

4.1.2 SC CODE DESCRIPTIONS

Code No.		Symptom	Possible Cause
101	C	Exposure lamp error	<ul style="list-style-type: none"> • Exposure lamp defective • Lamp stabilizer defective • Exposure lamp connector defective • Standard white plate dirty • Scanner mirror or scanner lens out of position or dirty • SBU defective
		The standard white level was not detected properly when scanning the white plate.	
120	B	Scanner home position error 1	<ul style="list-style-type: none"> • SIB or scanner drive motor defective • Scanner motor defective • Harness between SIB and scanner drive motor disconnected • Harness between SIB and scanner drive motor power source disconnected • Scanner HP sensor defective • Harness between SIB and HP sensor disconnected • Scanner wire, timing belt, pulley, or carriage defective
		The scanner home position sensor does not detect the on condition during initialization or copying.	
121	B	Scanner home position error 2	<ul style="list-style-type: none"> • SIB or scanner motor drive board defective • Scanner motor defective • Harness between SIB and scanner drive motor disconnected • Harness between SIB and scanner drive motor power source disconnected • Scanner HP sensor defective • Harness between SIB and scanner HP sensor disconnected • Scanner wire, timing belt, pulley, or carriage defective
		The scanner home position sensor does not detect the off condition during initialization or copying.	
130	B	SBU defective	<ul style="list-style-type: none"> • SBU defective • BICU defective • Harness between SBU and BICU disconnected or damaged
		Within 1 second after power on, the SOUT signal does not go high, or within 1 second after power on the SOUT signal goes high, but the SBU ID could not be read after two attempts.	
131	B	F-Gate asserts during shading	<ul style="list-style-type: none"> • While scanning at the DF, a software setting procedure caused an error. You must reboot the machine.
		F-Gate was asserted by the DF during shading.	
302	C	Charge roller current leak	<ul style="list-style-type: none"> • Charge roller damaged • High voltage supply board defective • PCU harness defective or disconnected
		A charge roller current leak signal was detected.	

Code No.		Symptom	Possible Cause
304	C	Charge roller current correction error	<ul style="list-style-type: none"> ID sensor defective
		The charge roller bias correction is performed twice even if the maximum charge roller bias (-2000V) is applied to the roller.	
321	C	F-Gate error: No laser writing signal	<ul style="list-style-type: none"> BICU board defective PCI harness between the controller board and the BICU defective or disconnected
		The laser writing signal (F-GATE) does not go to LOW for more than 30 seconds after the copy paper reaches the registration sensor.	
322	C	1st laser synchronization error	<ul style="list-style-type: none"> Poor I/F harness connection between the laser synchronization detector board and the LD unit. Laser synchronization detector board out of position and angle of reflection not correct Laser synchronization detector board defective LD unit defective
		The 1st laser synchronization signal cannot be detected by the main scan synchronization detector board even if the laser diodes are activated.	
323	C	LD drive current over	<ul style="list-style-type: none"> LD unit defective (not enough power, due to aging) Poor connection between the LD unit and the BICU board BICU defective
		The LD drive board applies more than 100 mA to the LD.	
326	C	2nd laser synchronization error	<ul style="list-style-type: none"> Poor connection between the laser synchronization detector board and the LD unit. Laser synchronization detector board out of position Laser synchronization detector board defective LD unit defective
		The 2nd laser synchronization signal cannot be detected by the main scan synchronization detector board even if the laser diodes are activated.	
327	B	LD unit home position error 1	<ul style="list-style-type: none"> HP sensor/harness defective LD unit home position sensor defective LD positioning motor harness defective LD unit movement blocked because of incorrect connector routing
		The LD unit home position sensor does not detect an on condition when the LD unit moves to its home position.	
328	B	LD unit home position error 2	<ul style="list-style-type: none"> HP sensor/harness defective LD positioning/harness motor defective LD unit movement blocked because of incorrect connector routing
		The LD unit home position sensor does not detect an off condition when the LD unit moves from its home position.	

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Code No.		Symptom	Possible Cause
329	B	LD unit beam pitch adjusted incorrectly	<ul style="list-style-type: none"> • After initialization of the SP modes, SP2-109-3 or SP2-109-4 was not executed. • The harness is blocking the LD drive (PCB), preventing adjustment of the pitch.
		The LD unit HP sensor does not detect the ON condition while changing the LD unit position for correcting the LD position or changing the dpi.	
335	C	Polygonal Mirror Motor Error 1: ON Timeout	<ul style="list-style-type: none"> • I/F harness of the polygonal mirror motor disconnected or defective. • Polygonal mirror motor or polygonal mirror motor driver defective. • Polygonal mirror motor drive pulse is not output incorrectly. • GABIC cannot monitor XSCRDY signal.
336	C	Polygonal Mirror Motor Error 2: OFF Timeout	<ul style="list-style-type: none"> • I/F harness of the polygonal mirror motor disconnected or defective. • Polygonal mirror motor or polygonal mirror motor driver defective. • Polygonal mirror motor drive pulse is not output incorrectly. • GABIC cannot monitor XSCRDY signal.
		The XSCRDY signal is not issued (HIGH: Inactive) within 2 s after the polygonal mirror motor switches off.	
337	C	Polygonal Mirror Motor Error 3: XSCRDY Signal Error	<ul style="list-style-type: none"> • I/F harness of the polygonal mirror motor disconnected or defective. • Polygonal mirror motor or polygonal mirror motor driver defective. • Polygonal mirror motor drive pulse is not output incorrectly. • GABIC cannot monitor XSCRDY signal.
		The XSCRDY is not issued (HIGH: Inactive) after the polygonal mirror motor has been rotating normally for 600 ms.	
338	C	Polygonal Mirror Motor Error 4: Unstable Timeout	<ul style="list-style-type: none"> • I/F harness of the polygonal mirror motor disconnected or defective. • Polygonal mirror motor or polygonal mirror motor driver defective. • Polygonal mirror motor drive pulse is not output incorrectly. • GABIC cannot monitor XSCRDY signal.
		The XSCRDY signal is detected LOW (Active) after the polygonal mirror motor switches on, but the signal is not detected LOW after 1 s has elapsed, and not detected after another 500 ms has elapsed.	

Code No.		Symptom	Possible Cause
350	C	ID sensor pattern test error	<ul style="list-style-type: none"> • ID sensor defective • ID sensor connector defective • Poor ID sensor connector connection • I/O board (IOB) defective • High voltage supply board defective • ID sensor dirty • Defect at ID sensor pattern writing area of the drum
		One of the following ID sensor output voltages was detected twice consecutively when checking the ID sensor pattern. 1) $V_{sp} \geq 2.5V$ 2) $V_{sg} \leq 2.5V$ 3) $V_{sp} = 0V$ 4) $V_{sg} = 0V$	
351	C	ID sensor Vsg test error	<ul style="list-style-type: none"> • ID sensor defective • ID sensor connector defective • Poor ID sensor connection • I/O board (IOB) defective • Scanning system defective • High voltage supply board defective • ID sensor dirty • Defect at the ID sensor pattern writing area of the drum
		When the ID sensor was checked, the ID sensor output voltage was 5.0V while the PWM signal input to the ID sensor was 0.	
352	C	ID sensor, pattern edge detect error	<ul style="list-style-type: none"> • ID sensor defective • ID sensor connector defective • Poor ID sensor connector connection • I/O board (IOB) defective • High voltage supply board defective • Dirty ID sensor • Defect at the ID sensor pattern writing area of the drum
		The ID sensor pattern edge voltage is detected to be not 2.5V twice consecutively during an 800 ms interval.	
353	C	ID sensor, LED current abnormal at initialization	<ul style="list-style-type: none"> • ID sensor defective • ID sensor harness defective • ID sensor connector defective • Poor ID sensor connection • I/O board (IOB) defective • Exposure system defective • High voltage supply board defective • Dirty ID sensor
		One of the following ID sensor output voltages is detected at ID sensor initialization. 1) $V_{sg} < 4.0V$ when the maximum PWM input (255) is applied to the ID sensor. 2) $V_{sg} \geq 4.0V$ when the minimum PWM input (0) is applied to the ID sensor.	
354	C	ID sensor timeout abnormal at adjustment	<ul style="list-style-type: none"> • ID sensor defective • ID sensor harness defective • ID sensor connector defective • I/O board (IOB) defective • Exposure system defective • Poor ID sensor connector connection • High voltage supply board defective • Dirty ID sensor
		Vsg falls out of the adjustment target ($4.0 \pm 0.2V$) at the start of Vsg checking after 20 seconds	

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Code No.		Symptom	Possible Cause
390	C	TD sensor error: Test value abnormal	<ul style="list-style-type: none"> • TD sensor defective • TD sensor not connected or connector damaged • Poor connection between the TD sensor and the I/O board (IOB) • I/O board (IOB) defective • Toner supply defective
		The TD sensor output voltage is less than 0.5V or more than 5.0V after 10 consecutive times during copying.	
391	C	TD sensor error: Auto adjust error	<ul style="list-style-type: none"> • TD sensor abnormal • TD sensor disconnected • Poor TD sensor connection • I/O Board (IOB) defective • Toner supply defective
		During automatic adjustment of the TD sensor, output voltage is less than 1.8V or more than 4.8V during TD sensor initial setting.	
395	C	Development output abnormal	<ul style="list-style-type: none"> • High voltage supply board defective • Poor connection at the development bias terminal • Poor connection at the high voltage supply board
		A development bias leak signal is detected. High voltage output to the development unit exceeded the upper limit (65%) for 60 ms.	
401	C	Transfer roller leak detected	<ul style="list-style-type: none"> • High voltage supply board defective • Poor cable connection or defective cable • Transfer connector defective
		A transfer roller current leak signal is detected.	
402	C	Transfer roller open error	<ul style="list-style-type: none"> • High voltage supply board defective • Transfer connector cable defective • Transfer connector defective • Poor PCU connection
		The transfer roller current feedback signal is not detected.	
403	C	Transfer belt position sensor error	<ul style="list-style-type: none"> • Main motor/drive malfunction • Transfer belt contact clutch defective • Harness disconnected
		The transfer belt position sensor does not activate even if the transfer belt contact clutch has been switched on twice and rotated once.	
405	C	Transfer belt error	<ul style="list-style-type: none"> • Main motor/drive malfunction • Transfer belt position sensor defective • Poor transfer belt position sensor connection
		The transfer belt does not move away from the drum during ID sensor pattern checking.	
440	C	Main motor lock	<ul style="list-style-type: none"> • Too much load on the drive mechanism • Main motor defective
		A main motor lock signal is not detected within 2 seconds after the main motor turns on.	
450	C	Feed Development Motor Error	<ul style="list-style-type: none"> • Motor lock caused by overload. • Motor driver defective.
		The PLL lock signal remains LOW for 2 s while the feed development motor is operating.	
490	C	Exhaust fan motor lock	<ul style="list-style-type: none"> • Too much load on the drive mechanism • Exhaust fan motor defective or a loose object is interfering with the fan • Poor fan motor connector connection
		An exhaust fan motor lock signal is not detected within 5 seconds after the exhaust fan motor turns on.	

Code No.		Symptom	Possible Cause
492	C	Cooling fan motor lock	<ul style="list-style-type: none"> • Too much load on the drive mechanism • Cooling fan motor defective or a loose object is interfering with the fan • Poor fan motor connector connection
		A cooling fan motor lock signal is not detected within 5 seconds after the cooling fan motor turns on.	
501	C	1st Tray lift malfunction	<ul style="list-style-type: none"> • Lift motor malfunction or disconnected • Height sensor abnormal, or connector loose • Loose paper or object between the tray and motor • Pick-up arm malfunction
		The paper height sensor is not activated after the tray lift motor has been on for 10 seconds. If the main power switch is turned on when the paper is already at the feed height, the paper height position is detected again. At this time, the paper height sensor should de-activate within 5 seconds after the paper bottom plate starts to drop. If it does not deactivate within 5 s four times consecutively, a message will prompt the user to reset Tray 1. After two attempts to release the error by re-setting the paper tray, if this does not solve the problem then this SC is displayed.	
502	C	2nd Tray lift malfunction	<ul style="list-style-type: none"> • Lift motor abnormal or disconnected • Height sensor defective or disconnected • Loose paper or object between the tray and motor • Pick-up arm malfunction
		The paper height sensor is not activated after the tray lift motor has been on for 10 seconds. If the main power switch is turned on when the paper is already at the feed height, the paper height position is detected again. At this time, the paper height sensor should de-activate within 5 seconds after the paper bottom plate starts to drop. If it does not deactivate within 5 s four times consecutively, a message will prompt the user to reset Tray 2. After two attempts to re-set the paper tray, if this does not solve the problem then this SC is displayed.	

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Code No.		Symptom	Possible Cause
503	C	3rd Tray lift malfunction (optional paper tray unit)	<ul style="list-style-type: none"> • Tray lift motor defective or disconnected • Height sensor defective or disconnected
		<p>The paper height sensor is not activated after the tray lift motor has been on for 13 seconds.</p> <p>If the main power switch is turned on when the paper is already at the feed height, the paper height position is detected again. At this time, the paper height sensor should de-activate within 5 seconds after the paper bottom plate starts to drop. If it does not deactivate within 5 s four times consecutively, the tray lift motor halts. After two attempts to re-set the paper tray, if this does not solve the problem, then this SC is displayed and tray control halts.</p>	
504	C	4th Tray lift malfunction (optional paper tray unit)	<ul style="list-style-type: none"> • Tray lift motor defective or disconnected • Height sensor defective or disconnected
		<p>The paper height sensor is not activated after the tray lift motor has been on for 13 seconds.</p> <p>If the main power switch is turned on when the paper is already at the feed height, the paper height position is detected again. At this time, the paper height sensor should de-activate within 5 seconds after the paper bottom plate starts to drop. If it does not deactivate within 5 s four times consecutively, the tray lift motor halts. After two attempts to re-set the paper tray, if this does not solve the problem, then this SC is displayed and tray control halts.</p>	
506	C	Paper tray unit main motor lock (optional paper tray)	<ul style="list-style-type: none"> • Paper tray unit main motor defective • Paper tray unit main motor connection loose • Too much load on the drive mechanism
		A main motor lock signal is detected for more than 50 ms during rotation.	
507	C	LCT main motor lock (optional LCT)	<ul style="list-style-type: none"> • LCT main motor defective • Paper tray unit main motor connection loose • Too much load on the drive mechanism
		A main motor lock signal is detected for more than 50 ms during rotation.	

Code No.		Symptom	Possible Cause
510	C	LCT tray malfunction	<ul style="list-style-type: none"> • LCT lift motor defective or disconnected. • Upper limit sensor defective or disconnected • Pick-up solenoid defective or disconnected • Paper end sensor defective
		1) The LCT lift sensor does not activate for more than 18 seconds after the LCT lift motor turned on. 2) The LCT lower limit sensor does not activate for more than 18 seconds after the LCT lift motor turned on. 3) The LCT lift sensor is already activated when the LCT lift motor turns on. 4) After the paper end sensor is actuated while the tray is raising, the upper limit sensor is not actuated within 5 s. A message is displayed to remind the user to set the paper and tray control halts. Resetting the display is done by opening and closing the LCT door. 5) The 4) state has been detected 3 times in succession.	
520	C	Fusing/Feed-Out Motor Error	<ul style="list-style-type: none"> • Motor lock caused by overload. • Motor driver defective.
		The PLL lock signal remains LOW for 2 s while the feed development motor is operating.	
541	A	Fusing thermistor open	<ul style="list-style-type: none"> • Fusing thermistor disconnected • Fusing thermistor connector defective • Fusing thermistor damaged or warped • Fusing temperature –15% less than the standard input voltage
		The fusing temperature detected by the thermistor was below 7°C (44.6°F) for 5 seconds, or 2 seconds after reaching 45°C (113°F) the temperature does not reach an additional 15°C (59°F) after checking five times at 0.1 intervals.	
542	A	Fusing temperature warm-up error	<ul style="list-style-type: none"> • Fusing lamp defective • Poor fusing unit connector • Thermistor warped or broken • Thermostat has tripped • BICU defective • Power supply board defective
		The fusing temperature does not reach the fusing standby temperature of 45°C (113°F) within 9 seconds for the B135 (35 cpm) 14 seconds for the B138 (45 cpm) after switching on the main power or closing the front cover, or 40 seconds after reaching 50°C the fusing roller does not reach warm-up temperature.	
543	A	Fusing overheat error (software detection)	<ul style="list-style-type: none"> • Power supply unit defective • I/O board (IOB) defective • BICU defective • Fusing thermistor defective
		A fusing temperature of over 230°C (446°F) is detected for 5 seconds by the fusing thermistors at the center or at either end of the fusing roller.	

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Code No.		Symptom	Possible Cause
544	A	Fusing overheat error (hardware circuit detection)	<ul style="list-style-type: none"> Power supply unit defective I/O board (IOB) defective BICU defective Fusing thermistor defective
		The dual monitoring circuitry of the BICU detects extremely high temperature and tripped the relay circuit off.	
545	A	Fusing lamp remains on	<ul style="list-style-type: none"> Thermistor is out of position.
		After warm-up the fusing lamp remains at full power for 10 seconds without the hot roller rotating.	
546	A	Fusing ready temperature unstable	<ul style="list-style-type: none"> Thermistor connection loose Fusing unit connector loose
		The fusing temperature is fluctuating.	
547	B	Zero cross signal malfunction	<ul style="list-style-type: none"> Power supply board defective Noise on the ac power line
		The applied power supply ac frequency was detected at over 66Hz or below 45Hz, and the zero cross signals are not detected within a certain period within 500 ms after the main power switch has been turned on.	
548	A	Fusing unit installation error	<ul style="list-style-type: none"> Fusing unit is not installed Fusing unit connection loose
		The machine cannot detect the fusing unit when the front cover and right cover are closed.	
599	C	1-bin tray motor lock (optional 1-bin tray unit)	<ul style="list-style-type: none"> 1-bin tray motor locked from overload 1-bin tray motor defective 1-bin tray motor connection loose
		A 1-bin tray motor lock signal is not detected for more than 300 ms during rotation.	
601	C	Communication error between BICU and scanner unit	<ul style="list-style-type: none"> Serial line connecting the BICU and SIB defective External noise on the serial line SIB board defective BICU board defective
		Within 800 ms after power on, after 3 attempts the BICU does not communicate with the SIB via the serial line.	
610	C	Communication timeout error between BICU and ARDF	<ul style="list-style-type: none"> BICU board and ARDF main board serial line connection defective External noise ARDF main board defective BICU board defective
		The BICU cannot receive a response within 100 ms after 3 attempts after sending data to the ARDF.	
611	C	Communication break error between BICU and ARDF	<ul style="list-style-type: none"> Serial line connecting BICU and ARDF unstable External noise ARDF main board defective BICU board defective
		The BICU receives a break signal from the ARDF main board.	
612	C	Communication command error between BICU and ARDF	<ul style="list-style-type: none"> Abnormal operation performed by software
		The BICU sends a command to the ARDF main board that it cannot execute.	

Code No.		Symptom	Possible Cause
620	C	Communication timeout error between BICU and finisher.	<ul style="list-style-type: none"> Serial line connecting BICU and finisher unstable External noise BICU board and finisher main board connection defective or loose Finisher main board defective BICU board defective
		The BICU cannot receive a response within 100 ms after 3 attempts after sending data to the finisher or mailbox.	
621	C	Communication timeout error between BICU and finisher.	<ul style="list-style-type: none"> Serial line connecting BICU and finisher unstable External noise
		A break (low) signal was received from the finisher.	
623	C	Communication timeout error between BICU and paper tray unit	<ul style="list-style-type: none"> Serial line connecting BICU and paper tray unit unstable External noise BICU board and paper tray main board connection defective or loose Paper tray main board defective BICU board defective
		The BICU cannot receive a response within 100 ms after 3 attempts after sending data to the paper tray unit.	
624	C	Communication break error between BICU and paper tray unit	<ul style="list-style-type: none"> Serial line connecting BICU and paper tray unit unstable External noise BICU board and LCT main board connection defective or loose Optional paper feed unit interface board defective BICU board defective
		The BICU cannot communicate with the paper tray unit normally as a result of receiving a break signal.	
626	C	Communication timeout error between BICU and LCT	<ul style="list-style-type: none"> Serial line connecting BICU and LCT unit unstable External noise BICU board and LCT main board connection defective or loose LCT interface board defective BICU board defective
		The BICU cannot receive a response within 100 ms after 3 attempts after sending data to the LCT.	
627	C	Communication break error between BICU and LCT	<ul style="list-style-type: none"> Serial line connecting BICU and LCT unit unstable External noise BICU board and LCT main board connection defective or loose LCT interface board defective BICU board defective
		The BICU cannot communicate with the LCT unit normally as a result of receiving a break signal.	
630	D	SC630 Communication failure with CSS (RSS)	<ul style="list-style-type: none"> Occurred with a SC call, CC call, Supply Management call, User call, or CE call. Timeout while no response from the LADP, and signal on the RS-485 line between PI and LADP is abnormal.
		The communication from the copier was detected as abnormal at the CSS center. This error occurs when the acknowledge signal from the LADP does not complete normally.	
640	D	BICU control data transfer sumcheck error	<ul style="list-style-type: none"> Controller board defective External noise BICU board defective
		A sampling of control data sent from the BICU to the controller reveals a sumcheck error. Only the logging count is performed.	

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Code No.		Symptom	Possible Cause
641	D	BICU control data transfer abnormal	<ul style="list-style-type: none"> Controller board defective External noise BICU board defective
		A sampling of the control data sent from the BICU reveals an abnormality.	
670	B	Engine response error	<ul style="list-style-type: none"> BICU installed incorrectly BICU defective Controller board defective
		After powering on the machine, a response is not received from the engine within the specified time.	
672	B	Controller-to-operation panel communication error at startup	<ul style="list-style-type: none"> Controller stall Controller board installed incorrectly Controller board defective Operation panel connector loose or defective
		After powering on the machine, the communication circuit between the controller and the operation panel is not opened, or communication with controller is interrupted after a normal startup.	
690	A	GAVD block I ² C bus error	<ul style="list-style-type: none"> I²C bus on BICU defective
		An error is detected in the GAVD communication I ² C control register of the GABIC2.	
691	A	GAVD FCI block I ² C bus error	<ul style="list-style-type: none"> I²C bus on BICU defective
		An error is detected in the FCI communication I ² C control register of the GABIC2.	
692	A	CDIC GAVD block I ² C bus error	<ul style="list-style-type: none"> I²C bus on BICU defective
		An error is detected in the CDIC communication I ² C control register of the GABIC2.	
700	B	ARDF original pick-up malfunction	<ul style="list-style-type: none"> Original stopper HP sensor (output abnormal) Pick-up motor defective (not rotating) Timing belt out of position ARDF main board defective
		After the pick-up motor is turned on, the original stopper HP sensor is not detected.	
701	B	ARDF original pick-up/paper lift mechanism malfunction	<ul style="list-style-type: none"> Original pick-up HP sensor defective. Pick-up motor defective ARDF main board defective
		The original pick-up HP sensor does not activate three times consecutively after the pick-up motor has turned on.	
722	B	Finisher jogger motor error	<ul style="list-style-type: none"> Jogger HP sensor defective Jogger motor defective
		The finisher jogger HP sensor does not return to the home position, or move out of the home position, within the specified time.	
724	B	Finisher staple hammer motor error	<ul style="list-style-type: none"> Staple jam Stapler overload caused by trying to staple too many sheets Staple hammer motor defective
		Stapling does not finish within 600 ms after the staple hammer motor turned on.	
725	B	Finisher stack feed-out motor error	<ul style="list-style-type: none"> Stack feed-out HP sensor defective Stack feed-out motor overload Stack feed-out motor defective
		The stack feed-out belt HP sensor does not activate within a certain time after the stack feed-out motor turned on.	

Code No.		Symptom	Possible Cause
726	B	Finisher shift tray 1 lift motor error	<ul style="list-style-type: none"> Shift motor defective or overloaded Shift tray lift motor defective or overloaded
		Tray shift does not finish within the specified time after the shift motor turned on, or the stack height sensor does not activate within the specified time after the shift tray lift motor turned on.	
727	B	Finisher stapler rotation motor error	<ul style="list-style-type: none"> Stapler rotation motor defective or overloaded Stapler rotation motor connection loose or connector defective
		Stapler rotation does not finish within the specified time after the staple rotation motor turned on, or the stapler does not return to its home position within the specified time after stapling finished.	
729	B	Finisher punch motor error	<ul style="list-style-type: none"> Punch motor defective or overloaded Punch HP sensor defective Punch motor connection loose or connector defective
		After the punch motor is turned on, the punch HP sensor does not activate within the specified time.	
730	B	Finisher stapler positioning motor error	<ul style="list-style-type: none"> Stapler positioning motor defective or overloaded Stapler HP sensor defective Stapler positioning motor connection loose or connector defective
		After the stapler motor is turned on, the stapler does not return to its home position within the specified time, or the stapler HP sensor does not activate within the specified time after the stapler motor is turned on.	
731	B	Finisher exit guide open/close motor error	<ul style="list-style-type: none"> Finisher exit guide open/close motor defective Open/close sensor defective
		After the finisher exit guide open/close motor is turned on, the open/close sensor does not activate within the specified time.	
732	C	Finisher upper tray shift motor error	<ul style="list-style-type: none"> Upper tray shift motor defective or overloaded Upper tray shift sensor defective
		The upper tray shift motor does not stop operation with the specified time.	
733	C	Finisher lower tray lift motor error	<ul style="list-style-type: none"> Lower tray lift motor defective or overloaded Upper stack height sensor defective Lower tray lower limit sensor defective
		The stack height sensor does not activate within a certain time period after the lower tray lift motor turned on.	
734	C	Finisher lower tray shift motor error	<ul style="list-style-type: none"> Lower tray shift motor defective or overloaded Lower tray shift sensor defective
		The lower tray shift motor driving the lower tray does not stop within the specified time.	

⇒ **NOTE:** SC740/741 (Booklet Finisher-related errors) are in the following section:
4.6 Reading SC 740/741 Errors from LED2. (Page 4-23) The section describes the method for using the LED to read the details for SC740/741, as this information is not displayed on the machine operation panel.

800	B	Startup without video output end error (K)	• Control board defective
		Video transfer to the engine is started, but a video transmission end command was not issued by the engine within the specified time.	
804	B	Startup without video input end (K)	• Control board defective
		A video transmission was requested from the scanner, but a video transmission end command was not issued by the scanner within the specified time.	

