

Portable Manual

MF7200/7100 Series

MF7170i



Canon

Application

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


Printed in Japan

Caution

Use of this manual should be strictly supervised to avoid disclosure of confidential information.



Symbols Used

This documentation uses the following symbols to indicate special information:

Symbol	Description
	Indicates an item of a non-specific nature, possibly classified as Note, Caution, or Warning.
	Indicates an item requiring care to avoid electric shocks.
	Indicates an item requiring care to avoid combustion (fire).
	Indicates an item prohibiting disassembly to avoid electric shocks or problems.
	Indicates an item requiring disconnection of the power plug from the electric outlet.
 Memo	Indicates an item intended to provide notes assisting the understanding of the topic in question.
 REF.	Indicates an item of reference assisting the understanding of the topic in question.
	Provides a description of a service mode.
	Provides a description of the nature of an error indication.

The following rules apply throughout this Service Manual:

1. Each chapter contains sections explaining the purpose of specific functions and the relationship between electrical and mechanical systems with reference to the timing of operation.

In the diagrams,  represents the path of mechanical drive; where a signal name accompanies the symbol, the arrow  indicates the direction of the electric signal.

The expression "turn on the power" means flipping on the power switch, closing the front door, and closing the delivery unit door, which results in supplying the machine with power.

2. In the digital circuits, '1' is used to indicate that the voltage level of a given signal is "High", while '0' is used to indicate "Low". (The voltage value, however, differs from circuit to circuit.) In addition, the asterisk (*) as in "DRMD*" indicates that the DRMD signal goes on when '0'.

In practically all cases, the internal mechanisms of a microprocessor cannot be checked in the field. Therefore, the operations of the microprocessors used in the machines are not discussed: they are explained in terms of from sensors to the input of the DC controller PCB and from the output of the DC controller PCB to the loads.

The descriptions in this Service Manual are subject to change without notice for product improvement or other purposes, and major changes will be communicated in the form of Service Information bulletins.

All service persons are expected to have a good understanding of the contents of this Service Manual and all relevant Service Information bulletins and be able to identify and isolate faults in the machine."

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Chapter 1 Maintenance and Inspection

1.1 Periodically Replaced Parts

1.1.1 Overview

The machine has parts that must be replaced on a periodical basis to ensure a specific level of functional performance. (The loss of the function of any of these parts will significantly affect the machine performance, regardless of the presence/absence of external changes or damage.)
If possible, schedule the replacement so that it coincides with a scheduled service visit.



The timing of replacement may vary depending on the site environment or user habit.

1.1.2 Reader Unit

The reader unit does not have parts that require periodical replacement.

1.1.3 Printer Unit

The printer unit does not have parts that require periodical replacement.

1.2 Durables and Consumables

1.2.1 Overview

The machine has parts that may require replacement once or more during the period of product warranty because of wear or damage. Replace them as needed by referring to their indicated estimated lives.

- Checking the Timing of Replacement

Use the following service mode item to check the timing of replacement:

#COUNTER > DRBL-1

- FX-UNIT: Fixing Unit

- TR-ROLL: Transfer roller

- M-PU-RL: Manual feed pickup roller

- M-SP-PD: Manual feed separation pad

1.2.2 Reader Unit

The reader unit does not have parts that are classified as durables.

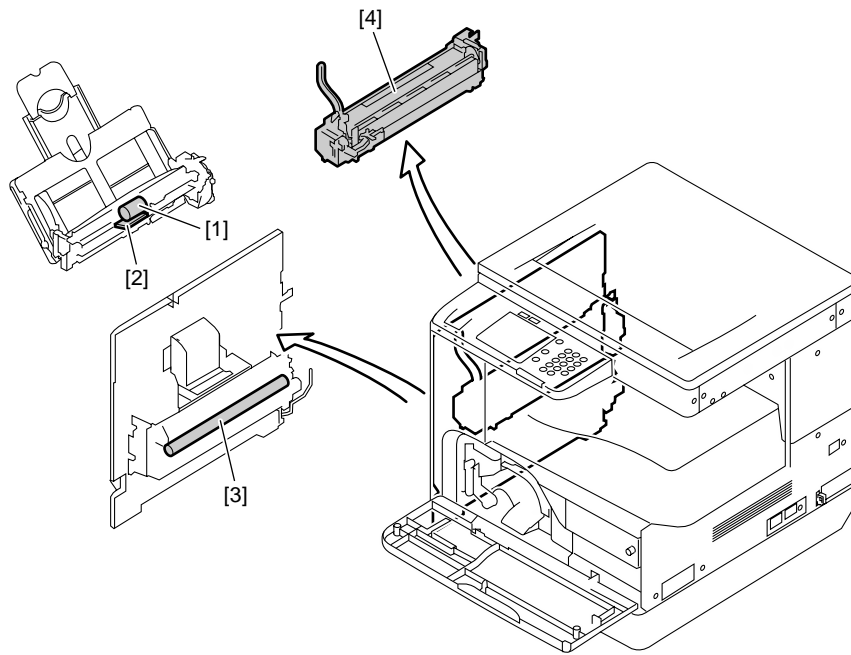
1.2.3 Printer Unit

T-1-1

					As of Aug. 2005
Ref.	Parts name	Parts No.	Q'ty	Life	Remarks
[1]	Manual feed pickup roller	FL2-3202-000	1	150K	
[2]	Manual feed separation pad	FL2-3201-000	1	150K	
[3]	Transfer roller	FC6-4313-000	1	150K	
[4]	Fixing unit (100V)	FM2-6351-000	1	150K	
	Fixing unit (120V)	FM2-3345-000	1	150K	
	Fixing unit (230V)	FM2-3352-000	1	150K	



The value is the mean value collected from the results of evaluation. The parts number may change because of changes in design.



F-1-1

1.3 Scheduled Servicing Basic Procedure

1.3.1 Scheduled Servicing

The reader and printer unit does not have items that require scheduled servicing.



Be sure to clean the copyboard glass and the ADF reading glass during every service visit.

Chapter 2 Standards and Adjustments

2.1 Scanning System

2.1.1 Procedure after Replacing the CIS

After replacing the contact image sensor (CIS), go through the following steps to perform inter-channel output correction:

- 1) Enter the service mode.
- Sequentially press the Additional functions key, 2 key, 8 key, and Additional functions key on the operation panel.
- 2) Press the arrow key on the touch panel to display "TEST MODE".
- 3) Press [OK].
- 4) Press the [2] key to display "SCAN TEST".
- 5) Press the [1] key to display "SHADING".
- 6) Press [OK].

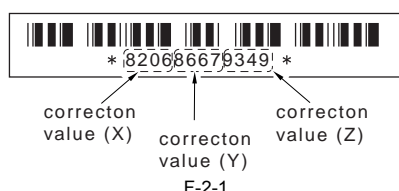
After completion of the above procedure, the contact sensor output is compensated and parameters are set automatically.

After completion of automatic adjustment, "OK" is displayed.

2.1.2 Procedure after Replacing the Copyboard Glass

After replacing the copyboard glass, enter the correction values (X, Y, Z) of the standard white plate which are indicated on the back of the new copyboard glass in the service mode.

Correction value (X): Service mode>#SCAN>#SCAN NUMERIC>No.213
Correction value (Y): Service mode>#SCAN>#SCAN NUMERIC>No.214
Correction value (Z): Service mode>#SCAN>#SCAN NUMERIC>No.215
Also, rewrite the values on the service label.



2.2 Electrical Adjustment

2.2.1 Procedure after Replacing the Image Processor PCB

If you have replaced the image processor PCB with a new one, perform the following operations:

- Using the service support tool, download the latest firmware (System/Boot) and language files.
- Delete the languages not used at the destination (Service mode > CLEAR > FILE SYSTEM).
- Input the all value printed on the service label affixed to the rear cover.

Make the following adjustments:

- Correction of output between CIS channels

- 1) Enter the service mode.
- Sequentially press the Additional functions key, 2 key, 8 key, and Additional functions key on the operation panel.
- 2) Press the arrow key on the touch panel to display "TEST MODE".
- 3) Press [OK].
- 4) Press the [2] key to display "SCAN TEST".
- 5) Press the [1] key to display "SHADING".
- 6) Press [OK].

After completion of the above procedure, the contact sensor output is compensated and parameters are set automatically.

After completion of automatic adjustment, "OK" is displayed.

- Read position adjustment (Stream reading: Only when the ADF is installed)

- 1) Enter the service mode.
- Sequentially press the Additional functions key, 2 key, 8 key, and Additional functions key on the operation panel.
- 2) Press the arrow key on the touch panel to display "TEST MODE".
- 3) Press [OK].
- 4) Press the [2] key to display "SCAN TEST".
- 5) Press the [3] key to display "SHEET POS ADJ".
- 6) Press [OK].

The optical system starts scanning. Several seconds later, automatic adjustment of the reading position finishes and "OK" appears.

! If automatic adjustment fails, "NG" appears. Perform the following procedure:
Clean the white roller of the DADF and the document glass of the host machine, and then retry auto adjustment.

2.2.2 Procedure after Replacing the USB Memory

If you have replaced the USB with a new one, perform the following operations:

- Using the service support tool, download language files.
- Delete the languages not used at the destination (Service mode > CLEAR > FILE SYSTEM).

MEMO:

You also need to perform these operations after formatting the damaged USB memory.

2.2.3 Actions to Take before All Clearing (Backing up the User Data)



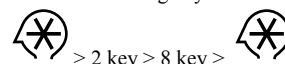
- Performing the all-clear operation in the service mode (#CLEAR > ALL) erases/initializes the user data such as address data and user mode settings.
Be sure to back up the user data with the data export function before starting the all-clear operation, and then load the user data with the data import function.
- To export and import user data, a PC and a USB cable are required. Have them on hand.

a. Exporting user data

- 1) Output a user data list in the following user mode.

(*) > Report Setting > Print List > User Data List

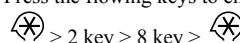
- 2) Press the following keys to enter the service mode.



- 3) Select "#SYSTEM" using **◀** or **▶**, and then press the OK.
- 4) Select "#SYSTEM SW" using **◀** or **▶**, and then press the OK.
- 5) Press the following keys to display "SW003".
> 0 key > 3 key
Message: #SYSTEM SW003 00001000
- 6) Position the cursor at Bit-6 (second from left) using **◀** or **▶**, and then press the 1 key.
Message: #SYSTEM SW003 01001000
- 7) Press the OK key. Check that "SW003" changes to "SW004".
Message: #SYSTEM SW004 00000000
- 8) Press the Reset key to exit the service mode.
- 9) Turn off the main power switch, and then turn it on again.
- 10) Start the PC and connect it to this machine with a USB cable.
- 11) Open My Computer on the PC to check that the "Removable Disk" icon is displayed. If the "Removable Disk" icon is not displayed, repeat the above procedure starting with step 1.
- 12) Double-click the "Removable Disk" icon, and then copy the user data (address_book.abk and user_data.dat) onto the Desktop.
- 13) Close the window on the Desktop.
- 14) Turn off the main power switch of this machine.
- 15) Disconnect the USB cable from this machine.

b. Importing user data

- 1) Press the following keys to enter the service mode.



- 2) Select "#SYSTEM" using **◀** or **▶**, and then press the OK.
- 4) Select "#SYSTEM SW" using **◀** or **▶**, and then press the OK.
- 5) Press the following keys to display "SW003".
> 0 key > 3 key
Message: #SYSTEM SW003 00001000
- 5) Check that Bit-6 (second from left) is set to set to "1". If Bit-6 is not set to "1", position the cursor at this bit using **◀** or **▶** and then press the 1 key.
Message: #SYSTEM SW003 01001000
- 6) Press the OK key. Check that "SW003" changes to "SW004".
Message: #SYSTEM SW004 00000000
- 7) Press the Reset key to exit the service mode.
- 8) Turn off the main power switch, and then turn it on again.
- 9) Open My Computer on the PC to check that the "Removal Disk" icon is displayed.
- 11) Write the user data (address_book.abk and user_data.dat) copied onto the Desktop as described in "a. Exporting user data" over the removable disk.
- 12) Disconnect the USB cable from the machine.
- 13) Turn off the main power switch of the machine.
- 14) Perform steps 1) to 4) again to reset Bit-6 of "SW003" to "0".
- 15) Press the OK key. When "SW003" changes to "SW004", press the Reset key to exit the service mode.
- 16) Check the user data list output as described in "a. Exporting user data" to make sure that the user data has been loaded into the machine properly.

Chapter 3 Error Code

3.1 Error Code Details

3.1.1 Error Code Details

MEMO:

The detail code of the error code of this machine can be confirmed in the following service mode.

Service mode>ERROR DISPLAY

T-3-1

Display Code	Detail Code	Main Cause/Symptom	Countermeasure
E000	0000	Startup error	
		The temperature detected by the main or sub thermistor does not rise to the specified value during startup control.	<ul style="list-style-type: none"> - Check the fixing film connector. - Replace the fixing film unit. - Replace the DC controller PCB.
E001	0000	Abnormally high temperature (detected by main thermistor)	
		The main thermistor detected an abnormally high temperature (240 deg C) during temperature control.	<ul style="list-style-type: none"> - Check the connector of the fixing film unit. - Replace the fixing film unit. - Replace the DC controller PCB.
	0001	Abnormally high temperature (detected by sub thermistor)	
		The sub thermistor detected an abnormally high temperature (295 deg C) during temperature control.	<ul style="list-style-type: none"> - Check the connector of the fixing film unit. - Replace the fixing film unit. - Replace the DC controller PCB.
E002	0000	Low temperature during temperature control.	
		The target temperature is not reached during temperature control.	<ul style="list-style-type: none"> - Check the connector of the fixing film unit. - Replace the fixing film unit. - Replace the DC controller PCB.
E003	0000	Abnormally low temperature (detected by main thermistor)	
		After the temperature detected by the main thermistor has reached the specified value, it does not reach the specified value during initial rotation.	<ul style="list-style-type: none"> - Check the connector of the fixing film unit. - Replace the fixing film unit. - Replace the DC controller PCB.
	0001	Abnormally low temperature (detected by sub thermistor)	
		After the temperature detected by the sub thermistor has reached the specified value, it does not reach the specified value during initial rotation.	<ul style="list-style-type: none"> - Check the connector of the fixing film unit. - Replace the fixing film unit. - Replace the DC controller PCB.
E007	0000	Fixing film sensor failure	
		The fixing film sensor is faulty.	<ul style="list-style-type: none"> - Check the connector of the fixing film sensor. - Replace the fixing film sensor. - Replace the DC controller PCB.
E010	0000	Main motor failure	
		The main motor is faulty.	<ul style="list-style-type: none"> - Check the connector of the main motor. - Replace the main motor. - Replace the DC controller PCB.
E019	0000	Waste toner full detection	
		The waste toner full state was detected.	Replace the drum unit.
	0001	Waster toner full detection sensor is faulty.	
		The waste toner full state was detected continuously for five or more seconds while the main motor was turning.	<ul style="list-style-type: none"> - Check the connector of the waster toner full sensor. - Replace the waste toner full sensor. - Replace the DC controller PCB.
E052	0000	Erroneous connection to duplex unit	
		Disconnection of the duplex unit was detected after power-on, detection of normal connection to the duplex unit, and start of communication.	<ul style="list-style-type: none"> - Check the connectors of the duplex unit and DC controller PCB. - Replace the duplex controller PCB. - Replace the DC controller PCB.
E100	0000	BD detection PCB failure	
		The BD detection PCB is faulty.	<ul style="list-style-type: none"> - Check the connector of the BD detection PCB. - Replace the laser scanner unit. - Replace the DC controller PCB.
E197	0000	Printer engine communication error	
		Erroneous communication between the DC controller PCB and image processor PCB was detected.	<ul style="list-style-type: none"> - Check the connectors of the DC controller PCB and image processor PCB. - Replace the DC controller PCB for normal connection. - Replace the image processor PCB.

Display Code	Detail Code	Main Cause/Symptom	Countermeasure
E716	0000	Erroneous communication with optional cassette	
		Disconnection of the optional cassette was detected after power-on, detection of normal connection to the optional cassette, and start of communication.	<ul style="list-style-type: none"> - Check the connectors of the optional cassette PCB and DC controller PCB. - Replace the optional cassette PCB for normal connection. - Replace the DC controller PCB.
E719	0000	Erroneous communication with card reader (serial communication)	
		<ul style="list-style-type: none"> - Disconnection from the card reader has been detected since communication started after confirmation of normal connection to the card reader (after power-on). - A serial communication error has occurred. (The serial communication error cannot be recovered.) 	<ul style="list-style-type: none"> - Check the connectors of the card reader and image processor PCB. - Replace the card reader for normal connection. - Replace the image processor PCB.
	0002	Erroneous communication with coin vendor (serial communication)	
		<ul style="list-style-type: none"> - Disconnection from the coin vendor has been detected since communication started after confirmation of normal connection to the coin vendor (after power-on). - A serial communication error has occurred. (The serial communication error cannot be recovered.) 	<ul style="list-style-type: none"> - Check the connection between the image processor PCB and serial PCB. - Check the connectors of the serial PCB and coin vendor for normal connection. - Replace the serial PCB. - Check the coin vendor. - Replace the image processor PCB.
E733	0000	Erroneous communication between controller and printer	
		Cannot communicate with the printer at startup.	<ul style="list-style-type: none"> - Check the connectors of the DC controller PCB and image processor PCB for normal connection. - Check the power supply of the printer (Check whether initialization is performed at startup). - Replace the DC controller PCB or image processor PCB.
E736	0000	CCU communication error	
		The installed modem PCB is incompatible.	<ul style="list-style-type: none"> - Check the connectors of the image processor PCB and modem. - Replace the modem PCB. - Replace the image processor PCB.
E739	0000	Erroneous communication between controller and network board	
		The installed network board is incompatible.	<ul style="list-style-type: none"> - Check the connectors of the image processor PCB and LAN PCB for normal connection. - Replace the LAN PCB. - Replace the image processor PCB.
E744		Language file/boot ROM/USB memory error	
	0001	The language file version does not match Bootable.	Download a language file of the correct version.
	0002	The language file is longer than the permitted size.	Download a language file of the correct version.
	0003	The language file version does not match Bootable.	Download a language file of the correct version.
	0004	Language file read error	Download a language file of the correct version.
E805	0000	Fan failure	
		The fan is faulty.	<ul style="list-style-type: none"> - Check the fan connector. - Replace the fan. - Replace the DC controller PCB.
E808	0000	Fixing drive circuit failure	
		<ul style="list-style-type: none"> - The heater does not turn on. - A fixing drive motor failure was detected. 	<ul style="list-style-type: none"> - Check the connector of the fixing film unit. - Replace the fixing film unit. - Replace the fixing drive motor. - Replace the DC controller PCB. - Replace the power supply PCB.

3.2 Jam Code

3.2.1 Jam Codes (Related to Printer Unit)

T-3-2

Code	Name	Sensor No.	Description
0104	Delay jam in paper pickup section	SR209	The registration sensor cannot detect the leading edge of paper from the moment paper pickup starts to the moment the jam detection time is reached.
0208	Stationary jam in paper pickup section	SR209	The registration sensor cannot detect the no paper status specified time before the leading edge of the picked up paper reaches this sensor.

Code	Name	Sensor No.	Description
010c	Delay jam in deliver section	SR202, SR203, SR209	- The fixing delivery sensor cannot detect presence of paper within the specified time after turning on of the registration clutch. - The fixing delivery sensor detected absence of paper within the specified time after the sensor had detected presence of paper within the specified time after turning on of the registration clutch. - The No.1 delivery sensor cannot detect presence of paper within the specified time after turning on of the fixing delivery sensor.
0210	Stationary jam in delivery section	SR202, SR203	- The fixing delivery sensor cannot detect absence of paper within the specified time after turning off of the registration clutch. - The fixing delivery sensor cannot detect absence of paper within the specified time after the sensor detected the leading edge of paper. - The No.1 delivery sensor cannot detect absence of paper within the specified time after the sensor detected the leading edge of paper.
0214	Stationary jam in machine	SR202, SR203, SR209	Paper was detected in the paper transport path during initial rotation, during automatic delivery, at the end of cleaning, or at reception of an emergency stop command.
1118	Door open jam	SR202, SR203, SR209, SW2, SW3	The door was opened when there was printing paper in the transport path.

3.2.2 Jam Codes (Related to Finisher)

T-3-3

Code	Name	Sensor No.	Description
0130	Delayed feed jam	PI5	The inlet sensor is not turned on within the specified time after reception of a paper ejection signal from the host machine.
0231	Staying paper jam	PI5	The inlet sensor is not turned off even if paper is fed by the specified distance after the leading edge of the paper from the host machine has passed through the sensor.
0033	Stack ejection jam	PI1	When a paper stack is ejected, the HP sensor is not turned off within the specified time.
0035	Staple jam	Stapler HP sensor (built in stapler)	The stapler HP sensor was turned off once after start of stapler operation, but the HP has not been reached within the specified time.
1036	Power-on jam	PI5	The inlet sensor detected paper at power-on.
1137	Door open jam	SW1	The front cover switch detected opening of the front cover during standby or copy operation.

3.2.3 Jam Codes (Related to ADF)

T-3-4

Code	Name	Sensor No.	Description
0000	Unknown jam	-	Other errors
0007	Initial stationary	PI6,PI7,PI8	Paper is detected in the transport path before the DADF starts initial operation.
0008	Read sensor delay	PI7,PI8	The read sensor does not detect paper when the paper has been fed by the predetermined distance since reception of a pickup request.
0009	Read sensor stationary	PI7	The trailing edge of paper is not detected when the paper has been fed by the predetermined distance since detection of it by the read sensor.
000a	Paper absence (Pull out the document.)	PI11	The Document set sensor has been held off since start of pickup.
000c	Delivery reversal sensor delay	PI6,PI7	The delivery reversal sensor does not detect paper since the paper has been fed by the predetermined distance since the read sensor was turned on.
000d	Delivery reversal sensor stationary	PI6	The trailing edge of paper is not detected when the paper has been fed by the predetermined distance since the delivery reversal sensor detected the paper.
000e	ADF cover open	PI10	The feeder cover was opened during operation (of the drive system).
000f	User ADF open	sensor of the reader unit	The ADF was opened during operation (of the drive system).
0010	Pickup NG	-	The registration sensor has been held off since paper pickup started.

3.2.4 Jam Codes (Related to Duplex Unit)

T-3-5

Code	Name	Sensor No.	Description
0120	Delay jam at duplex paper sensor 1	SR1002	The duplex paper sensor 1 does not turn on within the specified time after the delivery sensor on the main unit side turns on.
0124	Delay jam at duplex paper sensor 2	SR1003	The duplex paper sensor 2 does not turn on within the specified time after the duplex reverse motor starts.
0221	Stationary jam at duplex paper sensor 1	SR1002	- The duplex paper sensor 1 does not turn off when the specified time has lapsed since the duplex paper sensor 2 turned on. - The duplex paper sensor 1 does not turn off when the paper with a longitudinal length of 280 mm reaches the standby position (about 90 mm from the duplex paper sensor 2).

