TOSHIBA
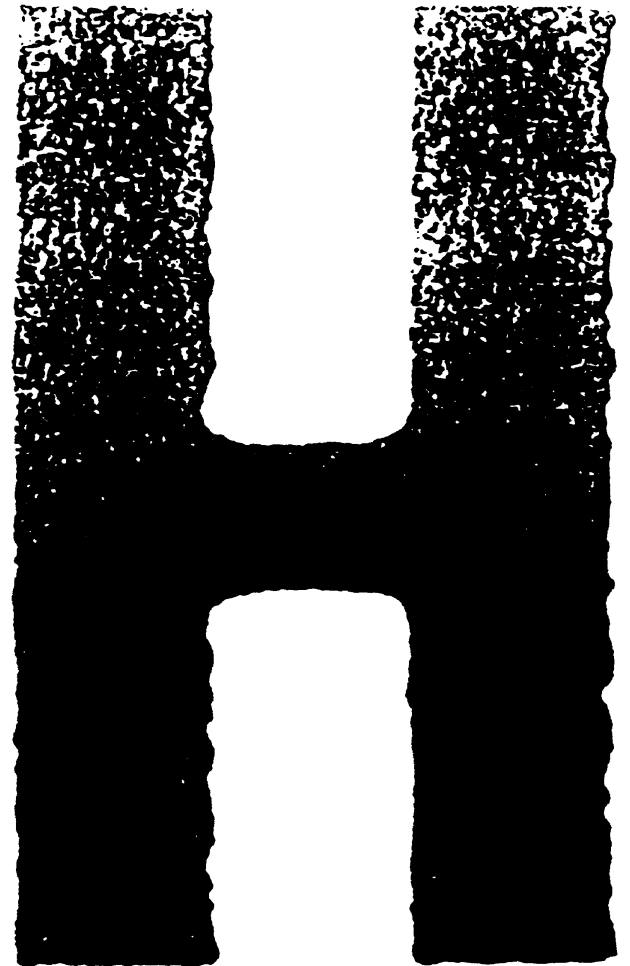
SERVICE HANDBOOK

MULTIFUNCTIONAL DIGITAL COLOR SYSTEMS
e-STUDIO2500c/3500c/3510c

Model: FC-2500C/3500C/3510C
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GENERAL PRECAUTIONS REGARDING THE SERVICE FOR e-STUDIO2500c/3500c/3510c

The installation and service should be done by a qualified service technician.

1) **Transportation/Installation**
   - When transporting/installing the equipment, employ four persons and be sure to hold the positions as shown in the figure.
     The equipment is quite heavy and weighs approximately 120 kg (264.55 lb.), therefore pay full attention when handling it.
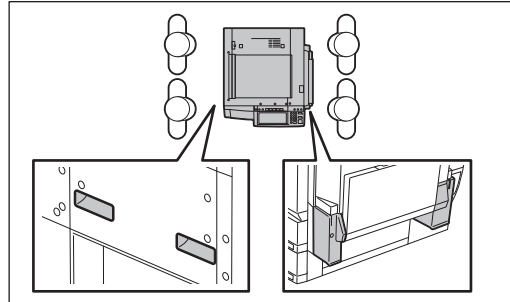
   - Be sure not to hold the movable parts or units (e.g. the control panel, ADU or RADF) when transporting the equipment.
   - Be sure to use a dedicated outlet with AC 110 V / 13.2 A, 115 V or 127 V / 12 A, 220-240 V / 8 A for its power source.
   - The equipment must be grounded for safety.
   - Select a suitable place for installation. Avoid excessive heat, high humidity, dust, vibration and direct sunlight.
   - Provide proper ventilation since the equipment emits a slight amount of ozone.
   - To insure adequate working space for the copying operation, keep a minimum clearance of 80 cm (32") on the left, 80 cm (32") on the right and 10 cm (4") on the rear.
   - The equipment shall be installed near the socket outlet and shall be accessible.
   - Be sure to fix and plug in the power cable securely after the installation so that no one trips over it.

2) **General Precautions at Service**
   - Be sure to turn the power OFF and unplug the power cable during service (except for the service should be done with the power turned ON).
   - Unplug the power cable and clean the area around the prongs of the plug and socket outlet once a year or more. A fire may occur when dust lies on this area.
   - When the parts are disassembled, reassembly is the reverse of disassembly unless otherwise noted in this manual or other related documents. Be careful not to install small parts such as screws, washers, pins, E-rings, star washers, harnesses in the wrong places.
   - Basically, the equipment should not be operated with any parts removed or disassembled.
   - The PC board must be stored in an anti-electrostatic bag and handled carefully using a wristband since the ICs on it may be damaged due to static electricity.
     Caution: **Before using the wristband, unplug the power cable of the equipment and make sure that there are no charged objects which are not insulated in the vicinity.**

- Avoid expose to laser beam during service. This equipment uses a laser diode. Be sure not to expose your eyes to the laser beam. Do not insert reflecting parts or tools such as a screwdriver on the laser beam path. Remove all reflecting metals such as watches, rings, etc. before starting service.
- Be sure not to touch high-temperature sections such as the exposure lamp, fuser unit, damp heater and areas around them.
- Be sure not to touch high-voltage sections such as the chargers, transfer belt, 2nd transfer roller, developer, high-voltage transformer, exposure lamp control inverter, inverter for the LCD back-light and power supply unit. Especially, the board of these components should not be touched since the electric charge may remain in the capacitors, etc. on them even after the power is turned OFF.
- Make sure that the equipment will not operate before touching potentially dangerous places (e.g. rotating/operating sections such as gears, belts pulleys, fans and laser beam exit of the laser optical unit).
- Be careful when removing the covers since there might be the parts with very sharp edges underneath.
- When servicing the equipment with the power turned ON, be sure not to touch live sections and rotating/operating sections. Avoid exposing your eyes to laser beam.
- Use designated jigs and tools.
- Use recommended measuring instruments or equivalents.
- Return the equipment to the original state and check the operation when the service is finished.
- Be very careful to treat the touch panel gently and never hit it. Breaking the surface could cause malfunctions.