Code No.	Symptom		Possible Cause
818	B	Watch Dog Error	
		While the system program is running, a bus hold or interrupt program goes into an eternal loop, preventing any other programs from executing.	<ul style="list-style-type: none"> • System program defective • Controller board defective • Peripheral device malfunction
819	B	Kernel mismatch error	<ul style="list-style-type: none"> • Software application error
820	B	Self-Diagnostic Error: CPU	<ul style="list-style-type: none"> • Controller board defective • Software defective
		The central processing unit returned an error during the self-diagnostic test.	
821	B	Self-Diagnostic Error: ASIC	<ul style="list-style-type: none"> • Controller board defective
		The ASIC returned an error during the self-diagnostic test because the ASIC and CPU timer interrupts were compared and determined to be out of range.	
822	B	Self-Diagnostic Error: HDD	<ul style="list-style-type: none"> • HDD defective • HDD connector defective • Controller board defective
		The hard disk drive returned an error during the self-diagnostic test.	
823	B	Self-diagnostic Error: NIB	<ul style="list-style-type: none"> • Network interface board defective • Controller board defective
		The network interface board returned an error during the self-diagnostic test.	
824	B	Self-diagnostic Error: NVRAM	<ul style="list-style-type: none"> • NVRAM damaged or abnormal • Backup battery has discharged • NVRAM socket damaged
		The resident non-volatile RAM returned an error during the self-diagnostic test.	
826	B	Self-diagnostic Error: NVRAM/Optional NVRAM	<ul style="list-style-type: none"> • NVRAM defective
		The NVRAM or optional NVRAM returned an error during the self-diagnostic test.	
827	B	Self-diagnostic Error: RAM	<ul style="list-style-type: none"> • Memory malfunction
		The resident RAM returned a verify error during the self-diagnostic test.	
828	B	Self-diagnostic Error: ROM	<ul style="list-style-type: none"> • Controller board defective • Firmware defective
		The resident read-only memory returned an error during the self-diagnostic test.	
829	B	Self-diagnostic Error: Optional RAM	<ul style="list-style-type: none"> • RAM DIMM defective • Controller board defective
		The optional RAM returned an error during the self-diagnostic test.	
835	B	Self-Diagnostic Error: Parallel Interface	<ul style="list-style-type: none"> • Loopback connector not detected • IEEE1284 connector defective • Controller board defective

Code No.	Symptom		Possible Cause
836	B	Self-diagnostic Error: Resident Font ROM	<ul style="list-style-type: none"> Font ROM defective
		The resident font ROM returned an error during the self-diagnostic test.	
837	B	Self-diagnostic Error: Optional Font ROM	<ul style="list-style-type: none"> Font ROM defective
		The optional font ROM returned an error during the self-diagnostic test.	
840	C	Self-Diagnostic Error 1: EEPROM Access Error	<ul style="list-style-type: none"> EEPROM defective EEPROM worn out
		During input/output with the EEPROM, one of the following errors occurred: <ul style="list-style-type: none"> A read error occurred, then continued after 3 retries. Write error occurred. 	
841	C	Self-Diagnostic Error 2: EEPROM Read/Write Data Error	<ul style="list-style-type: none"> The data is being written into the 3 designated errors differently
		The values of the data written and "mirrored" in 3 errors are all detected as not matching..	
850	B	Network I/F Abnormal	<ul style="list-style-type: none"> NIB defective Controller board defective
		NIB interface error.	
851	B	IEEE 1394 I/F Abnormal	<ul style="list-style-type: none"> IEEE1384 interface board defective Controller board defective
		IEEE1394 interface error.	
853	B	Wireless LAN Error: Card Error 1	<ul style="list-style-type: none"> Wireless LAN card not inserted into the wireless LAN board
		The wireless LAN board can be accessed, but the wireless LAN card (IEEE 802.11b or Bluetooth) cannot access the board.	
854	B	Wireless LAN Error Card Error 2	<ul style="list-style-type: none"> Wireless LAN card has been removed
		The board that holds the wireless LAN card can be accessed, but the wireless LAN card (802.11b/Bluetooth) itself cannot be accessed while the machine is operating	
855	B	Wireless LAN Error 3: Card Error 3	<ul style="list-style-type: none"> Wireless LAN card defective Wireless card connection not tight
		An error is detected for the wireless LAN card (802.11b or Bluetooth).	
856		Wireless LAN Error 4: Board	<ul style="list-style-type: none"> Wireless LAN card board defective PCI connector loose
		An error is detected for the wireless LAN card (802.11b or Bluetooth).	
857	B	USB I/F Error	<ul style="list-style-type: none"> The USB driver can generate three types of errors: RX, CRC, and STALL errors. Only the STALL error can generate this SC code.
		The USB driver is unstable and generated an error. The USB I/F cannot be used.	
860	C	Startup without HD connection at main power on	<ul style="list-style-type: none"> Cable between HDC and HD loose or defective HD power connector loose or defective HD defective HDC defective
		The hard disk connection is not detected.	

Code No.	Symptom		Possible Cause
861	C	Startup without HD detection at power key on	<ul style="list-style-type: none"> • Cable between HDC and HD loose or defective • HD power connector loose or defective • HD defective • HDC defective
		The hard disk connection is not detected.	
862	A	Maximum number of bad sectors detected on HD	<ul style="list-style-type: none"> • SC863 returned while reading data from the HD and the number of registered bad sectors reached 101.
		Up to 101 bad sectors have appeared in the area on the hard disk where image data is archived, and the hard disk may require replacement.	
863	B	Startup without HD data lead	<ul style="list-style-type: none"> • A bad sector occurred during operation of the HD
		Data stored on the hard disk is not read correctly.	
864	B	HD data CRC error	<ul style="list-style-type: none"> • Data transfer was abnormal in the data read from the HD.
		During operation of the HD, the HD responded with a CRC error.	
865	B	HD access error	<ul style="list-style-type: none"> • Error detected other than the bad sectors error (SC863) or the CRC error (SC864)
		The hard disk detected an error.	
870	B	Address Book Data Error	<ul style="list-style-type: none"> • Software defective • HDD defective
		Address book data stored on the hard disk was detected as abnormal when it was accessed from either the operation panel or the network.	
871	B	FCU Flash ROM Error	<ul style="list-style-type: none"> • Flash ROM device defective • Replace flash ROM on the MBU
		The address book written into the flash ROM mounted on the FCU is detected as defective.	
⇒ 872	B	Email Receiving Data Error	<ul style="list-style-type: none"> • Email(s) previously received by the machine and stored in the hard drive may contain damaged data. This can be deleted by executing SP5832-007 (Mail RX data), however note that doing so will also delete all other received emails. • Defective HDD
		Machine detects an HDD error during warm-up.	
⇒ 873	B	Email Sending Data Error	<ul style="list-style-type: none"> • Email(s) previously sent by the machine and stored in the hard drive may contain damaged data. This can be deleted by executing SP5832-008 (Mail TX data), however note that doing so will also delete all other sent emails, as well as initialize the sender's user name/password and administrator Mail address. • Defective HDD
880	B	MLB Error	<ul style="list-style-type: none"> • MLB defective
		A request for access to the MLB (Media Link Board) was not answered within the specified time.	




Code No.		Symptom	Possible Cause
900	B	Electronic total counter error	• NVRAM defective
		The value of the total counter has already exceeded 9,999,999	
901	B	SC901 Mechanical total count error	• Mechanical total counter defective
		The IO board cannot receive the mechanical total count data.	
920	B	Printer Error 1	• Software defective • Insufficient memory
		An internal application error was detected and operation cannot continue.	
925	B	Network File Error	• NIA
		NIA	
951	C	F-gate error at write request	• Software defective • BICU defective
		After the IPU receives an F-gate signal, it receives another F-gate signal.	
953	C	Scanner setting error	• Software defective
		During scanned image processing, another command to start scanning was received.	
954	B	Printer setting error	• Software defective
		The IPU does not respond with the settings that are required to start image processing by the printer.	
955	C	Memory setting error	• Software defective
		The IPU does not respond with the settings that are required to start image processing using the memory.	
964	C	Scanner Start Error	• Software defective
		During scanned image processing, another command to start scanning was received.	
984	B	Print image data transfer error	• Controller board defective • BICU defective Connectors between BICU and controller loose or defective
		The image transfer from the controller to the engine via the PCI bus does not end within 15 s after starting.	
985	B	Scanner image data transfer error	• Controller board defective • BICU defective • Connectors between BICU and controller loose or defective • SIB defective
		The image transfer from the engine to the controller via the PCI bus does not end within 3 s after starting.	
986	C	Software write parameter setting error	• Software defective
		An unstable area at the storage destination in the settings table is set NULL for the parameter received by the write module.	




Code No.	Symptom		Possible Cause
990	B	Software performance error	<ul style="list-style-type: none"> • Software defective • Internal parameter incorrect • Insufficient working memory <p>When this SC occurs, the file name, address, and data will be stored in NVRAM. This information can be checked by using SP7-403. Note the above data and the situation in which this SC occurs. Then report the data and conditions to your technical control center.</p>
		The software attempted to perform an unexpected operation.	
992	A	Unexpected Software Error	<ul style="list-style-type: none"> • Software defective • An error undetectable by any other SC code occurred
		Software encountered an unexpected operation not defined under any SC code.	
995	A	Machine Type Information Error	<ul style="list-style-type: none"> • The B135 (35 cpm) and B138 (45 cpm) use different controller boards, and the IOB DIP SW settings must be set correctly for the machine speed. For details, see Section “3. Replace and Adjustment”.
		After the machine is powered on, a mismatch is detected between the CPM information sent from the controller to the engine and the CPM information specified by the IOB DIP SW settings.	
996	B	FCU board error	<ul style="list-style-type: none"> • FCU board defective and requires replacement • Firmware incorrect
		FCU board is connected but not ready.	
997	B	Application function selection error	<ul style="list-style-type: none"> • Software defective • An option required by the application (RAM, DIMM, board) is not installed
		The application selected by a key press on operation panel does not start or ends abnormally.	
998	B	Application start error	<ul style="list-style-type: none"> • Software defective • An option required by the application (RAM, DIMM, board) is not installed
		After power on the application does not start within 60 s. (All applications neither start nor end normally.)	
999	B	Program download error	<ul style="list-style-type: none"> • Board installed incorrectly • BICU defective • IC card defective • NVRAM defective • Loss of power during downloading <p>Important Notes About SC999</p> <ul style="list-style-type: none"> • Primarily intended for operating in the download mode, logging is not performed with SC999. • If the machine loses power while downloading, or if for some other reason the download does not end normally, this could damage the controller board or the PCB targeted for the download and prevent subsequent downloading. If this problem occurs, the damaged PCB must be replaced.
		The download (program, print data, language data) from the IC card does not execute normally.	

5.1.3 SERVICE TABLES

SP1-xxx: Feed

1001*	Leading Edge Registration	[+9 ~ -9 / 3.0 / 0.1 mm]
	Adjusts the printing leading edge registration using the trimming area pattern (SP2-902-3, No.11).	
	Use  to toggle between ± before entering the value. Specification: 3 ±2 mm	

1002*	Side-to-Side Registration	
	Adjusts the printing side-to-side registration from the 3rd paper feed station using the trimming area pattern (SP2-902-3, No.11). <i>Tray3, Tray4 for Paper Feed Unit.</i> Use the  key to toggle between + and – before entering the value. Specification: 2 ±1.5 mm	
1002 1	Tray 1	[-9 ~ +9/ +3.0 mm / 0.1 mm step]
1002 2	Tray 2	[-9 ~ +9/ +3.0 mm / 0.1 mm step]
1002 3	Tray 3	[-9 ~ +9/ +2.0 mm / 0.1 mm/step]
1002 4	Tray 4	[-9 ~ +9/ +2.0 mm / 0.1 mm/step]
1002 5	From Duplex Tray	[-9 ~ +9/ +0.0 mm / 0.1 mm/step]
1002 6	Bypass Feed	[-9 ~ +9/ +3.0 mm / 0.1 mm/step]
1002 7	LCT (if present)	[-9 ~ +9/ +1.5 mm / 0.1 mm/step]

1003*	Registration Buckle Adjustment	
	Adjusts the relay clutch timing at registration. Relay clutch timing determines the amount of paper buckle at registration. (A “+” setting causes more buckling.)	
1003 1	Trays 2,3,4 LCT	[-9 ~ +9 / 0 / 1 mm step]
1003 2	Duplex	
1003 5	Bypass	
1003 4	Tray 1 Feed	
1003 5	Bypass Thick Paper	

1007*	By-pass Feed Paper Size Display	
	Displays the paper width sensor data for the by-pass feed table.	

1012*	Exit Junction Solenoid Start Timing	
	Adjusts the timing of the solenoids at the entrance and exit of the paper exit section to accommodate the increased speed of the duplex unit. <i>This SP has been added to compensate for the increased operation speed of the duplex unit for this machine. Increase the value if the leading edges are jamming. Decrease the value if trailing edges are bending at the entrance</i>	
1012 1*	Exit Entrance Junction Solenoid	B135: [200 ~ 450 ms / 370 ms / 10 ms]
		B138: [200 ~ 450 ms / 300 ms / 10 ms]
1012 2*	Exit Last Junction Solenoid	B135: [200 ~ 450 ms / 370 ms / 10 ms]
		B138: [200 ~ 450 ms / 370 ms / 10 ms]

SERVICE PROGRAM MODE

1103*	Fusing Idling	
	Switches fusing idling on/off. When on, printing will not start until enough time has elapsed so the hot roller can reach optimum temperature. This ensures even heat on the hot roller. <i>Switch on if fusing on the 1st and 2nd copies is incomplete (this may occur if the room is cold.) You must switch SP1103-1 ON before you set the fusing interval with SP1103-2.</i>	
1103 1*	Enable Fusing Idling	0 = Off , 1 = On
1103 2*	Fusing Idling Interval	[0 ~ 60 sec. / 30 sec. / 1 sec.]

1104*	Fusing Temperature Control	[0~1 / 0 / 1]
	<p>Selects the fusing temperature control method. After changing this setting, be sure the power the machine off and on again with the main power switch to enable the new setting.</p> <p>0: Normal (ON/OFF control). Allows full application from ac power supply to bring the hot roller up to the target fusing temperature then shuts off. Determines the on time from the present temperature (detected by the thermistor on the hot roller) and the temperature of 1 cycle before.</p> <p>1: Phase (hysteresis) control. Sets the upper and lower limits for the temperature; at the lower temperature the fusing lamp is on and at the higher temperature the fusing lamp is off.</p> <p>Change this setting to "0" only if the user has excessive electrical noise or interference on the power supply line. Such interference can cause voltage to drop when power is applied using the ON/OFF control method.</p> <p>Interference can be caused by the general poor quality of the power supply lines, or if the machine is sharing a power supply with other electrical devices such as fluorescent lights. Before changing this setting, make sure that the machine is connected to a power supply not shared by other electrical equipment.</p> <p>Note: Selecting Phase control ("1") could cause the fusing temperature control board to emit low pitched noise.</p>	

1105*	Fusing Temperature Adjustment	
	<p><i>Allows adjustment of the hot roller temperature at the center and ends of the roller for the quality or thickness of the paper. The hot roller in this machine has two fusing lamps: one heats the center of the roller, the other heats both ends. Each fusing lamp can be adjusted separately.</i></p> <p><i>The "re-load temperature" is the "print ready temperature. When the fusing temperature exceeds this setting, the machine can operate. Do not set up a re-load temperature (Re-load Temp. = Fusing. Temp – SP Value.) that is higher than the SP1-105-2 setting.</i></p>	
1105 1	Roller Center: Trays	35 cpm: [120 ~ 200 / 150 / 1 deg.] 45 cpm: [120 ~ 200 / 170 / 1 deg.]
	Adjusts the fusing temperature at the center of the hot roller.	
1105 2	Roller Ends: Trays	35 cpm: [120 ~ 200 / 160 / 1 deg.] 45 cpm: [120 ~ 200 / 175 / 1 deg.]
	Adjusts the fusing temperature at the ends of the hot roller.	
1105 3	Roller Center – Bypass	35 cpm: [120 ~ 200 / 160 / 1 deg.] 45 cpm: [120 ~ 200 / 170 / 1 deg.]
	Adjusts the fusing temperature at the center of the hot roller for bypass feed.	
1105 4	Roller Center - Ends	35 cpm: [120 ~ 200 / 160 / 1 deg.] 45 cpm: : [120 ~ 200 / 170 / 1 deg]
	Adjusts the fusing temperature at the ends of the hot roller for bypass feed.	
1105 5	Re-load Temp. Minus: Roller Center	[0 ~ 60 / 30 / 1 step]
	Sets the temperature for re-heating the hot roller center.	
1105 6	Re-load Temp. Minus: Roller Ends	[0 ~ 60 / 30 / 1 step]
	Sets the temperature for re-heating the hot roller ends.	
1105 7	Roller Center: Bypass (Thick Paper)	35 cpm: [120 ~ 200 / 170 / 1 deg] 45 cpm: [120 ~ 200 / 170 / 1 deg]
	Adjusts the fusing temperature at the center of the hot roller for thick paper.	
1105 8	Roller Ends: Bypass (Thick Paper)	35 cpm: [120 ~ 200 / 170 / 1 deg] 45 cpm: [120 ~ 200 / 170 / 1 deg]
	Adjusts the fusing temperature at the ends of the hot roller for thick paper.	
1105 9*	Re-load Temp. Minus: Roller Center (Thick Paper)	35 cpm: [0 ~ 60 / 0°C / 5] 45 cpm: [0~ 60 / 5°C /1]
	Sets the temperature for re-heating the hot roller center for thick paper.	
1105 10*	Re-load Temp. Minus: Roller Ends (Thick Paper)	35 cpm: [0 ~ 60 / 0°C / 5] 45 cpm: [0~ 60 / 5°C /1]
	Sets the temperature for re-heating the hot roller ends for thick paper.	

SERVICE PROGRAM MODE

1106	Fusing Temperature Display	
1106 1	Roller Center	Displays the fusing temperature for the center of the hot roller.
1106 2	Roller Ends	Displays the fusing temperature for the ends of the hot roller.
1106 3	I/O Board Temp. at Power On	Displays the internal temperature of the machine when it was powered on.

1109*	Fusing Nip Band Check	[0=Off, 1=On]
	Checks the fusing nip band.	

1111*	Paper Reverse Timing (Duplex)	[+5 ~ -5 / 0 mm / 1 mm step]
	Adjusts the timing for stopping the rotation of the reverse roller after the trailing edge of the paper passes the duplex entrance sensor. <i>Adjust the timing if paper frequently jams at the inverter gate in the duplex unit.</i>	

1801*	Motor Speed Adjustment	
	Adjusts the speeds of the main motor, feed/development motor, and fusing exit motor. Each step decreases or increases motor speed in 0.15% increments	
1801 1	Main Motor	[-4 ~ +4 / 0 / 0.15%]
1801 2	Feed/Development Motor	[-4 ~ +4 / 0 / 0.15%]
1801 3	Fusing/Exit Motor	[-4 ~ +4 / 0 / 0.15%]

SP2-xxx: Drum

⇒	2001*	Charge Roller Bias Adjustment	
⇒	2001 1*	Copying	[−1000 ~ −2000 / −1500V / 10V step] See NOTE.
		Adjusts the voltage applied to the charge roller for copying.	
⇒	2001 2*	ID Sensor Pattern	[0 ~ 700 / 250V / 10V step] See NOTE.
		Adjusts the voltage applied to the charge roller when making the VSDP ID sensor pattern (for charge roller voltage correction). The actual charge roller voltage is this value plus the value of SP2001 1.	

⇒	2005*	Charge Roller Bias Correction	
	2005 1*	Charge Roller Voltage Correction 1	[0.1 ~ 1.0 / 0.85 / 0.05 step]
		Adjusts the lower threshold value for the charge roller correction. <i>When the value of VSP/VSG is greater than this value, the charge roller voltage increases by 30 V (e.g., from −500 to −530).</i>	
	2005 2*	Charge Roller Voltage Correction 2	[0.1 ~ 1.0 / 0.90 / 0.05 step]
		Adjusts the upper threshold value for the charge roller correction. <i>When the value of VSP/VSG is greater than this value, the charge roller voltage decreases by 30 V (absolute value).</i>	
⇒	2005 3*	Charge Roller Voltage Adjustment 1	[−1000 ~ −2000 / 1500V / 10V step]
		Adjusts the lower limit value for charge roller voltage correction. See NOTE.	
	2005 4*	Charge Roller Voltage Adjustment 2	[−1000 ~ −2000 / 2000V / 10V step]
		Adjusts the upper limit value for charge roller voltage correction.	
	2005 5*	Charge Roller Voltage Step	[0 ~ 100V / 30V / 10V step]
		Adjusts the correction voltage adjustment step size.	

	2101*	Printing Erase Margin	
		Adjusts the leading edge (top), trailing edge (bottom), left, and right margins	
	2101 1*	Leading Edge (Top)	[0.9 ~ 9.0 / 3 / 0.1 mm step] Spec: ±2 mm
	2101 2*	Trailing Edge (Bottom)	[0.9 ~ 9.0 / 3 / 0.1 mm step] Spec: ±2 mm
	2101 3*	Left Edge	[0.9 ~ 9.0 / 2 / 0.1 mm step] Spec: ±1.5 mm
	2101 4*	Right Edge	[0.9 ~ 9.0 / 2 / 0.1 mm step] Spec: ±1.5 mm
	2101 5*	Trailing Edge - Back side	[0.0 ~ 4.0 / 1.2 / 0.1 mm step] <i>Recommended: 2 ±1.5 mm</i>
	2101 6*	Back Side - Right	[0.0 ~ 9.0 / 0.3 / 0.1 mm step] <i>Recommended: 2 ±1.5 mm</i>
	2101 7*	Back Side - Left	[0.0 ~ 9.0 / 0.3 / 0.1 mm step] <i>Recommended: 2 +2.5/-1.5 mm</i>

	2103*	LD Power Adjustment	DFU
		Adjusts the intensity of the laser for the copier, printer, and fax unit. The Copier and Printer/Fax settings can be adjusted separately.	
	2103 1*	LD1 (Copier)	[−55 ~ +64 / −5 / 1 LSB step] <i>Approx. 50/128 = .4%</i>
	2103 2*	LD2 (Copier)	[−55 ~ +64 / −20 / 1 LSB step] <i>Approx. 50/128 = .4%</i>
	2103 3*	LD1 (Printer, FAX)	[−50 ~ −35 / −25 / 1 LSB step]
	2103 4*	LD2 (Printer, FAX)	[−50 ~ −35 / −25 / 1 LSB step]
	2103 5*	LD1 Adjustment Start/End	OFF/ON
	2103 6*	LD2 Adjustment Start/End	OFF/ON

⇒ **NOTE:** Must update the firmware for the Controller to version 2.40 or later and the BICU to version 2.11b or later for the new default settings.

SERVICE PROGRAM MODE

2109*	LD Beam Pitch Adjustment	
	Adjusts the beam gap for the dual beam system. After replacing the LD unit or replacing or clearing the NVRAM, use this SP mode to adjust the laser beam pitch. <i>This adjustment is performed by specifying the number of pulses to the stepper motor that will adjust the angle of rotation of the LD unit from the home position.</i>	
2109 1*	400 dpi	[400 dpi: [8 ~ 262 / 144 / 1 pulse step]
	Adjusts the laser beam pitch value for 400 dpi resolution. <i>After replacing the LD unit or replacing or clearing NVRAM, use this SP and SP2-109-3 to adjust the laser beam pitch.</i>	
2109 2*	600 dpi	[600 dpi: [30 ~ 284 / 168 / 1 pulse step]
	Adjusts the laser beam pitch value for 600 dpi resolution. <i>After replacing the LD unit or replacing or clearing NVRAM, use this SP and SP2-109-4 to adjust the laser beam pitch.</i>	
2109 3*	400 dpi Initial Setting	
	Initializes the laser beam pitch for 400 dpi using the value for SP2-109-1. <i>After entering a value for SP2-109-1, this SP must be used.</i>	
2109 4*	600 dpi Initial Setting	
	Initializes the laser beam pitch for 600 dpi using the value for SP2-109-2. <i>After entering a value for SP2-109-2, this SP must be used.</i>	
2109 5*	Auto Pitch Adjustment Interval	[0 ~ 65535 / 1000 / 1 step]
	Sets the interval for automatic laser beam pitch adjustment. <i>When the number of times that the resolution has been changed reaches this value, the laser unit position is automatically corrected.</i>	
2109 6	Current LD Unit Position	
	Displays the current LD unit position (number of pulses from home position). If this is different from the value of 2-109-1 or 2-109-2, LD unit positioning has failed.	
2109 7	Beam Pitch Change Counter	
	Displays how many times the LD unit position has been changed (how many times the resolution has changed.) <i>When the laser beam pitch adjustment is done, this counter is reset to zero.</i>	
2109 8	Beam Pitch Data Reset	
	Resets the values of SP2-109-6 and SP2-109-7. <i>After replacing the LD unit, this SP mode must be performed. See the LD Unit Removal Procedure.</i>	

2110	Test Mode dpi	DFU , [See below / 8 / 0 ~ 18]
	Sets the scanning resolution (dpi). (Range values: 0 = 400 x 400 dpi, 1 = 391 x 406 dpi, 4 = 300 x 300 dpi, 8 = 600 x 600 dpi , 15 = 439 x 430 dpi, 16 = 476 x 476 dpi, 17 = 483 x 465 dpi, 18 = 465 x 483 dpi)	

2112	Polygon Motor Off Timer	[0 ~ 60 s / 10 s / 5 s step]
	Input the time that the polygon motor is to switch off after the printer has remained idle for the specified time and entered the standby mode. <i>If set to zero, the polygon motor never switches off in standby mode. However, if the machine enters the energy saver mode, the polygon motor will ignore the zero setting and switch itself off.</i>	

⇒	2201*	Development Bias Adjustment	
⇒	2201 1*	Development Bias	[-200 ~ -700 / -560V / 10V step]
		Adjusts the development bias for copying. <i>Use as a temporary measure to correct faint copies from an aging drum.</i>	
⇒	2201 2*	ID Sensor Pattern	[- 200 ~ -700 / -480V / 10V step]
		Adjusts the development bias for the ID sensor pattern for VSP	

2207	Forced Toner Supply	
	Forces the toner bottle to supply toner at 1-second intervals for up to 30 seconds. To start, press (Ⓢ).	

2208*	Toner Supply Mode	[0: Sensor control, 1: Image pixel count]
	Selects the toner mode. <i>If you select 1, SP2-209-002 should be set to its default value. Use image pixel count modes only as a temporary measure if the ID or TD sensor is defective.</i>	

2209*	Toner Supply Rate	
2209 1*	Toner Rate	[10 ~ 800 mg/s / 60 mg/s / 5 mg/s step]
	Sets the amount of toner supplied every second by the toner supply motor. <i>Increasing this value reduces the toner supply clutch on time. Use a lower value if the user tends to make lots of copies that have a high proportion of black.</i>	
2209 2*	Toner Supply Correction Data	[25 ~ 300 / 300 / 25 step]
	Displays the toner supply correction coefficient (K). It can also be used to adjust K, but the value is changed again when VT is measured for the next copy. <i>The toner supply rate depends on the amount of toner in the toner bottle. This change is corrected using this coefficient. This SP can be used to check the toner supply condition. The lower the value of K, the lower the toner density</i>	

2210*	ID Sensor Pattern Interval	
	Sets the interval between ID sensor pattern prints.	
2210 1*	Job Page Count	[0 ~ 200 / 10 / 1]
	Sets the interval between ID sensor pattern printing. For users that do not make many copies daily, set a smaller interval to compensate for the effects of seasonal and weather changes.	
2210 2*	Forced Page Count	[2 ~ 999 / 200 / 1]
	Forces creation of the ID sensor pattern to prevent low density copies for customers who use the copier for long copy jobs.	

2213*	Copies After Toner Near-End	[0: 90 copies, 1: No copies, 2: 10 copies]
	Selects the number of copies that can be printed once the copier has detected toner near-end. Select 1 or 2 if the customer normally makes copies of high density	

⇒ **NOTE:** Must update the firmware for the Controller to version 2.40 or later and the BICU to version 2.11b or later for the new default settings.

SERVICE PROGRAM MODE

2220*	Vref Manual Setting	[1.0 ~ 5.00 V / 4.00V / 0.01V step]
	<p>Adjusts the TD sensor reference voltage (Vref). <i>Change this value after replacing the development unit with another unit that contains toner.</i></p> <ol style="list-style-type: none"> 1. <i>Check the value of SP2-220 in both the machine containing the test unit and the machine that you are going to move it to.</i> 2. <i>Install the test development unit, and then input the VREF for this unit into SP2-220.</i> 3. <i>After the test, put back the old development unit, and change SP2-220 back to the original value.</i> 	

2223*	Vt Display	
2223 1	Current	
	Displays the TD sensor output voltage for the immediately previous copy.	
2223 2	Average Previous 10 copies	
	Displays the average of the most recent TD sensor outputs (from the previous 10 copies).	
2223 3	Rate of Change	
	Displays the rate of change in the TD sensor output.	
2223 4	GAIN	
	Displays the GAIN value used to calculate the on time for the toner supply motor.	
2223 5	Image Pixel Count	
	Displays the image pixel count.	

2301	Transfer Current Adjustment	
2301 1	1st Side of Paper	B135: [20 ~ 100μA / 35 / 1μA step] B138: [20 ~ 100μA / 45] / 1μA step]
	Adjusts the transfer current for printing the first side of the paper (image area). <i>If the user uses thicker paper, the current may have to be increased to ensure sufficient transfer of toner.</i>	
2301 2	2nd Side of Paper	B135: [20 ~ 100μA / 35 / 1μA step] B138: [20 ~ 100μA / 40] / 1μA step]
	Adjusts the transfer current for printing the second side of the paper (image area).	
2301 3	Leading Edge	B135: [20 ~ 100μA / 35 / 1μA step] B138: [20 ~ 100μA / 45] / 1μA step]
	Adjusts the transfer current for copying at leading edge of the paper. <i>Increase the current to separate the paper from the drum properly in high humidity and high temperature conditions.</i>	
2301 4	Bypass Feed (45ppm)	B138: [20 ~ 100μA / 45 / 1μA step]
	Adjusts the transfer current for copying from the by-pass tray (image area) for the B138 (45 cpm). <i>If the user normally feeds thicker paper from the bypass tray, use a higher setting.</i>	
2301 5	Leading Edge Bypass Feed (45ppm)	B138: [20 ~ 100μA / 60 / 1μA step]
	Adjusts the transfer current for copying at the leading edge of paper fed from the by-pass tray for the B138 (45 cpm). <i>Increase the current to separate the paper from the drum properly in high humidity and high temperature conditions.</i>	
2301 6	Bypass Feed (35 ppm)	B135: [20 ~ 100μA / 35 / 1μA step]
	Adjusts the transfer current for copying from the by-pass tray (image area) for the B135 (35 cpm).	
2301 7	Leading Edge Bypass Feed (35 ppm)	B135: [20 ~ 100μA / 45 / 1μA step]
	Adjusts the transfer current for copying at the leading edge of paper fed from the by-pass tray for the B135 (35 cpm).	

