

## [7] SIMULATIONS

### 1. Entering the simulation mode

Perform the following procedure to enter the simulation mode.  
 Clear key Interrupt key "0" key Interrupt key Main code  
 Start key Sub code Start key

### 2. Cancelling the simulation mode

When the clear all key is pressed, the simulation mode is cancelled.  
 When the interruption key is pressed, the process is interrupted and the screen returns to the sub code entering display.

\* After canceling the simulation mode, be sure to turn OFF/ON the power and check the operation.

### 3. List of simulations

Main code	Sub code	Contents	*
1	1	Mirror unit operation check	
	2	Optical system sensor operation check	
2	1	SPF aging	ADF
	2	SPF sensor operation check	ADF
	3	SPF motor forward rotation operation check	ADF
	4	SPF motor reverse rotation operation check	ADF
	8	SPF paper feed solenoid operation check	ADF
	9	RSPF reverse solenoid operation check	AD
	10	RSPF paper exit gate solenoid operation check	AD
3	11	SPF PS release solenoid operation check	ADF
	2	Shifter job separator sensor operation check	AEF
	3	Shifter operation check	E
	4	Job separator operation check	AF
5	11	Shifter Home Position Check	E
	1	Operation panel display check	
	2	Heater lamp lighting check, cooling fan motor operation check	
6	3	Copy lamp lighting check	
	1	Paper feed solenoid operation check	
7	10	Main cassette semi-circular roller drive	
	1	Aging with warmup time display	
9	4	Warmup saving	
	6	Intermittent aging	
	8	Warmup time display	
	1	Duplex motor forward rotation operation check	B
10	2	Duplex motor reverse rotation operation check	B
	4	Duplex motor rotation speed adjustment	B
	5	Duplex motor switchback time adjustment	B
14	Toner motor operation check		
16	Trouble (except for U2) cancel		
20	U2 trouble cancel		
21	1	Maintenance counter clear	
	1	Maintenance cycle setting	
22	2	Mini maintenance cycle setting	
	1	Maintenance counter display	
22	2	Maintenance preset value display	
	3	JAM memory display	
	4	Total JAM counter display	
	5	Total counter display	
	6	Developing counter display	
	7	Developing preset counter value display	
	8	SPF counter display	ADF
	9	Paper feed counter display	
	12	Drum counter display	
	14	Copier ROM version display	

Main code	Sub code	Contents	*	
22	15	Trouble memory display		
	16	Duplex print counter display	B	
	17	Copy counter display		
	18	Printer counter display	A	
	19	Electronic sort counter display	AD	
	21	Scanner counter display		
24	1	JAM memory, JAM counter clear		
	2	Trouble memory clear		
	4	SPF counter clear	ADF	
	5	Duplex counter clear	B	
	6	Paper feed counter clear		
	7	Drum counter clear		
	8	Copy counter clear		
	9	Printer counter clear	A	
	10	Electronic sort counter clear	AD	
	13	Scanner counter clear		
	25	1	Main motor operation check	
		10	Polygon motor operation check	
	26	1	Option switch display	
3		Auditor setting		
5		Counter mode setting		
6		Destination setting		
7		CRUM set value display		
10		Model name setting		
22		Language setting		
30		CE mark conformity control setting		
32		Fan rotation duty change state setup		
37		Cancel of stop at developer life over		
38		Cancel of stop at dram life over		
42		Transfer timing adjustment		
50		Black-white reversion function setup		
51		Sort/Group copy temporary stop function setup	AD	
30		1	Machine sensor operation check	
41		2	OC document sensor adjustment	C
		3	Document sensor light reception level display	C
42		1	Developing counter clear	
43		1	Fusing temperature setting	
46		1	Copy density level adjustment	
		19	AE mode picture quality change	
48		1	Main scanning (front/rear) direction magnification ratio adjustment (Copy/FAX/OC-SPF common)	
	2	OC mode sub scanning direction magnification ratio adjustment in copying		
	5	SPF mode sub scanning direction magnification ratio adjustment in copying	D	
50	1	Copy image lead edge position adjustment		
	10	Paper off center adjustment		
	13	OC mode document off center adjustment		
	16	SPF mode document off center adjustment	D	
	18	Duplex memory reverse print adjustment	B	
	19	Duplex rear edge void adjustment	B	
51	2	Resist amount adjustment		
63	1	Shading data check		
64	1	Self printing mode		
67	14	Printer Flash ROM Data Download	A	

\*A: Only when an option is installed.

B: AR-206/207 only

C: Other than AR162/163

D: AR-207 only

E: Other than AR-162

F: AR-F201 only

#### 4. Contents of simulations

Main code	Sub code	Contents	Details of operation	Initial value	Set range				
1	1	Mirror unit operation check	Used to execute scanning at the speed corresponding to the set magnification ratio. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Key operation</th> <th style="width: 50%;">Display</th> </tr> </thead> <tbody> <tr> <td>Changing the magnification ratio: Fixed magnification ratio key ZOOM UP KEY, ZOOM DOWN KEY</td> <td>Set magnification ratio: Fixed magnification ratio LED ZOOM LED</td> </tr> </tbody> </table>	Key operation	Display	Changing the magnification ratio: Fixed magnification ratio key ZOOM UP KEY, ZOOM DOWN KEY	Set magnification ratio: Fixed magnification ratio LED ZOOM LED	100%	50 ~ 200%
	Key operation	Display							
Changing the magnification ratio: Fixed magnification ratio key ZOOM UP KEY, ZOOM DOWN KEY	Set magnification ratio: Fixed magnification ratio LED ZOOM LED								
2	Optical system sensor operation check	Used to check MHPS (Mirror home position sensor) ON/OFF state with the LED on the operation panel. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 100%;">Display</th> </tr> </thead> <tbody> <tr> <td>&lt;Lighting when the sensor is ON&gt; MHPS: Paper empty LED</td> </tr> </tbody> </table>	Display	<Lighting when the sensor is ON> MHPS: Paper empty LED					
Display									
<Lighting when the sensor is ON> MHPS: Paper empty LED									
2	1	SPF aging  <b>&lt;Only when an SPF/RSPF is installed&gt;</b>	Used to perform SPF document transport. The paper size is not detected. (Excluding postcards, extra large sheet of 1m or greater.) With SPF installed: Single transport operation With RSPF installed: Duplex transport operation <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Key operation</th> <th style="width: 50%;">Display</th> </tr> </thead> <tbody> <tr> <td>Changing the magnification ratio: Fixed magnification ratio key ZOOM UP KEY, ZOOM DOWN KEY</td> <td>Set magnification ratio: Fixed magnification ratio LED ZOOM LED</td> </tr> </tbody> </table>	Key operation	Display	Changing the magnification ratio: Fixed magnification ratio key ZOOM UP KEY, ZOOM DOWN KEY	Set magnification ratio: Fixed magnification ratio LED ZOOM LED	100%	50 ~ 200%
	Key operation	Display							
	Changing the magnification ratio: Fixed magnification ratio key ZOOM UP KEY, ZOOM DOWN KEY	Set magnification ratio: Fixed magnification ratio LED ZOOM LED							
	2	SPF sensor operation check  <b>&lt;Only when an SPF/RSPF is installed&gt;</b>	Used to check sensors in SPF with the LED on the operation panel. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 100%;">Display</th> </tr> </thead> <tbody> <tr> <td>&lt;Lighting at sensor ON&gt; PW1: JAM LED PW2: Paper empty LED PW3: Machine position JAM LED PW4: SPF JAM LED PL1: Manual paper feed tray select LED PL2: 2nd tray position JAM LED P-IN: SPF select LED SPF COVER OPEN: Main cassette select LED</td> </tr> </tbody> </table>	Display	<Lighting at sensor ON> PW1: JAM LED PW2: Paper empty LED PW3: Machine position JAM LED PW4: SPF JAM LED PL1: Manual paper feed tray select LED PL2: 2nd tray position JAM LED P-IN: SPF select LED SPF COVER OPEN: Main cassette select LED				
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3	SPF motor forward rotation operation check <b>&lt;Only when an SPF/RSPF is installed&gt;</b>	Used to rotate the SPF motor forward for 10 sec.							
4	SPF motor reverse rotation operation check <b>&lt;Only when an SPF/RSPF is installed&gt;</b>	Used to rotate the SPF motor reversely for 10 sec.							
	8	SPF paper feed solenoid operation check <b>&lt;Only when an SPF/RSPF is installed&gt;</b>	Used to drive the SPF paper feed solenoid (PSOL) at the cycle of 500 msec ON and 500 msec OFF 20 times.						
	9	RSPF reverse solenoid operation check <b>&lt;Only when an RSPF is installed&gt;</b>	Used to drive the RSPF reverse solenoid (RSOL) at the cycle of 500 msec ON and 500 msec OFF 20 times.						
	10	RSPF paper exit gate solenoid operation check <b>&lt;Only when an RSPF is installed&gt;</b>	Used to drive the RSPF paper exit gate solenoid (GSOL) at the cycle of 500 msec ON and 500 msec OFF 20 times.						
	11	SPF PS release solenoid operation check <b>&lt;Only when an SPF/RSPF is installed&gt;</b>	Used to drive the SPF PS release solenoid at the cycle of 500 msec ON and 500 msec OFF 20 times.						