Code	Name	Sensor No.	Description
0228	Stationary jam at duplex paper sensor 2	SR1003	The duplex paper sensor 2 does not turn off when the specified time has lapsed since the feed motor started.

3.2.5 Jam Codes (Related to Inner 2-way Tray)

T-3-6

Code	Name	Sensor No.	Description
010e	Delay jam at No.2 delivery section	SR1101	The No.2 delivery sensor does not detect presence of paper within the specified time after turning on of the fixing delivery sensor.
0212	Stationary jam at No.2 delivery section	SR1101	Absence of paper is not detected within the specified time after turning on of the No.2 delivery sensor.

3.3 Finisher Error Codes

3.3.1 Error Code Details

T-3-7

Display code	Detail Code	Main Cause/Symptom	Countermeasure
E500	0001	Finisher communication error	
		Data communication could not be performed normally. It has been retried three times in vain.	<ul style="list-style-type: none"> - Check the connectors of the finisher controller PCB and DC controller PCB for normal connection. - Replace the finisher controller PCB. - Replace the DC controller PCB.
E520	0001	- Offset motor or finisher controller PCB failure - Offset HP sensor failure	
		- The offset motor was driven for 1000 ms in the HP sensor approach direction, but the offset HP sensor did not turn on.	<ul style="list-style-type: none"> - Check the connector of the offset HP sensor. - Check the connector of the offset motor. - Replace the offset HP sensor. - Replace the offset motor. - Replace the finisher controller PCB.
	0002	- Offset motor or finisher controller PCB failure - Offset HP sensor failure	
		- The offset motor was driven for 1000 ms in the HP sensor escape direction, but the offset HP sensor did not turn off.	<ul style="list-style-type: none"> - Check the connector of the offset HP sensor. - Check the connector of the offset motor. - Replace the offset HP sensor. - Replace the offset motor. - Replace the finisher controller PCB.
E531	0001	- Staple unit failure - Staple HP sensor failure - Finisher controller PCB failure	
		- The staple home position was not left when 400 ms have lapsed since start of staple operation.	<ul style="list-style-type: none"> - Check the connector of the staple unit. - Replace the staple unit. - Replace the finisher controller PCB.
	0002	- Staple unit failure - Staple HP sensor failure - Finisher controller PCB failure	
		- The staple home position had been left once, but it was not reached again when 400 ms have lapsed since start of staple operation. In addition, the staple home position could not be reached by performing reverse operation for 400 ms.	<ul style="list-style-type: none"> - Check the connector of the staple unit. - Replace the staple unit. - Replace the finisher controller PCB.

Display code	Detail Code	Main Cause/Symptom	Countermeasure
E540	0001	<ul style="list-style-type: none"> - Standard tray shift motor or finisher controller PCB failure - Standard tray HP sensor failure - Standard tray clock sensor failure - Standard tray shift motor load failure 	
		The standard tray was moved but the paper surface was not detected.	<ul style="list-style-type: none"> - Check the connector of the standard tray HP sensor. - Check the connector of the standard tray clock sensor. - Check the connector of the standard tray shift motor. - Replace the standard tray HP sensor. - Replace the standard tray clock sensor. - Replace the standard tray shift motor. - Replace the finisher controller PCB.
	0002	<ul style="list-style-type: none"> - Standard tray shift motor or finisher controller PCB failure - Standard tray HP sensor failure - Standard tray clock sensor failure - Standard tray shift motor load failure 	
		Cannot move (to the pickup position) within the specified time.	<ul style="list-style-type: none"> - Check the connector of the standard tray HP sensor. - Check the connector of the standard tray clock sensor. - Check the connector of the standard tray shift motor. - Replace the standard tray HP sensor. - Replace the standard tray clock sensor. - Replace the standard tray shift motor. - Replace the finisher controller PCB.
	0003	<ul style="list-style-type: none"> - Standard tray shift motor or finisher controller PCB failure - Standard tray HP sensor failure - Standard tray clock sensor failure - Standard tray shift motor load failure 	
		The standard tray was operated, but it did not reach the sensor within 300 ms.	<ul style="list-style-type: none"> - Check the connector of the standard tray HP sensor. - Check the connector of the standard tray clock sensor. - Check the connector of the standard tray shift motor. - Replace the standard tray HP sensor. - Replace the standard tray clock sensor. - Replace the standard tray shift motor. - Replace the finisher controller PCB.
	0005	<ul style="list-style-type: none"> - Standard tray shift motor or finisher controller PCB failure - Standard tray HP sensor failure - Standard tray clock sensor failure - Standard tray shift motor load failure 	
		The encoder clock signal was not detected two or more times when the standard tray was operated for 300 ms.	<ul style="list-style-type: none"> - Check the connector of the standard tray HP sensor. - Check the connector of the standard tray clock sensor. - Check the connector of the standard tray shift motor. - Replace the standard tray HP sensor. - Replace the standard tray clock sensor. - Replace the standard tray shift motor. - Replace the finisher controller PCB.

Display code	Detail Code	Main Cause/Symptom	Countermeasure
E542	0001	- Optional tray motor or finisher controller PCB failure - Optional tray HP sensor failure - Optional tray clock sensor failure - Optional tray shift motor load failure	
		The optional tray was operated, but the paper surface was not detected.	- Check the connector of the optional tray HP sensor. - Check the connector of the optional tray clock sensor. - Check the connector of the optional tray shift motor. - Replace the optional tray HP sensor. - Replace the optional tray clock sensor. - Replace the optional tray shift motor. - Replace the finisher controller PCB.
	0002	- Optional tray motor or finisher controller PCB failure - Optional tray HP sensor failure - Optional tray clock sensor failure - Optional tray shift motor load failure	
		Cannot move (to the pickup position) within the specified time.	- Check the connector of the optional tray HP sensor. - Check the connector of the optional tray clock sensor. - Check the connector of the optional tray shift motor. - Replace the optional tray HP sensor. - Replace the optional tray clock sensor. - Replace the optional tray shift motor. - Replace the finisher controller PCB.
	0003	- Optional tray motor or finisher controller PCB failure - Optional tray HP sensor failure - Optional tray clock sensor failure - Optional tray shift motor load failure	
		- The optional tray was moved upward, but it did not reach the HP sensor within 3000 ms.	- Check the connector of the optional tray HP sensor. - Check the connector of the optional tray clock sensor. - Check the connector of the optional tray shift motor. - Replace the optional tray HP sensor. - Replace the optional tray clock sensor. - Replace the optional tray shift motor. - Replace the finisher controller PCB.
	0005	- Optional tray motor or finisher controller PCB failure - Optional tray HP sensor failure - Optional tray clock sensor failure - Optional tray shift motor load failure	
		- The encoder clock signal was not detected two or more times when the optional tray was operated for 300 ms.	- Check the connector of the optional tray HP sensor. - Check the connector of the optional tray clock sensor. - Check the connector of the optional tray shift motor. - Replace the optional tray HP sensor. - Replace the optional tray clock sensor. - Replace the optional tray shift motor. - Replace the finisher controller PCB.
E575	0001	- Stack delivery motor or finisher controller PCB failure - Stack delivery HP sensor failure	
		- The stack delivery motor was driven for 2000 ms in the stack delivery direction (HP sensor approach direction), but the stack delivery HP sensor did not turn on.	- Check the connector of the stack delivery HP sensor. - Check the connector of the stack delivery motor. - Check the connector of the stack delivery HP sensor. - Replace the stack delivery motor. - Replace the finisher controller PCB.
	0002	- Stack delivery motor or finisher controller PCB failure - Stack delivery HP sensor failure	
		- The stack delivery motor was driven for 2000 ms in the HP sensor escape direction, but the stack delivery HP sensor did not turn off.	- Check the connector of the stack delivery HP sensor. - Check the connector of the stack delivery motor. - Check the connector of the stack delivery HP sensor. - Replace the stack delivery motor. - Replace the finisher controller PCB.

Display code	Detail Code	Main Cause/Symptom	Countermeasure
E584	0001	- Shutter drive motor or finisher controller PCB failure - Shutter open detection sensor failure - Shutter clutch failure	
		- The shutter open sensor did not turn on when 1000 ms have lapsed since the shutter unit had performed open operation, resulting in incomplete open operation.	- Check the connector of the shutter open sensor. - Check the connector of the shutter clutch. - Check the connector of the shutter motor. - Replace the shutter open sensor. - Replace the shutter clutch. - Replace the shutter drive motor. - Replace the finisher controller PCB.
	0002	- Shutter drive motor or finisher controller PCB failure - Shutter open detection sensor failure - Shutter clutch failure	
		- The shutter open sensor did not turn off when 1000 ms have lapsed since the shutter unit had performed close operation, resulting in incomplete close operation.	- Check the connector of the shutter open sensor. - Check the connector of the shutter clutch. - Check the connector of the shutter motor. - Replace the shutter open sensor. - Replace the shutter clutch. - Replace the shutter drive motor. - Replace the finisher controller PCB.

Chapter 4 User Mode Items

4.1 User Mode Items

4.1.1 Common Settings

T-4-1

Item	Settings(*1 Indicates the default setting.)
Initial Function	Select Initial Function: Copy*1, Send Set System Monitor Screen as initial function: On, Off*1 Set [Device] as the default for System Monitor: On*1, Off
Auto Clear Setting	Initial Function*1, Selected Function
Audible Tones	Entry Tone: On*1 (1* to 3 levels), Off Error Tone: On*1 (1* to 3 levels), Off Send Done Tone: On (1* to 3 levels), Off*1 Receive Done Tone: On (1* to 3 levels), Off*1 Print Done Tone: On*1 (1* to 3 levels), Off Scan Done Tone: On*1 (1* to 3 levels), Off
Toner Save Mode	High, Low, Off*1
Printer Density	1 to 9 levels; 5*1
Inch Entry	On, Off*1
Drawer Eligibility For APS/ADS	Copy: (Stack Bypass: On, Off*1, All Other Paper Sources: On*1, Off) Printer: (Stack Bypass: cannot be set, All Other Paper Sources: On*1, Off) Receive: (Stack Bypass: On, Off*1, All Other Paper Sources: On*1, Off) Other: (Stack Bypass: On, Off*1, All Other Paper Sources: On*1, Off)
Register Paper Type	Paper Drawer 1, Paper Drawer 2*2, Paper Drawer 3*2, Paper Drawer 4*2: Plain*1, Recycled, Color, Bond, Heavy Paper 1
Energy Consumption in Sleep Mode	Low*1, High
Tray Designation*2	If the Optional Inner 2 Way Tray-E1 Is Attached Tray A: Copy*1, Printer*1, Receive*1, Other*1 Tray B: Copy*1, Printer*1, Receive*1, Other*1 If the Optional Finisher-U1 and Additional Finisher Tray-C1 Are Attached Tray A: Copy*1, Printer*1, Receive*1, Other*1 Tray B: Copy*1, Printer*1, Receive*1, Other*1
Stack Bypass Standard Settings	On:Option, Off*1
Paper Feed Method Switch	Stack Bypass, Paper Drawer 1, Paper Drawer 2*2, Paper Drawer 3*2, Paper Drawer 4*2: Speed*1, Print Side
Language Switch	On, Off*1
Reversed Display (B/W)	On, Off*1
Error Display for Dirty Feeder	On*1, Off
Initialize Common Settings	Initialize

*2 Indicates items that appear only when the appropriate optional equipment is attached.

4.1.2 Timer Settings

T-4-2

Item	Settings(*1 Indicates the default setting.)
Date & Time Settings	Date and Time Setting (12 digit number) Time Zone Settings: GMT -12:00 to GMT +12:00; GMT -03:00*1 Daylight Saving Time Settings: On, Off*1
Auto Sleep Time	On*1 3 to 30 minutes; 5*1 Off
Auto Clear Time	0 (Off) to 9 minutes, in one minute increments; 2 min.*1

4.1.3 Adjustment/Cleaning

T-4-3

Item	Settings(*1 Indicates the default setting.)
Transfer Roller Cleaning	Press [Start]
Fixing Unit Cleaning	Press [Cleaning Sheet Print]
Feeder Cleaning	Press [Start]
Special Mode M	Normal*1, Low, High
Special Mode N	On, Off*1
Special Mode O	Stack Bypass: On, Off*1 Drawer: On, Off*1
Special Mode P	On, Off*1
Bond Special Fixing Mode	On, Off*1

Item	Settings(*1 Indicates the default setting.)
Special Mode S	Speed Priority 1, Speed Priority 2, Off*1
Auto Adjustment for Dirty Feeder	On*1, Off
Maintenance Code	This setting is not functional in this model.

4.1.4 Report Settings

T-4-4

Item	Settings(*1 Indicates the default setting.)
Settings	TX Report: On, For Error Only*1, Off Report With TX Image: On*1, Off Activity Report Auto Print: On*1, Off Send/Receive Separate: On, Off*1 RX Report: On, For Error Only, Off*1
Print List	Address Book List One-touch Buttons: Yes, No Address Book: Yes, No User's Data List: Yes, No

4.1.5 System Settings

T-4-5

Item	Settings(*1 Indicates the default setting.)
System Manager Settings	
System Manager	32 characters maximum
System Manager ID	Seven digit number maximum
System Password	Seven digit number maximum
Department ID Management	
Department ID Management	On, Off*1
Register ID/Password	Register, Edit, Erase
Page Totals	Clear, Clear All Totals, Print List
Allow ID Unknown Printer Jobs	On*1, Off
Network Settings	
TCP/IP Settings	
IP Address Settings	IP Address, Subnet Mask, Gateway Address, DHCP, RARP, BOOTP
DNS Server	Primary Server(DNS), Secondary Server (DNS), Host Name, Domain Name
WINS Configuration	WINS Resolution, WINS Server
Use LPD Print	LPD Settings
RAW Settings	Use RAW, Use Bidirectional
Use PASV Mode for FTP	Use PASV Mode for FTP On/Off
FTP Extension	FTP Extension On/Off
Use HTTP	Use HTTP On/Off
Port Number Settings	LPD, RAW, HTTP, SMTP, Receive, POP3 Receive, FTP Sending, SMTP Sending, SNMP
IP Address Range Settings	On/Off*1 A maximum of 4 IP addresses can be stored.
Receiving MAC Address Settings	Apply Settings: On/Off MAC addresses (a maximum of 5 addresses can be registered)
SMB Settings	Use SMB Client, Server, Workgroup, Comment, LM Announce
SNMP Settings	Use SNMP, Community Name, Writable SNMP
Enable Dedicated Port Settings	On/Off
Ethernet Driver Settings	Auto Detect, Communication Mode, Ethernet Type, MAC Address
E-Mail/I-Fax	SMTP Receive, POP, POP Authentication before Send, SMTP Server, E-mail Address, POP Server, POP Address, POP Password, POP Interval
Startup Time Settings	0 to 300 seconds 60*1
Forwarding Settings	
Receive Type	All*1, Fax, I-Fax
Validate/Invalidate	On, Off*1
Register	Condition Name: 50 characters maximum Forwarding Conditions Receive Type: Fax*1, I-Fax Forwarding Destination: Select from the registered addresses. File Format: TIFF*1, PDF, Divide into Pages
Forward w/o Cond.	Receive Type: Fax*1, I-Fax Forwarding Destination: Select from the registered addresses. File Format: TIFF*1, PDF, Divide into Pages
Detail/Edit	Condition Name: 50 characters maximum Forwarding Conditions Receive Type: Fax*1, I-Fax Forwarding Destination: Select from the registered addresses. File Format: TIFF*1, PDF, Divide into Pages
Erase	Yes, No

Item	Settings(*1 Indicates the default setting.)
Print List	Yes, No
Device Info Settings	
Device Name	32 characters maximum
Location	32 characters maximum
User ID Management	On, Off*1
Communications Settings	
E-mail/I-Fax	Maximum TX Data Size: 0 to 99 MB, in one MB increments, 3 MB*1 Devided TX over Max. Data Size: On, Off*1 Default Subject: 40 characters maximum
Fax Settings	Send Start Speed, Receive Start Speed R-Key Settings: PSTN*1/PBX
Memory Lock Settings	On:Option, Off*1
Remote UI On/Off	On*1, Off
Restrict Access to Destinations	Restrict New Addresses: On, Off*1 Allow Fax Driver TX: On*1, Off
License Registration	This setting is not functional in this model.
Department ID & User's Name	On*1, Off
Job Log Display	On*1, Off
Use USB Device	On*1, Off

4.1.6 Copy Settings

T-4-6

Item	Settings(*1 Indicates the default setting.)
Image Orientation Priority	On, Off*1
Auto Orientation	On*1, Off
Standard Settings	Store, Initialize
Initialize Copy Settings	Yes, No

4.1.7 Communication Settings

T-4-7

Item	Settings(*1 Indicates the default setting.)
Common Settings	
TX Settings	Unit Name (24 characters maximum) Data Compression Ratio: High Ratio, Normal*1, Low Ratio Retry Times: 0 to 5 times; 3 times*1 Edit Standard Send Settings Store, Initialize TX Terminal ID On*1 (Printing Position: Inside, Outside*1; Telephone # Mark: FAX*1, TEL) Gamma Value for Color Send Jobs: Gamma 1.0, Gamma 1.4, Gamma 1.8*1, Gamma 2.2 Sharpness: 1 to 7 levels, 4*1 Register Favorites Button: M1 to M18 Color TX Scan Settings: Speed Priority, Image Priority*1 Default Screen for Send: Favorite Buttons, One-touch Buttons, Initial Function*1 Initialize TX Settings: Yes, No
RX Settings	Two-sided Print: On, Off*1 Select Cassette Switch A: On*1, Off Switch B: On*1, Off Switch C: On*1, Off Switch D: On*1, Off Receive Reduction On*1 RX Reduction: Auto*1, Fix. Red. Reduce %: 97, 95, 90*1, 75% Reduce Direction: Ver. Hor., Vertical Only*1 Off Continue Printing When Toner Is Out: Yes*1, No
Fax Settings	
User Settings	Unit Telephone # (20 characters maximum) Tel Line Type: Tone*1, Pulse Monitor Volume Control: Volume Control: 0 to 3 levels, 1*1), Off (0)

Item	Settings(*1 Indicates the default setting.)
TX Settings	ECM TX: On*1, Off Pause Time: 1 to 15 seconds; 2 seconds*1 Auto Redial On*1 Option: Redial Times: 1 to 10 times; 2 times*1 Redial Interval: 2 to 99 minutes; 2 minutes*1 TX Error Redial: On*1, Off Off Check Dial Tone Before Sending: On*1, Off Rotate Send: On*1, Off
RX Settings	ECM RX: On*1, Off

4.1.8 Printer Settings

T-4-8

Item	Settings(* Indicates the default setting.)
Default Papersize	A4*, A3, B4, B5, A5, 11X17, LGL, LTR, STMT, EXECUTIV, ISO-B5, ISO-C5, COM10, MONARCH, DL
Default Papertype	Plain Paper*, Color, Recycled, Heavy Paper 1, Heavy Paper 2, Heavy Paper 3, Bond, Transparency, Labels, Envelope
Copies	1 to 999; 1*
2-Sided Printing	Off*, On
Print Quality	
Image Refinement	On*, Off
Density	9 levels; 5*
Toner Saver	Off*, On
Page Layout	
Binding	Long Edge*, Short Edge
Margin	MM*: -50.0 MM to 50.0 MM; 0.0 MM* Inches: -01.90 Inches to 01.90 Inches; 00.00 Inches*
Error Time Out	On* (Time Out Period: 5 to 300 Sec), Off; 15 Sec*
Collate	Off*, Collate, Offset + Collate**, Offset + Group**, Staple** (Staple Position: Top Left*, Top Right, Bottom Left)
Init. Printer Set	Off*, On
Reset Printer	Off*, On
PCL Settings	
Orientation	PortraitT*, Landscape
Font Number	0 to 120; 0*
Point Size	4.00 to 999.75 point; 12.00 point*
Pitch	0.44 to 99.99 cpi; 10.00 cpi*
Form Lines	5 to 128 lines; 64 lines*
Symbol Set	PC8*, PC850, PC852, PC8DN, PC8TK, PC1004, PIFONT, PSMATH, PSTEXT, ROMAN8, VNINTL, VNMATH, VNUS, WIN30, WINBALT, WINL1, WINL2, WINL5, DESKTOP, ISO4, ISO6, ISO11, ISO15, ISO17, ISO21, ISO60, ISO69, ISOL1, ISOL2, ISOL5, ISOL6, LEGAL, MATH8, MCTEXT, MSPUBL, PC775
Custom Paper	Off*, On
Unit of Measure	Millimeters*, Inches
X Dimension	148 mm to 432 mm (5.83" to 17.00"); 432 mm* (17.00")
Y Dimension	95 mm to 297 mm (3.75" to 11.69"); 297 mm* (11.69")
Append CR to LF	No*, Yes
Enlarge A4	Off*, On

Two asterisks (**) indicate items that appear only when the appropriate optional equipment is attached.

4.1.9 Address Book Settings

T-4-9

Item	Settings(*1 Indicates the default setting.)
Register Address	
Register New Add	
Fax	Fax Number: 120 characters maximum Register Name: 16 characters maximum Option: Sending Speed, Long Distance, ECM TX
E-mail	E-mail Address: 120 characters maximum Register Name: 16 characters maximum
I-Fax	I-Fax Address: 120 characters maximum Register Name: 16 characters maximum

Item	Settings(*1 Indicates the default setting.)
File	Protocol: FTP*1, Windows (SMB) Host Name: 120 characters maximum File Path: 120 characters maximum User: 24 characters maximum (FTP, Windows (SMB)) Password: 24 characters maximum (FTP), 14 characters maximum (Windows (SMB)) Register Name: 16 characters maximum
Group	Erase Address Book Register Name: 16 characters maximum
Erase	-
Edit	-
One-touch Buttons	
Register/Edit	You can register or edit the items of One-touch Buttons for Fax, E-mail, I-Fax, File, and Group shown in Register New Add above. Key Name: 12 characters maximum

4.1.10 Recommended setting of system management information

When multiple users use the machine, it is necessary to advise each user to set the system management information.

Setting ID and password of system administrator on the operation unit under (Additional functions key) > [System management setting] > [Setting of system administrator's information] has an effect of restraining the third person from falsifying information, for the ID and password are required when a user carries out an important setting of the machine.

Under the environment that the setting is not done, if a user who does not sufficiently know operation situation of the machine tries to change the setting, following troubles may occur.