2309*	Transfer Current Correction	
2309 1	Paper Lower Width (a)	[0 ~ 297 / 150 / 1 mm step]
	Adjusts the lower paper width threshold for the transfer current, charge voltage, and development bias corrections. <i>Use this SP when an image problem (e.g., insufficient toner transfer) occurs with a small width paper. If the paper width is smaller than this value, the transfer current will be multiplied by the factor in SP2-309-3 (paper tray) or SP2-309-5 (by-pass).</i>	
2309 2	Paper Upper Width (b)	[0 ~ 297 / 216 / 1 mm step]
	Adjusts the upper paper width threshold for the transfer current, charge voltage, and development bias corrections. <i>As for SP2-309-1, but the factors are in SP2-309-4 (paper tray) and SP2-309-6 (by-pass).</i>	
2309 3	Paper Tray (alpha)	[1.0 ~ 3 / 1.2 / 0.1 mm step]
	Adjusts the transfer current correction coefficient used if the paper width is less than the setting of SP2-309-1.	
2309 4	Paper Tray (beta)	[1.0 ~ 3 / 1.2 / 0.1 mm step]
	Adjusts the transfer current correction coefficient used if the paper width is less than the setting of SP2-309-2.	
2309 5	By-Pass Feed (gamma)	[1.0 ~ 3 / 1.5 / 0.1 mm step]
	Adjusts the transfer current correction coefficient used if the paper width is less than the setting of SP2-309-1.	
2309 6	By-Pass Feed (delta)	[1.0 ~ 3 / 1.5 / 0.1 mm step]
	Adjusts the transfer current correction coefficient used if the paper width is less than the setting of SP2-309-2.	

2801*	TD Sensor Initial Setting	
	Performs the TD sensor initial setting. This SP mode controls the voltage applied to the TD sensor to make the TD sensor output about 4.0 V. Press "Execute" to start. After finishing this, the TD sensor output voltage is displayed. <i>Use this mode only after installing the machine, changing the TD sensor, or adding new developer.</i>	

2802*	TD Sensor Manual Setting	
	Allows you to adjust the TD sensor output manually for the following.	
2802 1	VTS	[1.00 ~ 5.00V / 4.78V / 0.02V step]
	Adjusts the TD sensor output (VT). <i>Change this value after replacing the development unit with another one that already contains toner. For example, when using a development unit from another machine for test purposes. To adjust VT, use a similar procedure as for SP2-220.</i>	
2802 2	VTMAX	[1.00 ~ 5.00V / 4.78V / 0.02V step]
	Adjusts the maximum value for SP2802 1.	
2802 3	VTMIN	[1.00 ~ 5.00V / 1.00V / 0.02V step]
	Adjusts the minimum value for SP2802 1.	

⇒ 2805*	Developer Initialization	
	Performs the developer initialization. Press "Execute" to start. This SP should be performed after doing SP2801-01 at installation and after replacing the drum.	

2902	Test Pattern	
2902 2	IPU Test Pattern	Pattern 0 ~ 15
	Prints the test patterns for the IPU chip. <i>This SP mode is useful for finding whether the BICU or the SBU is defective. If the printout is not OK, the BICU is defective.</i>	
2902 3	Printing Test Pattern	Pattern 0 ~ 38
	Prints the printer test patterns. Select the number of the test pattern that you want to print. <i>This SP mode is useful for finding whether the LDDR or the BICU is defective. If the printout is not satisfactory, the LDDR is defective.</i>	

2909*	Main Scan Magnification	
	Adjusts the magnification in the main scan direction for copy mode and printer mode. Press \odot to toggle \pm .	
2909 1*	Copier	[-2.0 ~ +2.0 / 0 / 0.1% step]
2909 2*	Printer	[-2.0 ~ +2.0 / 0 / 0.1% step]

2911	Transfer Current On/Off Timing	
2911 1	La (On Timing)	[-30 ~ +30 / 0 mm / 1 mm step]
	Adjusts the transfer current on timing at leading edge.	
2911 2	Lb (Switch Timing)	[0 ~ +30 / 10 mm / 1 mm step]
	Adjusts the transfer current switch timing. This determines when the leading edge stops and the image area current begins (see SP2-301).	
2911 3	Lc (Off Timing)	[-30 ~ +30 / - 5 mm / 1 mm step]
	Adjusts the transfer current off timing. (e.g. -5 mm is 5 mm after the trailing edge.)	

2912*	Drum Reverse Rotation Interval	DFU
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2913*	Print Density for Test Pattern	[0 ~ 15 / 15 / 1]
	Sets the print density for the patterns printed with SP2-902-3.	

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2914*	Process Control Setting	
2914 1*	C-alpha	[0 ~ 400 / 150 / 10V step]
	Adjusts the charge roller voltage used when paper with a small width is fed from the by-pass tray. The paper width below which the correction starts depends on the value of SP2-309-1. <i>Use this SP when an image problem (such as white spots at the center of black dots or breaks in thin black lines) occurs when paper with a small width is fed from the by-pass feed tray.</i>	
2914 2*	C-beta	[0 ~ 400 / 0 / 10V step]
	Adjusts the charge roller voltage used when paper with a small width is fed from the by-pass tray. The paper width below which the correction starts depends on the value of SP2-309-2. <i>Use this SP when an image problem (see 2-914-1) occurs when paper with a small width is fed from the by-pass feed tray.</i>	
2914 3*	B-gamma	[0 ~ 300 / 200 / 10V step]
	Adjusts the development bias used when paper with a small width is fed from the by-pass tray. The paper width below which the correction starts depends on the value of SP2-309-1. <i>Use this SP when an image problem (see 2-914-1) occurs when paper with a small width is fed from the by-pass feed tray.</i>	
2914 4*	B-delta	[0 ~ 300 / 50 / 10V step]
	Adjusts the development bias used when paper with a small width is fed from the by-pass tray. The paper width below which the correction starts depends on the value of SP2-309-2. <i>Use this SP when an image problem (see 2-914-1) occurs when paper with a small width is fed from the by-pass feed tray.</i>	

2920	LD Off Check	DFU
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2960*	Toner Overflow Sensor	[0 = No, 1 = Yes]
	Selects whether or not the toner overflow sensor is activated.	

2964*	Transfer Cleaning Blade Forming	[0 ~ 30/ 0 / 1 sheets]
	Applies a pattern of toner to the transfer belt at a defined interval between sheets on the transfer belt in order to reduce friction between the belt surface and the cleaning blade. <i>Under conditions of high temperature and high humidity, the density control feature may reduce the amount of toner, which also reduces the amount of toner on the surface of the transfer belt. With less toner on the belt, the friction between the belt and the blade increases, and could cause the blade to bend or scour the surface of the belt.</i>	

2969*	LD – PWM Selection	
2969 1*	Printer Output LD – PWM Selection	[1 ~ 4 / 1 / 1 step]
	Changes the LD power PWM control for printed copies. A smaller value produces a lighter image. Use this SP to adjust the image density for printing from a personal computer or printing a received fax message. 1: 87.5% 2: 75% 3: 62.5% 4: 50%	
2969 2*	Fax Output LD – PWM Selection	[1 ~ 4 / 1 / 1 step]
	Changes the LD power PWM control for printed fax messages. A smaller value produces a lighter image. Use this SP to adjust the image density for printing fax messages. 1: 87.5% 2: 75% 3: 62.5% 4: 50%	

2971	Toner Full Sensor Count	DFU
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2972*	Grayscale Limit	
	A new feature of this machine that controls the halftone density level to prevent deterioration of the OPC. The halftone density is detected by the ID sensor, and the machine adjusts the intensity of the LD beam according to the upper/lower limit setting.	
2972 1*	Upper Limit	[0 ~ 100 / 60 / 1 step]
	Defines the upper limit for grayscale. <i>A larger value allows a wider range of halftones at the pale end of the scale. If the image contains pale areas with fuzzy borders surrounded by dark areas, reduce this value to make the borders clearer.</i>	
2972 2*	Lower Limit	[0 ~ 100 / 40 / 1 step]
	Defines the lower limit for grayscale. <i>A smaller value allows a wider range of halftones at the dark end of the scale.</i>	

2973*	Grayscale Copy Interval Check	[0 ~ 1000 / 100 / 10 step]
	Sets the halftone operation interval in order to prevent deterioration of the OPC. If the number of copies exceeds this setting, at the end of the job, or if the door is opened and closed, charge correction is executed.	

2974*	Image Density Adjustment	[1 ~ 5 / 3 / 1 step]
	Adjusts image density. Changing this setting adjusts development bias and ID sensor output voltage that in turn raises or lowers image density.	

2975*	Toner End Detection ON Time	[0 ~ 2,000 / 0 / 10 s step]
	Sets a time limit for issuing the toner near end warning on the operation panel. The time may need to be shorter for customers who run especially large print jobs (working at night, for example) to ensure earlier warning of the toner near end condition so toner out does not interrupt a long job. 0: Normal end detection (90 sheets after near-end detected (SP2213))	

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2976*	Toner Bottle Total On Time	[0 ~ 2,000,000 / 0 / 1 ms step]
	<p>Displays the total ON time of the toner supply motor, calculated from when the toner bottle was replaced. Use this to check that the toner end count (SP2975) is working properly.</p> <p><i>When SP2975 is set to any value other than "0", this value is displayed when it matches the setting of SP2975. When SP2975 is set to "0", SP2976 is disabled. SP2976 is automatically set to zero by toner end recovery.)</i></p>	

2980*	Charge Counter	[0 ~ 1000000 / 0 / 1 step]
	<p>Sets the number of pages to print after toner and carrier initialization before the charge input is increased to compensate for deterioration over time in the polarity of the carrier.</p> <p><i>The strength in the polarity of the carrier in the toner will eventually decrease and cause lower charge output. Setting the charge output to increase after a specified number of copies can compensate for this effect.</i></p>	

2981	Polygon Mirror Rotation Switching	DFU 0: Rpm determined by engine 1: Rpm for B135 (35 cpm) 2: Rpm for B138 (45 cpm)
	Switches the number revolutions per minute of the polygon mirror motor.	

SP3-xxx: Process


3001*	ID Sensor Initial Setting	
3001 1	ID Sensor PWM Setting	[0 ~ 255 / 100 / 1 step]
	Allows you to reset the PWM of the ID sensor LED to avoid a service call error after clearing NVRAM or replacing the NVRAM. <i>The PWM data is stored by executing SP-3001-2.</i>	
3001 2	ID Sensor Initialization	—
	Performs the ID sensor initial setting. ID sensor output for the bare drum (VSG) is adjusted automatically to 4.0 ±0.2 V. <i>Press “Execute” to start. Perform this setting after replacing or cleaning the ID sensor, replacing the drum, or clearing NVRAM.</i>	


3103*	ID Sensor Output Display	
3103 1*	Displays the current VSG, VSP, VSDP, and grayscale control If the ID sensor does not detect the ID pattern, “VSP = 5.0 V/VSG = 5.0 V” is displayed and an SC code is generated. If the ID sensor does not detect the bare area of the drum, “VSP = 0.0 V/VSG = 0.0 V” is displayed and an SC code is generated.	
	Vsg (Drum Surface Output)	[0V ~ 5.00V]
	Vsp (Pattern Output)	[0V ~ 5.00V]
	Vsdp (Immediate Post-Pattern Output).	[0V ~ 5.00V]
	Vsm/Vsg (Grayscale Post-Pattern Output)	[0V ~ 5.00V]


3905*	Hot Roller Stripper Cleaning After Job	
3905 1*	Toner and carbon clinging to the hot roller strippers can cause poor print quality. To prevent this, toner and carbon are dislodged from the hot roller strippers in two ways: 1) jogging the fusing/feed-out motor 3 times after every print job. 2) freely rotating the hot roller for 12 s. For details, see Section “6.6.2 Hot Roller Stripper Cleaning”. Also see SP 5959.	
	Number of Rotations	[0 ~ 60 / 1 / 1]
	Sets the number of times the fusing/exit motor is switched off/on in order to dislodge toner clinging to the hot roller strippers. <i>Raising this setting can increase wear on the hot roller and cleaning roller and shorten the service life of the hot roller.</i>	
3905 2*	Number of Pages	[0 ~ 1000 / 15 / 1]
	Sets the number of pages to print before the fusing/feed-out motor is jogged (switched off and on rapidly) to dislodge toner and carbon from the hot roller strippers. <i>Normally the motor is jogged once (switched off and on rapidly) after every print job that exceeds 15 pages.</i>	

SERVICE PROGRAM MODE

SP4-xxx: Scanner

4008*	Scanner Sub Scan Magnification	[−0.9 ~ 0.9 / 0.0 / 0.1% step]
	Adjusts the magnification of the sub scan direction during scanning. Changing this value changes the scanner motor speed. Press  to toggle ±.	

4010*	Scanner Leading Edge Registration	[−0.9 ~ 0.9 / 0.0 / 0.1 mm step]
	Adjusts the leading edge registration for scanning. Press  to toggle ±. <i>As you enter a negative value, the image moves toward the leading edge.</i>	

4011*	Scanner Side-to-Side Registration	[−4.6 ~ +4.6 / 0.0 / 0.1 mm step]
	Adjusts side-to-side registration for scanning. Press  to toggle ±. <i>As you enter negative values, the image will disappear at the left, and as you enter positive values, the image will appear at the left.</i>	

4012*	Scanner Erase Margin	
	Adjusts scanning margins for the leading and trailing edges (sub scan) and right and left edge (main scan). Do not adjust unless the customer desires a scanner margin greater than the printer margin.	
4012 1*	Leading Edge	[0 ~ 9 / 1.0 / 0.1 mm step] (Specification: 3 ± 2 mm)
4012 2*	Trailing Edge	[0 ~ 9 / 0.5 / 0.1 mm step] (Specification: 2 ± 2 mm)
4012 3*	Right	[0 ~ 9 / 0.5 / 0.1 mm step] (Specification: +2.5 ~ -1.5 mm)
4012 4*	Left	[0 ~ 9 / 1.0 / 0.1 mm step] (Specification: 2 ± 1.5 mm)

4013	Scanner Free Run	
	Performs a scanner free run with the exposure lamp off.	

4016	White Board Read Adjust	
4016 1	Read Start Position	
	Adjusts the scanning start position on the white plate for auto shading. The default is 10.5 mm from the leading edge. The setting specifies how far scanning starts from the default position. [−5.0 ~ +5.0 / 0.0 / 0.1 mm/step]	
4016 2	Read Width	
	Adjusts the width of the area on the white plate (in the sub scan direction) that is scanned for auto shading. The default is 4.76 mm. The current setting specifies the difference from this default. [−5.0 ~ +5.0 / 0.0 / 0.1 mm/step]	

4018	Scanner Optical Adjust Axis DFU	
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4019	Scanner Read Position DFU	
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4301	APS Sensor Output Display	
	Displays the time required to detect the size of the paper on the scanner exposure glass. Asterisks (*) are displayed if the size cannot be detected. <i>Dimensions are displayed in inches for North America and in mm for other areas.</i>	

4303*	APS A5/LT Size Detection	[0: not detected, 1: A5 length 5½ x 8½]
	Determines whether the original is A5/HLT size when the APS sensor does not detect the original size. <i>If 1 is selected, paper sizes that cannot be detected are regarded as A5 SEF. If 0 is selected, "Cannot detect original size" will be displayed.</i>	

4305*	8K/16K Detection	0: 8k/16k not detected, 1: 8K, 16K paper size detect enabled
	Selects whether or not the copier determines that the original is 8K/16K size when the APS sensor does not detect the original size. This SP is intended for use with 8K/16K Chinese paper sizes only and is effective only in China and Taiwan areas.	

4307*	APS Sensor Output Display	0: Original size detection at power on disabled. 1: Original size detection at power on enabled
	Determines whether or not the original size is detected while the exposure lamp lights during initialization.	

4428	Scanner Adjustment	DFU
4428 1	Flag Display	DFU
4428 2	Start	DFU
4428 3	Flag Reset	DFU

4901*	SBU Setting	DFU
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SERVICE PROGRAM MODE

4903*	Filter Setting	
	<i>Many filter setting SP modes have discussions in section 6. (●6.5)</i>	
4903 5	Full Size Mode	0: No. Normal operation 1: Yes. Main scan magnification always full-size
	Selects whether the copy is always full size, even if the magnification ratio has been changed. Set to 1 to check the main scan magnification. If the magnification is not 100%, the image processing circuits could be malfunctioning. <i>This SP is used to determine whether magnification is operating correctly. If this SP is set to 1 can make it easier to determine which part of the IPU is malfunctioning.</i>	
4903 7	Image Shift in Magnification	DFU, [0~7199 / 0 / 1 step]
	Adjusts the amount of pixel shift in the main scan direction in the magnification mode.	
4903 8*	Fax 25%, 50% Reduction	DFU, [0~3 / 0 / 1 step]
	Determines whether 25% and 50% reduction is available in the fax mode. 0: Off 1: Conducts fax mode OR processing for main scan for resolution below 100 dpi in only Text mode. 2: Conducts pre-filter processing for fax mode. 3: Conducts fax Text mode OR processing for main scan for resolution below 100 dpi. Pre-filter processing is done in every mode except Fax Text mode.	
	4903 10 to 4903 16, Pre-Filter Processing (●6.5) The following 5 SP modes Selects the filter processing setting for smoothing in order to reduce the incidence of moiré in images in different original modes. Specifically, they set 1) the compression rate for parallel lines in the main scan direction and for long lines in the sub scan direction, and 2) the strength of smoothing. Enter the appropriate number with the 10-key pad then press (#). <i>These settings attempt to smooth lines without making them stand out. Increasing the strength of a setting can reduce the incidence of moiré but can also decrease sharpness.</i>	
4903 10*	Pre-Filter: Text	[0~9 / 0 / 1]
4903 12*	Pre-Filter: Photo Mode	[0~9 / 0 / 1 step]
4903 13*	Pre-Filter: Text/Photo	[0~9 / 0 / 1 step]
4903 15*	Pre-Filter: Pale	[0~9 / 0 / 1 step]
4903 16*	Pre-Filter: Generation	[0~9 / 0 / 1 step]
	4903 20 to 4903 35, Text Mode MTF Filter Coefficient and MTF Filter Strength The following 15 SP modes select either the MTF filter coefficient (Level) or the MTF filter strength for text mode at various reproduction ratios. Each SP applies to either the main-scan direction or the sub-scan direction. (●6.5)	
4903 20*	Main Filter Level: Text 25%-64%	[0~15 / 9 / 1 step]
4903 21*	Sub Filter Level: Text 25%-64%	[0~13 / 13 / 1 step]
4903 22*	Main Filter Strength: Text 25%-64%	[0~7 / 2 / 1 step]
4903 23*	Sub Filter Strength: Text 25%-64%	[0~15 / 2 / 1 step]
4903 24*	Main Filter Level: Text 65%-154%	[0~7 / 12 / 1 step]
4903 25*	Main Filter Strength: Text 65%-154%	[0~13 / 13 / 1 step]
4903 26*	Sub Filter Level: Text 65%-154%	[0~7 / 2 / 1 step]
4903 27*	Sub Filter Strength: Text 65%-154%	[0~7 / 2 / 1 step]
4903 28*	Main Filter Level: Text 155%-256%	[0~15 / 14 / 1 step]
4903 29*	Sub Filter Level: Text 155%-256%	[0~13 / 13 / 1 step]
4903 30*	Main Filter Strength: Text 155%-256%	[0~7 / 2 / 1 step]
4903 31*	Sub Filter Strength: Text 155%-256%	[0~7 / 2 / 1 step]
4903 32*	Main Filter Level: Text 257%-400%	[0~15 / 15 / 1 step]

4903 33*	Sub Filter Level: Text 257%-400%	[0~13 / 13 / 1 step]
4903 34*	Main Filter Strength: Text 257%-400%	[0~7 / 2 / 1 step]
4903 35*	Sub Filter Strength: Text 257%-400%	[0~7 / 2 / 1 step]
	4903 36 to 4903 38, Photo Mode MTF Filter Coefficients (●6.5) 4903 36: Selects the MTF filter coefficient for edges in the photo mode 4903 37: Selects the filter coefficient for smoothing in the photo mode. The higher the number you select, the greater the applied smoothing effect. 4903 38: Selects the MTF filter coefficient sharpening an entire image in the Photo mode. For 4093 36 and 4093 38, the higher the number you select, the greater the effect on sharpening low contrast text and thin lines. However, a high setting could cause background to drop or, or cause moiré to appear in photos shaded with dots. (0:Off, 1: Softest, 7: Sharpest)	
4903 36*	Photo MTF (Edge)	[[0~7 / 0 / 1]
4903 37*	Smoothing Filter in Photo Mode	[0~7 / 2 / 1]
4903 38*	Photo MTF (All)	[[0~7 / 0 / 1]
	4903 39 to 4903 52, Text/Photo Mode MTF Filter Coefficient (●6.5) The following 8 SP modes select the filter coefficients for either the edges (Edge) or for the entire image (All) for the Text/Photo mode at various reproduction ratios. Generally, increasing the value can improve the appearance of low contrast text; however, it can also cause background to fade or drop out completely or increase the incidence of moiré. Each SP has a range of 0~7 (0:Off, 1: Softest, 7: Sharpest)	
4903 39*	Text/Photo (Edge) Coefficient 25-64%	[0~7 / 1 / 1]
4903 40*	Text/Photo (All) Coefficient 25-64%	[0~7 / 4 / 1]
4903 43*	Text/Photo (Edge) Coefficient 65-154%	[0~7 / 1 / 1]
4903 44*	Text/Photo (All) Coefficient 65-154%	[0~7 / 4 / 1]
4903 47*	Text/Photo (Edge) Coefficient 155-256%	[0~7 / 1 / 1]
4903 48*	Text/Photo (All) Coefficient 155-256%	[0~7 / 4 / 1]
4903 51*	Text/Photo (Edge) Coefficient 257-400%	[0~7 / 1 / 1]
4903 52*	Text/Photo (All) Coefficient 257-400%	[0~7 / 4 / 1]
	4903 55 and 4903 56, MTF Filter Coefficients for Pale (●6.5) These modes select the MTF filter coefficient (Level) and strength for originals scanned in the Pale mode. While these SPs can improve the appearance of low contrast originals, a high setting can also increase the incidence of moiré.	
4903 55*	Filter Level: Pale	[0~6 / 6 / 1]
4903 56*	Filter Strength: Pale	0: 1/32x, 1: 1/16x, 2: 1/8x, 3: 1/4x , 4: 1/2x, 5: 1x, 6: 2x, 7: 4x
	4903 57 and 4903 58, MTF Filter Coefficients for Generation Copy (●6.52) These modes select the MTF filter coefficient (Level) and strength for originals scanned in the Generation Copy mode. While selecting a higher number strengthens the effect of the filter to improve contrast, a very high setting can increase the incidence of moiré.	
4903 57*	Filter Level: Generation Copy	[0~6 / 3 / 1 step]
4903 58*	Filter Strength: Generation Copy	0: 1/32x, 1: 1/16x, 2: 1/8x , 3: 1/4x, 4: 1/2x, 5: 1x, 6: 2x, 7: 4x
	4903 60 to 4903 64, Independent Dot Erase Level The following 4 SP modes select the independent dot erase level for originals scanned in different modes. While selecting a higher setting erases more dots, setting a very high setting can cause very fine text or other detail to fade or drop out completely. 1: Weakest (fewest dots erased), 15: Strongest (most dots erased)	
4903 60*	Independent Dot Erase: Text Mode	[0~15 / 5 / 1 step]
4903 62*	Independent Dot Erase: Text/Photo	[0~15 / 0 / 1 step]
4903 63*	Independent Dot Erase: Pale	[0~15 / 0 / 1 step]

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4903 64*	Independent Dot Erase: Generation Copy	[0~15 / 8 / 1 step]
	4903 65 to 4903 69, Background Erase Level The following 5 SP modes adjust the threshold for background erase in originals scanned in different modes. A higher setting reduces more dirty background, but a very high setting can cause the image to reverse or cause other unexpected results. For all these modes, 0 = off (default).	
4903 65*	Background Erase Level: Text Mode	[0~255 / 0 / 1 step]
4903 66*	Background Erase Level: Photo Mode	[0~255 / 0 / 1 step]
4903 67*	Background Erase Level: Text/Photo Mode	[0~255 / 0 / 1 step]
4903 68*	Background Erase Level: Pale	[0~255 / 0 / 1 step]
4903 69*	Background Erase Level: Generation Copy	[0~255 / 0 / 1 step]
	4903 75 to 4903 77, Line Width Correction <u>4903 75</u> : Determines whether line thickness is adjusted in the main and/or sub scan direction. Enter the appropriate number with the 10-key pad then press # <u>4903 76 and 4903 77</u> : Select the threshold for line width detection in originals copied in the Generation Copy mode. Higher numbers make it easier to thicken thin lines.	
4903 75*	Line Width Correction: Generation Mode	0: None, 1: Thin, 2: Thin, 3: Thick
4903 76*	LWC Threshold (Main Scan): Generation Mode	[0~5 / 1 / 1 step]
4903 77*	LWC Threshold (Sub Scan): Generation Mode	[0~5 / 1 / 1 step]
	4903 79 to 4903 93, Filter Strength: Edge, Filter Adj.: Edge Detection, Filter Adj.: Magnification (●6.5) The following 15 SP modes modify the effects of the MTF filter coefficients set by SP 4903 39 to 4903 52. The related SP mode is in parenthesis in the right column. See page 6-28 for details about how they work.	
4903 79*	Filter Strength: Text/Photo (Edge) 25-64%	[0~3 / 3 / 1] (SP4903 039)
4903 80*	Filter Adj.: Text/Photo (Edge Det.) 25-64%	[0~15 / 3 / 1] (SP4903 039)
4903 81*	Filter Adj.: Text/Photo (Mag.%) 25-64%	[0~15 / 12 / 1] (SP4903 039)
4903 82*	Filter Strength: Text/Photo (Edge) 65-154%	[0~3 / 3 / 1] (SP4903 043)
4903 83*	Filter Adj.: Text/Photo (Edge Det.) 65-154%	[0~15 / 3 / 1] (SP4903 043)
4903 84*	Filter Adj.: Text/Photo (Mag.%) 65-154%	[0~15 / 12 / 1] (SP4903 043)
4903 85*	Filter Strength: Text/Photo (Edge) 155-256%	[0~3 / 3 / 1] (SP4903 047)
4903 86*	Filter Adj.: Text/Photo (Edge Det.) 155-256%	[0~15 / 3 / 1] (SP4903 047)
4903 87*	Filter Adj.: Text/Photo (Mag.%) 155-256%	[0~15 / 12 / 1] (SP4903 047)
4903 88*	Filter Strength: Text/Photo (Edge) 257-400%	[0~3 / 3 / 1] (SP4903 051)
4903 89*	Filter Adj.: Text/Photo (Edge Det.) 257-400%	[0~15 / 3 / 1] (SP4903 051)
4903 90*	Filter Adj.: Text/Photo (Mag.%) 257-400%	[0~15 / 12 / 1] (SP4903 051)
4903 91*	Filter Strength: Photo (Edge)	[0~3 / 2 / 1] (SP4903 036)
4903 92*	Filter Adj.: Photo (Edge Det.)	[0~15 / 0 / 1] (SP4903 036)
4903 93*	Filter Adj.: Photo (Mag.%)	[0~15 / 15 / 1] (SP4903 036)

