K]: S Cor.: 1200	*EGB	
2181 011	[M]: Skew	*EGB	[-5000 to 5000 / **0** / 1 micrometer /step]
2181 012	[M]: Bent	*EGB	
2181 013	[M]: M. Scan Erro.	*EGB	
2181 014	[M]: S. Scan Erro.	*EGB	
2181 015	[M]: M Cor.: Dot	*EGB	[-127 to 127 / **0** / 1 dot/step]
2181 016	[M]: M Cor.: SubD.	*EGB	[-15 to 15 / **0** / 1 sub-dot/step]
2181 017	[M]: S Cor.: 600	*EGB	[-127 to 127 / **0** / 1 line/step]
2181 018	[M]: S Cor.: 1200	*EGB	
2181 021	[C]: Skew	*EGB	[-5000 to 5000 / **0** / 1 micrometer/step]
2181 022	[C]: Bent	*EGB	
2181 023	[C]: M. Scan Erro.	*EGB	
2181 024	[C]: S. Scan Erro.	*EGB	
2181 025	[C]: M Cor.: Dot	*EGB	[-127 to 127 / **0** / 1 dot/step]
2181 026	[C]: M Cor.: SubD.	*EGB	[-15 to 15 / **0** / 1 sub-dot/step]
2181 027	[C]: S Cor.: 600	*EGB	[-127 to 127 / **0** / 1 line/step]
2181 028	[C]: S Cor.: 1200	*EGB	
2181 031	[Y]: Skew	*EGB	[-999 to 999 / **0** / 1 micrometer/step]
2181 032	[Y]: Bent	*EGB	
2181 033	[Y]: M. Scan Erro.	*EGB	
2181 034	[Y]: S. Scan Erro.	*EGB	
2181 035	[Y]: M Cor.: Dot	*EGB	[-127 to 127 / **0** / 1 dot/step]
2181 036	[Y]: M Cor.: SubD.	*EGB	[-15 to 15 / **0** / 1 sub-dot/step]
2181 037	[Y]: S Cor.: 600	*EGB	[-127 to 127 / **0** / 1 line/step]
2181 038	[Y]: S Cor.: 1200	*EGB	

2186	**[MUSIC Record]** Automatic Line Position Adjustment Record		
	The following SPs display the MUSIC record.		
2186 001	Year	*EGB	[0 to 99 / **0** / 1 y/step]
2186 002	Month	*EGB	[1 to 12 / **1** / 1 m/step]
2186 003	Date	*EGB	[1 to 31 / **1** / 1 d/step]
2186 004	Time	*EGB	[0 to 23 / **0** / 1 h/step]
2186 005	Minute	*EGB	[0 to 59 / **0** / 1 y/step]
2186 006	Temperature	*EGB	[0 to 100 / **0** / 1°C/step]

2186 007	Result	*EGB	[0 to 999999 / **0** / 1 /step]
2186 008	Execution	*EGB	[0 to 9999 / **0** / 1 /step]
2186 009	Failure	*EGB	[0 to 9999 / **0** / 1 /step]

2187	**[MUSIC Result]** Automatic Line Position Adjustment Result		
	The following SPs display the skew adjustment values after the line position adjustment have been done.		
2187 001	[K]:Skew Adj.	*EGB	[-99 to 99 / **0** / 1 click/step]
2187 002	[M]:Skew Adj.	*EGB	
2187 003	[C]:Skew Adj.	*EGB	
2187 004	[Y]:Skew Adj.	*EGB	

2201	**[Charge Bias: DC]** Charge Roller Voltage: DC (Process Speed, [Color]) Process Speed LS: Low speed, RS: Regular speed		
	These SPs adjust the DC voltage of the drum charge roller. These are used only when SP3-501-001 is set to "1".		
2201 001	RS: [K]	*EGB	[200 to 999 / **585** / 1 V/step]
2201 002	RS: [M]	*EGB	
2201 003	RS: [C]	*EGB	
2201 004	RS: [Y]	*EGB	
2201 006	LS: [K]	*EGB	
2201 007	LS: [M]	*EGB	
2201 008	LS: [C]	*EGB	
2201 009	LS: [Y]	*EGB	

2202	**[Charge Bias: AC]** Charge Roller Voltage: AC (Process Speed, [Color]) Process Speed -> LS: Low speed, RS: Regular speed		
	These SPs adjust the AC voltage of the drum charge roller. These are used only when SP2-202-011 is set to "1".		
2202 001	RS: [K]	*EGB	[0 to 3000 / **2000** / 1 V/step]
2202 002	RS: [M]	*EGB	
2202 003	RS: [C]	*EGB	
2202 004	RS: [Y]	*EGB	

2202 006	LS: [K]	*EGB	
2202 007	LS: [M]	*EGB	
2202 008	LS: [C]	*EGB	
2202 009	LS: [Y]	*EGB	
2202 011	Output Control	*EGB	Selects the method for the charge roller AC bias adjustment. [0 or 1 / **0** / -] 0: Process Control, 1: Setting
2202 012	Interval	*EGB	Adjusts the interval for charge roller AC bias adjustment. [0 to 2000 / **210** / 1 sheet/step]

2203	**[Charge Bias: AC]** Charge Roller Voltage: AC/I (Process Speed, [Color]) Process Speed -> LS: Low speed, RS: Regular speed		
	These SPs adjust the AC/I bias of the drum charge roller. These are used only when SP3-501-001 is set to “1”.		
2203 001	RS: [K]	*EGB	[0 to 1.5 / **P2a: 0.49, P2b: 0.30** / 0.01 mA/step]
2203 002	RS: [M]	*EGB	[0 to 1.5 / **P2a: 0.48, P2b: 0.30** / 0.01 mA/step]
2203 003	RS: [C]	*EGB	[0 to 1.5 / **P2a: 0.49, P2b: 0.30** / 0.01 mA/step]
2203 004	RS: [Y]	*EGB	[0 to 1.5 / **P2a: 0.48, P2b: 0.30** / 0.01 mA/step]

2204	**[Charge Bias]** Charge Roller Voltage: Corrections for humidity (Environmental correction, [Color]) For more about the humidity conditions, see SP 2304.		
	Adds these environment correction coefficients to the charge bias.		
2204 001	Environ. : HH: [K]	*EGB	[0 to 255 / **P2a: 109**, **P2b: 204** / 1%/step]
2204 002	Environ. : HH: [M]	*EGB	[0 to 255 / **P2a: 107, P2b:196** / 1%/step]
2204 003	Environ. : HH: [C]	*EGB	[0 to 255 / **P2a: 104, P2b: 197** / 1%/step]
2204 004	Environ. : HH: [Y]	*EGB	[0 to 255 / **P2a: 106, P2b: 191** / 1%/step]
2204 006	Environ. : H: [K]	*EGB	[0 to 255 / **P2a 106, P2b: 197** / 1%/step]
2204 007	Environ. : H: [M]	*EGB	[0 to 255 / **P2a 106, P2b: 197**/ 1%/step]

2204 008	Environ. : H: [C]	*EGB	[0 to 255 / **P2a 106, P2b: 190** / 1%/step]
2204 009	Environ. : H: [Y]	*EGB	[0 to 255 / **P2a 104, P2b: 183** / 1%/step]
2204 011	Environ. : MM: [K]	*EGB	[0 to 255 / **P2a 101, P2b: 187** / 1%/step]
2204 012	Environ. : MM: [M]	*EGB	[0 to 255 / **P2a 101, P2b: 179** / 1%/step]
2204 013	Environ. : MM: [C]	*EGB	[0 to 255 / **P2a 100, P2b: 179** / 1%/step]
2204 014	Environ. : MM: [Y]	*EGB	[0 to 255 / **P2a 100, P2b: 176** / 1%/step]
2204 016	Environ. : L: [K]	*EGB	[0 to 255 / **P2a 105, P2b: 196** / 1%/step]
2204 017	Environ. : L: [M]	*EGB	[0 to 255 / **P2a 104, P2b: 184** / 1%/step]
2204 018	Environ. : L: [C]	*EGB	[0 to 255 / **P2a 103, P2b: 184** / 1%/step]
2204 019	Environ. : L: [Y]	*EGB	[0 to 255 / **P2a 105, P2b: 185** / 1%/step]
2204 021	Environ. : LL: [K]	*EGB	[0 to 255 / **P2a 110, P2b: 202** / 1%/step]
2204 022	Environ. : LL: [M]	*EGB	[0 to 255 / **P2a 109, P2b: 194** / 1%/step]
2204 023	Environ. : LL: [C]	*EGB	[0 to 255 / **P2a 110, P2b: 195** / 1%/step]
2204 024	Environ. : LL: [Y]	*EGB	[0 to 255 / **P2a 109, P2b: 190** / 1%/step]

2212	**[Dev. Bias: DC]** Development Bias: DC (Process Speed, [Color]) Process Speed -> RS: Regular speed, LS: Low speed		
	These SPs adjust the development bias. These are used only when SP3-501-001 is set to “1”.		
2212 001	RS: [K]	*EGB	[50 to 800 / **350** / 1 V/step]
2212 002	RS: [M]	*EGB	
2212 003	RS: [C]	*EGB	
2212 004	RS: [Y]	*EGB	
2212 005	LS: [K]	*EGB	
2212 006	LS: [M]	*EGB	
2212 007	LS: [C]	*EGB	
2212 008	LS: [Y]	*EGB	

2251	**[Manual Toner]** Forced Toner Supply Execution		
2251 001	[K]		Manually executes toner supply for each color. The toner supply procedure is done specified times with SP2252 (supplied for one second on and one second off).
2251 002	[M]		
2251 003	[C]		
2251 004	[Y]		

2252	**[Forced Toner]** Forced Toner Supply Execution		
2252 001	Repeat: [K]		Adjusts the toner supply times for SP2251. [0 to 30 / 8 / 1 time/step]
2252 002	Repeat: [M]		
2252 003	Repeat: [C]		
2252 004	Repeat: [Y]		

2302	**[Temp./Humidity]** Temperature / Humidity Display		
2302 001	Temperature		Displays the temperature. [-128 to 127 / **0** / 0.1 deg/step]
2302 002	Relative Humidity		Display the relative humidity. [0 to 100 / **0** / 0.1%RH/step]
2302 003	Absolute Humidity		Display the absolute humidity. [0 to 100 / **0** / 0.1 g/m^3/step]
2302 004	Current Environ.		Display the current environment. [0 to 4 / **0** / 1/step] 0: LL, 1: ML, 2: MM, 3: MH, 4: HH

2303	**[Envir. Correct.]** Environment Correction		
2303 001	Manual Correct.	*EGB	Manually sets the environment. [0 to 5 / **0** / 1/step] 0: OFF, 1: LL, 2: ML, 3: MM, 4: MH, 5: HH

2304	**[EC Threshold]** Environment Correction Threshold (Humidity, Environment) A. Humidity: Absolute Humidity		
	These SPs adjust the thresholds (absolute humidity) for each environment.		
2304 001	A. Humidity: LL-MM	*EGB	[0 to 100 / **5.0** / 0.1 g/m^3/step]
2304 002	A. Humidity: ML-MM	*EGB	[0 to 100 / **8.0** / 0.1 g/m^3/step]
2304 003	A. Humidity: MM-MH	*EGB	[0 to 100 / **16.0** / 0.1 g/m^3/step]
2304 004	A. Humidity: MH-HH	*EGB	[0 to 100 / **26.0** / 0.1 g/m^3/step]

2306	**[Vd Link Corre.]** Vd Link Correction		
2306 001	Setting	*EGB	Sets the Vd link correction. [0 or 1 / **0** / -] Alphanumeric 0: Execute, 1: Not execute
2306 002	Correction Coef.	*EGB	Adjusts the Vd link correction coefficient.

			[1.00 to 2.50 / **1.00** / 0.01/step]

2314	**[Trans.Belt Bias]** Transfer Belt Current at Process Control		
2314 011	Process Cont. [K]	*EGB	Adjusts the transfer belt current at process control for [K]. [0 to 60 / **P2a 15.0, P2b: 13.0** / 0.1 µA /step]
2314 012	Process Cont. [M]	*EGB	Adjusts the transfer belt current at process control for [M, C]. [0 to 60 / **P2a 12.5, P2b: 10.0** / 0.1 µA /step]
2314 013	Process Cont. [C]	*EGB	
2314 014	Process Cont. [Y]	*EGB	Adjusts the transfer belt current at process control for [Y]. [0 to 60 / **P2a 12.5, P2b: 13.0** / 0.1 µA /step]

2326	**[T.Roll2 Clean.]** Transfer Roller Cleaning (Positive or Negative Bias, Process Speed) Process Speed -> RS: Regular speed, LS: Low speed		
2326 002	Posi. Bias: RS	*EGB	Adjusts the positive voltage for transfer roller cleaning. [0 to 2 / **2.0** / 0.1 KV/step]
2326 003	Posi. Bias: LS	*EGB	
2326 005	Nega. Bias: RS	*EGB	Adjusts the negative voltage for transfer roller cleaning. [0 to 60 / **60.0** / 0.1V/step]
2326 006	Nega. Bias: LS	*EGB	

2352	**[Trans.Belt Bias]** Transfer Belt Current ([Color], Process Speed) Process Speed -> RS: Regular speed		
2352 001	[K]: RS		Adjusts the current that is applied to the transfer belt. [0 to 60 / **P2a 15.0, P2b: 17.0** / 0.1 µA /step]

2353	**[Trans.Belt Bias]** Transfer Belt Current ([Color], Process Speed) Process Speed -> LS: Low speed		
2353 001	[K]: LS	*EGB	Adjusts the current that is applied to the transfer belt. [0 to 60 / **P2a 6.0, P2b: 7.5** / 0.1 µA /step]

2357	**[Trans.Belt Bias]** Transfer Belt Current ([Color], Process Speed) Process Speed -> RS: Regular speed		
2357 001	[FC/ K]: RS	*EGB	Adjusts the current that is applied to the transfer belt. [0 to 60 / **P2a 15.0, P2b: 17.0** / 0.1 µA /step]
2357 002	[FC/ M]: RS	*EGB	[0 to 60 / **P2a 12.5, P2b: 15.0** / 0.1 µA /step]
2357 003	[FC/ C]: RS	*EGB	
2357 004	[FC/ Y]: RS	*EGB	

2358	**[Trans.Belt Bias]** Transfer Belt Current ([Color], Process Speed) Process Speed -> LS: Low speed		
	Adjusts the current that is applied to the transfer belt.		
2358 001	[FC/ K]: LS	*EGB	[0 to 60 / **P2a 6.0, P2b: 7.5** / 0.1 micro-A/step]
2358 002	[FC/ M]: LS	*EGB	[0 to 60 / **6.0** / 0.1 µA /step]
2358 003	[FC/ C]: LS	*EGB	
2358 004	[FC/ Y]: LS	*EGB	

2402	**[Normal: [K]]** Transfer roller current and discharge plate voltage for the image area of plain paper 1 in B/W mode (Process Speed, Paper Side, Unit) Process Speed -> RS: Regular speed, Paper Side: 1st or 2nd Unit -> T.Roll2: Transfer roller, Separa.: Discharge plate (paper separation)		
2402 007	RS: 1st: T. Roll2	*EGB	Adjusts the transfer roller current. [0 to 60 / **P2a 25.0, P2b: 18.3/15.5 (NA/EU)** / 0.1 -µA/step]
2402 008	RS: 1st: Separa.	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2** / 0.1 -KV/step]
2402 012	RS: 2nd: T. Roll2	*EGB	[0 to 60 / **P2a 20.0/15.0 (NA/EU), P2b: 18.3/15.5 (NA/EU)** / 0.1 -µA /step]
2402 013	RS: 2nd: Separa.	*EGB	[0 to 4 / **2.0** / 0.1 -KV/step]

2403	**[Normal: [K]]** Transfer roller current and discharge plate voltage for the image area of plain paper 1 in B/W mode (Process Speed, Paper Side) Process Speed -> LS: Low speed, Paper Side: 1st or 2nd

2403 007	LS: 1st: T. Roll2	*EGB	Adjusts the transfer roller current. [0 to 60 / **P2a 15.0/17.5 (NA/EU), P2b: 15.3/12.5 (NA/EU)** / 0.1 -µA /step]
2403 008	LS: 1st: Separa.	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2.0** / 0.1 -KV/step]
2403 012	LS: 2nd: T. Roll2	*EGB	[0 to 60 / **P2a 15.0/12.5 (NA/EU), P2b: 15.3/12.5 (NA/EU)** / 0.1 -µA /step]
2403 013	LS: 2nd: Separa.	*EGB	[0 to 4 / **2.0** / 0.1 -KV/step]

2407	**[Normal: [FC]]** Transfer roller current and discharge plate voltage for the image area of plain paper 1 in color mode (Process Speed, Paper Side) Process Speed -> RS: Regular speed, Paper Side: 1st or 2nd		
2407 013	RS: 1st: T. Roll2	*EGB	Adjusts the transfer roller current. [0 to 60 / **P2a 27.5/25.0 (NA/EU), P2b: 30.2/27.3 (NA/EU)** / 0.1 -µA /step]
2407 014	RS: 1st: Separa.	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2.0** / 0.1 -KV/step]
2407 021	RS: 2nd: T. Roll2	*EGB	[0 to 60 / **P2a 25.0/27.5 (NA/EU), P2b: 25.5/30.2 (NA/EU)** / 0.1 -µA /step]
2407 022	RS: 2nd: Separa.	*EGB	[0 to 4 / **2.0** / 0.1 -KV/step]

2408	**[Normal: [FC]]** Transfer roller current and discharge plate voltage for the image area of plain paper 1 in color mode (Process Speed, Paper Side) Process Speed -> LS: Low speed, Paper Side: 1st or 2nd		
2408 013	LS: 1st: T. Roll2	*EGB	Adjusts the transfer roller current. [0 to 60 / **P2a 20.0/17.5 (NA/EU), P2b: 21.3** / 0.1 -µA /step]
2408 014	LS: 1st: Separa.	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2.0** / 0.1 -KV/step]
2408 021	LS: 2nd: T. Roll2	*EGB	[0 to 60 / **P2a 20.0, P2b: 18.3/19.5 (NA/EU)** / 0.1 -µA /step]
2408 022	LS: 2nd: Separa.	*EGB	[0 to 4 / **2.0** / 0.1 -KV/step]

2421	**[Normal:[K]:LE]** Transfer roller current and discharge plate voltage for the leading edge area of plain paper 1 in B/W mode Paper Side: 1st or 2nd Unit -> T.Roll2: Transfer roller, Separation: Discharge plate (paper separation)		
2421 003	Separation	*EGB	[0 to 400 / **100** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2421 007	T.Roll2: 1st	*EGB	
2421 012	T.Roll2: 2nd	*EGB	

2422	**[Switch Timing]** Switch timing from leading edge to normal, plain paper 1 (Paper Type, Edge) Paper Type -> N: Normal LE: Leading Edge		
2422 002	T. Roll 2: N: LE	*EGB	[0 to 200 / **10** / 1 mm/step]
2422 003	Separation: N: LE	*EGB	[0 to 200 / **25** / 1 mm/step]

2423	**[Normal: [K]: TE]** Transfer roller current and discharge plate voltage for the trailing edge area of plain paper 1 in B/W mode Paper side: 1st or 2nd Unit -> T.Roll2: Transfer roller, Separation: Discharge plate (paper separation)		
2423 003	Separation	*EGB	[0 to 400 / **100** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2423 007	T. Roll 2: 1st	*EGB	
2423 012	T. Roll 2: 2nd	*EGB	

2424	**[Switch Timing]** Switch timing from normal to trailing edge, plain paper 1 (Paper Type, Edge) Paper Type -> N: Normal, Edge ->TE: Trailing Edge		
2424 002	T. Roll 2: N: TE	*EGB	[0 to 200 / **10** / 1 mm/step]
2424 003	Separation: N: TE	*EGB	[0 to 200 / **30** / 1 mm/step]

2426	**[Normal: [FC]: LE]** Transfer roller current and discharge plate voltage for the leading edge area of plain paper 1 in color mode Paper side: 1st or 2nd		
2426 003	Separation	*EGB	[0 to 400 / **100** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2426 007	T. Roll 2: 1st	*EGB	
2426 012	T. Roll 2: 2nd	*EGB	

2428	**[Normal: [FC]: TE]** Transfer roller current and discharge plate voltage for the trailing edge area of plain paper 1 in color mode		
2428 003	Separation	*EGB	[0 to 400 / **100** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2428 007	T. Roll 2: 1st	*EGB	
2428 012	T. Roll 2: 2nd	*EGB	

2432	**[Normal2: [K]]** Transfer roller current and discharge plate voltage for the image area of plain paper 2 in B/W mode (Process Speed, Paper Side, Unit) Process Speed -> RS: Regular speed, Paper Side: 1st or 2nd Unit -> T.Roll2: Transfer roller, Separa.: Discharge plate (paper separation)		
2432 007	RS: 1st: T. Roll 2	*EGB	Adjusts the transfer roller current. [0 to 60 / **P2a 17.5, P2b: 15.5/15.3 (NA/EU)** / 0.1 -µA /step]
2432 008	RS: 1st: Separa.	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2.0** / 0.1 -KV/step]
2432 012	RS: 2nd: T. Roll 2	*EGB	[0 to 60 / **P2a 15.0, P2b: 15.3** / 0.1 -µA /step]
2432 013	RS: 2nd: Separa.	*EGB	[0 to 4 / **2.0** / 0.1 -KV/step]

2433	**[Normal2: [K]]** Transfer roller current and discharge plate voltage for the image area of plain paper 2 in B/W mode (Process Speed, Paper Side) Process Speed -> LS: Low speed, Paper Side: 1st or 2nd		
2433 007	LS: 1st: T. Roll 2	*EGB	Adjusts the transfer roller current. [0 to 60 / **P2a 11.0, P2b: 10.0/12.3 (NA/EU)** / 0.1 -µA /step]
2433 008	LS: 1st: Separa.	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2.0** / 0.1 -KV/step]
2433 012	LS: 2nd: T. Roll 2	*EGB	[0 to 60 / **P2a 12.5, P2b: 12.5/12.3 (NA/EU)** / 0.1 -µA /step]
2433 013	LS: 2nd: Separa.	*EGB	[0 to 4 / **2.0** / 0.1 -KV/step]

2437	**[Normal2: [FC]]** Transfer roller current and discharge plate voltage for the

	image area of plain paper 2 in color mode (Process Speed, Paper Side) RS: Regular Speed, Paper Side: 1st or 2nd		
2437 013	RS: 1st: T. Roll 2	*EGB	Adjusts the transfer roller current. [0 to 60 / **P2a 20.0, P2b: 24.3/18.3 (NA/EU)** / 0.1 -µA /step]
2437 014	RS: 1st: Separa.	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2.0** / 0.1 -KV/step]
2437 021	RS: 2nd: T. Roll 2	*EGB	[0 to 60 / **P2a 20.0/22.5 (NA/EU), P2b: 19.5/21.3 (NA/EU)** / 0.1 -µA /step]
2437 022	RS: 2nd: Separa.	*EGB	[0 to 4 / **2.0** / 0.1 -KV/step]

2438	**[Normal2: [FC]]** Transfer roller current and discharge plate voltage for the image area of plain paper 2 in color mode (Process Speed, Paper Side) LS: Low Speed, Paper Side: 1st or 2nd		
2438 013	LS: 1st: T. Roll 2	*EGB	Adjusts the transfer roller current. [0 to 60 / **P2a 12.5/15.0 (NA/EU), P2b: 12.3** / 0.1 -µA /step]
2438 014	LS: 1st: Separa.	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2.0** / 0.1 -KV/step]
2438 021	LS: 2nd: T. Roll 2	*EGB	[0 to 60 / **P2a 15.0/20.0 (NA/EU), P2b: 13.5/15.3 (NA/EU)** / 0.1 -µA /step]
2438 022	LS: 2nd: Separa.	*EGB	[0 to 4 / **2.0** / 0.1 -KV/step]

2451	**[Normal2:[K]:LE]** Transfer roller current and discharge plate voltage for the leading edge area of plain paper 2 in B/W mode Paper Side: 1st or 2nd Unit -> T.Roll2: Transfer roller, Separation: Discharge plate (paper separation)		
2451 003	Separation	*EGB	[0 to 400 / **100** / 5%/step]
2451 007	Trans.Roll2: 1st	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2451 012	Trans.Roll2: 2nd	*EGB	

2452	**[Switch Timing]** Switch timing from leading edge to normal, plain paper 2 (Paper Type, Edge) Paper Type -> N: Normal, LE: Leading Edge		
2452 002	T. Roll 2: N2: LE	*EGB	[0 to 200 / **10** / 1 mm/step]

2452 003	Separation: N2: LE	*EGB	[0 to 200 / **25** / 1 mm/step]

2453	**[Normal2: [K]: TE]** Transfer roller current and discharge plate voltage for the trailing edge area of plain paper 2 in B/W mode Paper side: 1st or 2nd Unit -> T.Roll2: Transfer roller, Separation: Discharge plate (paper separation)		
2453 003	Separation	*EGB	[0 to 400 / **100** / 5%/step]
2453 007	T. Roll 2: 1st	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2453 012	T. Roll 2: 2nd	*EGB	

2454	**[Switch Timing]** Switch timing from normal to trailing edge, plain paper 2 (Paper Type, Edge) Paper Type -> N: Normal, TE: Trailing Edge		
2454 002	T. Roll 2: N2: TE	*EGB	[0 to 200 / **10** / 1 mm/step]
2454 003	Separation: N2: TE	*EGB	[0 to 200 / **30** / 1 mm/step]

2456	**[Normal2:[FC]:LE]** Transfer roller current and discharge plate voltage for the leading edge area of plain paper 2 in color mode Paper Side: 1st or 2nd		
2456 003	Separation	*EGB	[0 to 400 / **100** / 5%/step]
2456 007	T. Roll 2: 1st	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2456 012	T. Roll 2: 2nd	*EGB	

2458	**[Normal2:[FC]:TE]** Transfer roller current and discharge plate voltage for the trailing edge area of plain paper 2 in color mode Paper Side: 1st or 2nd		
2458 003	Separation	*EGB	[0 to 400 / **100** / 5%/step]
2458 007	T. Roll 2: 1st	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2458 012	T. Roll 2: 2nd	*EGB	

2462	**[Spec1:[K]]** Transfer roller current and discharge plate voltage for the leading edge area of special paper 1 in B/W mode Paper Side: 1st or 2nd

2462 007	RS: 1st: T.Roll2	*EGB	[0 to 100 / **P2a 22.5, P2b: 15.5** / 0.1 –μA /step]
2462 008	RS: 1st:Separa.	*EGB	[0 to 4 / **2** / 0.1 -kV/step]
2462 012	RS: 2nd: T.Roll2	*EGB	[0 to 100 / **25.0** / 0.1 -μA /step]
2462 013	RS: 2nd: Separa.	*EGB	[0 to 4 / **2** / 0.1 -kV/step]

2463	**[Spec1:[K]]** Transfer roller current and discharge plate voltage for the trailing edge area of special paper 1 in B/W mode Paper Side: 1st or 2nd		
2463 007	LS: 1st: T.Roll2	*EGB	[0 to 100 / **P2a 15.0, P2b: 12.5** / 0.1 -μA /step]
2463 008	LS: 1st:Separa.	*EGB	[0 to 4 / **2** / 0.1 -kV/step]
2463 012	LS: 2nd: T.Roll2	*EGB	[0 to 100 / **20.0** / 0.1 -μA /step]
2463 013	LS: 2nd: Separa.	*EGB	[0 to 4 / **2** / 0.1 -kV/step]

2467	**[Spec1:[FC]]** Transfer roller current and discharge plate voltage for the leading edge area of special paper 1 in color mode Paper Side: 1st or 2nd		
2467 013	RS: 1st: T.Roll2	*EGB	[0 to 100 / **P2a 22.5, P2b: 18.5** / 0.1 -μA /step]
2467 014	RS: 1st:Separa.	*EGB	[0 to 4 / **2** / 0.1 -kV/step]
2467 021	RS: 2nd: T.Roll2	*EGB	[0 to 100 / **P2a 35.0, P2b: 30.0** / 0.1 -μA /step]
2467 022	RS: 2nd: Separa.	*EGB	[0 to 4 / **2** / 0.1 -kV/step]

2468	**[Spec1:[FC]]** Transfer roller current and discharge plate voltage for the trailing edge area of special paper 1 in color mode Paper Side: 1st or 2nd		
2468 013	LS: 1st: T.Roll2	*EGB	[0 to 100 / **P2a 12.5, P2b: 17.5** / 0.1 -μA /step]
2468 014	LS: 1st:Separa.	*EGB	[0 to 4 / **2** / 0.1 -kV/step]
2468 021	LS: 2nd: T.Roll2	*EGB	[0 to 100 / **P2a 35.0, P2b: 25.0** / 0.1 -μA /step]
2468 022	LS: 2nd: Separa.	*EGB	[0 to 4 / **2** / 0.1 -kV/step]

2472	**[Glossy2:[K]]** Transfer roller current and discharge plate voltage for the leading edge area of glossy paper 2 in B/W mode Paper Side: 1st or 2nd		
2472 007	RS: 1st: T.Roll2	*EGB	[0 to 100 / **P2a 15.0, P2b: 12.5** / 0.1 -µA /step]
2472 008	RS: 1st:Separa.	*EGB	[0 to 4 / **2** / 0.1 -kV/step]
2472 012	RS: 2nd: T.Roll2	*EGB	[0 to 100 / **13.0** / 0.1 -µA /step]
2472 013	RS: 2nd: Separa.	*EGB	[0 to 4 / **2** / 0.1 -kV/step]

2473	**[Glossy2:[K]]** Transfer roller current and discharge plate voltage for the trailing edge area of glossy paper 2 in B/W mode Paper Side: 1st or 2nd		
2473 007	LS: 1st: T.Roll2	*EGB	[0 to 100 / **10.0** / 0.1 -µA /step]
2473 008	LS: 1st:Separa.	*EGB	[0 to 4 / **2** / 0.1 -kV/step]
2473 012	LS: 2nd: T.Roll2	*EGB	[0 to 100 / **P2a 11.2, P2b: 10.0** / 0.1 -µA/step]
2473 013	LS: 2nd: Separa.	*EGB	[0 to 4 / **2** / 0.1 -kV/step]

2477	**[Glossy2:[FC]]** Transfer roller current and discharge plate voltage for the leading edge area of glossy paper 2 in color mode Paper Side: 1st or 2nd		
2477 013	RS: 1st: T.Roll2	*EGB	[0 to 100 / **15.0** / 0.1 -µA/step]
2477 014	RS: 1st:Separa.	*EGB	[0 to 4 / **2** / 0.1 -kV/step]
2477 021	RS: 2nd: T.Roll2	*EGB	[0 to 100 / **P2a 17.5, P2b: 15.0** / 0.1 -µA/step]
2477 022	RS: 2nd: Separa.	*EGB	[0 to 4 / **2** / 0.1 -kV/step]

2478	**[Glossy2:[FC]]** Transfer roller current and discharge plate voltage for the trailing edge area of glossy paper 2 in color mode Paper Side: 1st or 2nd		
2478 013	LS: 1st: T.Roll2	*EGB	[0 to 100 / **10.0** / 0.1 -µA /step]
2478 014	LS: 1st: Separa.	*EGB	[0 to 4 / **2** / 0.1 -kV/step]
2478 021	LS: 2nd: T.Roll2	*EGB	[0 to 100 / **P2a 13.5, P2b: 10.0** / 0.1 -µA/step]
2478 022	LS: 2nd: Separa.	*EGB	[0 to 4 / **2** / 0.1 -kV/step]

2481	**[Spec1:[K]:TE]** Transfer roller current and discharge plate voltage correction for the leading edge area of special paper 1 in B/W mode

	Paper Side: 1st or 2nd		
2481 007	RS: 1st: T.Roll2	*EGB	[0 to 400 / **100** / 5%/step]
2481 012	RS: 2nd: T.Roll2	*EGB	

2483	**[Spec1:[K]:LE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of special paper 1 in B/W mode Paper Side: 1st or 2nd		
2483 007	LS: 1st: T.Roll2	*EGB	[0 to 400 / **100** / 5%/step]
2483 012	LS: 2nd: T.Roll2	*EGB	

2486	**[Spec1:[FC]:TE]** Transfer roller current and discharge plate voltage correction for the leading edge area of special paper 1 in color mode Paper Side: 1st or 2nd		
2486 007	RS: 1st: T.Roll2	*EGB	[0 to 400 / **100** / 5%/step]
2486 012	RS: 2nd:Separa.	*EGB	

2488	**[Spec1:[FC]:LE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of special paper 1 in color mode Paper Side: 1st or 2nd		
2488 007	LS: 1st: T.Roll2	*EGB	[0 to 400 / **100** / 5%/step]
2488 012	LS: 1st:Separa.	*EGB	

2491	**[Glossy2:[K]:TE]** Transfer roller current and discharge plate voltage correction for the leading edge area of glossy paper 2 in B/W mode Paper Side: 1st or 2nd		
2491 007	RS: 1st: T.Roll2	*EGB	[0 to 400 / **100** / 5%/step]
2491 012	RS: 2nd: T.Roll2	*EGB	

2493	**[Glossy2:[K]:LE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of glossy paper 2 in B/W mode Paper Side: 1st or 2nd		
2493 007	LS: 1st: T.Roll2	*EGB	[0 to 400 / **100** / 5%/step]
2493 012	LS: 2nd: T.Roll2	*EGB	

2496	**[Glossy2:[FC]:TE]** Transfer roller current and discharge plate voltage

	correction for the leading edge area of glossy paper 2 in color mode Paper Side: 1st or 2nd		
2496 007	RS: 1st: T.Roll2	*EGB	[0 to 400 / **100** / 5%/step]
2496 012	RS: 2nd:Separa.	*EGB	

2498	**[Glossy2:[FC]:LE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of glossy paper 2 in color mode Paper Side: 1st or 2nd		
2498 007	LS: 1st: T.Roll2	*EGB	[0 to 400 / **100** / 5%/step]
2498 012	LS: 2nd:Separa.	*EGB	

2501	**[Thick: [K]]** Transfer roller current and discharge plate voltage for the image area of thick paper 1 in B/W mode Paper Side: 1st or 2nd Unit -> T.Roll2: Transfer roller, Separa.: Discharge plate (paper separation)		
2501 007	T. Roll 2: 1st	*EGB	Adjusts the transfer roller current. [0 to 60 / **P2a 10.0, P2b: 9.2** / 0.1 -µA /step]
2501 008	Separation: 1st	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2.0** / 0.1 -KV/step]
2501 012	T. Roll 2: 2nd	*EGB	[0 to 60 / **P2a 12.5, P2b: 12.3** / 0.1 -µA /step]
2501 013	Separation: 2nd	*EGB	[0 to 4 / **2.0** / 0.1 -KV/step]

2506	**[Thick: [FC]]** Transfer roller current and discharge plate voltage for the image area of thick paper 1 in color mode Paper Side: 1st or 2nd		
2506 013	T. Roll 2: 1st	*EGB	Adjusts the transfer roller current. [0 to 60 / **P2a 11.0, P2b: 12.3** / 0.1 -µA /step]
2506 014	Separation: 1st	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2.0** / 0.1 -KV/step]
2506 021	T. Roll 2: 2nd	*EGB	[0 to 60 / **P2a 17.5, P2b: 18.3** / 0.1 -µA /step]
2506 022	Separation: 2nd	*EGB	[0 to 4 / **2.0** / 0.1 -KV/step]

2521	**[Thick: [K]: LE]** Transfer roller current and discharge plate voltage correction for the leading edge area of thick paper 1 in B/W mode Paper Side: 1st or 2nd

2521 003	Separation	*EGB	[0 to 400 / **100** / 5%/step]
2521 007	T. Roll 2: 1st	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2521 012	T. Roll 2: 2nd	*EGB	

2522	**[Switch Timing]** Switch timing from leading edge to normal, thick paper 1 (Paper Type, Edge) Paper Type -> TC: Thick, LE: Leading Edge		
2522 002	T. Roll 2: Thick: LE	*EGB	[0 to 200 / **10** / 1 mm/step]
2522 003	Separation: TC: LE	*EGB	[0 to 200 / **25** / 1 mm/step]

2523	**[Thick: [K]: TE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of thick paper 1 in B/W mode Paper Side: 1st or 2nd		
2523 003	Separation	*EGB	[0 to 400 / **100** / 5%/step]
2523 007	T. Roll 2: 1st	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2523 012	T. Roll 2: 2nd	*EGB	

2524	**[Switch Timing]** Switch timing from normal to trailing edge, thick paper 1 (Paper Type, Edge) Paper Type -> TC: Thick, TE: Trailing Edge		
2524 002	T. Roll 2: Thick: TE	*EGB	[0 to 200 / **10** / 1 mm/step]
2524 003	Separation: TC: TE	*EGB	[0 to 200 / **30** / 1 mm/step]

2526	**[Thick: [FC]: LE]** Transfer roller current and discharge plate voltage correction for the leading edge area of thick paper 1 in color mode Paper Side: 1st or 2nd		
2526 003	Separation	*EGB	[0 to 400 / **100** / 5%/step]
2526 007	T. Roll 2: 1st	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2526 012	T. Roll 2: 2nd	*EGB	

2528	**[Thick: [FC]: TE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of thick paper 1 in color mode Paper Side: 1st or 2nd		
2528 003	Separation	*EGB	[0 to 400 / **100** / 5%/step]

2528 007	T. Roll 2: 1st	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2528 012	T. Roll 2: 2nd	*EGB	

2531	**[Thick2: [K]]** Transfer roller current and discharge plate voltage for the image area of thick paper 2 in B/W mode Unit -> T.Roll2: Transfer roller, Separa.: Discharge plate (paper separation)		
2531 007	Transfer Roller 2	*EGB	Adjusts the transfer roller current. [0 to 60 / **P2a 10.0, P2b: 9.2** / 0.1 -µA /step]
2531 008	Separation	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2.0** / 0.1 -KV/step]

2536	**[Thick2: [FC]]** Transfer roller current and discharge plate voltage for the image area of thick paper 2 in color mode		
2536 013	Transfer Roller 2	*EGB	Adjusts the transfer roller current. [0 to 60 / **P2a 12.5, P2b: 12.3** / 0.1 -µA /step]
2536 014	Separation	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2.0** / 0.1 -KV/step]

2551	**[Thick2: [K]: LE]** Transfer roller current and discharge plate voltage correction for the leading edge area of thick paper 2 in B/W mode		
2551 003	Separation	*EGB	[0 to 400 / **100** / 5%/step]
2551 007	Transfer Roller2	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.