Main code	Sub code	Contents	Details of operation	Initial value	Set range				
3	2	Shifter job separator sensor operation check  <b>&lt;Only when a job separator shifter&gt;</b>	Used to check the sensors state in the shifter job separator with the LED on the operation panel.  <table border="1"> <tr><td>Display</td></tr> <tr><td>&lt;Lighting at sensor ON&gt; Shifter HP sensor: Machine position JAM LED Job separator HP sensor: SPF JAM LED Paper exit full sensor: 2nd tray position JAM LED</td></tr> </table>	Display	<Lighting at sensor ON> Shifter HP sensor: Machine position JAM LED Job separator HP sensor: SPF JAM LED Paper exit full sensor: 2nd tray position JAM LED				
	Display								
	<Lighting at sensor ON> Shifter HP sensor: Machine position JAM LED Job separator HP sensor: SPF JAM LED Paper exit full sensor: 2nd tray position JAM LED								
	3	Shifter operation check  <b>&lt;Only when an shifter is installed&gt;</b>	Used to drive the shifter motor at the speed of printing of A4 (8-1/2 11"). Pressing the clear all key or interrupt key moves the shifter to the home position.  <table border="1"> <tr><td>Key operation</td></tr> <tr><td>The shifter is moved to the home position: Clear all key, interrupt key</td></tr> </table>	Key operation	The shifter is moved to the home position: Clear all key, interrupt key				
Key operation									
The shifter is moved to the home position: Clear all key, interrupt key									
4	Job separator operation check  <b>&lt;Only when an Job separator is installed&gt;</b>	Used to drive the job separator one way. Pressing the clear all key or interrupt key stops the job separator at the home position.  <table border="1"> <tr><td>Key operation</td></tr> <tr><td>Stops at the home position: Clear all key, interrupt key</td></tr> </table>	Key operation	Stops at the home position: Clear all key, interrupt key					
Key operation									
Stops at the home position: Clear all key, interrupt key									
11	Shifter Home Position check  <b>&lt;Only when a sifter is installed&gt;</b>	Used to drive the shifter motor  <table border="1"> <tr><td>Key operation</td></tr> <tr><td>Feed: Exposure up key or "3" key Return: Exposure down key or "4" key Move to Home Position: Magnification ratio display key or "5" key</td></tr> </table>	Key operation	Feed: Exposure up key or "3" key Return: Exposure down key or "4" key Move to Home Position: Magnification ratio display key or "5" key					
Key operation									
Feed: Exposure up key or "3" key Return: Exposure down key or "4" key Move to Home Position: Magnification ratio display key or "5" key									
5	1	Operation panel display check	Used to light all LED's on the operation panel for 5 sec.						
	2	Heater lamp lighting check, cooling fan motor operation check	Used to turn ON the heater lamp for 500 msec and OFF for 500 msec 5 times. At the same time, the cooling fan is rotated at a high speed. After checking the heater lamp operation, the cooling fan motor rotate at a low speed.						
	3	Copy lamp lighting check	Used to light the copy lamp for 10 sec.						
6	1	Paper feed solenoid operation check	When the start key is pressed, the selected paper feed solenoid is driven at the cycle of 500 msec ON and 500 msec OFF 20 times.  <table border="1"> <tr> <td>Key operation</td> <td>Display</td> </tr> <tr> <td>Solenoid selection: Tray select button</td> <td>&lt;Lighting at solenoid selection&gt; Main cassette paper feed solenoid: Main cassette select LED Multi manual paper feed solenoid: Manual paper feed select LED No. 2 cassette paper feed solenoid: No. 2 cassette select LED No. 3 cassette paper feed solenoid: No. 3 cassette select LED <b>&lt;Only when an option is installed&gt;</b> No. 4 cassette paper feed solenoid: No. 4 cassette select LED <b>&lt;Only when an option is installed&gt;</b> Resist roller solenoid: Machine position JAM LED No. 2 cassette transport solenoid: No. 2 cassette position JAM LED No. 3 cassette transport solenoid: Machine position JAM LED + No. 2 cassette position JAM LED <b>&lt;Only when an option is installed&gt;</b> No. 4 cassette transport solenoid: JAM LED <b>&lt;Only when an option is installed&gt;</b></td> </tr> </table>	Key operation	Display	Solenoid selection: Tray select button	<Lighting at solenoid selection> Main cassette paper feed solenoid: Main cassette select LED Multi manual paper feed solenoid: Manual paper feed select LED No. 2 cassette paper feed solenoid: No. 2 cassette select LED No. 3 cassette paper feed solenoid: No. 3 cassette select LED <b>&lt;Only when an option is installed&gt;</b> No. 4 cassette paper feed solenoid: No. 4 cassette select LED <b>&lt;Only when an option is installed&gt;</b> Resist roller solenoid: Machine position JAM LED No. 2 cassette transport solenoid: No. 2 cassette position JAM LED No. 3 cassette transport solenoid: Machine position JAM LED + No. 2 cassette position JAM LED <b>&lt;Only when an option is installed&gt;</b> No. 4 cassette transport solenoid: JAM LED <b>&lt;Only when an option is installed&gt;</b>		
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Solenoid selection: Tray select button	<Lighting at solenoid selection> Main cassette paper feed solenoid: Main cassette select LED Multi manual paper feed solenoid: Manual paper feed select LED No. 2 cassette paper feed solenoid: No. 2 cassette select LED No. 3 cassette paper feed solenoid: No. 3 cassette select LED <b>&lt;Only when an option is installed&gt;</b> No. 4 cassette paper feed solenoid: No. 4 cassette select LED <b>&lt;Only when an option is installed&gt;</b> Resist roller solenoid: Machine position JAM LED No. 2 cassette transport solenoid: No. 2 cassette position JAM LED No. 3 cassette transport solenoid: Machine position JAM LED + No. 2 cassette position JAM LED <b>&lt;Only when an option is installed&gt;</b> No. 4 cassette transport solenoid: JAM LED <b>&lt;Only when an option is installed&gt;</b>								
10	Main cassette semi-circular roller drive	Excute the simulation with the developer cartridge removed, used to rotate the semi-circular roller of the main cassette one turn to face it downward.							

Main code	Sub code	Contents	Details of operation	Initial value	Set range										
7	1	Aging with warmup time display	Execute the simulation input with the copier side cover open, then close the side cover, and the machine will start warming up. Warm up time is counted up every 2nd and it is displayed. After completion of warmup, count up is terminated. When the clear all key is pressed ready lamp is lighted and the copy quantity is entered and the start key is pressed, copying is made to make the set quantity of copies. At that time, the paper size does not matter.  <table border="1" style="width: 100%; text-align: center;"> <tr><td>Key operation</td></tr> <tr><td>Copy quantity setting: Copy quantity keys</td></tr> </table>	Key operation	Copy quantity setting: Copy quantity keys		1 ~ 99								
	Key operation														
	Copy quantity setting: Copy quantity keys														
	4	Warmup saving	Used to bring the machine to the ready state without warmup.		1 ~ 99										
6	Intermittent aging	After completion of warmup, counting is stopped and the ready lamp is lighted. When the copy quantity is entered and the start key is pressed, copying is made to make the set quantity of copies. After 3 sec standby, copying is made again to make the set quantity of copies. After that this operation is repeated. The paper size does not matter.  <table border="1" style="width: 100%; text-align: center;"> <tr><td>Key operation</td></tr> <tr><td>Copy quantity setting: Copy quantity keys</td></tr> </table>	Key operation	Copy quantity setting: Copy quantity keys		1 ~ 99									
Key operation															
Copy quantity setting: Copy quantity keys															
8	Warmup time display	Execute the simulation input with the copier side cover open, then close the side cover, and the machine will start warming up. Warm up time is counted up every 2nd and it is displayed.		1 ~ 99											
9	1	Duplex motor forward rotation operation check <Only AR-206/207>	Used to rotate the duplex motor forward for 30 sec.												
	2	Duplex motor reverse rotation operation check <Only AR-206/207>	Used to rotate the duplex motor reversely for 30 sec.												
	4	Duplex motor rotation speed adjustment  <Only AR-206/207>	The currently set duplex motor rotation speed set value is displayed. When the set value is entered and the start key is pressed, the set value is stored.  <table border="1" style="width: 100%; text-align: center;"> <tr><td>Key operation</td></tr> <tr><td>Duplex motor rotation speed set value: Copy quantity keys</td></tr> </table>	Key operation	Duplex motor rotation speed set value: Copy quantity keys	6	1 ~ 13								
	Key operation														
Duplex motor rotation speed set value: Copy quantity keys															
5	Duplex motor switchback time adjustment  <Only AR-206/207>	The currently set duplex motor switchback time set value is displayed. When the set value is entered and the start key is pressed, the set value is stored.  <table border="1" style="width: 100%; text-align: center;"> <tr><td>Key operation</td></tr> <tr><td>Duplex motor switchback time set value: Copy quantity keys</td></tr> </table>	Key operation	Duplex motor switchback time set value: Copy quantity keys	50	18 ~ 76									
Key operation															
Duplex motor switchback time set value: Copy quantity keys															
10		Toner motor operation check	Used to operate the toner motor for 30 sec.  Note: If this simulation is executed with the toner hopper installed, toner is automatically supplied to the developer. Be careful of overtoner.												
14		Trouble (except for U2) cancel	Used to cancel troubles except for U2.												
16		U2 trouble cancel	Used to cancel U2 trouble.												
20	1	Maintenance counter clear	Used to clear the maintenance counter. *2												
21	1	Maintenance cycle setting	Used to display the currently set maintenance cycle at the numbers shown at right. When the set value is entered and the start key is pressed, the set value is stored.  <table border="1" style="width: 100%; text-align: center;"> <tr><td colspan="2">Key operation/Display</td></tr> <tr><td>0: 2500 sheets</td><td>4: 150000 sheets</td></tr> <tr><td>1: 5000 sheets</td><td>5: FREE (999999 sheets)</td></tr> <tr><td>2: 15000 sheets</td><td>6: 10000 sheets</td></tr> <tr><td>3: 30000 sheets</td><td>7: 7500 sheets</td></tr> </table>	Key operation/Display		0: 2500 sheets	4: 150000 sheets	1: 5000 sheets	5: FREE (999999 sheets)	2: 15000 sheets	6: 10000 sheets	3: 30000 sheets	7: 7500 sheets	4	0 ~ 6
Key operation/Display															
0: 2500 sheets	4: 150000 sheets														
1: 5000 sheets	5: FREE (999999 sheets)														
2: 15000 sheets	6: 10000 sheets														
3: 30000 sheets	7: 7500 sheets														

\*2: Display after clearing each counter  
000 (0.75 sec)    Blank (0.35 sec)    000 (0.75 sec)    Blank (1.0 sec)    Repetition

Main code	Sub code	Contents	Details of operation	Initial value	Set range										
21	2	Mini maintenance cycle setting  <b>&lt;Japan only&gt;</b>	Used to display the currently set mini maintenance cycle at the numbers shown at right. When the set value is entered and the start key is pressed, the set value is stored.  <table border="1"> <thead> <tr> <th colspan="2">Key operation/Display</th> </tr> </thead> <tbody> <tr> <td>0: 2500 sheets</td> <td>4: 30000 sheets</td> </tr> <tr> <td>1: 5000 sheets</td> <td></td> </tr> <tr> <td>2: 10000 sheets</td> <td></td> </tr> <tr> <td>3: FREE (999999 sheets)</td> <td></td> </tr> </tbody> </table>	Key operation/Display		0: 2500 sheets	4: 30000 sheets	1: 5000 sheets		2: 10000 sheets		3: FREE (999999 sheets)		4	
Key operation/Display															
0: 2500 sheets	4: 30000 sheets														
1: 5000 sheets															
2: 10000 sheets															
3: FREE (999999 sheets)															
22	1	Maintenance counter display	Used to display the current maintenance counter value. *1												
	2	Maintenance preset value display	Used to display the current maintenance preset value (set with SIM 21-1). *1												
	3	JAM memory display	Used to display a JAM generated during copying on the JAM position display on the operation panel. Max. 30 recent jams are stored. JAM No. 1 is displayed even when there is no JAM.  <table border="1"> <thead> <tr> <th>Key operation</th> <th>Display</th> </tr> </thead> <tbody> <tr> <td>JAM history select: Magnification ratio display key</td> <td>The history number (1 ~ 30) is displayed on the display. The JAM position LED corresponding to the history number is lighted.</td> </tr> </tbody> </table>	Key operation	Display	JAM history select: Magnification ratio display key	The history number (1 ~ 30) is displayed on the display. The JAM position LED corresponding to the history number is lighted.								
	Key operation	Display													
	JAM history select: Magnification ratio display key	The history number (1 ~ 30) is displayed on the display. The JAM position LED corresponding to the history number is lighted.													
	4	Total JAM counter display	Used to display the current total JAM counter value. *1												
	5	Total counter display	Used to display the current total counter value. *1												
	6	Developing counter display	Used to display the current developing unit counter value. *1												
	7	Developing preset counter value display <b>&lt;Japan only&gt;</b>	Used to display the current mini maintenance preset value (set with SIM 21-2). *1												
	8	SPF counter display <b>&lt;Only when an SPF/RSPF is installed&gt;</b>	Used to display the current SPF counter value. *1												
9	Paper feed counter display	Used to display the current paper feed counter value for each paper feed port. *1  <table border="1"> <thead> <tr> <th>Key operation</th> </tr> </thead> <tbody> <tr> <td>Paper feed port selection: Tray select key</td> </tr> </tbody> </table>	Key operation	Paper feed port selection: Tray select key											
Key operation															
Paper feed port selection: Tray select key															
12	Drum counter display	Used to display the current drum counter value. *1													
14	Copier ROM version display	Used to display the version number of the main ROM.  <table border="1"> <thead> <tr> <th>Display</th> </tr> </thead> <tbody> <tr> <td>(Example) When the ROM version is 4.01: 004 Blank 001 Blank Repetition</td> </tr> </tbody> </table>	Display	(Example) When the ROM version is 4.01: 004 Blank 001 Blank Repetition											
Display															
(Example) When the ROM version is 4.01: 004 Blank 001 Blank Repetition															
15	Trouble memory display	Used to display the actually occurred trouble codes on the display on the operation panel. When the start key is pressed during the main code display, the sub code is displayed. Max. 20 recent trouble codes are stored.  <table border="1"> <thead> <tr> <th>Key operation</th> <th>Display</th> </tr> </thead> <tbody> <tr> <td>Sub code display: Start key</td> <td>Histories 1 ~ 10: The upper digit of display "A" ~ "J" lights up.</td> </tr> <tr> <td>Trouble code history select: Magnification ratio display key</td> <td>Histories 11 ~ 20: The upper digit of display "A" ~ "J" blinks.  ● Display without trouble code Main code: "--" Sub code: "00"</td> </tr> </tbody> </table>	Key operation	Display	Sub code display: Start key	Histories 1 ~ 10: The upper digit of display "A" ~ "J" lights up.	Trouble code history select: Magnification ratio display key	Histories 11 ~ 20: The upper digit of display "A" ~ "J" blinks.  ● Display without trouble code Main code: "--" Sub code: "00"							
Key operation	Display														
Sub code display: Start key	Histories 1 ~ 10: The upper digit of display "A" ~ "J" lights up.														
Trouble code history select: Magnification ratio display key	Histories 11 ~ 20: The upper digit of display "A" ~ "J" blinks.  ● Display without trouble code Main code: "--" Sub code: "00"														