4904*	IPU Setting				
	Many IPU setting SP modes have discussions in section 6. (●6.5)				
4904 1*	Grayscale Photo Mode	0: Dithering and smoothing 1: Error diffusion and MTF filter processing			
	Selects the method of grayscale processing for the Photo Mode. “Dithering and smoothing” is the same as the setting for “Print Photo” selected on the operation panel in Photo Mode. Dithering can be adjusted with SP4903 037. “Error diffusion and MTF filter processing” is the same as the setting for “Normal” or “Glossy Photo” selected on the operation panel in Photo Mode. Error diffusion can be adjusted with SP4903 036 and 038.				
	Quality Photo Mode	Value	Method	Lines	Effect
		0	Dither 8 x 8	75	Screening
		1	Dither 8 x 8	106	Best grayscale
		2	Dither 6 x 6	142	Good grayscale
		3	Dither 4 x 4	212	Good resolution
	Selects the size of the dither matrix for the photo mode.				
4904 3*	Density Setting for Low Density Original Mode	0: Selects γ normal density 1: Digitizes to near binary image			
	Selects the density γ factor for the low-density original mode. Use to achieve better balance between text and images, correct shadows that appear around text in handwritten documents, to enhance documents written in pencil, or to achieve stark contrast when copying blueprints, building plans, etc.				
4904 4*	Density Setting for Copied Original Mode	0: Selects γ normal density 1: Digitizes to near binary image			
	Selects the density γ factor for the copied original mode.				
4904 5*	Special Text Density	[0~7 / 0 / 1] 0: Off, 1: Weaker, 7: Stronger			
	Enter the appropriate number with the 10-key pad then press (#). This SP code adjusts the density of the image to eliminate vertical black lines in originals that were caused by previous scanning with a dirty optics. While selecting a higher setting to erase more lines, selecting a very high setting can cause low contrast areas to become faint or cause them to drop out. (●6.5)				
	4904 7*	Error Diffusion Pattern	0: Edge threshold pattern is used. 1: Texture Pattern (matrix) 0 is used 2: Texture Pattern (matrix) 1 used. 3: Texture Pattern 2 (matrix) used.		
	Adjusts the threshold level for error diffusion processing in the Text/Photo mode. The effect of error diffusion can vary, depending on the image of the original. Adjust this setting if the results of the texture in copies is not what you expect, especially before starting a large copy job.				
	4904 8 to 4904 12, Gray Adj.: Text/Photo (Edge Det.), Photo (Edge Det.) The following 5 SP modes adjust the setting for edge detection during grayscale processing of originals scanned with the Custom Setting of the Text/Photo mode and Photo mode in the specified magnification range. At defined edges error diffusion executes on text to create sharp lines to better define text characters, but in other areas, error diffusion executes grayscale processing for photographs. Select a lower setting for better reproduction of photographs and a higher setting for sharper text. A lower setting improves the appearance of photographs, but can cause text and thin lines to drop out. A higher setting sharpens text and thin lines, but can also cause grayscale areas to degrade. (●6.5)				
4904 8*	Gray Adj: Text/Photo (Edge Det.) 25-64%	[0~15 / 8 / 1]			
4904 9*	Gray Adj.: Text/Photo (Edge Det.) 65-154%				
4904 10*	Gray Adj.: Text/Photo (Edge Det.) 155-256%				

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4904 11*	Gray Adj.: Text/Photo (Edge Det.) 257-400%	[0~15 / 8 / 1]
4904 13*	Gray Adj.: Photo (Edge Det.)	[0~15 / 0 / 1]
	4904 20 to 4904 23, Text (General) Quality (6.2) The following 4 SP modes allow adjustment together with other SP codes to improve image quality of originals copied in Text Mode at magnification within the specified magnification range. Select a lower setting to prioritize reproduction of pictures without moiré, and select a higher setting to prioritize reproduction of text and thin lines. 0: Off, 1: Pictures highest priority, 13: Text/thin lines highest priority	
4904 20*	Text (General) Quality 25-64%	[0~13 / 0 / 1]
4904 21*	Text (General) Quality 65-154%	[0~13 / 0 / 1]
4904 22*	Text (General) Quality 155-256%	[0~13 / 0 / 1]
4904 23*	Text (General) Quality 254-400%	[0~13 / 0 / 1]
4904 24*	Photo (General) Quality	[0~10 / 0 / 1] 0: Off, 1: Picture high priority, 10:Text high priority
	Allows overall adjustment of photo images in originals scanned in the Photo mode. Select a lower setting to prioritize reproduction of pictures without moiré, and select a higher setting to prioritize reproduction of sharp text. (6.5)	
	4904 25 to 4904 28, Text/Photo (General) Quality (6.5) The following 4 SP modes allow adjustment with other SP codes to improve quality of images scanned in the Text/Photo mode and in the specified magnification range. Select a lower setting to prioritize reproduction of pictures without moiré, and select a higher setting to prioritize reproduction of sharp text. 0: Off, 1: Pictures highest priority, 10: Text highest priority	
4904 25*	Text/Photo (General) Quality 25-64%	[0~10 / 0 / 1]
4904 26*	Text/Photo (General) Quality 65-154%	[0~10 / 0 / 1]
4904 27*	Text/Photo (General) Quality 155-256%	[0~10 / 0 / 1]
4904 28*	Text/Photo (General) Quality 257-400%	[0~10 / 0 / 1]
4904 29*	Pale (General) Quality	[0~13 / 0 / 1] 0: Off, 1: Picture high priority, 13:Text high priority
	Allows adjustment with other SP codes to improve the overall quality of images scanned in Pale Mode. Select a lower setting to prioritize reproduction of pictures without moiré, and select a higher setting to prioritize reproduction of text and thin lines. (6.5)	
4904 30*	Generation (General) Quality	[0~13 / 0 / 1] 0: Off, 1: Picture high priority, 13:Text high priority
	Allows adjustment with other SP codes to improve the overall quality of images in originals scanned in Generation Copy mode. Select a lower setting to prioritize reproduction of pictures without moiré, and select a higher setting to prioritize reproduction of text and thin lines. (6.5)	

4905*	Image Data Path	
	SP4905 1 allows switching between filter and magnification processing of the image for testing. SP4905 4 allows switching of the printout for testing.	
4905 1*	Filter Mag. Path Switch	DFU 0: Uses settings of each application and mode 1: Through filter 2: Through magnification 3: Through filter, magnification
4905 4*	Printout Type Selection	DFU 0: Uses settings of each application, mode 1: Reverses image logic (normally inverse black/white).

4909*	Image Data Path	
	SP4909 1 selects the method for image quality through processing. SP4909 20 Forces switching of the data output format between writing for the Ri10, CDIA for testing.	
4905 1*	Image Quality Through Processing	DFU 0: Normal operation 1: Grayscale through processing 2: Gamma correction through processing 3: Printer gamma, grayscale through processing
4905 20*	Image Data Path – Printer	DFU 0: Normal operation 1: Sets output from the Ri10 to the CDICA for grayscale output (1 pixel/8 bits) 2: Sets output from the Ri10 to the write unit for grayscale output (4 pixels/8 bits) 3: Sets output from the Ri10 to the CDICA for grayscale output (1 pixel/8 bits), also sets output from the Ri10 to the write unit for grayscale output (4 pixels/8 bit)

SERVICE PROGRAM MODE

4999*	ADF Scan Glass Dust Check
	This function checks the narrow scanning glass of the ADF for dust that can cause black lines in copies. If dust is detected a system banner message is displayed, but processing does not stop.
4999 1*	Check On/Off Change
	<p>Issues a warning if there is dust on the narrow scanning glass of the ADF when the original size is detected before a job starts. This function can detect dust on the white plate above the scanning glass, as well as dust on the glass. Sensitivity of the level of detection is adjusted with SP4999 2.</p> <p>[0 ~ 1 / 0 / 1]</p> <p>0: Off. No dust warning.</p> <p>1: On. Dust warning. This warning does not stop the job.</p> <p>Note: Before switching this setting on, clean the ADF scanning glass and the white plate above the scanning glass.</p>
4999 2*	Detect Level
	<p>Adjusts the sensitivity for dust detection on the ADF scanning glass. This SP is available only after SP49991 is switched on.</p> <p>[0~8 / 4/ 1]</p> <p>If you see black streaks in copies when no warning has been issued, raise the setting to increase the level of sensitivity. If warnings are issued when you see not black streaks in copies, lower the setting.</p> <p>Note: Dust that triggers a warning could move and be removed from the glass by the originals in the feed path. If the dust is removed by passing originals, this is not detected and the warning remains on.</p>

SP5-xxx: Mode

5024*	mm/inch Display Selection	0: Europe/Asia (mm), 1: North America (inch)
	Selects the unit of measurement. After selection, turn the main power switch off and on.	

5044*	Operation Panel Bit SW	DFU
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5104*	A3/DLT Double Count	
	Specifies whether the counter is doubled for A3/DLT. "Yes" counts except from the bypass tray. When "Yes" is selected, A3 and DLT paper are counted twice, that is A4 x2 and LT x2 respectively.	

5106*	Density Level Setting	[1~7 / 4 / 1 notch per step]
	Selects the image density level used in ADS mode. Example: If you set SP5106 6 to "2": Pressing the Auto Image Density key toggles the display off and manual notch 2 is selected. <i>Adjust this SP if the customer cannot attain clean copies after performing automatic density adjustment</i>	

5112*	Non-Standard Paper Selection	[0: No, 1: Yes]
	Determines whether a non-standard paper size can be initialized for copying or not. If 1 is selected, a non-standard size can be input using the UP mode.	

5113*	Optional Counter Type	0: None 1: Key card (RK3, RK4) 2: Key card (subtraction count setting) 3: Pre-paid card 4: Coin lock 5: MF key card (Peace) Japan only 11: MF key card (Increment) 12: MF key card (Decrement)
	Selects the corresponding key for installed devices such as a coin lock.	

5118*	Disable Copying	DFU
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5120*	Mode Clear Opt. Counter Removal	0: Normal reset. 1: Resets only when job finished or before job start. 2: Not normal reset
	Clears all coin devices. Japan only	

5121*	Counter Up Timing	0: Feed , 1: Exit
	Determines whether the optional key counter counts up at paper feed or at paper exit. <i>(The total counter is not affected by this SP mode.)</i>	

5127*	APS Off Mode	0: Enabled , 1: Disabled
	Selects whether the APS function is enabled or disabled with the contact of a pre-paid card or coin lock.	

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5131*	Paper Size Type Selection	0: Japan, 1: North America, 2: Europe
	Selects the paper size (type) for both originals and copy paper. (Default depends on DIP SW 101 setting.) <i>After changing the setting, turn the copier off and on. If the paper size of the archive files stored on the HDD is different, abnormal copies could result.</i>	

5150*	By-Pass Length Setting	0: Off, 1: On
	Determines whether the transfer sheet from the by-pass tray is used or not. <i>Normally the paper length for sub scanning paper from the by-pass tray is limited to 600 mm, but this can be extended with this SP to 1260 mm.</i>	

5162*	Application Switching Method	0: SW, 1: HW
	Determines whether the application screen is switched with a hardware switch or software switch. 0: Soft Key Set 1: Hard Key Set	

5212*	Page Numbering	
	Sets the horizontal and vertical starting points for the front and back sides of duplex copies. <i>(-10 = Extreme top or extreme right, +10 = Extreme bottom or extreme left)</i>	
5212 3*	Duplex Printout Right/Left Position	[-10~+10 / 0 / 1 mm step] DFU
5212 4*	Duplex Printout High/Low Position	[-10~+10 / 0 / 1 mm step] DFU

5302*	Set Time	[-1440~+1440 / 1 min. step]
	Adjusts the RTC time setting for the local time zone. <i>Example: For Japan (+9 GMT), enter 540 (9 hours x 60 min.)</i>	

5404	User Code Count Clear	
	Clears the counts for the user codes assigned by the key operator to restrict the use of the machine.	

5501*	PM Alarm	
5501 1*	PM Alarm Level	[0~9999 / 0 / 1 step] 0: Alarm off 1~9999: Alarm goes off when <i>Value (1~9999) ≥ PM counter</i>
5501 2*	Original Count Alarm	0: No alarm sounds 1: Alarm sounds after the number of originals passing through the ARDF ≥ 10,000

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

5505*	Error Alarm	[0~255 / 50 / 100 copies per step] Japan only
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5507*	Supply Alarm	
5507 1*	Paper Supply Alarm	0: Off, 1: On, DFU
5507 2*	Staple Supply Alarm	0: Off, 1: On, Japan only
5507 3*	Toner Supply Alarm	0: Off, 1: On, DFU
5507 128*	Interval :Others	[00250 ~ 10000 / 1000 / 1 Step] DFU
5507 132*	Interval :A3	
5507 133*	Interval :A4	
5507 134*	Interval :A5	
5507 141*	Interval :B4	
5507 142*	Interval :B5	
5507 160*	Interval :DLT	
5507 164*	Interval :LG	
5507 166*	Interval :LT	
5507 172*	Interval :HLT	


5508*	CC Call	
5508 1*	Jam Remains	0: Disable, 1: Enable
	Enables/disables initiating a call for an unattended paper jam.	
5508 2*	Continuous Jams	0: Disable, 1: Enable
	Enables/disables initiating a call for consecutive paper jams.	
5508 3*	Continuous Door Open	0: Disable, 1: Enable
	Enables/disables initiating a call when the front door remains open.	
5508 4*	Low Call Mode	0: Normal mode, 1: Reduced mode
	Enables/disables the new call specifications designed to reduce the number of calls.	
5508 11*	Jam Detection: Time Length	[03~30 / 10 / 1]
	Sets the time a jam must remain before it becomes an "unattended paper jam". This setting is enabled only when SP5508 004 is set to 1.	
5508 12*	Jam Detection: Continuous Count	[02~10 / 5 / 1]
	Sets the number of consecutive paper jams required to initiate a call. This setting is enabled only when SP5508 004 is set to 1.	
5508 13*	Door Open: Time Length	[03~30 / 10 / 1]
	Sets the length of time the door remains open before the machine initiates a call. This setting is enabled only when SP5508 004 is set to 1.	

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5508 21*	Jam Operation: Time Length	0: Automatic Call 1: Audible Warning at Machine
	Determines what happens when a paper jam is left unattended.	
5508 22*	Jam Operation: Continuous Count	0: Automatic Call 1: Audible Warning at Machine
	Determines what happens when consecutive paper jams occur.	
5508 23*	Door Operation: Time Length	0: OFF, 1: ON
	Determines what happens if the door remains open (15 min.). Displays a warning if set to ON. Pressing the call button will contact the service center. <i>This setting is available for setting only if SP5508 004 is set for 1.</i>	

5801	Memory Clear	Resets all correction data for process control and all software counters, and returns all modes and adjustments to their default values. (➡ 5.1.9). <i>To execute, hold down ① for over 3 seconds, and then turn the copier off and on again.</i> <i>Use this SP only after replacing the NVRAM, or after the copier has malfunctioned due to a damaged NVRAM.</i>
5801 1	All Clear	Initializes items 2 ~ 12 below.
5801 2	Engine	Initializes all registration settings for the engine and processing settings.
5801 3	SCS	System Control Service. Initializes default system settings, CSS settings, operation display coordinates, and ROM update information. SCS: System Control Service
5801 4	IMH Memory Clr	Image Memory Handler. Initializes the registration setting for the image memory handler.
5801 5	MCS	Memory Control Service. Initializes the automatic delete time setting for stored documents.
5801 6	Copier application	Initializes all copier application settings.
5801 7	Fax application	Initializes the fax reset time, job login ID, all TX/RX settings, local storage file numbers, and the off-hook timer.
5801 8	Printer application	Initializes the printer defaults, programs registered, the printer SP bit switches, and printer CSS counter.
5801 9	Scanner application	Initializes the scanner defaults for the scanner and all the scanner SP modes.
5801 10	Web Service/Network Application	Deletes the network file application management files and thumbnails, and initializes the job login ID.
5801 11	NCS	Network Control Service. Initializes the system defaults and interface settings (IP addresses also), SmartDeviceMonitor for Admin, Web Status Monitor settings, and the TELNET settings.
5801 12	R-FAX	Initializes the job login ID, SmartDeviceMonitor for Admin, job history, and local storage file numbers.
5801 14	Clear DCS Settings	
5801 15	Clear UCS Settings	


SERVICE PROGRAM MODE


5802*	Printer Free Run	Disable / Enable
	Performs a free run. The scanner scans once and the printer prints for the number of copies requested. To perform the free run, after selecting "1", press the Copy Window to enter copy mode, input the number of copies, and then press the Start key. To stop the free run, press  .	

5803	Input Check	
	Displays the signals received from sensors and switches. (➡ 5.1.6)	

5804	Output Check	
	Turns on the electrical components individually for test purposes. (➡ 5.1.7)	

5807	Option Connection Check	
5807 1	ARDF	Execution will return either a "1" or "0": 0: Device not connected correctly. 1: Device connected correctly.
5807 2	Bank (Paper Tray Unit)	
5807 3	LCT	
5807 4	Finisher (1000-sheet, Two-Tray finisher)	

5811*	Machine Serial Number	
	Used to input the machine serial number. This is normally done at the factory. <i>If you want to know the serial number, print the system parameter list. Press  and then input "A".</i>	

5812*	Service Tel. No. Setting	
	Use these SP modes to input service and support telephone numbers. Enter the number and press <i>Press the  key to input a pause. Press the "Clear modes" key to delete the telephone number.</i>	
5812 1*	Service	Service representative telephone number.
5812 2*	Facsimile	Fax number of service representative
5812 3*	Supply	Supplier of consumables
5812 4*	Operation	Operation support

SERVICE PROGRAM MODE

5816*	Remote Service	
5816 1*	I/F Setting	Switches the remote diagnostics function off and on. [0~2 / 2 / 1] 0: Remote diagnostics off. 1: Serial (CSS or NRS) remote diagnostics on. 2: Network remote diagnostics.
5816 2*	CE Call	Allows the customer engineer to start or end the remote machine check using CSS or NRS by pressing the center report key.
5816 3*	Function Flag	Enables and disables remote diagnosis via the NRS network. [0~1 / 0 / 1] 0: Disables remote diagnosis via network. 1: Enables remote diagnosis via network.
5816 4*	Communication Test Call	Executes a transmission test call for NRS. The test returns a value in the range 0 to 99. 0: Normal end (center operating) 1: Normal end (center not operating) Other: Abnormal
5816 5*	Device Information Call	Executes a call to determine whether the machine is operating. The test returns a value in the range 0 to 99. 0: Normal end (center operating) 1: Normal end (center not operating) Other: Abnormal
5816 6*	Device Information Call Display	Determines whether the item for initial setting of the screen for the NRS device information notification call is displayed. 0: Enabled. Item initial setting not displayed. 1: Disable. Item for initial setting is displayed.
5816 7*	SSL Disable	Determines whether RCG (Remote Communication Gate) confirmation is done by SSL during an RCG send for the NRS via a network interface. 0: Yes. SSL not used. 1: No. SSL used.
5816 8*	RCG Connect Timeout	Sets the length of time (seconds) for the timeout when the RCG (Remote Communication Gate) connects during a call via the NRS network. [1~90 / 10 / 1 sec.]
5816 9*	RCG Write to Timeout	Sets the length of time (seconds) for the timeout when send data is written to the RCG during a call via the NRS network. [0~100 / 30 / 1 sec.]
5816 10*	RCG Read Timeout	Sets the length of time (seconds) for the timeout when send data is written from the RCG during a call via the NRS network. [0~100 / 30 / 1 sec.]
5816 11*	Port 80 Enable	Determines whether permission is granted for access to the SOAP method via Port 80 on the NRS network. 0: No. Access denied 1: Yes. Access granted.

5821*	Remote Service Address	Japan Only.
5821 1*	CSS PI Device Code	Sets the PI device code. After changing this setting, you must switch the machine off and on.
5821 2*	RCG IP Address	Sets the IP address of the RCG (Remote Communication Gate) destination for call processing at the remote service center. [00000000h ~ FFFFFFFFh/ 00000000h /

5824	NVRAM Data Upload	
	Uploads the UP and SP mode data (except for counters and the serial number) from NVRAM on the control board to a flash memory card. <i>While using this SP mode, always keep the front cover open. This prevents a software module accessing the NVRAM during the upload.</i>	

5825	NVRAM Data Download	
	Downloads the content of a flash memory card to the NVRAM on the control board.	

5828*	Network Setting			
5828 66*	Job Spooling Clear: Start Time	Determines whether unprinted jobs on the HDD are printed the next time the machine is switched on. Available only the job spooling feature. ON: Clear spooled jobs from HDD at power on. OFF : Print spooled jobs on HDD at power on.		
5828 69*	Job Spooling: Protocol	Disables and enables protocols used for job spooling. The settings are done by entering a "0" (Off) or a "1" for each bit switch. Defaults: 1 (all enabled).		
		Bit	Protocol	Comments
		0	LPR	
		1	FTP	Not used
		2	IPP	
		3	SMB	
		4	BM Links	Japan Only
		5	Reserved	Not used
		6	Reserved	Not used
		7	Reserved	Not used
5828 74*	Delete Password	Deletes the NCS (Network Control Service) password. Sets the Telnet, WSM (Web Status Monitor), and remote ROM update passwords to NULL (empty)		
5828 84*	Print Settings List	Prints a list of the NCS parameter settings.		
5828 90*	TELNET (0:OFF 1:ON)	Disables or enables Telnet operation. If this SP is disabled the Telnet port is closed. [0~1/ 1 / 1] 0: Disable 1: Enable		
5828 91*	Web (0:OFF 1:ON)	Disables or enables the Web operation. [0~1/ 1 / 1] 0: Disable 1: Enable		

SERVICE PROGRAM MODE

5832	HDD Formatting	
	Enter the SP number for the partition to initialize, then press #. When execution ends, cycle the machine off and on.	
5832 1	ALL	Initializes entire content of the HDD.
5832 2	IMH	Initializes 1) documents stored on the document server, 2) stamp print data, 3) scanner delivery images, 4) fax delivery images.
5832 3	Thumbnail	Initializes MCS thumbnail images.
5832 4	Job Log	Initializes job data used by the Poplar server. Japan Only
5832 5	Printer Fonts	Initializes printer fonts, overlay forms.
5832 6	User Info.	Initializes user information (UCS)
5832 7	Mail RX Data	Initializes mail receive data (DCS)
5832 8	Mail TX data	Initializes mail send data (DCS)
5832 9	Data for Design	Designer use only.
5832 10	Fax	Initializes the logs (fax history and debug log)
5832 11	Ridoc I / F	Initializes the NetFile management area.

5833	Job Log On/Off	0: Off (disable), 1: On (enable)
	Switches the job log transfer on/off for Poplar server. Japan Only	

5834	Operation Panel Image Exposure	0: Off (disable), 1: On (enable)
	Enables and disables the operation panel read (dump) feature. After powering on the machine, set this option to 1 to enable this feature. <i>To reset the machine to 0, the machine must be turned off and on again. Selecting 0 for this option without cycling the power off and on does not restore the default setting (0).</i>	

5836*	Capture Settings	
5836 1*	Capture Function (0:Off 1:On)	0: Disable, 1: Enable
	With this function disabled, the settings related to the capture feature cannot be initialized, displayed, or selected.	
5836 2*	Panel Setting	0: Disable, 1: Enable
	Determines whether each capture related setting can be selected or updated from the initial system screen. The setting for SP58361 has priority	
	5836 71 to 5836 76, Copier and Printer Document Reduction The following 6 SP modes set the default reduction for stored documents sent to the document management server via the MLB. [0~2 / 2 / 1] <i>Enabled only when optional MLB (Media Link Board) is installed</i>	
5836 71*	Reduction for Copy Color	0: 1to-1, 1: ½, 2: 1/4
5836 72*	Reduction for Copy B&W Text	0: 1to-1, 1: ½, 0: 1/4
5836 73*	Reduction for Copy B&W Other	0: 1to-1, 1: ½, 0: 1/4
5836 74*	Reduction for Printer Color	0: 1to-1, 1: ½, 2: 1/4
5836 75*	Reduction for Printer B&W	0: 1to-1, 1: ½, 0: 1/4
5836 76*	Reduction for Printer B&W HQ	0: 1to-1, 1: ½, 0: 1/4
	5836 81 to 5836 86, Stored document format The following 6 SP modes set Sets the default format for stored documents sent to the document management server via the MLB. <i>Enabled only when optional MLB (Media Link Board) is installed</i>	

5836 081*	Format for Copy Color	0: JFIF/JPEG, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR
5836 082*	Format for Copy B&W Text	0: JFIF/JPEG, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR
5836 083*	Format Copy B&W Other	0: JFIF/JPEG, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR
5836 084*	Format for Printer Color	0: JFIF/JPEG, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR
5836 085*	Format for Printer B&W	0: JFIF/JPEG, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR
5836 086*	Format for Printer B&W HQ	0: JFIF/JPEG, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR
5836 091*	Default for JPEG	[5~95 / 50 / 1]
	Sets the JPEG format default for documents sent to the document management server via the MLB with JPEG selected as the format. <i>Enabled only when optional MLB (Media Link Board) is installed.</i>	

5839*	IEEE 1394	
5839 4	Host Name	Enter name
	Enter the name of the device used on the network. Example: RNP0000000000	
5839 7*	Cycle Master	OFF / ON
	Enables or disables the cycle master function for the 1394 bus standard.	
5839 8*	BCR mode	
	Determines how BCR (Broadcast Channel Register) operates on the 1394 standard bus when the independent node is in any mode other than IRM. (NVRAM: 2bits) Always Effective: Writes from the IRM. Standard: Copies BCR of the IRM after no data is written from the IRM after the prescribed time has elapsed. IRM Color Copy: BCR normally enabled.	
5839 9*	IRM 1394a Check	
	Conducts a 1394a check of IRM when the independent node is in any mode other than IRM. OFF: Checks whether IRM conforms to 1394a. ON: After IRM is checked, if IRM does not conform then independent node switches to IRM.	
5839 10*	Unique ID	
	Lists the ID (Node_Unique_ID) assigned to the device by the system administrator. OFF: Does not list the Node_Unique_ID assigned by the system administrator. Instead, the Source_ID of the GASP header in the ARP is used. ON: The Node_Unique_ID assigned by the system administrator is used, and the Source_ID of the GASP header in the ARP is ignored. Also, when the serial bus is reset, extra bus transactions are opened for enumeration.	
5839 11*	Logout	
	Handles the login request of the login initiator for SBP-2. (1bit) OFF: Disable (refuse login). Initiator retry during login. Login refusal on arrival of login request (standard operation) ON: Enable (force logout). Initiator retry during login. Login refusal on arrival of login request, and the initiator forces the login.	

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5839 12*	Login	
	Enables or disables the exclusive login feature (SBP-2 related). OFF: Disables. The exclusive login (LOGIN ORB exClusvie it) is ignored. ON: Enables. Exclusive login is in effect.	
5839 13*	Login MAX	[0~63 / 8 / 1], (0 and 63: Reserved)
	Sets the maximum number of logins from the initiator (6-bits)	

5840*	IEEE 802.11b		
5840 4*	SSID	Enter ID	
	Enters a unique ID (up to 32 characters long) to identify the device when it is operating in an area with another wireless LAN network.		
5840 6*	Channel MAX	JA [1~14 / 14 / 1] NA [1~11 / 11 / 1 EU [1~13 / 13 / 1] China, Taiwan (Same as NA)	
	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. <i>Displayed only when the option 802.11b for wireless LAN is installed.</i>		
5840 7*	Channel MIN	JA [1~14 / 1 / 1] NA [1~11 / 1 / 1 EU [1~13 / 1 / 1] China, Taiwan (Same as NA)	
	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. <i>Displayed only when the option 802.11b for wireless LAN is installed.</i>		
5840 11*	WEP Key Select	00: Key #1	0000 0000
		01: Key #2 (Reserved)	0000 0001
		10: Key #3 (Reserved)	0000 0010
		11: Key #4 (Reserved)	0000 0011
	Selects the WEP key. [00~11 / 00 / 1 binary]		
5840 18*	SSID Key Check		
5840 20*	WEP Mode	0: Max. 64-bit (10 characters) 1: Max. 128-bit (10, 26 characters)	
	Determines the operation mode of the WEP key. <i>Displayed only when the option 801.11b for wireless LAN is installed.</i>		

5841*	Supply Name Setting	
	Allows setting the following items with the Soft Keyboard after pressing the "Soft Keyboard" button displayed for this SP code. The items you enter are displayed after pressing "User Tools" and then pressing the "Inquiry" button on the touch-panel display.	
5841 1*	Toner Name Setting: Black	Enter the name of the toner in use.
5841 6*	Staple Bind	Enter the name of the staples in use for booklet stapling.
5841 7*	Original Stamp	Enter the names of original stamps. (This is stamped on originals to indicate that they have been fed and scanned for copying.)
5841 11*	Staple Std1	
5841 12*	Staple Std2	
5841 13*	Staple Std3	
5841 14*	Staple Std4	

5842*	Net File Analysis Mode Setting	[8 bits / 0011 1111 / Bit SW]
	Selects each debug output mode for NetFile processing Bit 8 is reserved. Bit 7 is the debug output switch for each mode. Net files are jobs to be printed from the document server using a PC and the Desk Top Binder software.	