2552	**[Switch Timing]** Switch timing from leading edge to normal, thick paper 2 (Paper Type, Edge) Paper Type -> TC2: Thick 2, LE: Leading Edge		
2552 002	T. Roll 2: TC2: LE	*EGB	[0 to 200 / **10** / 1 mm/step]
2552 003	Separa.: TC2: LE	*EGB	[0 to 200 / **30** / 1 mm/step]

2553	**[Thick2: [K]: TE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of thick paper 2 in B/W mode		
2553 003	Separation	*EGB	[0 to 400 / **100** / 5%/step]
2553 007	Transfer Roller2	*EGB	The value displayed on the LCD is different

			from these SP's values. For example, "20%" on the LCD actually means 100%.

2554	**[Switch Timing]** Switch timing from normal to trailing edge, thick paper 2 (Paper Type, Edge) Paper Type -> TC2: Thick 2, TE: Trailing Edge		
2554 002	T. Roll 2: TC2: TE	*EGB	[0 to 200 / **10** / 1 mm/step]
2554 003	Separa.: TC2: TE	*EGB	[0 to 200 / **30** / 1 mm/step]

2556	**[Thick2: [FC]: LE]** Transfer roller current and discharge plate voltage correction for the leading edge area of thick paper 2 in color mode		
2556 003	Separation	*EGB	[0 to 400 / **100** / 5%/step]
2556 007	Transfer Roller2	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.

2558	**[Thick2: [FC]: TE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of thick paper 2 in color mode		
2558 003	Separation	*EGB	[0 to 400 / **100** / 5%/step]
2558 007	Transfer Roller2	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.

2561	**[Special1: [K]: LE]** Transfer roller current and discharge plate voltage correction for the leading edge area of special paper 1 in B/W mode		
2561 003	Separation	*EGB	[0 to 400 / **100** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.

2563	**[Special1: [K]: TE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of special paper 1 in B/W mode		
2563 003	Separation	*EGB	[0 to 400 / **100** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.

2566	**[Special1: [FC]: LE]** Transfer roller current and discharge plate voltage correction for the leading edge area of special paper 1 in color mode		
2566 003	Separation	*EGB	[0 to 400 / **100** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.

2568	**[Special1: [FC]: TE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of special paper 1 in color mode		
2568 003	Separation	*EGB	[0 to 400 / **100** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.

2571	**[Glossy2: [K]: LE]** Transfer roller current and discharge plate voltage correction for the leading edge area of glossy paper 2 in B/W mode		
2571 003	Separation	*EGB	[0 to 400 / **100** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.

2573	**[Glossy2: [K]: TE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of glossy paper 2 in B/W mode		
2573 003	Separation	*EGB	[0 to 400 / **100** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.

2576	**[Glossy2: [FC]: LE]** Transfer roller current and discharge plate voltage correction for the leading edge area of glossy paper 2 in color mode		
2576 003	Separation	*EGB	[0 to 400 / **100** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.

2578	**[Glossy2: [FC]: TE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of glossy paper 2 in color mode		
2578 003	Separation	*EGB	[0 to 400 / **100** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.

2601	**[OHP: [K]]** Transfer roller current and discharge plate voltage for the image area of OHP in B/W mode Unit -> T.Roll2: Transfer roller, Separa.: Discharge plate (paper separation)		
2601 002	Transfer Roller2	*EGB	Adjusts the transfer roller current. [0 to 60 / **P2a 15.0, P2b: 7.5** / 0.1 -µA /step]
2601 003	Separation	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2.0** / 0.1 -KV/step]

2606	**[OHP: [FC]]** Transfer roller current and discharge plate voltage for the image area of OHP in color mode		
2606 005	Transfer Roller2	*EGB	Adjusts the transfer roller current. [0 to 60 / **P2a 15.0, P2b: 21.3** / 0.1 -µA /step
2606 006	Separation	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2** / 0.1 -KV/step]

2621	**[OHP: [K]: LE]** Transfer roller current and discharge plate voltage correction for the leading edge area of OHP in B/W mode		
2621 002	Transfer Roller2	*EGB	[0 to 400 / **100** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2621 003	Separation	*EGB	

2622	**[Switch Timing]** Switch timing from leading edge to normal, OHP (Paper Type, Edge) Paper Type -> OHP, LE: Leading Edge		
2622 002	T. Roll 2: OHP: LE	*EGB	[0 to 200 / **10** / 1 mm/step]
2622 003	Separa.: OHP: LE	*EGB	[0 to 200 / **25** / 1 mm/step]

2623	**[OHP: [K]: TE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of OHP in B/W mode		
2623 002	Transfer Roller2	*EGB	[0 to 400 / **100** / 5%/step]
2623 003	Separation	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.

2624	**[Switch Timing]** Switch timing from normal to trailing edge, OHP (Paper Type, Edge) Paper Type -> OHP, TE: Trailing Edge		
2624 002	T. Roll 2: OHP: TE	*EGB	[0 to 200 / **10** / 1 mm/step]
2624 003	Separa.: OHP: TE	*EGB	[0 to 200 / **30** / 1 mm/step]

2626	**[OHP: [FC]: LE]** Transfer roller current and discharge plate voltage correction for the leading edge area of OHP in color mode		
2626 002	Transfer Roller2	*EGB	[0 to 400 / **100** / 5%/step]
2626 003	Separation	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.

2628	**[OHP: [FC]: TE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of OHP in B/W mode		
2628 002	Transfer Roller2	*EGB	[0 to 400 / **100** / 5%/step]
2628 003	Separation	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.

2631	**[Thin: [K]]** Transfer roller current and discharge plate voltage for the image area of thin paper in B/W mode Unit -> T.Roll2: Transfer roller, Separa.: Discharge plate (paper separation)		
2631 007	Transfer Roller 2	*EGB	Adjusts the transfer roller current. [0 to 60 / **30.0** / 0.1 -µA /step]
2631 008	Separation	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2.0** / 0.1 -KV/step]

2633	**[Thin: [K]]** Transfer roller current and discharge plate voltage for the image

	area of thin paper in B/W mode Process Speed -> LS: Low Speed		
2633 007	T.Roll 2: LS	*EGB	Adjusts the transfer roller current. [0 to 60 / **15.0** / 0.5 -µA /step]
2633 008	Separation: LS	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2.0** / 0.1 -KV/step]

2636	**[Thin: [FC]]** Transfer roller current and discharge plate voltage for the image area of thin paper in color mode		
2636 013	Transfer Roller 2	*EGB	Adjusts the transfer roller current. [0 to 100 / **P2a 27.5/25.0 (NA/EU), P2b: 30.2/24.3 (NA/EU)** / 0.1 -µA /step]
2636 014	Separation	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2.0** / 0.1 -KV/step]

2638	**[Thin: [FC]]** Transfer roller current and discharge plate voltage for the image area, of thin paper in color mode Process Speed -> LS: Low Speed		
2638 013	T.Roll 2: LS	*EGB	Adjusts the transfer roller current. [0 to 100 / **P2a 17.5, P2b: 21.3/18.3 (NA/EU)** / 0.1 -µA /step]
2638 014	Separation: LS	*EGB	Adjusts the discharge plate voltage. [0 to 4 / **2.0** / 0.1 -KV/step]

2651	**[Thin: [K]: LE]** Transfer roller current and discharge plate voltage correction for the leading edge area of thin paper in B/W mode		
2651 003	Separation	*EGB	[0 to 400 / **200** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "40%" on the LCD actually means 200 %.
2651 007	Transfer Roller2	*EGB	[0 to 400 / **100** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.

2652	**[Switch Timing]** Switch timing from leading edge to normal, thin paper (Paper Type, Edge) Paper Type -> TN: Thin, LE: Leading Edge		
2652 002	T. Roll 2: Thin: LE	*EGB	[0 to 200 / **10** / 1 mm/step]
2652 003	Separation: TN: LE	*EGB	[0 to 200 / **25** / 1 mm/step]

2653	**[Thin: [K]: TE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of thin paper in B/W mode		
2653 003	Separation	*EGB	[0 to 400 / **100** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2653 007	Transfer Roller2	*EGB	

2654	**[Switch Timing]** Switch timing from normal to trailing edge, thin paper (Paper Type, Edge) Paper Type -> TN: Thin, TE: Trailing Edge		
2654 002	T. Roll 2: Thin: TE	*EGB	[0 to 200 / **10** / 1 mm/step]
2654 003	Separation: TN: TE	*EGB	[0 to 200 / **30** / 1 mm/step]

2656	**[Thin: [FC]: LE]** Transfer roller current and discharge plate voltage correction for the leading edge area of thin paper in color mode		
2656 003	Separation	*EGB	[0 to 400 / **200** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "40%" on the LCD actually means 200 %.
2656 007	Transfer Roller2	*EGB	[0 to 400 / **100** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.

2658	**[Thin: [FC]: TE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of thin paper in color mode		
2658 003	Separation	*EGB	[0 to 400 / **100** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2658 007	Transfer Roller2	*EGB	

2751	**[Special3:[K]]** Transfer roller current and discharge plate voltage for the image area of special paper 3 in B/W mode Paper Side: 1st or 2nd		
2751 007	T.Roll 2: 1st	*EGB	Adjusts the transfer roller current for 1st side. [0 to 100 / **7.5** / 0.1 -µA /step]
2751 008	Separation: 1st	*EGB	Adjusts the discharge plate voltage for 1st side. [0 to 4 / **2.0** / 0.1 -KV/step]
2751 021	T.Roll2:nd	*EGB	Adjusts the transfer roller current for 2nd side. [0 to 100 / **P2a: 15.0, P2b: 10.0** / 0.1 -µA /step]
2751 022	Separation: 2nd	*EGB	Adjusts the discharge plate voltage for 2nd side. [0 to 4 / **2.0** / 0.1 -KV/step]

2756	**[Special3:[FC]]** Transfer roller current and discharge plate voltage for the image area of special paper 3 in color mode Paper Side: 1st or 2nd		
2756 013	T.Roll 2: 1st	*EGB	Adjusts the transfer roller current for 1st side. [0 to 100 / **10.0** / 0.1 -µA /step]
2756 014	Separation: 1st	*EGB	Adjusts the discharge plate voltage for 1st side. [0 to 4 / **2.0** / 0.1 -KV/step]
2756 021	T.Roll2:nd	*EGB	Adjusts the transfer roller current for 2nd side. [0 to 100 / **P2a: 20.0, P2b: 15.0** / 0.1 -µA /step]
2756 022	Separation: 2nd	*EGB	Adjusts the discharge plate voltage for 2nd side. [0 to 4 / **2.0** / 0.1 -KV/step]

2771	**[Special: [K]: LE]** Transfer roller current and discharge plate voltage correction for the leading edge area of special paper 3 in B/W mode Paper Side: 1st or 2nd

2771 003	Separation	*EGB	[0 to 400 / **100** / 5%/step]
2771 007	T.Roll 2: 1st	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2771 012	T.Roll 2: 2nd	*EGB	

2772	**[Switch Timing]** Switch timing from normal to leading edge, special paper 3 (Paper Type, Edge) Paper Type -> TN: Thin, TE: Trailing Edge		
2772 002	T. Roll 2: Sp3: TE	*EGB	[0 to 200 / **10** / 1 mm/step]
2772 003	Separation: TN: TE	*EGB	[0 to 200 / **25** / 1 mm/step]

2773	**[Special: [K]: TE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of special paper 3 in B/W mode Paper Side: 1st or 2nd		
2773 003	Separation	*EGB	[0 to 400 / **100** / 5%/step]
2773 007	T.Roll 2: 1st	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2773 012	T.Roll 2: 2nd	*EGB	

2774	**[Switch Timing]** Switch timing from normal to trailing edge, special paper 3 (Paper Type, Edge) Paper Type -> TN: Thin, TE: Trailing Edge		
2774 002	T. Roll 2: Sp3: TE	*EGB	[0 to 200 / **10** / 1 mm/step]
2774 003	Separation: TN: TE	*EGB	[0 to 200 / **30** / 1 mm/step]

2776	**[SP: [FC]: LE]** Transfer roller current and discharge plate voltage correction for the leading edge area of special paper 3 in color mode Paper Side: 1st or 2nd		
2776 003	Separation	*EGB	[0 to 400 / **100** / 5%/step]
2776 007	T.Roll 2: 1st	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2776 012	T.Roll 2: 2nd	*EGB	

2778	**[SP: [FC]: TE]** Transfer roller current and discharge plate voltage correction for the trailing edge area of special paper 3 in color mode Paper Side: 1st or 2nd		
2778 003	Separation	*EGB	[0 to 400 / **100** / 5%/step]

2778 007	T.Roll 2: 1st	*EGB	The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.
2778 012	T.Roll 2: 2nd	*EGB	

2901	**[T2: N: Size 4]** Transfer Roller Current: Correction for Humidity, Plain paper 1, Paper width between A5 and A6 (Environment, Process Speed, [Color], Paper Side) LS: Low Speed, RS: Regular Speed, Paper Side: 1st or 2nd Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2901 001	LL: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 135, P2b: 160** / 5%/step]
2901 002	LL: RS [K]: 2nd	*EGB	[0 to 1275 / **220** / 5%/step]
2901 003	LL: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 165, P2b: 130** / 5%/step]
2901 004	LL: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 190, P2b: 185** / 5%/step]
2901 005	LL: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 130, P2b: 135** / 5%/step]
2901 006	LL: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 240, P2b: 175** / 5%/step]
2901 007	LL: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 120, P2b: 165** / 5%/step]
2901 008	LL: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 215, P2b: 235** / 5%/step]
2901 009	MM: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 140, P2b: 130** / 5%/step]
2901 010	MM: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 235/265 (NA/EU), P2b: 265** / 5%/step]
2901 011	MM: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 150, P2b: 125** / 5%/step]
2901 012	MM: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 245, P2b: 310** / 5%/step]
2901 013	MM: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 120, P2b: 150** / 5%/step]
2901 014	MM: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 285/300 (NA/EU), P2b: 300** / 5%/step]
2901 015	MM: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 100, P2b: 145** / 5%/step]
2901 016	MM: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 290, P2b: 350** / 5%/step]
2901 017	HH: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 450** / 5%/step]
2901 018	HH: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 215/270 (NA/EU), P2b: 400** / 5%/step]
2901 019	HH: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 110, P2b: 165** / 5%/step]
2901 020	HH: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 260, P2b: 310** / 5%/step]
2901 021	HH: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 350** / 5%/step]

2901 022	HH: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 295, P2b: 540/570 (NA/EU)** / 5%/step]
2901 023	HH: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 290** / 5%/step]
2901 024	HH: LS [FC]: 2nd	*EGB	[0 to 1275 / **335** / 5%/step]

2902	**[T2: N: Size 5]** Transfer Roller Current: Correction for Humidity, Plain paper 1, Paper width A6 or less (Environment, Process Speed, [Color], Paper Side) LS: Low Speed, RS: Regular Speed, Paper Side: 1st or 2nd Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2902 001	LL: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 170/200 (NA/EU), P2b: 160** / 5%/step]
2902 002	LL: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 360, P2b: 290/275 (NA/EU)** / 5%/step]
2902 003	LL: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 200, P2b: 130** / 5%/step]
2902 004	LL: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 260, P2b: 185** / 5%/step]
2902 005	LL: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 150, P2b: 165** / 5%/step]
2902 006	LL: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 335, P2b: 240** / 5%/step]
2902 007	LL: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 160, P2b: 165** / 5%/step]
2902 008	LL: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 300, P2b: 235** / 5%/step]
2902 009	MM: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 150, P2b: 230** / 5%/step]
2902 010	MM: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 285/345 (NA/EU), P2b: 310/325 (NA/EU)** / 5%/step]
2902 011	MM: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 185/180 (NA/EU), P2b: 150** / 5%/step]
2902 012	MM: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 275, P2b: 310/** / 5%/step]
2902 013	MM: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 130, P2b: 245** / 5%/step]
2902 014	MM: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 365, P2b: 400** / 5%/step]
2902 015	MM: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 140, P2b: 295** / 5%/step]
2902 016	MM: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 320, P2b: 350** / 5%/step]
2902 017	HH: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 135, P2b: 455** / 5%/step]
2902 018	HH: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 240/290 (NA/EU), P2b: 400** / 5%/step]

2902 019	HH: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 150, P2b: 165** / 5%/step]
2902 020	HH: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 290, P2b: 310** / 5%/step]
2902 021	HH: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 400** / 5%/step]
2902 022	HH: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 320, P2b: 540/650 (NA/EU)** / 5%/step]
2902 023	HH: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 290** / 5%/step]
2902 024	HH: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 400, P2b: 335** / 5%/step]

2903	**[T2: N2: Size 4]** Transfer Roller Current: Correction for Humidity, Plain paper 2 Paper width between A5 and A6 (Environment, Process Speed, [Color], Paper Side) LS: Low Speed, RS: Regular Speed, Paper Side: 1st or 2nd Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2903 001	LL: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 135, P2b: 160** / 5%/step]
2903 002	LL: RS [K]: 2nd	*EGB	[0 to 1275 / **220** / 5%/step]
2903 003	LL: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 165, P2b: 130** / 5%/step]
2903 004	LL: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 190, P2b: 185** / 5%/step]
2903 005	LL: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 130, P2b: 135** / 5%/step]
2903 006	LL: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 200, P2b: 175** / 5%/step]
2903 007	LL: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 120, P2b: 165** / 5%/step]
2903 008	LL: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 215, P2b: 235** / 5%/step]
2903 009	MM: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 140, P2b: 130** / 5%/step]
2903 010	MM: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 250, P2b: 265** / 5%/step]
2903 011	MM: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 125/145 (NA/EU), P2b: 125** / 5%/step]
2903 012	MM: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 245, P2b: 310** / 5%/step]
2903 013	MM: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 120, P2b: 150** / 5%/step]
2903 014	MM: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 255, P2b: 355** / 5%/step]
2903 015	MM: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 145** / 5%/step]
2903 016	MM: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 290, P2b: 350** / 5%/step]
2903 017	HH: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 450** / 5%/step]
2903 018	HH: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 270/240 (NA/EU), P2b: 400** / 5%/step]

2903 019	HH: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 110, P2b: 165** / 5%/step]
2903 020	HH: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 260, P2b: 310** / 5%/step]
2903 021	HH: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 350** / 5%/step]
2903 022	HH: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 295, P2b: 540/535 (NA/EU)** / 5%/step]
2903 023	HH: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 290** / 5%/step]
2903 024	HH: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 335** / 5%/step]

2904	**[T2: N2: Size 5]** Transfer Roller Current: Correction for Humidity, Plain paper 2, Paper width A6 or less (Environment, Process Speed, [Color], Paper Side) LS: Low Speed, RS: Regular Speed, Paper Side: 1st or 2nd Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2904 001	LL: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 155, P2b: 160** / 5%/step]
2904 002	LL: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 320, P2b: 265/225 (NA/EU)** / 5%/step]
2904 003	LL: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 200/175 (NA/EU), P2b: 130** / 5%/step]
2904 004	LL: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 260/220 (NA/EU), P2b: 185** / 5%/step]
2904 005	LL: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 150, P2b: 165** / 5%/step]
2904 006	LL: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 280, P2b: 240** / 5%/step]
2904 007	LL: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 160, P2b: 165** / 5%/step]
2904 008	LL: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a:300, P2b: 235** / 5%/step]
2904 009	MM: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 150, P2b: 230** / 5%/step]
2904 010	MM: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 265/290 (NA/EU), P2b: 345** / 5%/step]
2904 011	MM: RS [FC]: 1st	*EGB	[0 to 1275 / **150** / 5%/step]
2904 012	MM: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 275, P2b: 310** / 5%/step]
2904 013	MM: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 145, P2b: 245** / 5%/step]
2904 014	MM: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 265, P2b: 375** / 5%/step]
2904 015	MM: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 165, P2b: 295** / 5%/step]
2904 016	MM: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 320, P2b: 350** / 5%/step]

2904 017	HH: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 135, P2b: 455** / 5%/step]
2904 018	HH: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 290/270 (NA/EU), P2b: 400** / 5%/step]
2904 019	HH: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 150, P2b: 165** / 5%/step]
2904 020	HH: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 290, P2b: 310** / 5%/step]
2904 021	HH: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 400** / 5%/step]
2904 022	HH: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 320, P2b: 540/535 (NA/EU)** / 5%/step]
2904 023	HH: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 290** / 5%/step]
2904 024	HH: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 400, P2b: 335** / 5%/step]

2905	**[T2: Thin: Size4]** Transfer Roller Current: Correction for Humidity, Thin Paper, Paper width between A5 and A6 (Environment, Process Speed, [Color]) LS: Low Speed, RS: Regular Speed Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2905 001	LL: RS [K]	*EGB	[0 to 1275 / **P2a: 135, P2b: 160** / 5%/step]
2905 002	LL: RS [FC]	*EGB	[0 to 1275 / **P2a: 140, P2b: 130** / 5%/step]
2905 003	LL: LS [K]	*EGB	[0 to 1275 / **P2a: 130, P2b: 135** / 5%/step]
2905 004	LL: LS [FC]	*EGB	[0 to 1275 / **P2a: 120, P2b: 165** / 5%/step]
2905 005	MM: RS [K]	*EGB	[0 to 1275 / **P2a: 140, P2b: 130** / 5%/step]
2905 006	MM: RS [FC]	*EGB	[0 to 1275 / **P2a: 140/125 (NA/EU), P2b: 125** / 5%/step]
2905 007	MM: LS [K]	*EGB	[0 to 1275 / **P2a: 120, P2b: 150** / 5%/step]
2905 008	MM: LS [FC]	*EGB	[0 to 1275 / **P2a: 140/100 (NA/EU), P2b: 145** / 5%/step]
2905 009	HH: RS [K]	*EGB	[0 to 1275 / **P2a: 125, P2b: 450** / 5%/step]
2905 010	HH: RS [FC]	*EGB	[0 to 1275 / **P2a: 110, P2b: 165** / 5%/step]
2905 011	HH: LS [K]	*EGB	[0 to 1275 / **P2a: 125, P2b: 350** / 5%/step]
2905 012	HH: LS [FC]	*EGB	[0 to 1275 / **P2a: 125, P2b: 290** / 5%/step]

2906	**[T2: Thin: Size5]** Transfer Roller Current: Correction for Humidity, Thin paper, Paper width A6 or less (Environment, Process Speed, [Color]) LS: Low Speed, RS: Regular Speed

	Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2906 001	LL: RS [K]	*EGB	[0 to 1275 / **P2a: 165, P2b: 160** / 5%/step]
2906 002	LL: RS [FC]	*EGB	[0 to 1275 / **P2a: 200, P2b: 130** / 5%/step]
2906 003	LL: LS [K]	*EGB	[0 to 1275 / **P2a: 150, P2b: 165** / 5%/step]
2906 004	LL: LS [FC]	*EGB	[0 to 1275 / **P2a: 160, P2b: 165** / 5%/step]
2906 005	MM: RS [K]	*EGB	[0 to 1275 / **P2a: 150, P2b: 230** / 5%/step]
2906 006	MM: RS [FC]	*EGB	[0 to 1275 / **P2a: 185/150 (NA/EU), P2b: 150** / 5%/step]
2906 007	MM: LS [K]	*EGB	[0 to 1275 / **P2a: 130, P2b: 245** / 5%/step]
2906 008	MM: LS [FC]	*EGB	[0 to 1275 / **P2a: 170/140 (NA/EU), P2b: 295** / 5%/step]
2906 009	HH: RS [K]	*EGB	[0 to 1275 / **P2a: 135, P2b: 455** / 5%/step]
2906 010	HH: RS [FC]	*EGB	[0 to 1275 / **P2a: 150, P2b: 165** / 5%/step]
2906 011	HH: LS [K]	*EGB	[0 to 1275 / **P2a: 125, P2b: 400** / 5%/step]
2906 012	HH: LS [FC]	*EGB	[0 to 1275 / **P2a: 125, P2b: 290** / 5%/step]

2907	**[T2: TC: Size4]** Transfer Roller Current: Correction for Humidity, Thick Paper 1, Paper width between A5 and A6 (Environment, Process Speed, [Color], Paper Side) LS: Low Speed, RS: Regular Speed, Paper Side: 1st or 2nd Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2907 001	LL: LS [K]: 1st	*EGB	[0 to 1275 / **150** / 5%/step]
2907 002	LL: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 260, P2b: 255** / 5%/step]
2907 003	LL: LS [FC]: 1st	*EGB	[0 to 1275 / **130** / 5%/step]
2907 004	LL: LS [FC]: 2nd	*EGB	[0 to 1275 / **250** / 5%/step]
2907 005	MM: LS [K]: 1st	*EGB	[0 to 1275 / **180** / 5%/step]
2907 006	MM: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 300, P2b: 335** / 5%/step]
2907 007	MM: LS [FC]: 1st	*EGB	[0 to 1275 / **150** / 5%/step]
2907 008	MM: LS [FC]: 2nd	*EGB	[0 to 1275 / **270** / 5%/step]
2907 009	HH: LS [K]: 1st	*EGB	[0 to 1275 / **170** / 5%/step]
2907 010	HH: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 300, P2b: 320** / 5%/step]

2907 011	HH: LS [FC]: 1st	*EGB	[0 to 1275 / **150** / 5%/step]
2907 012	HH: LS [FC]: 2nd	*EGB	[0 to 1275 / **270** / 5%/step]

2908	**[T2: TC: Size5]** Transfer Roller Current: Correction for Humidity, Thick paper 1, Paper width A6 or less (Environment, Process Speed, [Color], Paper Side) LS: Low Speed, RS: Regular Speed, Paper Side: 1st or 2nd Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2908 001	LL: LS [K]: 1st	*EGB	[0 to 1275 / **205** / 5%/step]
2908 002	LL: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 420, P2b: 410** / 5%/step]
2908 003	LL: LS [FC]: 1st	*EGB	[0 to 1275 / **165** / 5%/step]
2908 004	LL: LS [FC]: 2nd	*EGB	[0 to 1275 / **400** / 5%/step]
2908 005	MM: LS [K]: 1st	*EGB	[0 to 1275 / **265** / 5%/step]
2908 006	MM: LS [K]: 2nd	*EGB	[0 to 1275 / **500** / 5%/step]
2908 007	MM: LS [FC]: 1st	*EGB	[0 to 1275 / **200** / 5%/step]
2908 008	MM: LS [FC]: 2nd	*EGB	[0 to 1275 / **435** / 5%/step]
2908 009	HH: LS [K]: 1st	*EGB	[0 to 1275 / **245** / 5%/step]
2908 010	HH: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 495, P2b: 535** / 5%/step]
2908 011	HH: LS [FC]: 1st	*EGB	[0 to 1275 / **200** / 5%/step]
2908 012	HH: LS [FC]: 2nd	*EGB	[0 to 1275 / **445** / 5%/step]

2909	**[T2: TC2: Size4]** Transfer Roller Current: Correction for Humidity, Thick Paper 2, Paper width between A5 and A6 (Environment, Process Speed, [Color]) LS: Low Speed, RS: Regular Speed Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2909 001	LL: LS [K]	*EGB	[0 to 1275 / **150** / 5%/step]
2909 002	LL: LS [FC]	*EGB	[0 to 1275 / **130** / 5%/step]
2909 003	MM: LS [K]	*EGB	[0 to 1275 / **180** / 5%/step]
2909 004	MM: LS [FC]	*EGB	[0 to 1275 / **150** / 5%/step]
2909 005	HH: LS [K]	*EGB	[0 to 1275 / **170** / 5%/step]
2909 006	HH: LS [FC]	*EGB	[0 to 1275 / **150** / 5%/step]

2910	**[T2: TC2: Size5]** Transfer Roller Current: Correction for Humidity, Thick paper 2, Paper width A6 or less (Environment, Process Speed, [Color]) LS: Low Speed, RS: Regular Speed Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2910 001	LL: LS [K]	*EGB	[0 to 1275 / **205** / 5%/step]
2910 002	LL: LS [FC]	*EGB	[0 to 1275 / **165** / 5%/step]
2910 003	MM: LS [K]	*EGB	[0 to 1275 / **265** / 5%/step]
2910 004	MM: LS [FC]	*EGB	[0 to 1275 / **200** / 5%/step]
2910 005	HH: LS [K]	*EGB	[0 to 1275 / **245** / 5%/step]
2910 006	HH: LS [FC]	*EGB	[0 to 1275 / **200** / 5%/step]

2911	**[T2: SP Size4]** Transfer Roller Current: Correction for Humidity, Special paper, Paper width between A5 and A6 (Environment, Process Speed, [Color]) LS: Low Speed, RS: Regular Speed Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2911 001	LL: LS [K]	*EGB	[0 to 1275 / **150** / 5%/step]
2911 002	LL: LS [FC]	*EGB	[0 to 1275 / **130** / 5%/step]
2911 003	MM: LS [K]	*EGB	[0 to 1275 / **180** / 5%/step]
2911 004	MM: LS [FC]	*EGB	[0 to 1275 / **150** / 5%/step]
2911 005	HH: LS [K]	*EGB	[0 to 1275 / **170** / 5%/step]
2911 006	HH: LS [FC]	*EGB	[0 to 1275 / **150** / 5%/step]
101-106	These are used for 2nd side of the paper.		
2911 101	LL: LS: [K]	*EGB	[0 to 1275 / **P2a: 285, P2b: 320** / 5%/step]
2911 102	LL: LS: [FC]	*EGB	[0 to 1275 / **250** / 5%/step]
2911 103	MM: LS: [K]	*EGB	[0 to 1275 / **P2a: 300, P2b: 355 (NA/EU)150** / 5%/step]
2911 104	MM: LS: [FC]	*EGB	[0 to 1275 / **270** / 5%/step]
2911 105	HH: LS: [K]	*EGB	[0 to 1275 / **320** / 5%/step]
2911 106	HH: LS: [FC]	*EGB	[0 to 1275 / **270** / 5%/step]

2912	**[T2: SP: Size5]** Transfer Roller Current: Correction for Humidity, Special paper, Paper width A6 or less (Environment, Process Speed, [Color]) LS: Low Speed, RS: Regular Speed Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2912 001	LL: LS [K]	*EGB	[0 to 1275 / **205** / 5%/step]
2912 002	LL: LS [FC]	*EGB	[0 to 1275 / **165** / 5%/step]
2912 003	MM: LS [K]	*EGB	[0 to 1275 / **265** / 5%/step]
2912 004	MM: LS [FC]	*EGB	[0 to 1275 / **200** / 5%/step]
2912 005	HH: LS [K]	*EGB	[0 to 1275 / **245** / 5%/step]
2912 006	HH: LS [FC]	*EGB	[0 to 1275 / **200** / 5%/step]
101-106	These are used for 2nd side of the paper.		
2912 101	LL: LS: [K]	*EGB	[0 to 1275 / **P2a: 455, P2b: 535** / 5%/step]
2912 102	LL: LS: [FC]	*EGB	[0 to 1275 / **400** / 5%/step]
2912 103	MM: LS: [K]	*EGB	[0 to 1275 / **P2a: 500, P2b: 510** / 5%/step]
2912 104	MM: LS: [FC]	*EGB	[0 to 1275 / **435** / 5%/step]
2912 105	HH: LS: [K]	*EGB	[0 to 1275 / **535** / 5%/step]
2912 106	HH: LS: [FC]	*EGB	[0 to 1275 / **445** / 5%/step]

2913	**[T2: SP1: Size4]** Transfer Roller Current: Correction for Humidity, Special paper1, Paper width between A5 and A6 (Environment, Process Speed, [Color]) LS: Low Speed, RS: Regular Speed Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2913 001	LL: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 135, P2b: 160** / 5%/step]
2913 002	LL: RS [K]: 2nd	*EGB	[0 to 1275 / **220** / 5%/step]
2913 003	LL: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 135, P2b: 130** / 5%/step]
2913 004	LL: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 190, P2b: 185** / 5%/step]
2913 005	LL: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 130, P2b: 135** / 5%/step]
2913 006	LL: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 240, P2b: 175** / 5%/step]
2913 007	LL: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 120, P2b: 165** / 5%/step]
2913 008	LL: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 215, P2b: 235** / 5%/step]
2913 009	MM: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 140, P2b: 130** / 5%/step]

2913 010	MM: RS [K]: 2nd	*EGB	[0 to 1275 / **265** / 5%/step]
2913 011	MM: RS [FC]: 1st	*EGB	[0 to 1275 / **125** / 5%/step]
2913 012	MM: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 245, P2b: 310** / 5%/step]
2913 013	MM: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 120, P2b: 150** / 5%/step]
2913 014	MM: LS [K]: 2nd	*EGB	[0 to 1275 / **300** / 5%/step]
2913 015	MM: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 150, P2b: 145** / 5%/step]
2913 016	MM: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 290, P2b: 350** / 5%/step]
2913 017	HH: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 450** / 5%/step]
2913 018	HH: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 270, P2b: 400** / 5%/step]
2913 019	HH: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 110, P2b: 165** / 5%/step]
2913 020	HH: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 260, P2b: 310** / 5%/step]
2913 021	HH: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 350** / 5%/step]
2913 022	HH: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 295, P2b: 455** / 5%/step]
2913 023	HH: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 290** / 5%/step]
2913 024	HH: LS [FC]: 2nd	*EGB	[0 to 1275 / **335** / 5%/step]

2914	**[T2: SP1: Size5]** Transfer Roller Current: Correction for Humidity, Special paper1, Paper width A6 or less (Environment, Process Speed, [Color]) LS: Low Speed, RS: Regular Speed Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2914 001	LL: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 170, P2b: 160** / 5%/step]
2914 002	LL: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 310, P2b: 260** / 5%/step]
2914 003	LL: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 165, P2b: 130** / 5%/step]
2914 004	LL: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 225, P2b: 185** / 5%/step]
2914 005	LL: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 150, P2b: 165** / 5%/step]
2914 006	LL: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 335, P2b: 240** / 5%/step]
2914 007	LL: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 160, P2b: 165** / 5%/step]
2914 008	LL: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 300, P2b: 235** / 5%/step]
2914 009	MM: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 150, P2b: 230** / 5%/step]
2914 010	MM: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 275, P2b: 325** / 5%/step]
2914 011	MM: RS [FC]: 1st	*EGB	[0 to 1275 / **150** / 5%/step]
2914 012	MM: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 275, P2b: 310** / 5%/step]

2914 013	MM: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 130, P2b: 245** / 5%/step]
2914 014	MM: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 365, P2b: 400** / 5%/step]
2914 015	MM: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 200, P2b: 295** / 5%/step]
2914 016	MM: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 320, P2b: 350** / 5%/step]
2914 017	HH: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 135, P2b: 455** / 5%/step]
2914 018	HH: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 290, P2b: 400** / 5%/step]
2914 019	HH: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 150, P2b: 165** / 5%/step]
2914 020	HH: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 290, P2b: 310** / 5%/step]
2914 021	HH: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 400** / 5%/step]
2914 022	HH: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 320, P2b: 455** / 5%/step]
2914 023	HH: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 290** / 5%/step]
2914 024	HH: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 400, P2b: 335** / 5%/step]

2915	**[T2:GL2:Size4]** Transfer Roller Current: Correction for Humidity, Glossary paper2, Paper width between A5 and A6 (Environment, Process Speed, [Color]) LS: Low Speed, RS: Regular Speed Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2915 001	LL: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 135, P2b: 160** / 5%/step]
2915 002	LL: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 195, P2b: 220** / 5%/step]
2915 003	LL: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 165, P2b: 130** / 5%/step]
2915 004	LL: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 190, P2b: 185** / 5%/step]
2915 005	LL: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 130, P2b: 135** / 5%/step]
2915 006	LL: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 200, P2b: 175** / 5%/step]
2915 007	LL: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 120, P2b: 165** / 5%/step]
2915 008	LL: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 215, P2b: 235** / 5%/step]
2915 009	MM: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 140, P2b: 130** / 5%/step]
2915 010	MM: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 250, P2b: 265** / 5%/step]
2915 011	MM: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 155, P2b: 125** / 5%/step]
2915 012	MM: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 245, P2b: 310** / 5%/step]
2915 013	MM: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 120, P2b: 150** / 5%/step]
2915 014	MM: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 255, P2b: 300** / 5%/step]
2915 015	MM: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 130, P2b: 145** / 5%/step]

2915 016	MM: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 290, P2b: 350** / 5%/step]
2915 017	HH: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 450** / 5%/step]
2915 018	HH: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 270, P2b: 400** / 5%/step]
2915 019	HH: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 110, P2b: 165** / 5%/step]
2915 020	HH: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 260, P2b: 310** / 5%/step]
2915 021	HH: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 350** / 5%/step]
2915 022	HH: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 295, P2b: 465** / 5%/step]
2915 023	HH: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 290** / 5%/step]
2915 024	HH: LS [FC]: 2nd	*EGB	[0 to 1275 / **335** / 5%/step]

2916	**[T2:GL2:Size5]** Transfer Roller Current: Correction for Humidity, Glossary paper2, Paper width A6 or less (Environment, Process Speed, [Color]) LS: Low Speed, RS: Regular Speed Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2916 001	LL: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 200, P2b: 160** / 5%/step]
2916 002	LL: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 270, P2b: 235** / 5%/step]
2916 003	LL: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 200, P2b: 130** / 5%/step]
2916 004	LL: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 260, P2b: 185** / 5%/step]
2916 005	LL: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 150, P2b: 165** / 5%/step]
2916 006	LL: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 280, P2b: 240** / 5%/step]
2916 007	LL: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 160, P2b: 165** / 5%/step]
2916 008	LL: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 300, P2b: 235** / 5%/step]
2916 009	MM: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 150, P2b: 230** / 5%/step]
2916 010	MM: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 265, P2b: 345** / 5%/step]
2916 011	MM: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 195, P2b: 150** / 5%/step]
2916 012	MM: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 275, P2b: 310** / 5%/step]
2916 013	MM: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 130, P2b: 245** / 5%/step]
2916 014	MM: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 265, P2b: 350** / 5%/step]
2916 015	MM: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 175, P2b: 295** / 5%/step]
2916 016	MM: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 320, P2b: 350** / 5%/step]
2916 017	HH: RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 135, P2b: 455** / 5%/step]
2916 018	HH: RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 290, P2b: 400** / 5%/step]

2916 019	HH: RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 150, P2b: 165** / 5%/step]
2916 020	HH: RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 290, P2b: 310** / 5%/step]
2916 021	HH: LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 400** / 5%/step]
2916 022	HH: LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 320, P2b: 465** / 5%/step]
2916 023	HH: LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 125, P2b: 290** / 5%/step]
2916 024	HH: LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 400, P2b: 335** / 5%/step]

2920	**[S: HH SP: 1st]** Smaller than A5 HH Special paper, 1st side		
2920 001	T2 Switch Timing	*EGB	[0 to 200 / **15** / 1 mm/step]
2920 002	T2 Correction	*EGB	[0 to 1275 / **20** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "4%" on the LCD actually means 20 %.