\*1: Each counter display method

To display 123456: 123 (0.75 sec) Blank (0.35 sec) 456 (0.75 sec) Blank (1.0 sec) repetition

\*2: Display after clearing each counter

000 (0.75 sec) Blank (0.35 sec) 000 (0.75 sec) Blank (1.0 sec) Repetition

Main code	Sub code	Contents	Details of operation	Initial value	Set range
22	16	Duplex print counter display <Only AR-206/207>	Used to display the current duplex print counter value. *1		
	17	Copy counter display	Used to display the current copy counter value. *1		
	18	Printer counter display <Only when a printer function is installed>	Used to display the current printer counter value. *1		
	19	Electronic sort counter display <Only when an E-sort function is installed>	Used to display the current electronic sort counter value. *1		
	21	Scanner counter display	Used to display the current scanner counter value.		
24	1	JAM memory, JAM counter clear	Used to clear the JAM memory and the JAM counter. *2		
	2	Trouble memory clear	Used to clear the trouble memory. *2		
	4	SPF counter clear <Only when an SPF/RSPF is installed>	Used to clear the SPF counter. *2		
	5	Duplex counter clear <Only AR-206/207>	Used to clear the duplex counter. *2		
	6	Paper feed counter clear	Used to clear the paper feed counter. *2		
	7	Drum counter clear	Used to clear the drum counter. *2		
	8	Copy counter clear	Used to clear the copy counter. *2		
	9	Printer counter clear <Only when a printer function is installed>	Used to clear the printer counter. *2		
	10	Electronic sort counter clear <Only when an E-sort function is installed>	Used to clear the electronic sort counter. *2		
25	1	Main motor operation check	Execute the simulation with the developer cartridge removed, and the main motor will rotate for 30 sec. At that time, the cooling motor rotates at a low speed.		
	10	Polygon motor operation check	Used to drive the polygon motor for 30 sec.		

\*2: Display after clearing each counter  
000 (0.75 sec)    Blank (0.35 sec)    000 (0.75 sec)    Blank (1.0 sec)    Repetition

Main code	Sub code	Contents	Details of operation	Initial value	Set range						
26	1	Option switch display	<p>Used to display the installed option on the operation panel. (The LED corresponding to the installed option is lighted.)</p> <table border="1"> <thead> <tr> <th>Key operation</th> <th>Display</th> </tr> </thead> <tbody> <tr> <td>Display select:</td> <td>&lt;Lighting with an option installed&gt; <b>When "A" is displayed:</b> Shifter: Paper empty LED</td> </tr> <tr> <td>Magnification ratio display key</td> <td>Job separator: JAM LED SPF: SPF select LED RSPF: SPF JAM LED Duplex mode: Main cassette select LED Simplex mode: Multi manual paper feed select LED MCU JMPER1: Top of the magnification ratio display MCU JMPER2: 2nd of the magnification ratio display MCU JMPER3: 3rd of the magnification ratio display MCU JMPER7: 4th of the magnification ratio display MCU JMPER7: 5th of the magnification ratio display MCU JMPER7: 6th of the magnification ratio display MCU JMPER7: 7th of the magnification ratio display MCU JMPER8: Bottom of the magnification ratio display <b>When "b" is displayed:</b> Cassette (2nd step): No. 2 cassette select LED Cassette (3rd step): No. 3 cassette select LED Cassette (4th step): No. 4 cassette select LED Memory installed: Paper empty LED FAX: JAM LED Printer: Main body JAM LED ERDH: Main cassette select LED 16CPM: SPF JAM LED 20CPM: SPF select LED Document sensor: Auto paper select LED</td> </tr> </tbody> </table>	Key operation	Display	Display select:	<Lighting with an option installed> <b>When "A" is displayed:</b> Shifter: Paper empty LED	Magnification ratio display key	Job separator: JAM LED SPF: SPF select LED RSPF: SPF JAM LED Duplex mode: Main cassette select LED Simplex mode: Multi manual paper feed select LED MCU JMPER1: Top of the magnification ratio display MCU JMPER2: 2nd of the magnification ratio display MCU JMPER3: 3rd of the magnification ratio display MCU JMPER7: 4th of the magnification ratio display MCU JMPER7: 5th of the magnification ratio display MCU JMPER7: 6th of the magnification ratio display MCU JMPER7: 7th of the magnification ratio display MCU JMPER8: Bottom of the magnification ratio display <b>When "b" is displayed:</b> Cassette (2nd step): No. 2 cassette select LED Cassette (3rd step): No. 3 cassette select LED Cassette (4th step): No. 4 cassette select LED Memory installed: Paper empty LED FAX: JAM LED Printer: Main body JAM LED ERDH: Main cassette select LED 16CPM: SPF JAM LED 20CPM: SPF select LED Document sensor: Auto paper select LED		
Key operation	Display										
Display select:	<Lighting with an option installed> <b>When "A" is displayed:</b> Shifter: Paper empty LED										
Magnification ratio display key	Job separator: JAM LED SPF: SPF select LED RSPF: SPF JAM LED Duplex mode: Main cassette select LED Simplex mode: Multi manual paper feed select LED MCU JMPER1: Top of the magnification ratio display MCU JMPER2: 2nd of the magnification ratio display MCU JMPER3: 3rd of the magnification ratio display MCU JMPER7: 4th of the magnification ratio display MCU JMPER7: 5th of the magnification ratio display MCU JMPER7: 6th of the magnification ratio display MCU JMPER7: 7th of the magnification ratio display MCU JMPER8: Bottom of the magnification ratio display <b>When "b" is displayed:</b> Cassette (2nd step): No. 2 cassette select LED Cassette (3rd step): No. 3 cassette select LED Cassette (4th step): No. 4 cassette select LED Memory installed: Paper empty LED FAX: JAM LED Printer: Main body JAM LED ERDH: Main cassette select LED 16CPM: SPF JAM LED 20CPM: SPF select LED Document sensor: Auto paper select LED										
	3	Auditor setting	<p>Used to display the current auditor setting with the numbers at right. After entering the set value, press the start key, and the set value is stored.</p> <table border="1"> <thead> <tr> <th>Key operation/Display</th> </tr> </thead> <tbody> <tr> <td>0: Built-in auditor</td> </tr> <tr> <td>1: Coin vendor</td> </tr> <tr> <td>2: Others</td> </tr> </tbody> </table>	Key operation/Display	0: Built-in auditor	1: Coin vendor	2: Others	0	0 ~ 2		
Key operation/Display											
0: Built-in auditor											
1: Coin vendor											
2: Others											
	5	Counter mode setting	<p>Used to set the print counter mode in A3 or 11" 17". Used to display the currently set counter value with the numbers at right. After entering the set value, press the start key, and the set value is stored.</p> <table border="1"> <thead> <tr> <th>Key operation/Display</th> </tr> </thead> <tbody> <tr> <td>0: Total/Developer = 2 counts      Maintenance = 2 counts</td> </tr> <tr> <td>1: Total/Developer = 1 count      Maintenance = 2 counts</td> </tr> <tr> <td>2: Total/Developer = 2 counts      Maintenance = 1 count</td> </tr> <tr> <td>3: Total/Developer = 1 count      Maintenance = 1 count</td> </tr> </tbody> </table>	Key operation/Display	0: Total/Developer = 2 counts      Maintenance = 2 counts	1: Total/Developer = 1 count      Maintenance = 2 counts	2: Total/Developer = 2 counts      Maintenance = 1 count	3: Total/Developer = 1 count      Maintenance = 1 count	0	0 ~ 3	
Key operation/Display											
0: Total/Developer = 2 counts      Maintenance = 2 counts											
1: Total/Developer = 1 count      Maintenance = 2 counts											
2: Total/Developer = 2 counts      Maintenance = 1 count											
3: Total/Developer = 1 count      Maintenance = 1 count											

Main code	Sub code	Contents	Details of operation	Initial value	Set range																																				
26	6	Destination setting	Used to display the current destination setting with the numbers at right. After entering the set value, press the start key, and the set value is stored. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Key operation/Display</th> </tr> </thead> <tbody> <tr> <td>0: Japan</td> <td>8: EX AB series</td> </tr> <tr> <td>1: USA (Inch series)</td> <td>9: EX inch series (FC conformity)</td> </tr> <tr> <td>2: Canada (Inch series)</td> <td>10: EX AB series (FC conformity)</td> </tr> <tr> <td>3: Germany 1 (AB series)</td> <td>(Australia, Newzealand)</td> </tr> <tr> <td>4: UK (AB series)</td> <td>11: China (AB series)</td> </tr> <tr> <td>5: Not used</td> <td>12: Taiwan (AB series)</td> </tr> <tr> <td>6: France (AB series)</td> <td>13: Germany 2 (AB series)</td> </tr> <tr> <td>7: EX inch series</td> <td></td> </tr> </tbody> </table>	Key operation/Display		0: Japan	8: EX AB series	1: USA (Inch series)	9: EX inch series (FC conformity)	2: Canada (Inch series)	10: EX AB series (FC conformity)	3: Germany 1 (AB series)	(Australia, Newzealand)	4: UK (AB series)	11: China (AB series)	5: Not used	12: Taiwan (AB series)	6: France (AB series)	13: Germany 2 (AB series)	7: EX inch series		0	0 ~ 11																		
Key operation/Display																																									
0: Japan	8: EX AB series																																								
1: USA (Inch series)	9: EX inch series (FC conformity)																																								
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3: Germany 1 (AB series)	(Australia, Newzealand)																																								
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5: Not used	12: Taiwan (AB series)																																								
6: France (AB series)	13: Germany 2 (AB series)																																								
7: EX inch series																																									
	7	CRUM set value display	The currently set value of CRUM is displayed with the following numbers: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Key operation/Display</th> </tr> </thead> <tbody> <tr> <td>0: Not set</td> <td>3: BTA-C</td> </tr> <tr> <td>1: BTA-A</td> <td>99: Conv</td> </tr> <tr> <td>2: BTA-B</td> <td></td> </tr> </tbody> </table>	Key operation/Display		0: Not set	3: BTA-C	1: BTA-A	99: Conv	2: BTA-B																															
Key operation/Display																																									
0: Not set	3: BTA-C																																								
1: BTA-A	99: Conv																																								
2: BTA-B																																									
	10	Model name setting	Used to set the model name of the machine used with the following numbers. After entering the set value, press the start key and the set value is stored. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3">Key operation/Display</th> </tr> </thead> <tbody> <tr> <td>0: AL-1600</td> <td>11: AR-N200</td> <td>23: AR-162/S162</td> </tr> <tr> <td>1: AL-1610</td> <td>12: AR-N205</td> <td>24: AR-163/S163</td> </tr> <tr> <td>2: AL-1620</td> <td>13: AL-1621</td> <td>25: AR-201S</td> </tr> <tr> <td>3: AL-1640/AL-1641</td> <td>14: AL-1650</td> <td>26: AR-201/S201</td> </tr> <tr> <td>4: AR-160/AR-S160</td> <td>15: AL-1670</td> <td>27: AR-206/S206</td> </tr> <tr> <td>5: AR-161/AR-S161</td> <td>16: AR-F200</td> <td>28: AR-207</td> </tr> <tr> <td>6: AR-200S</td> <td>17: DM-2000</td> <td>29: ARF161</td> </tr> <tr> <td>7: AR-200/AR-S200</td> <td>18: DM-2005</td> <td>30: ARF201</td> </tr> <tr> <td>8: AR-205/AR-S205</td> <td>19: DM-2010</td> <td></td> </tr> <tr> <td>9: AR-F160</td> <td>20: DM-2015</td> <td></td> </tr> <tr> <td>10: AR-F205</td> <td></td> <td></td> </tr> </tbody> </table>	Key operation/Display			0: AL-1600	11: AR-N200	23: AR-162/S162	1: AL-1610	12: AR-N205	24: AR-163/S163	2: AL-1620	13: AL-1621	25: AR-201S	3: AL-1640/AL-1641	14: AL-1650	26: AR-201/S201	4: AR-160/AR-S160	15: AL-1670	27: AR-206/S206	5: AR-161/AR-S161	16: AR-F200	28: AR-207	6: AR-200S	17: DM-2000	29: ARF161	7: AR-200/AR-S200	18: DM-2005	30: ARF201	8: AR-205/AR-S205	19: DM-2010		9: AR-F160	20: DM-2015		10: AR-F205			0	0 ~ 30
Key operation/Display																																									
0: AL-1600	11: AR-N200	23: AR-162/S162																																							
1: AL-1610	12: AR-N205	24: AR-163/S163																																							
2: AL-1620	13: AL-1621	25: AR-201S																																							
3: AL-1640/AL-1641	14: AL-1650	26: AR-201/S201																																							
4: AR-160/AR-S160	15: AL-1670	27: AR-206/S206																																							
5: AR-161/AR-S161	16: AR-F200	28: AR-207																																							
6: AR-200S	17: DM-2000	29: ARF161																																							
7: AR-200/AR-S200	18: DM-2005	30: ARF201																																							
8: AR-205/AR-S205	19: DM-2010																																								
9: AR-F160	20: DM-2015																																								
10: AR-F205																																									
	22	Language setting	Used to display the current setting of the language information with the number at right. After entering the set value, press the start key, and the set value is stored. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Key operation/Display</th> </tr> </thead> <tbody> <tr> <td>0: Japanese</td> <td>4: Italian</td> </tr> <tr> <td>1: English</td> <td>5: Dutch</td> </tr> <tr> <td>2: French</td> <td>6: Swedish</td> </tr> <tr> <td>3: German</td> <td>7: Spanish</td> </tr> </tbody> </table>	Key operation/Display		0: Japanese	4: Italian	1: English	5: Dutch	2: French	6: Swedish	3: German	7: Spanish	0	0 ~ 7																										
Key operation/Display																																									
0: Japanese	4: Italian																																								
1: English	5: Dutch																																								
2: French	6: Swedish																																								
3: German	7: Spanish																																								
	30	CE mark conformity control setting	Used to display the current setting of CE mark conformity control with the number at right. After entering the set value, press the start key, and the set value is stored. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="1">Key operation/Display</th> </tr> </thead> <tbody> <tr> <td>0: CE mark control OFF</td> </tr> <tr> <td>1: CE mark control ON</td> </tr> </tbody> </table>	Key operation/Display	0: CE mark control OFF	1: CE mark control ON	0	0 ~ 1																																	
Key operation/Display																																									
0: CE mark control OFF																																									
1: CE mark control ON																																									
	32	Fan rotation duty change state setup	The currently set fan motor rotation duty is displayed with the following numbers. After entering the set value, press the start key to store the set value. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="1">Key operation/Display</th> </tr> </thead> <tbody> <tr> <td>0: Operating 50%, standby 30%</td> </tr> <tr> <td>1: Operating 80%, standby 50%</td> </tr> </tbody> </table>	Key operation/Display	0: Operating 50%, standby 30%	1: Operating 80%, standby 50%	0	0.1																																	
Key operation/Display																																									
0: Operating 50%, standby 30%																																									
1: Operating 80%, standby 50%																																									