- When the user changes [User ID Management] from [off] to [on], copying operation cannot be done unless ID and password are input.
- When each setting is changed on the network from RUI, that enables to falsify data of address book or delete log.
- When TCP/IP fixed address is changed on the network setting, printing operation via network cannot be done until the port setting is changed.
- When usage restriction of USB device is changed to [on], printing operation via USB becomes disabled.

4.1.11 The Reference Information of the Department ID Management

Function:

If Department is registered in Department ID Management, users are required to input the Department ID and password when inputting data from the operation unit of the machine. Also, the registration enables to restrict usage and control the usage number of times of Total Parts, Copy, B&W Scan, Color Scan, or Print.

Setting method:

Register Department ID in Department ID Management under Additional Functions key>System Setting.

Operation outline:

Department ID can be registered in [Department ID management] from the operation unit of the machine even though [System Manager Settings] is not done. When registering data in [Department ID Management] using RUI, you need to register yourself as a system manager in [System Manager Settings] and login as a system manager.

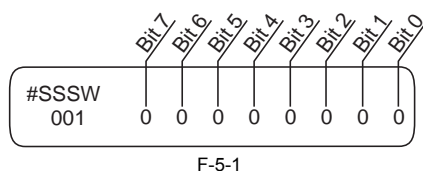
Chapter 5 Service Mode

5.1 Service Soft Switch Settings (SSSW)

5.1.1 Outline

5.1.1.1 Bit Switch Composition

The items registered and set by each of these switches comprise 8-bit switches. The figure below shows which numbers are assigned to which bits. Each bit has a value of either 0 or 1.



F-5-1

⚠ Do not change service data identified as "not used"; they are set as initial settings.

5.1.2 SSSW-SW01

5.1.2.1 List of Functions

T-5-1

Bit	Function	1	0
0	service error code	output	not output
1	not used	-	-
2	not used	-	-
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	not used	-	-

5.1.2.2 Detailed Discussions of Bit 0

Selects whether or not service error codes are output.
When output is selected, service error codes is report.

5.1.3 SSSW-SW03

5.1.3.1 List of Functions

T-5-2

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	not used	-	-
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	tonal signal before CED signal transmission	transmit	do not transmit

5.1.3.2 Detailed Discussions of Bit 7

Use it to enable/disable transmission of a 1080-Hz tonal signal before transmission of the CED signal.
Select 'transmit' if errors occur frequently because of an echo when reception is from overseas.

Memo:

Any of the following error code may be indicated because of an echo at time of reception
##0005, ##0101, ##0106, ##0107, ##0114, ##0200, ##0201, ##0790

5.1.4 SSSW-SW04

5.1.4.1 List of Functions

T-5-3

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	the number of final flag sequences of protocol signals	2	1

Bit	Function	1	0
3	Reception mode after CFR signal transmission	high speed	high speed/low speed
4	the length of the period of ignoring low speed signals after CFR output	1500 ms	700 ms
5	not used	-	-
6	CNG signal for manual transmission	Not transmitted	Transmitted
7	CED signal for manual reception	Not transmitted	Transmitted

5.1.4.2 Detailed Discussions of Bit 2

Use it to select the number of last flag sequences for a protocol signal (transmission speed at 300 bps). Select '2' if the other party fails to receive the protocol signal properly.

Memo:

Any of the following error codes may be indicated at time of transmission

##0100, ##0280, ##0281, ##0750, ##0753, ##0754, ##0755, ##0758, ##0759, ##0760, ##0763 ##0764, ##0765, ##0768, ##0769, ##0770, ##0773, ##0775, ##0778, ##0780, ##0783, ##0785, ##0788

5.1.4.3 Detailed Discussions of Bit 3

Use it to select an appropriate reception mode after transmission of the CFR signal.

If errors occur frequently at time of reception because of the condition of the line, select 'high speed' for reception mode and, at the same time, selects 'do not receive' for 'ECM reception.'

Memo:

Any of the following error codes may be indicated at time of reception because of line condition

##0107, ##0114, ##0201

Be sure to change bit 4 before changing this bit; if errors still occur, change this bit.

When 'high speed' is selected, only high-speed signals (images) will be received after transmission of the CFR signal.

5.1.4.4 Detailed Discussions of Bit 4

Use it to select the time length during which low-speed signals are ignored after transmission of the CFR signal.

If the condition of the line is not good and, therefore, the reception of image signals is difficult, select '1500 ms.'

5.1.4.5 Detailed Discussions of Bit 6

Selects whether or not to transmit CNG signal during manual transmission.

In manual transmitting to a fax with the FAX/TEL switching mode, if there are frequent errors due to failure to switch to fax mode, select "Transmitted" for the CNG signal.

5.1.4.6 Detailed Discussions of Bit 7

Selects whether or not to transmit CED signals during manual reception. If the other fax does not transmit even when you start manual reception, select "Transmitted" for the CED signal.

5.1.5 SSSW-SW05

5.1.5.1 List of Functions

T-5-4

Bit	Function	1	0
0	not used	-	-
1	Conversion from mm to inch (text mode)	convert	do not convert
2	Conversion from mm to inch (text/photo mode)	convert	do not convert
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	not used	-	-

5.1.5.2 Detailed Discussions of Bit 1

Use it to enable/disable millimeter/inch conversion in sub scanning direction for images read in text mode.

Scanning direction in conversion follows the Bit 2 setting of SW14.

5.1.5.3 Detailed Discussions of Bit 2

Use it to enable/disable millimeter/inch conversion in sub scanning direction for images read in text/photo mode while bit 1 is set to '1'.

Scanning direction in conversion follows the Bit 2 setting of SW14.

5.1.6 SSSW-SW12

5.1.6.1 List of Functions

T-5-5

Bit	Function	1	0
0	Time-out period for one page upon transmission	1	0
1	Time-out period for one page upon transmission	1	0
2	not used	-	-
3	not used	-	-
4	Time-out period for one page upon reception	1	0

Bit	Function	1	0
5	Time-out period for one page upon reception	1	0
6	not used	-	-
7	Respective page timer settings for transmission and for reception	enable	do not enable

The machine will stop the ongoing communication if the transmission/reception of a single original page takes 32 min or more. To use the timer for a purpose other than this function, refer to the tables that follow, and select an appropriate time length. When 'do not enable' is selected using bit 7, the time-out length for a single page for all modes will depend on the setting of bit 0 and bit 1.

T-5-6

Time-Out Length for Transmission/Reception	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
8 min	0	*	*	*	*	*	0	0
16 min	0	*	*	*	*	*	0	1
32 min	0	*	*	*	*	*	1	0
64 min	0	*	*	*	*	*	1	1

T-5-7

Time-Out Length for Transmission (in text mode)	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
8 min	1	*	*	*	*	*	0	0
16 min	1	*	*	*	*	*	0	1
32 min	1	*	*	*	*	*	1	0
64 min	1	*	*	*	*	*	1	1

T-5-8

Time-Out Length for Reception	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
8 min	1	*	0	0	*	*	*	*
16 min	1	*	0	1	*	*	*	*
32 min	1	*	1	0	*	*	*	*
64 min	1	*	1	1	*	*	*	*

5.1.7 SSSW-SW13

5.1.7.1 List of Functions

T-5-9

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	Convert "inch" into "mm" when transmitting the received image data	convert	do not convert
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	not used	-	-

5.1.7.2 Detailed Discussions of Bit 2

It converts "inch" into "mm" when transmitting the received image data. Scanning direction in conversion follows the Bit 2 setting of SW14.

5.1.8 SSSW-SW14

5.1.8.1 List of Functions

T-5-10

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	direction of scanning for inch/mm conversion	both main and sub scanning directions	sub scanning direction only
3	not used	-	-
4	inch-configuration resolution declaration	declare	do not declare
5	not used	-	-
6	not used	-	-
7	not used	-	-

5.1.8.2 Detailed Discussions of Bit 2

Use it to specify whether to convert or not convert an inch-configuration resolution into a millimeter-configuration resolution for image read in G3 transmission: either in sub scanning direction only or in both main and sub scanning directions. The setting is valid only when bit 1 of SW05 of #SSSW is set to '1'.

5.1.8.3 Detailed Discussions of Bit 4

Use it to specify whether to declare or not declare an inch-configuration resolution to the other machine for G3 communication: if 'declare' is selected, the machine will indicate that it reads and records at an inch-configuration resolution using the DIS, DCS, or DTC signal.

5.1.9 SSSW-SW28

5.1.9.1 List of Functions

T-5-11

Bit	Function	1	0
0	Caller V.8 protocol	NO	YES
1	Called party V.8 protocol	NO	YES
2	Caller V.8 protocol late start	NO	YES
3	Called party V.8 protocol late start	NO	YES
4	V.34 reception fallback	Prohibited	Not prohibited
5	V.34 transmission fallback	Prohibited	Not prohibited
6	not used	-	-
7	not used	-	-

5.1.9.2 Detailed Discussions of Bit 0

Select whether to use the V.8 protocol when calling. If NO is selected, the V.8 protocol is inhibited at calling and the V.21 protocol is used.

5.1.9.3 Detailed Discussions of Bit 1

Select whether to use the V.8 protocol when called. If NO is selected, the V.8 protocol is inhibited when called and the V.21 protocol is used.

5.1.9.4 Detailed Discussions of Bit 2

If ANSam signal is not received during transmission, select whether to use the V.8 protocol when the other fax machine declares the V.8 protocol in DIS signal. If NO is selected, the CI signal is not transmitted and the V.8 protocol is not used even if the DIS that specifies the V.8 protocol is received. The V.8 late start is not executed during manual transmission regardless of this setting.

5.1.9.5 Detailed Discussions of Bit 3

Select whether to declare the V.8 protocol in DIS signal for reception. If NO is selected, the V.8 protocol cannot be used because it is not declared in DIS signal. The V.8 late start is not executed during manual reception regardless of this setting.

5.1.9.6 Detailed Discussions of Bit 4

Select whether the receiver falls back during V.34 reception. If 'Prohibit' is selected, the receiver does not fall back.

5.1.9.7 Detailed Discussions of Bit 5

Select whether the transmitter falls back during V.34 transmission. If 'Prohibit' is selected, the transmitter does not fall back.

5.1.10 SSSW-SW30

5.1.10.1 List of Functions

T-5-12

Bit	Function	1	0
0	Not used	-	-
1	Not used	-	-
2	Not used	-	-
3	Not used	-	-
4	Not used	-	-
5	New dial tone detection method	Detect with the new method.	Detect with the existing method.
6	Not used	-	-
7	Not used	-	-

5.1.10.2 Detailed Discussions of Bit 5

When "Detect with the new method" is selected, tone is detected for 3.5 seconds before call origination in order to discriminate between dial tone and voice. If dial tone is detected and the time since line seizure is 3.5 seconds or longer, call origination takes place immediately. If the time since line seizure is less than 3.5 seconds, call origination takes place after waiting for 1 second. (If the time since line seizure reaches 3.5 seconds during the 1-second waiting period, call origination takes place immediately. By default, "Detect with a new method" is assigned for this SW.

5.1.11 SSSW-SW33

5.1.11.1 List of Functions

T-5-13

Bit	Function	1	0
0	count B4 (Print) as large size	Yes	No
1	indicate serial No. on counter check screen	Yes	No
2	count B4 (Scan) as large size	Yes	No
3	the counter display type change in Japan	Yes	No
4	not used	-	-
5	not used	-	-
6	not used	-	-

Bit	Function	1	0
7	not used	-	-

5.1.11.2 Detailed Discussions of Bit 0

Use it to specify whether B4 paper (Print) should be counted as large-size paper.
If 'yes' is selected, B4 paper will be counted as large-size paper.
If 'no' is selected, on the other hand, B4 paper will be counted as small-size paper.

5.1.11.3 Detailed Discussions of Bit 1

Use it to specify whether to indicate the machine serial No. on the Counter Check screen, appearing when the Counter key is pressed.
If 'yes' is selected, the serial No. will be indicated.
If 'no' is selected, on the other hand, the serial No. will not be indicated.

5.1.11.4 Detailed Discussions of Bit 2

Use it to specify whether B4 paper (Scan) should be counted as large-size paper.
If 'yes' is selected, B4 paper will be counted as large-size paper.
If 'no' is selected, on the other hand, B4 paper will be counted as small-size paper.

5.1.11.5 Detailed Discussions of Bit 3

Select whether to switch the counter display type in effect in Japan to the conventional or new type. Select "Yes" to display counters in the new type. Select "No" to display counters in the conventional type.

5.2 Menu Switch Settings (MENU)

5.2.1 Menu Switch Composition

T-5-14

No.	Function	Range of settings
005	NL equalizer	1: ON, 0: OFF
006	telephone line monitor	0:DIAL, 1:SERVICEMAN1, 2:SERVICEMAN2, 3:OFF
007	transmission level (ATT)	from 0 to 15 (ex: 15= -15 dBm)
008	V.34 modulation speed upper limit	0:3429, 1:3200, 2:3000, 3:2800, 4:2743, 5:2400
009	V34 data speed upper limit	0:33.6 kbps, 1:31.2 kbps, 2:28.8 kbps, 3:26.4 kbps, 4:24.0 kbps, 5:21.6 kbps, 6:19.2 kbps, 7:16.8 kbps, 8:14.4 kbps, 9:12.0 kbps, 10:9.6 kbps, 11:7.2 kbps, 12:4.8 kbps, 13:2.4 kbps
010	Frequency of pseudoring signal	0:50 Hz, 1:25 Hz, 2:17 Hz

5.2.2 <No.005 NL equalizer>

Use it to enable-disable the NL equalizer.
If errors occur often during communication because of the condition of the line, enable (ON) the NL equalizer.

Any of the following error codes may be indicated at time of transmission because of the line condition:
##100, ##101, ##102, ##104, ##201, ##281, ##282, ##283, ##750, ##755, ##765, ##774, ##779, ##784, ##789
Any of the following error codes may be indicated at time of transmission because of the line condition:
##103, ##107, ##114, ##201, ##790, ##793

5.2.3 <No.006 telephone line monitor>

Use it to set the telephone line monitor function:
DIAL: generate the monitor sound of the telephone line using the speaker from the start of transmission to DIS.
SERVICEMAN [1]: generate the monitor sound of the telephone line using the speaker from the start of communication to the end of it.
SERVICEMAN [2]: generate the monitor sound of the telephone line2 (Option).
OFF: do not generate the monitor sound of the telephone line using the speaker.

5.2.4 <No.007 ATT transmission level>

Use it to set the transmission level (ATT).
Raise the transmission level if errors occur frequently at time of communication because of the condition of the line. (It means close to 8)

Any of the following error codes may be indicated at time of transmission because of the line condition:
##100, ##101, ##102, ##104, ##201, ##280, ##281, ##282, ##283, ##284, ##750, ##752, ##754, ##755, ##757, ##759, ##760, ##762, ##764, ##765, ##767, ##769, ##770, ##772, ##774, ##775, ##777, ##779, ##780, ##782, ##784, ##785, ##787, ##789
Any of the following error codes may be indicated at time of reception because of the line condition:
##103, ##106, ##107, ##201, ##793

5.2.5 <No.008 V.34 modulation speed upper limit>

Use it to set an upper limit to the modulation speed (baud rate) for the V.34 primary channel.

5.2.6 <No.009 V.34 data speed upper limit>

Use it to set an upper limit to the data transmission speed for the V.34 primary channel between 2.4K and 33.6K bps in increments of 2400 bps. (0: 2.4K to 13: 33.6K bps).

5.2.7 <No.010 Frequency of the pseudo CI signal>

You may select a frequency for the pseudo CI signal.
Some types of external telephones do not ring when the fax/tel switch-over function is ON. To sound the ring, change the pseudo CI signal.

5.3 Numeric Parameter Settings (NUMERIC Param.)

5.3.1 Numerical Parameter Composition

T-5-15

No.	Item	Range of settings
002	RTN transmission condition(1)	1% to 99%
003	RTN transmission condition (2)	2 to 99 item
004	RTN transmission condition (3)	1 to 99 lines
005	NCC pause time length (pre-ID code)	1 to 60 sec
006	NCC pause time length (post-ID code)	1 to 60 sec
010	line condition identification time length	0 to 9999 (10 msec)
011	T.30T1 timer (for reception)	0 to 9999 (10 msec)
013	T.30 EOL timer	500 to 3000 (10 msec)
015	hooking detection time length	0 to 999
016	time length to first response at time of fax/tel switchover	0 to 9
017	pseudo RBT signal pattern ON time length	0 to 999
018	pseudo RBT signal pattern OFF time length (short)	0 to 999
019	pseudo RBT signal pattern OFF time length (long)	0 to 999
020	pseudo CI signal pattern ON time length	0 to 999
021	pseudo CI signal pattern OFF time length (short)	0 to 999
022	pseudo CI signal pattern OFF time length (long)	0 to 999
023	CNG detection level at time of fax/tel switchover	0 to 7
024	pseudo RBT transmission level at time of fax/tel switchover	10 to 20 0 to 20 (120/230V)
025	Answering machine connection function signal detection time	0 to 999
027	preamble detection time length for V21 low-speed flag	20 (x 10ms)
056	display the type of soft counter 1	101 (Fixed)
057	Display the type of soft counter 2	0 to 999
058	Display the type of soft counter 3	0 to 999
059	Display the type of soft counter 4	0 to 999
060	Display the type of soft counter 5	0 to 999
061	Display the type of soft counter 6	0 to 999

5.3.2 <002: RTN transmission condition (1)><003: RTN transmission condition (2)><004: RTN transmission condition (3)>

Use it to set RTN signal transmission conditions. Raise these parameters for more lenient conditions if errors occur frequently at time of reception because of transmission of the RTN signal.

Memo:

Any of the following error codes may be indicated at time of reception because of RTN signal transmission
##0104, ##0107, ##0114, ##0201

RTN signal transmission condition (1) affects the ratio of error lines to the total number of lines per single page of received images.

RTN signal transmission condition (2) affects the standard value (*2) of burst errors (*1).

RTN signal condition (3) affects the number of errors not reaching the standard value of burst errors.

*1: transmission error occurring cover several lines.

*2: for instance, if '15' is set, a single burst error will represent an error occurring continuously cover 15 lines.

If any of these lines is detected while an image signal is being received, the RTN signal will be transmitted after receiving the protocol signal of the transmitting party. Higher parameters restrict the transmission of the RTN signal.

5.3.3 <005: NCC pause length (pre-ID code)>

Use it to set the length of the pause automatically entered between access code and ID code when the NCC (New Common Carrier) line is used for dialing.

5.3.4 <006: NCC pause length (post-ID code)>

Use it to set the length of the pause automatically entered between ID code and telephone number of the other party when the NCC (New Common Carrier) line is used for dialing.

5.3.5 <010: line connection identification length>

Use it to set the time for identifying the line connection. Raise this parameter if errors occur frequently at time of communication because of the condition of the line.

Memo:

Any of the following error codes may be indicated because of the condition of the line

##0005, ##0018

The line condition identification time is between when the dial signal is transmitted and when the line condition is cut for the transmitting party, while it is between when the DIS signal is transmitted and when the line is cut for the receiving party.

5.3.6 <011: T.30 T1 timer (for reception)>

Set the T1 timer for the receiver (wait time after DIS transmission starts until a significant signal is received).

5.3.7 <013: T.30 EOL timer>

Set it so that the 1-line transmission time is longer for reception to prevent reception errors caused by a long data length per line (e.g., computer FAX).

5.3.8 <016: time length to first response at time of fax/tel switchover>

Allows setting of the time from seizing the line till pseudo RBT is sent, when the Fax/ Tel switching function is operating.

5.3.9 <017: pseudo RBT signal pattern ON time length><018: pseudo RBT signal pattern OFF time length (short)><019: pseudo RBT signal pattern OFF time length (long)>

Use it to set the pattern of the pseudo RBT signal transmitted at time of a fax/tel switchover.

5.3.10 <020: pseudo CI signal pattern ON time length><021: pseudo CI signal pattern OFF time length (short)><022: pseudo CI signal pattern OFF time length (long)>

Use it to set the pseudo CI signal pattern transmitted at time of a fax/tel switchover.

5.3.11 <023: CNG detention level for fax/tel switchover>

Use it to set the CNG detention level for a fax/tel switchover.

5.3.12 <024: pseudo RBT transmission level at time of fax/tel switchover>

Use it to set the pseudo transmission level for a fax/tel switchover.

5.3.13 <025: Answering machine connection function signal detection time>

Sets the signal detection time for the answering machine connection function operation. When the answering machine connection function is operating, if the function does not operate normally because the fax does not detect CNG signal sent from the line, raise this parameter to increase the signal detection time.

5.3.14 <027: V.21 low-speed flag preamble identification length>

Use it to detect the time of detection after which command analysis is started after detecting V.21 low-speed command preambles continuously for a specific period of time.

5.3.15 <056 - 061: Count type select >

Use it to confirm the count type indicated on the Counter Check screen, which appears in response to a press on the Counter key.

When '0' is selected, count type will not be indicated.

No.56: Use it to indicate the type of software counter 1 of the control panel. The type of soft counter 1 cannot be changed.

No.57: Use it to change the type of soft counter 2* of the control panel to suit the needs of the user.

No.58: Use it to change the type of soft counter 3* of the control panel to suit the needs of the user.

No.59: Use it to change the type of soft counter 4* of the control panel to suit the needs of the user.

No.60: Use it to change the type of soft counter 5* of the control panel to suit the needs of the user.

No.61: Use it to change the type of soft counter 6* of the control panel to suit the needs of the user.

*:The default type settings of soft counter is different from models.

<Soft Counter Specifications>

The soft counters are classified as follows in terms of input numbers:

100s: total

200s: copy

300s: print

400s: copy + print

500s: scan

700s: received file print

800s: report print

900s: transmitted scan

Guide to the Table

- 1:Count sheets of all sizes by one.

- 2:Count sheets of the large size by two.

- C:full color

- Bk:black mono

- L:large size (larger than A4/LTR)

- S:small size (A4/LTR or smaller)

MEMO:

To make a change so that B4 papers (for print) will be counted as large-size, use service mode: make the following selections, and change bit 0 to '1': #SSSW>SW33.

To make a change so that B4 papers (for scan) will be counted as large-size, use service mode: make the following selections, and change bit 2 to '1': #SSSW>SW33.