2921	**[S: HH SP: 2nd]** Smaller than A5 HH Special paper, 2nd side		
2921 001	T2 Switch Timing	*EGB	[0 to 200 / **15** / 1 mm/step]
2921 002	T2 Correction	*EGB	[0 to 1275 / **0** / 5%/step] The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.

2930	**[Separa. : LE: HH]** Separation Voltage: Correction for HH Humidity at the Leading Edge (Paper Type, Process Speed, [Color]) Paper Type -> Normal, Thin Process Speed -> LS: Low speed, RS: Regular speed Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2930 001	Normal: RS: [K]	*EGB	[0 to 400 / **200** / 5%/step]
2930 002	Normal: RS: [FC]	*EGB	
2930 003	Normal: LS: [K]	*EGB	
2930 004	Normal: LS: [FC]	*EGB	
2930 005	Normal 2: RS: [K]	*EGB	
2930 006	Normal 2: RS: [FC]	*EGB	
2930 007	Normal 2: LS: [K]	*EGB	

2930 008	Normal 2: LS: [FC]	*EGB	
2930 009	Thin: RS: [K]	*EGB	
2930 010	Thin: RS: [FC]	*EGB	
2930 011	Thin: LS: [K]	*EGB	
2930 012	Thin: LS: [FC]	*EGB	

2938	**[T2:LL:SP1]** Transfer Roller Current: Correction for Humidity, LL Environment, Special paper1, (Process Speed, [Color]) LS: Low Speed, RS: Regular Speed Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2938 001	RS [K]: 1st	*EGB	[0 to 1275 / **80** / 5%/step]
2938 002	RS [K]: 2nd	*EGB	[0 to 1275 / **80** / 5%/step]
2938 003	RS [FC]: 1st	*EGB	[0 to 1275 / **90** / 5%/step]
2938 004	RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 80, P2b: 95** / 5%/step]
2938 005	LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 65, P2b: 100** / 5%/step]
2938 006	LS [K]: 2nd	*EGB	[0 to 1275 / **65** / 5%/step]
2938 007	LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 100, P2b: 75** / 5%/step]
2938 008	LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 60, P2b: 80** / 5%/step]

2939	**[T2:LL:GL2]** Transfer Roller Current: Correction for Humidity, LL Environment, Glossary paper2, (Process Speed, [Color]) LS: Low Speed, RS: Regular Speed Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2939 001	RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 85, P2b: 80** / 5%/step]
2939 002	RS [K]: 2nd	*EGB	[0 to 1275 / **90** / 5%/step]
2939 003	RS [FC]: 1st	*EGB	[0 to 1275 / **85** / 5%/step]
2939 004	RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 70, P2b: 100** / 5%/step]
2939 005	LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 75, P2b: 50** / 5%/step]
2939 006	LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 80, P2b: 90** / 5%/step]
2939 007	LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 100, P2b: 75** / 5%/step]
2939 008	LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 75, P2b: 100** / 5%/step]

2948	**[T2:ML:SP1]** Transfer Roller Current: Correction for Humidity, ML Environment, Special paper1, (Process Speed, [Color]) LS: Low Speed, RS: Regular Speed Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2948 001	RS [K]: 1st	*EGB	[0 to 1275 / **90** / 5%/step]
2948 002	RS [K]: 2nd	*EGB	[0 to 1275 / **90** / 5%/step]
2948 003	RS [FC]: 1st	*EGB	[0 to 1275 / **95** / 5%/step]
2948 004	RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 90, P2b: 100** / 5%/step]
2948 005	LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 85, P2b: 100** / 5%/step]
2948 006	LS [K]: 2nd	*EGB	[0 to 1275 / **85** / 5%/step]
2948 007	LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 100, P2b: 90** / 5%/step]
2948 008	LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 80, P2b: 90** / 5%/step]

2949	**[T2:ML:GL2]** Transfer Roller Current: Correction for Humidity, ML Environment, Glossary paper2, (Process Speed, [Color]) LS: Low Speed, RS: Regular Speed Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2949 001	RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 95, P2b: 90** / 5%/step]
2949 002	RS [K]: 2nd	*EGB	[0 to 1275 / **95** / 5%/step]
2949 003	RS [FC]: 1st	*EGB	[0 to 1275 / **95** / 5%/step]
2949 004	RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 85, P2b: 100** / 5%/step]
2949 005	LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 85, P2b: 75** / 5%/step]
2949 006	LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 90, P2b: 95** / 5%/step]
2949 007	LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 100, P2b: 90** / 5%/step]
2949 008	LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 90, P2b: 100** / 5%/step]

2958	**[T2:MH:SP1]** Transfer Roller Current: Correction for Humidity, MH Environment, Special paper1, (Process Speed, [Color]) LS: Low Speed, RS: Regular Speed Note

	▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2958 001	RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 110, P2b: 100** / 5%/step]
2958 002	RS [K]: 2nd	*EGB	[0 to 1275 / **100** / 5%/step]
2958 003	RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 110, P2b: 175** / 5%/step]
2958 004	RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 160, P2b: 115** / 5%/step]
2958 005	LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 135, P2b: 110** / 5%/step]
2958 006	LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 160, P2b: 110** / 5%/step]
2958 007	LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 205, P2b: 120** / 5%/step]
2958 008	LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 115, P2b: 120** / 5%/step]

2959	**[T2:MH:GL2]** Transfer Roller Current: Correction for Humidity, MH Environment, Glossary paper2, (Process Speed, [Color]) LS: Low Speed, RS: Regular Speed Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2959 001	RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 120, P2b: 100** / 5%/step]
2959 002	RS [K]: 2nd	*EGB	[0 to 1275 / **115** / 5%/step]
2959 003	RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 135, P2b: 130** / 5%/step]
2959 004	RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 145, P2b: 130** / 5%/step]
2959 005	LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 150, P2b: 115** / 5%/step]
2959 006	LS [K]: 2nd	*EGB	[0 to 1275 / **125** / 5%/step]
2959 007	LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 175, P2b: 160** / 5%/step]
2959 008	LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 130, P2b: 175** / 5%/step]

2968	**[T2:HH:SP1]** Transfer Roller Current: Correction for Humidity, HH Environment, Special paper1, (Process Speed, [Color]) LS: Low Speed, RS: Regular Speed Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2968 001	RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 120, P2b: 115** / 5%/step]
2968 002	RS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 110, P2b: 115** / 5%/step]
2968 003	RS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 130, P2b: 205** / 5%/step]

2968 004	RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 165, P2b: 125** / 5%/step]
2968 005	LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 135, P2b: 120** / 5%/step]
2968 006	LS [K]: 2nd	*EGB	[0 to 1275 / **P2a: 200, P2b: 120** / 5%/step]
2968 007	LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 225, P2b: 140** / 5%/step]
2968 008	LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 120, P2b: 135** / 5%/step]

2969	**[T2:HH:GL2]** Transfer Roller Current: Correction for Humidity, HH Environment, Glossary paper2, (Process Speed, [Color]) LS: Low Speed, RS: Regular Speed Note ▪ The value displayed on the LCD is different from these SP's values. For example, "20%" on the LCD actually means 100%.		
2969 001	RS [K]: 1st	*EGB	[0 to 1275 / **P2a: 135, P2b: 120** / 5%/step]
2969 002	RS [K]: 2nd	*EGB	[0 to 1275 / **135** / 5%/step]
2969 003	RS [FC]: 1st	*EGB	[0 to 1275 / **P2a:170, P2b: 150** / 5%/step]
2969 004	RS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 160, P2b: 165** / 5%/step]
2969 005	LS [K]: 1st	*EGB	[0 to 1275 / **P2a: 200, P2b: 125** / 5%/step]
2969 006	LS [K]: 2nd	*EGB	[0 to 1275 / **150** / 5%/step]
2969 007	LS [FC]: 1st	*EGB	[0 to 1275 / **P2a: 200, P2b: 185** / 5%/step]
2969 008	LS [FC]: 2nd	*EGB	[0 to 1275 / **P2a: 165, P2b: 200** / 5%/step]

2971	**[T2:Size3]** Transfer Roller Current: Correction for Humidity, Size3 (Process Speed, [Color]) LS: Low Speed, RS: Regular Speed		
2971 001	LL/1st	*EGB	[0 to 100 / **100** / 1%/step]
2971 002	LL/2nd	*EGB	[0 to 100 / **70** / 1%/step]
2971 003	MM/1st	*EGB	[0 to 100 / **100** / 1%/step]
2971 004	MM/2nd	*EGB	[0 to 100 / **P2a: 75, P2b: 60** / 1%/step]
2971 005	HH/1st	*EGB	[0 to 100 / **100** / 1%/step]
2971 006	HH/2nd	*EGB	[0 to 100 / **P2a: 80, P2b: 65** / 1%/step]

SP3-XXX (Process)

3001	**[Vt Display]** Vt Display ([Color])		
3001 001	[K]	*EGB	Displays the output voltage of TD sensor

3001 002	[M]	*EGB	for each color. [0.00 to 5.00 / **0.01** / 0.01 V/step]
3001 003	[C]	*EGB	
3001 004	[Y]	*EGB	

3002	**[Vcnt Current]** Current Vcnt Display ([Color])		
3002 001	[K]	*EGB	Displays the current Vcnt for each color. [0.00 to 5.00 / **3.00** / 0.01 V/step]
3002 002	[M]	*EGB	
3002 003	[C]	*EGB	
3002 004	[Y]	*EGB	
	[Vcnt Initial] Initial Vcnt Display ([Color])		
3002 005	[K]	*EGB	Displays the initial Vcnt for each color. [0.00 to 5.00 / **3.00** / 0.01 V/step]
3002 006	[M]	*EGB	
3002 007	[C]	*EGB	
3002 008	[Y]	*EGB	

3003	**[Vtref Current]** Current Vtref Display ([Color])		
3003 001	[K]	*EGB	Displays the current Vtref for each color. [0.00 to 5.00 / **3.00** / 0.01 V/step]
3003 002	[M]	*EGB	
3003 003	[C]	*EGB	
3003 004	[Y]	*EGB	
	[Vtref Initial] Initial Vtref Display ([Color])		
3003 005	[K]	*EGB	Displays the initial Vtref for each color. [0.00 to 5.00 / **3.00** / 0.01 V/step]
3003 006	[M]	*EGB	
3003 007	[C]	*EGB	
3003 008	[Y]	*EGB	

3011	**[T. Sensor Init.]** Toner Density Sensor Initial Setting (Agitation Time, TS Target: Toner Sensor Target Value, [Color])		
3011 001	Agitation: [K]	*EGB	Adjusts the agitation time for the developer for each color. [0 to 300 / **65** / 1 sec/step]
3011 002	Agitation: [M]	*EGB	
3011 003	Agitation: [C]	*EGB	
3011 004	Agitation: [Y]	*EGB	
3011 005	TD Target: [K]	*EGB	Adjusts the TS initial target voltage for each color.
3011 006	TD Target: [M]	*EGB	

3011 007	TD Target: [C]	*EGB	[0.00 to 5.00 / **2.80** / 0.01 V/step]
3011 008	TD Target: [Y]	*EGB	

3021	**[Vt Shift]** Vt Shift Setting ([Color])		
3021 001	[K]	*EGB	Adjusts the Vt shift rate for each color. [0.00 to 5.00 / **P2a: 0.75, P2b: 0.90** / 0.01 V/step]
3021 002	[M]	*EGB	
3021 003	[C]	*EGB	
3021 004	[Y]	*EGB	

3032	**[Vcnt Response] DFU**		
3032 001	[K]	*EGB	Adjusts the Vcnt correction coefficient for each color. [1.00 to 5.00 / **3.71** / 0.01 V/step]
3032 002	[M]	*EGB	
3032 003	[C]	*EGB	
3032 004	[Y]	*EGB	
3032 005	Max	*EGB	Adjusts the maximum Vcnt correction coefficient. [1.00 to 5.00 / **4.30** / 0.01 V/step]
3032 006	Min	*EGB	Adjusts the minimum Vcnt correction coefficient. [1.00 to 5.00 / **3.50** / 0.01 V/step]

3041	**[Vtref]** Vtref Setting ([Color])		
3041 001	Lower Limit: [K]	*EGB	Sets the lower limit Vtref voltage for each color. [0.10 to 5.00 / **1.50** / 0.01 V/step]
3041 002	Lower Limit: [M]	*EGB	
3041 003	Lower Limit: [C]	*EGB	
3041 004	Lower Limit: [Y]	*EGB	
3041 005	Upper Limit: [K]	*EGB	**DFU**
3041 006	Upper Limit: [M]	*EGB	Sets the maximum limit Vtref voltage for each color. [0.10 to 5.00 / **3.70** / 0.01 V/step]
3041 007	Upper Limit: [C]	*EGB	
3041 008	Upper Limit: [Y]	*EGB	

3042	**[Vtref]** Vtref Correction Setting ([Color]) **DFU**		
3042 001	Mode	*EGB	Sets the Vtref correction. [0 or 1 / **1** / -] Alphanumeric

			0: On, 1: Off
3042 002	Step [K]	*EGB	Adjusts the Vtref correction step for each color. [0.00 to 1.00 / **0.10** / 0.01 V/step]
3042 003	Step [M]	*EGB	
3042 004	Step [C]	*EGB	
3042 005	Step [Y]	*EGB	
3042 006	Adj. Remain: [K]		Displays the remaining Vtref value for each color. [-5.00 to 5.00 / - / 1 V/step]
3042 007	Adj. Remain: [M]		
3042 008	Adj. Remain: [C]		
3042 009	Adj. Remain: [Y]		
3042 014	Change Step: [K]	*EGB	Adjusts the density change rate of the ID sensor pattern for each color. [0 to 100 / **15** / 1%/step]
3042 015	Change Step: [M]	*EGB	
3042 016	Change Step: [C]	*EGB	
3042 017	Change Step: [Y]	*EGB	

3051	**[Vt Thr.Setting]** Vt Threshold Setting ([Color])		
3051 001	Low Vt Thr.:[K]	*EGB	Sets the threshold of the lower limit Vt voltage for each color. [0.10 to 5.00 / **2.00** / 0.01 V/step]
3051 002	Low Vt Thr.:[M]	*EGB	
3051 003	Low Vt Thr.:[C]	*EGB	
3051 004	Low Vt Thr.:[Y]	*EGB	
3051 005	High Vt Thr.:[K]	*EGB	**DFU**
3051 006	High Vt Thr.:[M]	*EGB	Sets the threshold of the upper limit Vt voltage for each color. [0.10 to 5.00 / **3.00** / 0.01 V/step]
3051 007	High Vt Thr.:[C]	*EGB	
3051 008	High Vt Thr.:[Y]	*EGB	

3101	**[P. Sensor Patt.]** ID Sensor Pattern Setting ([Color])		
3101 001	Change Value: [K]	*EGB	Displays the density change rate of the ID sensor pattern for each color. [-100 to 100 / **0** / 1%/step]
3101 002	Change Value: [M]	*EGB	
3101 003	Change Value: [C]	*EGB	
3101 004	Change Value: [Y]	*EGB	

3102	**[P. Sensor Patt.]** ID Sensor Pattern Setting ([Color])		
3102 001	Change Value: [K]	*EGB	Displays the toner amount change of the ID sensor pattern for each color. [-1.000 to 1.000 / **0** / 0.001 mg/cm^2/step]
3102 002	Change Value: [M]	*EGB	
3102 003	Change Value: [C]	*EGB	

3102 004	Change Value: [Y]	*EGB	

3103	**[P. Sensor Patt.]** ID Sensor Pattern Setting ([Color]) **DFU**		
3103 001	Pot.Corr.Val: [K]	*EGB	Stores the delta Vcnt (current Vcnt - initial Vcnt) value for each color. [-500 to 500 / **0** / 1 V/step]
3103 002	Pot.Corr.Val: [M]	*EGB	
3103 003	Pot.Corr.Val: [C]	*EGB	
3103 004	Pot.Corr.Val: [Y]	*EGB	

3104	**[P. Sensor Patt.]** ID Sensor Pattern Setting ([Color]) **DFU**		
3104 001	m/a Corr.Step:[K]	*EGB	Adjusts the change amount of toner at the density change rate of the ID sensor pattern. [0 to 0.250 / **0.015** / 0.001 mg/cm^2 /step]
3104 002	m/a Corr.Step:[M]	*EGB	
3104 003	m/a Corr.Step:[C]	*EGB	
3104 004	m/a Corr.Step:[Y]	*EGB	

3111	**[Voff Display]** Vsp-offset Display		
3111 001	Regular	*EGB	Displays the Vsp-offset regular voltage. [0.00 to 5.00 / **0.00** / 0.01 V/step]
3111 002	Diffusion	*EGB	Displays the Vsp-offset diffusion voltage. [0.00 to 5.00 / **0.00** / 0.01 V/step]

3121	**[Vsg Display]** Vsg Display		
3121 001	Regular	*EGB	Displays the Vsp regular voltage. [0.00 to 5.00 / **0.00** / 0.01 V/step]
3121 002	Diffusion		Displays the Vsp diffusion voltage. [0.00 to 5.00 / **0.00** / 0.01 V/step]

3131	**[Lps Display]** Lps Display		
3131 001	Lps	*EGB	Displays the value of lps. [0 to 511 / **0** / 1/step]

3141	**[Vmin Display]**		
3141 001	[K]	*EGB	Displays the Vmin voltage for each color. [0.00 to 5.00 / **0.00** / 0.01 V/step]
3141 005	[Cl]	*EGB	

3142	**[Kx Display]**		
3142 001	Min	*EGB	Displays the minimum Kx. [0.0000 to 1.0000 / **0.0000** / 0.0001/step]

3143	**[K5 Display]** ([Color])		
3143 002	[M]	*EGB	Displays the P.sensor K5 for each color. [0.0000 to 5.0000 / **1.2500** / 0.0001/step]
3143 003	[C]	*EGB	
3143 004	[Y]	*EGB	

3145	**[Vmin]**		
3145 001	Upper Limit	*EGB	**DFU** Adjusts the maximum Vmin. [0.00 to 5.00 / 0.05 / 0.01 V/step]

3146	**[K2]**		
3146 001	Upper Limit	*EGB	**DFU** Adjusts the upper limit. [0.0000 to 1.0000 / **0.1500** / 0.0001/step]
3146 002	Lower Limit	*EGB	**DFU** Adjusts the lower limit. [0.0000 to 1.0000 / **0.0500** / 0.0001/step]

3147	**[K5]**		
3147 001	Upper Limit	*EGB	**DFU** Adjusts the upper limit. [0.0000 to 5.0000 / **2.5000** / 0.0001/step]
3147 002	Lower Limit	*EGB	**DFU** Adjusts the lower limit. [0.0000 to 5.0000 / **0.7500** / 0.0001/step]

3148	**[P sensor Prm.]** ID sensor Parameter		
3148 001	setting	*EGB	**DFU** [0 to 8.0000 / **4.600** / 0.001/step]

3151	**[Vsg Display]** ([Color])

3151 001	Regular: [K]	*EGB	Displays the Vsg output from ID sensor for each mode. [0.00 to 5.00 / **0.00** / 0.01 V/step]
3151 002	Regular: [M]	*EGB	
3151 003	Regular: [C]	*EGB	
3151 004	Regular: [Y]	*EGB	
3151 005	Diffusion: [K]	*EGB	Displays the Vsg output from ID sensor for each mode. [0.00 to 5.00 / **0.00** / 0.01 V/step]
3151 006	Diffusion: [M]	*EGB	
3151 007	Diffusion: [C]	*EGB	
3151 008	Diffusion: [Y]	*EGB	

3161	**[P. Pattern]** ID Sensor Pattern Setting ([Color]) **DFU**		
3161 001	Target Value: [K]	*EGB	Adjusts the target density of ID sensor pattern for each mode. [0 to 100 / **50** / 1%/step]
3161 002	Target Value: [M]	*EGB	
3161 003	Target Value: [C]	*EGB	
3161 004	Target Value: [Y]	*EGB	
3161 005	Target Switch	*EGB	[0 or 1 / **0** / -] **Not used**

3162	**[P. Pattern]** ID Sensor Pattern Setting ([Color])		
3162 001	M/A: [K]	*EGB	Displays the toner amount of the ID sensor pattern for each mode. [0 to 1.000 / **0** / 0.001 mg/cm^2/step]
3162 002	M/A: [M]	*EGB	
3162 003	M/A: [C]	*EGB	
3162 004	M/A: [Y]	*EGB	

3171	**[P. Pattern]** ID Sensor Pattern Setting ([Color]) **DFU**		
3171 001	Interval: [K]	*EGB	Adjusts the interval of making the ID sensor pattern. [0 to 200 / **150** / 1 sheet/step]
3171 002	Interval: [MCY]	*EGB	[0 to 200 / **200** / 1 sheet/step]

3202	**[Toner Near End]** Toner Near End ([Color])		
3202 001	Counter: [K]	*EGB	Displays the counter of the toner near end for each mode. [0 to 30 / **0** / 1/step]
3202 002	Counter: [M]	*EGB	
3202 003	Counter: [C]	*EGB	
3202 004	Counter: [Y]	*EGB	

3301	**[Toner Mode]** Toner Supply Control ([Color])		
3301 001	[K]	*EGB	Selects the method of the toner suppy for each mode. [0 to 3 / **3** / 1/step] 0: Fixed, 1: Coefficient (Pixel), 2: Coefficient (TD sensor), 3: Hybrid See 'Detailed Section Descriptions – Process Control – Toner Near-end/Toner End Detection'
3301 002	[M]	*EGB	
3301 003	[C]	*EGB	
3301 004	[Y]	*EGB	

3302	**[Toner Mode]** Toner Supply Control ([Color])		
3302 001	Fixed Rate: [K]	*EGB	Adjusts the toner supply rate for each mode. These SPs are enabled only when SP3301 for each color is set to "0". [0 to 100 / **5** / 1%/step]
3302 002	Fixed Rate: [M]	*EGB	
3302 003	Fixed Rate: [C]	*EGB	
3302 004	Fixed Rate: [Y]	*EGB	

3303	**[Toner Mode]** Toner Supply Control ([Color])		
3303 001	T. Supply Rate: [K]	*EGB	Displays the toner supply rate for each mode. [0 to 100 / 0 / 1%/step]
3303 002	T. Supply Rate: [M]	*EGB	
3303 003	T. Supply Rate: [C]	*EGB	
3303 004	T. Supply Rate: [Y]	*EGB	

3304	**[Toner Mode]** Toner Supply Control ([Color])		
3304 001	Upper Limit: [K]	*EGB	Adjusts the upper limit of toner supply rate for each mode. [0 to 100 / **100** / 1%/step]
3304 002	Upper Limit: [M]	*EGB	
3304 003	Upper Limit: [C]	*EGB	
3304 004	Upper Limit: [Y]	*EGB	
3304 005	Lower Limit: [K]	*EGB	Adjusts the lower limit of toner supply rate for each mode. [0 to 800/ **100** / 10 msec/step]
3304 006	Lower Limit: [M]	*EGB	
3304 007	Lower Limit: [C]	*EGB	
3304 008	Lower Limit: [Y]	*EGB	

3305	**[Toner Mode]** Toner Supply Control ([Color])		
3305 001	Convert Time: [K]	*EGB	Adjusts the coefficient for calculating the toner

3305 002	Convert Time: [M]	*EGB	supply time. [1.0 to 20.0 / **3.45** / 0.01 msec/mg /step]
3305 003	Convert Time: [C]	*EGB	
3305 004	Convert Time: [Y]	*EGB	

3306	**[Toner Mode]** Toner Supply Control ([Color])		
3306 001	Coefficient 1: [K]	*EGB	Adjusts the time of the toner supply in proportional control mode (Pixel). [0.10 to 5.00 / **1.00** / 0.01/step]
3306 002	Coefficient 1: [M]	*EGB	
3306 003	Coefficient 1: [C]	*EGB	
3306 004	Coefficient 1: [Y]	*EGB	
3306 005	Coefficient 2: [K]	*EGB	Adjusts the time of the toner supply in proportional control mode (TD sensor). [0.10 to 5.00 / **0.3** / 0.01/step]
3306 006	Coefficient 2: [M]	*EGB	
3306 007	Coefficient 2: [C]	*EGB	
3306 008	Coefficient 2: [Y]	*EGB	
3306 009	Coefficient 3: [K]	*EGB	Adjusts the time of the toner supply in hybrid control mode. [0.10 to 5.00 / **0.4** / 0.01/step]
3306 010	Coefficient 3: [M]	*EGB	
3306 011	Coefficient 3: [C]	*EGB	
3306 012	Coefficient 3: [Y]	*EGB	
3306 013	Coefficient 4: [K]	*EGB	Adjusts the time of the toner supply in hybrid control mode. [0.10 to 5.00 / **0.1** / 0.01/step]
3306 014	Coefficient 4: [M]	*EGB	
3306 015	Coefficient 4: [C]	*EGB	
3306 016	Coefficient 4: [Y]	*EGB	
3306 017	Coefficient 5: [K]	*EGB	Adjusts the time of the toner supply in hybrid control mode. [0.10 to 5.00 / **0.80** / 0.01/step]
3306 018	Coefficient 5: [M]	*EGB	
3306 019	Coefficient 5: [C]	*EGB	
3306 020	Coefficient 5: [Y]	*EGB	

3401	**[Toner End Detec]** Toner End Detection		
3401 001		*EGB	[0 or 1 / **0** / -] 0: Detected, 1: Not detected

3411	**[Toner Near End]** ([Color]) **DFU**		
3411 001	Min. Print: [K]	*EGB	Minimum: This is the minimum number of prints after the toner end sensor detects toner end.
3411 002	Min. Print: [Cl]	*EGB	
3411 003	Max. Print: [K]	*EGB	

3411 004	Max. Print: [Cl]	*EGB	Maximum: For low image coverage, more sheets can be printed. This sets the maximum that can be printed after toner end is detected. [0 to 750 / **0** / 1/step] **DFU**
3411 005	Pixel: [K]	*EGB	Adjusts the number of sheets (A4), which the pixel area is converted into for the toner end after detecting the toner near end. [0 to 100 / **0** / 1 sheet/step]
3411 006	Pixel: [Cl]	*EGB	

3501	**[Process Cont.]** Process Control		
3501 001	ON/ OFF	*EGB	Sets the method of the process control. [0 to 3 / **0** / 1/step] 0: Auto, 1: Fixed 2: Auto + LS, 3: Auto (Table fixed) **Do not use settings 2 and 3.**

3511	**[Pntr. Display]** Process Control Table Display ([Color])		
3511 001	[K]	*EGB	Displays the current process control table for each mode. [1 to 30 / 15 / 1/step]
3511 002	[M]	*EGB	
3511 003	[C]	*EGB	
3511 004	[Y]	*EGB	

3521	**[DEV.Potential]** Development Potential Setting ([Color])		
3521 001	[K]	*EGB	Displays the development bias for each color. [1 to 800 / **0** / 1 V/step]
3521 002	[M]	*EGB	
3521 003	[C]	*EGB	
3521 004	[Y]	*EGB	

3522	**[DEV.Potential]** Development Potential Setting ([Color])		
3522 001	MAX [K]	*EGB	Adjusts the maximum development bias for each color. [1 to 800 / **450** / 1 V/step]
3522 002	MAX [M]	*EGB	
3522 003	MAX [C]	*EGB	
3522 004	MAX [Y]	*EGB	

3523	**[DEV.Potential]** Development Potential Setting ([Color])

3523 001	MIN [K]	*EGB	Adjusts the minimum development bias for each color. [1 to 800 / **150** / 1 V/step]
3523 002	MIN [M]	*EGB	
3523 003	MIN [C]	*EGB	
3523 004	MIN [Y]	*EGB	

3531	**[M/A Target]** ([Color])		
3531 001	[K]	*EGB	Adjusts the maximum toner target M/A for each mode. [0.000 to 1.000 / **0.53** / 0.001 mg/step]
3531 002	[M]	*EGB	[0.000 to 1.000 / **0.500** / 0.001 mg/step]
3531 003	[C]	*EGB	
3531 004	[Y]	*EGB	

3541	**[TD Setting]** Toner Density Adjustment Setting		
3541 001		*EGB	[0 or 1 / **0** / -] 0: On, 1: Off

3551	**[PC SelfChk]** Process Control Self-check		
3551 001	Job End 1: [K]	*EGB	At the end of a job, process control is done after the interval of time that is set with SP 3555 001, if this number of pages was printed after the previous process control. [0 to 2000 / **210** / 1 page/step]
3551 002	Job End 1: [Cl]	*EGB	
3551 003	Job End 2: [K]	*EGB	At the end of a job, process control is done immediately, if this number of pages was printed after the previous process control. [0 to 2000 / **300** / 1 page/step]
3551 004	Job End 2: [Cl]	*EGB	
3551 005	Job End 3: [K]	*EGB	In the middle of a job, printing stops and process control is done if the number of pages in the job gets to this number. [0 to 2000 / **500** / 1 page/step]
3551 006	Job End 3: [Cl]	*EGB	

3553	**[PC SelfChk]**		
3553 001	Idle Time	*EGB	Adjusts the threshold time for the self check without the machine operation.

			[0 to 24 / **6** / 0.1 Hour/step]

3554	**[Pow. ON SelfChk]** Power On Self-check		
3554 001	Time	*EGB	Adjusts the threshold (Time) of the process control from turning the power on. [0 to 24 / **6.0** / 0.1 H/step]
3554 002	Temp./ Humidity	*EGB	Adjusts the threshold (Temperature/ Humidity) of the process control. [0 to 100 / **6** / 0.1 g/m^3/step]
3554 003	Time 2	*EGB	Adjusts the threshold (Time) for developer mixing after turning the power on. [0 to 200.0 / **36.0** / 0.1 H/step]
3554 004	Temp./ Humidity 2	*EGB	Adjusts the threshold (Temperature/ Humidity) for developer mixing after turning the power on. [0 to 100 / **6.0** / 0.1 g/m^3/step]

3555	**[S.Chk Stand-by]** Process Control Self-check Stand-by Time		
3555 001		*EGB	Waiting time for the next job command after job end. If the next job command comes before this interval expires, the "JOB END 1" process control is not done. (SP3551 001 and 002) [0 to 30 / **0** / 1 /sec]

3556	**[Image Process.]** Display the Time of Last Image Processing		
3556 001	Time (Year)	*EGB	[0 to 99 / **0** / 1 year/step]
3556 002	Time (Month)	*EGB	[1 to 12 / **1** / 1 month/step]
3556 003	Time (Date)	*EGB	[1 to 31 / **1** / 1 day/step]
3556 004	Time (Hour)	*EGB	[0 to 23 / **0** / 1 hour/step]
3556 005	Time (Minute)	*EGB	[0 to 59 / **0** / 1 minute/step]

3557	**[Image Process.]** Image Processing		
3557 001	Temperature	*EGB	[-127 to 127 / **0.0** / 0. 1°C/step]
3557 002	Humidity	*EGB	[0 to 100 / 0 / **0.1**% RH/step]

3557 003	A. Humidity	*EGB	[0 to 100 / 0 / **0.1** g/m^3/step]/step]

3558	**[No Use SelfChk]** No Use Self-check		
3558 001	Maximum Repeat	*EGB	Adjusts the maximum repeat times of the process control. [0 to 100 / **10** / 1 time/step]

3561	**[Dev g Display]** Development gamma Display ([Color])		
3561 001	[K]	*EGB	Displays the development gamma measured during the process control self-check. [0.00 to 5.00 / **0.00** / 0.01/step]
3561 002	[M]	*EGB	
3561 003	[C]	*EGB	
3561 004	[Y]	*EGB	

3562	**[Vk Display]** ([Color])		
3562 001	[K]	*EGB	Displays the current Vk value. [-300 to 300 / **0** / 1 V/step]
3562 002	[M]	*EGB	
3562 003	[C]	*EGB	
3562 004	[Y]	*EGB	

3573	**[Vd Display]** ([Color])		
3573 001	[K]	*EGB	Displays the current Vd value. [0 to 1000 / **0** / 1 V/step]
3573 002	[M]	*EGB	
3573 003	[C]	*EGB	
3573 004	[Y]	*EGB	

3574	**[Vl Display]** ([Color])		
3574 001	[K]	*EGB	Displays the current Vl value. [0 to 1000 / **0** / 1 V/step]
3574 002	[M]	*EGB	
3574 003	[C]	*EGB	
3574 004	[Y]	*EGB	

3575	**[Vb Display]** (Process Speed,[Color]) RS: Regular speed, LS: Low speed		
3575 001	RS: [K]	*EGB	Displays the current Vb value for each mode.