Main code	Sub code	Contents	Details of operation	Initial value	Set range											
26	37	Cancel of stop at developer life over	The currently set value is displayed. Enter a set value and press the START key, then the set value is registered. <table border="1" style="width: 100%;"> <tr><th style="text-align: center;">Key operation/Display</th></tr> <tr><td>0: Stops the machine at developer life over.</td></tr> <tr><td>1: Does not stop the machine at developer life over.</td></tr> </table>	Key operation/Display	0: Stops the machine at developer life over.	1: Does not stop the machine at developer life over.	1	0 ~ 1								
	Key operation/Display															
	0: Stops the machine at developer life over.															
	1: Does not stop the machine at developer life over.															
	38	Cancel of stop at drum life over  <b>&lt;Not Used&gt;</b>	The currently set value is displayed. After entering the set value, press the start key to store the set value. <table border="1" style="width: 100%;"> <tr><th style="text-align: center;">Key operation/Display</th></tr> <tr><td>0: The machine stops at drum life over.</td></tr> <tr><td>1: The machine does not stop at drum life over.</td></tr> </table>	Key operation/Display	0: The machine stops at drum life over.	1: The machine does not stop at drum life over.	0	0 ~ 1								
Key operation/Display																
0: The machine stops at drum life over.																
1: The machine does not stop at drum life over.																
42	Transfer timing adjustment	After completion of warm up, shading is performed and the currently set transfer timing adjustment value is displayed. <table border="1" style="width: 100%;"> <tr><th style="text-align: center;">Key operation</th></tr> <tr><td>Transfer timing adjustment value: Copy quantity keys</td></tr> <tr><td>"1": 240 ms</td></tr> <tr><td>"3": 260 ms</td></tr> <tr><td>"5": 280 ms</td></tr> <tr><td>"7": 300 ms</td></tr> <tr><td>"9": 320 ms</td></tr> </table>	Key operation	Transfer timing adjustment value: Copy quantity keys	"1": 240 ms	"3": 260 ms	"5": 280 ms	"7": 300 ms	"9": 320 ms	5	1, 3, 5, 7, 9					
Key operation																
Transfer timing adjustment value: Copy quantity keys																
"1": 240 ms																
"3": 260 ms																
"5": 280 ms																
"7": 300 ms																
"9": 320 ms																
50	Black-white reversion function setup	The current setup of black-white reversion is displayed with the following numbers. After entering the set value, press the start key to store the set value. <table border="1" style="width: 100%;"> <tr><th style="text-align: center;">Key operation/Display</th></tr> <tr><td>0: Black-white reversion function enabled</td></tr> <tr><td>1: Black-white reversion function disabled</td></tr> </table>	Key operation/Display	0: Black-white reversion function enabled	1: Black-white reversion function disabled	0	0.1									
Key operation/Display																
0: Black-white reversion function enabled																
1: Black-white reversion function disabled																
51	Sort/Group copy temporary stop function setup <b>&lt;Only when an E-sort function is installed&gt;</b>	Used to set whether temporary stop for every 250-sheet print (150-sheet print when the job separator is installed) is made or not during copying with the sort/group function. The current setup is displayed with the following numbers. After entering the set value, press the start key to store the set value. <table border="1" style="width: 100%;"> <tr><th style="text-align: center;">Key operation/Display</th></tr> <tr><td>0: Does not stop.</td></tr> <tr><td>1: Stops.</td></tr> </table>	Key operation/Display	0: Does not stop.	1: Stops.	1	0.1									
Key operation/Display																
0: Does not stop.																
1: Stops.																
30	1	Machine sensor operation check	Used to check the sensors in the machine transport system with LED on the operation panel. <table border="1" style="width: 100%;"> <tr><th style="text-align: center;">Display</th></tr> <tr><td>&lt;Lighting at sensor ON&gt;</td></tr> <tr><td>Paper entry sensor: Machine position JAM LED</td></tr> <tr><td>Duplex sensor: SPF JAM LED <b>&lt;Only AR-206/207&gt;</b></td></tr> <tr><td>Paper exit sensor: JAM LED</td></tr> <tr><td>No. 2 cassette transport sensor: No. 2 cassette position LED</td></tr> <tr><td>No. 3 cassette transport sensor: No. 3 cassette position LED</td></tr> <tr><td><b>&lt;Only when an option is installed&gt;</b></td></tr> <tr><td>No. 4 cassette transport sensor: No. 4 cassette position LED</td></tr> <tr><td><b>&lt;Only when an option is installed&gt;</b></td></tr> <tr><td>Drum initial SW: DRUM LED</td></tr> </table>	Display	<Lighting at sensor ON>	Paper entry sensor: Machine position JAM LED	Duplex sensor: SPF JAM LED <b>&lt;Only AR-206/207&gt;</b>	Paper exit sensor: JAM LED	No. 2 cassette transport sensor: No. 2 cassette position LED	No. 3 cassette transport sensor: No. 3 cassette position LED	<b>&lt;Only when an option is installed&gt;</b>	No. 4 cassette transport sensor: No. 4 cassette position LED	<b>&lt;Only when an option is installed&gt;</b>	Drum initial SW: DRUM LED		
Display																
<Lighting at sensor ON>																
Paper entry sensor: Machine position JAM LED																
Duplex sensor: SPF JAM LED <b>&lt;Only AR-206/207&gt;</b>																
Paper exit sensor: JAM LED																
No. 2 cassette transport sensor: No. 2 cassette position LED																
No. 3 cassette transport sensor: No. 3 cassette position LED																
<b>&lt;Only when an option is installed&gt;</b>																
No. 4 cassette transport sensor: No. 4 cassette position LED																
<b>&lt;Only when an option is installed&gt;</b>																
Drum initial SW: DRUM LED																
41	2	OC document sensor adjustment <b>&lt;Other than AR-162&gt;</b>	Used to read the document sensor input value with paper and perform the sensor detection level adjustment. For the adjustment procedure of the document sensor input value, refer to the previous descriptions.													