Serial No. on counter check screen	Counter type	Print system															
		Bk 1-sided L				Bk 1-sided S				Bk 2-sided L				Bk 2-sided S			
		Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print
101	Total1	1	1	1	1	1	1	1	1								
102	Total2	2	2	2	2	1	1	1	1								
103	Total (L)	1	1	1	1												
104	Total (S)					1	1	1	1								
108	Total (Bk1)	1	1	1	1	1	1	1	1								
109	Total (Bk2)	2	2	2	2	1	1	1	1								
112	Total (Bk/L)	1	1	1	1												
113	Total (Bk/S)					1	1	1	1								
114	Total1 (2-sided)									1	1	1	1	1	1	1	1

Serial No. on counter check screen	Counter type	Print system															
		Bk 1-sided L				Bk 1-sided S				Bk 2-sided L				Bk 2-sided S			
		Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print
115	Total2 (2-sided)									2	2	2	2	1	1	1	1
116	L (2-sided)									1	1	1	1				
117	S (2-sided)													1	1	1	1
126	TotalA1		1	1	1		1	1	1								
127	TotalA2		2	2	2		1	1	1								
128	TotalA (L)		1	1	1												
129	TotalA (S)						1	1	1								
132	TotalA (Bk1)		1	1	1		1	1	1								
133	TotalA (Bk2)		2	2	2		1	1	1								
136	TotalA (Bk/L)		1	1	1												
137	TotalA (Bk/S)						1	1	1								
138	TotalA1 (2-sided)										1	1	1		1	1	1
139	TotalA2 (2-sided)										2	2	2		1	1	1
140	L A (2-sided)										1	1	1				
141	S A (2-sided)														1	1	1
150	TotalB1		1	1	1		1	1	1								
151	TotalB2		2	2	2		1	1	1								
152	TotalB (L)		1	1	1												
153	TotalB (S)						1	1	1								
156	TotalB (Bk1)		1	1	1		1	1	1								
157	TotalB (Bk2)		2	2	2		1	1	1								
160	TotalB (Bk/L)		1	1	1												
161	TotalB (Bk/S)						1	1	1								
162	TotalB1 (2-sided)										1	1	1		1	1	1
163	TotalB2 (2-sided)										2	2	2		1	1	1
164	LB (2-sided)										1	1	1				
165	SB (2-sided)														1	1	1
201	Copy(Total1)	1				1											
202	Copy(Total2)	2				1											
203	Copy(L)	1															
204	Copy(S)					1											
205	CopyA (Total1)	1				1											
206	CopyA (Total2)	2				1											
207	CopyA (L)	1															
208	CopyA (S)					1											
209	Local copy(Total1)	1				1											
210	Local copy(Total2)	2				1											
211	Local copy(L)	1															
212	Local copy(S)					1											
221	Copy(Bk1)	1				1											
222	Copy(Bk2)	2				1											
227	Copy(Bk/L)	1															
228	Copy(Bk/S)					1											
237	Copy(Bk/L/2-sided)									1							
238	Copy(Bk/S/2-sided)													1			
249	CopyA (Bk1)	1				1											
250	CopyA (Bk2)	2				1											
255	CopyA (Bk/L)	1															
256	CopyA (Bk/S)					1											
265	CopyA (Bk/L/2-sided)									1							
266	CopyA (Bk/S/2-sided)													1			
277	Local copy(Bk1)	1				1											
278	Local copy(Bk2)	2				1											
283	Local copy(Bk/L)	1															
284	Local copy(Bk/S)					1											
293	Local copy(Bk/L/2-sided)									1							
294	Local copy(Bk/S/2-sided)													1			
301	Print (Total1)		1		1		1		1								
302	Print (Total2)		2		2		1		1								

Serial No. on counter check screen	Counter type	Print system															
		Bk 1-sided L				Bk 1-sided S				Bk 2-sided L				Bk 2-sided S			
		Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print
303	Print (L)		1		1												
304	Print (S)						1		1								
305	PrintA (Total1)		1		1		1		1								
306	PrintA (Total2)		2		2		1		1								
307	PrintA (L)		1		1												
308	PrintA (S)						1		1								
313	Print (Bk1)		1		1		1		1								
314	Print (Bk2)		2		2		1		1								
319	Print (Bk/L)		1		1												
320	Print (Bk/S)						1		1								
329	Print (Bk/L										1		1				
330	Print (Bk/S/2-sided)														1		1
331	PDL print (Total1)		1				1										
332	PDL print (Total2)		2				1										
333	PDL print (L)		1														
334	PDL print (S)						1										
339	PDL print (Bk1)		1				1										
340	PDL print (Bk2)		2				1										
345	PDL print (Bk/L)		1														
346	PDL print (Bk/S)						1										
355	PDL print (Bk/L/2-sided)										1						
356	PDL print (Bk/S)														1		
403	Copy+Print (Bk/L)	1	1		1												
404	Copy+Print (Bk/S)					1	1		1								
405	Copy+Print (Bk2)	2	2		2	1	1		1								
406	Copy+Print (Bk1)	1	1		1	1	1		1								
411	Copy+Print (L)	1	1		1												
412	Copy+Print (S)					1	1		1								
413	Copy+Print (2)	2	2		2	1	1		1								
414	Copy+Print (1)	1	1		1	1	1		1								
421	Copy+Print (Bk/L)									1	1		1				
422	Copy+Print (Bk/S)													1	1		1
701	Received print (Total1)																
702	Received print (Total2)																
703	Received print (L)																
704	Received print (S)																
709	Received print (Bk1)																
710	Received print (Bk2)																
715	Received print (Bk/L)																
716	Received print (Bk/S)																
725	Received print (Bk/L/2-sided)											1					
726	Received print (Bk/S/2-sided)															1	
801	Report print (Total1)																
802	Report print (Total2)																
803	Report print (L)																
804	Report print (S)																
809	Report print (Bk1)																
810	Report print (Bk2)																
815	Report print (Bk/L)																
816	Report print (Bk/S)																
825	Report print (Bk/L)												1				
826	Report print (Bk/S)																1

Serial No. on counter check screen	Counter type	Scan system													
		Bk 1-sided L				Bk 1-sided S				Bk 2-sided L				Bk 2-sided S	
		Total scan	E-mail scan	FileS hare DBscan	E-mail FileS hare DB scan	FileS hare DB BoxF scan	E-mail FileS hare DB Box	Total scan	Total scan	E-mail scan	FileS hare DB scan	E-mail FileS hare DB scan	FileS hare DB scan	E-mail FileS hare DB BOX scan	Total scan
501	Scan (Total1)	1						1							
505	Bk scan (Total1)	1						1							
506	Bk scan (Total2)	2						1							
507	Bk scan (L)	1													
508	Bk scan (S)							1							
509	C scanTotal (1)							1							1
510	C scanTotal (2)							2							1
511	C scan (L)							1							
512	C scan (S)														1
915	Transmission scan total2 (C)													1	
916	Transmission scan total2 (Bk)						1								
917	Transmission scan total3 (C)											1			
918	Transmission scanTotal3 (Bk)				1										
921	Transmission scanTotal5 (C)										1				
922	Transmission scanTotal5 (Bk)			1											
929	Transmission scanTotal6 (C)												1		
930	Transmission scanTotal6 (Bk)					1									
945	Transmission scan/E-mail (C)									1					
946	Transmission scan/E-mail (Bk)		1												

5.4 Scanner Function Settings (SCANNER)

5.4.1 Setting of Bit Switch

<SCAN SW SSSW01>

T-5-16


Bit	Function	1	0
0	Not used	-	-
1	Not used	-	-
2	Not used	-	-
3	Not used	-	-
4	Outputting an Image for ADF Perpendicularity Adjustment	output	not output
5	Not used	-	-
6	Not used	-	-
7	Not used	-	-

Specify whether to output an image for ADF perpendicularity adjustment.

5.4.2 Numeric Parameter Functional configuration

No.	Function	Default	Setting range	Unit
001: - 023:	Not used			
024:	CIS scan position during ADF scanning.	385	300-450	one unit=0.1mm
025:	Not used			
026:	Distance from the standby position of CIS to the shading start point.	22	6-48	one unit=0.1mm
027: - 030:	Not used			
031:	Vertical scan start position adjustment	35	0-70	one unit=0.1mm
032:	Horizontal scan start position adjustment	115	50-150	one unit=0.1mm
033:	Vertical scan magnification correction	16	0-32	one unit=0.1%
034:	Not used			
035: - 036:	Reader motor speed adjustment	474		
037: - 040:	Not used			
041:	Vertical scan start position adjustment (scanning on ADF)	35	0-70	one unit=0.1mm
042:	Horizontal scan start position adjustment (scanning on ADF)	220	170-270	one unit=0.1mm
043:	Horizontal scan end position correction (copy:scanning on ADF)	24	0-200	one unit=0.1mm
044:	Horizontal scan end position correction (superfine:scanning on ADF)	36	0-200	one unit=0.1mm

No.	Function	Default	Setting range	Unit
045:	Horizontal scan end position correction (fine:scanning on ADF)	47	0-200	one unit=0.1mm
046:	Horizontal scan end position correction (standard:scanning on ADF)	47	0-200	one unit=0.1mm
047:	Vertical scan magnification correction (scanning on ADF)	16	0-32	one unit=0.1%
048:	Horizontal scan magnification correction (scanning on ADF)	16	0-32	one unit=0.1%
049: - 053:	Not used			
054:	Pickup motor speed correction (when the ADF is used)	16	0-32	one unit=0.1%
055: - 192:	Not used			
193:	ADF special paper, standardized size: LGL misidentification-ready	0	0 : LEGAL 1 : FOOLSCAP 2 : M_OFFICIO 3 : A_FOOLSCAP 4 : FOLIO 5 : G_LEGAL 6 : A_OFFICIO 7 : B_OFFICIO	
194:	ADF special paper, standardized size: LTR misidentification-ready	0	0 : LTR 1 : G_LTR 2 : A_LTR	
195:	ADF special paper, standardized size: LTR_R misidentification-ready	0	0 : LTR_R 1 : FOOLSCAP 2 : OFFICIO 3 : E_OFFICIO 4 : G_LTR_R 5 : A_LTR_R	
196:	shading target value (red)	272	0-511	
197:	shading target value (green)	272	0-511	
198:	shading target value (blue)	272	0-511	
199: - 212:	Not used			
213:	XYZ correction value (X) of standard white plate	8273	1-9999	
214:	XYZ correction value (Y) of standard white plate	8737	1-9999	
215:	XYZ correction value (Z) of standard white plate	9427	1-9999	
216: - 350:	Not used			


 If any operation error occurs after changing the setting value, change the setting value to the original one.

5.4.3 <024:CIS scan position during ADF scanning>

This value is used when automatic scan position adjustment (TEST MODE>"2"SCAN TEST>"3"SHEET POS ADJ) fails.

5.4.4 <026:Distance from the standby position of CIS to the shading start point>

White shading can be adjusted finely.

 Normally, do not change the setting value. If any operation error occurs after changing the setting value, change the setting value to the original one.

5.4.5 <031Vertical scan start position adjustment>

Adjust the position at which vertical scanning of a book starts. The larger the adjustment value, the narrower the left-side margin of the image becomes.

5.4.6 <032Horizontal scan start position adjustment>

Adjust the position at which horizontal scanning of a book starts. The larger the adjustment value, the narrower the top margin in the image becomes.

5.4.7 <033Vertical scan magnification correction>

Correct the magnification of vertical scanning of a book. The larger the adjustment value, the more the image stretches in the vertical scanning direction.

5.4.8 <035: - 036:Reader motor speed change>

Though no market adjustment work needs to be carried out, enter factory defaults at image processor PCB replacement.

5.4.9 <041: Vertical scan start position adjustment (when scanning on a document fed from ADF)>

Adjust the position at which vertical scanning of a document fed from the ADF starts. The larger the adjustment value, the narrower the left-side margin of the image becomes.

5.4.10 <042: Horizontal scan start position adjustment (when scanning on a document fed from ADF)>

Adjust the position at which horizontal scanning of a document fed from the ADF starts. The larger the adjustment value, the narrower the top margin of the image becomes.

5.4.11 <043: Horizontal scan end position correction (copy:scanning on ADF)>

Adjust the position at which horizontal scanning of a document being copied ends (when scanning on a document fed from ADF). The larger the adjustment value, the narrower the bottom margin of the image becomes.

5.4.12 <044: Horizontal scan end position correction (superfine:scanning on ADF)>

Adjust the position at which horizontal scanning of a FAX document scanned in superfine mode ends. The larger the adjustment value, the narrower the bottom margin of the image becomes.

5.4.13 <045: Horizontal scan end position correction (fine:scanning on ADF)>

Adjust the position at which horizontal scanning of a FAX document scanned in fine mode ends. The larger the adjustment value, the narrower the bottom margin of the image becomes.

5.4.14 <046: Horizontal scan end position correction (standard:scanning on ADF)>

Adjust the position at which horizontal scanning of a FAX document set to the standard scan resolution ends. The larger the adjustment value, the narrower the bottom margin of the image becomes.


5.4.15 <047: Vertical scan magnification correction (when scanning on a document fed from ADF)>

Correct the magnification of vertical scanning of a document fed from the ADF. The larger the adjustment value, the more the image stretches in the vertical scanning direction.

5.4.16 <048: Horizontal scan magnification correction (when scanning on a document fed from ADF)>


Correct the magnification of horizontal scanning of a document fed from the ADF. The smaller the adjustment value, the more the image stretches in the horizontal scanning direction.

This menu is used to adjust the ADF feed motor speed. If you changed the adjustment value in this mode, the adjustment value selected for SCAN NUMERIC>54 must also be incremented/decremented by the same amount.

 Do not change the adjustment value extremely.

5.4.17 <054: Pickup motor speed correction (when the ADF is used)>

This menu is used to adjust the ADF pickup motor speed. If you have adjusted the ADF feed motor speed by selecting SCAN NUMERIC>48, the ADF pickup motor speed must also be incremented/decremented by the same amount.

 Do not change the adjustment value extremely.

5.4.18 <193: ADF special standard-sized paper: LGL misidentification-ready>

Set to use special standard-sized paper that is not otherwise identifiable to the ADF (because it is misidentified as "LEGAL").

0: LEGAL
1: FOOLSCAP
2: M_OFFICIO
3: A_FOOLSCAP
4: FOLIO
5: G_LEGAL
6: A_OFFICIO
7: B_OFFICIO

5.4.19 <194: ADF special standard-sized paper: LTR misidentification-ready>

Set to use special standard-sized paper that is not otherwise identifiable to the ADF (because it is misidentified as "LTR").

0: LTR
1: G_LTR
2: A_LTR

5.4.20 <195: ADF special standard-sized paper: LTR_R misidentification-ready>

Set to use special standard-sized paper that is not otherwise identifiable to the ADF (because it is misidentified as "LTRR").

0: LTR_R
1: FOOLSCAP
2: OFFICIO
3: E_OFFICIO
4: G_LTR_R
5: A_LTR_R

5.4.21 <196: Shading Target Value (Red)>

This is market-related measures taken to improve shadow images generated by a thick original such as a book or a folded or wrinkled original. When taking the measures, assign the same values for R, G, and B. After changing the values, be sure to turn off the power and turn it on again.

5.4.22 <197: Shading Target Value (Green)>

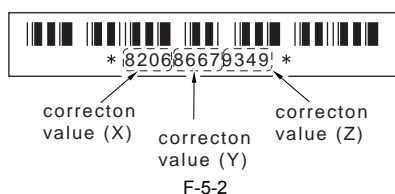
This is market-related measures taken to improve shadow images generated by a thick original such as a book or a folded or wrinkled original. When taking the measures, assign the same values for R, G, and B. After changing the values, be sure to turn off the power and turn it on again.

5.4.23 <198: Shading Target Value (Blue)>

This is market-related measures taken to improve shadow images generated by a thick original such as a book or a folded or wrinkled original. When taking the measures, assign the same values for R, G, and B. After changing the values, be sure to turn off the power and turn it on again.

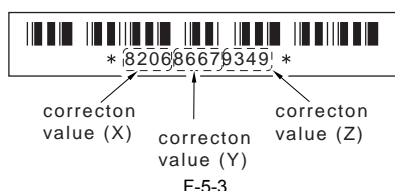
5.4.24 <213: XYZ correction value (X) of standard white plate>

If you replaced the image processor PCB, enter values indicated on the service label. If you have replaced the document glass, enter values indicated on the new document glass and write the values on the service label.



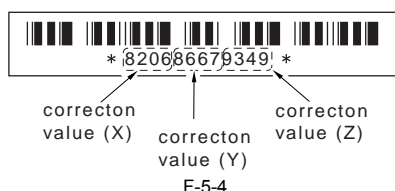
5.4.25 <214: XYZ correction value (Y) of standard white plate>

If you replaced the image processor PCB, enter values indicated on the service label. If you have replaced the document glass, enter values indicated on the new document glass and write the values on the service label.



5.4.26 <215: XYZ correction value (Z) of standard white plate>

If you replaced the image processor PCB, enter values indicated on the service label. If you have replaced the document glass, enter values indicated on the new document glass and write the values on the service label.



5.5 Printer Function Settings (PRINTER)

5.5.1 Service Soft Switch Settings (SSSW)

5.5.1.1 SSSW-SW05

5.5.1.1.1 List of Functions

0012-3961

T-5-17

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	not used	-	-
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	priority on recording in sub scanning direction	place	do not place

5.5.1.1.2 Detailed Discussions of Bit 7

0012-3962

Use it to enable/disable placement of priority on recording in sub scanning direction.

T-5-18

place:	if B4 recording paper and A4 recording paper are set and an A4 extra-long image (*) is received, printing will be on the B4 recording paper.
do not place:	if B5 horizontal recording paper and A4 recording paper are set and a B4 image is received, printing will be by division and on B5 horizontal recording paper.

*: Image B4 or shorter and that cannot be printed by division and on A4 recording paper.

5.5.1.2 SSSW-SW14

5.5.1.2.1 List of Functions

0012-3963

T-5-19

Bit	Function	1	0
0	Transfer bias pressure reduction mode	Enable	Disable
1	Not used	-	-
2	Black belt addition mode	Enable	Disable

Bit	Function	1	0
3	Post-rotation reduction mode	Enable	Disable
4	Flicker reduction mode	Enable	Disable
5	Silent mode	Enable	Disable
6	Terminal temperature rise noise reduction mode	Enable	Disable
7	Not used	-	-

5.5.1.2.2 Detailed Discussions of Bit 0

[0012-3964](#)

Select whether to enable or disable transfer bias pressure reduction mode.

Select "Enable" to avoid image defects (black spots) produced by transfer bias leaks occurring in a low-pressure region, such as one at a high altitude. This setting regulates the transfer bias to keep it from exceeding a predetermined level during printing.

5.5.1.2.3 Detailed Discussions of Bit 2

[0012-3966](#)

Select whether to enable or disable black belt addition mode. If the user uses paper that causes fixed toner on paper to be fused and adhered to drum, selecting "Yes" will clean the drum by forming a black band on the drum surface during the reverse rotation which is performed after printing on 50 sheets.

5.5.1.2.4 Detailed Discussions of Bit 3


[0012-3967](#)

Select whether to enable or disable post-rotation reduction mode. Selecting "Enable" will reduce the noise caused by the polygon motor by stopping the motor immediately after post-rotation.

5.5.1.2.5 Detailed Discussions of Bit 4

[0012-3969](#)

Select whether to enable or disable flicker reduction mode. Select "Enable" and enter a count to modify fusing temperature control to cancel fluorescent flicking during printing.

 Implementation of this mode would degrade the throughput.

5.5.1.2.6 Detailed Discussions of Bit 5

[0012-3970](#)

Select whether to enable or disable silent mode. Select "Enable" to modify the registration loop amount and thus reduce noises or squeaks the registration rollers produce after picking paper from the individual paper inlets.

5.5.1.2.7 Detailed Discussions of Bit 6

[0012-3972](#)

Select whether to enable or disable noise reduction mode during terminal temperature rises. Select "Enable" to start slowdown at a temperature lower than normal when printing on smaller-sized paper than B4. Slowdown control thus enabled prevents the thermal degradation of the fusing film grease, assuring smooth sliding among the fixing film, heater and film guide to cut squeaks.

5.5.1.3 SSSW-SW15

5.5.1.3.1 List of Functions

[0012-3973](#)

T-5-20

Bit	Function	1	0
0	Inhibit automatic delivery tray replacement while running jobs	Enable	Disable
1	Halt stapling job when out of staples	Enable	Disable
2	Inhibit tray full indication while the stapled document count is exceeded	Enable	Disable
3	Not used	-	-
4	Not used	-	-
5	Not used	-	-
6	Not used	-	-
7	Not used	-	-

5.5.1.3.2 Detailed Discussions of Bit 0

[0012-3977](#)

Select whether to inhibit automatic delivery tray replacement while running jobs with an inner two-way tray mounted in position. Select "Enable" to inhibit automatic tray replacement.

5.5.1.3.3 Detailed Discussions of Bit 1

[0012-3978](#)

Select whether to halt stapling job when a finisher installed has run out of staples. Select "Enable" to halt staple jobs when the finisher has run out of staples.

5.5.1.3.4 Detailed Discussions of Bit 2

[0012-3979](#)

Select whether to display a tray full message when the maximum allowable stapled document count is exceeded with a finisher installed. Select "Enable" not to display the message.

5.5.2 Numeric Parameter Settings (NUMERIC Param.)

5.5.2.1 List of Functions

No.	Function	Default	Setting range
01: - 30:	Not used		
31:	Top registration adjustment (manual feed tray)	50	0 to 100, one unit = 0.1 mm
32:	Top registration adjustment (cassette)	50	0 to 100, one unit = 0.1 mm
33:	Top registration adjustment (duplex unit)	50	0 to 200, one unit = 0.1 mm
34:	Left-end registration adjustment (manual feed tray)	100	0 to 200, one unit = 0.1 mm
35:	Left-end registration adjustment (cassette 1)	100	0 to 200, one unit = 0.1 mm
36:	Left-end registration adjustment (cassette 2)	100	0 to 200, one unit = 0.1 mm
37:	Left-end registration adjustment (cassette 3)	100	0 to 200, one unit = 0.1 mm
38:	Left-end registration adjustment (cassette 4)	100	0 to 200, one unit = 0.1 mm
39:	Left-end registration adjustment (duplex unit)	100	0 to 200, one unit = 0.1 mm
40:	Target fixing temperature adjustment (multi)	6	-30 to 0, one unit = 5 deg C
41:	Target fixing temperature adjustment (cassette 1)	6	-30 to 0, one unit = 5 deg C
42:	Target fixing temperature adjustment (cassette 2)	6	-30 to 0, one unit = 5 deg C
43:	Target fixing temperature adjustment (cassette 3)	6	-30 to 0, one unit = 5 deg C
44:	Target fixing temperature adjustment (cassette 4)	6	-30 to 0, one unit = 5 deg C
45:	Fixing film speed change (manual feed tray)	16	0 to 30, 1 unit = 0.4%
46:	Fixing film speed change (cassette)	16	0 to 30, 1 unit = 0.4%
47: - 50:	Not used		

5.5.2.2 <031: Top registration adjustment (manual feed tray)>

Adjust the top registration margin of paper picked from a manual feed tray. The larger the adjustment value, the wider the top margin of the image becomes.

5.5.2.3 <032: Top registration adjustment (cassette)>

Adjust the top registration margin of paper picked from cassettes. The larger the adjustment value, the wider the top margin of the image becomes.