5844*	USB	
5844 1*	Transfer Rate	Full Speed / Auto Change
	Sets the speed for USB data transmission. Full Speed: (12 Mbps fixed) Auto Change: 480 Mbps/12 Mbps auto adjust	
5844 2*	Vendor ID	[0x0000~0xFFFF/ 0x05CA /1], DFU
	Sets the vendor ID: Initial Setting: 0x05CA Ricoh Company.	
5844 3*	Product ID	[0x0000~0xFFFF/ 0x0403 /1], DFU
	Sets the product ID.	
5844 4*	Device Release Number	[0000~9999/ 0100 /1], DFU
	Sets the device release number of the BCD (binary coded decimal) display. <i>Enter as a decimal number. NCS converts the number to hexadecimal number recognized as the BCD.</i>	

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5845*	Delivery Server Setting	
	Provides items for delivery server settings.	
5845 1*	FTP Port No.	[0~65535 / 3670 / 1]
	Sets the FTP port number used when image files to the Scan Router Server.	
5845 2*	IP Address (Primary)	Range: 000.000.000.000 ~ 255.255.255.255
	Use this SP to set the Scan Router Server address. The IP address under the transfer tab can be referenced by the initial system setting.	
5845 6*	Delivery Error Display Time Netfiles:	[0~999 / 300 / 1]
	Use this setting to determine the length of time the prompt message is displayed when a test error occurs during document transfer with the NetFile application and an external device.	
5845 8*	IP Address (Secondary)	Range: 000.000.000.000 ~ 255.255.255.255
	Specifies the IP address assigned to the computer designated to function as the secondary delivery server of Scan Router. This SP allows only the setting of the IP address without reference to the DNS setting.	
5845 9*	Delivery Server Model	[0~4/ 0 / 1]
	Allows changing the model of the delivery server registered by the I/O device. 0: Unknown 1: SG1 Provided 2: SG1 Package 3: SG2 Provided 4: SG2 Package	

5845 10*	Delivery Svr Capability	[0~255 / 0 / 1]
Bit7 = 1	Comment information exists	Changes the capability of the registered that the I/O device registered.
Bit6 = 1	Direct specification of mail address possible	
Bit5 = 1	Mail RX confirmation setting possible	
Bit4 = 1	Address book automatic update function exists	
Bit3 = 1	Fax RX delivery function exists	
Bit2 = 1	Sender password function exists	
Bit1 = 1	Function to link MK-1 user and Sender exists	
Bit0 = 1	Sender specification required (if set to 1, Bit6 is set to "0")	

5846*	UCS Settings	
5846 1*	Machine ID (For Delivery Server)	Displays ID
	Displays the unique device ID in use by the delivery server directory. The value is only displayed and cannot be changed. This ID is created from the NIC MAC or IEEE 1394 EUI. The ID is displayed as either 6-byte or 8-byte binary.	
5846 2*	Machine ID Clear (For Delivery Server)	Clears ID
	Clears the unique ID of the device used as the name in the file transfer directory. Execute this SP if the connection of the device to the delivery server is unstable. After clearing the ID, the ID will be established again automatically by cycling the machine off and on.	
5846 3*	Maximum Entries	[2000~50000/ 2000 /1]
	Changes the maximum number of entries that UCS can handle. If a value smaller than the present value is set, the UCS managed data is cleared, and the data (excluding user code information) is displayed.	
5846 4*	Delivery Server Model	0 : Not used, 1:SG1 Provided, 2: SG1 Package, 3: SG2 Provided 4: SG2 Package
	Changes the model of the transfer server registered for the I/O device.	
5846 5*	Delivery Server Capability	Bit 7 = 1 Comment information Bit 6 = 1 Address direct entry possible Bit 5 = 1 Mail Rx confirmation possible Bit 4 = 1 Address book auto update Bit 3 = 1 Fax Rx function [0~255 / 0 / 2]
	Changes the capability of the server registered for the I/O device.	
5846 6*	Delivery Server Retry Timer	[0~255/ 0 /1]
	Sets the interval for retry attempts when the delivery server fails to acquire the delivery server address book.	
5846 7*	Delivery Server Retry Times	[0~255/ 0 /1]
	Sets the number of retry attempts when the delivery server fails to acquire the delivery server address book.	
5846 8*	Delivery Server Maximum Entries	[2000~50000 / 2000 / 1]
	Sets the maximum number account entries of the delivery server user information managed by UCS.	
5846 10*	LDAP Search Timeout	[1~255 / 60 / 1]
	Sets the length of the timeout for the search of the LDAP server.	
5846 50*	Initialize All Directory Info.	Clears all directory information managed by UCS, including all user codes.
5846 51*	Upload All Directory Info.	Uploads all directory information to the IC card.
5846 52*	Download All Directory Info.	Downloads all directory information from the IC card.
5846 70*	LDAP Attribute (Name)	Allows you to enter a search attribute other than the default mail (cn) for the LDAP server search.
5846 71*	LDAP Attribute (Mail)	Allows you to enter a search attribute other than the default mail address (mail) for the LDAP server search.
5846 72*	LDAP Attribute (Fax)	Allows you to enter a search attribute other than the default facsimile telephone number (FacsimileTelephoneNumber) for the LDAP server search.

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5846 73*	LDAP Attribute (Organization)	Allows you to enter a search attribute other than the default organization name (o) for the LDAP server search.
5846 74*	LDAP Attribute (Organizational Unit)	Allows you to enter a search attribute other than the default organization unit name (ou) for the LDAP server search.
5846 80*	Backup FCU	Backs up all directory information on the HDD to the FCU ROM.
5846 90*	Plain Data Forbidden	Allows you to prevent the address from plain data. This is a security function that prevents unauthorized access to address book data. 0: No check. Address book data not protected. 1: Check. Allows operation of UCS without data from HDD or SC card and without creating address book information with plain data.
5846 99*	Bit SW	Sets UCS debug output. DFU

5847*	Net File Resolution Reduction	
	5847 1 through 5847 6 changes the default settings of image data transferred externally by the Net File page reference function. [0~2 / 2 / 1] 5847 21 sets the default for JPEG image quality of image files handled by NetFile. "Net files" are jobs to be printed from the document server using a PC and the DeskTopBinder software.	
5847 2*	Rate for Copy B&W Text	0: 1x
5847 3*	Rate for Copy B&W Other	1: 1/2x
5847 5*	Rate for Printer B&W	2: 1/3x
5847 6*	Rate for Printer B&W HQ	3: 1/4x
5847 21*	Network Quality Default for JPEG	
	Sets the default value for the quality of JPEG images sent as NetFile pages. This function is available only with the MLB (Media Link Board) option installed. [5~95 / 50 / 1]	

5848*	Web Service	
	5847 2 sets the 4-bit switch assignment for the access control setting. Setting of 0001 has no effect on access and delivery from Scan Router. 5847 100 sets the maximum size allowed for downloaded images. The default is equal to 1 gigabyte.	
5848 1*	NetFile (Lower 4 Bits Only)	Bit switch settings.
	0000: No access control 0001: Denies access to DeskTop Binder. Access and deliveries from Scan Router have no effect on capture.	
5848 2*	Repository (Lower 4 Bits)	0000: No access control 0001: Denies access to DeskTop Binder.
5848 3*	Doc. Svr. Print (Lower 4 Bits)	Switches access control on and off. 0000: OFF
5848 4*	User Directory (Lower 4 Bits)	
5848 5*	Delivery Input (Lower 4 Bits)	
5848 6*	Fax Control (Lower 4 Bits)	
5848 7*	Comm. Log Fax (Lower 4 Bits)	
5848 100*	Repository: Max. Size of Download Image	[1~1024 / 1024 / 1K]

5849*	Installation Date	
5849 1*	Display	DFU
5849 2*	Switch to Print	DFU

5850*	Address Book Function	
5850 1*	Switch Module	
5850 3*	Replacement of Circuit Classification	
	The machine is sold ready to use with a G3 line. This SP allows you to switch all at once to convert to G4 after you add a G4 line. Conversely, if for some reason the G4 line becomes unusable, you can easily switch back to G3.	
	Circuit Type	
	G3	
	Internal	
	G21	
	G21 Internal	
	G22	
	G22 Internal	
	G23	
	G23 Internal	
	G3 Open Circuit	
	Internal Open Circuit	
	I-G3	
	I-G3 Internal	
	G4	

5852*	SMTP	
	Simple Mail Transfer Protocol. The protocol for communication between Internet main MTAs (Message Transfer Agents).	
5852 1*	SMTP Server Name	Allows you to specify the server by either its IP address or host name. If you use the host name, then you must also specify the DNS.
5852 2*	SMTP Server Port Number	Sets the port number of the SMTP server. [0~65535 / 25 / 1]
5852 3*	SMTP Type	
5852 4*	SMTP User Name	
5852 5*	SMTP Password	
5852 7*	POP Before SMTP	During mail sending, determines whether the POP server connection is validated before connecting to the SMTP server. This prevents unauthorized access to the SMTP server and requires users to access and log onto the POP3 server before sending e-mail. 0: No. POP server connection validated. 1: Yes. POP server connection validated before SMTP connection.
5852 8*	POP Server Name	Sets the name of the POP server. You can use either the IP address or the host name. If you use the host name, then you must also specify the DNS.

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5852 9*	POP Server Port Number	Sets the port number of the POP server. [1~65535 / 110 / 1]
5852 10*	POP User Name	Sets the POP user name used to validate POP connection before SMTP connection. This validation is switched on with SP5852 6 (POP Before SMTP). Limit: 63 characters.
5852 11*	POP Password	Sets the POP password used to validate POP connection before SMTP connection. This validation is switched on with SP5852 6 (POP Before SMTP). Limit: 63 characters.
5852 12*	POP Auth. Encryption	Determines whether encryption is done when POP connection is validated before SMTP connection. [0~2 / 0 / 1] 0: Automatic 1: No. Without encryption. 2: Yes. With encryption.

5853*	Stamp Data Download
	Use this SP to download the fixed stamp data stored in the firmware of the ROM and copy it to the HDD. This SP can be executed as many times as required. This SP must be executed after replacing or formatting the hard disks. Note: This SP can be executed only with the hard disks installed.

5856	Remote ROM Update
	When set to "1" allows reception of firmware data via the local port (IEEE 1284) during a remote ROM update. This setting is reset to zero after the machine is cycled off and on. [0~1 / 0 / 1] 0: Not allowed 1: Allowed

5857*	Debug Log Save Function
5857 1*	On/Off (1:ON 0:OFF) 0: ON, 1: OFF
	Switches the debug log feature on and off. The debug log cannot be captured until this feature is switched on.
5857 2*	Target (1:IC Card 2:HDD) 1:IC Card, 2:HDD
	Select "1" (IC Card) if an HDD unit is not installed in the machine, or if the HDD unit is temporarily out of service. The IC card can store only 4 MB so use the HDD selection.
5857 3*	Initialize IC Card DFU
	Initializes the IC card inserted into the controller slot. Initializing erases all data on the IC card. Use to initialize a new card.
5857 4*	Save to IC Card DFU
	Saves the debug log in memory to the IC card.
5857 5*	Save to HDD DFU
	Saves the debug log in memory to the HDD. <i>A unique file name is generated to avoid overwriting existing file names on the SD Card. Up to 4MB can be copied to an SD Card. 4 MB segments can be copied one by one to each SD Card.</i>
5857 7*	HDD to IC Card (Latest 4MB)
	Copies the latest 4 MB of the debug log on the HDD to the IC card. This function erases all data from the IC card as it copies.

5857 8*	HDD to IC Card (Latest 4MB Any Key)	
	Copies the latest 4 MB of the debug log on the HDD to the IC card, but only those portions of the log specified with a key specified with SP5859 (Debug Save Key No.) This function erases all data from the IC card as it copies. <i>To enable this SP, the machine must be cycled off and on.</i>	
5857 11*	Erase Debug Data From HDD	DFU.
	Erases all debug log data from the IC card.	

5858*	Debug Save When	
	These SPs select the content of the debugging information to be saved to the destination selected by SP5857 002. SP5858 3 stores one SC specified by number. <i>Refer to Section 4 for a list of SC error codes.</i>	
5858 1*	Engine SC Error	Stores SC codes generated by copier engine errors.
5858 2*	Controller SC Error	Stores SC codes generated by GW controller errors.
5858 3*	Any SC Error	[0~65535 / 0 / 1]
5858 4*	Jam	Stores jam errors.

5859*	Debug Log Save Function	
5859 1*	Key 1	These SPs allow you to set up to 10 keys for log files for functions that use common memory on the controller board. (●5.3.1) [-9999999~9999999 / 0 / 1]
5859 2*	Key 2	
5859 3*	Key 3	
5859 4*	Key 4	
5859 5*	Key 5	
5859 6*	Key 6	
5859 7*	Key 7	
5859 8*	Key 8	
5859 9*	Key 9	
5859 10*	Key 10	

5860*	SMTP/POP3/IMAP4	
5860 20*	Partial Mail Receive Timeout	[1~168 / 72 / 1]
	Sets the amount of time to wait before saving a mail that breaks up during reception. The received mail is discarded if the remaining portion of the mail is not received during this prescribed time.	
5860 21*	MDN Response RFC2298 Compliance	[0~1 / 1 / 1]
	Determines whether RFC2298 compliance is switched on for MDN reply mail. 0: No 1: Yes	
5860 22*	SMTP Auth. From Field Replacement	[0~1 / 0 / 1]
	Determines whether the FROM item of the mail header is switched to the validated account after the SMTP server is validated. 0: No. "From" item not switched. 1: Yes. "From item switched.	

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5870	Common Key Info Writing
	Writes to flash ROM the common proof for validating the device for NRS specifications.

5871	HDD Function Disable DFU	[0~1 / 0 / 1] (0: OFF, 1: ON)
	<p>Disables the HDD functions by suppressing all functions that write data to the HDD. After this SP is executed, the machine must be switched off and on to enable the setting.</p> <p>Note: This SP is intended for use during the installation of the security DIMM, an option that is not yet available.</p>	

5872	HDD Overwrite Status Check DFU	
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5907*	Plug & Play Setting
	<p>Sets the brand name and the production name for Windows Plug & Play. This information is stored in NVRAM. If the NVRAM is defective or has been replaced, these names should be registered again.</p> <p>Allows input of the maker and model on a two-line display. After replacing the NVRAM, the settings can be selected from available maker and model names.</p> <p>To select and enable the maker & model name:</p> <p>1 Press and hold down (#).</p> <p>2 Enter the number that corresponds to the correct name on the list.</p>

5913	Switchover Permission Time	[3~30 / 3 / 1 s]
	<p>Sets the amount of time to elapse while the machine is in standby mode (and the operation panel keys have not been used) before another application can gain control of the display.</p>	

5914*	Application Counter Display	0: Off , 1: On
5914 1*	Printer Counter	Selects whether or not these total counters are displayed in the UP mode.
5914 2*	Copy Counter	

5915	Mechanical Counter Detection	0: Not detected, 1: Detected , 2: Unknown
	Confirms that the mechanical counter inside the inner cover is connected.	

5918*	A3/DLT Counter Display	[0, 1 / 0 / --] (0: OFF, 1: ON)
	<p>Sets the key press display for the counter key.</p> <p>This setting has no relation to (SSP) SP5-104 A3/DLT Double Count.</p>	

5923*	Border Removal Area Switching	[0~1 / 0 / 1]
	<p>Toggles between two settings that affect the appearance of the pages for border removal and printed facing pages: (1) Using the original area as the allotted area, or (2) Using only the copy paper as the allotted area.</p> <p>0: Original 1: Paper</p>	

5958*	Feed Clutch Start Timing Adjustment, DFU	
	Adjusts the clutch timing to optimize the intervals between fed sheets to reduce jams in the feed unit.	
5958 1*	Start Timing: Tray 1, 2	[35 ~ 57.5 / 42.5 / 2.5mm] DFU
5958 2*	Start Timing: Tray 3, 4, LCT	35 ~ 57.5 / 42.5 / 2.5mm] DFU
5958 3*	Leading Edge Detection	[19~34 / 26.5 / 2.5 mm] DFU

5959*	1st Print Delay Timing	[0~60 / 0 / 1 s]
	<p>Sets the amount of time the machine waits to project the latent image onto the drum after the feed/development motor, main motor, and fusing/feed-out motor switch on.</p> <p>This setting allows the drum and hot roller to turn freely in order to allow more time for cleaning toner and carbon that has accumulated on the hot roller strippers. Changing this can improve image quality but can also slow down the first print time. Adjust only when necessary.</p>	

5961*	Large Capacity Exit Mode	0: OFF, 1: ON
	Selects whether or not all stapled copies are sent to Shift Tray 1 when the Two-Tray finisher is installed.	

5962*	8K 16K Paper Mode		0: Off, 1: On.
	<p>Switches on/off the use of 8-kai, and 16-kai China paper sizes.</p> <p>If 'Off', 8-kai, 16-kai paper sizes are not displayed after pressing the selection key.</p> <p>If 'On', 8-kai, 16-kai paper sizes displayed after pressing the selection key. For this setting to take effect, "2" must be selected for SP5131.</p> <p>With "2" (Europe) selected for SP5131, the ADF can select 16-kai LEF. With SP5962 set for "0" (Off), the nearest size is detected as shown below.</p>		
	Size Loaded	16-kai SEF	6-kai LEF
	Size Detected	B5 SEF	B5 LEF
			8-kai SEF

5967*	Copy Server Set Function	0: ON, 1: OFF
	Enables and disables the document server. This is a security measure that prevents image data from being left in the temporary area of the HDD. After changing this setting, you must switch the main switch off and on to enable the new setting.	

5970*	Debug Serial Output DFU	
	<p>Determines whether the debug information is output by the serial port when the machine is powered on.</p> <p>[0~1 / 0 / 1]</p> <p>0: Disable</p> <p>1: Enable</p>	

5974*	Cherry Server	0: Lite, 1: Full
	Switches writing between the Scan Router Lite application provided and the optional full version.	

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5990	SP Print Mode (SMC Printout)	
5990 1	All (Data List)	Prints all of the system parameter lists for the item selected. (➡ 5.1.8) Input the number for the item that you want to print, and then press ①: "Execute" on the touch panel.
5990 2	SP (Mode Data List)	
5990 3	User Program	
5990 4	Logging Data	
5990 5	Diagnostic Report	
5990 7	NIB Summary	
5990 8	Capture Log	
5990 21	Copier User Program	
5990 22	Scanner SP	
5990 23	Scanner User Program	

SP6-xxx: Peripherals

6006*	ADF Registration Adjustment	
	Adjusts the side-to-side and leading edge registration for simplex and duplex original feeding in ARDF mode. Press \odot to toggle \pm . SP6006 5 sets the maximum setting allowed for rear edge erase.	
6006 1*	Side-to-side	[-3 ~ +3 / 0.0 / 0.1 mm step]
6006 2*	Leading Edge (Thin Original)	[-30 ~ +30 / 0.0 / 0.17 mm step]
6006 3*	Leading Edge (Duplex Front)	[-42 ~ +42 / 0.0 / 0.12 mm step]
6006 4*	Leading Edge (Duplex Rear)	[-42 ~ +42 / 0.0 / 0.12 mm step]
6006 5*	Rear Edge Erase	[-20 ~ +20 / 0.0 / 0.5 mm step]

6007	ADF Input Check	
6007 1	Group 1	Displays the signals received from sensors and switches of the ARDF. (➡ 5.1.6)
6007 2	Group 2	
6007 3	Group 3	


6008	ADF Output Check	
	Switches on each electrical component (ARDF motor, solenoid, etc.) of the ARDF for testing. (➡ 5.1.7)	


6009	ADF Free Run	
	Performs a free run with the ARDF for duplex and stamp testing. Input the number for the item you want to check, and then press \odot to start. <i>This is a general free run controlled from the copier. For more detailed free run modes, see the ARDF manual.</i>	
6009 1	Duplex Mode	OFF/ON
6009 2	Stamp Mode	OFF/ON


6010*	ADF Stamp Position Adjustment	[-7~+7 / 0 / 0.5 mm steps]
	Adjusts the horizontal position of the stamp on the scanned originals.	

6016*	Original Size Decision Priority	Japan		
		Bit	0	1
		7	DLT SEF	11"x15"
		North America		
		Bit	0	1
		6	DLT SEF	11" x 15"
		5	LT LEF	US Exec LEF
		4	LT SEF	8"x10" SEF
		3	LG SEF	F4 SEF
		Europe		
		Bit	0	1
		2	DLT SEF	8-K SEF
		1	LT SEF	16-K SEF
		0	LT LEF	16-K LEF
		Determines which original sizes are detected when an original is detected that is larger than the size assigned to the original size sensor. This provides an alternate selection for detection, other than that assigned with SP5131.		

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6017*	Sheet Through Magnification	[−50.0 ~ +50.0 / 0.0 / 0.1%/step]
	Adjusts the magnification in the sub-scan direction for ADF mode. Use the  key to toggle between + and - before entering the value	

6105*	Staple Position Adjustment	[−3.5~+3.5 / 0.0 / 0.5 mm step]
	Adjusts the staple position in the main scan direction when using the two-tray finisher. <i>Press  to toggle ±. A larger value shifts the staple toward the edge of the paper.</i>	

6113*	Punch Hole Adjustment	
	Adjusts the punch hole position. SP6113 1: 2-hole punches for Japan, North America, Europe, and 4-hole punches for Northern Europe. SP6113 2: 3-hole punches for North America, and 4-hole punches for Europe. <i>Press  to toggle ±. A larger value shifts the holes toward the edge of the paper.</i>	
6113 1*	2-Holes	[−7~+7 / 0 / 0.5 mm steps]
6113 2*	3-Holes	[−7~+7 / 0 / 0.5 mm steps]

6902*	Fold Position Adjustment	
	Allows fine adjustment of the fold position on paper when the Booklet Finisher is connected and used.	
6902 1*	A3/DLT	[−30~+30 / 0 / 0.5 mm]
6902 2*	B4	[−20~+20 / 0 / 0.5 mm]
6902 3*	A4/LT	[−15~+15 / 0 / 0.5 mm]

SP7-xxx: Data Log

7001*	Main Motor Operation Time	Display: 00000000~99999999 min
	The number of prints and drive time for drum revolutions can be obtained by counting the main motor revolution time. If the amount of time required for the drum to revolve to print 1 copy increases, this data combined with the number of copies can be used to analyze problems and could be useful for future product development.	

7002*	Original Counter	
7002 1*	Total	Select a number to display the total original count (number of originals fed) for the selected item.
7002 2*	Copier	
7002 3*	Fax	
7002 4*	Doc. Svr. Application	
7002 5*	Scanner	
7002 6*	Others	

7003*	Print Counter	
7003 1*	Total Count	Select a number to display the total print count for the selected item.
7003 2*	Copy	
7003 3*	Fax	
7003 4*	Printer	
7003 5*	Others	

7006*	C/O, P/O Counter	
	Displays the number of copies/prints per original when making more than 10 copies. <i>For example, if you make 15 copies of a 3 page original document, for a total of 45 sheets, then the counter would be 15 (5 copies counted from 11 to 15 x 3 originals). No count will be returned for 1~10 copies of an original.</i>	
7006 1*	C/O (Copies/Original)	Displays number
7006 2*	P/O (Prints/Original)	

7007*	Other Counters	
7007 1*	Duplex Counter	Displays the count total for the selected item.
7007 2*	A3/DLT Counter	
7007 3*	Staple Counter	
7007 4*	Scan Counter	

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7101*	Print Count: Paper Size	
7101 5*	A4 LEF	Displays the total number of prints by paper size.
7101 6*	A5 LEF	
7101 14*	B5 LEF	
7101 38*	LT LEF	
7101 44*	HLT LEF	
7101 132*	A3 SEF	
7101 133*	A4 SEF	
7101 134*	A5 SEF	
7101 141*	B4 SEF	
7101 142*	B5 SEF	
7101 160*	DLT SEF	
7101 164*	LG SEF	
7101 166*	LT SEF	
7101 172*	HLT SEF	
7101 255*	Other	Count for custom (non-standard) paper sizes

7105*	P type Counter	
7105 1*	Normal	Displays the count for each type of special paper, up to 99,999,999.
7105 2*	Recycled	
7105 3*	Special	
7105 4*	Colour	
7105 6*	Letterhead	
7105 7*	Label	
7105 8*	Thick	
7105 9*	OHP	
7105 10*	Used	
7105 11*	Index	
7105 255*	Others	

7201*	Total Scan Counter	Displays the total number of originals scanned.
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7204*	Print Counter - Paper Tray	
	Displays the total number of sheets fed from each paper feed tray.	
7204 1*	ByPass	Copier
7204 2*	Tray 1	Copier
7204 3*	Tray 2	Copier
7204 4*	Tray 3	Paper Tray Unit (Option)
7204 5*	Tray 4	Paper Tray Unit (Option)
7204 6*	LCT	Large Capacity Tray (Option)

7205*	Total ADF Counter	Displays the total number of originals fed by the ARDF.
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7206*	Staple Counter	
7206 1*	Normal Staple	Display the total number of staples fired.
7206 2*	Binding Staple	

SERVICE PROGRAM MODE

7209*	Punch	Displays the total times the punch has fired.
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7401*	Total SC Counter	Displays the total number of service calls that have occurred. Display range: 0000~9999
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7403*	SC History	
7403 1*	Latest	Displays the most recent service calls successive groups of 10.
7403 2*	Latest 1	
7403 3*	Latest 2	
7403 4*	Latest 3	
7403 5*	Latest 4	
7403 6*	Latest 5	
7403 7*	Latest 6	
7403 8*	Latest 7	
7403 9*	Latest 8	
7403 10*	Latest 9	

7502*	Total Paper Jam Counter	Displays the total number of copy jams. Display range: 0000~9999
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7503*	Total Original Jam Counter	Displays the total number of original jams. Display range: 0000~9999
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7504*

Paper Jam Counter by Jam Location		Display range: 0000~9999	
Displays the total number of copy jams by location. <i>A “Paper Late” error occurs when the paper fails to activate the sensor at the precise time. A “Paper Lag” paper jam occurs when the paper remains at the sensor for longer than the prescribed time.</i>			
Paper Late Error No.	Paper Lag Error No.	Error	
1*		At Power On	
3*		1st Paper Feed Sensor	
4*		2nd Paper Feed Sensor	
5*		3rd Paper Feed Sensor	
6*		4th Paper Feed Sensor	
7*	57*	LCT Tray Relay Sensor	LCT Tray Relay Sensor .OFF
8*	58*	Transport Sensor 1	Transport Sensor 1.OFF
9*	59*	Transport Sensor 2	Transport Sensor 2.OFF
10*	60*	Transport Sensor 3	Transport Sensor 3.OFF
	61*		Transport Sensor 4.OFF
13*	63*	Registration Sensor	Registration Sensor.OFF
14*	64*	Fusing Exit Sensor	Fusing Exit Sensor
16*	66*	Exit Entrance Sensor	Fusing Exit Sensor.OFF
17*	67*	Relay Sensor 1 (option)	Relay Sensor 1 .OFF
18*	68*	Relay Sensor 2 (option)	Relay Sensor 2 .OFF
19*	69*	Duplex Entrance Sensor	Duplex Entrance Sensor.OFF
23*	73*	Duplex Exit Sensor	Duplex Exit Sensor.OFF
24*	74*	1-Bin Tray: Sensor	1-Bin Tray: Sensor.OFF
25*		Finisher Entrance	
26*		Finisher Proof Tray	
27*		Finisher Shift Tray	
28*		Finisher Staple Tray	
29*		Finisher Tray	
30*		Mailbox Entrance	
31*		Mailbox Proof Tray	
32*		Mailbox Relay	
33*		Mailbox MBX	
35*		Booklet FIN Entrance	
36*		Booklet FIN Transport	
37*		Booklet FIN Early	
38*		Booklet FIN Staple	
39*		Booklet FIN Late Saddle Stitch	
40*		Ent. FIN Off	
41*		Exit FIN Off	

7505*	Total Original Jam by Location		Display range: 0000~9999
	Displays the total number of original jams by location. These jams occur when the original does not activate the sensors. A "Paper Late" error occurs when the paper fails to activate the sensor at the precise time. A "Paper Linger" paper jam occurs when the paper remains at the sensor for longer than the prescribed time.		
	1*		At Power On
	Paper Late Error No.	Paper Lag Error No.	Error Location
	3	53	Skew Correction Sensor
	4	54	Interval Sensor
	5	55	Registration Sensor
	6	56	Relay Sensor
	7	57	Inverter Sensor

7506*	Jam Count by Copy Size	
7506 5*	A4 LEF	Displays the total number of copy jams by paper size.
7506 6*	A5 LEF	
7506 14*	B5 LEF	
7506 38*	LT LEF	
7506 44*	HLT LEF	
7506 132*	A3 SEF	
7506 133*	A4 SEF	
7506 134*	A5 SEF	
7506 141*	B4 SEF	
7506 142*	B5 SEF	
7506 160*	DLT SEF	
7506 164*	LG SEF	
7506 166*	LT SEF	
7506 172*	HLT SEF	
7506 255*	Others	

7507*	Copy Jam History (Transfer Sheet)	
	Displays the copy jam history of the transfer unit in groups of 10, starting with the most recent 10 jams. Display contents are as follows: CODE is the SP7-505-*** number. SIZE is the paper size code in hex. (See "Paper Size Hex Codes" below.) TOTAL is the total jam error count (SP7-003) DATE is the date the previous jam occurred	
	7507 1*	Latest
	7507 2*	Latest 1
	7507 3*	Latest 2
	7507 4*	Latest 3
	7507 5*	Latest 4
	7507 6*	Latest 5
	7507 7*	Latest 6
	7507 8*	Latest 7
	7507 9*	Latest 8
	7507 10*	Latest 9

Sample Display:
CODE: 007
SIZE: 05h
TOTAL: 0000334
DATE: Mon Mar 15 11:44:50 2000

SERVICE PROGRAM MODE

7508*	Original Jam History	
	Displays the original jam history of the transfer unit in groups of 10, starting with the most recent 10 jams. Display contents are as follows: CODE is the SP7-505-*** number. SIZE is the paper size code in hex. (See "Paper Size Hex Codes" below.) TOTAL is the total jam error count (SP7-003) DATE is the date the previous jam occurred	
7508 1*	Latest	Sample Display: CODE: 007 SIZE: 05h TOTAL: 0000334 DATE: Mon Mar 15 11:44:50 2000
7508 2*	Latest 1	
7508 3*	Latest 2	
7508 4*	Latest 3	
7508 5*	Latest 4	
7508 6*	Latest 5	
7508 7*	Latest 6	
7508 8*	Latest 7	
7508 9*	Latest 8	
7508 10*	Latest 9	

Paper Size Hex Codes

These codes are displayed by SP7507 and SP7508.