Main code	Sub code	Contents	Details of operation	Initial value	Set range														
41	3	Document sensor light reception level display	Used to display the light reception level and the detection level of the document sensor. (The sensor level adjusted with SIM 41-2 is displayed.) <table border="1"> <thead> <tr> <th>Key operation</th> <th>Display</th> </tr> </thead> <tbody> <tr> <td>Light reception/Detection level select: Magnification ratio display key</td> <td>Display at the 3rd digit "A": Light reception level display "b": Document detection level display</td> </tr> <tr> <td>Sensor select: Auto</td> <td>Sensor A: A3 (11 17) document size LED</td> </tr> <tr> <td>magnification ratio select key</td> <td>Sensor B: A4 (8 1/2 14) document size LED</td> </tr> <tr> <td></td> <td>Sensor C: A4R (8 1/2 11) document size LED</td> </tr> <tr> <td></td> <td>Sensor D: B4 (8 1/2 5 1/2) document size LED</td> </tr> </tbody> </table> <p>&lt;Other than AR-162&gt;</p>	Key operation	Display	Light reception/Detection level select: Magnification ratio display key	Display at the 3rd digit "A": Light reception level display "b": Document detection level display	Sensor select: Auto	Sensor A: A3 (11 17) document size LED	magnification ratio select key	Sensor B: A4 (8 1/2 14) document size LED		Sensor C: A4R (8 1/2 11) document size LED		Sensor D: B4 (8 1/2 5 1/2) document size LED				
Key operation	Display																		
Light reception/Detection level select: Magnification ratio display key	Display at the 3rd digit "A": Light reception level display "b": Document detection level display																		
Sensor select: Auto	Sensor A: A3 (11 17) document size LED																		
magnification ratio select key	Sensor B: A4 (8 1/2 14) document size LED																		
	Sensor C: A4R (8 1/2 11) document size LED																		
	Sensor D: B4 (8 1/2 5 1/2) document size LED																		
42	1	Developing counter clear	Used to clear the Developing counter. *2																
43	1	Fusing temperature setting	Used to display the current setting of the fusing temperature at right. After selecting the fusing temperature with the magnification ratio display key, press the start key, and the set value is stored. The set range is 155 ~ 190°C. Use the magnification ratio key to adjust the value by -5°C. <table border="1"> <thead> <tr> <th>Key operation</th> </tr> </thead> <tbody> <tr> <td>Fusing temperature select: Magnification ratio display key</td> </tr> </tbody> </table>	Key operation	Fusing temperature select: Magnification ratio display key	170	155 ~ 190												
Key operation																			
Fusing temperature select: Magnification ratio display key																			
46	1	Copy density level adjustment	After completion of warmup, shading is performed and the currently set copy density level is displayed. For the adjustment procedure, refer to the previous descriptions. <table border="1"> <thead> <tr> <th>Key operation</th> <th>Display</th> </tr> </thead> <tbody> <tr> <td>Mode select:</td> <td>&lt;LED lighting at each mode selection&gt;</td> </tr> <tr> <td>Exposure mode select key</td> <td>Auto mode: AUTO LED</td> </tr> <tr> <td>Copy density level:</td> <td>Manual mode: MANUAL LED</td> </tr> <tr> <td>Copy quantity keys</td> <td>Photo mode: PHOTO LED</td> </tr> <tr> <td></td> <td>Toner save mode: MANUAL + PHOTO LED</td> </tr> <tr> <td></td> <td>AETS mode: AUTO + PHOTO LED</td> </tr> </tbody> </table>	Key operation	Display	Mode select:	<LED lighting at each mode selection>	Exposure mode select key	Auto mode: AUTO LED	Copy density level:	Manual mode: MANUAL LED	Copy quantity keys	Photo mode: PHOTO LED		Toner save mode: MANUAL + PHOTO LED		AETS mode: AUTO + PHOTO LED	48	1 ~ 99
Key operation	Display																		
Mode select:	<LED lighting at each mode selection>																		
Exposure mode select key	Auto mode: AUTO LED																		
Copy density level:	Manual mode: MANUAL LED																		
Copy quantity keys	Photo mode: PHOTO LED																		
	Toner save mode: MANUAL + PHOTO LED																		
	AETS mode: AUTO + PHOTO LED																		
	19	AE mode picture quality change	The currently set AE picture quality mode (gamma table) is displayed with the following set values. Enter a set value and press the START key, then the set value will be inputted. <table border="1"> <thead> <tr> <th>Key operation/Display</th> </tr> </thead> <tbody> <tr> <td>1: Picture quality priority mode</td> </tr> <tr> <td>2: Toner consumption priority mode</td> </tr> </tbody> </table>	Key operation/Display	1: Picture quality priority mode	2: Toner consumption priority mode	1	1 ~ 2											
Key operation/Display																			
1: Picture quality priority mode																			
2: Toner consumption priority mode																			
48	1	Main scanning (front/rear) direction magnification ratio adjustment (Copy/FAX/OC-SPF common)	After completion of warmup, shading is performed and the currently set main scanning (front/rear) direction magnification ratio adjustment and the OC mode document center off adjustment are performed. For the adjustment procedure, refer to the previous descriptions. <table border="1"> <thead> <tr> <th>Key operation</th> <th>Display</th> </tr> </thead> <tbody> <tr> <td>Adjustment mode select: Magnification ratio display key</td> <td>Auto magnification ratio adjustment: AUTO LED</td> </tr> <tr> <td>Manual main scanning direction magnification ratio adjustment</td> <td>Manual magnification ratio adjustment: MANUAL LED</td> </tr> <tr> <td>Set value: Copy quantity keys</td> <td>OC mode document center off adjustment: PHOTO LED</td> </tr> </tbody> </table>	Key operation	Display	Adjustment mode select: Magnification ratio display key	Auto magnification ratio adjustment: AUTO LED	Manual main scanning direction magnification ratio adjustment	Manual magnification ratio adjustment: MANUAL LED	Set value: Copy quantity keys	OC mode document center off adjustment: PHOTO LED	58	1 ~ 99						
Key operation	Display																		
Adjustment mode select: Magnification ratio display key	Auto magnification ratio adjustment: AUTO LED																		
Manual main scanning direction magnification ratio adjustment	Manual magnification ratio adjustment: MANUAL LED																		
Set value: Copy quantity keys	OC mode document center off adjustment: PHOTO LED																		
	2	OC mode sub scanning direction magnification ratio adjustment in copying	After completion of warmup, shading is performed and the currently set OC mode sub scanning direction magnification ratio adjustment in copying is performed. For the adjustment procedure, refer to the previous descriptions. <table border="1"> <thead> <tr> <th>Key operation</th> </tr> </thead> <tbody> <tr> <td>OC mode sub scanning direction magnification ratio in copying: Copy quantity keys</td> </tr> </tbody> </table>	Key operation	OC mode sub scanning direction magnification ratio in copying: Copy quantity keys	50	1 ~ 99												
Key operation																			
OC mode sub scanning direction magnification ratio in copying: Copy quantity keys																			

\*2: Display after clearing each counter  
000 (0.75 sec) Blank (0.35 sec) 000 (0.75 sec) Blank (1.0 sec) Repetition

Main code	Sub code	Contents	Details of operation	Initial value	Set range						
48	5	SPF mode sub scanning direction magnification ratio adjustment in copying  <b>&lt;Only when an SPF/RSPF is installed&gt;</b>	<p>After completion of warmup, shading is performed and the currently set SPF mode sub scanning direction magnification ratio adjustment in copying is performed. For the adjustment procedure, refer to the previous descriptions.</p> <table border="1"> <thead> <tr> <th>Key operation</th> <th>Display</th> </tr> </thead> <tbody> <tr> <td>Adjustment mode select: Exposure mode select key</td> <td>Auto: SPF mode sub scanning direction magnification ratio in copying</td> </tr> <tr> <td>Set value: Copy quantity keys</td> <td>Manual: RSPF mode sub scanning direction magnification ratio in copying</td> </tr> </tbody> </table>	Key operation	Display	Adjustment mode select: Exposure mode select key	Auto: SPF mode sub scanning direction magnification ratio in copying	Set value: Copy quantity keys	Manual: RSPF mode sub scanning direction magnification ratio in copying	33 45	1 ~ 99
Key operation	Display										
Adjustment mode select: Exposure mode select key	Auto: SPF mode sub scanning direction magnification ratio in copying										
Set value: Copy quantity keys	Manual: RSPF mode sub scanning direction magnification ratio in copying										
50	1	Copy image position adjustment	<p>After completion of warmup, shading is performed and the currently set value is displayed. For the adjustment procedure, refer to the previous descriptions.</p> <table border="1"> <thead> <tr> <th>Key operation</th> <th>Display</th> </tr> </thead> <tbody> <tr> <td>Adjustment mode select: Exposure mode select key</td> <td>Auto: Copy lead edge adjustment Manual: SPF lead edge adjustment <b>&lt;Not used&gt;</b></td> </tr> <tr> <td>Set value: Copy quantity keys</td> <td>Photo: Main cassette lead edge void adjustment Auto + Manual: Left edge void adjustment Auto + Photo: Rear edge void adjustment Auto + Manual + Photo: Option cassette lead edge void adjustment Manual + Photo: Multi bypass tray lead edge void adjustment None: Duplex lead edge void adjustment <b>&lt;Only AR-206/207&gt;</b> Exposure 1: Print start position adjustment Exposure 3: Duplex lead edge adjustment <b>&lt;Only AR-206/207&gt;</b> Exposure 5: Duplex rear edge void adjustment <b>&lt;Only AR-206/207&gt;</b></td> </tr> </tbody> </table>	Key operation	Display	Adjustment mode select: Exposure mode select key	Auto: Copy lead edge adjustment Manual: SPF lead edge adjustment <b>&lt;Not used&gt;</b>	Set value: Copy quantity keys	Photo: Main cassette lead edge void adjustment Auto + Manual: Left edge void adjustment Auto + Photo: Rear edge void adjustment Auto + Manual + Photo: Option cassette lead edge void adjustment Manual + Photo: Multi bypass tray lead edge void adjustment None: Duplex lead edge void adjustment <b>&lt;Only AR-206/207&gt;</b> Exposure 1: Print start position adjustment Exposure 3: Duplex lead edge adjustment <b>&lt;Only AR-206/207&gt;</b> Exposure 5: Duplex rear edge void adjustment <b>&lt;Only AR-206/207&gt;</b>	55 77 18 48 40 18 18 20 55 60 60	1 ~ 99
Key operation	Display										
Adjustment mode select: Exposure mode select key	Auto: Copy lead edge adjustment Manual: SPF lead edge adjustment <b>&lt;Not used&gt;</b>										
Set value: Copy quantity keys	Photo: Main cassette lead edge void adjustment Auto + Manual: Left edge void adjustment Auto + Photo: Rear edge void adjustment Auto + Manual + Photo: Option cassette lead edge void adjustment Manual + Photo: Multi bypass tray lead edge void adjustment None: Duplex lead edge void adjustment <b>&lt;Only AR-206/207&gt;</b> Exposure 1: Print start position adjustment Exposure 3: Duplex lead edge adjustment <b>&lt;Only AR-206/207&gt;</b> Exposure 5: Duplex rear edge void adjustment <b>&lt;Only AR-206/207&gt;</b>										
	10	Paper off center adjustment	<p>After completion of warmup, shading is performed and the currently set off center adjustment of each paper feed port is displayed. For the adjustment procedure, refer to the previous descriptions.</p> <table border="1"> <thead> <tr> <th>Key operation</th> <th>Display</th> </tr> </thead> <tbody> <tr> <td>Paper feed port tray select: Tray select key</td> <td>Main cassette: Main cassette select LED</td> </tr> <tr> <td>Off center adjustment value: numeric keys</td> <td>Manual paper feed: Manual feed select LED No. 2 cassette: No. 2 cassette select LED No. 3 cassette: No. 3 cassette select LED <b>&lt;Only when an option is installed&gt;</b> No. 4 cassette: No. 4 cassette select LED <b>&lt;Only when an option is installed&gt;</b> Duplex: None <b>&lt;Only AR-206/207&gt;</b></td> </tr> </tbody> </table>	Key operation	Display	Paper feed port tray select: Tray select key	Main cassette: Main cassette select LED	Off center adjustment value: numeric keys	Manual paper feed: Manual feed select LED No. 2 cassette: No. 2 cassette select LED No. 3 cassette: No. 3 cassette select LED <b>&lt;Only when an option is installed&gt;</b> No. 4 cassette: No. 4 cassette select LED <b>&lt;Only when an option is installed&gt;</b> Duplex: None <b>&lt;Only AR-206/207&gt;</b>	50	1 ~ 99
Key operation	Display										
Paper feed port tray select: Tray select key	Main cassette: Main cassette select LED										
Off center adjustment value: numeric keys	Manual paper feed: Manual feed select LED No. 2 cassette: No. 2 cassette select LED No. 3 cassette: No. 3 cassette select LED <b>&lt;Only when an option is installed&gt;</b> No. 4 cassette: No. 4 cassette select LED <b>&lt;Only when an option is installed&gt;</b> Duplex: None <b>&lt;Only AR-206/207&gt;</b>										
	13	OC mode document off center adjustment	<p>After completion of warmup, shading is performed and the currently set off center adjustment value for the document in OC reading is displayed. For the adjustment procedure, refer to the previous descriptions.</p> <table border="1"> <thead> <tr> <th>Key operation</th> </tr> </thead> <tbody> <tr> <td>Off center adjustment value: Copy quantity keys</td> </tr> </tbody> </table>	Key operation	Off center adjustment value: Copy quantity keys	50	1 ~ 99				
Key operation											
Off center adjustment value: Copy quantity keys											
	16	SPF mode document off center adjustment  <b>&lt;Only when an SPF/RSPF is installed&gt;</b>	<p>After completion of warmup, shading is performed and the currently set off center adjustment value for the document in SPF reading is displayed. For the adjustment procedure, refer to the previous descriptions.</p> <table border="1"> <thead> <tr> <th>Key operation</th> </tr> </thead> <tbody> <tr> <td>Off center adjustment value: Copy quantity keys</td> </tr> </tbody> </table>	Key operation	Off center adjustment value: Copy quantity keys	61	1 ~ 99				
Key operation											
Off center adjustment value: Copy quantity keys											