5.5.2.4 <033: Top registration adjustment (duplex unit)>

Adjust the top registration margin of paper picked from a duplex unit. The larger the adjustment value, the wider the top margin of the image becomes.

5.5.2.5 <034: Left-end registration adjustment (manual feed tray)>

Adjust the left-end registration margin of paper picked from a manual feed tray. The larger the adjustment value, the wider the left-end margin of the image becomes.

5.5.2.6 <035: Left-end registration adjustment (cassette 1)>

Adjust the left-end registration margin of paper picked from cassette 1. The larger the adjustment value, the wider the left-end margin of the image becomes.

5.5.2.7 <036: Left-end registration adjustment (cassette 2)>

Adjust the left-end registration margin of paper picked from cassette 2. The larger the adjustment value, the wider the left-end margin of the image becomes.

5.5.2.8 <037: Left-end registration adjustment (cassette 3)>

Adjust the left-end registration margin of paper picked from cassette 3. The larger the adjustment value, the wider the left-end margin of the image becomes.

5.5.2.9 <038: Left-end registration adjustment (cassette 4)>

Adjust the left-end registration margin of paper picked from cassette 4. The larger the adjustment value, the wider the left-end margin of the image becomes.

5.5.2.10 <039: Left-end registration adjustment (duplex unit)>

Adjust the left-end registration margin of paper picked from a duplex unit. The larger the adjustment value, the wider the left-end margin of the image becomes.

5.5.2.11 <040: Target fixing temperature adjustment (manual feed tray)>

Lower the fixing temperature from the target temperature setting to reduce the chances of fixing offsets and curled or stuck delivered sheets occurring with paper picked from a manual feed tray.

5.5.2.12 <041: Target fixing temperature adjustment (cassette 1)>

Lower the fixing temperature from the target temperature setting to reduce the chances of fixing offsets and curled or stuck delivered sheets occurring with paper picked from cassette 1.

5.5.2.13 <042: Target fixing temperature adjustment (cassette 2)>

Lower the fixing temperature from the target temperature setting to reduce the chances of fixing offsets and curled or stuck delivered sheets occurring with paper picked from cassette 2.

5.5.2.14 <043: Target fixing temperature adjustment (cassette 3)>

Lower the fixing temperature from the target temperature setting to reduce the chances of fixing offsets and curled or stuck delivered sheets occurring with paper picked from cassette 3.

5.5.2.15 <044: Target fixing temperature adjustment (cassette 4)>

Lower the fixing temperature from the target temperature setting to reduce the chances of fixing offsets and curled or stuck delivered sheets occurring with paper picked from cassette 4.

5.5.2.16 <045: Fixing film speed change (manual feed tray)>

Change the fixing film speed to reduce the chances of streaks appearing in the trailing edge of images caused by shocks from the fixing roller out of position while picking paper from a manual feed tray.

5.5.2.17 <046: Fixing film speed change (cassette)>

Change the fixing film speed to reduce the chances of streaks appearing in the trailing edge of images caused by shocks from the fixing roller out of position while picking paper from a cassette.

5.5.3 Setting of Cassette (CST)

5.5.3.1 Special Standard-sized Paper Compatibility

With a special paper compatibility kit (cassette size adjuster) installed, set the cassette paper size lever to paper size groups U1 to U3 to set the paper sizes listed below.

Paper size group	Setting (*default)	Paper name	Marking
U1	0*	Government LETTER	G-LTR
	29	Argentine LETTER	A-LTR
	31	Government LETTER	G-LTR
	40	8K	8K
U2	0*	FOOLSCAP	FLSP
	24	FOOLSCAP	FLSP
	26	OFFICIO	OFI
	27	Ecuadorian OFFICIO	E-OFI
	28	Bolivian OFFICIO	B-OFI
	36	Argentine Offico	A-OFI
	37	Mexican OFFICIO	M-OFI
	39	16K	16K
U3	0*	Government LEGAL	G-LGL
	25	Australian FOOLSCAP	AFLS
	30	Argentine LETTERR	ALTRR
	32	Government LETTERR	FLTRR
	34	Government LEGAL	G-LGL
	35	FORIO	FORIO

5.6 Setting of System Functions (SYSTEM)

5.6.1 Bit Switch Settings

SSSW-SW03 functional configuration

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Bit	Function	1	0
0	Not used	-	-
1	Not used	-	-
2	Not used	-	-
3	Not used	-	-
4	Not used	-	-
5	Not used	-	-
6	Imports and exports user information via USB.	Enable	Disable
7	Not used	-	-

Bit 6 details

Select whether to enable the host machine to work as a USB storage device or not. If the host machine is plugged into a PC with this setting enabled, it allows user registration data (user data and telephone registration data) to be imported and exported to and from the PC, except for the data embedded in the department management information and user management IDs in the system management information.

5.7 Registration of Accessories (ACC)

5.7.1 Accessory Registration

The table below gives summary description of the accessories available.

Item	Explanation	
#ACC	CARD	Card reader installation setting Enter a card number to use. (0 to 9999. One hundred cards are registered with the department ID beginning from the input card number in sequence.) *1: 1,000 cards if option ROM is mounted. When a card number is entered, the following kinds of management information are initialized: - Card name (department ID), beginning from the input card number. - Password associated with the card
	CC-SPSW	Control card I/F support setting Set whether to support the control card I/F (CC-V) or not. 0: Do not support. 1: Support.
	COIN	Coin vendor change Set the control card set display appearing on the operator station for vendor use. 0: Control card use 1: Coin vendor use
	CONTROL	Set the PDL printer output control where the control card I/F (CC-V) is supported. 0: Enable printing without a card mounted. 1: Enable printing with a card mounted in position.

5.8 Counter Indication (COUNTER)

5.8.1 Counters

This copier is furnished with a maintenance/supplies counter set (DRBL-1), which can be used to gain rough measures of when to replace supplies. The counter set increments by one on counting each sheet of small-sized paper (up to A4/LTR) and by two on counting each sheet of large-sized paper (larger than A4/LTR).

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Maintenance counter list		
Item	Counter	Explanation
TOTAL (Total counter)	SERVICE1	Service total counter 1
	SERVICE2	Service total counter 2
	TTL	Total counter
	COPY	Total copy counter
	PDL-PRT	PDL print counter
	FAX-PRT	Fax print counter
	REP-PRT	Report print counter
	2-SIDE	Double-sided copy/print counter
	SCAN	Scan counter
PICK-UP (Paper pickup counter)	C1	Cassette 1 jam counter
	C2	Cassette 2 jam counter
	C3	Cassette 3 jam counter
	C4	Cassette 4 jam counter
	MF	Manual feed tray pickup total counter
	2-SIDE	Double-sided paper pickup total counter
FEEDER (Feeder related counters)	FEED	Feeder pickup total counter
	DFOP-CNT	ADF open/close hinge counter
JAM (Jam counters)	TTL	Unit total jam count
	FEEDER	Feeder total jam count
	SORTER	Finisher total jam count
	2-SIDE	Duplex unit jam counter
	MF	Manual feed tray jam counter
	C1	Cassette 1 jam counter
	C2	Cassette 2 jam counter
	C3	Cassette 3 jam counter
	C4	Cassette 4 jam counter
MISC (Other required counter)	WST-TNR	Waste toner counter

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Parts counter list			
Item	Counter	Explanation	Service life
DRBL-1 (Unit supplies)	FX-UNIT	Fixing unit paper pass count	150,000
	TR-ROLL	Transfer charger roller high-voltage ON count	150,000
	DV-UNT-C	Developing unit rotation count (not used)	-
	M-PU-RL	Manual feed tray pickup roller paper pass count	150,000
	M-SP-PD	Manual feed tray separation pad paper pass count	150,000

5.8.2 Clearing Counters

- Maintenance/parts counter all clear
Execute service mode > CLEAR > COUNTER to clear all maintenance/parts counters.

- Counter clear on parts replacement
Press the numeric keypad key 0 after displaying the counter for a part just replaced, and the counter will be cleared individually.

5.9 Report Output (REPORT)

5.9.1 Report Output

The table below lists the kinds of reports that are supported.

Item	Explanation
SERVICE DATA LIST	Service mode service soft switch output (SSSW, MENU, NUMERIC Param., SPECIAL, NCU, SCAN, PRINT, SYSTEM, ROM, start date)
SYSTEM DATA LIST	Service mode service soft switch output (SSSW, MENU, NUMERIC Param., SPECIAL, NCU, SCAN, PRINT, SYSTEM, ROM, start date) System dump list output
SYSTEM DUMP LIST	Transmission count, reception count, record chart count, error count and other outputs
COUNTER REPORT	Counter output
ERROR LOG LIST	Jam and error history output
SPEC LIST	Type setting, print speed, memory size, ROM indication, adjustment data and other outputs
SERVICE LABEL	Output of an entry format for the service label affixed to the rear cover as shipped

5.9.2 System Data List

Use it to check the settings associated with the service soft switch and service parameters.

06/30/2005 12:00 FAX		001
*** SYSTEM DATA LIST ***		

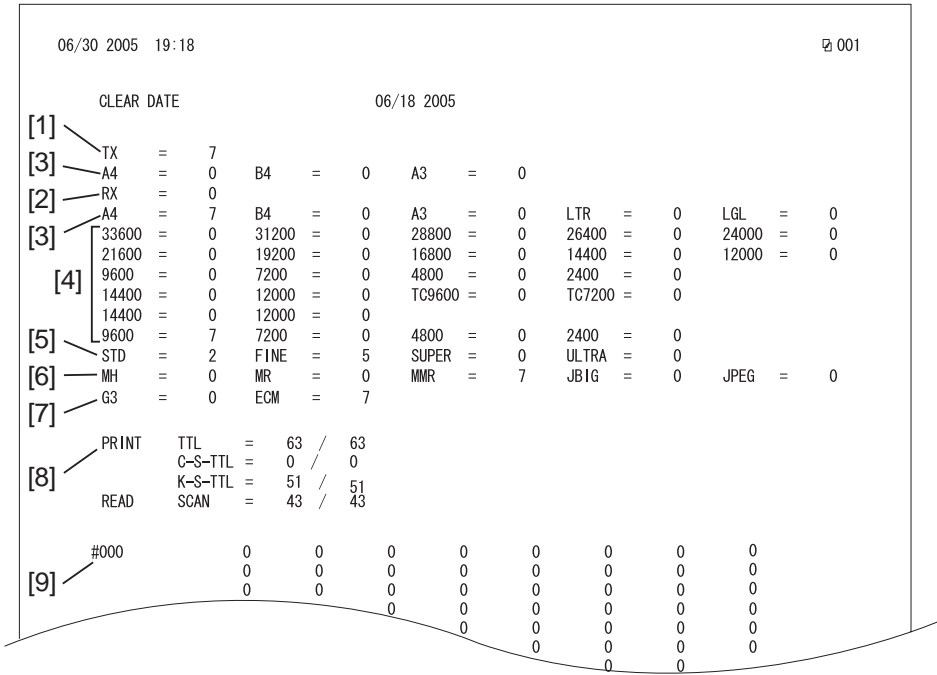
#SSSW		
SW01	00000000
SW02	10000000
SW03	00000000
SW04	10000000
SW05	00000000
SW06	10000000
SW07	00000000
SW08	00000000
SW09	00000000
SW10	00000000
SW11	00000000
SW12	00000011
SW13	00000000
SW14	00000000
SW15	00000000
SW16	00000000
SW17	00000000
SW18	00000000
SW19	00011000
SW20	00000000
SW21	00000000
SW22	00000000
SW23	00000000
SW24	00000000
SW25	00000000
SW26	00100000
SW27	00000000
SW28	00000000
SW29	00000000
SW30	00000000
SW31	00000000
SW32	00000000
SW33	00000000
SW34	00000000
SW35	00000000
SW36	00000000
SW37	00000000
SW38	00000000
SW39	00000000
SW40	00000000
SW41	00000000
SW42	00000000
SW43	00000000
SW44	00000000
SW45	00000000
SW46	00000000
SW47	00000000
SW48	00000000
SW49	00000000
SW50	00000000
#MENU		
01:	0
02:	0
03:	0
04:	0
05:	0

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5.9.3 System Dump List

- System Dump List

Use it to check the history of communications, both successful and error.



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- *1: TX, number of total pages transmission.
- *2: Total number of pages transmitted/received according to original size.
- *3: RX, number of total pages reception.
- *4: Total number of pages transmitted and received for each modem speed
- *5: Total number of pages transmitted/received in connection with different modem speeds (Standard, Fine, Super Fine, Ultra Fine).
- *6: Total number of pages transmitted and received for each coding method
- *7: Total number of pages transmitted and received in each mode
- *8: Total number of pages printed/scanned
- *9: Total number of occurrences for error code

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Indication sample	1	7	3	0	0
##280	1	7	3	0	0
##280	1	7	3	0	0
##281	1	7	3	0	0
##282	1	7	3	0	0
number of errors	1	7	3	0	0

It provides error information on the 3 most recent communications.

2003 09/02 TUE 12:00 FAX

0001

*1

#1 LATEST

#000

*2

START TIME

09/02 10:00

*3

OTHER PARTY

12345678

*4

MAKER CODE

10001000

*5

MACHINE CODE

0100001 00000000

RCV V.8 FRAME

E0 81 85 D4 90 7E 00 00

SYMBOL RATE

3429 baud

DATA RATE

28800 bps [V.34]

TX LVL REDUCTION

0

ERR ABCODE

00

ERR SECTXB

00

ERR SECRXB

00

*6

Rx : (bit 1)

00000100 01110111 01011111 00100011 00000001 10101001 00000001 (bit 56)

(bit 57)

00000001 00000001 00000100 00000000 00000000 (bit 96)

*7

Tx : (bit 1)

00000000 01000010 00011111 00100001 00000001 00000001 00000001 (bit 56)

(bit 57)

00000001 00000001 00000100 00000000 00000000 (bit 96)

*8

Rx : NSF CSI DIS	CFR	MCF	MCF
Tx :	NSS TSI DCS	PIX-288 PPS-NUL	PIX-288 PPS-NUL
Rx : MCF	MCF	MCF	
Tx :	PIX-288 PPS-NUL	PIX-288 PPS-EOP	DCN

*8

#2

#000

START TIME

09/02 09:30

OTHER PARTY

12345678

MAKER CODE

10001000

MACHINE CODE

0100001 00000000

RCV V.8 FRAME

E0 81 85 D4 90 7E 00 00

SYMBOL RATE

3429 baud

DATA RATE

28800 bps [V.34]

TX LVL REDUCTION

0

ERR ABCODE

00

ERR SECTXB

00

ERR SECRXB

00

Rx : (bit 1)

00000100 01110111 01011111 00100011 00000001 10101001 00000001 (bit 56)

(bit 57)

00000001 00000001 00000100 00000000 00000000 (bit 96)

Tx : (bit 1)

00000000 01000010 00011111 00100001 00000001 00000001 00000001 (bit 56)

(bit 57)

00000001 00000001 00000100 00000000 00000000 (bit 96)

Rx : NSF CSI DIS	CFR	MCF	MCF
Tx :	NSS TSI DCS	PIX-288 PPS-NUL	PIX-288 PPS-NUL
Rx : MCF	MCF	MCF	
Tx :	PIX-288 PPS-NUL	PIX-288 PPS-EOP	DCN

#3 OLDEST

#000

START TIME

09/02 09:00

OTHER PARTY

12345678

MAKER CODE

10001000

MACHINE CODE

0100001 00000000

RCV V.8 FRAME

E0 81 85 D4 90 7E 00 00

SYMBOL RATE

3429 baud

DATA RATE

28800 bps [V.34]

TX LVL REDUCTION

0

ERR ABCODE

00

ERR SECTXB

00

ERR SECRXB

00

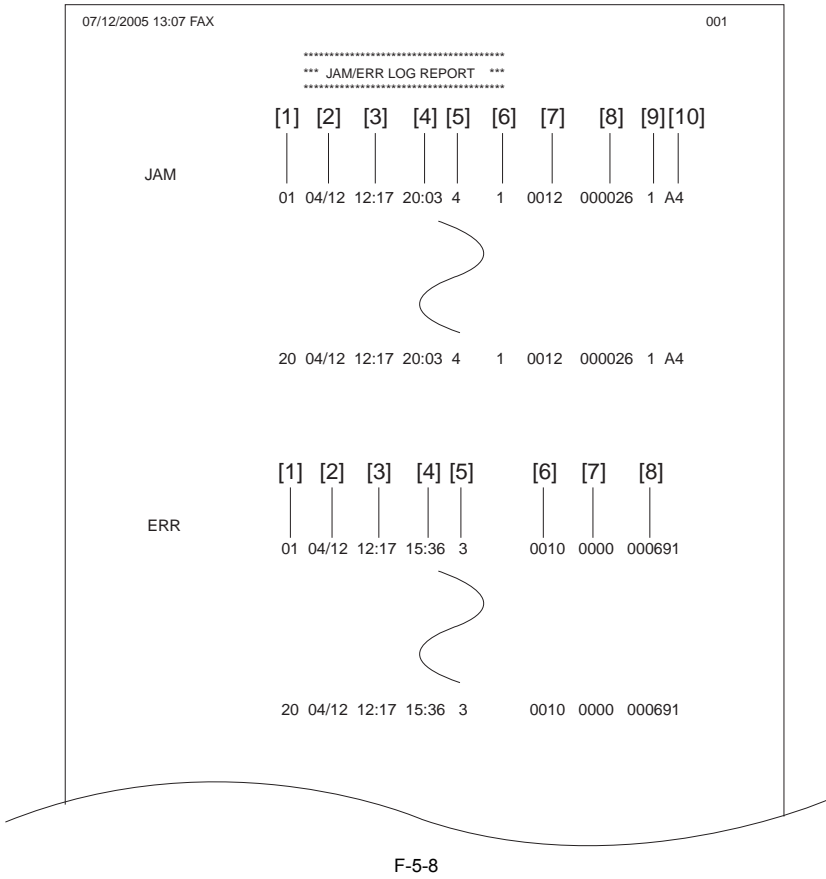
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- *1: service error code.
- *2: START TIME, date and time (in 24-hr notation).
- *3: OTHER PARTY, telephone number sent by the other party.
- *4: MAKER CODE, manufacturer code.
- *5: MACHINE CODE, model code.
- *6: bit 1 through bit 96 of DIS, DCS, or DTC that has been received.
- *7: bit 1 through bit 96 of DIS, DCS, or DTC that has been transmitted.
- *8: RX, procedural signal received; TX, procedural signal transmitted.

5.9.4 Counter List

Explanation: Maintenance/supplies counter output.
(For more detailed information about the maintenance/supplies counter output, execute service mode > Display counter information > Counters.)

5.9.5 Error Log List



Jam history description (JAM)		
	Item	Explanation
[1]	Number	The larger the number of a jam, the more recently it has occurred.
[2]	Jam date	Date of jam occurrence
[3]	Jam time	
[4]	Jam recovery time	
[5]	Location	3: Host machine, 4: ADF, 5: Finisher
[6]	Occurrence category	0: Host machine, 1: ADF, 2: Finisher

Jam history description (JAM)			
	Item	Explanation	
[7]	Jam code	Code	Jam cause
	Host machine	0104	Pickup assembly delay jam
		0208	Pickup assembly stationary jam
		010c	Delivery assembly jam
		010e	Second delivery assembly delivery delay jam
		0210	Delivery stationary jam
		0212	Second delivery assembly stationary jam
		0214	Host machine retention paper jam
		1118	Door open jam
		0120	Duplexing paper sensor 1 delay jam
		0221	Duplexing paper sensor 1 stationary jam
		0124	Duplexing paper sensor 2 delay jam
		0228	Duplexing paper sensor 2 stationary jam
	ADF	0000	Unknown jam
		0007	Initial stationary
		0008	Read sensor delay jam
		0009	Read sensor stationary jam
		000a	Paper absence (Pull out the document.)
		000c	Delivery reversal sensor delay jam
		000d	Delivery reversal sensor stationary jam
		000e	ADF cover open error
		000f	User ADF open error
		0010	Pickup NG
	Finisher	0130	Inlet sensor delivery delay jam
		0231	Inlet sensor delivery stationary jam
		0033	Bundle delivery jam
		0035	Stapler jam
		1036	Power-on jam
		1137	Door open jam
[8]	Total counter display		
[9]	Pickup stage position	0: Manual feed tray, 1: Cassette 1, 2: Cassette 2, 3: Cassette 3, 4: Cassette 4	
[10]	Paper size		

Error history description (ERR)		
	Item	Explanation
[1]	Number	The larger the number of an error, the more recently it has occurred.
[2]	Error date	Date of error occurrence
[3]	Error time	
[4]	Location	3: Main unit, 5: Finisher
[5]	Error code	Error code (4-digit code; for a definition of the code, see the "Error Code" Chapter.)
[6]	Detail code	Detail code of the error code (4-digit code; for a definition of the code, see the "Error Code" Chapter.)
[7]	Total counter display	

5.9.6 Spec List

07/12/2005 13:07 FAX		001	
[1]		*****	
[2]		*** SPEC REPORT ***	
[3]		*****	
	TYPE	-----	U. S. A
	LBP SPEED	-----	20cpm
	TOTAL MEMORY	-----	256MB
[4]	MAIN	-----	WLaa-07-05
	OPTION	-----	WLaa-07-05
	BOOT	-----	WLaa-07-05
	ECONT	-----	0210
	OPT-CAS 1	-----	0003
	OPT-CAS 2	-----	0000
	OPT-CAS 3	-----	0000
	OPT-DUP	-----	0003
	OPT-FIN	-----	0000
[5]	ACTIBAT FUNCTION		
	BDL-IMAGE (1200)	-----	ON
	FAX	-----	ON
	NETWORK	-----	ON
	PCL	-----	ON
	PC-SCAN	-----	OFF
	BW-SEND	-----	OFF
	CL-SEND	-----	OFF
	PAF	-----	OFF
	BDL-IMAGE (600)	-----	ON
	SOFT-ID PRM		
	TYPE	-----	2 : US
[6]	OPTION/ENABLE SW		
	BIT 00: BDL-IMAGE (1200)	-----	ON / ON
	BIT 01: FAX	-----	ON / ON
	BIT 02: NETWORK	-----	ON / ON
	BIT 03: PCL	-----	ON / ON
	BIT 04: PC-SCAN	-----	OFF / OFF
	BIT 05: BW-SEND	-----	OFF / OFF
	BIT 06: CL-SEND	-----	OFF / OFF
	BIT 07: PAF	-----	OFF / OFF
	BIT 08: BDSS	-----	ON / ON
	BIT 09: BDL-IMAGE (600)	-----	ON / ON
	BIT 10: COUNTER	-----	ON / ON
	BODY No.	-----	BFDxxxxx
	ENGINE CODE	-----	20000013
[7]	SIZE TYPE	-----	4 : AB/INCH
	TOTAL		
	TTL	-----	000688
	COPY	-----	000685
	FAX-PRT	-----	000000
	PDL-PRT	-----	000000
	PRT-PRT	-----	000003
	READ ADJ PRM		
	026:	-----	0022
	031:	-----	0035
	032:	-----	0115
	033:	-----	0016
	034:	-----	0016
	041:	-----	0035
	042:	-----	0220
	043:	-----	0024
	044:	-----	0036
	045:	-----	0047
	046:	-----	0047
	047:	-----	0016
	048:	-----	0016
	054:	-----	0016
	213:	-----	8273
	214:	-----	8737
	215:	-----	9427
	WRITE ADJ PRM		
	031:	-----	0050
	032:	-----	0050
	033:	-----	0050
	034:	-----	0100
	035:	-----	0100
	036:	-----	0100
	037:	-----	0100
	038:	-----	0100
	039:	-----	0100
[9]	OPTION ROM	-----	32MB
[10]	USB MEMORY	-----	OFF
[11]	DELIVERY FULL SENSOR 1	-----	ON
[12]	DELIVERY FULL SENSOR 2	-----	ON
	USB SERIAL No.	-----	0051J9AE904
[13]	MAC ADDRESS	-----	00 00 85 51 60 1C

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- [1] Type setting
- [2] Print speed
- [3] Memory size
- [4] ROM version (MAIN/BOOT/ECONT/option cassette/duplex unit/finisher)
- [5] Activation function ON/OFF
- [6] Soft ID information
- [7] Total counter (TOTAL/COPY/FAX/PDL/REPORT record counts)
- [8] Adjustment data (factory scan/record adjustment values)
- [9] Option ROM availability
- [10] USB memory availability
- [11] No. 1/No. 2 paper full sensor sensor availability
- [12] USB serial number
- [13] MAC address

5.9.7 Service Label

Enter the value given in the service label affixed to the rear cover when it has been replaced with a new one.

