

[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	
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)	
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)	
F9	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)	
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)
U9	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	E9-*** 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.		
		E11	11	Content	E-Sort PWB ASIC error
				Detail	E-Sort PWB ASIC abnormality
E11	11	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
E11	11	Check and remedy	Replace the E-Sort PWB. Check grounding of the machine.
	12	Content	E-Sort PWB CODEC error
		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
E11	17	Cause	A 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.
E1	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	E-Sort PWB communication trouble (Framing)
		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 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	LSU trouble
			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. 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	
	H2	00	Content	Thermistor open detection
			Detail	Fusing thermistor open
			Cause	Thermistor defect MCU PWB defect Fusing section connector contact failure Power 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 failure	

Main code	Sub code		Detail of trouble
H3	00	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 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 failure Interlock switch failure
		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.
		Check and remedy	When the lamp does not light: Check for heater lamp disconnection or thermostat disconnection. Check the interlock switch. Check the power 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.

Main code	Sub code		Detail of trouble
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
		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.
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 unit breakdown
		Check and remedy	Check the harness and the connector. MCU PWB replacement Power unit replacement
U2	04	Content	EEPROM serial communication error
		Detail	Error in communication with EEPROM

Main code	Sub code		Detail of trouble	
U2	04	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	
	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	
	12	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	
	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	U9-** Communication trouble between MCU and OPE (OPE detection)	
		Detail	Communication setup error, framing, parity, protocol error	
		Cause	Operation control PWB connector disconnection Operation control PWB MCU PWB harness failure	

Main code	Sub code		Detail of trouble	
U9	00	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.
F6	00	Content	F6*: 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 WPB
		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)
		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	81	Content	FAX control PWB communication trouble (Parity)
		Detail	Communication trouble between MCU and FAX control PWB (Parity 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.
	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.
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.	

Main code	Sub code		Detail of trouble
F6	88	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	F9: 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
	00	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

Main code	Sub code		Detail of trouble
F9	10	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.
F9	80	Content	Printer PWB communication trouble (Protocol)
		Detail	Communication trouble between MCU and printer PWB (Protocol error)
	Cause	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.