Paper Size	Code (hex)
A4 LEF	05
A5 LEF	06
B5 LEF	0E
LT LEF	26
HLT LEF	2C
A3 SEF	84
A4 SEF	85
A5 SEF	86
B4 SEF	8D
B5 SEF	8E
DLT SEF	A0
LG SEF	A4
LT SEF	A6
HLT SEF	AC
Others	FF

SERVICE PROGRAM MODE

7801	ROM No./Firmware Version	Displays the ROM number and firmware version numbers.
7803*	PM Counter Display	Displays the PM counter since the last PM.
7804	PM Counter Reset	Resets the PM counter. To reset, press ①.
7807	SC/Jam Counter Reset	Resets the SC and jam counters. To reset, press ①.
	This SP does not reset the jam history counters: SP7-507, SP7-508.	
7808	Counter Reset	Resets all counters except SP7-003-***, SP7-006-***. To reset, press ①.
7810	Access Code Clear	Clears the access code. To clear, press ①.
	Use to clear the access code if the customer forgets the code. After clearing the code is reset for Null and the password entry display does not open.	
7811	Original Count Clear	Clears the original total display, displayed with SP7-002-***. To clear, press ①.
7816	Print Counter Reset by Tray	
7816 1	Bypass	Resets the total copy count by paper tray. To reset, press ①. Use these SP modes when replacing the pick-up, feed, and separation rollers.
7816 2	Tray 1	
7816 3	Tray 2	
7816 4	Tray 3	
7816 5	Tray 4	
7816 6	LCT	
7825	Total Counter Reset	No longer used. (Has no effect)
7826*	MF Error Counter	Japan Only
7827	MF Device Error Counter Clear	Japan Only
7832	Self-Diagnosis Result Display	Opens the “Self-Diagnose Result Display”
	Execute to open the “Self-Diagnose Result Display” to view details about errors. Use the keys on in the display on the touch-panel to scroll through all the information. If no errors have occurred, you will see the “No Error” notation.	

SERVICE PROGRAM MODE

7833	Pixel Coverage Ratio	
	Displays the coverage ratio of the output (the ratio of the total pixel area of the image data to the total printable area on the paper). Note that this value is not directly proportional to the amount of toner consumed, although of course it is one factor that affects this amount. The other major factors involved include: the type, total image area and image density of the original, toner concentration and developer potential.	
7833 1*	Last Pages	0% to 100%.
7833 2*	Average Pages	0% to 100%.
7833 3*	Toner Bottles In Use	0 to 65,535 copies
7833 4*	Copy Count: Previous Toner Bottle	0 to 999,999 copies
7833 5*	Copy Count: Toner Bottle Before Previous	0 to 999,999 copies

7834	Clear Pixel Coverage Data	
	These SPs clear the counters of SP7833 (see table above).	
7834 1	Last & Average	Clears counter for SP7833 001, 002
7834 2	Toner Bottles In Use	Clears counter for SP7833 003
7834 3	Page Counts (2 Prev. Toner Bottles)	Clears counter for SP7833 004, 005

7836	Total Memory Size	
	Displays the memory capacity of the controller system.	

7852	ADF Scan Glass Dust Check Counter	
	Counts the number of occurrences (0 ~ 65,535) when dust was detected on the scanning glass of the ADF. Counting is done only if SP4991 1 (ADF Scan Glass Dust Check) is switched on. Memory All Clear (SP5801) resets this counter to zero	

7901*	Assert Info. DFU	
	These SP numbers display the results of the occurrence of the most recent SC code generated by the machine.	
7991 1*	Source File Name	Module name
7991 2*	Line Number	Number of lines
7991 3*	Result	Value

SP8-xxx: Data Log2

Many of these counters are provided for features that are currently not available, such as sending color faxes, and so on. However, here are some Group 8 codes that when used in combination with others, can provide useful information.

SP Numbers	What They Do
SP8 211~SP8 216	The number of pages scanned to the document server.
SP8 401~SP8 406	The number of pages printed from the document server
SP8 691~SP8 696	The number of pages sent from the document server

Specifically, the following questions can be answered:

- How is the document server actually being used?
- What application is using the document server most frequently?
- What data in the document server is being reused?

Most of the SPs in this group are prefixed with a letter that indicates the mode of operation (the mode of operation is referred to as an 'application'). Before reading the Group 8 Service Table, make sure that you understand what these prefixes mean.

PREFIXES	WHAT IT MEANS	
T:	Total: (Grand Total).	Grand total of the items counted for all applications (C, F, P, etc.)..
C:	Copy application.	Totals (pages, jobs, etc.) executed for each application when the job was <i>not</i> stored on the document server.
F:	Fax application.	
P:	Print application.	
S:	Scan application.	
L:	Local storage (document server)	Totals (jobs, pages, etc.) for the document server. The L: counters work differently case by case. Sometimes, they count jobs/pages stored on the document server; this can be in document server mode (from the document server window), or from another mode, such as from a printer driver or by pressing the Store File button in the Copy mode window. Sometimes, they include occasions when the user uses a file that is already on the document server. Each counter will be discussed case by case.
O:	Other applications (external network applications, for example)	Refers to network applications such as Web Image Monitor. Utilities developed with the SDK (Software Development Kit) will also be counted with this group in the future.

SERVICE PROGRAM MODE

The Group 8 SP codes are limited to 17 characters, forced by the necessity of displaying them on the small LCDs of printers and faxes that also use these SPs. Read over the list of abbreviations below and refer to it again if you see the name of an SP that you do not understand.

Key for Abbreviations

ABBREVIATION	WHAT IT MEANS
/	"By", e.g. "T:Jobs/Apl" = Total Jobs "by" Application
>	More (2> "2 or more", 4> "4 or more")
AddBook	Address Book
Apl	Application
B/W	Black & White
Bk	Black
C	Cyan
ColCr	Color Create
ColMode	Color Mode
Comb	Combine
Comp	Compression
Deliv	Delivery
DesApl	Designated Application. The application (Copy, Fax, Scan, Print) used to store the job on the document server, for example.
Dev Counter	Development Count, no. of pages developed.
Dup, Duplex	Duplex, printing on both sides
Emul	Emulation
FC	Full Color
FIN	Post-print processing, i.e. finishing (punching, stapling, etc.)
Full Bleed	No Margins
GenCopy	Generation Copy Mode
GPC	Get Print Counter. For jobs 10 pages or less, this counter does not count up. For jobs larger than 10 pages, this counter counts up by the number that is in excess of 10 (e.g., for an 11-page job, the counter counts up 11-10 =1)
IFax	Internet Fax
ImgEdt	Image Edit performed on the original with the copier GUI, e.g. border removal, adding stamps, page numbers, etc.
K	Black (YMCK)
LS	Local Storage. Refers to the document server.
LSize	Large (paper) Size
Mag	Magnification
MC	One color (monochrome)
NRS	New Remote Service, which allows a service center to monitor machines remotely. "NRS" is used overseas, "CSS" is used in Japan.
Org	Original for scanning
OrgJam	Original Jam
Palm 2	Print Job Manager/Desk Top Editor: A pair of utilities that allows print jobs to be distributed evenly among the printers on the network, and allows files to moved around, combined, and converted to different formats. Currently not available.
PC	Personal Computer
PGS	Pages. A page is the total scanned surface of the original. Duplex pages count as two pages, and A3 simplex count as two pages if the A3/DLT counter SP is switched ON.
PJob	Print Jobs
Ppr	Paper

SERVICE PROGRAM MODE

ABBREVIATION	WHAT IT MEANS
PrtJam	Printer (plotter) Jam
PrtPGS	Print Pages
R	Red (Toner Remaining). Applies to the wide format model A2 only. This machine is under development and currently not available.
Rez	Resolution
SC	Service Code (Error SC code displayed)
Scn	Scan
Sim, Simplex	Simplex, printing on 1 side.
S-to-Email	Scan-to-E-mail
SMC	SMC report printed with SP5990. All of the Group 8 counters are recorded in the SMC report.
Svr	Server
TonEnd	Toner End
TonSave	Toner Save
TXJob	Send, Transmission
YMC	Yellow, Magenta, Cyan
YMCK	Yellow, Magenta, Cyan, Black

NOTE: All of the Group 8 SPs are reset with SP5 801 1 Memory All Clear, or the Counter Reset SP7 808.

SERVICE PROGRAM MODE

8 001	T:Total Jobs	These SPs count the number of times each application is used to do a job. [0~9999999/ 0 / 1] Note: The L: counter is the total number of times the other applications are used to send a job to the document server, plus the number of times a file already on the document server is used.
8 002	C:Total Jobs	
8 003	F:Total Jobs	
8 004	P:Total Jobs	
8 005	S:Total Jobs	
8 006	L:Total Jobs	
8 007	O:Total Jobs	

- These SPs reveal the number of times an application is used, not the number of pages processed.
- When an application is opened for image input or output, this counts as one job.
- Interrupted jobs (paper jams, etc.) are counted, even though they do not finish.
- Only jobs executed by the customer are counted. Jobs executed by the customer engineer using the SP modes are not counted.
- When using secure printing (when a password is required to start the print job), the job is counted at the time when either “Delete Data” or “Specify Output” is specified.
- A job is counted as a fax job when the job is stored for sending.
- When a fax is received to fax memory, the F: counter increments but the L: counter does not (the document server is not used).
- A fax broadcast counts as one job for the F: counter (the fax destinations in the broadcast are not counted separately).
- A fax broadcast is counted only after all the faxes have been sent to their destinations. If one transmission generates an error, then the broadcast will not be counted until the transmission has been completed.
- A printed fax report counts as one job for the F: counter.
- The F: counter does not distinguish between fax sending or receiving.
- When a copy job on the document server is printed, SP8022 also increments, and when a print job stored on the document server is printed, SP8024 also increments.
- When an original is both copied and stored on the document server, the C: and L: counters both increment.
- When a print job is stored on the document server, only the L: counter increments.
- When the user presses the Document Server button to store the job on the document server, only the L: counter increments.
- When the user enters document server mode and prints data stored on the document server, only the L: counter increments.
- When an image received from Palm 2 is received and stored, the L: counter increments.
- When the customer prints a report (user code list, for example), the O: counter increments. However, for fax reports and reports executed from the fax application, the F: counter increments.

8 011	T:Jobs/LS	These SPs count the number of jobs stored to the document server by each application, to reveal how local storage is being used for input. [0~9999999/ 0 / 1] The L: counter counts the number of jobs stored from within the document server mode screen at the operation panel.
8 012	C:Jobs/LS	
8 013	F:Jobs/LS	
8 014	P:Jobs/LS	
8 015	S:Jobs/LS	
8 016	L:Jobs/LS	
8 017	O:Jobs/LS	

- When a scan job is sent to the document server, the S: counter increments. When you enter document server mode and then scan an original, the L: counter increments.
- When a print job is sent to the document server, the P: counter increments.
- When a network application sends data to the document server, the O: counter increments.
- When an image from Palm 2 is stored on the document server, the O: counter increments.
- When a fax is sent to the document server, the F: counter increments.

8 021	T:Pjob/LS	These SPs reveal how files printed from the document server were stored on the document server originally. [0~9999999/ 0 / 1] The L: counter counts the number of jobs stored from within the document server mode screen at the operation panel.
8 022	C:Pjob/LS	
8 023	F:Pjob/LS	
8 024	P:Pjob/LS	
8 025	S:Pjob/LS	
8 026	L:Pjob/LS	
8 027	O:Pjob/LS	

- When a copy job stored on the document server is printed with another application, the C: counter increments.
- When an application like DeskTopBinder merges a copy job that was stored on the document server with a print job that was stored on the document server, the C: and P: counters both increment.
- When a job already on the document server is printed with another application, the L: counter increments.
- When a scanner job stored on the document server is printed with another application, the S: counter increments. If the original was scanned from within document server mode, then the L: counter increments.
- When images stored on the document server by a network application (including Palm 2), are printed with another application, the O: counter increments.
- When a copy job stored on the document server is printed with a network application (Web Image Monitor, for example), the C: counter increments.
- When a fax on the document server is printed, the F: counter increments.

SERVICE PROGRAM MODE

8 031	T:Pjob/DesApl	These SPs reveal what applications were used to output documents from the document server. [0~9999999/ 0 / 1] The L: counter counts the number of jobs printed from within the document server mode screen at the operation panel.
8 032	C:Pjob/DesApl	
8 033	F:Pjob/DesApl	
8 034	P:Pjob/DesApl	
8 035	S:Pjob/DesApl	
8 036	L:Pjob/DesApl	
8 037	O:Pjob/DesApl	

- When documents already stored on the document server are printed, the count for the application that started the print job is incremented.
- When the print job is started from a network application (Desk Top Binder, Web Image Monitor, etc.) the L: counter increments.

8 041	T:TX Jobs/LS	These SPs count the applications that stored files on the document server that were later accessed for transmission over the telephone line or over a network (attached to an e-mail, or as a fax image by I-Fax). [0~9999999/ 0 / 1] Note: Jobs merged for sending are counted separately. The L: counter counts the number of jobs scanned from within the document server mode screen at the operation panel.
8 042	C:TX Jobs/LS	
8 043	F:TX Jobs/LS	
8 044	P:TX Jobs/LS	
8 045	S:TX Jobs/LS	
8 046	L:TX Jobs/LS	
8 047	O:TX Jobs/LS	

- When a stored copy job is sent from the document server, the C: counter increments.
- When images stored on the document server by a network application or Palm2 are sent as an e-mail, the O: counter increments.

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

- If the send is started from Desk Top Binder or Web Image Monitor, for example, then the O: counter increments.

8 061	T:FIN Jobs [0~9999999/ 0 / 1]	
	These SPs total the finishing methods. The finishing method is specified by the application.	
8 062	C:FIN Jobs [0~9999999/ 0 / 1]	
	These SPs total finishing methods for copy jobs only. The finishing method is specified by the application.	
8 063	F:FIN Jobs [0~9999999/ 0 / 1]	
	These SPs total finishing methods for fax jobs only. The finishing method is specified by the application. Note: Finishing features for fax jobs are not available at this time.	
8 064	P:FIN Jobs [0~9999999/ 0 / 1]	
	These SPs total finishing methods for print jobs only. The finishing method is specified by the application.	
8 065	S:FIN Jobs [0~9999999/ 0 / 1]	
	These SPs total finishing methods for scan jobs only. The finishing method is specified by the application. Note: Finishing features for scan jobs are not available at this time.	
8 066	L:FIN Jobs [0~9999999/ 0 / 1]	
	These SPs total finishing methods for jobs output from within the document server mode screen at the operation panel. The finishing method is specified from the print window within document server mode.	
8 067	O:FIN Jobs [0~9999999/ 0 / 1]	
	These SPs total finishing methods for jobs executed by an external application, over the network. The finishing method is specified by the application.	
8 06x 1	Sort	Number of jobs started in Sort mode. When a stored copy job is set for Sort and then stored on the document server, the L: counter increments. (See SP8 066 1)
8 06x 2	Stack	Number of jobs started out of Sort mode.
8 06x 3	Staple	Number of jobs started in Staple mode.
8 06x 4	Booklet	Number of jobs started in Booklet mode. If the machine is in staple mode, the Staple counter also increments.
8 06x 5	Z-Fold	Number of jobs started In any mode other than the Booklet mode and set for folding (Z-fold).
8 06x 6	Punch	Number of jobs started in Punch mode. When Punch is set for a print job, the P: counter increments. (See SP8 064 6.)
8 06x 7	Other	Reserved. Not used.

SERVICE PROGRAM MODE

8 071	T:Jobs/PGS		[0~9999999/ 0 / 1]
	These SPs count the number of jobs broken down by the number of pages in the job, regardless of which application was used.		
8 072	C:Jobs/PGS		[0~9999999/ 0 / 1]
	These SPs count and calculate the number of copy jobs by size based on the number of pages in the job.		
8 073	F:Jobs/PGS		[0~9999999/ 0 / 1]
	These SPs count and calculate the number of fax jobs by size based on the number of pages in the job.		
8 074	P:Jobs/PGS		[0~9999999/ 0 / 1]
	These SPs count and calculate the number of print jobs by size based on the number of pages in the job.		
8 075	S:Jobs/PGS		[0~9999999/ 0 / 1]
	These SPs count and calculate the number of scan jobs by size based on the number of pages in the job.		
8 076	L:Jobs/PGS		[0~9999999/ 0 / 1]
	These SPs count and calculate the number of jobs printed from within the document server mode window at the operation panel, by the number of pages in the job.		
8 077	O:Jobs/PGS		[0~9999999/ 0 / 1]
	These SPs count and calculate the number of "Other" application jobs (Web Image Monitor, Palm 2, etc.) by size based on the number of pages in the job.		
8 07x 1	1 Page	8 07x 8	21~50 Pages
8 07x 2	2 Pages	8 07x 9	51~100 Pages
8 07x 3	3 Pages	8 07x 10	101~300 Pages
8 07x 4	4 Pages	8 07x 11	301~500 Pages
8 07x 5	5 Pages	8 07x 12	501~700 Pages
8 07x 6	6~10 Pages	8 07x 13	701~1000 Pages
8 07x 7	11~20 Pages	8 07x 14	1001~ Pages

- For example: When a copy job stored on the document server is printed in document server mode, the appropriate L: counter (SP8076 0xx) increments.
- Printing a fax report counts as a job and increments the F: counter (SP 8073).
- Interrupted jobs (paper jam, etc.) are counted, even though they do not finish.
- If a job is paused and re-started, it counts as one job.
- If the finisher runs out of staples during a print and staple job, then the job is counted at the time the error occurs.
- For copy jobs (SP 8072) and scan jobs (SP 8075), the total is calculated by multiplying the number of sets of copies by the number of pages scanned. (One duplex page counts as 2.)
- The first test print and subsequent test prints to adjust settings are added to the number of pages of the copy job (SP 8072).
- When printing the first page of a job from within the document server screen, the page is counted.

8 111	T:FAX TX Jobs	[0~9999999/ 0 / 1]
	These SPs count the total number of jobs (color or black-and-white) sent by fax, either directly or using a file stored on the document server, on a telephone line. Note: Color fax sending is not available at this time.	
8 113	F:FAX TX Jobs	[0~9999999/ 0 / 1]
	These SPs count the total number of jobs (color or black-and-white) sent by fax directly on a telephone line. Note: Color fax sending is not available at this time.	
8 116	L:FAX TX Jobs	[0~9999999/ 0 / 1]
	These SPs count the total number of jobs (color or black-and-white) sent by fax on a telephone line using a file stored on the document server. Documents sent from fax memory are not counted. Note: Color fax sending is not available at this time.	

- These counters count jobs, not pages.
- This SP counts fax jobs sent over a telephone line with a fax application, including documents stored on the document server.
- If the mode is changed during the job, the job will count with the mode set when the job started.
- If the same document is faxed to both a public fax line and an I-Fax at a destination where both are available, then this counter increments, and the I-Fax counter (8 12x) also increments.
- The fax job is counted when the job is scanned for sending, not when the job is sent.

8 121	T:IFAX TX Jobs	[0~9999999/ 0 / 1]
	These SPs count the total number of jobs (color or black-and-white) sent, either directly or using a file stored on the document server, as fax images using I-Fax. Note: Color fax sending is not available at this time.	
8 123	F:IFAX TX Jobs	[0~9999999/ 0 / 1]
	These SPs count the number of jobs (color or black-and-white) sent (not stored on the document server), as fax images using I-Fax. Note: Color fax sending is not available at this time.	
8 126	L:IFAX TX Jobs	[0~9999999/ 0 / 1]
	These SPs count the number of jobs (color or black-and-white) sent using a file stored on the document server, as fax images using I-Fax. Note: Color fax sending is not available at this time.	

- These counters count jobs, not pages.
- The counters for color are provided for future use; the color fax feature is not available at this time.
- The fax job is counted when the job is scanned for sending, not when the job is sent.

SERVICE PROGRAM MODE

8 131	T:S-to-Email Jobs	[0~9999999/ 0 / 1]
	These SPs count the total number of jobs scanned and attached to an e-mail, regardless of whether the document server was used or not.	
8 135	S:S-to-Email Jobs	
	These SPs count the number of jobs scanned and attached to an e-mail, without storing the original on the document server.	
8 136	L:S-to-Email Jobs	
	These SPs count the number of jobs using a file stored on stored on the document server, and attaching it to an e-mail.	

- These counters count jobs, not pages.
- If the job is stored on the document server, after the job is stored it is determined to be color or black-and-white then counted.
- If the job is cancelled during scanning, or if the job is cancelled while the document is waiting to be sent, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- If several jobs are combined for sending to the Scan Router, Scan-to-Email, or Scan-to-PC, or if one job is sent to more than one destination. each send is counted separately. For example, if the same document is sent by Scan-to-Email as well as Scan-to-PC, then it is counted twice (once for Scan-to-Email and once for Scan-to-PC).

8 141	T:Deliv Jobs/Svr	[0~9999999/ 0 / 1]
	These SPs count the total number of jobs scanned and sent to a Scan Router server.	
8 143	F:Deliv Jobs/Svr	
	These SPs count the number of jobs scanned in fax mode and sent to a Scan Router server.	
8 145	S:Deliv Jobs/Svr	
	These SPs count the number of jobs scanned in scanner mode and sent to a Scan Router server.	

- These counters count jobs, not pages.
- The jobs are counted even though the arrival and reception of the jobs at the Scan Router server cannot be confirmed.
- If even one color image is mixed with black-and-white images, then the job is counted as a "Color" job.
- If the job is cancelled during scanning, or if the job is cancelled while the document is waiting to be delivered, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- Even if several files are combined for sending, the transmission counts as one job.

8 151	T:Deliv Jobs/PC	[0~9999999/ 0 / 1]
	These SPs count the total number of jobs scanned and sent to a folder on a PC (Scan-to-PC). Note: At the present time, 8 151 and 8 155 perform identical counts.	
8 155	S:Deliv Jobs/PC	
	These SPs count the total number of jobs scanned and sent with Scan-to-PC.	

- These counters count jobs, not pages.
- If the job is cancelled during scanning, it is not counted.
- If the job is cancelled while it is waiting to be sent, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- Even if several files are combined for sending, the transmission counts as one job.

8 161	T:PCFAX TX Jobs	These SPs count the number of PC Fax transmission jobs. A job is counted from when it is registered for sending, not when it is sent. [0~9999999/ 0 / 1] Note: At the present time, these counters perform identical counts.
8 163	F:PCFAX TX Jobs	

- This counts fax jobs started from a PC using a PC fax application, and sending the data out to the destination from the PC through the copier.

SERVICE PROGRAM MODE

8 191	T:Total Scan PGS	These SPs count the pages scanned by each application that uses the scanner to scan images. [0~99999999/ 0 / 1]
8 192	C:Total Scan PGS	
8 193	F:Total Scan PGS	
8 195	S:Total Scan PGS	
8 196	L:Total Scan PGS	

- SP 8 191 to 8 196 count the number of scanned sides of pages, not the number of physical pages.
- These counters do not count reading user stamp data, or reading color charts to adjust color.
- Previews done with a scanner driver are not counted.
- A count is done only after all images of a job have been scanned.
- Scans made in SP mode are not counted.

Examples

- If 3 B5 pages and 1 A3 page are scanned with the scanner application but not stored, the S: count is 4.
- If both sides of 3 A4 sheets are copied and stored to the document server using the Store File button in the Copy mode window, the C: count is 6 and the L: count is 6.
- If both sides of 3 A4 sheets are copied but not stored, the C: count is 6.
- If you enter document server mode then scan 6 pages, the L: count is 6.

8 201	T:LSize Scan PGS	[0~9999999/ 0 / 1]
	These SPs count the total number of large pages input with the scanner for scan and copy jobs. Large size paper (A3/DLT) scanned for fax transmission are not counted. Note: These counters are displayed in the SMC Report, and in the User Tools display.	
8 205	S:LSize Scan PGS	[0~9999999/ 0 / 1]
	These SPs count the total number of large pages input with the scanner for scan jobs only. Large size paper (A3/DLT) scanned for fax transmission are not counted. Note: These counters are displayed in the SMC Report, and in the User Tools display..	

8 211	T:Scan PGS/LS	These SPs count the number of pages scanned into the document server . [0~9999999/ 0 / 1]
8 212	C:Scan PGS/LS	
8 213	F:Scan PGS/LS	The L: counter counts the number of pages stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen
8 215	S:Scan PGS/LS	
8 216	L:Scan PGS/LS	

- Reading user stamp data is not counted.
- If a job is cancelled, the pages output as far as the cancellation are counted.
- If the scanner application scans and stores 3 B5 sheets and 1 A4 sheet, the S: count is 4.
- If pages are copied but not stored on the document server, these counters do not change.
- If both sides of 3 A4 sheets are copied and stored to the document server, the C: count is 6 and the L: count is 6.
- If you enter document server mode then scan 6 pages, the L: count is 6.