3575 002	RS: [M]	*EGB	[0 to 800 / **350** / 1 V/step]
3575 003	RS: [C]	*EGB	
3575 004	RS: [Y]	*EGB	
3575 005	LS: [K]	*EGB	
3575 006	LS: [M]	*EGB	
3575 007	LS: [C]	*EGB	
3575 008	LS: [Y]	*EGB	

3576	**[Charge Bias]** Charge Roller Bias (DC, Process Speed,[Color]) RS: Regular speed, LS: Low speed		
3576 001	DC: RS: [K]	*EGB	Displays the current charge roller DC bias of the development unit for each mode. [0 to 999 / **585** / 1 V/step]
3576 002	DC: RS: [M]	*EGB	
3576 003	DC: RS: [C]	*EGB	
3576 004	DC: RS: [Y]	*EGB	
3576 005	DC: LS: [K]	*EGB	
3576 006	DC: LS: [M]	*EGB	
3576 007	DC: LS: [C]	*EGB	
3576 008	DC: LS: [Y]	*EGB	

3577	**[Charge Bias]** Charge Roller Bias (AC, Process Speed,[Color]) RS: Regular speed, LS: Low speed		
3577 001	AC: RS: [K]	*EGB	Displays the current charge roller AC bias of the development unit for each mode. [0.0 to 3.0 / **1.9** / 0.001 kV/step]
3577 002	AC: RS: [M]	*EGB	
3577 003	AC: RS: [C]	*EGB	
3577 004	AC: RS: [Y]	*EGB	
3577 005	AC: LS: [K]	*EGB	
3577 006	AC: LS: [M]	*EGB	
3577 007	AC: LS: [C]	*EGB	
3577 008	AC: LS: [Y]	*EGB	

3581	**[LD Control]** LD Power Control		
	Displays the current LD power rate for each mode.		
3581 001	LD: RS: [K]	*EGB	[10 to 200 / **100** / 1%/step]
3581 002	LD: RS: [M]	*EGB	

3581 003	LD: RS: [C]	*EGB	
3581 004	LD: RS: [Y]	*EGB	
3581 005	LD: LS: [K]	*EGB	
3581 006	LD: LS: [M]	*EGB	
3581 007	LD: LS: [C]	*EGB	
3581 008	LD: LS: [Y]	*EGB	

3601	**[Dev. Setup]** Developer Initialization Setting		
	Adjusts the number of the sheet for the developer free run at the developer initializing for each color.		
3601 001	SheetSet: [K]	*EGB	[0 to 100 / **20** / 1 sheet/step]
3601 002	SheetSet: [M]	*EGB	
3601 003	SheetSet: [C]	*EGB	
3601 004	SheetSet: [Y]	*EGB	

3602	**[Dev. Setup]** Developer Initialization Setting		
	Adjusts the toner supply times for the developer initializing for each color.		
3602 001	SupplySet: [K]	*EGB	[0 to 30 / **20** / 1 /step]
3602 002	SupplySet: [M]	*EGB	
3602 003	SupplySet: [C]	*EGB	
3602 004	SupplySet: [Y]	*EGB	

3606	**[Dev. Setup]** Developer Initialization Setting **DFU**		
	Specifies the maximum times of developer initialization to adjust the proper toner density.		
3606 001	Repeat	*EGB	[0 to 20 / **5** / 1 /step]

3611	**[Supply Thresh]**		
	Adjusts the toner supply threshold for the toner density adjustment.		
3611 001	Normal: [K]	*EGB	[1 to 800 / **420** / 1 V/step]
3611 002	Normal: [M]	*EGB	
3611 003	Normal: [C]	*EGB	
3611 004	Normal: [Y]	*EGB	
3611 005	High Vt:[K]	*EGB	[1 to 800 / **380** / 1 V/step]

3611 006	High Vt [M]	*EGB	
3611 007	High Vt [C]	*EGB	
3611 008	High Vt [Y]	*EGB	
3611 009	DEV.SetUp: [K]	*EGB	
3611 010	DEV.SetUp [M]	*EGB	
3611 011	DEV.SetUp [C]	*EGB	
3611 012	DEV.SetUp [Y]	*EGB	

3612	**[Consume Thresh]**		
	Adjusts the toner consume threshold for the toner density adjustment.		
3612 001	Normal: [M]	*EGB	[1 to 800 / **220** / 1 V/step]
3612 002	Normal: [C]	*EGB	
3612 003	Normal: [Y]	*EGB	
3612 004	Normal:[K]	*EGB	
3612 005	Low Vt: [K]	*EGB	[1 to 800 / **250** / 1 V/step]
3612 006	Low Vt: [M]	*EGB	
3612 007	Low Vt: [C]	*EGB	
3612 008	Low Vt: [Y]	*EGB	
3612 009	DEV.SetUp: [K]	*EGB	
3612 010	DEV.SetUp [M]	*EGB	
3612 011	DEV.SetUp [C]	*EGB	
3612 012	DEV.SetUp [Y]	*EGB	

3701	**[Low Resolution]** (Threshold, [Color]) SP 3701-001 controls if the pixel count is used in hybrid toner supply mode or not. If this SP is 'on', it is used if the image coverage ratio for the page is below a threshold value (if the coverage is above this ratio, then the TD sensor is used). If this SP is 'off', then the TD sensor is always used. SP3701-002 to 005 control the threshold values for the image coverage ratio.		
3701 001	Low Resolution	*EGB	[0 to 1 / **0** / -] 0: Off, 1: On
3701 002	Threshold: [K]	*EGB	[0 to 100 / **1** / 1%/step]
3701 003	Threshold: [M]	*EGB	
3701 004	Threshold: [C]	*EGB	

3701 005	Threshold: [Y]	*EGB	

3721	**[Low Resolution]** Toner Refresh Mode Setting in Low Image Coverage Ratio		
3721 001	Toner Refresh Mode	*EGB	Enables or disables the toner refresh mode. [0 or 1 / **0** / -] 0: On. 1: Off
3721 002	S: Toner Refresh	*EGB	Toner refresh mode is done if the percentage of pages that have low image coverage is larger than this threshold value. [0 to 50 / **20** / 1%/step]
3721 003	Toner refresh coef.	*EGB	Toner refreshing coefficient: **DFU** [0 to 100 / **100** / 1%/step]
3721 004	Interval Bk	*EGB	Specifies the interval of the process control at low coverage printing. [0 to 65535 / **0** / 1 sheet/step]
3721 005	Interval Col	*EGB	

3731	**[SUM.ImageArea]**		
3731 001	[Bk]	*EGB	Displays the total coverage for each color after the process control execution. This SP is cleared when the process control is done. Value: pixel
3731 002	[M]	*EGB	
3731 003	[C]	*EGB	
3731 004	[Y]	*EGB	

3741	**[Thr.SplyMthod]**		
3741 001	[Bk]	*EGB	Adjusts the threshold for low coverage printing. [0 to 255 / **1** / 1%/step]
3741 002	[M]	*EGB	
3741 003	[C]	*EGB	
3741 004	[Y]	*EGB	

3801	**[TD Initial]** TD sensor Initialization ([Color]) **DFU**		
3801 001	[All]		Initializes the developer for each mode. Press the Enter key to execute the initialization after the machine asks "Execute?"
3801 002	[Cl]		
3801 003	[K]		
3801 004	[M]		
3801 005	[C]		

3801 006	[Y]		

3811	**[Developer]** Developer Initialization		
3811 001	All		Initializes all the developers.

3820	**[Process Cont.]** Process Control		
3820 001			Executes the process control. Press the Enter key to execute the initialization after the machine asks "Execute?"

3821	**[P Ctl Result]** Process Control Result		
3821 001	1	*EGB	Displays each logged process control result. The ten most recent ones are shown. 3821 001 is the most recent. See 'Troubleshooting – Process Control Results'.
3821 002	2	*EGB	
3821 003	3	*EGB	
3821 004	4	*EGB	
3821 005	5	*EGB	
3821 006	6	*EGB	
3821 007	7	*EGB	
3821 008	8	*EGB	
3821 009	9	*EGB	
3821 010	10	*EGB	

SP5-XXX (Mode)

5001	**[All Indicators On]**		
5001 001		*CTL	Checks the LED on the operation panel. 0: Normal, 1: All lit

5024	**[mm/ inchDisplay]**		
5024 001		*CTL	Sets units (mm or inch) for custom paper sizes. [0 or 1 / **1** /-] 0: mm (EU/AS), 1: inch (NA)

5045	**[Accounting count]**		
5045 001	Counter Method	*CTL	Selects the counting method if the meter charge mode is enabled with SP5-930-001. You can change the setting only one time. [0 or 1 / **1** / -] 0: Developments, 1: Pages

5051	**[Refill Toner Disp]** Toner Refill Display		
5051 001	Refill Toner Disp	*CTL	Enable or disable the warning display when you install a toner bottle that was refilled by third party venders. [0 or 1 / **0** / -] 0: Enable, 1: Disable

5055	**[Display IP address]**		
5055 001	Display IP address	*CTL	Display or does not display the IP address on the LCD. [0 or 1 / **0** / -] 0: Not display, 1: Display

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

5150	**[Bypass Long Paper]** By-pass Long Paper		
5150 001	0: OFF, 1: ON	-	Lets or does not let the by-pass tray feed extra long paper (up to 1260 mm). [0 or 1 / **0** / -] 0: Off, 1: On

5169	**[CE Login]**		
5169 001	CE Login	*CTL	Enables or disables the CE login. [0 or 1 / 0 / -]

			0: Off, 1: On

5302	**[Set Time]**		
5302 002	Time difference	*CTL#	Adjusts the RTC (real time clock) time setting for the local time zone. [-1440 to 1440 / **NA, EU, CH** / 1 minute/step] NA: **-300**, EU: **60**, CH: **480**

5307	**[Summer Time]**		
5307 001	ON/OFF	-	Enables or disables the summer time mode. [0 to 1 / **0** / -] 0: Off, 1: On
5307 003	Rule Set(Start)	-	NA: **04100010**, EU: **035(4)00010**, ASIA: **105(4)00010**
	Specifies the start setting for the summer time mode. 1st and 2nd digits: The month. [1 to 12] 3rd digit: The week of the month. [1 to 5] 4th digit: The day of the week. [0 to 6 = Sunday to Saturday] 5th and 6th digits: The hour. [00 to 23] 7th digit: The length of the advanced time. [0 to 9 / 1 hour /step] 8th digit: The length of the advanced time. [0 to 5 / 10 minutes /step] 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 is set to "1".		
5307 004	Rule Set(End)	-	NA: **105(4)60000**, EU: **105(4)00000**, ASIA: **03100000**
	Specifies the end setting for the summer time mode. There are 8 digits in this SP. 1st and 2nd digits: The month. [1 to 12] 3rd digit: The week of the month. [0 to 5] 4th digit: The day of the week. [0 to 6 = Sunday to Saturday] 5th and 6th digits: The hour. [00 to 23] **The 7th and 8 digits must be set to "00".** ▪ The digits are counted from the left.		

	▪ Make sure that SP5-307-1 is set to "1".

5401	**[Access Control]**		
5401 200	SDK1 Unique ID	*CTL	"SDK" is the "Software Development Kit". These data can be converted from SAS (VAS) when installed or uninstalled. **DFU**
5401 201	SDK1 Certification Method	*CTL	
5401 210	SDK2 Unique ID	*CTL	
5401 211	SDK2 Certification Method	*CTL	
5401 220	SDK3 Unique ID	*CTL	
5401 221	SDK3 Certification Method	*CTL	

5404	**[User Code Clear]** User Code Counter Clear		
5404 001	User Code Clear]	-	Clears all counters for users.

5501	**[PM Alarm Interval]** PM Alarm Interval		
5501 001	Printout	*CTL	Sets the PM alarm Interval. [0 to 9999 / **0** / 1k prints/step] The alert is sent to the e-mail address that is specified for the system administrator using a browser and the built-in web server (Web Image Monitor). 0: Disables the PM alarm When SP5-866-001 is set to "1", this SP is enabled.

5504	**[Jam Alarm]**		
5504 001	Jam Alarm	*CTL	Sets the jam alarm level. If a paper jam occurs, the jam alarm counter increases by +1. If no paper jam occurs while the set number of paper is output, the jam alarm counter decreases by -1. The jam alarm occurs when the jam alarm counter gets to +10.

			[0 to 3 / **3** / 1/step] 0: Disables the jam alarm 1: 1.5K, 2: 3K, 3: 6K The alert is sent to the e-mail address that is specified for the system administrator using a browser and the built-in web server (Web Image Monitor). When SP5-866-001 is set to "1", this SP is enabled.

5505	**[Error Alarm]**		
5505 001	Error Alarm	*CTL	Sets the error alarm level. If an SC code occurs, the error alarm counter increases by +1. If no SC code occurs while the set number of paper is output, the jam alarm counter decreases by -1. The error alarm occurs when the error alarm counter reaches +5. [0 to 255 / **30** / 1/step] 0: Disables the PM alarm The alert is sent to the e-mail address that is specified for the system administrator using a browser and the built-in web server (Web Image Monitor). When SP5-866-001 is set to "1", this SP is enabled.

5507	**[Supply Alarm]**		
5507 001	Paper Size	*CTL	Enables or disables the supply alarm. [0 to 1 / **0** / -] 0: Off, 1: On
5507 003	Toner	-	
5507 004	Maintenance Kit S		
5507 005	Drum Life Remain S		
5507 006	Waste Toner Bottle		
5507 007	Tensya Supply Al		
5507 128	Interval: Others	*CTL	Sets the paper supply alarm level. A paper

5507 133	Interval: A4	*CTL	supply alarm counter increases by +1 when a sheet of the related size is used. The paper supply alarm occurs when one of the paper supply alarm counters gets to the set value. [250 to 10000 / **1000** / 1/step] The alert is sent to the e-mail address that is specified for the system administrator using a browser and the built-in web server (Web Image Monitor). When SP5-866-001 is set to "1", this SP is enabled.
5507 134	Interval: A5	*CTL	
5507 142	Interval: B5	*CTL	
5507 164	Interval: LG	*CTL	
5507 166	Interval: LT	*CTL	
5507 172	Interval: HLT	*CTL	

5515	**[SC/Alarm Setting]**		
	Turns on or off the following SC alarm settings. These SP's are active when the CSS or NRS is enabled.		
5515 001	SC Call	*CTL	[0 or 1 / **0** / -] 0: OFF, 1: ON
5515 002	Service Parts Ne	*CTL	This SP activates the service parts near end call. [0 or 1 / **0** / -] 0: OFF, 1: ON
5515 003	Service Parts En	*CTL	This SP activates the service parts end call. [0 or 1 / **0** / -] 0: OFF, 1: ON
5515 004	User Call	*CTL	[0 or 1 / **1** / -] 0: OFF, 1: ON
5515 006	Communication Te	*CTL	This SP activates the communication test call. [0 or 1 / **1** / -] 0: OFF, 1: ON
5515 007	Machine Infomat	*CTL	This SP activates the machine information call. [0 or 1 / **1** / -] 0: OFF, 1: ON
5515 008	Alarm Notice	*CTL	[0 or 1 / **0** / -] 0: OFF, 1: ON
5515 009	Non Genuine Tonn	*CTL	This SP activates the non genuine toner bottle call. [0 or 1 / **1** / -] 0: OFF, 1: ON
5515 010	Supply Automatic	*CTL	This SP activates the automatic supply order call. [0 or 1 / **0** / -] 0: OFF, 1: ON
5515 011	Supply Managemen	*CTL	This SP activates the supply management

			call. [0 or 1 / **0** / -] 0: OFF, 1: ON

5801	**[Memory Clear]**		
5801 001	All	-	Resets the SP5801-002 through 016 except the security related data in 003, 010, 011and 015. These cannot be reset with SP mode.
5801 002	Engine	-	Resets or deletes the engine-related data.
5801 003	SCS	-	Clears the system settings.
5801 004	IMH	-	Clears IMH data. **DFU**
5801 005	MCS	-	Clears MCS data. **DFU**
5801 008	Printer	-	Clears the printer application settings.
5801 010	GWWS/NFA	-	Clears the web service data and the network application data.
5801 011	NCS	-	Initializes the system default and interface settings (IP address also), SmartNetMonitor for Admin, WebStatusMonitor settings, and the TELNET settings.
5801 014	DCS Setting	-	Resets or deletes the DCS-related data.
5801 015	Clear UCS Setting	-	Resets or deletes the UCS-related data.
5801 016	MIRS Setting	-	Resets or deletes the MIRS-related data.
5801 017	CCS	-	Resets or deletes the CSS-related data. **FA**
5801 018	SRM Memory Clr	-	Resets or deletes the SRM-related data.
5801 019	LCS	-	Resets or deletes the LCS-related data.

5802	**[Engine Free Run]**		
5802 001			Performs a free run on the printer engine. Note ▪ The machine starts free run in the same condition as the sequence of A4/LT printing from the 1st tray. Therefore, paper should be loaded in the 1st tray, but paper is not fed. ▪ The main switch has to be turned off and on after using the free run mode for a test.

5803	**[Input Check]**		
	See ‘Input Check Table’		

5804	**[Output Check]**		
	See ‘Output Check Table’		

5808	**[Destination]** Destination Code Display		
5808 001	Destin. Code Disp	*EGB	Displays the destination code. [0 to 4 / **0** / 1/step] Alphanumeric 0: DOM (Japan), 1: OTHER, 2: ASIA 3: ERP (Europe). 4: USA

5810	**[Fusing SC Reset]**		
5810 001	Fusing SC Reset		Resets a type A service call condition. Turn the main power switch off and on after resetting the SC code.

5811	**[Serial No.]** Machine Serial No. Setting		
5811 001	Setting	*EGB	**[SSP]** Sets the machine serial number.
5811 002	Display	*EGB	Displays the machine serial number.

5812	**[Service TEL]**		
5812 001	Telephone	*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 19 characters (both numbers and alphabetic characters can be input).
5812 002	Facsimile	*CTL	Sets the fax or telephone number for a service representative. This number is printed on the Counter List, which can be printed with the user’s "Counter" menu if the Meter Charge

			mode is selected with SP5-930-1. This can be up to 19 characters (both numbers and alphabetic characters can be input).

5813	**[Power Freqency]**		
5813 001		-	Displays the power frequency. [0 to 100 / **0** / 1 Hz/step] **Not used**

5814	**[Power Voltage]**		
5814 001	Detected Voltage	-	Displays the detected power voltage. [0 to 400 / **0** / 1 V/step] **Not used**

5816	**[NRS Function]** These settings are used for NRS.		
5816 001	I/F Setting	*CTL	[0 to 2 / **2** / 1/step] Alphanumeric 0: Off, 1: CSS (Not used) 2: Network (The remote service function is on.)
5816 002	CE Call	*CTL	[0 or 1 / **1** / 1/step] 0: Start, 1: End
5816 003	Function Flag	*CTL	[0 or 1 / **0** / 1/step] 0: Off (The remote service function is disabled.) 1: On (The remote service function is enabled.)
5816 007	SSL Disable	*CTL	[0 to 1 / 0 / 1/step] 0: On, 1: Off
5816 008	RCG Connect T/O	*CTL	Sets the timeout counter for the remote connection. [1 to 90 / 10 / 1 second/step]
5816 009	RCG Write Timeout	*CTL	Sets the timeout counter for writing processing. [0 to 100 / 60 / 1 second/step]
5816 010	RCG Read Timeout	*CTL	Sets the timeout counter for reading processing. [0 to 100 / 60 / 1 second/step]

5816 011	Port 80	*CTL	Enables or disables access to the SOAP method via port 80. [0 to 1 / 0 / 1/step] 0: Disables, 1: Enables
5816 021	Function Flag	*CTL	[0 or 1 / **0** / -] 0: Not registered, 1: Registered
5816 022	Install Status	*CTL	This SP displays the Cumin installation status. 0: Basil not registered 1: Basil registered 2: Device registered
5816 023	Connect Mode (N/M)	*CTL	
	This SP displays and selects the Cumin connection method. **0**: Internet connection 1: Dial-up connection		
5816 061	NotiTime ExpTime	*CTL	
	Proximity of the expiration of the certification.		
5816 062	HTTP Proxy use	*CTL	
	This SP setting determines if the proxy server is used when the machine communicates with the service center.		
5816 063	HTTP Proxy Host	*CTL	
	This SP sets the address of the proxy server used for communication between Cumin-N and the gateway. Use this SP to set up or display the customer proxy server address. The address is necessary to set up Cumin-N. Note ▪ The address display is limited to 127 characters. Characters beyond the 127th character are ignored. ▪ This address is customer information and is not printed in the SMC report.		
5816 064	HTTP Proxy Port	*CTL	
	This SP sets the port number of the proxy server used for communication between Cumin-N and the gateway. This setting is necessary to set up Cumin-N. Note ▪ This port number is customer information and is not printed in the SMC		

<table>
<tr><td></td><td colspan="3">report.</td></tr>
<tr><td rowspan="2">5816 065</td><td>HTTP Proxy AutUsr</td><td>*CTL</td><td></td></tr>
<tr><td colspan="3">This SP sets the HTTP proxy certification user name.
Note
▪ 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.</td></tr>
<tr><td rowspan="2">5816 066</td><td>HTTP Proxy AutPass</td><td>*CTL</td><td></td></tr>
<tr><td colspan="3">This SP sets the HTTP proxy certification password.
Note
▪ 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.</td></tr>
<tr><td rowspan="12">5816 067</td><td>Cer Updt Cond</td><td>*CTL</td><td></td></tr>
<tr><td colspan="3">Displays the status of the certification update.</td></tr>
<tr><td>0</td><td colspan="2">The certification used by Cumin is set correctly.</td></tr>
<tr><td>1</td><td colspan="2">The certification request (setAuthKey) for update has been received from the GW URL and certification is presently being updated.</td></tr>
<tr><td>2</td><td colspan="2">The certification update is completed and the GW URL is being notified of the successful update.</td></tr>
<tr><td>3</td><td colspan="2">The certification update failed, and the GW URL is being notified of the failed update.</td></tr>
<tr><td>4</td><td colspan="2">The period of the certification has expired and new request for an update is being sent to the GW URL.</td></tr>
<tr><td>11</td><td colspan="2">A rescue update for certification has been issued and a rescue certification setting is in progress for the rescue GW connection.</td></tr>
<tr><td>12</td><td colspan="2">The rescue certification setting is completed and the GW URL is being notified of the certification update request.</td></tr>
<tr><td>13</td><td colspan="2">The notification of the request for certification update has completed successfully, and the system is waiting for the certification update request from the rescue GW URL</td></tr>
<tr><td>14</td><td colspan="2">The notification of the certification request has been received from the rescue GW controller, and the certification is being stored.</td></tr>
<tr><td>15</td><td colspan="2">The certification has been stored, and the GW URL is being notified of the successful completion of this event.</td></tr>
</table>

	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 an certification error has been received, and the rescue certification is being recorded.		
	18	The rescue certification of No. 17 has been recorded, and the GW URL is being notified of the failure of the certification update.		
5816 068	Cer Abnml Cause		*CTL	
	Displays a number code that describes the reason for the request for update of the certification.			
	0	Normal. There is no request for certification update in progress.		
	1	Request for certification update in progress. The current certification has expired.		
	2	An SSL error notification has been issued. Issued after the certification has expired.		
	3	Notification of shift from a common authentication to an individual certification.		
	4	Notification of a common certification without ID2.		
	5	Notification that no certification was issued.		
	6	Notification that GW URL does not exist.		
5816 069	Cer Updt ReqID		*CTL	
	The ID of the request for certification.			
5816 083	Firm Updating		*CTL	
	Displays the status of the firmware update.			
5816 084	Firm UpFlg NoHDD		*CTL	
	This setting determines if the firmware can be updated, even without the HDD installed.			
5816 085	Firm UpUsr Conf		*CTL	
	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.			
5816 086	Firmware Size		*CTL	
	Allows the service technician to confirm the size of the firmware data files			

	during the firmware update execution.		
5816 087	CERT: MacroVsn	*CTL	
	Displays the macro version of the NRS certification.		
5816 088	CERT: PAC Vsn	*CTL	
	Displays the PAC version of the NRS certification.		
5816 089	CERT: ID2 Code	*CTL	
	Displays ID2 for the NRS certification. Spaces are displayed as underscores (_). Asteriskes () indicate that no NRS certification exists.		
5816 090	CERT: Subject	*CTL	
	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.		
5816 091	CERT: SeriNum	*CTL	
	Displays serial number for the NRS certification. Asterisks () indicate that no DESS exists.		
5816 092	CERT: Issuer	*CTL	
	Displays the common name of the issuer of the NRS certification. CN = the following 30 bytes. Asteriskes () indicate that no DESS exists.		
5816 093	CERT: St ExpTime	*CTL	
	Displays the start time of the period for which the current NRS certification is enabled.		
5816 094	CERT: End ExpTime	*CTL	
	Displays the end time of the period for which the current NRS certification is enabled.		
5816 200	Poling Man Exc	*CTL	
	No information is available at this time.		
5816 201	Instl: Condition	*CTL	
	Displays a number that indicates the status of the NRS service device. 0: Neither the NRS device nor Cumin device are set. 1: The Cumin device is being set. Only Box registration is completed. In this status the Basil unit cannot answer a polling request. 2: The Cumin device is set. In this status the Basil unit cannot answer a polling request. 3: The NRS device is being set. In this status the Cumin device cannot be set. 4: The NRS module has not started.		

5816 202	Instl: ID #	*CTL	
	Allows entry of the number of the request needed for the Cumin device.		
5816 203	Instl: Reference	*CTL	
	Executes the inquiry request to the NRS GW URL.		
5816 204	Instl: Ref Rslt	*CTL	
	Displays a number that indicates the result of the inquiry executed with SP5816-203.		
	0: Succeeded 1: Inquiry number error 2: Registration in progress 3: Proxy error (proxy enabled) 4: Proxy error (proxy disabled) 5: Proxy error (Illegal user name or password) 6: Communication error 7: Certification update error 8: Other error 9: Inquiry executing		
5816 205	Instl: Ref Section	*CTL	
	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.		
5816 206	Instl: Rgstltn	*CTL	
	Executes Cumin Registration.		
5816 207	Instl: Rgstltn Rst	*CTL	
	Displays a number that indicates the registration result. 0: Succeeded 2: Registration in progress 3: Proxy error (proxy enabled) 4: Proxy error (proxy disabled) 5: Proxy error (Illegal user name or password) 6: Communication error 7: Certification update error 8: Other error 9: Registration executing		
5816 208	Error Code		

	Displays a number that describes the error code that was issued when either SP5816-204 or SP5816-207 was executed.		
	Cause	Code	Meaning
	Illegal Modem Parameter	-11001	Chat parameter error
		-11002	Chat execution error
		-11003	Unexpected error
	Operation Error, Incorrect Setting	-12002	Inquiry, registration attempted without acquiring device status.
		-12003	Attempted registration without execution of an inquiry and no previous registration.
		-12004	Attempted setting with illegal entries for certification and ID2.
	Error Caused by Response from GW URL	-2385	Attempted dial up overseas without the correct international prefix for the telephone number.
		-2387	Not supported at the Service Center
		-2389	Database out of service
		-2390	Program out of service
		-2391	Two registrations for same device
		-2392	Parameter error
		-2393	Basil not managed
		-2394	Device not managed
		-2395	Box ID for Basil is illegal
		-2396	Device ID for Basil is illegal
		-2397	Incorrect ID2 format
		-2398	Incorrect request number format
5816 209	Instl Clear	*CTL	
	Releases a machine from its Cumin setup.		
5816 250	Print Com Log	*CTL	
	Prints the communication log.		

5821	**[NRS Address]**		
5821 001	CSS-PI Device	*CTL	[0 to 4 / **0** / 1/step] **DFU**
5821 002	RCG IP Address (used for NRS)	*CTL	Sets the IP address of the RCG (Remote Communication Gate).

			[00000000h to FFFFFFFFh / 00000000h / 1/step]

5824	**[NVRAM Upload]**		
5824 001	NVRAM Upload	#	Uploads the UP and SP mode data (except for counters and the serial number) from the NVRAM to an SD card.

5825	**[NVRAM Download]**		
5825 001	NVRAM Download	#	Downloads the UP and SP mode data from an SD card to the NVRAM.

5828	**[Network Setting]** Job spool settings/ Interface selection for Ethernet and wireless LAN		
5828 050	1284 Compatible	*CTL	Switches Centronics IEEE1284 compatibility on/off for the network. [0 or 1 / **1** / -] 0: Disabled, 1: Enabled Note ▪ Selecting “0” disables bi-directional data transmission.
5828 052	ECP	*CTL	Switches the ECP setting for Centronics off/on. [0 or 1 / **1** / -] 0: Disabled, 1: Enabled Note ▪ With “1” selected, SP5-828-050 must be enabled for 1284 mode compatibility.
5828 065	Job Spool	*CTL	Switches the job spool on/off. [0 or 1 / **0** / -] 0: Disabled, 1: Enabled
5828 066	HD job Clear	*CTL	Selects the treatment of the job when a spooled job exists at power on. [0 or 1 / **1** / 1/step]

			0: Data is cleared, 1: Automatically printed
5828 069	Job Spool (Protocol)	*CTL	Switches job spooling off or on and enables settings for job spooling protocols. [0 or 1 / **1** / 1/step] 0: Off, 1: On Bit switches: ▪ Bit 0: LPR ▪ Bit 1: FPT ▪ Bit 2: IPP ▪ Bit 3: SMB ▪ Bit 4: Not used. ▪ Bit 5: DIPRINT ▪ Bits 6 and 7: Reserved
5828 090	TELNET (0: OFF, 1: ON)	*CTL	Enables or disables Telnet. [0 or 1 / **1** / 1/step] 0: Disabled, 1: Enabled
5828 091	Web (0: OFF, 1: ON)	*CTL	Enables or disables the Web monitor. [0 or 1 / **1** / 1/step] 0: Disabled, 1: Enabled
5828 145	Active IPv6 Link		Displays the IPv6 link local address for the wireless LAN or Ethernet.
5828 147	Active IPv6 Stat (1)		Displays the IPv6 stateless address 1 to 5 for the wireless LAN or Ethernet.
5828 149	Active IPv6 Stat (2)		
5828 151	Active IPv6 Stat (3)		
5828 153	Active IPv6 Stat (4)		
5828 155	Active IPv6 Stat (5)		
5828 156	IPv6 Manual Addr		Displays the IPv6 manual setting address for the wireless LAN or Ethernet.
5828 158	IPv6 Gateway Add		Displays the IPv6 gateway address for the wireless LAN or Ethernet.

5832	**[HDD]** HDD Initialization		
5832 001		#	Prepares the hard disk. Use this SP mode only when there is a hard disk error.

5839	**[IEEE 1394]**		
5839 007	Cycle Master	*CTL	[0 or 1 / **1** /-] 0: Off, 1: On
5839 008	BCR mode	*CTL	[0 to 3 / **3** / 1/step] 0: Standard, 1: IRM Color Copy 2: Reserved, 3: Always Effective
5839 009	IRM 1394a Check	*CTL	[0 or 1 / **0** /-] 0: Off, 1: On
5839 010	Unique ID	*CTL	[0 or 1 / **1** /-] 0: Off, 1: On
5839 011	Logout	*CTL	[0 or 1 / **1** /-] 0: Off, 1: On
5839 012	Login	*CTL	[0 or 1 / **0** /-] 0: Off, 1: On
5839 013	Login MAX	*CTL	[0 to 63 / **8** / 1/step]]

5840	**[IEEE 802.11b]**		
5840 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/ AS: [1 to 11 / **11** / 1/step]
5840 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]

5840 011	WEP Key Select	*CTL	Selects the WEP key. [00 to 11 / **00** / 1 binary] 00: Key #1 01: Key #2 (Reserved) 10: Key #3 (Reserved) 11: Key #4 (Reserved)

5842	**[GWWS Analysis]** Net File Application Analysis		
5842 001	Setting 1	*CTL	Prints or does not print the module log for each bit. [0 or 1 / **1** / 1/step] 0: Prints, 1: Not print Bit switches: ▪ Bit 0: System or other related application. ▪ Bit 1: Captured related application ▪ Bit 2: Certification related application ▪ Bit 3: Address related application ▪ Bit 4: Control devices or transmission logs related application ▪ Bit 5: Output (print, fax or transmission) related application ▪ Bit 6: Documents related application in bit 7, 0: Not printed, 1: Printed ▪ Bit 7: MSB related application
5842 002	Setting 2	*CTL	Selects the stamp type for the log of Net File Application Analysis. Bit switches: ▪ Bit 0 to 6: Not used. ▪ Bit 7 0: Minute/second/micro second 1: Date/hour/minute/second

5844	**[USB]**		
5844 001	Transfer Rate	*CTL	Adjusts the USB transfer rate. [0001 or 0004 / **0004** / -] 0001: Full speed, 0004: Auto Change

5844 002	Vendor ID	*CTL	Displays the vendor ID.
5844 003	Product ID	*CTL	Displays the product ID.
5844 004	Dev Release Num	*CTL	Displays the device release version number.

5845	**[Dlv Server Stting]** Delivery Server Setting		
5845 003	DeliErr DisplTime	*CTL	Specifies the retry interval. [60 to 900 / **300** / 1 second/step]
5845 004	Delivery Options	*CTL	Specifies the maximum number of retries. [0 to 99 / **3** / 1/step]

5846	**[UCS Setting]**		
5846 010	LDAP Search TOut	*CTL	[1 to 255 / **60** / 1 /step]
	Sets the length of the timeout for the search of the LDAP server.		
5846 041	AddtB Acl Info	*CTL	
	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.		
5846 046	IniSet/All AddrB	*CTL	
	This SP clears all the setting information managed in UCS and address book information (local, delivery, LDAP) and restores these settings to their default values. Use this SP to initial the account information (user codes and passwords) for system managers and users as well.		
5846 047	Ini Local AddrB	*CTL	
	Clears the local address book information, including the user code.		
5846 049	Ini LDAP AddrB	*CTL	
	Clears the LDAP address book information, except the user code.		
5846 050	Init All AddrB	*CTL	Initializes all address information data except the administration account.
	Clears all directory information managed by UCS, including all user codes. Turn off and on the main power switch after executing this SP.		
5846 051	Bkup All AddrB	*CTL	

	Uploads all directory information to the SD card.		
5846 052	Restr All AddrB	*CTL	
	Downloads all directory information from the SD card.		
5846 053	Clear Backup Info	*CTL	
	Deletes the address book data from the SD card in the service slot. Deletes only the files that were uploaded from this machine. This feature does not work if the card is write-protected. 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.		
5846 060	Search option	*CTL	
	This SP uses bit switches to set up the fuzzy search options for the UCS local address book. Bit: Meaning Bit0: Checks both upper/lower case characters Bit1: Japan Only Bit2 to 7		
5846 062	Compl Opt1	*CTL	[0 to 32 / **0** / 1 /step]
	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. 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.		
5846 063	Compl Opt2	*CTL	[0 to 32 / **0** / 1 /step]
	Use this SP to set the conditions for password entry to access the local address book. Specifically, this SP limits the password entry to **lower case** and defines the length of the password. **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.		
5846 064	Compl Opt3	*CTL	[0 to 32 / **0** / 1 /step]
	Use this SP to set the conditions for password entry to access the local address		

	book. Specifically, this SP limits the password entry to **numbers** and defines the length of the password. **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.		
5846 065	Compl Opt4	*CTL	[0 to 32 / **0** / 1 /step]
	Use this SP to set the conditions for password entry to access the local address book. Specifically, this SP limits the password entry to **symbols** and defines the length of the password. **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.		
5846 094	Encryption Stat	*CTL	[0 to 255 / - / 1 /step] No default
	Shows the status of the encryption function of the address book on the LDAP server.		