Main code	Sub code	Contents	Details of operation	Initial value	Set range						
50	18	Duplex memory reverse position adjustment  <b>&lt;Only when an duplex function is installed&gt;</b>	After completion of warmup, shading is performed and currently set value is displayed  <table border="1" style="width: 100%;"> <tr> <th colspan="2">Key operation</th> </tr> <tr> <td colspan="2">Memory reverse position adjustment value: Copy quantity keys</td> </tr> </table>	Key operation		Memory reverse position adjustment value: Copy quantity keys		58	1 ~ 99		
Key operation											
Memory reverse position adjustment value: Copy quantity keys											
50	19	Duplex rear edge void adjustment  <b>&lt;Only when an duplex function is installed&gt;</b>	After completion of warmup, shading is performed and currently set value is displayed.  <table border="1" style="width: 100%;"> <tr> <th>Key operation</th> <th>Display</th> </tr> <tr> <td>Adjustment mode select: Exposure mode select key</td> <td>Auto: SPF/R-SPF rear edge void</td> </tr> <tr> <td>Set value: Copy quantity keys</td> <td>Manual: R-SPF off center Photo: R-SPF lead edge void</td> </tr> </table>	Key operation	Display	Adjustment mode select: Exposure mode select key	Auto: SPF/R-SPF rear edge void	Set value: Copy quantity keys	Manual: R-SPF off center Photo: R-SPF lead edge void	37 52 70	1 ~ 99
Key operation	Display										
Adjustment mode select: Exposure mode select key	Auto: SPF/R-SPF rear edge void										
Set value: Copy quantity keys	Manual: R-SPF off center Photo: R-SPF lead edge void										
51	2	Resist amount adjustment	After completion of warmup, shading is performed and the currently set resist amount adjustment value is displayed.  <table border="1" style="width: 100%;"> <tr> <th>Key operation</th> <th>Display</th> </tr> <tr> <td>Resist amount adjustment: Copy quantity keys</td> <td>Auto: Main cassette Manual: 2nd tray</td> </tr> <tr> <td>Adjustment mode select: Exposure mode select key</td> <td>Photo: Manual feed tray Auto + Manual: Duplex <b>&lt;Only AR-206/207&gt;</b> Auto + Photo: RSPF <b>&lt;Only when an option is installed&gt;</b></td> </tr> </table>	Key operation	Display	Resist amount adjustment: Copy quantity keys	Auto: Main cassette Manual: 2nd tray	Adjustment mode select: Exposure mode select key	Photo: Manual feed tray Auto + Manual: Duplex <b>&lt;Only AR-206/207&gt;</b> Auto + Photo: RSPF <b>&lt;Only when an option is installed&gt;</b>	50 1 50 50 48	1 ~ 99 (6 ~ 94 for the duplex only)
Key operation	Display										
Resist amount adjustment: Copy quantity keys	Auto: Main cassette Manual: 2nd tray										
Adjustment mode select: Exposure mode select key	Photo: Manual feed tray Auto + Manual: Duplex <b>&lt;Only AR-206/207&gt;</b> Auto + Photo: RSPF <b>&lt;Only when an option is installed&gt;</b>										
63	1	Shading data check	The copy lamp is shifted to the shading position and it is lighted with the reference voltage at AD conversion fixed ( $V_{ref-} = 0.5V$ , $V_{ref+} = 4.5V$ ). The level of one pixel at the center at that time is displayed.  <table border="1" style="width: 100%;"> <tr> <th>Display</th> </tr> <tr> <td>Display section: Shading data</td> </tr> </table>	Display	Display section: Shading data						
Display											
Display section: Shading data											
64	1	Self print mode	Disregards the optical system and performs self printing in 1 by 2mode.								
67	14	Printer Flash ROM Data Download <b>&lt;Only when printer function is installed&gt;</b>	The machine enters the version up mode of the printer control PWB flash ROM. For details, refer to the later.								

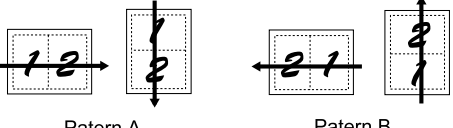
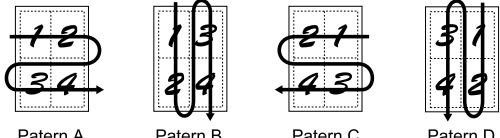
## [8] USER PROGRAMS

The user programs allow the parameters of certain functions to be set, changed, or canceled as desired.

### 1. List of user programs

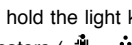
This copier has the following user programs.

Program name	Program No	Description	Default	Parameters
Auto clear time	1	Sets the auto clear time. The copier returns to the initial settings when the auto clear time elapses after the last copy is made.	60sec	0(OFF)
				1(30sec)
				2(60sec)
				3(90sec)
				4(120sec)
Preheat mode	2	Sets the time that elapses before the copier enters the preheat mode after any operation is made.	90sec	0(OFF)
				1(30sec)
				2(60sec)
				3(90sec)
				4(120sec)
Auto power shut-off timer	3	Sets the time that elapses before the copier enters the auto power shut-off mode after any operation is made.	30min	1(30min)
				2(60min)
				3(90min)
				4(120min)
				5(240min)
Stream feeding mode*	4	Enables or disables the stream feeding mode when an optional SPF or RSPF is installed.	OFF	0(OFF)
				1(ON)
Auto power shut-off setting	5	Enables or disables the auto power shut-off mode.	ON	0(OFF)
				1(ON)
Border line for 2 in 1 or 4 in 1*	6	Enables or disables the border line which is printed in 2 in 1 or 4 in 1 copying when an electronic sorting kit and an SPF or RSPF are installed.	OFF	0(OFF)
				1(ON)
Rotation copy*	7	Enables or disables rotation of original images.	ON	0(OFF)
				1(ON)
Auto paper select mode	8	Enables or disables the auto paper selection.	ON	0(OFF)
				1(ON)
Auto tray switching	9	Enables or disables the automatic tray switching which occurs when paper in a tray runs out. (This switching cannot switch to the bypass tray.)	ON	0(OFF)
				1(ON)
Auditing mode	10	Enables or disables the auditing mode, which controls access to copier.	OFF	0 (OFF)
				1 (ON)
Account number entry	11	Registers accounts for auditing mode.	-	-
Account number change	12	Changes account numbers for auditing mode.	-	-
Account number deletion	13	Deletes accounts for auditing mode.	-	-
Number of copies per account	14	Displays the total number of copies made against account numbers.	-	-
Resetting account	15	Resets all audit accounts or resets any desired individual account.	-	-
Erase width adjustment*	16	Sets the amount of the edge erase and center erase areas.	10mm[1/2"]	0(0mm[0"])
				1(5mm[1/4"])
				2(10mm[1/2"])
				3(15mm[3/4"])
				4(20mm[1"])

Program name	Program No	Description	Default	Parameters
Layout in 2 in 1 copy*	17	Selects a pattern for 2 in 1 copying.  Patern A                      Patern B	Pattern 1	1(Pattern 1)
				2(Pattern 2)
Layout in 4 in 1 copy*	18	Selects a pattern for 4 in 1 copying.  Patern A      Patern B      Patern C      Patern D	Pattern 1	1(Pattern 1)
				2(Pattern 2)
				3(Pattern 3)
				4(Pattern 4)
Offset of paper output tray	19	Enables or disables the offset function of the paper output tray. The offset function can be specified respectively for the upper and lower areas separated by an optional job separator tray kit.	Upper ON, Lower ON	0(Upper OFF, Lower OFF)
				1(Upper ON, Lower On)
				2(Upper ON, Lower OFF)
				3(Upper OFF, Lower On)
Image rotation in duplex copying	20	Enables or disables image rotation (180°) of the front side in one-sided to two-sided copying or two-sided to one-sided copying.	OFF	0(OFF)
				1(ON)
Location of the margin*	22	Selects the location of the expanded margin.	Left	1(Left)
				2(Top)

\* These programs do not affect the copier functions unless certain optional equipment is installed.

## 2. Setting the user programs

- Press and hold the light key for more than 5 seconds until all the alarm indicators (  ) blink and "- ." appears in the copy quantity display.
- Enter a program number using the numeric keys.
  - The selected program number will blink in the copy quantity display.
  - If a mistake is made in steps 2) to 4), press the CLEAR key. The copier will return to step 2).

For example, to change the setting of the auto power shut-off timer, press key 3.

- Press the START key.
  - For programs 1 to 9 and 16 to 19, the entered program number will be steadily lit on the left side of the copy quantity display and the currently selected parameter number for the program will blink on the right side.
  - For programs 10 to 15 (programs for auditing accounts), the display varies with the program number.
- Select the desired parameter using the numeric keys.
  - The entered parameter number will blink on the right side of the copy quantity display.
  - The parameters are shown in the table below.

For example, to change the setting of the auto power shut-off timer to 60 min., press key 2.

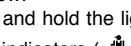
\*\* In European countries, the default setting of the preheat mode is 1 (30 sec.). For other programs, factory-default settings in these countries are same to those shown above with an asterisk (\*).

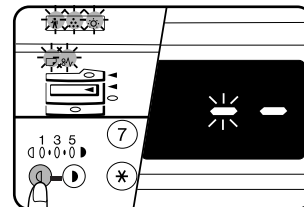
Note: If you select "0" (OFF) in a program, the corresponding function will be disabled.

- Press the START key.
  - The right-hand number in the copy quantity display will be steadily lit and the entered value will be stored.
- To continue with other user programs, press the PRESS key and then repeat steps 2 to 5. To exit the user program mode, press the light key.
  - All the alarm indicators will go out.

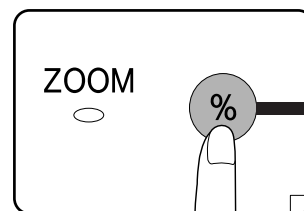
## 3. Toner cartridge life

To find out the approximate quantity of toner remaining, follow the procedure below.

- Press and hold the light key for more than 5 seconds until all the alarm indicators (  ) blink and "- ." appears in the copy quantity display.



- Press and hold the copy ratio display key for more than 5 seconds.
  - The approximate quantity of toner remaining will be indicated as a percent in the copy quantity display. ("100", "75", "50", "25", "10" or "LO" is displayed. When "LO" is displayed, the toner is down to less than 10%.)



- Press the light key.
  - All the alarm indicators will go out.

# [9] TROUBLE CODE LIST

## 1. Trouble code list

Trouble code	Trouble content	
E1	00	E-Sort board communication trouble
	10	E-Sort board trouble
	11	E-Sort ASIC error
	12	E-Sort CODEC error
	13	E-Sort flash ROM error
	14	E-Sort RAM error
	15	E-Sort page memory error
	16	E-Sort SIMM error
	17	Rotation RAM error
	80	E-Sort board communication trouble (Protocol)
	81	E-Sort board communication trouble (Parity)
	82	E-Sort board communication trouble (Overrun)
	84	E-Sort board communication trouble (Framing)
	88	E-Sort board communication trouble (Time-out)
E7	03	LSU trouble
	04	CCD white level trouble
	05	CCD black level trouble
F1	06	Shifter motor trouble
F2	04	CRUM data read trouble
F5	02	Copy lamp error
F6	00	FAX board communication trouble
	10	FAX board trouble
	80	FAX board communication trouble (Protocol)
	81	FAX board communication trouble (Parity)
	82	FAX board communication trouble (Overrun)
	84	FAX board communication trouble (Framing)
	88	FAX board communication trouble (Time-out)
F9	00	Printer PWB communication trouble
	10	Printer PWB trouble
	80	Printer PWB communication trouble (Protocol)
	81	Printer PWB communication trouble (Parity)
	82	Printer PWB communication trouble (Overrun)
	84	Printer PWB communication trouble (Framing)
	88	Printer PWB communication trouble (Time-out)
H2	00	Thermistor open detection
H3	00	Heat roller abnormally high temperature
H4	00	Heat roller abnormally low temperature
L1	00	Mirror base feed trouble
L3	00	Mirror base return trouble
L4	01	Main motor lock
	10	Job separator motor abnormality
L6	10	Polygon motor lock
L8	01	Zero cross pulse (FW) trouble
U2	04	EEPROM serial communication error
	11	Counter check sum error
	12	Adjustment value check sum error (EEPROM)
	40	CRUM communication error
U3	29	Mirror base home position error