#PRINT>#PRINT NUMERIC					#SCAN>#SCAN NUMERIC				
	FACTORY	1	2	3		FACTORY	1	2	3
031	50				026				
032	50				031				
033	50				032				
034	100				033				
035	100				034				
036	100				041				
037	100				042				
038	100				043				
039	100				044				
					045				
					046				
					047				
#SCAN>#SCAN NUMERIC					048				
					054				
					213				
					214				
body No: BFDxxxxx					215				

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5.10 Data Initialization Mode (CLEAR)

5.10.1 Clear

Group	Item	Explanation
TEL & USER DATA		Clears all user-registered and -set areas of telephone registration data and user data. (Telephone registration refers to the registration of codes on one-touch dialing, abbreviated dialing, and group dialing.)
SERVICE DATA		Clears the system dump list, except for counters and clear dates.
COUNTER		Clears the maintenance counter, parts counter and mode-specific counters. Initializes the counter (numerator) in the system dump list.
TYPE		Initializes user data and service data to suit specified destination settings.
SOFT-CNT		Not used
HST	ACTIVITY	Initializes the activity report
	ACCOUNT	Clears print histories.
	JAM	Clears the jam history.
	ERR	Clear the error (error code) history.
	ALARM	Clears the alarm history.
CARD		Clears department management information held in the controller before the card reader is demounted.
ERR	E355	Not used
	E719	Clears card reader errors.
PWD		Clears the system administrator's password.
FILE SYSTEM		Delete unnecessary language files in the USB memory.
FORMAT	USB MEMORY	Format the USB memory. (This mode is used when the USB memory error is damaged and E744 occurs.)
	LICENSE DRIVE	Not used
ALL		Clears user and service data (except for some scan parameters and print parameters), and the counter setting/registration data in the system dump list, except for the print count.

5.11 Test Mode (TEST)

5.11.1 Overview

5.11.1.1 Outline

Test mode must be executed by keeping track the flow of menu items appearing on the touch panel (LCD). Menu items in test mode are organized into seven blocks as described below. Numerals enclosed in parentheses denote a numeric keypad key to be pressed each.

1. D-RAM test ((1) D-RAM)

Checks to see if data can be correctly written to and read from D-RAM.

2. Scan test ((2) SCAN TEST)

Used to adjust contact sensor output and the position at which a document fed from the ADF is scanned.

3. Print test ((3) PRINT TEST)

Used to generate service test patterns.

4. Modem test ((4) MODEM TEST)

Performs relay actuation, modem DTMF and tonal signal transmission/reception tests.

5. Aging test ((5) AGING TEST)

Not used.

6. Function test ((6) FUNCTION TEST)

Used to verify the operations of microswitches, sensors, speakers and ADF functions.

7. Roller cleaning mode ((0) ROLLER CLEAN)

Used to clean the delivery roller or ADF pickup roller by idling them.

5.11.1.2 Test Mode Menu List**Test mode menu list**

To invoke test mode, follow these steps:

1) Enter service mode.

Sequentially press the Additional functions key, 2 key, 8 key, and Additional functions key on the operation panel.

2) Press the arrow key on the touch panel to display "TEST MODE".

3) Press [OK].

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Numerals enclosed in parentheses denote a numeric keypad key to be pressed each.					
Group	Subgroup	Item 1	Item 2	Item 3	Explanation
TEST MODE [1] - [9], [#]					
(1) DRAM [1] - [2]					
	(1) D-RAM TEST				D-RAM data check
	(2) D-RAM TEST				Write/read check
	(2) D-RAM TEST				Read check
(2) SCAN TEST [1] - [8]					
	(1) SHADING				Automatic gain adjustment
	(3) SHEET POS ADJ				CS position adjustment
	(4) TRASH DETECT				Dust detection
	(5), (6), (9), (*)				Not used
(3) PRINT TEST [1] - [9]					
	(1)				Not used
	(2)				All-black output
	(3)				Not used
	(4)				Back belt output
	(5), (6), (7), (8), (9), (*)				Not used
(4) MODEM TEST [1] - [9]					
	(1) RELAY TEST [1] - [2]				
		(1) RELAY TEST 1			NCU relay (and switch) ON/OFF test
		(2) RELAY TEST 2			230 V common NCU test
	(2) FREQ TEST [0] - [6]				
		(0) FREQ TEST 462Hz			
		(1) FREQ TEST 1100Hz			
		(2) FREQ TEST 1300Hz			
		(3) FREQ TEST 1500Hz			
		(4) FREQ TSST 1650Hz			
		(5) FREQ TEST 1850Hz			
		(6) FREQ TEST 2100Hz			
	(4) G3 SIGNAL TX TEST [0] - [8]				
		(0) G3 SIGNAL TX TEST 300bps			G3 signal transmission test
		(1) G3 SIGNAL TX TEST 2400bps			
		(2) G3 SIGNAL TX TEST 4800bps			
		(3) G3 SIGNAL TX TEST 7200bps			
		(4) G3 SIGNAL TX TEST 9600bps			
		(5) G3 SIGNAL TX TEST TC7200bps			
		(6) G3 SIGNAL TX TEST TC9600bps			
		(7) G3 SIGNAL TX TEST 12000bps			
		(8) G3 SIGNAL TX TEST 14400bps			
	(5) DTMF TEST [0] - [9], *, #				
		(0) G3 SIGNAL TX TEST 300bps			DTMF transmission test
		(1) G3 SIGNAL TX TEST 2400bps			
		(2) G3 SIGNAL TX TEST 4800bps			
		(3) G3 SIGNAL TX TEST 7200bps			
		(4) G3 SIGNAL TX TEST 9600bps			
		(5) G3 SIGNAL TX TEST TC7200bps			
		(6) G3 SIGNAL TX TEST TC9600bps			
		(7) G3 SIGNAL TX TEST 12000bps			
		(8) G3 SIGNAL TX TEST 14400bps			
		(9) G3 SIGNAL TX TEST TC9600bps			
		(*) G3 SIGNAL TX TEST 12000bps			
		(#) G3 SIGNAL TX TEST 14400bps			
	(6) MODEM TEST				
					Tonal sign reception test
	(8) G3 V.34 Tx TEST				
					V34 G3 signal transmission test
	(9)				
					Not used

Numerals enclosed in parentheses denote a numeric keypad key to be pressed each.					
Group	Subgroup	Item 1	Item 2	Item 3	Explanation
(5) AGING TEST					Not used
(6) FUNCTION TEST [1] - [9]					
	(1) FUNCTION TEST G3 4800bps				G3 4800 bps signal transmission test
	(3) 6-3 SENSOR [1] - [6]				Sensor checks
		(1) SENSOR CHECK 0:NORMAL 1:LATCH			
			(0) SENSOR NORMAL [0] - [2]		
			(0) CAS 0 REG 0 DEL 0 MULTI 0		
			(1) TONER 0 FULL 0 2ND-DEL 0000		
			(2) OP1 0000 OP2 0000 OP3 0000 PATH 0000		
		(1) SENSOR LATCH [0] - [2]			
			(0) CAS 0 REG 0 DEL 0 MULTI 0		
			(1) TONER 0 FULL 0 2ND-DEL 0000		
			(2) OP1 0000 OP2 0000 OP3 0000 PATH 0000		
	(2) SWITCH CHECK [0] - [1]				
		(0) CAS 0000 LOCK 0000			
		(1) OP1 0000 OP2 0000 OP3 0000			
	(3) DS ON DES of HPS ON BCVS of				
	(4) REF xxx ANT xxx ANT-REF xxx				
	(5) BSCT on BDAC[A3] BDSS3-0 [of of of of]				
	(6) NCR Sts: NCR xxxxx DPT MGN OK RDY 0101				
	(4) ADF FEED TEST				ADF delivery operation test
	(5) BOOK FEED TEST				Book copy operation test
	(6) 6-6 SPEAKER FREQ-[1] VOL:[2]				Speaker volume and buzzer frequency test
	(7) Not used				
	(8) FUNCTION TEST LAMP TEST ALL				Lamp test
	(9) LINE TEST [1] - [3]				Line signal reception test
(0) ROLLER CLEAN 0:PRT 1:ADF					Printer and ADF roller cleaning
	(0) PRT ROL CLEAN Press start key				
	(1) ADF ROL CLEAN Press start key				

5.11.2 DRAM Test

5.11.2.1 D-RAM test<(1) D-RAM TEST>

D-RAM Test((1) D-RAM)

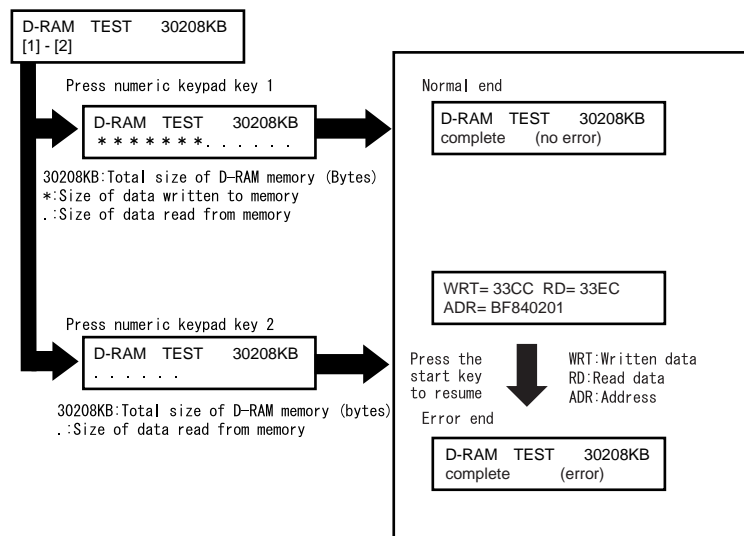
Press the numeric keypad key 1 on the test mode menu to select the D-DRAM test.
Press numeric keypad keys 1 and 2 during the D-DRAM test to carry out the individual tests described below.

Numeric keypad key 1

Checks to see if data can be correctly written to and read from all areas of D-RAM (SDRAM). If an error occurs making this check, the test is aborted, with an error appearing on the LCD.

Numeric keypad key 2

Checks to see if data can be correctly read from all areas of D-RAM (SDRAM). If an error occurs making this check, the test is aborted, with an error appearing on the touch panel (LCD).



F-5-11

5.11.3 Scan Test

5.11.3.1 Scan Test ((2) SCAN TEST)

Scan test ((2) SCAN TEST)

Press the numeric keypad key 2 on the test mode menu to select the CCD test.
Press numeric keypad keys 1, 3 and 4 during the CCD test to carry out the individual tests described below.

Numeric keypad key 1

Corrects the LED output of the contact sensor and sets its parameters automatically. (AGC adjustment)

Numeric keypad key 3

Adjusts the document scan position (only on models with the ADF feature installed). Adjusts the position of the contact sensor for scanning documents fed from the ADF automatically.

Numeric keypad key 4

Detects trash at reader scan positions A/B/C.

Pos A: Reference read position

Pos B: About 0.5 mm inside of the roller from the reference position

Pos C: About 1.0 mm inside of the roller from the reference position

5.11.4 Print Test

5.11.4.1 Print Test ((3) PRINT TEST)

Print test ((3) PRINT TEST)

Press the numeric keypad key 3 on the test mode menu to select the print test.

Press numeric keypad keys 2 and 4 during the print test to generate test patterns as described below. Two kinds of service test patterns are available. Other test patterns are reserved for factory/development purposes.

Numeric keypad key 2

(2) BLACK: All-black output

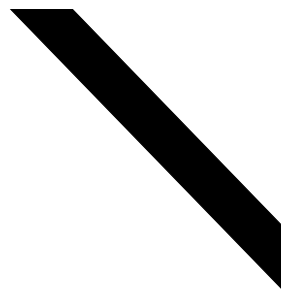
Numeric keypad key 4

(4) ENDURANCE: Black belt output

To cancel test printing, press the stop key.



Use it to make sure that the print pattern does not have white lines or uneven image.



Use it to make sure that the print pattern does not have contraction/elongation of an image or dirt/black lines.

F-5-12

5.11.5 Modem Test

5.11.5.1 MODEM Test((4) MODEM TEST)

MODEM test((4) MODEM TEST)

These tests test modem and NCU transmission and reception. The modem tests check whether signals are sent correctly from the modem by comparing the sound of the signals from the speaker with the sounds from a normal modem.

End this test by pressing the Stop key.

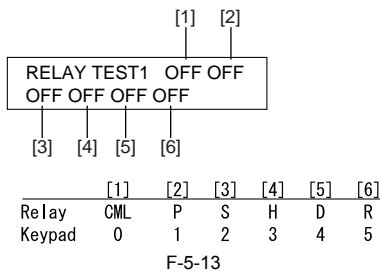
Keypad	Type	Description
1	Relay test	Use it to turn on/off a selected relay to execute a switch-over test
2	Frequency test	The modem sends tonal signals from the modular jack and the speaker.
4	G3 signal transmission test	The modem sends G3 signals from the modular jack and the speaker.
5	DTMF signal reception test	Use it to generate the DTMF signal coming from the modem using the telephone line terminal and the speaker.
6	Tonal signal reception test	Use it to monitor a specific frequency and the DTMF signal received from the telephone line terminal by causing them to be indicated on the LCD (i.e., the presence/absence as detected). The reception signal is generated by the speaker.
8	V.34 G3 signal transmission test	The modem sends V.34 G3 signals from the modular jack and the speaker.

Relay Test

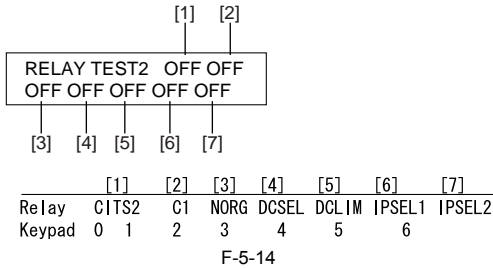
Press '1' or '2' on the keypad on the Modem test menu to select relay test mode. Use the keypad to operate the various relays of the NCU. '2' on the keypad is used for 230V machine.

Numeric keypad key 1

The input key and relay are shown below:



Numeric keypad key 2
The input key and relay are shown below:



The touchpanel (LCD) is turned on or off in relation to the transmission of the relay operation signal as is operated on the keypad; for this reason, you cannot use the touch panel (LCD) to check a fault on a single relay.

Frequency Test

A press on '2' on the keypad from the MODEM test menu selects the frequency test. In this test, signals of the following frequencies from the modem are transmitted using the telephone line terminal and the speaker. To select a different frequency, use the keypad.

Keypad	Frequency
1	462Hz
2	1100Hz
3	1300Hz
4	1500Hz
5	1650Hz
6	1850Hz
7	2100Hz

MEMO:

The frequency and the output level of individual frequencies are in keeping with the output level set in service mode.

G3 Signal Transmission Test

A press on '4' on the keypad from the MODEM test menu selects the G3 signal transmission test. In this test, the following G3 signals from the modem are transmitted using the telephone line terminal and the speaker. To select a different transmission speed, use the keypad.

Keypad	Transmission speed
0	300bps
1	2400bps
2	4800bps
3	7200bps
4	9600bps
5	TC7200bps
6	TC9600bps
7	12000bps
8	14400bps

MEMO:

The output level of individual signals is in keeping with the setting made in service mode.

DTMF Signal Transmission Test

A press on '5' on the keypad from the MODEM test menu selects the DTMF signal transmission test. In the test, the following DTMF signals from the modem are transmitted using the telephone line terminal and the speaker. The number pressed on the keypad selects a specific DTMF signal.

MEMO:

The output level of individual signals is in keeping with the setting made in service mode.

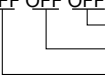
Tonal/DTMF Signal Reception Test

A press on '6' on the keypad from the MODEM test menu selects the tonal signal/DTMF signal reception 0 test. In this signal, the tonal signal/DTMF signal received from the telephone line terminal can be checked to find out if it was detected by the modem.

Tonal signal reception test

MODEM TEST
 OFF OFF OFF

OFF OFF OFF


 changes from '0' to '1' in response to detection of a signal of 462 ± 25 Hz.

 changes from '0' to '1' in response to detection of a signal of 1100 ± 30 Hz.

 changes from '0' to '1' in response to detection of a signal of 2100 ± 25 Hz.

DTMF signal reception test

MODEM TEST
 OFF OFF OFF 5

The received DTMF signals are indicated starting from the right using the 2nd character of the display.

F-5-15

V.34 G3 Signal Transmission Test

A press on '8' on the keypad from the MODEM test menu selects the V.34 G3 signal transmission test. The V.34 G3 signals below are sent from the modem using the modular jack and the speaker by pressing the start key. The Baud rate can be changed with the keypad, and the Speed can be changed with the left/right arrow key.

Keypad	Baud rate
0	3429baud
1	3200baud
2	3000baud
3	2800baud
4	2743baud
5	2400baud

Left/right arrow key	Transmission speed
	2400bps
	4800bps
	7200bps
	9600bps
<	12000bps
	14400bps
	16800bps
	19200bps
	21600bps
>	24000bps
	26400bps
	28800bps
	31200bps
	33600bps

5.11.6 Faculty Test**5.11.6.1 Function Test ((6) FUNCTION TEST)****Function test ((6) FUNCTION TEST)**

Press the numeric keypad key 6 on the test mode menu to select the function test.

Press numeric keypad keys 1 and 3 to 9 during the function test to enter the menus listed below.

T-5-26

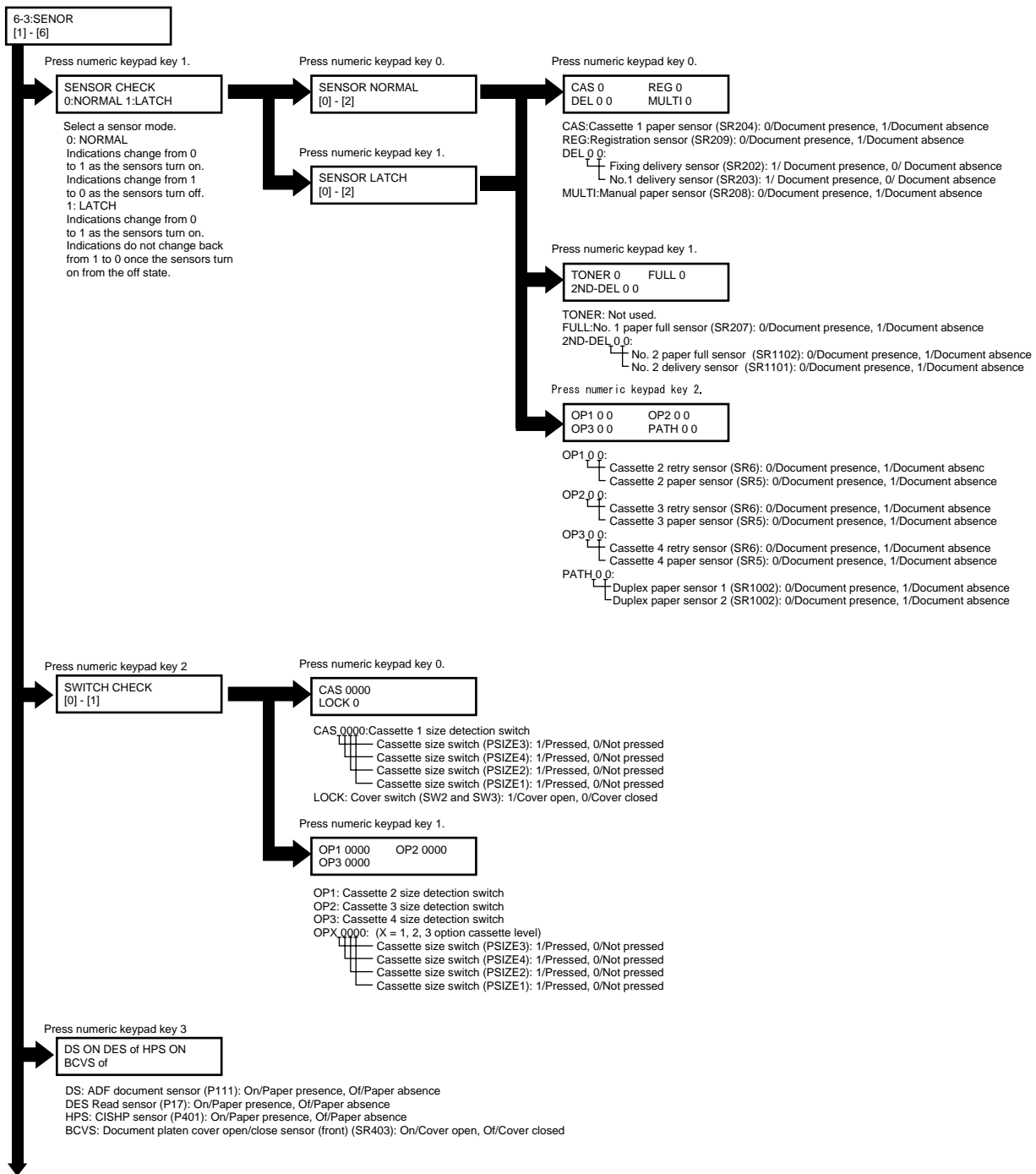
Keypad	Item	Explanation
1	G3 signal transmission test	Transmits 4800-bps G3 signals to a telephone line and speaker.
2	Not used	
3	Sensor test	Sensor actuation test
4	ADF test	ADF operation test
5	Book test	Host machine operation test
6	Speaker test	Speaker operation test
7	Not used	
8	Lamp test	Contact sensor illumination test
9	Line signal reception test	NCU board signal sensor and frequency counter operation test

G3 signal transmission test (6-1: G3 480 bps Tx)

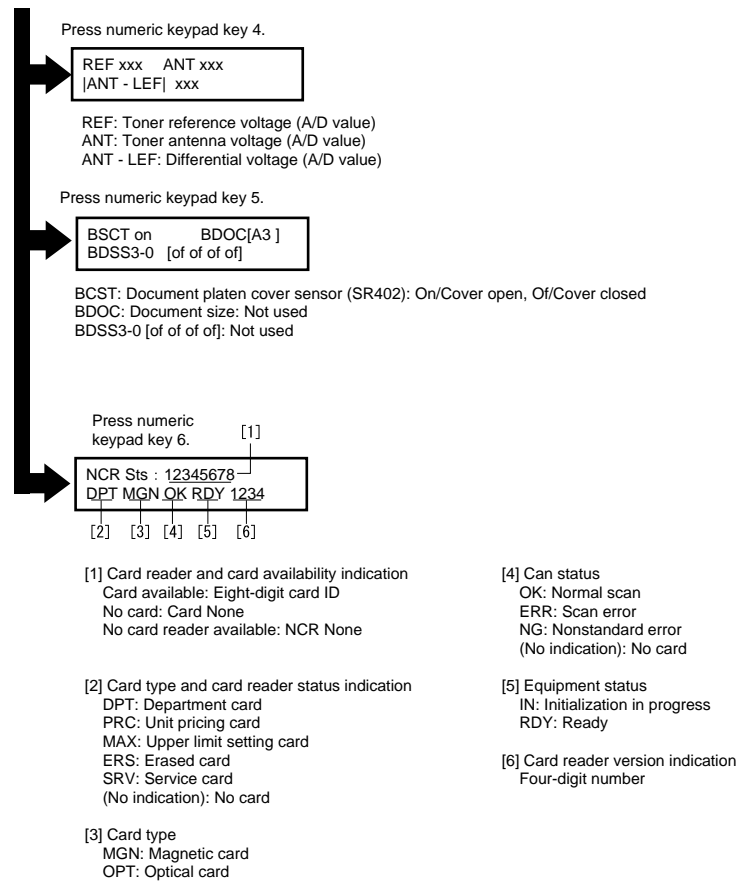
Press numeric keypad key 1 on the FUNCTION TEST menu to select the G3 signal transmission test. This test transmits 4800-bps G3 signals from the telephone line connection terminal and speaker.