5848	**[Web Service]**		
5848 004	ac: UD	*CTL	Enables or disables the udirectory access limitation. 0000: Disabled, 0001: Enabled
5848 009	ac: Job Ctrl		Switches access control on and off. 0000: OFF, 0001: ON
5848 011	ac: Dev Mng	*CTL	
5848 022	ac:Uadmin	*CTL	
5848 210	LogType: Job 1	*CTL	Displays the log server settings. These can be adjusted with the Web Image Monitor.
5848 211	LogType: Job 2	*CTL	
5848 212	LogType: Access	*CTL	
5848 213	PrimarySrv	*CTL	
5848 214	SecondarySrv	*CTL	
5848 215	Start Time	*CTL	
5848 216	Interval Time	*CTL	[1 to 1000 / **1** / 1 hour/step]
	Specifies the interval of transmitting log information. This SP is activated only when the SP5848-217 is set to "2".		
5848 217	Timing	*CTL	[0 to 2 / **0** / 1 /step]

	Selects the method for transmitting log information. 0: Transmitting OFF, 1: Always Transmitting, 2: Interval Transmitting

5849	**[Installation Date]**		
5849 001	Display	*CTL	Enables or disables the udirectory access limitation. 0000: Disabled, 0001: Enabled
5849 003	Total Counter	*CTL	

5851	**[Bluetooth]**		
5851 001	Mode	*CTL	Adjusts the Bluetooth setting. [0 or 1 / **0** / -] 0: Public, 1: Private

5856	**[Remote ROM Update]**		
5856 002	Local Port		Allows the technician to update the firmware using a parallel cable. [0 or 1 / **0** / 1/step] 0: Disable, 1: Enable

5857	**[Debug Log Save]**		
5857 001	ON/ OFF	*CTL	Enables Or Disables The Debug Log Saving Function. [0 or 1 / **0** / 1/Step] Alphanumeric 0: OFF, 1: ON
5857 002	Target	*CTL	Sets the storage location for the debug log. [2 or 3 / **2** / 1/step] 2: HDD, 3: SD
5857 005	Save to HDD	*CTL	Sets the key number of the debug log.
5857 006	Save to SD Card	*CTL	Sets the key number of the debug log.
5857 009	HDD to SD Latest	*CTL	Copies the most recent 4 MB of the debug log from the hard disk to the SD card.
5857 010	HDD to SD Any	*CTL	Sets the key number of the debug log copied from the hard disk to the SD card.
5857 011	Erase HDD Debug	*CTL	Deletes the debug log from the hard disk.

5857 012	Erase SD Debug	*CTL	Deletes the debug log from the SD card.
5857 013	Dsply-SD Space	*CTL	Shows the free space on the SD card.
5857 014	SD to SD Latest	*CTL	Copies the most recent 4 MB of the debug log from an SD card to a different SD card.
5857 015	SD to SD Any	*CTL	Sets the key number of the debug log copied from an SD card to a different SD card.
5857 016	Make HDD Debug File	*CTL	Makes a log file on the HDD to save debug logs. To save debug logs, the controller makes a log file first, then writes data in the file. This procedure can use much time. The user can switch off the main power switch before the log is written in the file. To prevent this possible problem, you can prepare a log file in advance. If you do this, the controller uses less time to save logs because the log file is prepared.
5857 017	Make SD Debug File	*CTL	

5858	**[Debug Log Save: SC]**		
5858 001	Engine SC	*CTL	Collects debug logs when an engine-related SC code occurs. [0 or 1 / **0** / 1/step] 0: OFF, 1: ON
5858 002	Controller SC	*CTL	Collects debug logs when a controller-related SC code occurs. [0 or 1 / **0** / 1/step] 0: OFF, 1: ON
5858 003	Any SC	*CTL	Sets the SC code whose logs are collected. [00000 to 65535 / **0** / 1/step]
5858 004	Jam	*CTL	Collects debug logs when a paper jam occurs. [0 or 1 / **0** / 1/step] 0: OFF, 1: ON

5859	**[Debug Log Save Key]**		
5859 001	Key 1	*CTL	Sets the key number of a specific event (see the note below) whose logs are saved in the
5859 002	Key 2	*CTL	

5859 003	Key 3	*CTL	specified storage place (see the note below). When multiple key numbers are assigned, the logs are collected in this order: Key 1, Key 2, ..., Key 9, Key 10. Note ▪ The event is set with SP5-857-2. The storage is set with SP5-858. [0000000 to 9999999 / **0** / 1/step]
5859 004	Key 4	*CTL	
5859 005	Key 5	*CTL	
5859 006	Key 6	*CTL	
5859 007	Key 7	*CTL	
5859 008	Key 8	*CTL	
5859 009	Key 9	*CTL	
5859 010	Key 10	*CTL	

5860	**[SMTP/ POP3/ IMAP]**		
5860 002	SMTP Server Port No.	*CTL	Adjusts the number of the SMTP server ports. [1 to 65535 / **25** / 1/step]
5860 003	SMTP Auth.	*CTL	Enables or disables the SMTP authentication for mail transfers. [0 or 1 / **0** / 1/step] 0: Disable, 1: Enable
5860 006	SMTP Auth. Encryp	*CTL	Encrypts or does not encrypt passwords for POP3/IMAP4 authentications. [0 to 2 / **0** / 1/step] 0: Automatic, 1: Not encrypt, 2: Encrypt
5860 007	POP before SMTP	*CTL	Enables or disables the authentication that is executed on the POP server before the communication is established with the SMTP server to transfer mails. [0 or 1 / **0** / 1/step] 0: Disable, 1: Enable
5860 008	POP to SMTP Wait	*CTL	Adjusts the waiting time to access the SMTP server after the authentication on the POP server. [0 to 10000 / **300** / 1 ms/step]
5860 009	Mail Receive Pro	*CTL	Sets the protocol of receiving e-mail. [1 to 3 / **1** / 1/step] 1: POP3, 2: IMAP4, 3: SMTP
5860 013	POP3/IMAP4 Auth.	*CTL	Encrypts or does not encrypt passwords for POP3/IMAP4 authentications.

			[0 to 2 / **0** / 1/step] 0: Automatic, 1: Not encrypt, 2: Encrypt
5860 014	POP3 Srvr Port No.	*CTL	Adjusts the port number of the POP server. [1 to 65535 / **110** / 1/step]
5860 015	IMAP4 Srv Port	*CTL	Adjusts the port number of the IMAP4 server. [1 to 65535 / **143** / 1/step]
5860 016	SMTP Rx Port No	*CTL	Adjusts the port number of the SMTP server. [1 to 65535 / **25** / 1/step]
5860 017	Mail Rx Interval	*CTL	Adjusts the interval of receiving an e-mail. [2 to 1440 / **3** / 1 minute/step]
5860 019	Mail Keep Setting	*CTL	Sets the way of keeping the e-mail in the server. [0 to 2 / **0** / 1/step] 0: Not keeping 1: Keeping All 2: Keeping the only error e-mail
5860 020	ParMail Rec TOut	*CTL	Adjusts the time for keeping the partial e-mails. If the partial e-mails are not received during the set time, these are deleted. [1 to 168 / **72** / 1 h/step]
5860 021	MDN Res RFC2298	*CTL	Determines whether RFC2298compliance is switched on for MDN reply mail. [0 or 1 / **1** / -] 0: No, 1: Yes
5860 022	SMTP Aut FileldRep	*CTL	Determines whether the FROM item of the mail header is switched to the validated account after the SMTP server is validated. [0 or 1 / **0** / 1/step] 0: No. “From” item not switched, 1: Yes. “From” item switched.
5860 025	SMTP Auth DirectSet	*CTL	Selects directly the way of SMTP authentication if all SMTP authentications fail due to the error in the SP5860-006. This SP is activated only when SP5860-003 is set to “Enable”.

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

5866	**[E-Mail Report]**		
5866 001	Report Validity	*CTL	Disables and re-enables the email notification feature. [0 or 1/ **0** / 1/step] 0: Enable, 1: Disable
5866 005	Add DataFiled	*CTL	Enables or disables to add the date field on the alert notice e-mail. [0 or 1 / **0** / 1/step] 0: Off, 1: On

5869	**[RAM Disk Setting]**		
5869 001	Mail Function	*CTL#	Enables or disables the e-mail transfer function. This SP sets the RAM disk size for the e-mail transfer function. [0 or 1 / **0** / 1/step] 0: On, 1: Off

5870	**[Common Key Info Writi]** Common Key Information Writing		
5870 001	Writing	*CTL	Writes the authentication data (used for NRS) in the memory.
5870 003	Initialize	*CTL	Initializes the authentication data in the memory.

5873	**[SD Card Appli Move]**		
5873 001	Move Exec		See ‘SD Card Appli Move’.
5873 002	Undo Exec		See ‘SD Card Appli Move’.

5878	**[Option Setup]**		
5878 001	Option Setup		Executes the setup for the Data Overwrite

			Security Unit.

5886	**[Permit ROM update]**		
5886 001	Permit ROM update	*CTL	[0 or 1 / **0** / 1/step]

5907	**[Plug/ Play] Plug/Play Name Selection**	
5907 001	*CTL	[0 to 8 / **0** / 1/step] 0: Ricoh, Aficio SP C411DN 1: Ricoh, Aficio SP C410DN 2: SAVIN, CLP31DN 3: SAVIN, CLP27DN 4: Gestetner, C7531dn 5: Gestetner, C7526dn 6: NRG, C411DN 7: NRG, C410DN 8: infotec, IPC 3030DN 9: infotec, IPC 2525DN 10: LANIER, LP231cn/SP C411DN 11: LANIER, LP226cn/SP C410DN

5924	**[SDK Apli Display]** SDK Application Display		
5924 001	SDK Appli Display	*CTL	Enables or disables the LCD display of the SDK application. [0 or 1 / **0** / 1/step] 0: Not display, 1: Display

5930	**[Meter Click Ch.]** Meter Click Charge		
5930 001	Meter Click Ch.	*EGB	Enables or disables the Meter Charge mode. When enabling the Meter Charge mode, the “Counter” menu is added to the user menu. [0 or 1 / **0** / -] 0: OFF, 1: ON
5930 010	PCU	*EGB	Displays or does not display the end display for the PCU. This SP is activated only when the SP5930-001 is set to "1".

			[0 or 1 / **0** / -] 0: OFF, 1: ON
5930 014	Mid Trans Unit	*EGB	Displays or does not display the end display for the transfer belt unit. This SP is activated only when the SP5930-001 is set to "1". [0 or 1 / **0** / -] 0: OFF, 1: ON
5930 016	Fusing Unit.	*EGB	Displays or does not display the end display for the fusing unit. This SP is activated only when the SP5930-001 is set to "1". [0 or 1 / **0** / -] 0: OFF, 1: ON

5990	**[SP Print Mode]**		
5990 001	All (Data List)		Does SP5-990-002, 004, 005, 006, and 007.
5990 002	SP (Mode Data List)		Prints an SMC report on all SP modes.
5990 004	Logging Data		Prints an SMC report on the SPs that save logs.
5990 005	Diagnosic Report		Prints the Self-Diagnostic Report.
5990 006	Non-Default		Prints an SMC report on the SPs that have settings, which are different from the defaults.
5990 007	NIB Summary		Prints the network configuration report.

SP7-XXX (Data Log)

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

7403	**[SC History]**		
7403 001	Latest	*CTL	Displays the SC codes detected. The 10 most recently detected SC Codes are displayed on the screen, and also can be seen on the SMC (logging) outputs.
7403 002	Latest 1	*CTL	
7403 003	Latest 2	*CTL	
7403 004	Latest 3	*CTL	
7403 005	Latest 4	*CTL	

7403 006	Latest 5	*CTL	
7403 007	Latest 6	*CTL	
7403 008	Latest 7	*CTL	
7403 009	Latest 8	*CTL	
7403 010	Latest 9	*CTL	

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

7504	**[Paper Jam/Loc]** Paper Jam Location Displays the number of jams according to the location where jams were detected.		
7504 001	At Power On	*CTL	Not used
7504 003	Tray 1: Non-feed	*CTL	Tray 1: Paper is not fed.
7504 004	Tray 2: Non-feed	*CTL	Tray 2: Paper is not fed.
7504 005	Tray 3: Non-feed	*CTL	Tray 3/LCT: Paper is not fed.
7504 006	By-pass: Non-feed	*CTL	By-pass: Paper is not fed.
7504 007	Duplex: Non-feed	*CTL	Duplex: Paper is not fed.
7504 008	Registration	*CTL	Registration Senor does not get "ON".
7504 009	Fusing Unit	*CTL	Fusing Exit Sensor does not get "ON".
7504 010	Exit	*CTL	Paper Exit Sensor does not get "ON".
7504 011	Inverter (F)	*CTL	Duplex: ON
7504 012	Inverter (R)	*CTL	Duplex Jam Sensor 1 does not get "ON".
7504 013	Duplex Exit	*CTL	Duplex Jam Sensor 2 does not get "ON".
7504 015	Bank Paper Feed	*CTL	Optional Paper Feed Sensor does not get "ON".
7504 016	Fusing Entrance	*CTL	Fusing Entrance Sensor does not get "ON".
7504 061	Regist: Stay	*CTL	Registration Sensor does not get "OFF"
7504 063	Exit: Stay	*CTL	Paper Exit Sensor does not get "OFF".
7504 065	Inverter (F): Stay	*CTL	Duplex: OFF
7504 066	Inverter (R): Stay	*CTL	Duplex Exit 1: OFF
7504 070	Bank Paper 1: Stay	*CTL	Not used
7504 071	Bank Paper 2: Stay	*CTL	Not used

7506	**[Paper Jam/Size]**		
7506 133	A4 SEF	*CTL	Displays the number of jams according to the paper size. [0 to 9999 / **0** / 1 sheet/step]
7506 134	A5 SEF	*CTL	
7506 142	B5 SEF	*CTL	
7506 164	LG SEF	*CTL	
7506 166	LT SEF	*CTL	
7506 172	HLT SEF	*CTL	
7506 255	Others	*CTL	

7507	**[Dsply-P Jam Hist]** Paper Jam History Display		
7507 001	Latest	*CTL	Displays the 10 most recently detected paper jams.
7507 002	Latest 1	*CTL	
7507 003	Latest 2	*CTL	
7507 004	Latest 3	*CTL	
7507 005	Latest 4	*CTL	
7507 006	Latest 5	*CTL	
7507 007	Latest 6	*CTL	
7507 008	Latest 7	*CTL	
7507 009	Latest 8	*CTL	
7507 010	Latest 9	*CTL	

7801	**[Memory/Version/PN]** Memory Version and Part Number Display		
7801 250	Memory/Version/PN	*CTL	Displays the part number and version of all ROMs in the machine.

7803	**[PM Counter Display]** Preventive Maintenance Counter Display (Sheets or Rotations (%), Unit, [Color]) Trans Belt Unit: Transfer Belt Unit T. Roll 2: Transfer Roller 2, Waste Toner: Waste Toner Bottles		
	Displays the PM counter for each unit.		
7803 001	Paper	*EGB	Displays the number of sheets printed for each current maintenance unit. When a unit is replaced, the machine automatically detects that the new unit is installed. Then, the current
7803 002	S: PCU: [K]	*EGB	
7803 003	S: PCU: [M]	*EGB	
7803 004	S: PCU: [C]	*EGB	

7803 005	S: PCU: [Y]	*EGB	PM counter value is automatically moved to the PM Counter - Previous (SP7-906-1 to 10) and is reset to “0”. The total number of sheets printed with the last unit replaced can be checked with SP7-906-1 to 10. SP7-803-001: This shows the number of pages printed. [0 to 9999999 / **0** / 1 sheet/step]
7803 009	S: Transfer Belt Unit	*EGB	
7803 010	S: T. Roll 2	*EGB	
7803 011	S: Fusing Unit	*EGB	
7803 012	S: By-pass	*EGB	
7803 013	S: Tray 1	*EGB	
7803 014	S: Tray 2	*EGB	
7803 015	S: Tray 3	*EGB	
7803 017	R: PCU: [K]	*EGB	Displays the number of revolutions of motors or clutches for each current maintenance unit. [0 to 9999999 / **0** / 1 revolution/step] When a unit is replaced, the machine automatically detects that the new unit is installed. Then, the current PM counter value is automatically moved to the PM Counter - Previous (SP7-906-11 to 20) and is reset to “0”. The total number of revolutions made with the last unit replaced can be checked with SP7-906-11 to 20. [0 to 9999999 / **0** / 1 rotation/step]
7803 018	R: PCU: [M]	*EGB	
7803 019	R: PCU: [C]	*EGB	
7803 020	R: PCU: [Y]	*EGB	
7803 025	R: Trans Belt Unit	*EGB	
7803 026	R: T. Roll 2	*EGB	
7803 027	R: Fusing Unit	*EGB	
7803 033	Toner Supply: [K]	*EGB	Displays the number of sheets printed until the waste toner bottle becomes full or toner runs out. [0 to 9999999 / **0** / 1 /step]
7803 034	Toner Supply: [M]	*EGB	
7803 035	Toner Supply: [C]	*EGB	
7803 036	Toner Supply: [Y]	*EGB	
7803 037	R%: PCU: [K]	*EGB	Displays the value given by the following formula: (Current revolution / Target revolution) 100, where “Current revolution” is the current value for the counter of the part, and “Target revolution” is the values of SP7-803-17 through 27. This shows how much of the unit’s expected lifetime has been used up. The R% counter is based on rotations, not prints. If the number of rotations reaches the limit, the machine enters the end condition for
7803 038	R%: PCU: [M]	*EGB	
7803 039	R%: PCU: [C]	*EGB	
7803 040	R%: PCU: [Y]	*EGB	
7803 045	R%: Trans Belt Unit	*EGB	
7803 046	R%: T. Roll 2	*EGB	
7803 047	R%: Fusing Unit	*EGB	

			that unit. If the print count lifetime is reached first, the machine also enters the end condition, even though the R% counter is still less than 100%. [0 to 999 / **0** / 1 rotation%/step]
7803 050	PCU Life: [K]	*EGB	Displays the PCU unit life. [-999 to 999 / **100** / 1/step]
7803 051	PCU Life: [Col]	*EGB	
7803 052	reserved	*EGB	
7803 053	reserved	*EGB	
7803 054	TransBeltU.Life	*EGB	Displays the transfer belt unit life. [-999 to 999 / **100** / 1/step]
7803 055	T.Roll2 Life	*EGB	Displays the paper transfer unit life. [-999 to 999 / **100** / 1/step]
7803 056	FusingUnit Life	*EGB	Displays the fusing unit life. [-999 to 999 / **100** / 1/step]

7804	**[PM Counter Reset]** Preventive Maintenance Counter Reset (Sheets, Unit, [Color]) Trans Belt Unit: Transfer Belt Unit, T. Roll 2: Transfer Roller 2, Waste Toner: Waste Toner Bottle, Toner: Toner Bottles		
	Clears the PM counter for each unit.		
7804 001	Paper		
7804 002	PCU: [K]	-	Clears the PM counter. Press the Enter key after the machine asks “Execute?”. When a unit is replaced, the machine automatically detects that the new unit is installed. Then, the current PM counter value is automatically moved to the PM Counter-Previous (SP7-906-1 to 40) and is reset to "0".
7804 003	PCU: [M]	-	
7804 004	PCU: [C]	-	
7804 005	PCU: [Y]	-	
7804 009	Trans Belt Unit	-	
7804 010	Transfer Roller 2	-	
7804 011	Fusing Unit	-	
7804 012	S: By-pass	-	
7804 013	S: Tray 1	-	
7804 014	S: Tray 2	-	
7804 015	S: Tray 3	-	
7804 017	S: Toner: [K]	-	
7804 018	S: Toner: [M]	-	
7804 019	S: Toner: [C]	-	

7804 020	S: Toner: [Y]	-	
7804 021	Toner Supply: [K]	-	
7804 022	Toner Supply: [M]	-	
7804 023	Toner Supply: [C]	-	
7804 024	Toner Supply: [Y]	-	
7804 050	All		

7806	**[Procon Counter]** Process Control Counter ([Color])		
7806 001	[K]	*EGB	[0 to 2000 / **0** / 1/step]
7806 002	[Cl]	*EGB	
	[MUSIC Counter] ([Color])		
7806 003	[K]	*EGB	Counts the paper printed after previous MUSIC. [0 to 999 / **0** / 1/step]
7806 004	[Cl]	*EGB	
	[P. Pattern Coun.] P. Sensor Pattern Counter ([Color])		
7806 005	[K]	*EGB	[0 to 255 / **0** / 1/step]
7806 006	[Cl]	*EGB	
	[Low Resolution] Low Resolution Counter ([Color])		
7806 007	Sheets: [K]	*EGB	[0 to 255 / **0** / 1/step]
7806 008	Sheets: [M]	*EGB	
7806 009	Sheets: [C]	*EGB	
7806 010	Sheets: [Y]	*EGB	
7806 011	Counter	*EGB	[0 to 2000 / - / 1 /step]

7807	**[SC/ Jam Counter Reset]**		
7807 001	SC/ Jam Counter Reset	-	Clears the all counters related to SC codes and paper jams.

7810	**[Engine Cnt Reset]** Engine Counter Reset		
7810 001	All Clear	-	Clears the all Engine counters other than the total counter (SP7812).

7812	**[Total Cnt. Rst.]** Total Counter Reset		
7812 001	Color Counter	-	Clears the total color counter.

7812 002	Black Counter	-	Clears the total black counter.
7812 100	All Reset	-	Clears the total all counter.

7815	**[Rep. Cnter Reset]** Replacement Counter Reset (Sheets, Unit, [Color]) Trans Belt Unit: Transfer Belt unit, Waste Toner: Waste Toner Bottle, Toner: Toner Bottle		
7815 001	PCU: [K]	-	Clears the replacement counter and the previous unit counter of the black PCU.
7815 002	PCU: [M]	-	Clears the replacement counter and the previous unit counter of the magenta PCU.
7815 003	PCU: [C]	-	Clears the replacement counter and the previous unit counter of the cyan PCU.
7815 004	PCU: [Y]	-	Clears the replacement counter and the previous unit counter of the yellow PCU.
7815 005	Trans Belt Unit	-	Clears the replacement counter and the previous unit counter of the Transfer belt unit.
7815 006	Transfer Roller 2	-	Clears the replacement counter and the previous unit counter of the Transfer Roller.
7815 007	Fusing Unit	-	Clears the replacement counter and the previous unit counter of the Fusing unit.
7815 008	S: By-pass	-	Clears the replacement counter and the previous unit counter of the Paper pick up roller at by-pass.
7815 009	S: Tray 1	-	Clears the replacement counter and the previous unit counter of the Paper pick up roller at tray 1.
7815 010	S: Tray 2	-	Clears the replacement counter and the previous unit counter of the Paper pick up roller at tray 2.
7815 011	S: Tray 3	-	Clears the replacement counter and the previous unit counter of the Paper pick up roller at tray 3.
7815 029	Toner: [K]	-	Clears the replacement counter and the previous unit counter of the black toner bottle
7815 030	Toner: [M]	-	Clears the replacement counter and the

			previous unit counter of the magenta toner bottle
7815 031	Toner: [C]	-	Clears the replacement counter and the previous unit counter of the cyan toner bottle
7815 032	Toner: [Y]	-	Clears the replacement counter and the previous unit counter of the yellow toner bottle
7815 100	All	-	Clears the all replacement and the previous unit counters.

7817	**[Rep Cnter Reset]** Replacement Counter Reset		
7817 100	All Clear	-	Clears the all adjustment counters.

7832	**[Display-Self-Diag]** Display Self-Diagnostic Result		
7832 001	Display-Self-Diag	-	Displays the result of the diagnostics. To scroll the return codes, press the up-arrow key or the down-arrow key.

7834	**[Cov. Counter]** Coverage Counter		
7834 255	All Clear	-	Clears the all coverage counters.

7836	**[Total Memory Size]**		
7836 001		-	Shows the total storage size.

7853	**[Rep. Count. Disp]** Replacement Counter Display (Sheets, Unit, [Color]) Trans Belt Unit: Transfer Belt unit, Waste Toner: Waste Toner Bottle, Toner: Toner Bottle		
7853 002	PCU: [K]	*EGB	Displays the replacement counter for each unit. [0 to 9999999 / **0** / 1/step]
7853 003	PCU: [M]	*EGB	
7853 004	PCU: [C]	*EGB	
7853 005	PCU: [Y]	*EGB	
7853 009	Trans Belt Unit	*EGB	
7853 010	Transfer Roller 2	*EGB	
7853 011	Fusing Unit	*EGB	
7853 012	S: By-pass	*EGB	

7853 013	S: Tray 1	*EGB	
7853 014	S: Tray 2	*EGB	
7853 015	S: Tray 3	*EGB	
7853 028	Waste Toner	*EGB	

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

7906	**[PM Counter-PREV]** Previous Preventive Maintenance Counter Display (Sheets or Rotation (%),Unit, [Color]) Trans Belt Unit: Transfer Belt Unit, T. Roll 2: Transfer Roller 2, Waste Toner: Waste Toner Bottle, Toner: Toner Bottles		
7906 001	S: PCU: [K]	*EGB	Displays the number of sheets printed with the previous maintenance units. [0 to 9999999 / **0** / 1/step]
7906 002	S: PCU: [M]	*EGB	
7906 003	S: PCU: [C]	*EGB	
7906 004	S: PCU: [Y]	*EGB	
7906 008	S: Trans Belt Unit	*EGB	
7906 009	S: T. Roll 2	*EGB	
7906 010	S: Fusing Unit	*EGB	
7906 011	R: PCU: [K]	*EGB	Displays the number of revolutions for each unit in the previous maintenance units. [0 to 9999999 / **0** / 1 revolution/step]
7906 012	R: PCU: [M]	*EGB	
7906 013	R: PCU: [C]	*EGB	
7906 014	R: PCU: [Y]	*EGB	
7906 018	R: Trans Belt Unit	*EGB	
7906 019	R: Paper Trans	*EGB	
7906 020	R: Fusing Unit	*EGB	
7906 026	Toner Supply: [K]	*EGB	Displays the toner supply time for each color in the previous toner bottles. [0 to 9999999 / **0** / 1/step]
7906 027	Toner Supply: [M]	*EGB	
7906 028	Toner Supply: [C]	*EGB	
7906 029	Toner Supply: [Y]	*EGB	
7906 030	R%: PCU: [K]	*EGB	Displays the value given by the following formula: (Current count / Yield count) x 100, where
7906 031	R%: PCU: [M]	*EGB	
7906 032	R%: PCU: [C]	*EGB	

7906 033	R%: PCU: [Y]	*EGB	"Current count" is the current values in the counter for the part, and "Yield count" is the recommended yield. [0 to 999 / **0** / 1%/step]
7906 034	R%: Trans Belt Unit	*EGB	
7906 035	R%: T. Roll 2	*EGB	
7906 036	R%: Fusing Unit	*EGB	
7906 037	S: By-pass	*EGB	Displays the number of sheets fed with the previous maintenance unit. [0 to 9999999 / **0** / 1/step]
7906 038	S: Tray 1	*EGB	
7906 039	S: Tray 2	*EGB	
7906 040	S: Tray 3	*EGB	

7931	**[Toner Info [K]]** Toner Bottle Information [K] (R: Replacement or E: End)		
7931 001	Model ID	*EGB	Displays the information number for each category.
7931 002	Cartridge Ver	*EGB	
7931 003	Brand ID	*EGB	
7931 004	Area ID	*EGB	
7931 005	Production ID	*EGB	
7931 006	Color ID	*EGB	
7931 007	Maintenance ID	*EGB	
7931 008	New	*EGB	
7931 009	Recycle Count	*EGB	
7931 010	Prod. Date	*EGB	
7931 011	Serial No.	*EGB	
7931 012	Remaining Toner	*EGB	Displays the remaining toner rate. [0 to 100 / **100** / 1%/step]
7931 013	Toner End	*EGB	Displays the toner end record.
7931 014	Refill Flag	*EGB	Displays the refilling record.
7931 015	R: Total Counter	*EGB	Displays the total number of sheets when replacing the new toner bottle for the b/w mode or the full color mode. [0 to 9999999 / **0** / 1/step]
7931 016	R: Color Counter	*EGB	
7931 017	E: Total Counter	*EGB	Displays the total number of sheets when detecting the toner end for the b/w mode or the full color mode. [0 to 9999999 / **0** / 1/step]
7931 018	E: Color Counter	*EGB	

7931 019	Near End	*EGB	Displays the toner near end record. [0 to 3 / **0** / 1/step]
7931 020	Install Date	*EGB	Displays the date of the install the toner bottle.
7931 021	Toner End Date	*EGB	Displays the date of the toner end.

7932	**[Toner Info [M]]** Toner Bottle Information [M] (R: Replacement or E: End)		
7932 001	Model ID	*EGB	Displays the information number for each category.
7932 002	Cartridge Ver	*EGB	
7932 003	Brand ID	*EGB	
7932 004	Area ID	*EGB	
7932 005	Production ID	*EGB	
7932 006	Color ID	*EGB	
7932 007	Maintenance ID	*EGB	
7932 008	New	*EGB	
7932 009	Recycle Count	*EGB	
7932 010	Prod. Date	*EGB	
7932 011	Serial No.	*EGB	
7932 012	Remaining Toner	*EGB	Displays the remaining toner rate. [0 to 100 / **100** / 1%/step]
7932 013	Toner End	*EGB	Displays the toner end record.
7932 014	Refill Flag	*EGB	Displays the refilling record.
7932 015	R: Total Counter	*EGB	Displays the total number of sheets when replacing the new toner bottle for the b/w mode or the full color mode. [0 to 9999999 / **0** / 1/step]
7932 016	R: Color Counter	*EGB	
7932 017	E: Total Counter	*EGB	Displays the total number of sheets when detecting the toner end for the b/w mode or the full color mode. [0 to 9999999 / **0** / 1/step]
7932 018	E: Color Counter	*EGB	
7932 019	Near End	*EGB	Displays the toner near end record. [0 to 3 / **0** / 1/step]
7932 020	Install Date	*EGB	Displays the date of the install the toner bottle.
7932 021	Toner End Date	*EGB	Displays the date of the toner end.

7933	**[Toner Info [C]]** Toner Bottle Information [C] (R: Replacement or E: End)		
7933 001	Model ID	*EGB	Displays the information number for each category.
7933 002	Cartridge Ver	*EGB	
7933 003	Brand ID	*EGB	
7933 004	Area ID	*EGB	
7933 005	Production ID	*EGB	
7933 006	Color ID	*EGB	
7933 007	Maintenance ID	*EGB	
7933 008	New	*EGB	
7933 009	Recycle Count	*EGB	
7933 010	Prod. Date	*EGB	
7933 011	Serial No.	*EGB	
7933 012	Remaining Toner	*EGB	Displays the remaining toner rate. [0 to 100 / **100** / 1%/step]
7933 013	Toner End	*EGB	Displays the toner end record.
7933 014	Refill Flag	*EGB	Displays the refilling record.
7933 015	R: Total Counter	*EGB	Displays the total number of sheets when replacing the new toner bottle for the b/w mode or the full color mode. [0 to 9999999 / **0** / 1/step]
7933 016	R: Color Counter	*EGB	
7933 017	E: Total Counter	*EGB	Displays the total number of sheets when detecting the toner end for the b/w mode or the full color mode. [0 to 9999999 / **0** / 1/step]
7933 018	E: Color Counter	*EGB	
7933 019	Near End	*EGB	Displays the toner near end record. [0 to 3 / **0** / 1/step]
7933 020	Install Date	*EGB	Displays the date of the install the toner bottle.
7933 021	Toner End Date	*EGB	Displays the date of the toner end.

7934	**[Toner Info [Y]]** Toner Bottle Information [Y] (R: Replacement or E: End times)		
7934 001	Model ID	*EGB	Displays the information number for each category.
7934 002	Cartridge Ver	*EGB	
7934 003	Brand ID	*EGB	

7934 004	Area ID	*EGB	
7934 005	Production ID	*EGB	
7934 006	Color ID	*EGB	
7934 007	Maintenance ID	*EGB	
7934 008	New	*EGB	
7934 009	Recycle Count	*EGB	
7934 010	Prod. Date	*EGB	
7934 011	Serial No.	*EGB	
7934 012	Remaining Toner	*EGB	Displays the remaining toner rate. [0 to 100 / **100** / 1%/step]
7934 013	Toner End	*EGB	Displays the toner end record.
7934 014	Refill Flag	*EGB	Displays the refilling record.
7934 015	R: Total Counter	*EGB	Displays the total number of sheets when replacing the new toner bottle for the b/w mode or the full color mode. [0 to 9999999 / **0** / 1/step]
7934 016	R: Color Counter	*EGB	
7934 017	E: Total Counter	*EGB	Displays the total number of sheets when detecting the toner end for the b/w mode or the full color mode. [0 to 9999999 / **0** / 1/step]
7934 018	E: Color Counter	*EGB	
7934 019	Near End	*EGB	Displays the toner near end record. [0 to 3 / **0** / 1/step]
7934 020	Install Date	*EGB	Displays the date of the install the toner bottle.
7934 021	Toner End Date	*EGB	Displays the date of the toner end.

7935	**[PM Interval]** Preventive Maintenance Interval (Sheets or Rotations, Unit)		
7935 004	R: Trans. Belt	*EGB	[0 to 500.00 / **P2a: 104.82, P2b: 106.32** / 0.01 Km/step]
7935 005	S: Fusing	*EGB	[0 to 255 / **100** / 1 K/step]
7935 006	R: Fusing	*EGB	[0 to 200.00 / **P2a: 168.92, P2b: 170.54** / 0.01 Km/step]

7936	**[PM Count. Reset]** Preventive Maintenance Counter Reset	
7936 001	All	Resets the following SP counters.

		▪ SP3251-001 to -004 ▪ SP3303-001 to -004 ▪ SP3821-001 to -010 ▪ SP7931-001 to -021 ▪ SP7932-001 to -021 ▪ SP7933-001 to -021 ▪ SP7934-001 to -021 ▪ SP9001-001 to -024 ▪ SP9001-029 to -032 ▪ SP9001-059 to -061 ▪ SP9001-075 to -077 ▪ SP9901-001, 002 ▪ SP9914-005 to -006

7941	**[TonerLog1 [K]]** Toner Bottle Log Data 1 [K] (R: Replacement or E: End)		
7941 001	S/N	*EGB	Displays the serial number of the previous bottle.
7941 002	Installed Date	*EGB	Displays the installed date of the previous bottle.
7941 003	Total Count	*EGB	Displays the total counter of the previous bottle.
	[TonerLog2 [K]]		
7941 004	S/N	*EGB	Displays the serial number of the one before the previous bottle.
7941 005	Installed Date	*EGB	Displays the installed date of the one before the previous bottle.
7941 006	Total Count	*EGB	Displays the total counter of the one before the previous bottle.
	[TonerLog3 [K]]		
7941 007	S/N	*EGB	Displays the serial number of the one before the second previous bottle.
7941 008	Installed Date	*EGB	Displays the installed date of the one before the second previous bottle.
7941 009	Total Count	*EGB	Displays the total counter of the one before

			the second previous bottle.
	[TonerLog4 [K]]		
7941 010	S/N	*EGB	Displays the serial number of the third previous bottle.
7941 011	Installed Date	*EGB	Displays the installed date of the third previous bottle.
7941 012	Total Count	*EGB	Displays the total counter of the third previous bottle.
	[TonerLog5 [K]]		
7941 013	S/N	*EGB	Displays the serial number of the fourth previous bottle.
7941 014	Installed Date	*EGB	Displays the installed date of the fourth previous bottle.
7941 015	Total Count	*EGB	Displays the total counter of the fourth previous bottle.