SERVICE PROGRAM MODE

8 221	ADF Org Feeds [0~9999999/ 0 / 1]	
	These SPs count the number of pages fed through the ADF for front and back side scanning.	
8 221 1	Front	<p>Number of front sides fed for scanning:</p> <p>With an ADF that can scan both sides simultaneously, the Front side count is the same as the number of pages fed for either simplex or duplex scanning.</p> <p>With an ADF that cannot scan both sides simultaneously, the Front side count is the same as the number of pages fed for duplex front side scanning. (The front side is determined by which side the user loads face up.)</p>
8 221 2	Back	<p>Number of rear sides fed for scanning:</p> <p>With an ADF that can scan both sides simultaneously, the Back count is the same as the number of pages fed for duplex scanning.</p> <p>With an ADF that cannot scan both sides simultaneously, the Back count is the same as the number of pages fed for duplex rear-side scanning.</p>

- When 1 sheet is fed for duplex scanning the Front count is 1 and the Back count is 1.
- If a jam occurs during the job, recovery processing is not counted to avoid double counting. Also, the pages are not counted if the jam occurs before the first sheet is output.

8 231	Scan PGS/Mode [0~9999999/ 0 / 1]	
	These SPs count the number of pages scanned by each ADF mode to determine the work load on the ADF.	
8 231 1	Large Volume	Selectable. Large copy jobs that cannot be loaded in the ADF at one time.
8 231 2	SADF	Selectable. Feeding pages one by one through the ADF.
8 231 3	Mixed Size	Selectable. Select "Mixed Sizes" on the operation panel.
8 231 4	Custom Size	Selectable. Originals of non-standard size.
8 231 5	Platen	Book mode. Raising the ADF and placing the original directly on the platen.

- If the scan mode is changed during the job, for example, if the user switches from ADF to Platen mode, the count is done for the last selected mode.
- The user cannot select mixed sizes or non-standard sizes with the fax application so if the original's page sizes are mixed or non-standard, these are not counted.
- If the user selects "Mixed Sizes" for copying in the platen mode, the Mixed Size count is enabled.
- In the SADF mode if the user copies 1 page in platen mode and then copies 2 pages with SADF, the Platen count is 1 and the SADF count is 3.

8 241	T:Scan PGS/Org	[0~9999999/ 0 / 1]					
	These SPs count the total number of scanned pages by original type for all jobs, regardless of which application was used.						
8 242	C:Scan PGS/Org	[0~9999999/ 0 / 1]					
	These SPs count the number of pages scanned by original type for Copy jobs.						
8 243	F:Scan PGS/Org	[0~9999999/ 0 / 1]					
	These SPs count the number of pages scanned by original type for Fax jobs.						
8 245	S:Scan PGS/Org	[0~9999999/ 0 / 1]					
	These SPs count the number of pages scanned by original type for Scan jobs.						
8 246	L:Scan PGS/Org	[0~9999999/ 0 / 1]					
	These SPs count the number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen						
8 247	O:Scan PGS/Org	[0~9999999/ 0 / 1]					
	These SPs count the number of pages scanned by original type by Other applications.						
		8 241	8 242	8 243	8 245	8 246	8 247
8 24x 1: Text		Yes	Yes	Yes	Yes	Yes	Yes
8 24x 2: Text/Photo		Yes	Yes	Yes	Yes	Yes	Yes
8 24x 3: Photo		Yes	Yes	Yes	Yes	Yes	Yes
8 24x 4: GenCopy, Pale		Yes	Yes	No	Yes	Yes	Yes
8 24x 5: Map		Yes	Yes	No	Yes	Yes	Yes
8 24x 6: Normal/Detail		Yes	No	Yes	No	No	No
8 24x 7: Fine/Super Fine		Yes	No	Yes	No	No	No
8 24x 8: Binary		Yes	No	No	Yes	No	No
8 24x 9: Grayscale		Yes	No	No	Yes	No	No

- If the scan mode is changed during the job, for example, if the user switches from ADF to Platen mode, the count is done for the last selected mode.

SERVICE PROGRAM MODE

8 251	T:Scan PGS/ImgEdt	<p>These SPs show how many times Image Edit features have been selected at the operation panel for each application. Some examples of these editing features are:</p> <ul style="list-style-type: none"> • Erase> Border • Erase> Center • Image Repeat • Centering • Positive/Negative <p>[0~9999999/ 0 / 1]</p> <p>Note: The count totals the number of times the edit features have been used. A detailed breakdown of exactly which features have been used is not given.</p>
8 252	C:Scan PGS/ImgEdt	
8 254	P:Scan PGS/ImgEdt	
8 256	L:Scan PGS/ImgEdt	
8 257	O:Scan PGS/ImgEdt	

The L: counter counts the number of pages stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen.

8 281	T:Scan PGS/TWAIN	<p>These SPs count the number of pages scanned using a TWAIN driver. These counters reveal how the TWAIN driver is used for delivery functions.</p> <p>[0~9999999/ 0 / 1]</p> <p>Note: At the present time, these counters perform identical counts.</p>
8 285	S:Scan PGS/TWAIN	

8 291	T:Scan PGS/Stamp	<p>These SPs count the number of pages stamped with the stamp in the ADF unit.</p> <p>[0~9999999/ 0 / 1]</p> <p>The L: counter counts the number of pages stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen</p>
8 293	F:Scan PGS/Stamp	
8 295	S:Scan PGS/Stamp	
8 296	L:Scan PGS/Stamp	

8 301	T:Scan PGS/Size [0~9999999/ 0 / 1]	
	These SPs count by size the total number of pages scanned by all applications. Use these totals to compare original page size (scanning) and output (printing) page size [SP 8-441].	
8 302	C:Scan PGS/Size [0~9999999/ 0 / 1]	
	These SPs count by size the total number of pages scanned by the Copy application. Use these totals to compare original page size (scanning) and output (printing) page size [SP 8-442].	
8 303	F:Scan PGS/Size [0~9999999/ 0 / 1]	
	These SPs count by size the total number of pages scanned by the Fax application. Use these totals to compare original page size (scanning) and output page size [SP 8-443].	
8 305	S:Scan PGS/Size [0~9999999/ 0 / 1]	
	These SPs count by size the total number of pages scanned by the Scan application. Use these totals to compare original page size (scanning) and output page size [SP 8-445].	
8 306	L:Scan PGS/Size [0~9999999/ 0 / 1]	
	These SPs count by size the total number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning) and output page size [SP 8-446].	
8 30x 1	A3	
8 30x 2	A4	
8 30x 3	A5	
8 30x 4	B4	
8 30x 5	B5	
8 30x 6	DLT	
8 30x 7	LG	
8 30x 8	LT	
8 30x 9	HLT	
8 30x 10	Full Bleed	
8 30x 254	Other (Standard)	
8 30x 255	Other (Custom)	

SERVICE PROGRAM MODE

8 311	T:Scan PGS/Rez	[0~9999999/ 0 / 1]
	These SPs count by resolution setting the total number of pages scanned by applications that can specify resolution settings.	
8 315	S:Scan PGS/Rez	[0~9999999/ 0 / 1]
	These SPs count by resolution setting the total number of pages scanned by applications that can specify resolution settings. Note: At the present time, 8 311 and 8 315 perform identical counts.	
8 31x 1	1200dpi ~	
8 31x 2	600dpi~1199dpi	
8 31x 3	400dpi~599dpi	
8 31x 4	200dpi~399dpi	
8 31x 5	~199dpi	

- Copy resolution settings are fixed so they are not counted.
- The Fax application does not allow finely-adjusted resolution settings so no count is done for the Fax application.

8 321	T:Scan PGS/Comp	[0~9999999/ 0 / 1]
	These SPs count by compression method the total number of pages scanned.	
8 325	S:Scan PGS/Comp	[0~9999999/ 0 / 1]
	These SPs count by compression method the total number of pages scanned by the Scan application.	
	Note: At the present time, 8 321 and 8 325 perform identical counts.	
8 32x 1	JPEG	
8 32x 2	JPEG2000	
8 32x 3	TIFF (Comp OFF)	
8 32x 4	TIFF (Comp ON)	
8 32x 5	PDF	
8 32x 6	Other	

8 381	T:Total PrtPGS	These SPs count the number of pages printed by the customer. The counter for the application used for storing the pages increments. [0~9999999/ 0 / 1] The L: counter counts the number of pages stored from within the document server mode screen at the operation panel. Pages stored with the Store File button from within the Copy mode screen go to the C: counter.
8 382	C:Total PrtPGS	
8 383	F:Total PrtPGS	
8 384	P:Total PrtPGS	
8 385	S:Total PrtPGS	
8 386	L:Total PrtPGS	
8 387	O:Total PrtPGS	

- When the A3/DLT double count function is switched on with SP5104, 1 A3/DLT page is counted as 2.
- When several documents are merged for a print job, the number of pages stored are counted for the application that stored them.
- These counters are used primarily to calculate charges on use of the machine, so the following pages are not counted as printed pages:
 - Blank pages in a duplex printing job.
 - Blank pages inserted as document covers, chapter title sheets, and slip sheets.
 - Reports printed to confirm counts.
 - All reports done in the service mode (service summaries, engine maintenance reports, etc.)
 - Test prints for machine image adjustment.
 - Error notification reports.
 - Partially printed pages as the result of a copier jam.

SERVICE PROGRAM MODE

8 391	LSize PrtPGS	[0~9999999/ 0 / 1]
	These SPs count pages printed on paper sizes A3/DLT and larger. Note: In addition to being displayed in the SMC Report, these counters are also displayed in the User Tools display on the copy machine.	

8 401	T:PrtPGS/LS	These SPs count the number of pages printed from the document server. The counter for the application used to print the pages is incremented. The L: counter counts the number of jobs stored from within the document server mode screen at the operation panel. [0~9999999/ 0 / 1]
8 402	C:PrtPGS/LS	
8 403	F:PrtPGS/LS	
8 404	P:PrtPGS/LS	
8 405	S:PrtPGS/LS	
8 406	L:PrtPGS/LS	

- Print jobs done with Web Image Monitor and Desk Top Binder are added to the L: count.
- Fax jobs done with Web Image Monitor and Desk Top Binder are added to the F: count.

8 411	Prints/Duplex	This SP counts the amount of paper (front/back counted as 1 page) used for duplex printing. Last pages printed only on one side are not counted. [0~9999999/ 0 / 1]
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8 421	T:PrtPGS/Dup Comb	[0~9999999/ 0 / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing. This is the total for all applications.	
8 422	C:PrtPGS/Dup Comb	[0~9999999/ 0 / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the copier application.	
8 423	F:PrtPGS/Dup Comb	[0~9999999/ 0 / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the fax application.	
8 424	P:PrtPGS/Dup Comb	[0~9999999/ 0 / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the printer application.	
8 425	S:PrtPGS/Dup Comb	[0~9999999/ 0 / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the scanner application.	
8 426	L:PrtPGS/Dup Comb	[0~9999999/ 0 / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing from within the document server mode window at the operation panel.	
8 427	O:PrtPGS/Dup Comb	[0~9999999/ 0 / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by Other applications	
8 42x 1	Simplex> Duplex	
8 42x 2	Duplex> Duplex	
8 42x 3	Book> Duplex	
8 42x 4	Simplex Combine	
8 42x 5	Duplex Combine	
8 42x 6	2>	2 pages on 1 side (2-Up)
8 42x 7	4>	4 pages on 1 side (4-Up)
8 42x 8	6>	6 pages on 1 side (6-Up)
8 42x 9	8>	8 pages on 1 side (8-Up)
8 42x 10	9>	9 pages on 1 side (9-Up)
8 42x 11	16>	16 pages on 1 side (16-Up)
8 42x 12	Booklet	
8 42x 13	Magazine	

- These counts (SP8 421 to SP8 427) are especially useful for customers who need to improve their compliance with ISO standards for the reduction of paper consumption.
- Pages that are only partially printed with the n-Up functions are counted as 1 page.
- Here is a summary of how the counters work for Booklet and Magazine modes:

SERVICE PROGRAM MODE

Booklet	
Original Pages	Count
1	1
2	2
3	2
4	2
5	3
6	4
7	4
8	4

Magazine	
Original Pages	Count
1	1
2	2
3	2
4	2
5	4
6	4
7	4
8	4

8 431	T:PrtPGS/ImgEdt [0~9999999/ 0 / 1]	
	These SPs count the total number of pages output with the three features below, regardless of which application was used.	
8 432	C:PrtPGS/ImgEdt [0~9999999/ 0 / 1]	
	These SPs count the total number of pages output with the three features below with the copy application.	
8 434	P:PrtPGS/ImgEdt [0~9999999/ 0 / 1]	
	These SPs count the total number of pages output with the three features below with the print application.	
8 436	L:PrtPGS/ImgEdt [0~9999999/ 0 / 1]	
	These SPs count the total number of pages output from within the document server mode window at the operation panel with the three features below.	
8 437	O:PrtPGS/ImgEdt [0~9999999/ 0 / 1]	
	These SPs count the total number of pages output with the three features below with Other applications.	
8 43x 1	Cover/Slip Sheet	Total number of covers or slip sheets inserted. The count for a cover printed on both sides counts 2.
8 43x 2	Series/Book	The number of pages printed in series (one side) or printed as a book with booklet right/left pagination.
8 43x 3	User Stamp	The number of pages printed where stamps were applied, including page numbering and date stamping.

8 441	T:PrtPGS/Ppr Size [0~9999999/ 0 / 1]	
	These SPs count by print paper size the number of pages printed by all applications.	
8 442	C:PrtPGS/Ppr Size [0~9999999/ 0 / 1]	
	These SPs count by print paper size the number of pages printed by the copy application.	
8 443	F:PrtPGS/Ppr Size [0~9999999/ 0 / 1]	
	These SPs count by print paper size the number of pages printed by the fax application.	
8 444	P:PrtPGS/Ppr Size [0~9999999/ 0 / 1]	
	These SPs count by print paper size the number of pages printed by the printer application.	
8 445	S:PrtPGS/Ppr Size [0~9999999/ 0 / 1]	
	These SPs count by print paper size the number of pages printed by the scanner application.	
8 446	L:PrtPGS/Ppr Size [0~9999999/ 0 / 1]	
	These SPs count by print paper size the number of pages printed from within the document server mode window at the operation panel.	
8 447	O:PrtPGS/Ppr Size [0~9999999/ 0 / 1]	
	These SPs count by print paper size the number of pages printed by Other applications.	
8 44x 1	A3	
8 44x 2	A4	
8 44x 3	A5	
8 44x 4	B4	
8 44x 5	B5	
8 44x 6	DLT	
8 44x 7	LG	
8 44x 8	LT	
8 44x 9	HLT	
8 44x 10	Full Bleed	
8 44x 254	Other (Standard)	
8 44x 255	Other (Custom)	

- These counters do not distinguish between LEF and SEF.

SERVICE PROGRAM MODE

8 451	PrtPGS/Ppr Tray	[0~9999999/ 0 / 1]
	These SPs count the number of sheets fed from each paper feed station.	
8 451 1	Bypass	Bypass Tray
8 451 2	Tray 1	Copier
8 451 3	Tray 2	Copier
8 451 4	Tray 3	Paper Tray Unit (Option)
8 451 5	Tray 4	Paper Tray Unit (Option)
8 451 6	Tray 5	LCT (Option)
8 451 7	Tray 6	Currently not used.
8 451 8	Tray 7	Currently not used.
8 451 9	Tray 8	Currently not used.
8 451 10	Tray 9	Currently not used.

8 461	T:PrtPGS/Ppr Type	[0~9999999/ 0 / 1]
	These SPs count by paper type the number pages printed by all applications.	
	<ul style="list-style-type: none"> • These counters are not the same as the PM counter. The PM counter is based on feed timing to accurately measure the service life of the feed rollers. However, these counts are based on output timing. • Blank sheets (covers, chapter covers, slip sheets) are also counted. • During duplex printing, pages printed on both sides count as 1, and a page printed on one side counts as 1. 	
8 462	C:PrtPGS/Ppr Type	[0~9999999/ 0 / 1]
	These SPs count by paper type the number pages printed by the copy application.	
8 463	F:PrtPGS/Ppr Type	[0~9999999/ 0 / 1]
	These SPs count by paper type the number pages printed by the fax application.	
8 464	P:PrtPGS/Ppr Type	[0~9999999/ 0 / 1]
	These SPs count by paper type the number pages printed by the printer application.	
8 466	L:PrtPGS/Ppr Type	[0~9999999/ 0 / 1]
	These SPs count by paper type the number pages printed from within the document server mode window at the operation panel.	
8 46x 1	Normal	
8 46x 2	Recycled	
8 46x 3	Special	
8 46x 4	Thick	
8 46x 5	Normal (Back)	
8 46x 6	Thick (Back)	
8 46x 7	OHP	
8 46x 8	Other	

8 471	PrtPGS/Mag	[0~9999999/ 0 / 1]
	These SPs count by magnification rate the number of pages printed.	
8 471 1	~49%	
8 471 2	50%~99%	
8 471 3	100%	
8 471 4	101%~200%	
8 471 5	201% ~	

- Counts are done for magnification adjusted for pages, not only on the operation panel but performed remotely with an external network application capable of performing magnification adjustment as well.
- Magnification adjustments done with printer drivers with PC applications such as Excel are also counted.
- Magnification adjustments done for adjustments after they have been stored on the document server are not counted.
- Magnification adjustments performed automatically during Auto Reduce/Enlarge copying are counted.
- The magnification rates of blank cover sheets, slip sheets, etc. are automatically assigned a rate of 100%.

8 481	T:PrtPGS/TonSave
8 484	P:PrtPGS/TonSave
	These SPs count the number of pages printed with the Toner Save feature switched on. Note: These SPs return the same results as this SP is limited to the Print application. [0~9999999/ 0 / 1]

SERVICE PROGRAM MODE

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

- SP8 511 and SP8 514 return the same results as they are both limited to the Print application.
- Print jobs output to the document server are not counted.

8 521	T:PrtPGS/FIN	[0~9999999/ 0 / 1]
	These SPs count by finishing mode the total number of pages printed by all applications.	
8 522	C:PrtPGS/FIN	[0~9999999/ 0 / 1]
	These SPs count by finishing mode the total number of pages printed by the Copy application.	
8 523	F:PrtPGS/FIN	[0~9999999/ 0 / 1]
	These SPs count by finishing mode the total number of pages printed by the Fax application. Note: • Print finishing options for received faxes are currently not available.	
8 524	P:PrtPGS/FIN	[0~9999999/ 0 / 1]
	These SPs count by finishing mode the total number of pages printed by the Print application.	
8 525	S:PrtPGS/FIN	[0~9999999/ 0 / 1]
	These SPs count by finishing mode the total number of pages printed by the Scanner application.	
8 526	L:PrtPGS/FIN	[0~9999999/ 0 / 1]
	These SPs count by finishing mode the total number of pages printed from within the document server mode window at the operation panel.	
8 52x 1	Sort	
8 52x 2	Stack	
8 52x 3	Staple	
8 52x 4	Booklet	
8 52x 5	Z-Fold	
8 52x 6	Punch	
8 52x 7	Other	

NOTE: 1) If stapling is selected for finishing and the stack is too large for stapling, the unstapled pages are still counted.
2) The counts for staple finishing are based on output to the staple tray, so jam recoveries are counted.

8 531	Staples	This SP counts the amount of staples used by the machine. [0~9999999/ 0 / 1]
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SERVICE PROGRAM MODE

8 581	T:Counter	[0~9999999/ 0 / 1]
	These SPs count the total output broken down by color output, regardless of the application used. In addition to being displayed in the SMC Report, these counters are also displayed in the User Tools display on the copy machine. Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.	

8 591	O:Counter	[0~9999999/ 0 / 1]
	These SPs count the totals for A3/DLT paper use, number of duplex pages printed, and the number of staples used. These totals are for Other (O:) applications only.	
8 591 1	A3/DLT	
8 591 2	Duplex	
8 591 3	Staple	

8 631	T:FAX TX PGS	[0~9999999/ 0 / 1]
	These SPs count by color mode the number of pages sent by fax to a telephone number. Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.	
8 633	F:FAX TX PGS	[0~9999999/ 0 / 1]
	These SPs count by color mode the number of pages sent by fax to a telephone number. Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.	

- If a document has color and black-and-white pages mixed, the pages are counted separately as B/W or Color.
- At the present time, this feature is provided for the Fax application only so SP8631 and SP8633 are the same.
- The counts include error pages.
- If a document is sent to more than one destination with a Group transmission, the count is done for each destination.
- Polling transmissions are counted but polling RX are not.
- Relay, memory, and confidential mailbox transmissions and are counted for each destination.

8 641	T:FAX TX PGS	[0~9999999/ 0 / 1]
	These SPs count by color mode the number of pages sent by fax to as fax images using I-Fax. Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.	
8 643	F:FAX TX PGS	[0~9999999/ 0 / 1]
	These SPs count by color mode the number of pages sent by Fax as fax images using I-Fax. Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.	

- If a document has color and black-and-white pages mixed, the pages are counted separately as B/W or Color.
- At the present time, this feature is provided for the Fax application only so SP8641 and SP8643 are the same.
- The counts include error pages.
- If a document is sent to more than one destination with a Group transmission, the count is done for each destination.
- Polling transmissions are counted but polling RX are not.
- Relay, memory, and confidential mailbox transmissions and are counted for each destination.

SERVICE PROGRAM MODE

8 651	T:S-to-Email PGS	[0~9999999/ 0 / 1]
	These SPs count by color mode the total number of pages attached to an e-mail for both the Scan and document server applications. Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.	
8 655	S:S-to-Email PGS	[0~9999999/ 0 / 1]
	These SPs count by color mode the total number of pages attached to an e-mail for the Scan application only. Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.	
8 656	L:S-to-Email PGS	[0~9999999/ 0 / 1]
	These SPs count by color mode the total number of pages attached to an e-mail for LS applications only. Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.	

- NOTE:**
- 1) The count for B/W and Color pages is done after the document is stored on the HDD. If the job is cancelled before it is stored, the pages are not counted.
 - 2) If Scan-to-Email is used to send a 10-page document to 5 addresses, the count is 10 (the pages are sent to the same SMTP server together).
 - 3) If Scan-to-PC is used to send a 10-page document to 5 folders, the count is 50 (the document is sent to each destination of the SMB/FTP server).
 - 4) Due to restrictions on some devices, if Scan-to-Email is used to send a 10-page document to a large number of destinations, the count may be divided and counted separately. For example, if a 10-page document is sent to 200 addresses, the count is 10 for the first 100 destinations and the count is also 10 for the second 100 destinations, for a total of 20.).

8 661	T:Deliv PGS/Svr	[0~9999999/ 0 / 1]
	These SPs count by color mode the total number of pages sent to a Scan Router server by both Scan and LS applications. Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.	
8 665	S:Deliv PGS/Svr	[0~9999999/ 0 / 1]
	These SPs count by color mode the total number of pages sent to a Scan Router server by the Scan application. Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.	
8 666	L:Deliv PGS/Svr	[0~9999999/ 0 / 1]
	These SPs count by color mode the total number of pages sent to a Scan Router server by LS applications. Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.	

- NOTE:** 1) The B/W and Color counts are done after the document is stored on the HDD of the Scan Router server.
 2) If the job is canceled before storage on the Scan Router server finishes, the counts are not done.
 3) The count is executed even if regardless of confirmation of the arrival at the Scan Router server.

8 671	T:Deliv PGS/PC	[0~9999999/ 0 / 1]
	These SPs count by color mode the total number of pages sent to a folder on a PC (Scan-to-PC) with the Scan and LS applications. Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.	
8 675	S:Deliv PGS/PC	[0~9999999/ 0 / 1]
	These SPs count by color mode the total number of pages sent with Scan-to-PC with the Scan application. Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.	
8 676	L:Deliv PGS/PC	[0~9999999/ 0 / 1]
	These SPs count by color mode the total number of pages sent with Scan-to-PC function with the LS applications. Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.	

SERVICE PROGRAM MODE

8 681	T:PCFAX TXPGS	These SPs count the number of pages sent by PC Fax. These SPs are provided for the Fax application only, so the counts for SP8 681 and SP8 683 are the same. [0~9999999/ 0 / 1]
8 683	F:PCFAX TXPGS	

- This counts pages sent from a PC using a PC fax application, from the PC through the copier to the destination.
- When sending the same message to more than one place using broadcasting, the pages are only counted once. (For example, a 10-page fax is sent to location A and location B. The counter goes up by 10, not 20.)

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

- NOTE:** 1) Print jobs done with Web Image Monitor and Desk Top Binder are added to the count.
- 2) If several documents are merged for sending, the number of pages stored are counted for the application that stored them.
- 3) When several documents are sent by a Fax broadcast, the F: count is done for the number of pages sent to each destination.

8 701	TX PGS/Port	[0~9999999/ 0 / 1]
	These SPs count the number of pages sent by the physical port used to send them. For example, if a 3-page original is sent to 4 destinations via ISDN G4, the count for ISDN (G3, G4) is 12.	
8 701 1	PSTN-1	
8 701 2	PSTN-2	
8 701 3	PSTN-3	
8 701 4	ISDN (G3,G4)	
8 701 5	Network	

8 741	RX PGS/Port	[0~9999999/ 0 / 1]
	These SPs count the number of pages received by the physical port used to receive them.	
8 741 1	PSTN-1	
8 741 2	PSTN-2	
8 741 3	PSTN-3	
8 741 4	ISDN (G3,G4)	
8 741 5	Network	

8 771	Dev Counter	[0~9999999/ 0 / 1]
	<p>These SPs count the frequency of use (number of rotations of the development rollers) for black and other color toners.</p> <p>Note: For machines that do not support color, the Black toner count is the same as the Total count.</p>	

8 791	LS Memory Remain	<p>This SP displays the percent of space available on the document server for storing documents.</p> <p>[0~100/ 0 / 1]</p>
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8 801	Toner Remain	[0~100/ 0 / 1]
	<p>This SP displays the percent of toner remaining for each color. This SP allows the user to check the toner supply at any time.</p> <p>Note:</p> <ul style="list-style-type: none"> • This precise method of measuring remaining toner supply (1% steps) is better than other machines in the market that can only measure in increments of 10 (10% steps). • This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only. 	

8 781	Pixel Coverage Ratio	DFU
8 831	Pixel Coverage Ratio	DFU
8 841	Pixel Coverage Ratio	DFU
8 851		DFU
8 861		DFU
8 871		DFU
8 881		DFU
8 901	Pixel Coverage Ratio	DFU
8 911	Pixel Coverage Ratio	DFU

SERVICE PROGRAM MODE

8 941	Machine Status [0~9999999/ 0 / 1]	
	These SPs count the amount of time the machine spends in each operation mode. These SPs are useful for customers who need to investigate machine operation for improvement in their compliance with ISO Standards.	
8 941 1	Operation Time	Engine operation time. Does not include time while controller is saving data to HDD (while engine is not operating).
8 941 2	Standby Time	Engine not operating. Includes time while controller saves data to HDD. Does not include time spent in Energy Save, Low Power, or Off modes.
8 941 3	Energy Save Time	Includes time while the machine is performing background printing.
8 941 4	Low Power Time	Includes time in Energy Save mode with Engine on. Includes time while machine is performing background printing.
8 941 5	Off Mode Time	Includes time while machine is performing background printing. Does not include time machine remains powered off with the power switches.
8 941 6	Down Time/SC	Total down time due to SC errors.
8 941 7	Down Time/PrtJam	Total down time due to paper jams during printing.
8 941 8	Down Time/OrgJam	Total down time due to original jams during scanning.
8 941 9	Down Time/TonEnd	Total down time due to toner end.

8 951	AddBook Register		
	These SPs count the number of events when the machine manages data registration.		
8 951 1	User Code	User code registrations.	[0~9999999/ 0 / 1]
8 951 2	Mail Address	Mail address registrations.	
8 951 3	Fax Destination	Fax destination registrations.	
8 951 4	Group	Group destination registrations.	
8 951 5	Transfer Request	Fax relay destination registrations for relay TX.	
8 951 6	F-Code	F-Code box registrations.	
8 951 7	Copy Program	Copy application registrations with the Program (job settings) feature.	[0~255 / 0 / 255]
8 951 8	Fax Program	Fax application registrations with the Program (job settings) feature.	
8 951 9	Printer Program	Printer application registrations with the Program (job settings) feature.	
8 951 10	Scanner Program	Scanner application registrations with the Program (job settings) feature.	

List Contents

Here is a brief summary of what is contained on the Logging Data List.