U9	00	Operation control PWB communication trouble
	80	Operation control PWB communication trouble (Protocol)
	81	Operation control PWB communication trouble (Parity)
	82	Operation control PWB communication trouble (Overrun)
	84	Operation control PWB communication trouble (Framing)
	88	Operation control PWB communication trouble (Time-out)
U95		Operation control PWB connection error
U99		Operation control PWB connection error

## 2. Details of trouble codes

Main code	Sub code	Detail of trouble	
E1	00	Content	Communication trouble between MCU and E-Sort.
		Detail	Communication setup error, framing, parity, protocol error
		Cause	E-Sort PWB connector disconnection E-Sort PWB MCU PWB harness failure E-Sort Motherboard connector pin breakage. E-Sort PWB ROM defect, data failure
		Check and remedy	Check the connectors and harness of the E-Sort PWB and the MCU PWB. Check grounding of the machine. Check the ROM of the E-Sort PWB.
	10	Content	E-Sort PWB trouble
		Detail	Communication trouble between MCU and E-Sort
		Cause	E-Sort PWB connector disconnection E-Sort PWB MCU PWB harness failure E-Sort Motherboard connector pin breakage. E-Sort PWB ROM defect, data failure
		Check and remedy	Check the connectors and harness of the E-Sort PWB and the MCU PWB. Check grounding of the machine. Check the ROM of the E-Sort PWB.
	11	Content	E-Sort PWB ASIC error
Detail		E-Sort PWB ASIC abnormality	
Cause		An ASIC abnormality is detected in the E-Sort PWB. Control circuit hung up due to noises ASIC peripheral circuit error	

Main code	Sub code		Detail of trouble
E1	11	Check and remedy	Replace the E-Sort PWB. Check grounding of the machine.
		12	Content
		Detail	E-Sort PWB CODEC error
		Cause	A CODEC error is detected in the E-Sort PWB. Control circuit hung up due to noises CODEC peripheral circuit error
		Check and remedy	Replace the E-Sort PWB. Check grounding of the machine.
	13	Content	E-Sort PWB Flash ROM error
		Detail	E-Sort PWB Flash ROM abnormality
		Cause	A Flash ROM abnormality is detected in the E-Sort PWB. Control circuit hung up due to noises Flash ROM peripheral circuit error
		Check and remedy	Replace the E-Sort PWB. Rewrite the flash ROM data. Check grounding of the machine.
	14	Content	E-Sort PWB Work RAM error
		Detail	E-Sort PWB Work RAM abnormality
		Cause	A Work RAM abnormality is detected in the E-Sort PWB. Control circuit hung up due to noises RAM peripheral circuit error
		Check and remedy	Replace the E-Sort PWB. Check grounding of the machine.
	15	Content	E-Sort PWB Page Memory error
		Detail	E-Sort PWB Page Memory abnormality
		Cause	A Page Memory abnormality is detected in the E-Sort PWB. Control circuit hung up due to noises Page Memory peripheral circuit error
		Check and remedy	Replace the E-Sort PWB. Check grounding of the machine.
	16	Content	E-Sort PWB SIMM error
		Detail	E-Sort PWB SIMM abnormality
		Cause	A SIMM abnormality is detected in the E-Sort PWB. Control circuit hung up due to noises SIMM peripheral circuit error
Check and remedy		Replace the E-Sort PWB. Replace the SIMM. Check grounding of the machine.	
17	Content	E-Sort PWB image rotating RAM error	
	Detail	E-Sort PWB image rotating RAM abnormality	

Main code	Sub code		Detail of trouble
E1	17	Cause	An image rotating RAM abnormality is detected in the E-Sort PWB. Control circuit hung up due to noises Image rotating RAM peripheral circuit error
		Check and remedy	Replace the E-Sort PWB. Check grounding of the machine.
	80	Content	E-Sort PWB communication trouble (protocol)
		Detail	Communication trouble between MCU and printer PWB (Protocol error)
		Cause	E-Sort PWB connector disconnection E-Sort PWB MCU PWB harness failure E-Sort Motherboard connector pin breakage. E-Sort PWB ROM defect, data failure
		Check and remedy	Check the connectors and harness of the E-Sort PWB and the MCU PWB. Check grounding of the machine. Check the ROM of the E-Sort PWB.
	81	Content	E-Sort PWB communication trouble (Parity)
		Detail	Communication trouble between MCU and printer E-Sort (Parity error)
		Cause	E-Sort PWB connector disconnection E-Sort PWB MCU PWB harness failure E-Sort Motherboard connector pin breakage. E-Sort PWB ROM defect, data failure
		Check and remedy	Check the connectors and harness of the E-Sort PWB and the MCU PWB. Check grounding of the machine. Check the ROM of the E-Sort PWB.
	82	Content	E-Sort PWB communication trouble (Overrun)
		Detail	Communication trouble between MCU and E-Sort PWB (Overrun error)
		Cause	E-Sort PWB connector disconnection E-Sort PWB MCU PWB harness failure E-Sort Motherboard connector pin breakage. E-Sort PWB ROM defect, data failure

Main code	Sub code		Detail of trouble
E1	82	Check and remedy	Check the connectors and harness of the E-Sort PWB and the MCU PWB. Check grounding of the machine. Check the ROM of the E-Sort PWB.
		84	Content
		Detail	Communication trouble between MCU and E-Sort PWB (Framing error)
		Cause	E-Sort PWB connector disconnection E-Sort PWB MCU PWB harness failure E-Sort Motherboard connector pin breakage. E-Sort PWB ROM defect, data failure
		Check and remedy	Check the connectors and harness of the E-Sort PWB and the MCU PWB. Check grounding of the machine. Check the ROM of the E-Sort PWB.
	88	Content	E-Sort PWB communication trouble (Time-out)
		Detail	Communication trouble between MCU and E-Sort PWB (Time-out error)
		Cause	E-Sort PWB connector disconnection E-Sort PWB and MCU PWB harness failure E-Sort Motherboard connector pin breakage. E-Sort PWB ROM defect, data failure
		Check and remedy	Check the connectors and harness of the E-Sort PWB and the MCU PWB. Check grounding of the machine. Check the ROM of the E-Sort PWB.
	E7	03	Content
Detail			After the polygon motor becomes active, BD signal (HSYNC) from the LSU is not detected at the specified times (41 10 times within 20msec).
Cause			LSU connector disconnection or LSU's inside harness disconnection or breakage Polygon motor rotation abnormality Improper positioning of the laser home position sensor in the LSU. Laser power voltage failure Laser emitting diode abnormality MCU PWB abnormality

Main code	Sub code		Detail of trouble	
E7	03	Check and remedy	Improper connection of the LSU connector Check the polygon motor operation with SIM 25-10. Check printing with SIM64-1. Check laser emission of laser emitting diode. Check the LSU unit. Check the MCU PWB.	
		04	Content	CCD white level trouble
		Detail	CCD white reference level which is read during the copy lamp lighting is abnormal.	
		Cause	Flat cable installation failure to CCD unit Dirt on the mirror, lens, and reference white plate Copy lamp lighting failure CCD unit installation failure CCD unit abnormality MCU PWB abnormality	
		Check and remedy	Clean the mirror, the lens, and the reference white plate. Check the copy lamp (SIM 5-3) ON. Carriage unit position failure Check the sub scanning direction distortion adjustment (F rail height). CCD unit check MCU PWB check	
	05	Content	CCD black level trouble	
		Detail	CCD black level which is read while the copy lamp is off is abnormal.	
		Cause	Flat cable installation failure CCD unit abnormality MCU PWB abnormality	
		Check and remedy	Check flat cable installation to the CCD unit. CCD unit check MCU PWB check	
	F1	06	Content	Shifter motor trouble
			Details	The home position is not detected within 1 sec after shifter motor drive.
			Cause	The shifter home position sensor is defective. The shifter motor is defective. The shifter motor periphery circuit is defective. The condition of the MCU PWB JP4 is wrong. The assembly of the shifter motor unit is improper.
		Check and remedy	Check the shifter operation by means of SIM3-2 and 3. Check the harnesses and connectors. Check whether the shifter unit is properly assembled. Check whether the condition of the MCU PWB JP4 is correct.	

Main code	Sub code		Detail of trouble
F2	04	Content	CRUM data read trouble
		Detail	Communication error between CRUM PWB and MCU PWB
		Cause	CRUM PWB data error MCU PWB error MCU PWB EEPROM error Disconnection between CRUM (toner cartridge) and MCU PWB
		Check and remedy	Replace the toner cartridge. Replace MCU PWB. Replace MCU PWB EEPROM Check and fix connection between CRUM (toner cartridge) and MCU PWB.
F5	02	Content	Copy lamp error
		Detail	Copy lamp voltage detection error
		Cause	Power unit trouble Copy lamp trouble Inverter trouble MCU PWB trouble
		Check and remedy	Replace the power unit. Check the copy lamp ON with SIM 5-3. Replace the copy lamp. Replace the inverter. Replace the MCU PWB.
F6	00	Content	Communication trouble between MCU and FAX (MCU detection)
		Detail	Communication establishment error, framing error, parity error, protocol error
		Cause	Bad connection of FAX control PWB connector Defective harness between FAX control PWB and MCU PWB. Motherboard connector pin breakage FAX control PWB ROM error, data error
		Check and remedy	Check connector/harness of FAX control PWB and MCU PWB. Check grounding of the machine. Check FAX control PWB ROM.
	10	Content	FAX control PWB trouble
		Detail	Communication trouble between MCU and FAX control PWB
		Cause	Bad connection of FAX control PWB connector Defective harness between FAX control PWB and MCU PWB Motherboard connector pin breakage FAX control PWB ROM error/Data error
		Check and remedy	Check connector/harness between FAX control PWB and MCU PWB. Check grounding of the machine. Check FAX control PWB ROM.
	80	Content	FAX control PWB communication trouble (Protocol)
		Detail	Communication trouble between MCU and FAX control PWB (Protocol error)

Main code	Sub code		Detail of trouble	
F6	80	Cause	Bad connection of FAX control PWB connector Defective harness between FAX control PWB and MCU PWB Motherboard connector pin breakage FAX control PWB ROM error/Data error	
		Check and remedy	Check connector/harness between FAX control PWB and MCU PWB. Check grounding of the machine. Check FAX control PWB ROM.	
		81	Content	FAX control PWB communication trouble (Parity)
			Detail	Communication trouble between MCU and FAX control PWB (Parity error)
	81	Cause	Bad connection of FAX control PWB connector Defective harness between FAX control PWB and MCU PWB Motherboard connector pin breakage FAX control PWB ROM error/Data error	
		Check and remedy	Check connector/harness between FAX control PWB and MCU PWB. Check grounding of the machine. Check FAX control PWB ROM.	
	82	Content	FAX control PWB communication trouble (Overrun)	
		Detail	Communication trouble between MCU and FAX control PWB (Overrun error)	
		Cause	Bad connection of FAX control PWB connector Defective harness between FAX control PWB and MCU PWB Motherboard connector pin breakage FAX control PWB ROM error/Data error	
		Check and remedy	Check connector/harness between FAX control PWB and MCU PWB. Check grounding of the machine. Check FAX control PWB ROM.	
	84	Content	FAX control PWB communication trouble (Framing)	
		Detail	Communication trouble between MCU and FAX control PWB (Framing error)	
Cause		Bad connection of FAX control PWB connector Defective harness between FAX control PWB and MCU PWB Motherboard connector pin breakage FAX control PWB ROM error/Data error		
Check and remedy		Check connector/harness between FAX control PWB and MCU PWB. Check grounding of the machine. Check FAX control PWB ROM.		