7942	**[TonerLog1 [M]]** Toner Bottle Log Data 1 [K] (R: Replacement or E: End)		
7942 001	S/N	*EGB	Displays the serial number of the previous bottle.
7942 002	Installed Date	*EGB	Displays the installed date of the previous bottle.
7942 003	Total Counter	*EGB	Displays the total counter of the previous bottle.
	[TonerLog2 [M]]		
7942 004	S/N	*EGB	Displays the serial number of the one before the previous bottle.
7942 005	Installed Date	*EGB	Displays the installed date of the one before the previous bottle.
7942 006	Total Counter	*EGB	Displays the total counter of the one before the previous bottle.
	[TonerLog3 [M]]		
7942 007	S/N	*EGB	Displays the serial number of the one before the second previous bottle.
7942 008	Installed Date	*EGB	Displays the installed date of the one before

			the second previous bottle.
7942 009	Total Counter	*EGB	Displays the total counter of the one before the second previous bottle.
	[TonerLog4 [M]]		
7942 010	S/N	*EGB	Displays the serial number of the third previous bottle.
7942 011	Installed Date	*EGB	Displays the installed date of the third previous bottle.
7942 012	Total Counter	*EGB	Displays the total counter of the third previous bottle.
	[TonerLog5 [M]]		
7942 013	S/N	*EGB	Displays the serial number of the fourth previous bottle.
7942 014	Installed Date	*EGB	Displays the installed date of the fourth previous bottle.
7942 015	Total Count	*EGB	Displays the total counter of the fourth previous bottle.

7943	**[TonerLog1 [C]]** Toner Bottle Log Data 1 [K] (R: Replacement or E: End)		
7943 001	S/N	*EGB	Displays the serial number of the previous bottle.
7943 002	Installed Date	*EGB	Displays the installed date of the previous bottle.
7943 003	Total Counter	*EGB	Displays the total counter of the previous bottle.
	[TonerLog2 [C]]		
7943 004	S/N	*EGB	Displays the serial number of the one before the previous bottle.
7943 005	Installed Date	*EGB	Displays the installed date of the one before the previous bottle.
7943 006	Total Counter	*EGB	Displays the total counter of the one before the previous bottle.
	[TonerLog3 [C]]		
7943 007	S/N	*EGB	Displays the serial number of the one before

			the second previous bottle.
7943 008	Installed Date	*EGB	Displays the installed date of the one before the second previous bottle.
7943 009	Total Counter	*EGB	Displays the total counter of the one before the second previous bottle.
	[TonerLog4 [C]]		
7943 010	S/N	*EGB	Displays the serial number of the third previous bottle.
7943 011	Installed Date	*EGB	Displays the installed date of the third previous bottle.
7943 012	Total Counter	*EGB	Displays the total counter of the third previous bottle.
	[TonerLog5 [C]]		
7943 013	S/N	*EGB	Displays the serial number of the fourth previous bottle.
7943 014	Installed Date	*EGB	Displays the installed date of the fourth previous bottle.
7943 015	Total Count	*EGB	Displays the total counter of the fourth previous bottle.

7944	**[TonerLog1 [Y]]** Toner Bottle Log Data 1 [K] (R: Replacement or E: End)		
7944 001	S/N	*EGB	Displays the serial number of the previous bottle.
7944 002	Installed Date	*EGB	Displays the installed date of the previous bottle.
7944 003	Total Counter	*EGB	Displays the total counter of the previous bottle.
	[TonerLog2 [Y]]		
7944 004	S/N	*EGB	Displays the serial number of the one before the previous bottle.
7944 005	Installed Date	*EGB	Displays the installed date of the one before the previous bottle.
7944 006	Total Counter	*EGB	Displays the total counter of the one before the previous bottle.

	[TonerLog3 [Y]]		
7944 007	S/N	*EGB	Displays the serial number of the one before the second previous bottle.
7944 008	Installed Date	*EGB	Displays the installed date of the one before the second previous bottle.
7944 009	Total Counter	*EGB	Displays the total counter of the one before the second previous bottle.
	[TonerLog4 [Y]]		
7944 010	S/N	*EGB	Displays the serial number of the third previous bottle.
7944 011	Installed Date	*EGB	Displays the installed date of the third previous bottle.
7944 012	Total Counter	*EGB	Displays the total counter of the third previous bottle.
	[TonerLog5 [Y]]		
7944 013	S/N	*EGB	Displays the serial number of the fourth previous bottle.
7944 014	Installed Date	*EGB	Displays the installed date of the fourth previous bottle.
7944 015	Total Count	*EGB	Displays the total counter of the fourth previous bottle.

SP8-XXX (Data Log 2)

The counters in Data Log 2 are commonly used in multiple machines. Data Log 2 includes the counters of the functions or units that are not supported by Model G-P1a and P1b. The counters in Data Log 2 are cleared by SP5-801 (Memory Clear) or SP7-808 (Counter Reset).

Keys and abbreviations in Data Log 2

Program-related keys and abbreviations	
T:	The grand total of the counters of all application programs
P:	The counter of the printer application program excluding the events related to the document server
O:	The counter of other application programs including remote application programs

8001	**[T: Total Jobs]**	*CTL	Total jobs
8004	**[P: Total Jobs]**	*CTL	
	The number of times the application program starts a job [0 to 9999999/ 0 / 1]		

- The jobs interrupted by paper jams or some other errors are also counted.
- The jobs executed by SPs are not counted.

8021	**[T: Pjob/LS]**	*CTL	Print job / Local storage; document server
8024	**[P: Pjob/LS]**	*CTL	
8027	**[O: Pjob/LS]**	*CTL	
	The number of times the application program stores data on the document server [0 to 9999999/ 0 / 1]		

- When images stored on the document server by a network application (including Palm 2), are printed with another application, the O: counter increments.

8031	**[T: Pjob/DesApl]**	*CTL	Print job/ Designated application program
8034	**[P: Pjob/DesApl**	*CTL	
8037	**[O: Pjob/DesApl]**	*CTL	
	The number of times the application program retrieves data from the document server [0 to 9999999/ 0 / 1]		

- When documents already stored on the document server are printed, the counter of the application program that executes the print job increases.

8061	**[T: FIN Jobs]**	*CTL	Finish, post-print processing jobs
8064	**[P: FIN Jobs]**	*CTL	
8067	**[O: FIN Jobs]**	*CTL	
	The number of times the application program uses the finisher [0 to 9999999/ 0 / 1]		
001	Sort	The number of times the application program starts the	

		sort mode
002	Stack	The number of times the application program starts the stack mode
003	Staple	The number of times the application program starts the staple mode
004	Booklet	The number of times the application program starts the booklet mode Note ▪ The counter of the staple mode (003) can also increase.
005	Z-Fold	The number of times the application program starts the Z-fold mode Note ▪ The booklet mode is not included.
006	Punch	The number of times the application program starts the punch mode Note ▪ The counter of the printer application program (P:) can also increase.
007	Other	(Reserved)

8071	**[T: Jobs/PGS]**	*CTL	Jobs/ Pages
8074	**[P: Jobs/PGS]**	*CTL	
8077	**[O: Jobs/PGS]**	*CTL	
	The number of jobs that try to output a specific number of pages [0 to 9999999/ 0 / 1]		
-001	1 Page	-008	21 to 50 Pages
-002	2 Pages	-009	51 to 100 Pages
-003	3 Pages	-010	101 to 300 Pages
-004	4 Pages	-011	301 to 500 Pages
-005	5 Pages	-012	501 to 700 Pages
-006	6 to 10 Pages	-013	701 to 1000 Pages
-007	11 to 20 Pages	-014	1001 to Pages

- The jobs interrupted by paper jams or some other errors are also counted.
- If a job is suspended and restarted later, the job is seen as one job.

8381	**[T: Total PrtPGS]**	*CTL	Total print pages
8384	**[P: Total PrtPGS]**	*CTL	
8387	**[O: Total PrtPGS]**	*CTL	
	The number of sheets that the application program tries to print (excluding the pages printed in the SP mode) [0 to 9999999/ 0 / 1]		

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 printer jam

8391	**[LSize PrtPGS]**		
	Large size print pages	*CTL	The number of sheets printed on A3/DLT and larger sizes [0 to 9999999/ 0 / 1]

8411	**[Prints/Duplex]**		
	Prints/Duplex	*CTL	The number of sheets used in duplex printing [0 to 9999999/ 0 / 1]

- The counter increases by +1 when both sides (front/back) are printed. The counter does not increase when one of the two sides is not printed (e.g., the last page of the documents that have three pages, five pages, seven pages, and so on).

8421	**[T: PrtPGS/Dup Comb]**	*CTL	Print pages/ Duplex printing combine
8424	**[P: PrtPGS/Dup Comb]**	*CTL	
8427	**[O: PrtPGS/Dup Comb]**	*CTL	
	The number of sheets used in binding and combining [0 to 9999999/ 0 / 1]		
001	Simplex> Duplex	*CTL	

004	Simplex Combine	*CTL	
005	Duplex Combine	*CTL	
006	2>	*CTL	2 pages on 1 side (2-Up)
007	4>	*CTL	4 pages on 1 side (4-Up)
008	6>	*CTL	6 pages on 1 side (6-Up)
009	8>	*CTL	8 pages on 1 side (8-Up)
010	9>	*CTL	9 pages on 1 side (9-Up)
011	16>	*CTL	16 pages on 1 side (16-Up)
012	Booklet	*CTL	
013	Magazine	*CTL	

- These counters are useful for the users who want to know how much paper they have saved.
- Partially printed sheets are also counted as 1 page (e.g, the last page in the 4-Up mode is only partially printed when the documents have 5, 6, or 7 pages, 9, 10, or 11 pages, 13, 14, or 15 pages, and so on.).
- Here is a summary of how the counters work in the booklet and magazine modes.

Booklet		Magazine	
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

8431	**[T: PrtPGS/ImgEdt]**	*CTL	Print pages/ Image editing performed on the original with the copier GUI
8434	**[P: PrtPGS/ImgEdt]**	*CTL	
8437	**[O: PrtPGS/ImgEdt]**	*CTL	
	The number of pages that the application program handles in a specific way [0 to 9999999/ 0 / 1]		
001	Cover/Slip Sheet	*CTL	The number of cover sheets or slip sheets

			inserted Note ▪ A duplex-printed cover is counted as two.
002	Series/Book	*CTL	The number of pages printed in series (one side) or in the booklet mode
003	User Stamp	*CTL	The number of pages where stamps were applied (including page numbering and date stamping)

8441	**[T: PrtPGS/Ppr Size]**	*CTL	Print pages/ Paper size
8444	**[P: PrtPGS/Ppr Size]**	*CTL	
8447	**[O: PrtPGS/Ppr Size]**	*CTL	
	The number of sheets of a specific paper size that the application program uses [0 to 9999999/ 0 / 1]		
001	A3	007	LG
002	A4	008	LT
003	A5	009	HLT
004	B4	010	Full Bleed
005	B5	254	Other (Standard)
006	DLT	255	Other (Custom)

These counters do not distinguish between LEF and SEF.

8451	**[PrtPGS/Ppr Tray]**	*CTL	Print pages/ Paper tray
	The number of sheets fed from a specific tray [0 to 9999999/ 0 / 1]		
8451 001	Bypass Tray	*CTL	By-pass Tray
8451 002	Tray 1	*CTL	Printer
8451 003	Tray 2	*CTL	Paper Tray Unit/LCT (Optional)
8451 004	Tray 3	*CTL	Paper Tray Unit (Optional)
8451 005	Tray 4	*CTL	(Not used)
8451 006	Tray 5	*CTL	(Not used)
8451 007	Tray 6	*CTL	(Not used)
8451 008	Tray 7	*CTL	(Not used)

8451 009	Tray 8	*CTL	(Not used)
8451 010	Tray 9	*CTL	(Not used)

8461	**[T: PrtPGS/Ppr Type]**	*CTL	Print pages/ Paper type
8464	**[P: PrtPGS/Ppr Type]**	*CTL	
	The number of sheets of specific paper types [0 to 9999999/ 0 / 1]		
001	Normal	005	Normal (Back)
002	Recycled	006	Thick (Back)
003	Special	007	OHP
004	Thick	008	Other

- These counters increase when the paper is output. On the other hand, the PM counter increases (to measure the service life of each feed roller) when the paper is fed.
- Blank sheets (covers, chapter covers, slip sheets) are also counted.
- During duplex printing, a sheet printed on two sides and a sheet printed on one side are both counted as 1.

8471	**[PrtPGS/Mag]**	*CTL	Print pages/ Magnification
	The number of pages magnified or reduced [0 to 9999999/ 0 / 1]		
8471 001	to 49%	8471 004	101% to 200%
8471 002	50% to 99%	8471 005	201% to
8471 003	100%		

- Some application programs (on the computer) can specify the magnification setting of the printer driver (e.g., MS Excel). In a case like this, SP8-471 recognizes the setting and increases the corresponding counter. Other application programs can magnify or reduce the print images on their own. In a case like this, SP8-471 does not recognize the magnification setting of the application programs and increase the counter of 100%.
- Magnification adjustment conducted on the document server is not counted.
- Blank cover sheets and slip sheets are regarded as 100%.

8481	**[T: PrtPGS/TonSave]**	*CTL	Print pages/ Toner save
8484	**[P: PrtPGS/TonSave]**	*CTL	
	The number of pages printed with the toner save feature activated [0 to 9999999/ 0 / 1]		

- These counters display the same result.

8501	**[T: PrtPGS/Col Mode]**	*CTL	Print pages/ Color mode
8504	**[P: PrtPGS/Col Mode]**	*CTL	
8507	**[O: PrtPGS/Col Mode]**		
	The number of pages printed in a specific color mode [0 to 9999999/ 0 / 1]		

001	B/W	004	Single Color
002	Single Color	005	Two Color
003	Full Color		

8511	**[T: PrtPGS/Emul]**	*CTL	Print pages/ Emulation
8514	**[P: PrtPGS/Emul]**	*CTL	
	The number of pages printed by the printer emulation mode [0 to 9999999/ 0 / 1]		

001	RPCS	008	RTIFF
002	RPDL	009	PDF
003	PS3	010	PCL5e/5c
004	R98	011	PCL XL
005	R16	012	IPDL-C
006	GL/GL2	013	BM-Links (for local models only)
007	R55	014	Other

- These counters display the same result.

8521	**[T: PrtPGS/FIN]**	*CTL	Print pages/ Finish post-print processing
8524	**[P: PrtPGS/FIN]**	*CTL	
	The number of pages processed by the finisher [0 to 9999999/ 0 / 1]		

001	Sort	005	Z-Fold
002	Stack	006	Punch
003	Staple	007	Other
004	Booklet		

- Even if the pages are too many for the finisher to staple, all pages are counted (including unstapled pages).
- The counter of stapling (003) increases by +1 when the paper is transported from the

printer to the tray of the finisher. Even if a paper jam occurs on this path, the counter (003) increases. If the same job is retried, the counter (003) increases once again.

8531	**[Staples]**	*CTL	Staples
	The number of staples [0 to 9999999/ 0 / 1]		

8581	**[T: Counter]**	*CTL	Total counter
	The number of outputs in a specific color mode [0 to 9999999/ 0 / 1]		
001	Total	010	Total: Color
002	Total: Full Colo	011	Total: B/W
003	B&W/Single Color	012	Full Colour: A3
004	Development: CMY	013	Full Colour: B4
005	Development: K	014	Full Colour Print
008	Print: Color	015	Mono Colour Print
009	Print: B/W		

8584	**[P: Counter]**	*CTL	Print counter
	The number of outputs in a specific color mode [0 to 9999999/ 0 / 1]		
8584 001	B/W	8584 004	Single Color
8584 002	Mono Color	8584 005	Two Color
8584 003	Full Color		

8591	**[O: Counter]**	*CTL	Other counter
	The number of A3/DLT, duplex printing, or staples [0 to 9999999/ 0 / 1]		
8591 001	A3/DLT	8591 002	Duplex

- Note that these counters are not for the printer application program.

8601	**[CvgCounter]**	*CTL		
	The coverage rate of B/W printing or Color printing/ The number of prints out in B/W printing or Color printing [0 to 9999999/ 0 / 1]			

8601 001	Cvg: BW %	8601 011	Cvg: BW Pages
8601 002	Cvg: FC %	8601 012	Cvg: FC Pages

8771	**[Dev Counter]**	*CTL	Development counter
	The number of rotations of the development rollers [0 to 9999999/ 0 / 1]		
8771 001	Total	8771 004	M
8771 002	K	8771 005	C
8771 003	Y		

8781	**[TonerBotolInfo]** Toner Bottle Information		
8781 001	Last [BK]	*EGB	The number of toner bottles (bottles) already replaced [0 to 9999999/ 0 / 1]
8781 002	Last [Y]	*EGB	
8781 003	Last [M]	*EGB	
8781 004	Last [C]	*EGB	

8801	**[Toner Remain]**	*CTL	Toner remain
8801 001	K	*CTL	The percentage of the remaining toner [0 to 100/ 0 / 1]
8801 001	Y	*CTL	
8801 001	M	*CTL	
8801 001	C	*CTL	

8851	**[Cvr Cnt: 0-10%]** Coverage Counter (Sheets, [Color]) S: Sheets		
	[0 to 9999999 / 0 / 1 sheet/step] (*EGB)		
8851 011	0 - 2%: BK	8851 031	5 - 7%: Bk
8851 012	0 - 2%: Y	8851 032	5 - 7%: Y
8851 013	0 - 2%: M	8851 033	5 - 7%: M
8851 014	0 - 2%: C	8851 034	5 - 7%: C
8851 021	3 - 4%: BK	8851 041	8 - 10%: Bk
8851 022	3 - 4%: Y	8851 042	8 - 10%: Y
8851 023	3 - 4%: M	8851 043	8 - 10%: M
8851 024	3 - 4%: C	8851 044	8 - 10%: C

8861	**[Cvr Cnt: 11-20%]** Coverage Counter (Sheets, [Color]) S: Sheets		
8871	**[Cvr Cnt: 21-30%]** Coverage Counter (Sheets, [Color]) S: Sheets		
8881	**[Cvr Cnt: 31%-]** Coverage Counter (Sheets, [Color]) S: Sheets		
001	[K]	*EGB	The number of printed sheets of a specific coverage ratio [0 to 9999999/ 0 / 1]
002	[Y]	*EGB	
003	[M]	*EGB	
004	[C]	*EGB	

- For example, SP8-851-001 displays the number of printed sheets whose black-coverage ratio is 0 percent through 10 percent. SP8-881-004 displays the number of scanned sheets whose cyan-coverage ratio is 31 percent or higher.

8891	**[Page/Toner Bottle]** (Sheets, [Color]) S: Sheets		
8891 001	[K]	*EGB	The number of printed sheets [0 to 9999999/ 0 / 1]
8891 002	[Y]	*EGB	
8891 003	[M]	*EGB	
8891 004	[C]	*EGB	

8901	**[Page/Ink Prev1]**		
8901 001	[K]	*EGB	The number of printed sheets with the previously replaced units [0 to 9999999/ 0 / 1]
8901 002	[Y]	*EGB	
8901 003	[M]	*EGB	
8901 004	[C]	*EGB	

8911	**[Page/Ink Prev2]**		
8911 001	[K]	*EGB	The number of printed sheets with the units that was replaced before the previous unit. [0 to 9999999/ 0 / 1]
8911 002	[Y]	*EGB	
8911 003	[M]	*EGB	
8911 004	[C]	*EGB	

8921	**[Cvr Cnt/Total]**	*CTL	Coverage Counter Total

8921 001	Coverage (%): Bk	*CTL	The amount of total coverage rate and printouts in each coverage rate [0 to 9999999/ 0 / 1]
8921 002	Coverage (%): Y	*CTL	
8921 003	Coverage (%): M	*CTL	
8921 004	Coverage (%): C	*CTL	
8921 011	Coverage/P: Bk	*CTL	
8921 012	Coverage/P: Y	*CTL	
8921 013	Coverage/P: M	*CTL	
8921 014	Coverage/P: C	*CTL	

8941	**[Machine Status]**	*CTL	Machine status
	The amount of time the machine spends in a specific mode [0 to 9999999/ 0 / 1]		
8941 001	Operation Time	*CTL	The engine is operating. The counter does not include the time when the data is being saved in the HDD (while engine is not operating).
8941 002	Standby Time	*CTL	The engine is not operating. The counter includes the time when the data is being saved in the HDD. The counter does not include the time when the machine is n the Energy Saver Mode, the Low Power Mode, or the Off Mode.
8941 003	Energy Save Time	*CTL	The machine is in the Energy Saver Mode. The counter includes the time when the background printing is being executed.
8941 004	Low Power Time	*CTL	The machine is in the Low Power Mode. The counter includes the time when the engine is on in the Energy Saver Mode. The counter also includes the time when the background printing is being executed.
8941 005	Off Mode Time	*CTL	The machine is in the Off Mode. The counter includes the time when the background printing is being executed. The counter does not include the time when the main power switch is off.
8941 006	SC	*CTL	The total downtime caused by SC codes

8941 007	PrtJam	*CTL	The total downtime caused by paper jams
8941 008	OrgJam	*CTL	The total downtime caused by original jams
8941 009	Supply PM Unit E	*CTL	The total downtime caused by toner ends

8999	**[AdminCounter]**	*CTL	Coverage Counter Total
8999 001	Total	*CTL	Displays the administrator counter in the UP mode. [0 to 9999999/ 0 / 1]
8999 006	Printer: FC	*CTL	
8999 007	Printer: FC	*CTL	
8999 008	Printer: OneC	*CTL	
8999 009	Printer: TwoC	*CTL	
8999 013	Duplex	*CTL	
8999 014	Cvg:FC %	*CTL	
8999 015	Cvg:BW %	*CTL	
8999 016	Cvg:FC Pges		
8999 017	Cvg:BW Pages		

SP9-XXX

9001			
	[Shutter Motor]		
9001 064	Open Time	*EGB	Adjusts the open shutter time. [0 to 990 / **210** / 10 ms/step]
9001 065	Close Time	*EGB	Adjusts the closed shutter time. [0 to 990 / **100** / 10 ms/step]
	[Filming Remov.] Filming Removal		
9001 074	Interval: [k]	*EGB	Adjusts the threshold for filming removal. This SP is executed even the print job is proceeding. [0 to 65535 / **150** / 1/step]
	[Vb: LS] Vb at Low Process Speed		
9001 083	Vb Shift	*EGB	[0 to 65535 / **10** / 1/step]
	[Vc: LS] Vc at Low Process Speed		
9001 084	Vc Shift	*EGB	[0 to 65535 / **0** / 1/step]
	[Filming Remov.] Filming Removal: Job end		

9001 099	Interval (E): [K]	*EGB	Displays the counter that counts the number of sheets in black and white printing mode from previous filming removal. [0 to 65535 / **0** / 1/step]
9001 100	Interval (E): [FC]	*EGB	Displays the counter that counts the number of sheets in full color printing mode from previous filming removal. [0 to 65535 / **0** / 1/step]
9001 101	Interval: [end]	*EGB	Adjusts the threshold for job end filming removal. This SP is not executed until the print job has ended. [0 to 65535 / **75** / 1/step]
9001 102	Vk Coef.		[0.00 to 1.00 / **0.00** / 0.01 /step]
9001 103			[0 to 100 / **100** / 1%/step]
9001 104	Fusing JAM Cnt		Displays the paper jam counter of the fusing unit. [0 to 255 / **0** / 1/step]

9003	**[Time Adjust.]** Time Adjustment		
	Adjusts the current year, month, date, hour, and minute.		
9003 001	Year	-	[0 to 99 / **0** / 1 y/step]
9003 002	Month	-	[1 to 12 / **1** / 1 m/step]
9003 003	Date	-	[1 to 31 / **1** / 1 d/step]
9003 004	Hour	-	[0 to 23 / **0** / 1 hour/step]
9003 005	Minute	-	[0 to 59 / **0** / 1 m/step]

9903	**[Gamma]** Gamma Table (Process Speed, [Color]) RS: Regular Speed, LS: Low Speed		
	Adjusts the gamma table lists for each mode.		
9903 028	OHP: K3	*EGB	[0 to 31 / **7** / 1/step]
9903 031	OHP: M3	*EGB	
9903 034	OHP: C3	*EGB	
9903 037	OHP: Y3	*EGB	

9906	**[Vpp]**

	Adjusts the AC charge bias correction for each environment.		
9906 001	Vpp1: LL	*EGB	[0 to 3000 / **1950** / 1 V/step]
9906 002	Vpp2: LL	*EGB	[0 to 3000 / **2200** / 1 V/step]
9906 003	Vpp1: ML	*EGB	[0 to 3000 / **1780** / 1 V/step]
9906 004	Vpp2: ML	*EGB	[0 to 3000 / **2030** / 1 V/step]
9906 005	Vpp1: MM	*EGB	[0 to 3000 / **1770** / 1 V/step]
9906 006	Vpp2: MM	*EGB	[0 to 3000 / **2020** / 1 V/step]
9906 007	Vpp1: MH	*EGB	[0 to 3000 / **1810** / 1 V/step]
9906 008	Vpp2: MH	*EGB	[0 to 3000 / **2060** / 1 V/step]
9906 009	Vpp1: HH	*EGB	[0 to 3000 / **1770** / 1 V/step]
9906 010	Vpp2: HH	*EGB	[0 to 3000 / **2020** / 1 V/step]

9908	**[Background Po.]** Background Potential		
	Adjusts the upper or lower threshold for disabling the charge bias.		
9908 001	Upper Limit	*EGB	[0 to 300 / **130** / 1/step]
9908 002	Lower Limit	*EGB	

9910	**[Factory Adj.]**		
9910 001	Charge Output	*EGB	Performs the charge output.
9910 003	[All] TC Initial	*EGB	Performs the toner supply for all colors.
9910 004	[All] TC Initial	*EGB	Performs the developer initializing for all colors.
9910 005	[K] TC Initial	*EGB	Performs the developer initializing for black.
9910 006	[M] TC Initial	*EGB	Performs the developer initializing for magenta.
9910 007	[C] TC Initial	*EGB	Performs the developer initializing for cyan.
9910 008	[Y] TC Initial	*EGB	Performs the developer initializing for yellow.
9910 010	[K] Toner FillUP	*EGB	Fills up the black toner.
9910 011	[M] Toner FillUP	*EGB	Fills up the magenta toner.
9910 012	[C] Toner FillUP	*EGB	Fills up the cyan toner.
9910 013	[Y] Toner FillUP	*EGB	Fills up the yellow toner.
9910 020	Upper Limit	*EGB	Specifies the threshold for completing the toner filled up. When the toner is detected three times, the filling up the toner ends.

			[0 to 5/ **3** / 1 /step]
9910 021	MUSIC Vsg Adj.	*EGB	Selects the Vsg adjustment execution when the line position adjustment is manually done. [1 to 3 / **3** / 1 /step] 1: Normal (ON except the line position adjustment at printout interval) 2: Always ON 3: Always OFF

9911	**[TC Initial]**		
9911 001	Maximum Repeat	*EGB	Adjusts the maximum toner cartridge initializing time. [1 to 30 / **15** / 1 /step]
9911 002	Threshold	*EGB	Adjusts the threshold for toner cartridge initializing. [1 to 100 / **20** / 0.01 V/step]

9912	**[ST Sensor]**		
9912 001	read	*EGB	Adjusts the Vcnt. **DFU**

9914	**[Waste Toner NF]** Waste Toner Near Full		
	Specifies the number of sheets to be printed after waste toner near full.		
9914 001	Print 1	*EGB	[0 to 5000 / **1250** / 1/step]
9914 002	Print 2	*EGB	[0 to 5000 / **250** / 1/step]
9914 003	Print 3	*EGB	[0 to 5000 / **125** / 1/step]
9914 004	Print 4	*EGB	Specifies the number of sheets to be printed after replacing the waste toner bottle. [0 to 5000 / **2500** / 1/step]
9914 005	Detection Times	*EGB	Displays the times of waste toner near full. [0 to 50 / 0 / 1 /step]
9914 006	Near Full Count.	*EGB	Displays the total counter for waste toner near full. [0 to 100000 / 0 / 1 /step]

9918	**[LD Pow. Change]** LDB Power Change

9918 001		*EGB	[0 or 1 / 0 / -] Alphanumeric 0: Not execute, 1: Execute

9923	**[Vt ShiftAdj Mode]**		
	These SP's measure the Vt values at regular speed or low speed. **DFU**		
9923 001	Vt ShiftAdj Mode	*EGB	
9923 002	[K]Vt Shift	*EGB	
9923 003	[M]Vt Shift	*EGB	
9923 004	[C]Vt Shift	*EGB	
9923 005	[Y]Vt Shift	*EGB	
9923 006	[K]Vt Normal Speed	*EGB	
9923 007	[M]Vt Normal Speed	*EGB	
9923 008	[C]Vt Normal Speed	*EGB	
9923 009	[Y]Vt Normal Speed	*EGB	
9923 010	[K]Vt Half Speed	*EGB	
9923 011	[M]Vt Half Speed	*EGB	
9923 012	[C]Vt Half Speed	*EGB	
9923 013	[Y]Vt Half Speed	*EGB	
9923 014	Agitate Time: STD	*EGB	
9923 015	Agitate Time: HALF	*EGB	

9924	**[ACS Setting]**		
9923 001	ON/OFF	*EGB	Turns on or off the ASC. [0 or 1 / **0** / 1/step] 0: OFF, 1: ON
9923 002	Switching	*EGB	Specifies the threshold of changing mode from color to BW when ACS is set to "0: OFF" with SP9923-001. [0 to 255 / **0** / 1 sheet/step:

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	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1	0 or 1

SP5-803 -XXX	Bit	Description	Reading	
			0	1
001	**Input Check 1**			
	Not used			
002	**Input Check 2**			
	0	Color OPC Motor	Locked	Not locked
	1	Black OPC/ Development Motor	Locked	Not locked
	2	Color Development Motor	Locked	Not locked
	3	Paper Feed/ Fusing Motor	Locked	Not locked
	4	Registration Sensor	Paper detected	Paper not detected
	5	Paper Exit Sensor	Paper not detected	Paper detected
	6	Interlock Switch 5V	Open	Close
	7	Top Cover Sensor	Close	Open
003	**Input Check 3**			
	Not used			
004	**Input Check 4**			
	0-3	Not used	-	-
	4	Polygon Motor Fan	Locked	Not locked
	5	Color Drum Gear Position Sensor	Activated (Actuator inside sensor)	Deactivated
	6	Black Drum Gear Position Sensor	Activated (Actuator inside sensor)	Deactivated
	7	Interlock Switch 24V	Opened	Closed
005	**Input Check 5**			
	Not used			
006	**Input Check 6**			
	Not used			
011	**Input Check 11**			
	0	Paper Size Sensor 1	Pushed	Not Pushed
	1	Paper Size Sensor 2	Pushed	Not Pushed

SP5-803 -XXX	Bit	Description	Reading	
			0	1
	2	Paper Size Sensor 3	Pushed	Not Pushed
	3	Paper Size Sensor 4	Pushed	Not Pushed
	4	Paper Width Sensor	Pushed	Not Pushed
	5	Paper Height Sensor 1	Pushed	Not Pushed
	6	Paper Height Sensor 2	Pushed	Not Pushed
	7	Paper End Sensor	Not End	End
012	**Input Check 12**			
	0	Transfer Belt Contact Sensor	Not Contact	Contact
	1	Transfer Roller Contact Sensor	Not Contact	Contact
	2	Duplex Jam Sensor 1	Paper detected	Paper not detected
	3	Duplex Jam Sensor 1	Paper detected	Paper not detected
	4	Fusing New Unit Sensor	New	Old
	5	Fusing Unit Set Sensor P1	Set	Not Set
	6	Fusing Unit Set Sensor P2	Set	Not Set
	7	Not Used	-	-
013	**Input Check 13**			
	0	Paper Overflow Sensor	Overflow	Not overflow
	1	Fusing Exit Sensor	Paper detected	Paper not detected
	2	Inverter Sensor	Paper detected	Paper not detected
	3	Fusing Unit Fan	Locked	Not locked
	4	PSU Fan	Locked	Not locked
	5	Drive Unit Fan	Locked	Not locked
	6	Paper Exit Fan	Locked	Not locked
	7	Not used		
014	**Input Check 14**			
	0	Toner End Sensor [Y]	End	Not end
	1	Toner End Sensor [C]	End	Not end
	2	Toner End Sensor [M]	End	Not end
	3	Toner End Sensor [K]	End	Not end
	4	New PCU Detection [Y]	New	Old
	5	New PCU Detection [C]	New	Old
	6	New PCU Detection [M]	New	Old

SP5-803 -XXX	Bit	Description	Reading	
			0	1
	7	New PCU Detection [K]	New	Old
015	**Input Check 15**			
	0	LDU Shutter Sensor	Close	Open
	1	Left Cover Sensor	Close	Open
	2	Waste Toner Overflow Sensor	Not overflow	Overflow
	3	By-pass Paper Detection Sensor	Paper detected	Paper not detected
	4	By-pass Paper Size Sensor 1	Not used	
	5	By-pass Paper Size Sensor 2	Not used	
	6	By-pass Paper Size Sensor 3	Not used	
	7	By-pass Paper Size Sensor 4	Not used	
016	**Input Check 16**			
	0-2	Not used	-	-
	3	Fusing Entrance Sensor	Paper detected	Paper not detected
	4	Transfer Belt New Unit Detection	New	Old
	5-7	Not used	-	-
017	**Input Check 17**			
	0-4	Not used	-	-
	5	Front Door Sensor	Close	Open
	6-7	Not used	-	-
020	**Input Check 20**			
	0	Tray 2 Paper Near End Sensor 1	Pushed	Not Pushed
	1	Tray 2 Paper Near End Sensor 2	Pushed	Not Pushed
	2	Tray 2 Paper End Sensor	End	Not end
	3	Tray 2 Paper Feed Sensor	Paper detected	Paper not detected
	4	Tray 2 Paper Size 4	Pushed	Not Pushed
	5	Tray 2 Paper Size 3	Pushed	Not Pushed
	6	Tray 2 Paper Size 2	Pushed	Not Pushed
	7	Tray 2 Paper Size 1	Pushed	Not Pushed
021	**Input Check 21**			
	0	Tray 3 Paper Near End Sensor 1	Pushed	Not Pushed
	1	Tray 3 Paper Near End Sensor 2	Pushed	Not Pushed
	2	Tray 3 Paper End Sensor	End	Not end

SP5-803 -XXX	Bit	Description	Reading	
			0	1
	3	Tray 3 Paper Feed Sensor	Paper detected	Paper not detected
	4	Tray 3 Paper Size 4	Pushed	Not Pushed
	5	Tray 3 Paper Size 3	Pushed	Not Pushed
	6	Tray 3 Paper Size 2	Pushed	Not Pushed
	7	Tray 3 Paper Size 1	Pushed	Not Pushed

Output Check Table

5804	**[Output Check]**	
5804 001	Fusing Fan H	Fusing Unit Fan: High speed
5804 002	Fusing Fan L	Fusing Unit Fan: Low speed
5804 003	PSU Fan	PSU Fan
5804 005	Polygon Fan	Polygon Motor Fan
5804 007	PSU Inner Fan	PSU Inner Fan
5804 008	Drive Fan	Drive Unit Fan
5804 009	Exit Paper Fan H	Paper Exit Fan: High speed
5804 010	Polyg. Mir. Motor	Polygon Mirror Motor
5804 011	Exit Paper Fan L	Paper Exit Fan: Low speed
5804 012	Duplex Fan	Duplex Motor
5804 020	Paper Feed Motor	Paper Feed/ Fusing Motor
5804 022	Mono. PCU Motor	Black OPC/ Development Motor
5804 024	Color PCU Motor	Color OPC Motor
5804 026	Color Dev. Motor	Color Development Motor
5804 030	[Y] Toner Motor	Toner Supply Motor [Y]
5804 031	[C] Toner Motor	Toner Supply Motor [C]
5804 032	[M] Toner Motor	Toner Supply Motor [M]
5804 033	[K] Toner Motor	Toner Supply Motor [K]
5804 034	T. Belt Contact M	Transfer Belt Contact Motor
5804 035	T. Roll 2 Contact M	Transfer Roller Contact Motor
5804 036	LDU Shutter Motor	LDU Shutter Motor
5804 040	Trans. Belt Motor	Transfer Belt Unit Motor
5804 042	Duplex In Motor	Inverter Motor

5804 044	Duplex Exit Motor	Duplex Motor
5804 060	Paper Feed Clutch	Paper Feed Clutch
5804 061	Relay Clutch	Relay Transport Clutch
5804 062	Regist. Clutch	Registration Clutch
5804 063	Develop. Clutch	Development Clutch
5804 064	By-pass Solenoid	By-pass Solenoid
5804 065	Duplex Solenoid	Junction Gate Solenoid
5804 100	[Y]: Charge DC	Charge Roller DC: Yellow PCU
5804 102	[C]: Charge DC	Charge Roller DC: Cyan PCU
5804 104	[M]: Charge DC	Charge Roller DC: Magenta PCU
5804 106	[K]: Charge DC	Charge Roller DC: Black PCU
5804 110	[Y]: Charge AC	Charge Roller AC: Yellow PCU
5804 112	[C]: Charge AC	Charge Roller AC: Cyan PCU
5804 114	[M]: Charge AC	Charge Roller AC: Magenta PCU
5804 116	[K]: Charge AC	Charge Roller AC: Black PCU
5804 118	Charge AC Trigger	Charge Roller AC Trigger
5804 120	[Y]: Develop. DC	Development DC: Yellow
5804 122	[C]: Develop. DC	Development DC: Cyan
5804 124	[M]: Develop. DC	Development DC: Magenta
5804 126	[K]: Develop. DC	Development DC: Black
5804 130	[Y]: Transfer Belt	Transfer Belt Bias: Yellow
5804 132	[C]: Transfer Belt	Transfer Belt Bias: Cyan
5804 134	[M]: Transfer Belt	Transfer Belt Bias: Magenta
5804 136	[K]: Transfer Belt	Transfer Belt Bias: Black
5804 140	T. Roll 2 Posi.	Transfer Roller: Positive Voltage
5804 142	T. Roll 2 Nega.	Transfer Roller: Negative Voltage
5804 200	[Y]: TD. Sensor Vcnt	TD Sensor Vcnt: Yellow
5804 201	[C]: TD. Sensor Vcnt	TD Sensor Vcnt: Cyan
5804 202	[M]: TD. Sensor Vcnt	TD Sensor Vcnt: Magenta
5804 203	[K]: TD. Sensor Vcnt	TD Sensor Vcnt: Black
5804 204	ID. Sensor LED	ID Sensor LED
5804 205	Toner End Sensor	Toner End Sensor
5804 210	ID. Sensor Left	ID. Sensor Left
5804 211	ID. Sensor Center	ID. Sensor Center

5804 212	ID. Sensor Right	ID. Sensor Right
5804 220	Color PCL	Color PCL
5804 221	Mono. PCL	Monochrome PCL
5804 230	PFU 1 Motor	Optional paper tray unit 1 Motor
5804 231	PFU 1 Clutch	Optional paper tray unit 1 Clutch
5804 240	PFU 2 Motor	Optional paper tray unit 2 Motor
5804 241	PFU 2 Clutch	Optional paper tray unit 2 Clutch

Firmware Update

Firmware updating procedure is the same as G-P1 (G104/G105). For details, refer to the service manual for G-P1.