• System Counts	
Total Count	
CE Count	
PM Count	
Count Timing	Printed outputs completed.
No Counts	White copied both sides, SMC prints, free runs, DF jams not counted.
Other	Single count only, even if double-count selected. (Japan only: (1) Double count setting cannot be performed, (2) Abnormal coin operations are counted.)
ARDF Feed-ins	
Count Timing	Original feed-ins, originals inverted completed.
No Counts	---
Other	Feed-in jams.
Scan Starts	
Count Timing	Engine starts for scanning, image write operations started.
No Counts	Prints from external video.
Other	Prints from sources other than scanning operation are counted. Examples: Less than 2 retention copies, SMC prints, white copies
Staples	
Count Timing	Staple engine cycles completed, number of staples fired.
No Counts	Staple jams.
Other	---
Prints by Paper Feeds	
Count Timing	Paper feeds initiated.
No Counts	White duplex copies, SMC prints, free runs, ARDF jams.
Other	Jams that interfered with the total count. Trays are counted started from the Duplex Tray.
Prints by Paper Size	
Count Timing	Paper feed starts.
No Counts	White duplex copies, SMC prints, free runs, ARDF jams.
Other	Jams that interfered with the total count.
Scanner SCs	
Count Timing	SC10n, SC12n occurrences counted.
No Counts	---
Other	---
IPU SCs	
Count Timing	SC19n occurrences counted.
No Counts	---
Other	---
Printer SCs	
Count Timing	SC30n, SC32n, SC35, SC39n, SC40n, SC42n, SC44n, SC49n, SC52n, SC54n, SC72n occurrences counted.
No Counts	---
Other	

SERVICE PROGRAM MODE

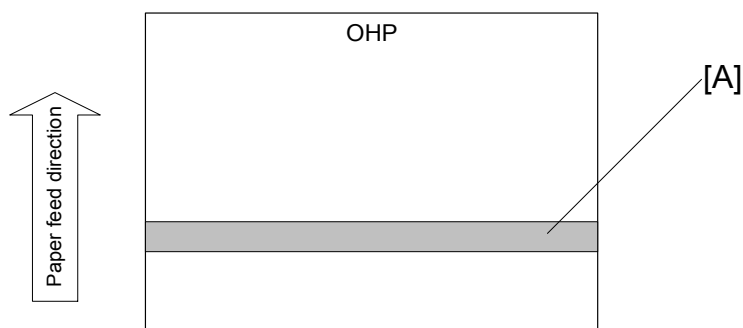
• System Counts	
Other SCs	
Count Timing	SC's generated other than those listed above for Scanner, IPU, Printer.
No Counts	---
Other	---
Operation Time	
Count Timing	Operation time of the main motor in increments of 100 ms.
No Counts	---
Other	Counts scanner and ARDF operation time when these devices are operating alone so these counts will not match the time count for drum rotation.
• Application Software Counts	
Original Total for Copy Application	
Count Timing	Counts the number of times the size of an original is detected for every original feed-in.
Other	For double-sided originals, counts 1 the first time the backside is set. Inverting is not counted. This count is different from the ADF Feed-ins reading described above.
Copy Total for Copy Application	
Count Timing	Feed-ins started.
Other	Blank (white) pages output.
• Mode Counts for Copy Application	
Copies by Magnifications	
Reduction (25%~49%)	
Reduction (50%~99%)	
1:1	
Enlargement (101%~200%)	
Enlargement (201%~400%)	
Custom (Paper, dimensions, area, etc.)	
Count Timing	Number of executions for each magnification category.
Other	Also counts white (blank) copies, and the number of times the operation panel keys are operated for zooming. For example, an AMS 71% copy is not counted for 50%~90%.
Copies by Color	
Black Copies	
Red Copies	
Blue Copies	
2-Color Copies	
Count Timing	Feed-in starts for each category. Counts according to the selection information of the basic screen.
Other	Also counts white sheets according to the mode.
Copies by Quality Mode	
Text/Photo Mode	
Photo Mode	
Photo Original Mode	
Pencil Original Mode	
Count Timing	Feed-in starts for each category. Counts according to the selection information of the basic screen.

• Mode Counts for Copy Application	
Other	Also counts white sheets according to the mode.
Copies by Print Function Job No. Stamp User Stamp User Pattern Date Stamp Page Numbering Count Timing	Feed-in starts for each category. (Counts according to the print tags for each function in the selection information.)
Other	Counts even white sheets (blanks) according to the selected mode. The feed-times of first pages without stamps, for example, are also counted. User patterns are also counted when user stamp is selected or when pattern mode is selected.
Into1 Function Copies Count Timing	Feed-ins for multiple page per sheet printing (2-up, 4-up, etc).
Other	White sheets (blank) for each mode.
Copies by Editing Mode Center Erase Mirror Color Erase Skew All Edit Shadow Effect Pen Area Edit Screening Editor Edit Gradation Synthesis Background Gradation Nega/Posi Repeat, Double Copy Center Erase Internal, External Color Center Fill Internal, External Erase Count Timing	Feed-ins for each edit mode.
Other	White sheets (blank) for each mode. In the Editor Edit mode, the edit and file are counted during fill execution.
Mode Program Count Timing	Mode program calls.
Other	---
High Speed Count Timing	Feed-in starts while the high speed key is selected.
Other	White sheets (blank) while the high speed key is selected.
Image Rotation Count Timing	Feed-in starts for user image rotation, stapler rotation, and duplex rotation.
Other	White sheets (blank) for the selected mode.
Auto Start Count Timing	Copy feed-ins for Auto Start mode.
Other	White sheets (blank) for the high speed mode are also counted..
Electronic Collate Count Timing	Feed-ins with the collate function selected.

• Mode Counts for Copy Application	
Other	Output to the rotational stacker are not counted. White sheets (blanks) for the high speed mode are also counted.
Mechanical Collate	
Count Timing	Feed-in starts with "Sort" selected on the finisher.
Other	Counts even for stapling. White sheets (blanks) for the high speed mode are also counted.
Stapler	
Count Timing	Feed-in starts with "Staple" selected on the finisher.
Other	Not counted for the Collate mode.

5.1.4 NIP BAND WIDTH ADJUSTMENT: SP1-109

When paper wrinkling or image offset occurs, the pressure from the pressure roller



can be adjusted by changing the position of the pressure springs. At this time, the nip bandwidth can also be checked with SP1-109.

1. Execute SP5-802 to perform a free run of about 50 sheets.
2. Open SP1-109-1, press $\#$, and then press Yes to confirm the selection.
3. Press Copy Window to return to the copy window.
4. Place an OHP sheet (A4/8.5" x 11" sideways) on the by-pass feed tray.
5. Press Start \diamond twice. The OHP sheet stops in the fusing unit for about 10 seconds, then it exits automatically.
6. Check the nip bandwidth [A]. The relationship between the position of the pressure spring and the bandwidth is as follows.

NOTE: Check the nip bandwidth around the center of the OHP.

Pressure spring position	Nip width
Upper (default position)	6.0 ± 0.5 mm
Lower	6.5 ± 0.6 mm

If the width is out of the above specification, the pressure spring should be replaced.

5.1.5 TEST PATTERN PRINTING: SP2-902

NOTE: Always print a test pattern to confirm correct operation of the machine.

1. Enter the SP mode and select SP2-902.
2. Press **2** or **3**.
 - **2** IPU Test Print
 - **3** Test Pattern
3. Enter the number for the test pattern that you want to print and press **#**. (See the tables below.)
4. When you are prompted to confirm your selection, press Yes. This selects the test pattern for printing.
5. Press Copy Window to open the copy window and then select the settings for the test print (paper size, etc.)
6. Press Start **⏏** twice. (Ignore the "Place Original" messages) to start the test print.
7. Press SP Mode (highlighted) to return to the SP mode display.

Test Pattern Table (SP2-902-2: IPU Test Print)

No.	Test Pattern	No.	Test Pattern
0	None	8	Grayscale (Horizontal) (8)
1	Vertical Line (1-dot)	9	Grayscale (Vertical) (8)
2	Horizontal Line (1-dot)	10	Cross Pattern (8)
3	Vertical Line (2-dot)	11	Cross Shape
4	Horizontal Line (2-dot)	12	Argyle Pattern
5	Alternate Dot Pattern	13	Cross Pattern (256)
6	Grid Pattern (1-dot)	14	Cross Pattern (64)
7	Vertical Stripes	15	Not used

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Test Pattern Table: SP2-902-3 Printing Test Patterns

No.	Test Pattern	No.	Test Pattern
0	None	20	Horizontal Line (1-dot) (Reversed LD1, LD2)
1	Vertical Line (1-dot)	21	Grid Pattern (1-dot) (Reversed LD1, LD2)
2	Horizontal Line (1-dot)	22	Grid Pattern (1-dot pair) (Reversed LD1, LD2)
3	Vertical Line (2-dot)	23	Independent Pattern (1-dot) (Reversed LD1, LD2)
4	Horizontal Line (2 dot)	24	3 Grayscale
5	Grid Pattern (1-dot)	25	Grayscale (Horizontal)
6	Grid Pattern (1-dot pair)	26	Grayscale (Vertical)
7	(not used)	27	Grayscale (Vertical/Horizontal)
8	(not used)	28	Grayscale (Grid)
9	Full Dot Pattern	29	Grayscale (Horizontal Extension)
10	Black band	30	Grayscale (Vertical Extension)
11	Trimming Area	31	Grayscale (Horizontal Margin)
12	Trimming Area (2-dot)	32	Grayscale (Vertical Margin)
13	Argyle Pattern	33	Grayscale (Vertical/Horizontal Margin)
14	Argyle Pattern (2-dot_)	34	Grayscale (Horizontal Extension Margin)
15	Hound's Tooth Check (2-dot Horizontal)	35	Grayscale (Vertical Extension Margin)
16	Checker Flag Pattern	36	White Pattern
17	Point Black Pattern	37	Grid (1-dot pair) (OR Outside Data 1)
18	Black Band (Vertical)		
19	Independent Pattern (4-dot)		

5.1.6 INPUT CHECK

Main Machine Input Check: SP5-803

1. Enter the SP mode and select SP5-803.
2. Enter the number (1 – 13) for the item that you want to check. A small box will be displayed on the SP mode screen with a series of 0's and 1's.
The meaning of the display is as follows.

0 0 0 0 0 0 0 0

Bit 7 6 5 4 3 2 1 0

3. Check the status of each item against the corresponding bit numbers listed in the table below.

Number	Bit	Description	Reading	
			0	1
1: Paper Feed 1 (Upper Tray)	7	Fusing Exit Sensor	Activated	Deactivated
	6	Near End Sensor 2	Activated	Deactivated
	5	Near End Sensor 1	Activated	Deactivated
	4	Not Used	---	---
	3	Paper Size Sensor 4	Activated	Deactivated
	2	Paper Size Sensor 3	Activated	Deactivated
	1	Paper Size Sensor 2	Activated	Deactivated
	0	Paper Size Sensor 1	Activated	Deactivated
2: Paper Feed 2 (Lower Tray)	7	Duplex Unit Set Sensor	Unit set	Unit not set
	6	Near End Sensor 2	Off	On
	5	Near End Sensor 1	Off	On
	4	Fusing/Paper Output Motor Lock	Not Locked	Locked
	3	Paper Size Sensor 4	Activated	Deactivated
	2	Paper Size Sensor 3	Activated	Deactivated
	1	Paper Size Sensor 2	Activated	Deactivated
	0	Paper Size Sensor 1	Activated	Deactivated
3: Registration and Others	7	Zero Cross Signal	Detected	Not detected
	6	Transfer Belt Unit HP Sensor	Not present	Present
	5	Exhaust Fan Lock Signal	Not locked	Locked
	4	Cooling Fan Lock Signal	Not locked	Locked
	3	Main Motor Lock Signal	Not locked	Locked
	2	Toner Overflow Sensor	Tank not full	Tank full
	1	Cover Open	Cover closed	Cover opened
	0	Registration Sensor	Paper detected	Paper not detected

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Number	Bit	Description	Reading	
			0	1
4: By-pass Feed	7	Duplex reverse path door	Closed	Open
	6	Paper End Sensor	Paper detected	Paper not detected
	5	Not used		
	4	Paper Size Sensor 4, By-pass	Activated	Deactivated
	3	Paper Size Sensor 3, By-pass	Activated	Deactivated
	2	Paper Size Sensor 2, By-pass	Activated	Deactivated
	1	Paper Size Sensor 1, By-pass	Activated	Deactivated
	0	Unit Set Signal	Yes	No
5: Relay Unit (Bridge Unit)	7	Not used	Yes	No
	6	Unit Set Signal	Connected	Not connected
	5	Paper Sensor	Paper detected	Paper not detected
	4	Relay Sensor	Paper detected	Paper not detected
	3	Exit Sensor	Paper detected	Paper not detected
	2	Left Cover Switch	Switch pressed (cover closed)	Switch not pressed
	1	Middle Cover Switch	Switch pressed (cover closed)	Switch not pressed
	0	Right Cover Switch	Switch pressed (cover closed)	Switch not pressed
6: Unit Set	7	Feed Motor Lock	No	Yes
	6	F-Gate Signal	Active	Not active
	5	Height Sensor	Feed height	Not feed height
	4	Paper Exit Sensor	Paper detected	Paper not detected
	3	Fusing Unit	Detected	Not detected
	2	Total Counter	Not detected	Detected
	1	Key Counter	Detected	Not detected
	0	Key Card Present	Detected	Not detected
7: Paper End	7	Front cover/open closed	Open	Closed
	6	Vertical feed path	Clear	Not clear
	5	2nd Tray Height Sensor	Paper not at upper limit	Paper at upper limit
	4	1st Tray Height Sensor	Paper not at upper limit	Paper at upper limit
	3	Lower Relay Sensor	Paper detected	Paper not detected
	2	Upper Relay Sensor	Paper detected	Paper not detected
	1	Lower Paper End Sensor	Paper not detected	Paper detected
	0	Upper Paper End Sensor	Paper not detected	Paper detected

Number	Bit	Description	Reading			
			0		1	
8: DIP Switches	7	Dip Switch - 8	On		Off	
	6	Dip Switch - 7	On		Off	
	5	Dip Switch - 6	On		Off	
	4	Dip Switch - 5	On		Off	
	3	Dip Switch - 4	On		Off	
	2	Dip Switch - 3	On		Off	
	1	Dip Switch - 2	On		Off	
	0	Dip Switch - 1	On		Off	
9: Duplex Unit	7	Not used				
	6	Right cover open/closed	Closed		Open	
	5	1-Bin Unit Set	Detected		Not detected	
	4	LD, HP sensor	Positioned		Not positioned	
	3	Exit Sensor (Jam)	Paper detected		Paper not detected	
	2	Entrance Sensor (Jam)	Paper detected		Paper not detected	
	1	Paper End Sensor	Paper detected		Paper not detected	
	0	Duplex Unit Switch	Cover closed		Cover open	
10: Remainder of Feed Tray 1	7	Tray 4: Bit 1				
	8	Tray 4: Bit 0	Bit 1	Bit 0	Capacity	
	5	Tray 3: Bit 1	1	1	Full	
	4	Tray 3: Bit 0	1	0	50% or more	
	3	Tray 2: Bit 1	0	1	10% or more	
	2	Tray 2: Bit 0	0	0	Out, or tray not set	
	1	Tray 1: Bit 1				
	0	Tray 1: Bit 0				
11: Remainder of Feed Tray 2	7	By-pass Yes/No				
	6	Not Used				
	5	Not Used				
	4	Not Used				
	3	Not Used	Bit 2	Bit 1	Bit 0	Capacity
	2	LCT: Bit 2	1	1	1	Full
	1	LCT: Bit 1	1	0	0	80% or more
	0	LCT: Bit 0	0	1	1	50% or more
			0	1	0	30% or more
			0	0	0	10% or more

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Number	Bit	Description	Reading	
			0	1
12: Full Exit Tray 1	7	Mailbox 9-bin	Not full or no tray	Full
	6	Mailbox 8-bin	Not full or no tray	Full
	5	Not used	-	-
	4	Finisher: Shift Tray 1	Not full or no tray	Full
	3	Finisher: Shift Tray 2	Not full or no tray	Full
	2	Not used	-	-
	1	1-Bin Exit	Not full or no tray	Full
	0	Machine Exit	Not full or no tray	Full
13: Full Exit Tray 2	7	Mailbox 7-bin	Not full or no tray	Full
	6	Mailbox 6-bin	Not full or no tray	Full
	5	Mailbox 5-bin	Not full or no tray	Full
	4	Mailbox 4-bin	Not full or no tray	Full
	3	Mailbox 3-bin	Not full or no tray	Full
	2	Mailbox 2-bin	Not full or no tray	Full
	1	Mailbox 1-bin	Not full or no tray	Full
	0	Mailbox Proof Tray	Not full or no tray	Full

Table 1: By-pass Feed Table Paper Size Data

Number.	Bit 4	Bit 3	Bit 2	Bit 1	Paper Width
4: By-pass	1	1	1	1	Post Card
	1	1	1	0	B6 SEF
	1	1	0	1	B5 SEF
	1	1	0	0	A5 SEF / 5.5"
	1	0	1	1	B4 SEF
	1	0	0	1	A4 SEF / 8.5" / 8"
	0	1	1	1	A3 SEF
	0	0	1	1	11" x 17"

ARDF Input Check: SP6-007

1. Enter the SP mode and select SP6-007.
2. Enter the number (1 – 13) for the item that you want to check. A small box will be displayed on the SP mode screen with a series of 0's and 1's.
The meaning of the display is as follows.

0 0 0 0 0 0 0

Bit 7 6 5 4 3 2 1 0

3. Check the status of each item against the corresponding bit numbers listed in the table below.

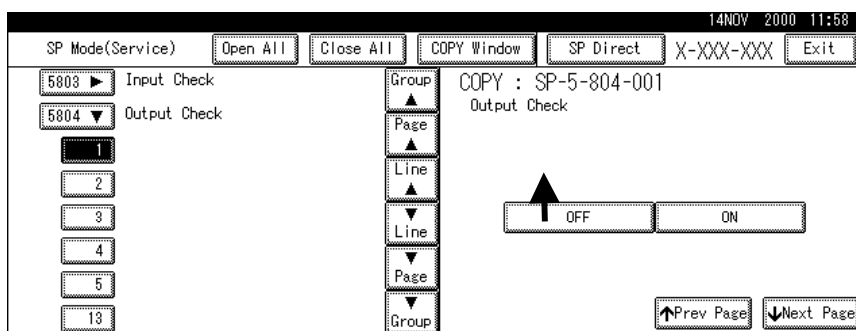
Group	Bit No.	Description	Reading	
			0	1
1	7	Original width sensor 4	Paper not detected	Paper detected
	6	Original width sensor 3	Paper not detected	Paper detected
	5	Original width sensor 2	Paper not detected	Paper detected
	4	Original width sensor 1	Paper not detected	Paper detected
	3	Skew correction sensor	Paper not detected	Paper detected
	2	Original set sensor	Paper not detected	Paper detected
	1	Original B5 sensor	Paper not detected	Paper detected
	0	Original LG sensor	Paper not detected	Paper detected
2	7	Original stopper HP sensor	Original stopper up	Original stopper down
	6	Pick-up HP sensor	Cover closed	Cover opened
	5	Top cover Sensor	Cover closed	Cover opened
	4	Lift sensor	Pick-up roller up	Pick-up roller down
	3	Inverter sensor	Paper not detected	Paper detected
	2	Exit sensor	Paper not detected	Paper detected
	1	Registration sensor	Paper not detected	Paper detected
	0	Interval Sensor	Paper not detected	Paper detected
3	0	Original A4 sensor		

5.1.7 OUTPUT CHECK

NOTE: Motors keep turning in this mode regardless of upper or lower limit sensor signals. To prevent mechanical or electrical damage, do not keep an electrical component on for a long time.

Main Machine Output Check: SP5-804

1. Open SP mode 5-804.
2. Select the SP number that corresponds to the component you wish to check. (Refer to the table on the next page.)
3. Press On then press Off to test the selected item.



NOTE: You cannot exit and close this display until you press off to switch off the output check currently executing. Do not keep an electrical component switched on for a long time.

SP5-804 Output Check Table

No.	Description	No.	Description
1	1st Paper Feed CL	45	Duplex Junction Gate Solenoid ()
2	2nd Paper Feed CL		
3	3rd Paper Feed CL (PTU)	47	Relay Junction Gate Solenoid
4	4th Paper Feed CL (PTU)		
5	By-pass Paper Feed CL	50	Tray Junction Gate Solenoid
6	LCT Paper Feed CL	51	Stapler Junction Gate Solenoid
		52	Positioning Roller Solenoid (Finishers)
13	By-pass Pick-up Solenoid		
14	LCT Pick-up Solenoid	56	Toner Bottle Motor
		57	Transfer Belt Positioning Clutch
17	Transport Motor 1 (Finisher)		
18	Transport Motor 2 (Finisher)	62	Quenching Lamp
19	Exit Motor (Finisher)	63	Charge Bias
20	Staple Motor (Finisher)		
21	Punch Motor (Finisher)	67	Development Bias
25	LCT Motor	69	Transfer Belt Voltage
26	Bank Motor (Paper Tray Unit)	70	ID Sensor LED
27	Fusing/Feed-Out Motor		
28	Main Motor	75	Exhaust Fan
29	Duplex Transport Motor	76	Elec. Equipment Cooling Fan (High Rev.)
30	Duplex Inverter Motor – Rev.		
31	Duplex Inverter Motor – Fwd	78	Relay Fan Motor
32	Feed/Development Motor	79	Fusing Fan Motor
		85	Total Counter
35	Bank Relay Clutch (Paper Tray Unit)		
36	Relay Clutch		
38	LCT Relay Clutch	92	Shift Tray Lift Motor (Finisher)
39	Registration Clutch	93	Jogger Motor (Finisher)
40	Not used	94	Stapler Unit Motor (Finisher)
41	Exit Junction Gate Solenoid (Upper Unit)	95	Stack Feed Out Motor (Finisher)
42	Duplex Junction Gate Solenoid (Lower Unit)	96	Shift Motor (Finisher)
		97	Stapler Rotation Motor (Two-Tray Finisher)

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ARDF Output Check: SP6-008)

1. Open SP mode SP6-008.
2. Select the SP number that corresponds to the component you wish to check. (Refer to the table below.)
3. Press On then press Off to test the selected item. You cannot exit and close this display until you click Off to switch off the output check currently executing.

No.	Description
1	Feed Motor (Forward)
2	Feed Motor (Reverse)
3	Drive Motor (Forward)
4	Inverter Motor (Forward)
5	Inverter Motor (Reverse)
6	Feed Clutch
7	Inverter Solenoid
8	Pick-up Motor (Forward)
9	Pick-up Motor (Reverse)

5.1.8 SMC PRINT OUT LISTS: SP5-990

1. Open SP mode 5-990 and select the number corresponding to the list that you wish to print.

SMC (System Parameter and Data Lists)	
1	All Data List
2	SP Mode Data List
3	UP Mode Data List
4	Logging Data List
5	Self-Diagnostics Results List
6	Non-Default
7	NIB Summary
8	NetFile Application Log
21	Copy UP Mode List
22	Scanner SP Mode List
23	Scanner UP Mode List

2. Press "Execute" on the touch panel.
3. Select "Single Face" or "Both Face".
4. After printing the list, press "Close" to return to the SP mode display.
5. Press Exit twice to close the SP Mode screen and return to copy mode.

5.1.9 MEMORY CLEAR: SP5-801

Executing Memory All Clear resets all the settings stored in the NVRAM to their default settings except the following:

SP7-003-1:	Electrical total counter value
SP5-811-1:	Machine serial number
SP5-907:	Plug & Play Brand Name and Production Name Setting

1. Execute SP5-990 to print out all SMC Data Lists.
2. Open SP mode 5-801.
3. Press the number for the item that you want to initialize. The number you select determines which application is initialized. For example, press 1 if you want to initialize all modules or select the appropriate number from the table below.

5801	Memory Clear	Comments
5801 1	All Clear	Initializes items 2 ~ 12 below. ^{*1}
5801 2	Engine	Initializes all registration settings for the engine and processing settings. ^{*1}
5801 3	SCS	Initializes default system settings, CSS settings, operation display coordinates, and ROM update information. ^{*1}
5801 4	IMH Memory Clr	Initializes the registration setting for the image memory handler by deleting all image files on the HDD.
5801 5	MCS	Initializes the automatic delete time setting for stored documents.
5801 6	Copier application	Initializes all copier application settings.
5801 7	Fax application	Initializes the fax reset time, job login ID, all TX/RX settings, local storage file numbers, and off-hook timer.
5801 8	Printer application	Initializes the printer defaults, programs registered, the printer SP Bit SW, and printer CSS counter.
5801 9	Scanner application	Initializes the scanner defaults for the scanner and all the Scanner SP modes.
5801 10	Web Service/Network Application	Deletes the NFA management files and thumbnails, and initializes the JOB login ID.
5801 11	NCS	Initializes the system defaults and interface settings (IP addresses also), the SmartDeviceMonitor for Admin, WebStatusMonitor settings, and the TELNET settings.
5801 12	R-FAX	Initializes the Job login ID, SmartDeviceMonitor for Admin, Job History, and local storage file numbers.
5801 14	Clear DCS Settings	Initialization
5801 15	Clear UCS Settings	Initialization

^{*1}: Resetting 1~3 resets the operation panel screen coordinates, so after executing 1, 2, or 3, you must re-calibrate the screen.



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4. Press Execute, and then follow the prompts on the display to complete the procedure.
5. Make sure that you perform the following settings:
 - Do the laser beam pitch adjustment (SP2-109).
 - Do the printer and scanner registration and magnification adjustments (➡ 3.21 Replacement and Adjustment, "Copy Adjustments").
 - Do the touch screen calibration (➡ 3.21.4 Replacement and Adjustment, "touch screen calibration").
 - Referring to the SMC data lists, re-enter any values, which had been changed from their factory settings.
 - Do SP 3-001-2 (ID Sensor Initial Setting).
6. Check the copy quality and the paper path, and do any necessary adjustments.

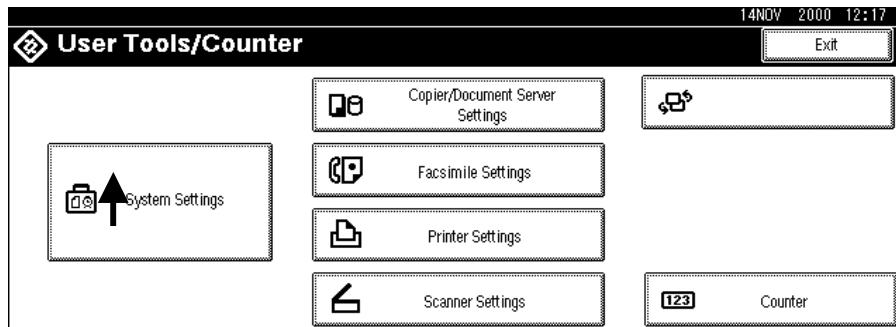
5.1.10 SYSTEM SETTINGS AND COPY SETTING RESET

System Setting Reset

The system settings in the UP mode can be reset to their defaults. Use the following procedure.

1. Press User Tools/Counter .
2. Hold down  and then press System Settings.

NOTE: You must press  first.

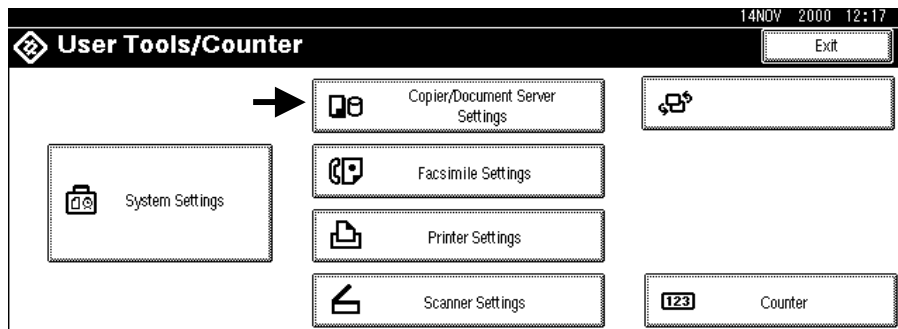


3. When the message prompts you to confirm that you want to reset the system settings, press Yes.
4. When the message tells you that the settings have been reset, press Exit.

Copier Setting Reset

The copy settings in the UP mode can be reset to their defaults. Use the following procedure.

1. Press User Tools/Counter .
2. Hold down  and then press Copier/Document Server Settings.
NOTE: You must press  first.



3. When the message prompts you to confirm that you want to reset the Copier Document Server settings, press Yes.
4. When the message tells you that the settings have been reset, press Exit.