Main code	Sub code		Detail of trouble
F6	88	Content	FAX control PWB communication trouble (Timeout)
		Detail	Communication trouble between MCU and FAX control PWB (Timeout error)
		Cause	Bad connection of FAX control PWB connector Defective harness between FAX control PWB and MCU PWB Motherboard connector pin breakage FAX control PWB ROM error/Data error
		Check and remedy	Check connector/harness between FAX control PWB and MCU PWB. Check grounding of the machine. Check FAX control PWB ROM.
F9	00	Content	Communication trouble between MCU and printer PWB (MCU detection)
		Detail	Communication establishment error, framing error, parity error, protocol error
		Cause	Bad connection of printer PWB connector Defective harness between printer PWB and MCU PWB. Motherboard connector pin breakage Printer PWB ROM error, data error
		Check and remedy	Check connector/harness of printer PWB and MCU PWB. Check grounding of the machine. Check printer PWB ROM.
	10	Content	Printer PWB trouble
		Detail	Communication trouble between MCU and printer PWB
		Cause	Bad connection of printer PWB connector Defective harness between printer PWB and MCU PWB. Motherboard connector pin breakage Printer PWB ROM error, data error
		Check and remedy	Check connector/harness of printer PWB and MCU PWB. Check grounding of the machine. Check printer PWB ROM.
	80	Content	Printer PWB communication trouble (Protocol)
		Detail	Communication trouble between MCU and printer PWB (Protocol error)
		Cause	Bad connection of printer PWB connector Defective harness between printer PWB and MCU PWB. Motherboard connector pin breakage Printer PWB ROM error, data error
		Check and remedy	Check connector/harness of printer PWB and MCU PWB. Check grounding of the machine. Check printer PWB ROM.

Main code	Sub code		Detail of trouble
F9	81	Content	Printer PWB communication trouble (Parity)
		Details	Communication trouble between MCU and printer PWB(Parity error)
		Cause	Printer PWB connector disconnection Printer PWB MCU PWB harness failure Printer PWB mother board connector pin breakage. Printer PWB ROM defect,data failure
		Check and remedy	Check the connectors and harness of the printer PWB and the MCU PWB. Check grounding of the machine. Check the ROM of the printer PWB.
	82	Content	Printer PWB communication trouble (Overrun)
		Details	Communication trouble between MCU and printer PWB(Overrun error)
		Cause	Printer PWB connector disconnection Printer PWB MCU PWB harness failure Printer PWB mother board connector pin breakage. Printer PWB ROM defect,data failure
		Check and remedy	Check the connectors and harness of the printer PWB and the MCU PWB. Check grounding of the machine. Check the ROM of the printer PWB.
	84	Content	Printer PWB communication trouble (Framing)
		Details	Communication trouble between MCU and printer PWB(Framing error)
		Cause	Printer PWB connector disconnection Printer PWB MCU PWB harness failure Printer PWB mother board connector pin breakage. Printer PWB ROM defect,data failure
		Check and remedy	Check the connectors and harness of the printer PWB and the MCU PWB. Check grounding of the machine. Check the ROM of the printer PWB.
88	Content	Printer PWB communication trouble (Time-out)	
	Details	Communication trouble between MCU and printer PWB(Time-out error)	

Main code	Sub code		Detail of trouble
F9	88	Cause	Printer PWB connector disconnection Printer PWB MCU PWB harness failure Printer PWB mother board connector pin breakage. Printer PWB ROM defect,data failure
		Check and remedy	Check the connectors and harness of the printer PWB and the MCU PWB. Check grounding of the machine. Check the ROM of the printer PWB.
H2	00	Content	Thermistor open detection
		Detail	Fusing thermistor open
		Cause	Thermistor defect MCU PWB defect Fusing section connector contact failure Power supply failure Fusing unit not installed
		Check and remedy	Check the harness and the connector of the thermistor and the MCU. Clear the self diag display with SIM 14.
H3	00	Content	Heat roller abnormally high temperature
		Detail	Fusing temperature of 220 ~ 240°C.
		Cause	Thermistor defect MCU PWB defect Fusing connector connection failure Power supply failure
		Check and remedy	Check the heater lamp blinking with SIM 5-2. When the lamp blinks normally: Check the thermistor and the harness. Check the MCU PWB thermistor input circuit. When the lamp lights up instead of blinking: Check the lamp control circuit of the power supply PWB and the MCU PWB. Clear the trouble with SIM 14.
H4	00	Content	Heat roller abnormally low temperature
		Detail	When the temperature does not reach 155°C within 55 sec after turning on the power, or when it falls under 145°C during printing, or when it falls under 100°C during pre-heating.
		Cause	Thermistor failure Heater lamp failure MCU PWB failure Thermostat failure Power supply failure Interlock switch failure

Main code	Sub code		Detail of trouble
H4	00	Check and remedy	Check blinking of the heater lamp with SIM 5-2. When the lamp blinks normally: Check the thermistor and the harness. Check the MCU PWB thermistor input circuit. When the lamp does not light: Check for heater lamp disconnection or thermostat disconnection. Check the interlock switch. Check the power supply PWB and MCU PWB lamp control circuit. Clear the trouble with SIM 14.
L1	00	Content	Mirror base feed trouble
		Detail	The mirror home position (MHPS) does not turn off though the feed operation is completed during mirror initial operation after turning on the power. The mirror home position (MHPS) does not turn off during shading operation. The mirror home position (MHPS) does not turn on when the mirror base is returned for the specified time after copy feed is started and SPF scanning position shift is performed.
		Cause	Mirror unit defect Mirror home position sensor defect MCU PWB defect Scanner wire disconnection
		Check and remedy	Check the scanning operation with SIM 1-1.
L3	00	Content	Mirror base return trouble
		Detail	The mirror home position (MHPS) does not turn on though the mirror base returning is completed during mirror initial operation after turning on the power. The mirror home position does not turn on when the mirror is returned to the home position during shading. The mirror home position (MHPS) does not turn on when the mirror base returning is completed for the specified time (about 6 sec) after copy return start.
		Cause	Mirror unit Mirror home position sensor defect MCU PWB defect Scanner wire disconnection
		Check and remedy	Check the scanning operation with SIM 1-1.
L4	01	Content	Main motor lock
		Detail	The main motor encoder pulse is not detected for 400msec.
		Cause	Main motor defect Harness disconnection between the MCU PWB and the main motor. Control circuit failure

Main code	Sub code		Detail of trouble
L4	01	Check and remedy	Check the main motor operation with SIM 25-1. Check the harness and the connector between the MCU PWB and the main motor.
		Content	Job separator motor trouble
	10	Details	When the home is not detected within 2.5 sec after the job separator tray starts to move upwards.
		Cause	The job separator upper limit detection sensor is defective. The job separator motor is defective. The job separator motor periphery circuit is defective. The condition of the MCU PWB JP5 is wrong.
		Check and countermeasure	Check the job separator operation by means of SIM3-2 and 4. Check the harnesses and connectors. Check whether the condition of the MCU PWB JP5 is correct.
L6	10	Content	Polygon motor lock
		Detail	The lock signal (the specified rotation speed signal) is not supplied within the specified time (about 6 sec)after starting the polygon motor rotation.
		Cause	LSU connector disconnection or harness disconnection in the LSU.
		Check and remedy	Check the operation of the polygon motor with SIM 25-10. Check the harness and the connector connection. LSU replacement
L8	01	Content	Zero cross pulse (FW) trouble
		Detail	Zero cross pulse width is shifted by 55Hz 10% or more.
		Cause	MCU PWB defect Power supply unit breakdown
		Check and remedy	Check the harness and the connector. MCU PWB replacement Power supply unit replacement
U2	04	Content	EEPROM serial communication error
		Detail	Error in communication with EEPROM
		Cause	EEPROM failure Installation of uninitialized EEPROM MCU PWB EEPROM access circuit failure
		Check and remedy	Check that the EEPROM is properly set. To prevent against loss of counter/adjustment values, record the values with simulation. U2 trouble cancel with SIM 16 MCU PWB replacement

Main code	Sub code		Detail of trouble
U2	11	Content	Counter check sum error
		Detail	Counter check sum value stored in the EEPROM is abnormal.
		Cause	EEPROM failure Control circuit hung up by noises MCU PWB EEPROM access circuit defect
		Check and remedy	Check that the EEPROM is properly set. To prevent against loss of counter/adjustment values, record the values with simulation. U2 trouble cancel with SIM 16 MCU PWB replacement
	12	Content	Adjustment value check sum error (EEPROM)
		Detail	Adjustment value data area check sum error
		Cause	EEPROM failure Control circuit hung up by noises MCU PWB EEPROM access circuit failure
		Check and remedy	Check that the EEPROM is properly set. To prevent against loss of counter/adjustment values, record the values with simulation. U2 trouble cancel with SIM 16 MCU PWB replacement
	40	Content	CRUM communication error
		Detail	Toner cartridge CRUM data read error
		Cause	A toner cartridge of a different destination is installed. EEPROM trouble Toner cartridge CRUM PWB trouble MCU PWB trouble CRUM connector disconnection
		Check and remedy	Install a specified toner cartridge. Check the SIM 26-6 setup. Replace the EEPROM. Replace the toner cartridge. Replace the MCU PWB. Check connection of the CRUM connector. Execute SIM 16.
U3	29	Content	Mirror base home position error
		Detail	Home position is not detected when starting mirror base shift.
		Cause	Mirror unit defect Mirror home position sensor defect MCU PWB defect Scanner wire disconnection
		Check and remedy	Check the scanning operation with SIM 1-1.
U9	00	Content	Communication trouble between MCU and OPE (OPE detection)
		Detail	Communication setup error, framing, parity, protocol error

Main code	Sub code		Detail of trouble
U9	00	Cause	Operation control PWB connector disconnection Operation control PWB MCU PWB harness failure
		Check and remedy	Check the connectors and harness of the operation control PWB and the MCU PWB. Check grounding of the machine. Check the ROM of the operation control PWB.
	80	Content	Operation control PWB communication trouble (Protocol)
		Detail	Communication trouble between MCU and the operation control PWB (Protocol error)
		Cause	Operation control PWB connector disconnection Operation control PWB MCU PWB harness failure
		Check and remedy	Check the connectors and harness of the operation control PWB and the MCU PWB. Check grounding of the machine.
	81	Content	Operation control PWB communication trouble (Parity)
		Detail	Communication trouble between MCU and the operation control PWB (Parity error)
		Cause	Operation control PWB connector disconnection Operation control PWB MCU PWB harness failure
		Check and remedy	Check the connectors and harness of the operation control PWB and the MCU PWB. Check grounding of the machine.
	82	Content	Operation control PWB communication trouble (Overrun)
		Detail	Communication trouble between MCU and the operation control PWB (Overrun error)
		Cause	Operation control PWB connector disconnection Operation control PWB MCU PWB harness failure
		Check and remedy	Check the connectors and harness of the operation control PWB and the MCU PWB. Check grounding of the machine.
	84	Content	Operation control PWB communication trouble (Framing)
		Detail	Communication trouble between MCU and the operation control PWB (Framing error)
		Cause	Operation control PWB connector disconnection Operation control PWB MCU PWB harness failure
		Check and remedy	Check the connectors and harness of the operation control PWB and the MCU PWB. Check grounding of the machine.

Main code	Sub code		Detail of trouble
U9	88	Content	Operation control PWB communication trouble (Time-out)
		Detail	Communication trouble between MCU and the operation PWB (Time-out error)
		Cause	Operation control PWB connector disconnection Operation control PWB MCU PWB harness failure
		Check and remedy	Check the connectors and harness of the operation control PWB and the MCU PWB. Check grounding of the machine.
U95		Content	Operation control PWB communication error
		Detail	Communication error between the operation control PWB and the MCU PWB (Detected by the OPE-PWB)
		Cause	Disconnection or reverse connection of the flat cable between the Operation control PWB and the MCU PWB. Operation control PWB trouble MCU PWB trouble Connector trouble of the operation control PWB and the MCU PWB
		Check and remedy	Check insertion of or replace the flat cable between the operation control PWB and the MCU PWB. Replace the operation control PWB. Replace the MCU PWB. Check connection of the connector of the operation control PWB and the MCU PWB.
U99		Content	Operation control PWB communication error
		Detail	Communication error between the operation control PWB and the MCU PWB (Detected by the OPE-PWB)
		Cause	Disconnection or reverse connection of the flat cable between the Operation control PWB and the MCU PWB. Operation control PWB trouble MCU PWB trouble Connector trouble of the operation control PWB and the MCU PWB
		Check and remedy	Check insertion of or replace the flat cable between the operation control PWB and the MCU PWB. Replace the operation control PWB. Replace the MCU PWB. Check connection of the connector of the operation control PWB and the MCU PWB.