Types of Firmware

The table lists the programs used by Model G160/161.

	Type of firmware	Function	Location of firmware	Message displayed
1	Engine – Main	Printer engine control	EGB flash ROM	Engine
2	System	Printer system management	Controller flash ROM	Onboard Sys
3	Printer Application	Feature application		
	NIB	NIB management		
	Web System	Web service application		

Precautions

Handling SD Cards

Observe the following precautions when handling SD cards:

- Turn off the main power switch before you insert or remove an SD card. Data in the SD card can be corrupted if you insert or remove an SD card while the main power switch is on.
- Do not turn off the main power switch during downloading.
- 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 SD cards in a safe location. Do not store SD cards in these locations:
  1. Locations exposed to high temperature, high humidity, direct sunlight, or strong vibration
  2. Locations where there are effects from magnetic forces
- Do not bend or scratch SD cards.
- Do not drop SD cards or expose them to shock or vibration.

SD Card Application Move

Overview

The service program “SD Card Appli Move” (SP 5873) enables you to copy application programs from an SD card to another SD card.

There are two SD card slots (center slot is not used). Model G160/G161 can use slot 1 to store application programs. Slot 3 is for maintenance work and applications for a customer. Because of this, if the application programs are stored in an SD card or more, a) choose one SD card from these SD cards and b) store all the application programs on one card.

Use extreme caution when using SD Card Appli Move:

1. The authentication data is transferred with the application program from an SD card to the other SD card. Authentication fails if you try to use the SD card after you copy the application program from this card to another SD card.
2. Do not use an SD card if it has been used for some other work, for example, on a computer. Normal operation is not guaranteed when such SD card is used.
3. Keep the SD card in the place (Note) after you copy the application program from the card to another card. This is because: a) The SD card can be the only proof that the user is licensed to use the application program. b) You may need to check the SD card and its data to solve a problem in the future.

Note

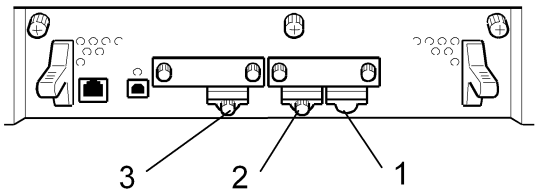
- See “Keeping the SD card” at the end of this chapter.

Move Exec

The program “Move Exec” (SP 5873-1) enables you to copy application programs from the original SD card to another SD card.

The application programs are copied from slot 3 to slot 1.

Note that the authentication data is also copied with the application program (see ‘Overview’).



1. Turn off the main power switch.

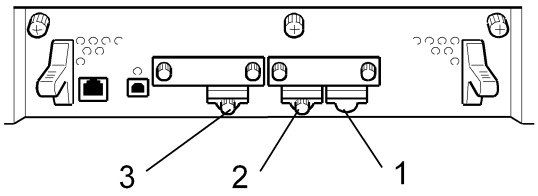
2. **Make sure that an SD card is in slot 1. The application program is copied to SD card in slot 1.**
3. **Insert the SD card (having stored the application program) to slot 3. The application program is copied from this SD card.**
4. **Turn on the main power switch.**
5. **Start the SP mode.**
6. **Select SP 5873-1 “Move Exec.”**
7. **Follow the messages displayed on the operation panel.**
8. **Go out of the SP mode.**
9. **Turn off the main power switch.**
10. **Remove the SD card from slot 3.**
11. **Turn on the main power switch.**
12. **Check that the application programs run normally.**

Undo Exec

The program “Undo Exec” (SP 5873-2) enables you to copy 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 with Move Exec (SP 5873-1).

The application programs are copied from slot 1 to slot 3.

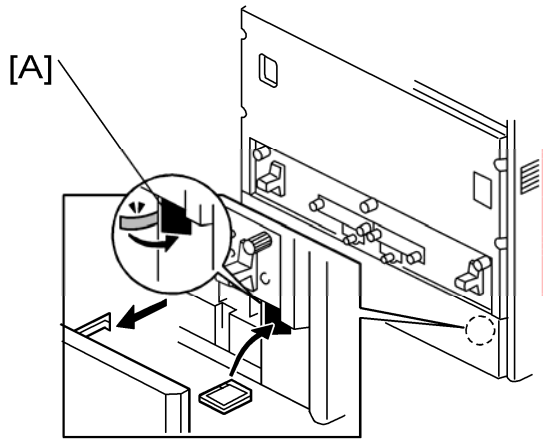
Note that the authentication data is also copied with the application program (see ‘Overview’).



1. **Turn off the main power switch.**
2. **Insert the original SD card in slot 3. The application program is copied back to this card.**
3. **Make sure that the SD card (having stored the application program) is in slot 1. The application program is copied back from this SD card.**
4. **Turn on the main power switch.**
5. **Start the SP mode.**
6. **Select SP 5873-2 “Undo Exec.”**
7. **Follow the messages displayed on the operation panel.**
8. **Go out of the SP mode.**

9. **Turn off the main power switch.**
10. **Remove the SD card from slot 3.**
11. **Turn on the main power switch.**
12. **Check that the application programs run normally.**

Keeping the SD Card



After moving or copying a program, the original SD card must be kept, as proof of purchase. Keep the SD card in the location [A] and secure it with a tape.

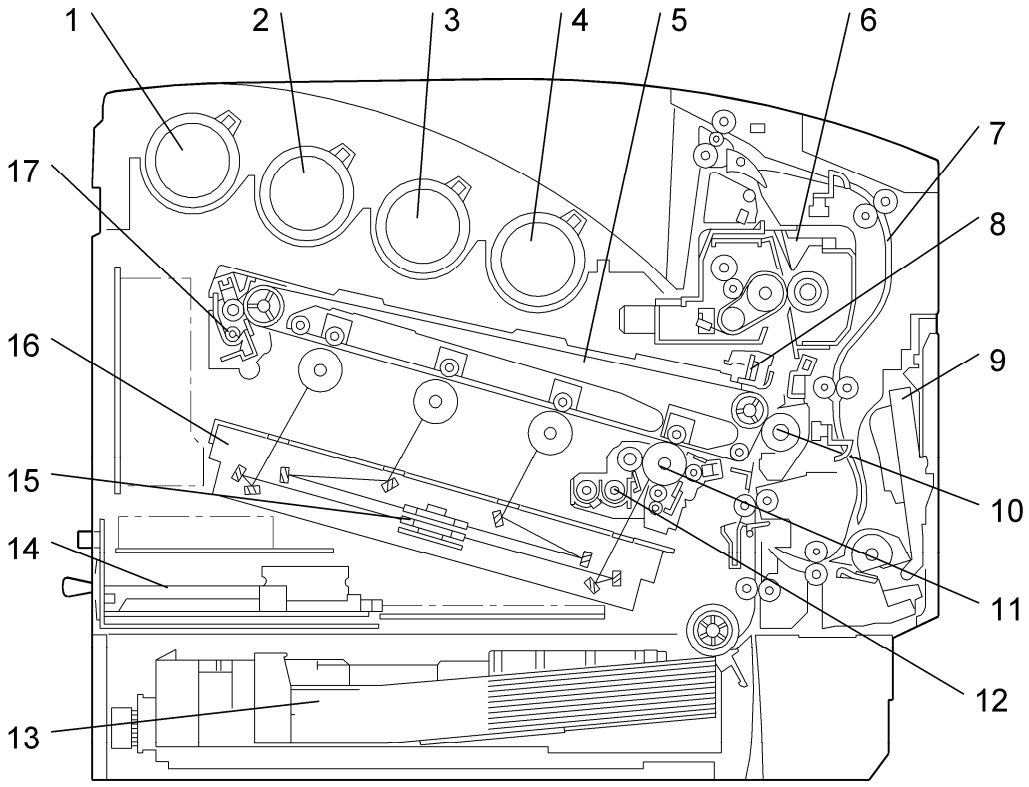
Detailed Section Descriptions

Beforehand

This section shows the differences between G-P1 (G104/G105) and G-P2 (G160/G161). For other items procedures, refer to the Service Manual for G-P1 (G104/G105).

Overview

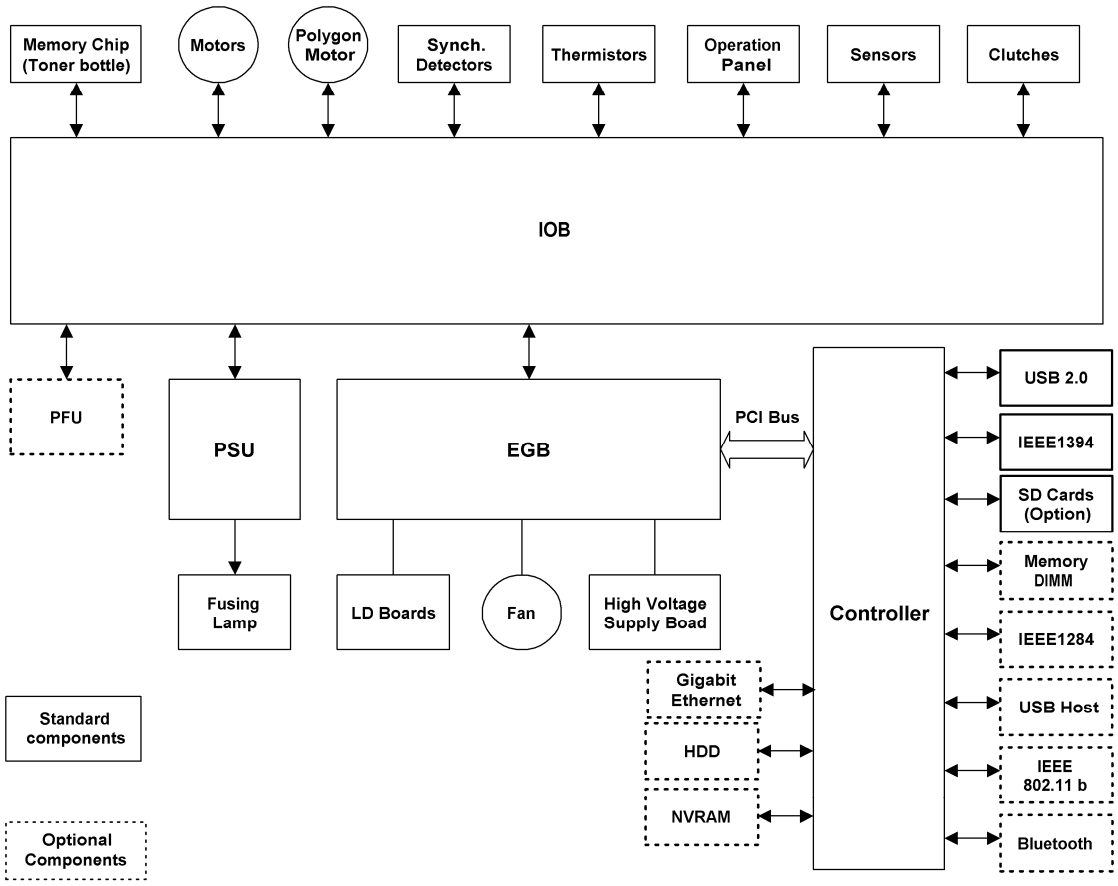
Component Layout



1. Toner bottle [Y] 2. Toner bottle [C] 3. Toner bottle [M] 4. Toner bottle [K] 5. Transfer Belt Unit 6. Fusing Unit 7. Duplex Unit 8. ID sensor 9. By-pass Feed Table	10. Transfer roller 11. PCU (Photo Conductor Unit) 12. Development Unit 13. Standard tray 14. PSU (Power Supply Unit) 15. Polygon Mirror Motor 16. LDU 17. Transfer Belt Cleaning Unit

The paper path and drive layout of G-P2 (G160/G161) is the same as for the G-P1 (G104/G105).

Board Structure



The EGB (Engine Board) controls machine functions along with the CTL (Controller). The IOB (In/Out Board) controls input/output, drivers and input/output connections. The IOB is part of the EGB expansion board.

You can only install two of the optional interface boards (IEEE1284, IEEE802.11b, Bluetooth, USB Host and Gigabit Ethernet) at the same time. (You can not install IEEE802.11b and Bluetooth at the same time.)

The controller connects to the EGB through the PCI Bus (Peripheral Component Interconnect Bus).

1. EGB (Engine Board):

This controls the Engine, the controller interface, image processing, MUSIC (Mirror Unit for Skew and Interval Correction), and input/output. MUSIC is also called Automatic Line Position Adjustment).

2. IOB (Input/Output Board):

This controls input/output, and the interfaces with the optional units, and the operation panel.

3. Controller:

The controller board controls the following functions:

- SD card (Option/Service)
- Memory DIMM
- IEEE1284
- IEEE1394
- IEEE802.11b
- Bluetooth
- USB 2.0
- USB Host
- Gigabit Ethernet
- NVRAM
- HDD
- PictBridge

4. LD Drive Board:

This is the laser diode drive circuit board.

5. IEEE1394 Interface:

This lets computers connect to the machine with an IEEE1394 interface.

6. HDD Unit (Option):

The HDD unit stores data for the following.

- Additional software fonts
- Collation
- Locked print
- Sample print
- Downloaded forms for form overlay

7. Memory DIMM (Standard: 256MB DRAM, Option: 128/256MB DRAM):

This increases printer processing memory, and is also used for collation and for soft fonts.

8. Operation Panel Board:

Controls the display panel, the LED, and the keypad.

9. IEEE1284 Interface (Option):

This is a parallel printer port.

10. USB 2.0:

Lets you connect the machine to a computer.

11. Bluetooth (Option):

Lets you connect the machine to a computer with a wireless connection.

12. IEEE802.11b wireless LAN (Option):

Lets you connect the machine to a computer with a wireless connection.

13. USB Host (Option):

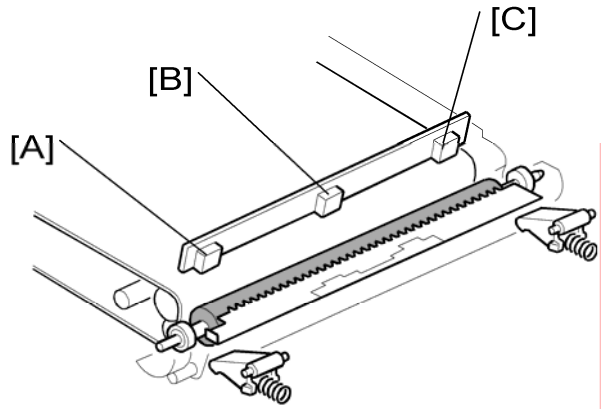
Lets you connect the machine to a PictBridge standard digital camera.

14. Gigabit Ethernet (Option):

This lets computers connect to the machine with a Gigabit Ethernet interface.

Process Control

Overview



This machine has the following two forms of process control:

- Potential control
- Toner supply control

Process control uses the following components:

- Three ID (image density) sensors (left [A], center [B], and right [C]). Only the center ID sensor is used for process control. The left, center, and right ID sensors are used for line positioning and other adjustments.
- TD (toner density) sensor in each development unit.

Potential Control

Overview

Potential control controls development to keep the toner images on the drums at the same density. It does this by compensating for variations in drum chargeability and toner density. The machine uses the ID sensor to measure the reflectivity of the transfer belt and the density of a standard sensor pattern. This is done during the process control self-check. The machine measures these values from the ID sensor output and a reference table in memory.

- V_D: Drum potential without exposure – to adjust this, the machine adjusts the charge roller voltage.
- V_B: Development bias

- V_L: Drum potential at the strongest exposure – to adjust this, the machine adjusts the laser power.

(Also, V_{REF} is corrected. This is used for toner supply control.)

This controls the development potential to make sure that the maximum quantity of toner applied to the drum is constant.

If SP 3501 1 is set to "1" (Fixed), the machine does not do the potential control, but uses the following parameters:

- Development bias adjusted with SP 2212 1 to 8
- Charge roller voltage adjusted with SP 2201 1 to 9
- Laser power selected with SP 2105 1 to 12.

These SPs are not normally adjusted in the field.

Process Control Self-check

This machine does potential control with a procedure that is known as the process control self-check. This procedure is done at these 9 times.

1. Initial

This starts automatically at the following times:

- Immediately after the power is turned on
- When the machine comes back from energy saver mode
- 6 hours after the power was turned on (adjusted with SP 3554 1)
- If absolute humidity changes more than ± 6 g/m^3 (e.g. changes from 23°C/ 50% to 27°C/ 70%). The humidity threshold can be changed with SP 3554 2.

2. Interval: Job End

At the end of a job, process control is done after the interval of time that is set with SP 3555 1, if more than 450 prints were made after the previous process control (this number can be adjusted with SP 3551 1 and 2).

At the end of a job, process control is done immediately, if more than 450 prints were made after the previous process control (this number can be adjusted with SP 3551 3 and 4).

The default setting of SP 3555 1 is "0". Because of this, there is no difference between these two processes, and the 300-print setting is not used.

After process control is done (except for forced process control), the counters are reset to “0.”

3. Interval: Interrupt (default: 500)

If the machine makes a sequence of 500 or more color prints in the same job, printing stops and process control is done. After it is completed, the machine continues to make prints. The default value of 500 can be adjusted with SP 3551 5 to 6

4. Non-use Time (6 hours)

This starts before the next print job if the machine has no job for 6 hours. If the non-use time process control is done (N) times after the user turns on the power, it will not be done. N is adjusted with SP 3558.

5. Installation

This starts only when this machine turns on at first installation. The machine does this if SP 5950 1 is set to "1" (set in the factory).

6. After Toner End Recovery

This starts after recovery from a toner end condition.

7. After Developer Initialization

This starts after a developer initialization is done. Developer initialization occurs automatically after a new PCU is installed.

8. After Transfer Belt Unit Initialization

This starts after a transfer belt unit initialization is done. Transfer belt unit initialization occurs automatically after a new transfer belt unit is installed.

9. Forced

This is done when SP 3820 1 is used.

Process Control Self-Check Procedure

Step 1: VSG Adjustment

This machine uses three ID sensors (direct-reflection type). They are located at the left, center, and right of the transfer unit. Only the center ID sensor is used for process control. The ID sensor checks the bare transfer belt's reflectivity and the machine calibrates the ID sensor until its output (known as V_{SG}) is as follows.

- V_{SG} = 4.0 ± 0.5 Volts

This calibration adjusts for the transfer belt's condition and the ID sensor condition, for example, dirt on the belt or ID sensor.

Step 2: ID Sensor Solid Pattern Generation

The machine mixes the developer and then makes a gradation pattern on the transfer belt for each toner color. The pattern has one square (the sequence is as follows: one black square, one magenta square, one cyan square and one yellow square). Each of the squares is 15.03 mm x 12.23 mm, and is a solid-color square. To make the squares, the machine changes the development bias and charge roller voltage. The difference between development bias and charge roller voltage is always the same.

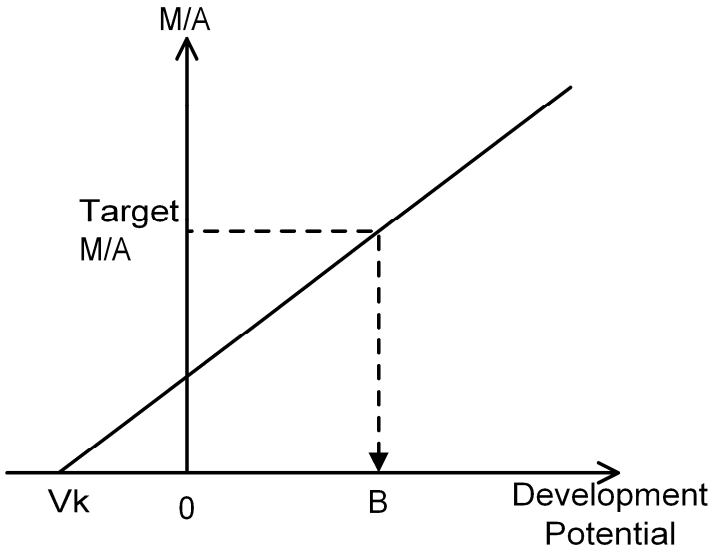
Step 3: Sensor Pattern Detection

The ID sensor detects the densities of the one solid-color square for each color. This data goes to memory.

Step 4: Toner Amount Calculation

The quantity of toner on the transfer belt (M/A, mass per unit area, mg/cm^2) is calculated for each of the 10 gradations of the sensor pattern. To do this, the machine uses the ID sensor output value from each gradation of the pattern.

Step 5: V_D, V_B, V_L Selection and V_{REF} Adjustment



The machine makes a plot of the 10 values of M/A against the development potential that was used to make each of the gradations. Then it makes a line through the 10 points.

Then, it finds the development potential that is necessary to put the 'target M/A' of toner on the OPC.

This development potential is then used to find the best values of development bias, charge roller voltage and laser power for the machine in its current condition. To do this, it refers to a table in memory.

The machine also adjusts V_{REF} (toner density target) at the same time. As a result, the development gamma detected by process control will be the value stored in SP 3561 1 to 4 (do not adjust in the field unless told to do this).

After that, the transfer belt cleaning unit cleans the transfer belt.

Toner Supply Control

Toner Supply Control Modes

This machine has four toner supply control modes. They are selected with SP 3301 1 to 4.

1. Fixed supply mode

This mode is used when the TD sensor becomes defective. The amount of toner supply can be adjusted with SP 3302 1 -4 if the image density is incorrect (the default setting is 5%).

2. Proportional control mode 1 (Pixel)

This mode is used when the TD sensor becomes defective. Only the pixel count is used to control toner supply. The amount of toner supply can be adjusted with SP 3306 1 to 4.

3. Proportional control mode 2 (TD sensor)

This mode is used when the ID sensor at the center becomes defective. Only the TD sensor is used to control toner supply. The amount of toner supply can be adjusted with SP 3306 5 to 8.

4. Hybrid control mode

This is the default toner supply control mode. The TD sensor or the pixel count are used in this mode.

- If the image coverage ratio is less than the value of SP 3701 2 to 5, pixel count is used.
- If the image coverage ratio is more than the value of SP 3701 2 to 5, the TD sensor is used.
- But, if SP 3701 1 is "off", then the TD sensor is always used. The default setting for this SP is "off". Because of this, pixel count is not used.

The amount of toner supply can be adjusted with SP 3306 9 to 20.

The TD sensor is in the PCU. If the TD sensor becomes defective, the technician must replace the PCU. But if this is not possible, the technician can change the toner supply mode with SP 3301 1 to 4.

Low Image Coverage

After process control, toner refresh mode is done (this can be switched off with SP3721-1).

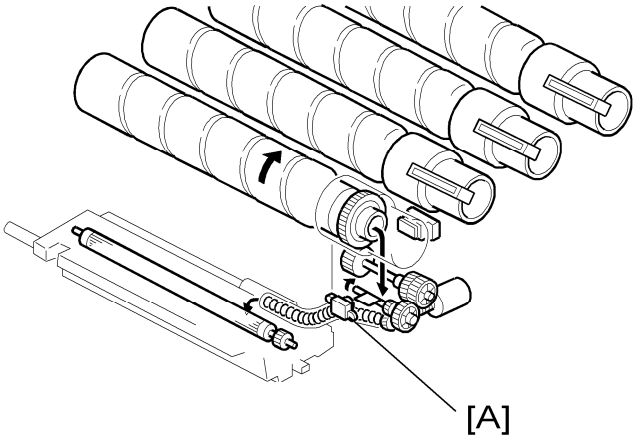
- It is only done if the percentage of pages (after the previous process control) that had low image coverage is more than the value of SP3721-2.
- SP 3701-2 to-5 control the limits that the machine uses to detect if the image coverage is low.

Toner refresh mode supplies new toner, because there is old toner in the developer after printing many pages that have low image coverage.

During toner refresh mode, the machine does the following:

1. Mixes the developer for 5 seconds.
2. Performs an engine free run, which simulates printing of 10 sheets of A4 size paper with the image data (2 by 2) and normal toner supply.
3. Mixes the developer for 10 seconds.

Toner Near End/Toner End Detection



Introduction

Toner Near End

To detect toner near-end the machine uses:

- Pixel count (memory chip on the toner bottle)

Toner End

To detect toner end the machine uses:

- Output from the toner end sensor [A]

Toner Near End Detection

The machine uses the pixel count.

1. The controller counts the printed pixels. Then, it calculates the remaining toner quantity from the record in the ID chip for each toner bottle.
2. If the remaining toner quantity is less than 10% of a full bottle, the machine detects toner near-end.
3. The remaining toner quantity and “Toner near end” are recorded in the ID chip.
4. Toner near-end is displayed.

Note

- Toner near-end detection uses the pixel counter in the ID chip. If new toner is added to the empty toner bottle, the contents of the ID chip are not reset, so the toner near-end or end condition is not reset. Also, near-end detection cannot be done.

Toner End Detection

The machine detects toner end when the toner end sensor detects toner end 3 times in a row 3.1 seconds after toner was supplied. At this time, “Toner end” is recorded in the ID chip.

Toner End Recovery

The machine detects that the toner bottle was replaced if one of the following events occurs during a toner end condition:

- The top cover is opened and closed.
- The main switch is turned off and on.

The machine then starts to supply toner to the development unit. After this, the machine resets the toner end condition.

Note

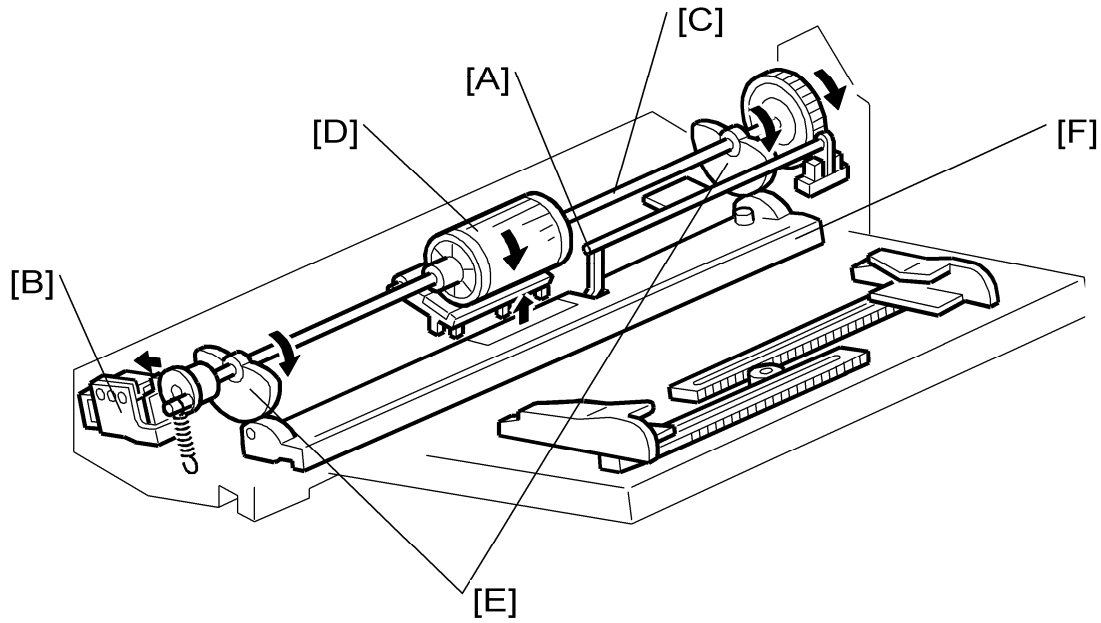
- When “Toner near end” is detected, “Toner end recovery” is not done. If there is no “Toner end” information in the ID chip, the machine detects that there is toner in the toner bottle and “Toner end recovery” is done.

Developer Initialization

When the machine detects that a new PCU was installed, it initializes the developer.
To do this, the machine mixes the developer for a few seconds, and adjusts V_{CNT} (control voltage for TD sensor) to make V_T (TD sensor output) equal to 2.5 ± 0.1 volts. The machine stores this V_T as V_{REF}.
During PCU initialization, the machine automatically supplies toner because there is no toner in the toner supply pipe at installation. Then the machine does the process control self-check.

Paper Feed

By-pass Tray Feed and Size Detection



Paper Feed Mechanism

When the paper detection feeler [A] detects a sheet of paper, the by-pass solenoid [B] unlocks the feed shaft stopper at the left end of the by-pass feed shaft [C].

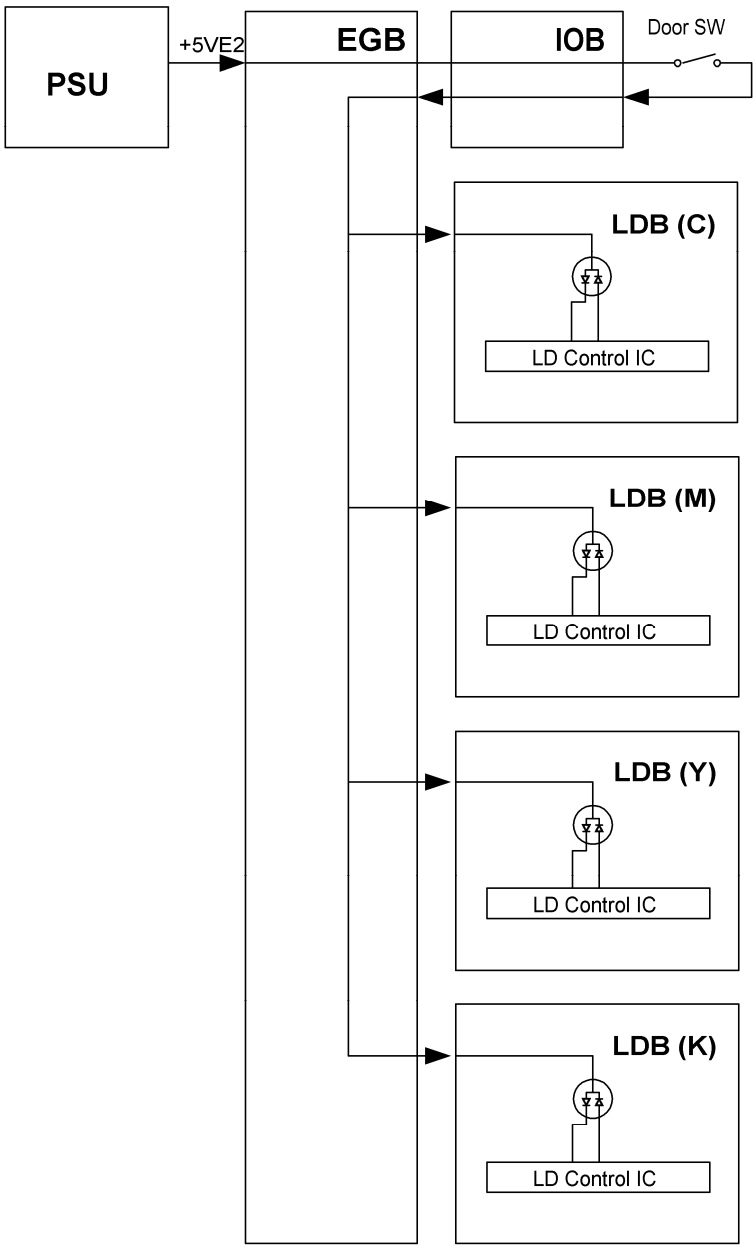
The by-pass feed shaft has the feed roller [D] and two cams [E]. These cams move the paper support plate [F] up and down and pushes the sheets of paper against the feed roller.

Paper Size Detection Mechanism

There is no paper size detection mechanism on the by-pass tray in this printer. Paper size on the by-pass tray can be adjusted with the operation panel or printer driver.

Laser Exposure

LD Safety Switch



A safety switch turns off when the front cover or the right door is opened. As a result, the relay on the PSU cuts off the power supply (+5V) to the four LD boards. (The electric circuits go through the EGB and IOB.)

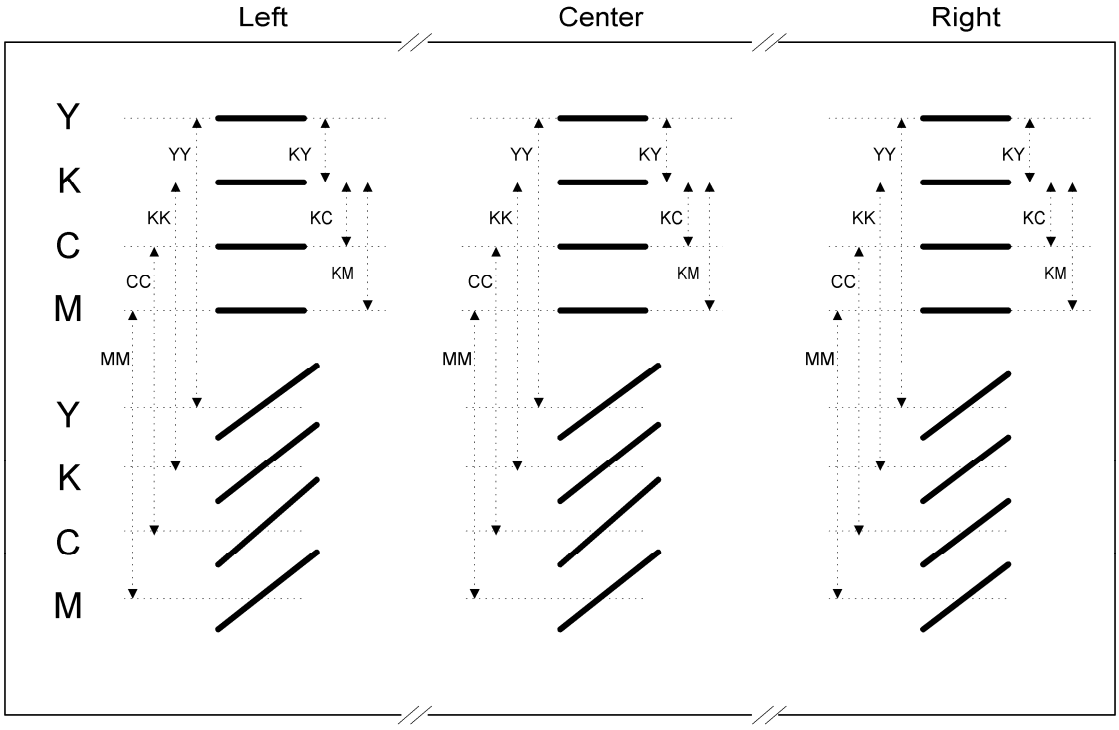
The LD safety switch system stops the laser beam when the cover is open.