Sensor test (6-3: SENSOR)

This mode is used to verify the status of the unit sensors from the touch panel (LCD) indications. Press numeric keypad key 3 on the FUNCTION TEST menu to select the sensor test. The touch panel (LCD) indications change as the associated sensors turn on and off.



F-5-16



F-5-17

ADF feed test (6-4: ADF FEED TEST)

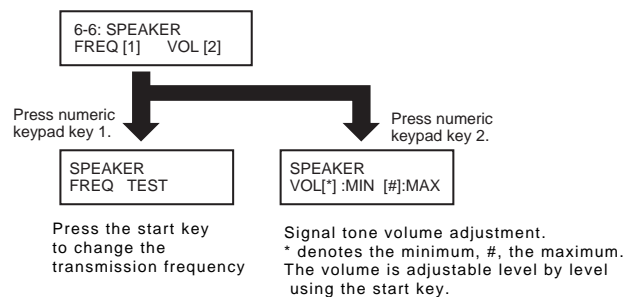
ADF operation verification mode. Press numeric keypad key 4 on the FUNCTION TEST menu to select the ADF feed test. Place a document on the document platen and press the start key to transfer the document at the speed matched to the scan resolution setting. In this test, enter a transfer speed between 500 and 2000 (mm/s) from the numeric keypad and verify the transfer speed. Select between the ON and OFF states with the left and right cursor keys to select between single-sided document feed (OFF) and double-sided document feed (ON).

Book feed test (6-5: BOOK FEED TEST)

Performs a book feed operation with a specified magnification and in a specified size.

Speaker test (6-6: SPEAKER)

Speaker operation verification mode. Press numeric keypad key 6 on the FUNCTION TEST menu to select the speaker test. In this test, the speaker generates tonal signals at 100 Hz intervals, from 200 Hz to 5 kHz, in varying sound volumes. Signal output from the speaker is thus verified.



F-5-18

Lamp test (6-8: LAMP TEST)

Press numeric keypad key 8 on the FACULTY menu to select the scan lamp illumination mode. The test checks to see if the scan lamp is on or not. Numeric keypad key 1 selects LAMP TEST ALL. Press the start key to turn on all scan lamps. LAMP TEST AGC is not used.

Line signal reception test (6-9 LINE DETECT)

Press numeric keypad key 9 on the FACULTY menu to select the line signal reception test. In this test, verify the successful operations of the NCU signal sensor and the frequency counter. Menu 1 detects the CI state, while menu 3 detects the CNG signal.

Test menu 1

Press numeric keypad key 1 on the LINE DETECT menu to select test menu 1. When CI is detected on the telephone line connection terminal, the touch panel (LCD) display changes from OFF to ON, indicating the received frequency. The touch panel (LCD) also displays the on-hook or off-hook state of an external telephone set as detected. The touch panel (LCD) displays, from left to right, CI, CI frequency, hook port and FC with indications of 1:ON and 0:OFF.

Test menu 2

Press numeric keypad key 2 on the LINE DETECT menu to select test menu 2. When the CNG signal is detected on the telephone line connection terminal, the touch panel (LCD) display changes from OFF to ON, indicating the received frequency. The touch panel (LCD) displays the status of CML, CNG and FED detection, from left to right, with ON/OFF indications. Numeric keypad key 2 turns on the CML relay to detect CNG.

Test menu 3

Press numeric keypad key 3 on the LINE DETECT menu to select test menu 3. When the CNG signal is detected on the telephone line connection terminal, the touch panel (LCD) display changes from OFF to ON, indicating the received frequency. The touch panel (LCD) displays the status of CML, CNG and FED detection, from left to right, with ON/OFF indications. Numeric keypad key 3 turns off the CML relay to detect CNG.

5.11.7 Cleaning Mode

5.11.7.1 Roller Cleaning Mode ((0) ROLLER CLEAN)

Roller cleaning mode ((0) ROLLER CLEAN)

Press numeric keypad key 0 in test mode to select roller cleaning mode. Press numeric keypad keys 1 and 2 during this test to enter the following menus:

Numeric keypad key 1

Press the start key clean the ADF pickup/feed rollers by idling.

Press the stop key to exit this mode.

Numeric keypad key 2

Press the start key clean the unit transfer rollers by idling.

Press the stop key to exit this mode.

Chapter 6 Outline of Components

6.1 Clutch/Solenoid

6.1.1 List of Clutches/Solenoids

<Reader Unit>

The reader unit has no clutch/solenoid.

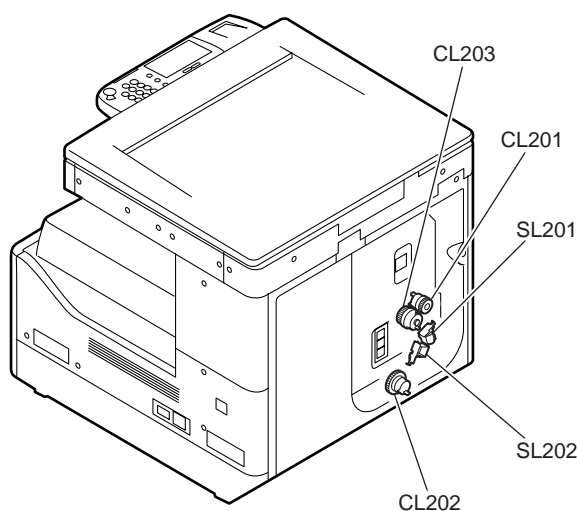
<Printer Unit>

T-6-1

Symbol	Name	Function
CL201	Manual pickup clutch	Drives the manual pickup roller.
CL202	Cassette feed clutch	Drives the cassette feed roller.
CL203	Registration clutch	Drives the registration clutch.
SL201	Manual pickup solenoid	Drives the manual pickup roller.
SL202	Cassette 1 pickup solenoid	Drives the cassette 1 pickup roller.

T-6-2

Symbol	Part No.	DC controller PCB
CL201	FK2-1070	J219
CL202	FK2-1068	J211
CL203	FK2-1069	J210
SL201	FK2-1083	J219
SL202	FK2-1082	J209



F-6-1

6.2 Motor

6.2.1 List of Motors

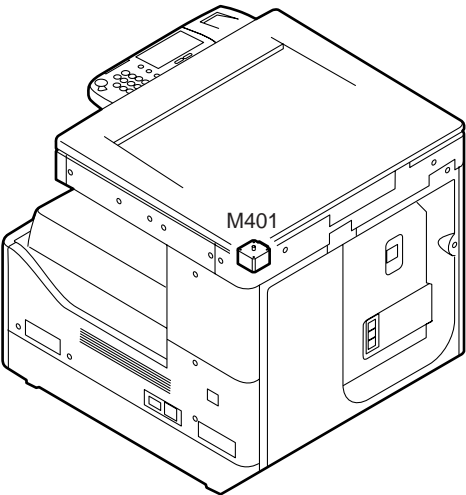
<Reader Unit>

T-6-3

Symbol	Name	Function
M401	Reader motor	Drives the carriage.

T-6-4

Symbol	Part No.	Reader controller PCB	Error
M401	FK2-1066	J409	



F-6-2

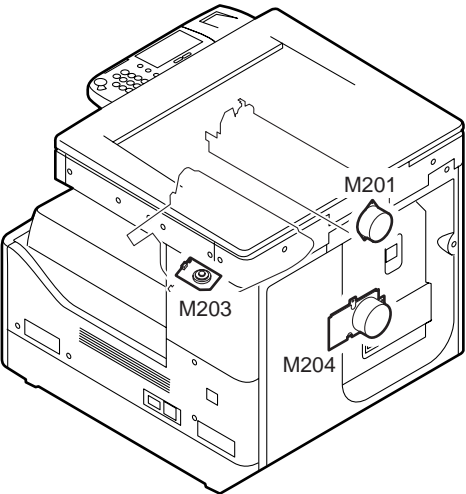
T-6-5

<Printer Unit>

Symbol	Name	Function
M201	Fixing motor	Drives the fixing unit.
M203	Polygon motor	Drives the laser scanner.
M204	Main motor	Drives the main parts of the printer.

T-6-6

Symbol	Part No.	DC controller PCB	Error
M201	FK2-1067	J202	E007, E808
M203	Scanner unit FM2-3384	J205	
M204	FK2-1080	J208	E010



F-6-3

6.3 Fan

6.3.1 List of Fans

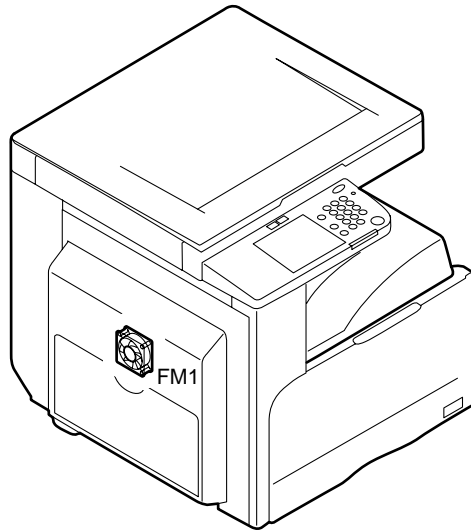
<Reader Unit>
The reader unit has no fan.
<Printer Unit>

T-6-7

Symbol	Name	Function
FM1	Heat discharge fan	Cools fixing unit.

T-6-8

Symbol	Part No.	DC controller PCB	Error
FM1	FK2-1073	J219	E805



F-6-4

6.4 Sensor

6.4.1 List of Sensors

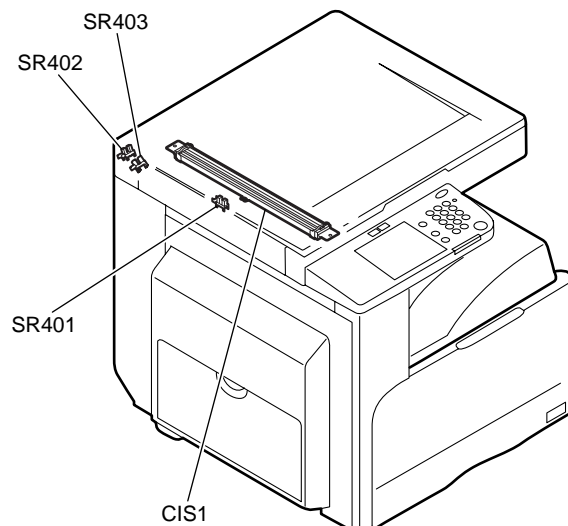
<Reader Unit>

T-6-9

Symbol	Name	Function
SR401	CIS HP sensor	Detects the CIS home position.
SR402	Copyboard cover open/closed sensor (rear)	Detects opening/closing of the copyboard cover.
SR403	Copyboard cover open/closed sensor (front)	Detects opening/closing of the copyboard cover.
CIS1	CIS	Reads the original.

T-6-10

Symbol	Part No.	Reader controller PCB	Jam code
SR401	WG8-5696	J406	
SR402	WG8-5696	J405	
SR403	WG8-5696	J405	000f
CIS1	FM2-3369	J408	



F-6-5

<Printer Unit>

T-6-11

Symbol	Name	Function
SR101	Fixing film speed sensor	Detects the fixing film speed.
SR202	Fixing delivery sensor	Detects fixing delivery.
SR203	No.1 delivery sensor	Detects delivery.
SR204	Cassette 1 paper sensor	Detects presence/absence of cassette 1 paper.

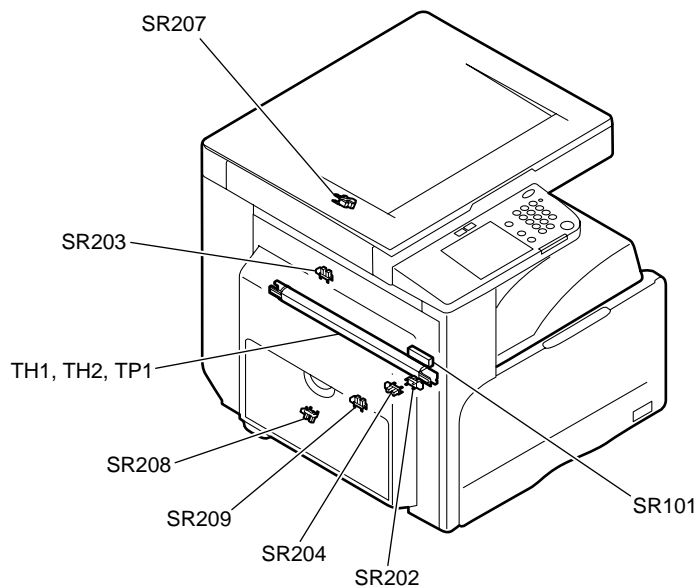
Symbol	Name	Function
SR207	No.1 paper full sensor	Detects the No.1 paper full status.
SR208	Manual paper sensor	Detects presence/absence of manually fed paper.
SR209	Registration sensor	Detects registration paper.
TH1	Fixing main thermistor	Detects the fixing heater temperature.
TH2	Fixing sub thermistor	Detects the fixing heater temperature.
TP1	Thermo switch	Cuts off the heater power supply line when an abnormal temperature is detected.

T-6-12

Symbol	Part No.	DC controller PCB	Jam code
SR201	FG3-3501	J217	
SR202	WG8-5696	J217	010c, 0210, 0214, 1118
SR203	WG8-5696	J221	010c, 0210, 0214, 1118
SR204	WG8-5696	J213	
SR207	WG8-5696	J201	
SR208	WG8-5696	J219	
SR209	WG8-5696	J212	0104, 0208, 010c, 0214, 1118

T-6-13

Symbol	Part No.	DC controller PCB	Power supply PCB
TH1, TH2	Fixing film unit	J217	
TP1	FM2-6351(100V) FM2-3346(120V) FM2-3353(230V)		J13



F-6-6

6.5 Switch

6.5.1 List of Switches

<Reader Unit>

The reader unit has no switch.

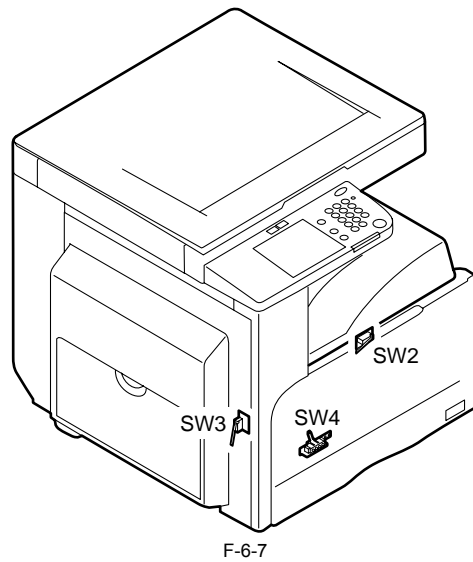
<Printer Unit>

T-6-14

Symbol	Name	Function
SW2	Front cover switch	Detects opening/closing of the front cover.
SW3	Left door switch	Detects opening/closing of the left door.
SW4	Cassette 1 size detection switch	Detects the cassette 1 paper size.

T-6-15

Symbol	Part No.	DC controller PCB	Power supply PCB
SW2	FM2-4433		J12
SW3	FM2-4433		J12
SW4	WC2-5332	J213	



F-6-7

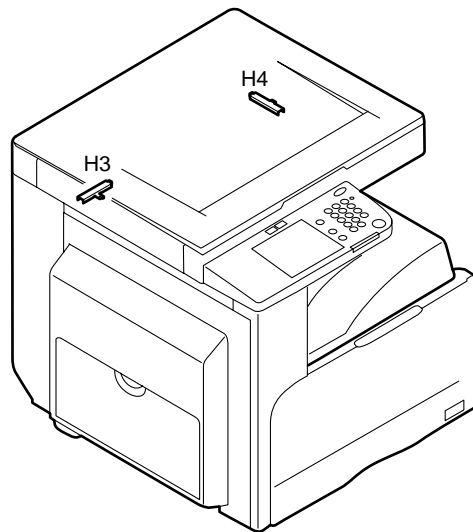
6.6 Lamps, Heaters, and Others

6.6.1 List of Lamps, Heaters, and Others

<Reader Unit>

T-6-16

Symbol	Name	Part No.	Function
H3	Reader heater (left)	NPN	Prevents dew condensation on the ADF reading glass.
H4	Reader heater (right)	NPN	Prevents dew condensation on the copyboard glass.



F-6-8

<Printer unit>

T-6-17

Symbol	Name	Function
H1	Fixing main heater	Used as the main heater for fixing.
H2	Fixing sub heater	Used as the sub heater for fixing.
H6	Cassette heater	Prevents paper in the cassette from absorbing moisture.
VA1	Varistor	Used as a varistor.
SP1	Speaker	Used as a speaker (for fax unit).