Automatic Line Position Adjustment

Overview

YY, KK, CC, MM: Spaces between two lines of the same color

KY, KC, KM: Spaces between a black line and a color line



During automatic line position adjustment, the line patterns above are made eight times on the transfer belt. The spaces between the lines (YY, KK, CC, MM, KY, KC, KM) are measured by the left, center, and right ID sensors. The controller reads the average of the spaces, and adjusts the following items:

- Sub scan line position for YCM
- Main scan line position for KYCM
- Magnification ratio for KYCM
- Skew for YCM (see the note below)

Note

- In this procedure, only the skew for YCM is measured. If you want to adjust it, do the main skew adjustment procedure. (See 'Replacements and Adjustments – Laser Optics – LD Unit')

The transfer-belt-cleaning unit cleans the transfer belt after the patterns are measured.

Summary of Each Adjustment

Sub scan line position for YCM

The adjustment of the sub-scan line position for YCM uses the line position for K (color registration). The machine measures the gaps between the lines of each color in the pattern on the transfer belt. If the gaps for a color are not correct, the machine moves the image of the color up or down the sub scan axis. To do this, it changes the laser write timing for that color.

Main scan line position for KYCM

If the machine detects that the image is out of position in the main scan direction, it changes the laser-write-start timing for each scan line.

Magnification adjustment for KYCM

If the machine detects that magnification adjustment is necessary, it changes the LD clock frequency for the necessary color.

Skew for YCM

The adjustment of the skew for YCM uses the line position for K.

Adjustment Conditions

If SP 2153 1 is set to "1 (ON)", then automatic line position adjustment is done at the times shown below.

After process control is done

If SP 2153 2 is set to "1 (ON)", then the adjustment is done when the following types of process control are successfully done.

- Initial process control
- Interval process control
- No-use time process control

Initialization

If SP2153 3 is set to "1 (ON)", then the adjustment is done when the main power is turned on or the machine comes back from the standby mode, but only if one of the following conditions occurs.

- At a set time after the previous adjustment. The default value is 360 minutes. You can adjust the time with SP 2153 13.
- When the temperature changes after a previous adjustment by more than a set value. The default value is "5°C ". You can adjust the temperature change value with SP 2153 12.

Printing

If SP 2153 4 is set to "1 (ON)", then the adjustment is done when the machine gets print job

data, but only if one of the following conditions occurs.

- At a set time after the previous adjustment. The default value is 360 minutes. You can adjust the time with SP 2153 13.
- When the temperature changed after a previous adjustment by more than a set value. The default value is "5°C". You can adjust the temperature change value with SP 2153 12.
- When the magnification changed after a previous adjustment by more than a set value. The default value is "1%". You can adjust the magnification change value with SP 2153 15.

Interrupt

If SP 2153 5 is set to "1 (Yes)", then the adjustment is done when the one of the following conditions occurs during a print job with many pages.

- When the number of printed pages after the previous adjustment becomes more than a set number. The number of pages includes black and color printing. The default value is 190 pages. (If this condition occurs, automatic line position adjustment after the next interval process control will not be cancelled.) You can adjust the default value with SP 2153 10.
- When the temperature changed after a previous adjustment by more than a set value. The default value is "5°C". You can adjust the temperature change value with SP 2153 12.
- When the magnification changed after a previous adjustment by more than a set value. The default value is "1%". You can adjust the magnification change value with SP 2153 15.

Summary Table

The below table shows when the automatic line position adjustment is done. It also shows the main SPs that control the timing of the adjustment. If SP 2153 1 is "Off", then the automatic adjustment is never done. Note that the adjustments for the sub-scan line position, main scan line position, and magnification are done at the same time.

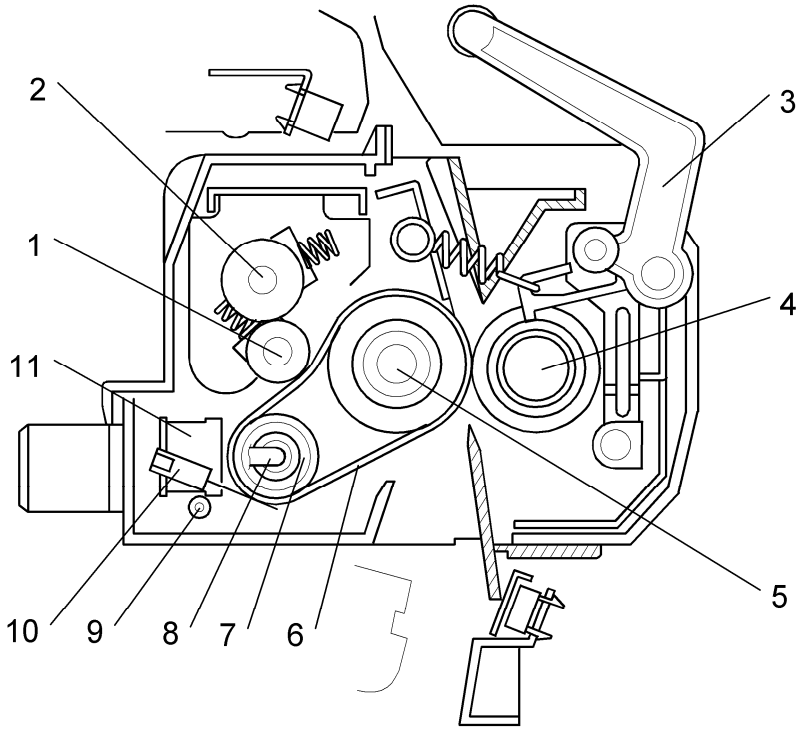
Enabled/ Disabled (SP 2153 1)	After Process Control (SP 2153 2)	Initialization (SP 2153 3)	Printing (SP 2153 4)	Interrupt (SP 2153 5)	Remarks
On	ON	On	ON	On	Default
				Off	
			Off	On	
				Off	
		Off	ON	On	
				Off	
			Off	On	
				Off	
	Off	On	ON	On	
				Off	
			Off	On	
				Off	
		Off	ON	On	
				Off	
			Off	On	
				Off	
Off	-	-	-	-	No Adjustment

Note

- You can also do the automatic line position adjustment manually with SP 2111 1.

Fusing

Overview

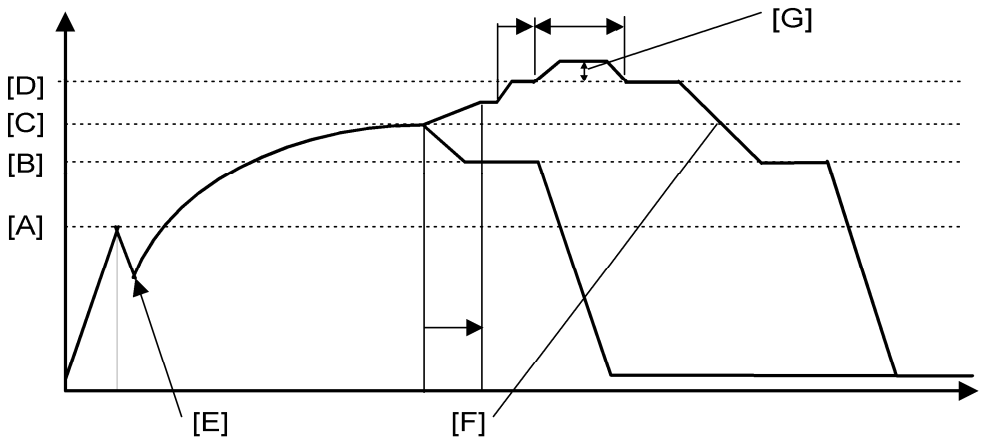


1. Fusing tension roller
2. Cleaning roller
3. Pressure lever
4. Pressure roller
5. Hot roller
6. Fusing belt
7. Heating roller
8. Heating lamp
9. New fusing unit detection fuse
10. Thermistor
11. Thermostat

- A belt fusing system is used. This has a faster warm-up time than a standard hot and pressure roller system.
- The heating roller is made of aluminum to increase the temperature of the fusing belt quickly.
- The hot roller is made of sponge, which becomes a little flat, and this increases the fusing nip. This roller does not contain a heating lamp.
- The heating roller thermistor controls the temperature of the lamp.
- Each new fusing unit contains a fuse. A short time after a new fusing unit is installed, this fuse blows. When this occurs, the machine detects that a new fusing unit is installed.

Fusing Temperature Control

Overall Procedure



The machine starts to warm up the fusing unit to get the print ready condition. When the heating roller temperature gets to the idling ready temperature [A], the idling procedure starts to warm up the heating roller. The temperature becomes higher than the machine ready temperature [B] and gets to the print ready temperature [C] after the heating roller completes the idling.

The temperature increases to the target printing temperature. Then printing starts. If the temperature does not get to the target printing temperature before 30 seconds (SP 1104 22), printing starts.

The temperature increases to the first print temperature [G] when the first sheet of paper is printed, but this is only for the first page.

After the printing job, the machine turns the heating roller to prevent overheating [F]. You can adjust the fusing temperature settings.

Fusing Roller Idling

This is done at the following three times:

1. Immediately after the power is turned on, or when the machine comes back from energy saver mode, if the fusing unit temperature is less than 100ºC.
   - This is [E] on the diagram.
   - This idling keeps the heating roller warmed up equally while it is heated. This temperature is controlled with SP 1912 5, and the durations of fusing idling are controlled with SP 1912 6, and 8 to 14
   - You can also adjust this with SP 1912 2 and SP 1105 43
2. At the end of a job: [F]

- This prevents the heating roller's overheating. After printing, the machine turns the heating roller with no heating. You can adjust the setting with SP 1912 7

3. At intervals of 4 hours if the machine is not used for a long time
   - This prevents the deformation of the hot roller and pressure roller.
   - Controlled by SP 1912 3 (interval) and 4 (duration)
   - Enable/disable this idling feature: SP 1912 1

For fusing idling at the start of a job, the duration and the fusing unit temperature during idling are also corrected for ambient temperature. SP 1917 controls all the corrections. The temperature/humidity sensor measures the room temperature. Corrections are made at the following times:

- Room temperature is below 18ºC (L threshold, controlled by SP 1917 8)
- Room temperature is above 30ºC (H threshold, controlled by SP 1917 7)

Idling Ready Temperature before First Print Job: [A]

This is the idling ready temperature for the heating roller before the first print job. You can adjust the setting with SP 1912 5. The default is 100°C. If the heating roller temperature does not reach this temperature within 15 seconds after the heating lamp turns on, SC 542 occurs.

Machine Ready Temperature: [B]

You can adjust the setting with SP 1913 2. The default is 150°C.

Print ready temperature: [C]

You can adjust the setting with SP 1105 22. The default is 160°C.

Target Printing Temperature: [D]

This is adjusted by the value stored in SP 1104 23. This value is added to the print ready temperature. The default is "5°C (G160)/ 10°C (G161)".

First Print Temperature: [G]

When the machine prints the first page, the heating roller temperature can easily decrease. If necessary, you can increase the temperature for the first page. This is a good adjustment for cold environments.

If fusing is not sufficient for the first page of a job, adjust these SPs:

- Temperature increase for the first page of a job: SP 1104 25 This value is added to the target printing temperature. The default is "2°C (G160)/ 8°C (G161)".
- Duration for application of the temperature increase: SP 1104 26

- The increase is applied if the interval between jobs is greater than these values:
  - OHP, Thick paper, or 1200 x 1200 dpi: SP 1104 24
  - Other types of job: SP 1104 27

Corrections for Small Paper Sizes (less than A5)

These corrections prevent too much heating of the fusing unit when paper widths less than A5 are used. In multi-page printing with this size of paper, the heating roller's temperature is not the same in all areas because the small size paper does not go through the two ends of the heating roller. The temperature of locations that do not touch the paper becomes higher than other locations during multi-page printing. The following corrections decrease this problem.

- Print speed: This is decreased after 15 pages. Then, 30 seconds after this, the print speed increases to the standard temperature again. You can adjust this with SP 1911 1 to 3.
- Fusing temperature: This is decreased in three stages, as shown below.
  - Decreased by 2ºC after 30 pages (G160)/ 25 pages (G161) are printed (controlled by SP 1911 4 and 14)
  - Decreased by 5ºC again after 20 more pages (G160)/ 10 more pages (G161) are printed (controlled by SP 1911 6 and 16)
  - Reduced by 5ºC again after 50 more pages (G160)/ 15 more pages (G161) are printed (controlled by SP 1911 8 and 18)

There are also temperature reductions for one-sided printing and two-sided printing.

- One sided printing: The temperature is decreased in two steps as shown below
  - After 100 pages, decreased by 2ºC (controlled by SP 1911 21 and 23)
  - After 30 more pages (G160)/ 15 more pages (G161), decreased by 5ºC (controlled by SP 1911 22 and 24)
- Duplex printing: The temperature is decreased in two steps as shown below
  - After 80 pages, decreased by 2ºC (controlled by SP 1911 25 and 27)
  - After 20 more pages (G160)/ 10 more pages (G161), decreased by 5ºC (controlled by SP 1911 26 and 28)

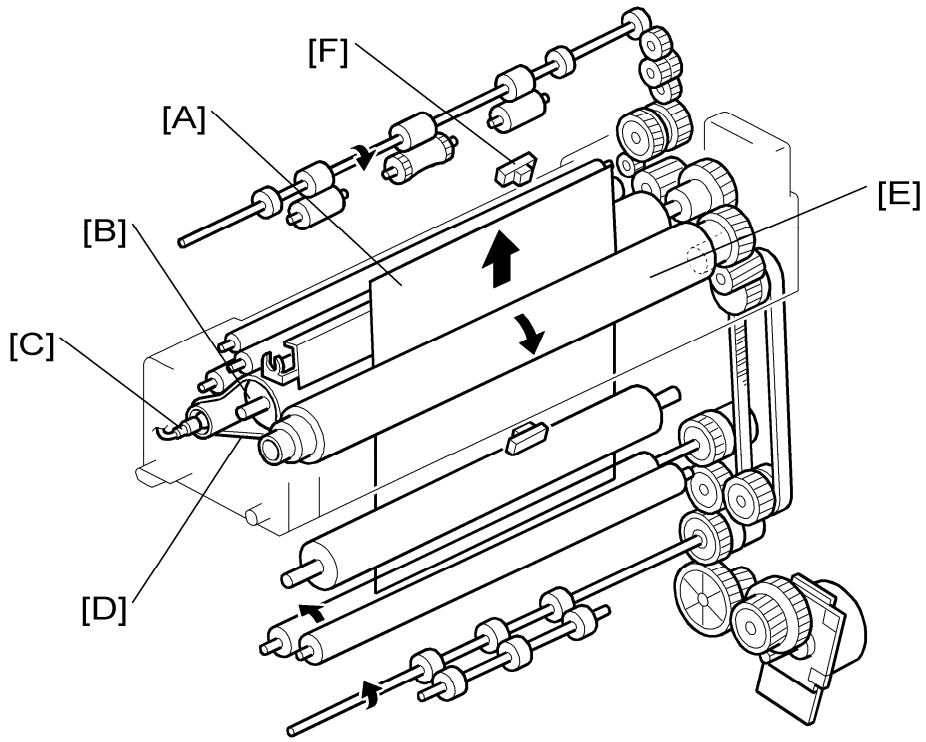
Overheat Protection

- If the heating roller temperature becomes higher than 230°C, the CPU cuts off the power to the heating lamp and SC543 shows.
- If 250°C is detected, the thermostat is opened, and then the heating lamp power is cut off. SC545 shows.

Note

- If the thermistor output is less than 0°C for six seconds, SC541 occurs.
- If the heating lamp gets full power for 8 seconds after the heating roller gets to the print ready temperature, SC545 occurs.

Drive

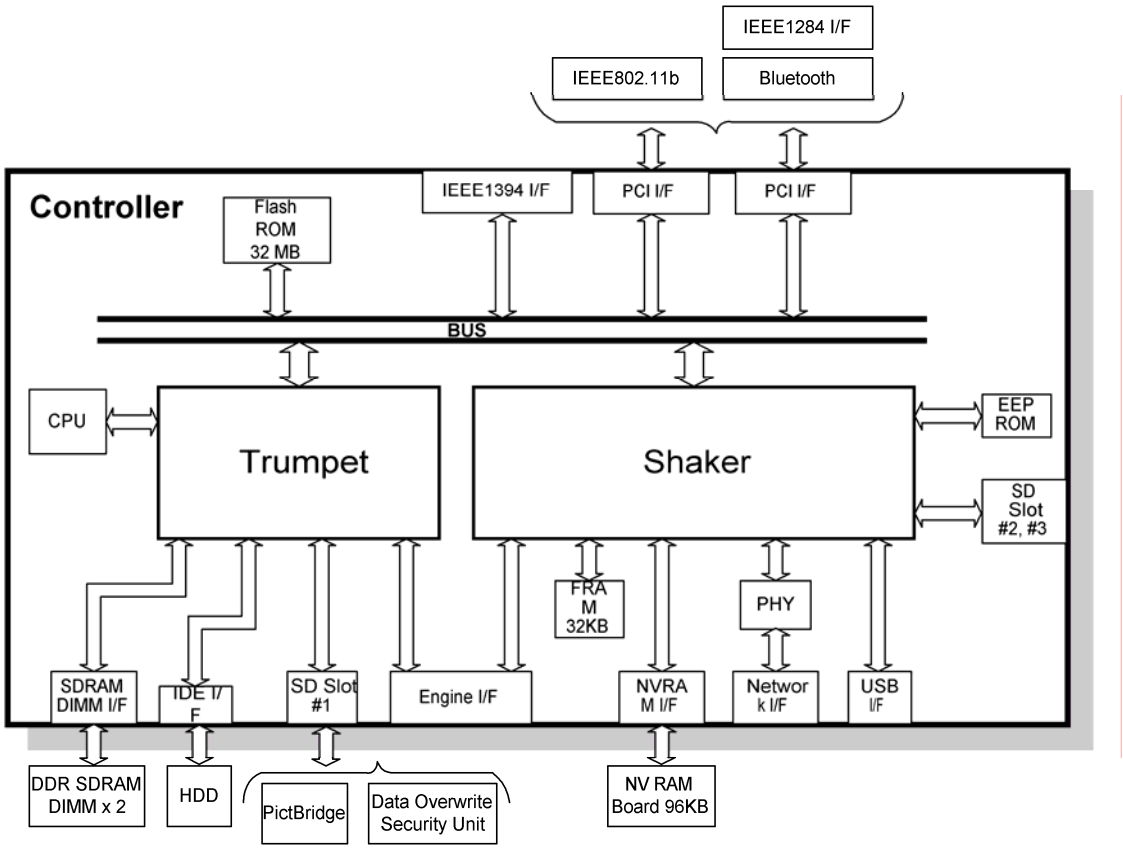


After the toner image is transferred to the paper [A], it goes through the fusing unit. The fusing unit contains the heating roller [B]. The heating lamp [C] applies heat to the heat roller. The heat roller applies heat to the fusing belt [D] to melt the toner on the paper. The paper receives pressure between the fusing belt and the pressure roller [E], and melted toner bonds to the paper.

When the paper goes out of the fusing unit, it goes to the exit tray. The fusing exit sensor [F] detects paper jams.

Controller

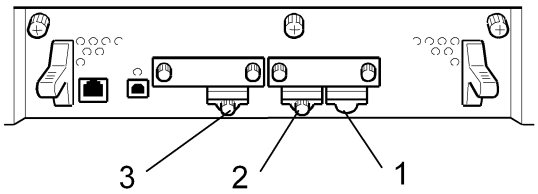
Overview



The controller uses GW (Ground Work) architecture.

1. CPU: PMC RM7035C (598 MHz)
2. TRUMPET: GW architecture ASIC. It controls the interface with the CPU and controls these functions: memory, local bus interrupts, PCI bus, video data, HDD, SD card for booting and image processing.
3. QUENA: IO control ASIC. It controls the network, operation panel, USB port, SD cards.
4. SDRAM DIMM (2 slots):
   - Model G-P2a/P2b: 256 MB SDRAM (resident)
   - Can be increased to 512 MB with the optional SDRAM (128/256 MB SDRAM).
5. Flash ROM: 32 MB flash ROM programmed for the boot system. This includes the program for system, network application, printer, PCL5c, PS3 and RPCS applications and internal printer fonts.
6. NVRAM: 32 KB FRAM for the printer parameters, logged data and a record of the number of pages printed for each “User Code”.

7. NVRAM board (option): 96KB NVRAM increases the number of “User Codes” form 100 to 500.
8. Network Interface: 100BASE-TX/10BASE-T
9. USB Interface: USB2.0
10. IEEE 1394 Interface: Supports a data transfer speed of up to 400 Mbps.
11. IEEE 1284 Interface (option): This is the parallel printer port.
12. IEEE 802.11b (option): This lets you connect the printer to a wireless network.
13. Bluetooth (option): This lets you connect the printer to a Bluetooth network.
14. HDD: A 2.5” HDD (40 GB) can be connected using the IDE interface.
15. SD Card slots: Slots #1 to #3, numbered from right to left.



- Slot #1: Customer’s application (for example, PostScript 3) or Service use (for example, firmware upgrade), customer’s application
- Slot #2: This slot is not used in this printer.
- Slot #3: Service use only

The system and application software for the following boards can be downloaded from SD cards connected to slot #3.

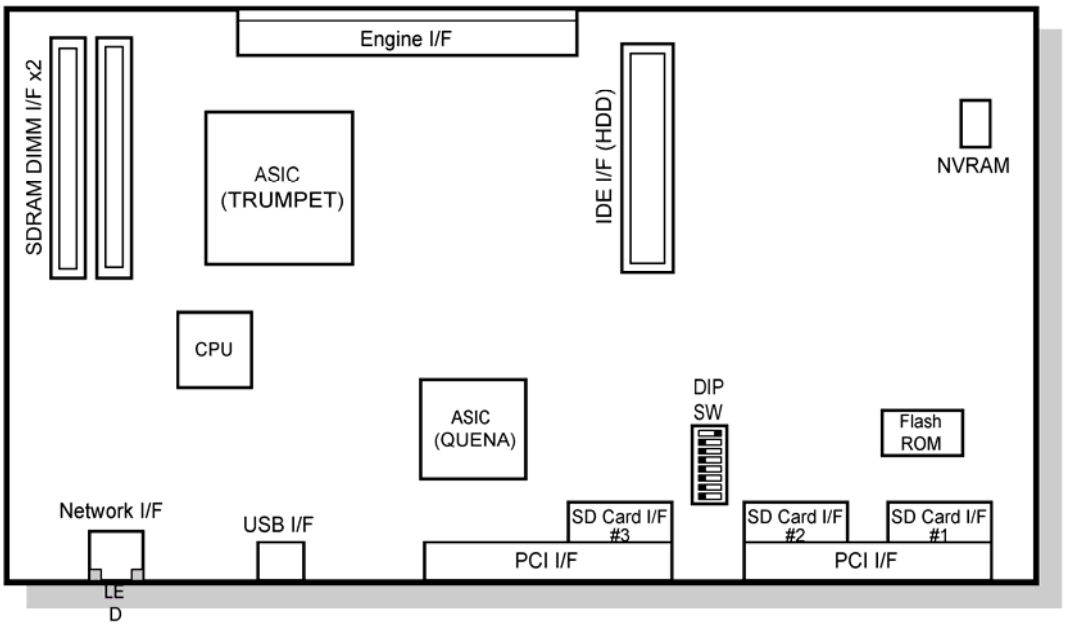
- Controller (Flash ROM and SD card for boot)
- EGB (Engine board)

Note

- See the Service Tables Firmware Update Procedure for details on downloading software from the SD card.

An SD Card programmed with an additional application can be installed in SD Card slot #3. If an additional application cannot be merged onto the card on slot #1, then use slot #3 for that additional application. If possible, keep slot #3 empty for the firmware update.

Board Layout



DIP Switches: Factory use only. Keep DIP SW 1 ON and the other switches OFF.

Specifications

Specifications

General Specifications

	G160/G161	G104/G105
Configuration:	Desktop	←
Print Process:	Laser beam scanning & Electro photographic printing 4 drums tandem method	←
Printer Languages:	PictBridge, RPCS (Refined Printing Command Stream), PCL5c/e, PCL-XL, Adobe PostScript 3, PDF	RPCS (Refined Printing Command Stream), PCL5c/e, PCL-XL, Adobe PostScript 3, PDF
Resolution:		
RPCS:	1200 x 1200 dpi*, 1200 x 600 dpi, 600 x 600 dpi	1200 x 1200 dpi, 1200 x 600 dpi, 600 x 600 dpi
PCL5c/e:	600 x 600 dpi 300 x 300 dpi	600 x 600 dpi 300 x 300 dpi
PCL-XL:	1200 x 1200 dpi*, 1200 x 600 dpi, 600 x 600 dpi	1200 x 1200 dpi, 1200 x 600 dpi, 600 x 600 dpi
Adobe PS 3:	1200 x 1200 dpi*, 1200 x 600 dpi, 600 x 600 dpi	1200 x 1200 dpi, 1200 x 600 dpi, 600 x 600 dpi
PDF:	1200 x 1200 dpi*, 1200 x 600 dpi, 600 x 600 dpi	1200 x 1200 dpi, 1200 x 600 dpi, 600 x 600 dpi
PictBridge:	1200 x 1200 dpi*, 1200 x 600 dpi	¬
	*For P2a (G160) machine, the optional memory must be installed to print in 1200 x 1200 dpi mode.	
Gradations:	1 bit, 256 gradations	←

	G161	G160	G104/ G105	G161	G160	G104/ G105
Printing Speeds	Plain Paper			Thick/OHP		

	G161	G160	G104/ G105	G161	G160	G104/ G105
[Monochrome]						
600 x 600 dpi (ppm)	30	25	25	15	12.5	25
1200 x 600 dpi (ppm)	30	25	25	15	12.5	25
1200 x 1200 dpi (ppm)	15	12.5	12.5	15	12.5	12.5
Printing Speeds [Color]	Plain Paper			Thick/OHP		
600 x 600 dpi (ppm)	30	25	25	15	12.5	25
1200 x 600 dpi (ppm)	30	25	25	15	12.5	25
1200 x 1200 dpi (ppm)	15	12.5	12.5	15	12.5	12.5

	G160/G161	G104/G105
Resident Fonts:	PCL5c: ▪ 45 Manager Intelli fonts ▪ 13 TrueType fonts ▪ 1 Bitmap font Adobe PostScript 3: ▪ 136 fonts (24 Type 2 fonts, 112 Type 14 fonts)	PCL5c: ▪ 35 Manager Intelli fonts ▪ 10 TrueType fonts ▪ 1 Bitmap font Adobe PostScript 3: ▪ 136 fonts (24 Type 2 fonts, 112 Type 14 fonts)
Host Interfaces:	▪ Ethernet (10/100 Base-TX): Standard ▪ USB2.0: Standard ▪ IEEE1394 (SCSI print, IP over 1394): Standard ▪ IEEE802.11b (Wireless LAN): Optional ▪ Parallel (IEEE1284: Optional): Optional ▪ Bluetooth (Wireless): Optional ▪ USB Host: Optional ▪ Gigabit Ethernet: Optional	▪ Ethernet (10/100 Base-TX): Standard ▪ USB2.0: Standard ▪ IEEE1394 (SCSI print, IP over 1394): Optional ▪ IEEE802.11b (Wireless LAN): Optional ▪ Parallel (IEEE1284: Optional): Optional ▪ Bluetooth (Wireless): Optional
Network Protocols:	TCP/IP, IPX/SPX, NetBEUI, AppleTalk	←
First Print Speed:	▪ Color: 15 seconds or less (from	←

	G160/G161	G104/G105
	tray 1) ▪ Black & White: 10 seconds or less (from tray 1)	
Warm-up Time	Less than 30 seconds (at 23°C/50%)	←
Print Paper Capacity: (80 g/m^2, 20lb)	▪ Standard tray: 550 sheets ▪ By-pass tray: 100 sheets ▪ Optional paper feed tray: 550 sheets	←
Print Paper Size:	(See "Supported Paper Sizes".)	
Standard Tray	A4 / B5 / 8.5" x 11" / 8.5" x 14" (SEF)	←
By-pass: Minimum	90 x 148 mm	←
By-pass: Maximum	216 x 356 mm	←
Optional Tray	A4 / B5 / 8.5" x 11" / 8.5" x 14" (SEF)	←
Printing Paper Weight:	Standard tray, Optional paper tray, and bypass tray: ▪ One-sided: 52-216 g/m^2 (16-55 lb) Duplex: ▪ 60-157 g/m^2 (16-43 lb) Paper weight settings at printer driver and operation panel: ▪ Thin: 52 – 60.2 g/m^2 ▪ Plain paper 1 (Plain): 60.2 – 90.2 g/m^2 ▪ Plain paper 2 (Plain & Recycled): 90.2 – 104.7 g/m^2 ▪ Thick paper 1: 104.7 – 157 g/m^2 ▪ Thick paper 2: 157 – 216 g/m^2	←
Output Paper Capacity:	Standard exit tray: 500 sheets (face down)	←
Memory:	Standard 256 MB. Up to 512 MB with optional Memory Unit	Standard 128/256 MB. Up to 512 MB with optional Memory Unit
Power Source:	120 V, 60 Hz: More than 11 A (for	←

	G160/G161	G104/G105
	North America) 220 V - 240 V, 50/60 Hz: More than 6 A (for Europe/Asia)	
Power Consumption:	▪ 120 V: 990 W or less ▪ 220-240 V: 1200 W or less ▪ Energy Saver: 6 W or less	←
Noise Emission: (Sound Power Level, The measurements were made in accordance with ISO9296 at the operator position.)	Printing ▪ Mainframe Only: 63 dB or less ▪ Full System: 67 dB or less Stand-by ▪ Mainframe Only: 40 dB or less ▪ Full System: 40 dB or less	←
Dimensions (W x D x H):	446 x 589.5 x 487 mm (17.4" x 23.2" x 19.2")	←
Weight:	Less than 50 kg (110.3 lb.)	←

Supported Paper Sizes

Paper	Size (W x L)	Main Tray		PFU		By-pass Tray		Duplex
		NA	E/A	NA	E/A	NA	E/A	
A3	297 x 420 mm	N	N	N	N	N	N	N
A4 SEF	210 x 297 mm	Y	Y	Y	Y	Y#	Y#	Y
A4 LEF	297 x 210 mm	N	N	N	N	N	N	N
A5 SEF	148 x 210 mm	Y#	Y	Y#	Y	Y#	Y#	Y
A5 LEF	210 x 148 mm	N	N	N	N	N	N	N
A6 SEF	105 x 148 mm	Y#	Y	N	N	Y#	Y#	Y
B4 SEF	257 x 364 mm	N	N	N	N	N	N	N
B5 SEF	182 x 257 mm	Y#	Y#	Y#	Y#	Y#	Y#	Y
B5 LEF	257 x 182 mm	N	N	N	N	N	N	N
B6 SEF	128 x 182 mm	Y#	Y#	Y#	Y#	Y#	Y#	Y
Ledger	11" x 17"	N	N	N	N	N	N	N
Letter SEF	8.5" x 11"	Y	Y	Y	Y	Y#	Y#	Y
Letter LEF	11" x 8.5"	N	N	N	N	N	N	N

Paper	Size (W x L)	Main Tray		PFU		By-pass Tray		Duplex
		NA	E/A	NA	E/A	NA	E/A	
Legal SEF	8.5" x 14"	Y	Y	Y	Y	Y#	Y#	Y
Half Letter SEF	5.5" x 8.5"	Y	Y#	Y	Y#	Y#	Y#	Y
Executive SEF	7.25" x 10.5"	Y	Y	Y	Y	Y#	Y#	Y
Executive LEF	10.5" x 7.25"	N	N	N	N	N	N	N
F SEF	8" x 13"	Y#	Y#	Y#	Y#	Y#	Y#	Y
Foolscap SEF	8.5" x 13"	Y#	Y#	Y#	Y#	Y#	Y#	Y
Folio SEF	8.25" x 13"	Y#	Y#	Y#	Y#	Y#	Y#	Y
8K	267 x 390 mm	N	N	N	N	N	N	N
16K SEF	195 x 267 mm	Y#	Y#	Y#	Y#	Y#	Y#	Y
16K LEF	267 x 195 mm	N	N	N	N	N	N	N
Custom (Width)	70 x 216 mm *1	Y#	Y#	Y#	Y#	Y#	Y#	N
Custom (Length)	5.5" x 14" *2	Y#	Y#	Y#	Y#	Y#	Y#	N
	14" ~ 900 mm	N	N	N	N	Y#	Y#	N
Postcard	100 x 148 mm	Y#	Y#	N	N	Y#	Y#	N
Double postal card	200 x 148 mm	Y#	Y#	Y#	Y#	Y#	Y#	N
Com10 Env.	4.125" x 9.5"	Y#	Y#	Y#	Y#	Y#	Y#	N
Monarch Env.	3.875" x 7.5"	Y#	Y#	Y#	Y#	Y#	Y#	N
C6 Env.	114 x 162 mm	Y#	Y#	Y#	Y#	Y#	Y#	N
C5 Env.	162 x 229 mm	Y#	Y#	Y#	Y#	Y#	Y#	N
DL Env.	110 x 220 mm	Y#	Y#	Y#	Y#	Y#	Y#	N

*1: This size is only for the by-pass tray. The size for the main tray and OPU is 98 mm.

*2: This size is only for the main tray and by-pass tray. The size for OPU is 148 mm.

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 95/98/ME	Windows NT4.0	Windows 2000	Windows XP	Macintosh
PCL 5c/6	Yes	Yes	Yes	Yes	No
PS3	Yes	Yes	Yes	Yes	Yes
RPCS	Yes	Yes	Yes	Yes	No

Note

- The printer drivers for Windows NT 4.0 are only for the Intel x86 platform. There is no Windows NT 4.0 printer driver for the PowerPC, Alpha, or MIPS platforms.
- The PS3 drivers are all genuine AdobePS drivers, except for Windows 2000, 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.

Utility Software

Software	Description
Font Manager 2000 (Win95/98/Me, NT4.0, 2000, XP, Server2003)	A font management utility with screen fonts for the printer
Smart Device Monitor for Admin (Win95/98/Me, NT4.0, 2000, XP, Server2003)	A printer management utility for network administrators. NIB setup utilities are also available.
Smart Device Monitor for Client (Win95/98/Me, NT4.0, 2000, XP, Server2003)	A printer management utility for client users. A utility for peer-to-peer printing over a NetBEUI or TCP/IP network. A peer to peer print utility over a TCP/IP network. This provides the parallel printing and recovery printing features.
Printer Utility for Mac (Mac)	This software provides several convenient functions for printing from Macintosh clients.
IEEE1394 Utility (Win2000, XP, Server2003)	This utility solves problems with Windows 2000, XP, Server2003.
DeskTopBinder V2 Lite (Win95/98, 2000, NT4, XP, Server2003)	DeskTopBinder V2 Lite itself can be used as personal document management software and can manage both image data converted from paper documents and application files saved in each client's PC.

Machine Configuration

Item	Machine Code	Remarks
Main Unit	G160/G161	G160: 25 ppm, G161: 30 ppm
Paper Feed Unit	G392	Up to two tray units can be installed.
128 MB DIMM Memory	B584	Common with model G-P1
256 MB DIMM Memory	G818	Common with model G-P1
NVRAM Memory	G395-57	Common with model G-P1
IEEE1284 I/F Board	B679	Common with model G-P1
IEEE802.11b Board	EU/ASIA: G813-45 NA: G874-39	
Bluetooth Board	B826	
USB Host	B825	
Gigabit Ethernet	G874-01	
HDD Type 4000	G395-17	Common with model G-P1
Data Overwrite Security Unit	G874-21	
PictBridge	G874-19	
VM Card	G874-08	
Data Storage Card	G874-36	

Note

- Of IEEE1284, IEEE802.11b, and Bluetooth, two can be installed at the same time.