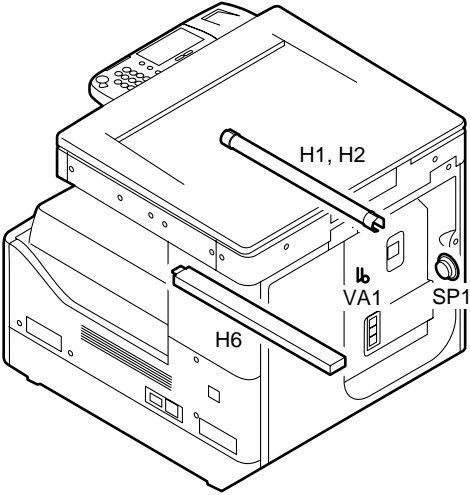
T-6-18

Symbol	Part No.
H1,H2	Fixing film unit FM2-6351(100V) FM2-3346(120V) FM2-3353(230V)

Symbol	Part No.
H6	FK2-1146(100V) FK2-1088(230V)

T-6-19

Symbol	Part No.	Modem PCB
VA1	FH5-3543	
SP1	FK2-1265	J1203



F-6-9

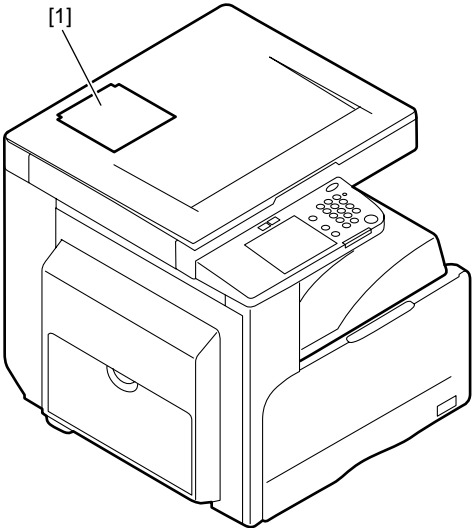
6.7 PCBs

6.7.1 List of PCBs

<Reader Unit>

T-6-20

Symbol	Name	Part No.	Function
[1]	Reader controller PCB	FM2-3305	controls the reader unit/ADF



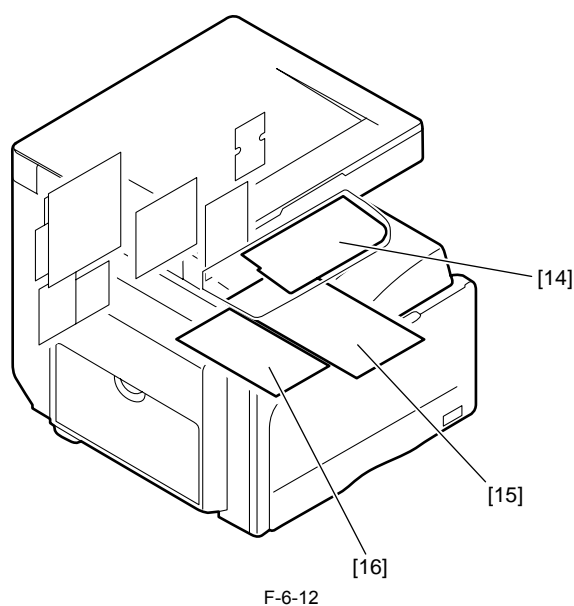
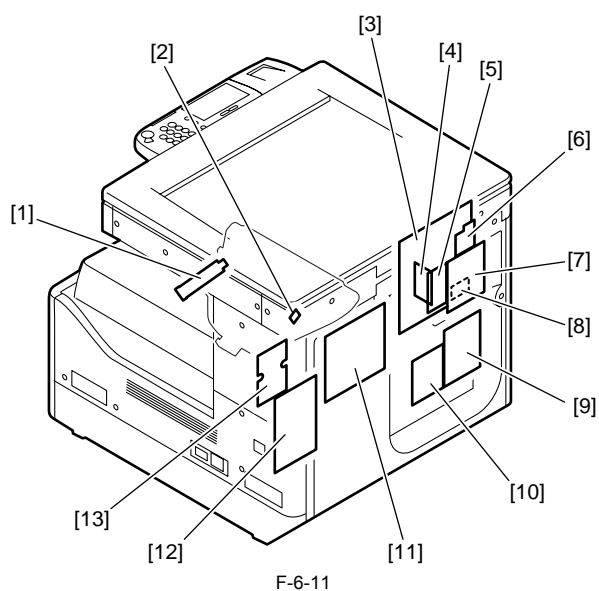
F-6-10

<Printer unit>

T-6-21

Symbol	Name	Part No.	Function
[1]	Laser driver PCB	Scanner unit FM2-3384	controls the laser unit drive
[2]	BD PCB		generates the BD signal
[3]	Image processor PCB	FM2-4893(MF7110/MF7140/ MF7210/MF7240) FM2-4781(MF7280/MF7170i)	processes output image data for the printer unit
[4]	256MB RAM	FM2-4056	temporarily retains image data
[5]	LAN PCB	FM2-4058	network interface/printer function control
[6]	Seriar interface PCB	FM2-4062	coin vendor interface

Symbol	Name	Part No.	Function
[7]	Modem PCB	FM2-4773(100V) FM2-4057(120V/230V)	control the fax
[8]	PCL PCB	FM2-4061	PCL function control
[9]	NCU PCB	FM2-2790	controls the line switching operation
[10]	Modular PCB	FM2-4778(100V) FM2-4777(120V) FM2-4772(230V)	fax line interface
[11]	DC controller PCB	FM2-5941(MF7110/MF7140) FM2-5942(MF7210/MF7240) FM2-5944(MF7280) FM2-5945(MF7170i)	controls the printer unit/option
[12]	Option power supply PCB	FK2-1085(100V/120V) FK2-1086(230V)	Option power supply
[13]	Heater PCB	FM2-4021	heater power switch
[14]	Operation panel PCB	Operation panel unit FM2-4010(MF7210/7140/7240) FM2-4011(MF7280) FM2-4012(MF7170i)	controls the operation panel
[15]	Power supply PCB	FK2-1831(100V) FK2-1074(120V) FK2-1075(230V)	printer power supply
[16]	HVT PCB	FM2-4018	high-voltage power supply

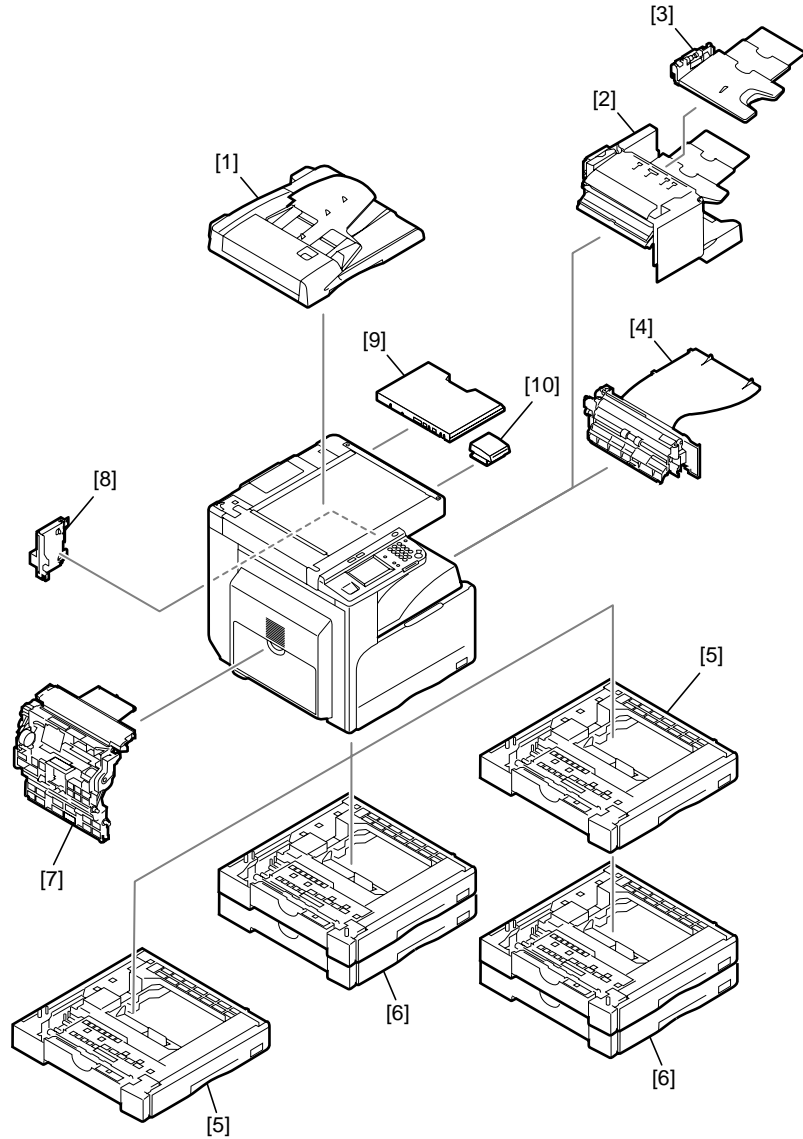


Chapter 7 System Construction

7.1 System Construction

7.1.1 Pickup/ Delivery /Original Handling Accessories System Configuration (MF7170i)

The configuration is as shown in the following figure:



F-7-1

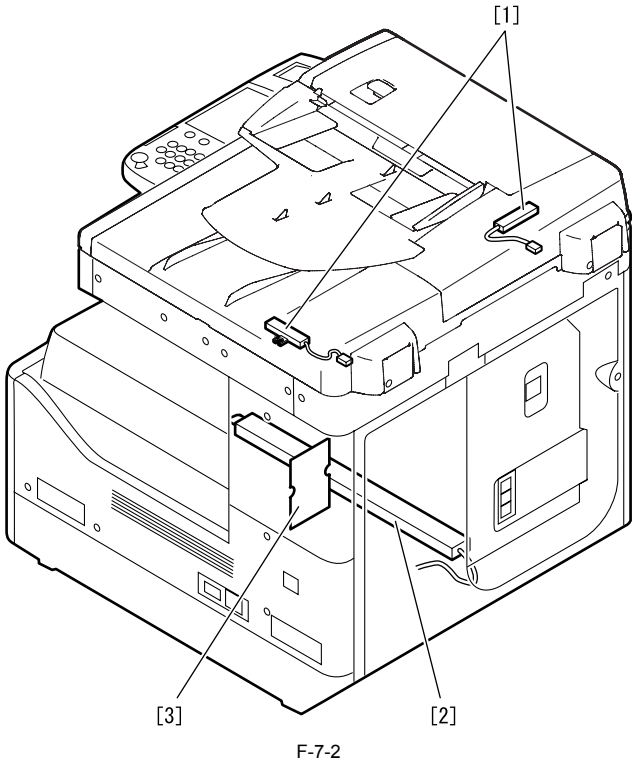
[1]	DADF-P1	*1
[2]	Finisher-U1	
[3]	Additional Finisher Tray-C1	
[4]	Inner 2-way Tray-E1	
[5]	Cassette Feeding Module-J1	*2
[6]	Cassette Feeding Module-K1	*2
[7]	Duplex Unit-A1	
[8]	Power Supply Kit-Q1	*1
[9]	Document Tray-J1	
[10]	Card Reader-E1	

*1: Standard equipment

*2: A Cassette feeding module-J1 can be placed on the Cassette feeding module-K1 to use these cassette units as a 3-stage cassette unit.

7.1.2 Reader Heater/ Cassette Heater System Configuration (MF7170i)

The configuration is as shown in the following figure:

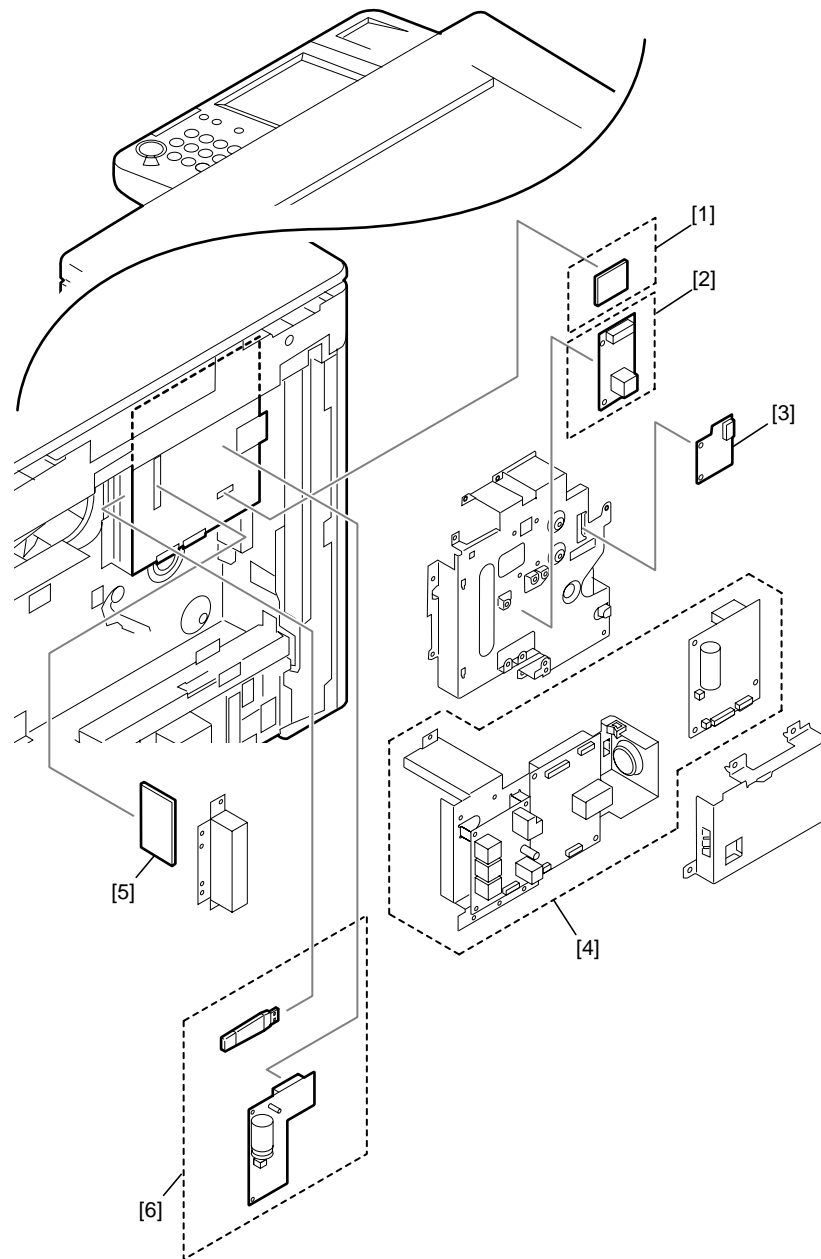


- | | | |
|-----|-----------------|----|
| [1] | Reader Heater | *1 |
| [2] | Cassette Heater | *1 |
| [3] | Heater PCB | |

These parts are supplied as service parts, not the standard items.
*1: To operate the heaters, a heater PCB is required.

7.1.3 Printing/Transmitting Accessories System Configuration (MF7170i)

The configuration is as shown in the following figure:



F-7-3

[1]	PCL Printer Kit-K1	*1
[2]	UFR II LT Printer Kit-J2	*1
[3]	Serial Interface Board-A1	
[4]	Super G3 FAX Board-T1	
[5]	iR 256MB Expansion RAM-D1	*1
[6]	Color SEND Kit (This item is not supplied as goods.)	*1

*1: Standard equipment

7.1.4 Functions of the Printing/Transmission Functions (MF7170i)

The following is a brief explanation of the functions expected of the accessories; for details, see the chapters that follow:

T-7-1

UFR II print function (Resolution: 1200dpi)*1	==>	UFR II LT Printer Kit-J2 iR 256MB Expansion RAM-D1
PCL print function*1	==>	PCL Printer Kit-K1
FAX function	==>	Super G3 FAX Board-T1
Coin vender function	==>	Serial Interface Board-A1

*1: Standard equipment

7.2 Product Specifications

7.2.1 Product Specifications

Copyboard	stream reading, fixed reading
Body	desktop
Light source type	LED array (CIS)
Photosensitive medium	OPC drum (30-mm dia.)
Image reading method	CCD (CIS)
Reproduction method	indirect electrostatic
Exposure method	by laser light
Charging method	by AC charging roller
Development method	1-component toner projection
Transfer method	by transfer roller
Separation method	by curvature + static eliminator
Cassette pickup method	retard
Multifeeder pickup method	dual processing
Drum cleaning method	by cleaning blade
Fixing method	on-demand
Delivery method	face-down
Reproduction ratio	50% to 200%
Warm-up time	approx. 13sec
Image margin (leading edge)	3.0 +/-1.5 mm
Image margin (trailing edge)	3.0 +/-2.0 mm
Image margin (left/right)	left edge: 3.0 +/-2.0 mm right edge: 0.5 mm or more
Non-image width (leading edge)	3.0 +/-2.0 mm
Non-image width (trailing edge)	3.0 +/-2.0 mm
Non-image width (left/right)	3.0 +/-2.0 mm
Number of gradations	256 gradations
Reading resolution	600 x 600 dpi
Printing resolution	1200 dpi x 1200 dpi (MF7120: 600 dpi x 600 dpi)
First print time	Book mode: 7.9 sec or less ADF mode: 13.5 sec or less
Cassette capacity	250sheets (80 g/m2)
Multifeeder tray capacity	100 sheets (80 g/m2) (B4/LGL or less, 64 g/m2) 80 sheets (80 g/m2) (B4/LGL or less, 80 g/m2) 50 sheets (B4/LGL or more, 64 g/m2, 80 g/m2) 50 sheets (heavy paper (105 to 128 g/m2), OHP) 10 sheets (envelope) 1 sheet (label) 40 sheets (post card)
Continuous reproduction	1 to 99 sheets
Toner type	magnetic negative toner
Original type	sheet, book
Maximum original size	A3/LDR
Original size recognition	by reflection type sensor (This feature is not supported by the MF7120/MF7170i.)
Sleep mode	yes
Option	See the system configuration chart.
Operating environment (temperature range)	15 to 27.5 deg C
Operating environment (humidity range)	25% to 75%
Operating environment (atmospheric pressure)	0.6 to 1.0 atm
Noise	MF7200 series: 66.0 dB or less MF7100 series: 64.6 dB or less
Power supply rating	100V / 120V / 230V
Power consumption (maximum)	100V model: 1250 W or less 120V model: 1550 W or less 230V model: 1600 W or less

Power consumption	100V model: continuous printing: 460 Wh (reference only) 120V model: continuous printing: 470 Wh (reference only) 230V model: continuous printing: 500 Wh (reference only)
Ozone	0.01ppm or less (initial) 0.035ppm or less (after endurance test)
Dimensions	MF7210/MF7120/MF7110: 622 mm x 633.4 mm x 580.4 mm (WxDxH) MF7240/MF7170i/MF7140: 622 mm x 668 mm x 672 mm (WxDxH) MF7280: 622 mm x 668 mm x 757 mm (WxDxH)
Weight	MF7210/MF7120/MF7110: approx. 44.0 kg MF7240/MF7170i/MF7140: approx. 52.0 kg MF7280: approx. 58.0 kg

7.3 Function List

7.3.1 Printing Speed (MF7100 Series)

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	Paper size	Single-sided	
		Cassette feed	Manual feed
Plain paper	A4	16	16
	A5	24	24
	A5R	-	13
	B5	21	21
	B5R	12	12
	A4R	11	11
	B4	9	9
	A3	10	10
	STMT	16	16
	STMTR	-	13
	EXE	-	21
	LTR	16	16
	LTRR	11	11
	LGL	10	10
	LDR	10	10
	8K	9	9
	16K	21	21
Heavy paper(81 to 105g/m2) (Heavy paper(106 to 128g/m2)	A4	12(10)	12(10)
	A5	13(11)	13(11)
	A5R	-	10(7)
	B5	12(10)	12(10)
	B5R	9(6)	9(6)
	A4R	10(8)	10(8)
	B4	6	6
	A3	8(7)	8(7)
	STMT	11(7)	11(7)
	STMTR	-	10(7)
	EXE	-	13(11)
	LTR	12(10)	12(10)
	LTRR	9(8)	9(8)
	LGL	8(5)	8(5)
	LDR	8(7)	8(7)
	8K	7(5)	7(5)
	16K	12(10)	12(10)

	Paper size	Single-sided	
		Cassette feed	Manual feed
Bond paper	A4	8	8
	A5	6	6
	A5R	-	4
	B5	6	6
	B5R	4	4
	A4R	4	4
	B4	5	5
	A3	6	6
	STMT	4	4
	STMTR	-	4
	EXE	-	6
	LTR	7	7
	LTRR	4	4
	LGL	4	4
	LDR	6	6
	8K	5	5
	16K	6	6
OHP	A4	-	16
	LTR	-	16
Envelope	Monarch	-	4
	COM10	-	4
	ISO-B5	-	4
	ISO-C5	-	4
	DL	-	4
Postcard	Postcard	-	8
	Double postal card	-	7
	4-plane post card	-	7

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	Paper size	Double-sided	
		Cassette feed	Manual feed
Plain paper	A4	16	16
	A5	11	11
	A5R	-	15
	B5	19	19
	B5R	8	8
	A4R	8	8
	B4	7	7
	A3	7	7
	STMT	14	14
	STMTR	-	13
	EXE	-	19
	LTR	16	16
	LTRR	8	8
	LGL	7	7
	LDR	7	7
	8K	7	7
	16K	19	19

Supplement:

- The above copy speed does not change irrespective of whether paper is supplied from the upper/lower cassette, the manual feed tray, or from the cassette feeding module.
- The copy speed may become down when the copies make continuously one minutes or more with the narrow width paper. The slowdown is reduced with the following user mode. User Mode: Additional Functions > Adjust/Cleaning > Special Mode P > ON
- The double-sided copy speed applies only when a duplex unit-A1 is installed.

7.3.2 Types of Paper

T-7-4

Type	Paper size	Source	
		Manual Feed Tray	Cassette
Plain paper, eco paper, recycled paper (64-90g/m2)	A3, B4, A4, A4R, B5, B5R, A5, LDR, LGL, LTR, LTRR, STMT, 8K, 16K	Yes	Yes

Type		Paper size	Source	
			Manual Feed Tray	Cassette
Special paper	Heavy paper (90-128g/m ²)	Width: 95mm-297mm Length: 148mm-432mm	Yes	No
	OHP	A4, LTR	Yes	No
	Postcard	Postcard A6R modified	Yes	No
	4-plane postcard	A4 modified	Yes	No
	Label paper	A4, B4, LTR	Yes	No
	3-hole paper	same as plain	Yes	Yes
	Envelope	Com10, Monarch, DL, ISO-C5, ISO-B5	Yes	No

Chapter 8 Upgrading

8.1 Upgrading

8.1.1 Overview of Upgrade

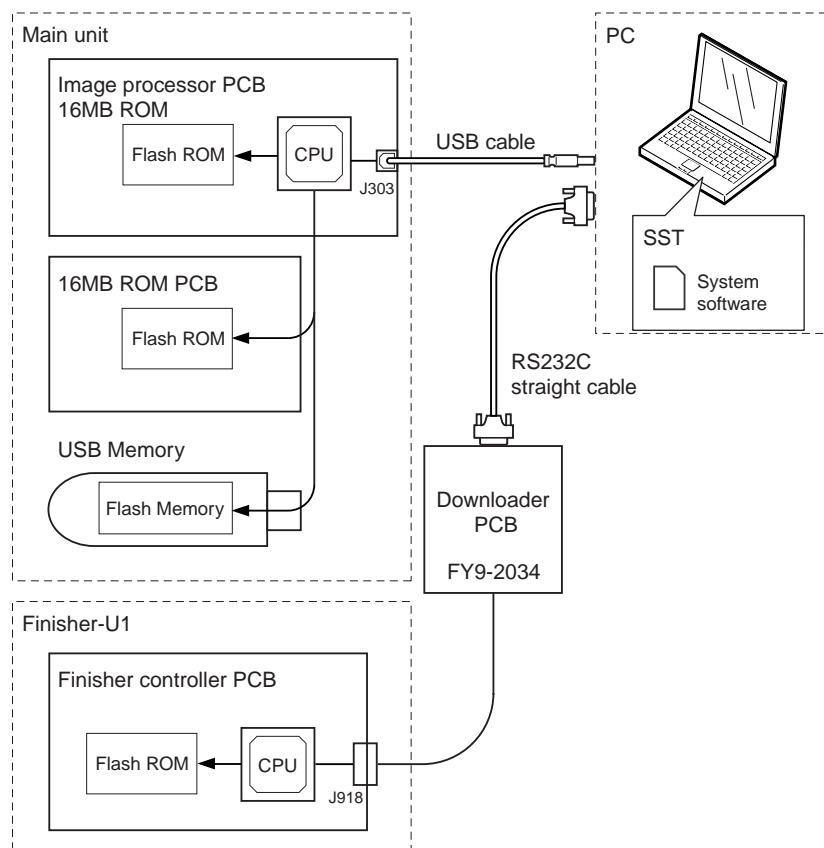
This machine and options can be upgraded by downloading system software programs from the personal computer (hereafter called as the PC) in which a service support tool (hereafter called SST) has been loaded.

System software programs and upgrade tools are listed in the following table:

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Type	System software type	Upgrade tool	Remarks
		SST	
Main unit	System (main controller)	Yes	Main controller also controls the reader.
	Boot (boot program)	Yes	
	Language (language module)	Yes	USB memory
	PCL	Yes	16MB ROM PCB
Option	Fin_U1 (Finisher-U1)	Yes	Dedicated service tool (Downloader PCB: FY9-2034)

8.1.2 Overview of Service Support Tool



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When using the SST, select "#DOWNLOAD" in the service mode to place the main unit in the download mode. (The finisher need not enter the download mode.)

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