3) **Important Service Parts for Safety**
- The breaker, door switch, fuse, thermostat, thermofuse, thermistor, IC-RAMs including lithium batteries, etc. are particularly important for safety. Be sure to handle/install them properly. If these parts are short-circuited and their functions become ineffective, they may result in fatal accidents such as burnout. Do not allow a short-circuit or do not use the parts not recommended by Toshiba TEC Corporation.

4) **Cautionary Labels**
- During servicing, be sure to check the rating plate and cautionary labels such as "Unplug the power cable during service", "CAUTION. HOT", "CAUTION. HIGH VOLTAGE", "CAUTION. LASER BEAM", etc. to see if there is any dirt on their surface and if they are properly stuck to the equipment.

5) **Disposal of the Equipment, Supplies, Packing Materials, Used Batteries and IC-RAMs**
- Regarding the recovery and disposal of the equipment, supplies, packing materials, used batteries and IC-RAMs including lithium batteries, follow the relevant local regulations or rules.

6) **When the option has been installed:**
When the EFI printer board has been installed, be sure to unplug the power cable before performing maintenance and inspection, otherwise troubles such as a communication error may occur.

Caution:
   Dispose of used batteries and IC-RAMs including lithium batteries according to this manual.
Attention:
   Se débarrasser de batteries et IC-RAMs usés y compris les batteries en lithium selon ce manuel.
Vorsicht:
   Entsorgung der gebrauchten Batterien und IC-RAMs (inclusive der Lithium-Batterie) nach diesem Handbuch.

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1. SPECIFICATIONS/ACCESSORIES/OPTIONS/SUPPLIES

1.1 Specifications

• Copy process .... Indirect electrophotographic process (dry)
• Type....................................... Desktop type (Console type: when optional Paper Feed Pedestal (PFP) or optional Large Capacity Feeder (LCF) is installed.)
• Original table .... Fixed type (the left rear corner used as guide to place originals)
• Accepted originals .... Original type: Sheets, books and 3-dimensional objects

Note that when the optional Reversing Automatic Document Feeder is used, carbon, bounded or stapled originals cannot be accepted, and paper type of the original should be 35-157g/m^2 (9.3 lb. Bond -58 lb. Cover) for single-sided copy and 50-157 g/m^2 (13.3 lb. Bond -58 lb. Cover) for double-sided copy.

Maximum size: A3/LD

• Copy speed (Copies/min.)

Plain paper (64 g/m^2 to 105 g/m^2 / 17 lb. Bond to 28 lb. Bond)

e-STUDIO2500c

Paper supply / Paper size	Drawer	Bypass feed		PFP	LCF (A4/LT only)
		Size specified	Size not specified		
A4, LT	35 (25)	35 (25)	18 (15)	35 (25)	35 (25)
B5, A5-R, ST-R					-
A4-R, B5-R, LT-R	26 (20)	26 (20)	18 (15)	26 (20)	-
B4, LG, FOLIO, COMPUTER	22 (17)	22 (17)	18 (15)	22 (17)	-
A3, LD	18 (15)	18 (15)	18 (15)	18 (15)	-

e-STUDIO3500c

Paper supply / Paper size	Drawer	Bypass feed		PFP	LCF (A4/LT only)
		Size specified	Size not specified		
A4, LT	35 (35)	35 (25)	18 (15)	35 (11)	35 (35)
B5, A5-R, ST-R					-
A4-R, B5-R, LT-R	26 (26)	26 (20)	18 (15)	26 (26)	-
B4, LG, FOLIO, COMPUTER	22 (22)	22 (17)	18 (15)	22 (22)	-
A3, LD	18 (18)	18 (15)	18 (15)	18 (18)	-

e-STUDIO3510c

Paper supply / Paper size	Drawer	Bypass feed		PFP	LCF (A4/LT only)
		Size specified	Size not specified		
A4, LT	45 (35)	45 (35)	22 (18)	45 (35)	45 (35)
B5, A5-R, ST-R					-
A4-R, B5-R, LT-R	32 (26)	32 (26)	22 (18)	32 (26)	-
B4, LG, FOLIO, COMPUTER	26 (22)	26 (22)	22 (18)	26 (22)	-
A3, LD	22 (18)	22 (18)	22 (18)	22 (18)	-

* "-" means "Not acceptable".
* When originals are manually placed for single-sided, continuous copying.
* Plain paper is selected for the paper type.
* When the Reversing Automatic Document Feeder is used, the copying speeds of the equipment is only possible under the following conditions:
  * Original: A4 or LT (single-sided)
  * Mode: APS and Automatic density not selected, Plain paper mode
  * Reproduction ratio: 100%
* The values in ( ) can be realized in the color mode.

Thick paper / OHP film
e-STUDIO2500c/3500c/3510c

Thick1 (106 g/m^2 to 163 g/m^2 / 28 lb. Bond to 60 lb. Cover (90 lb. Index))

Paper supply / Paper size	Drawer	Bypass feed		PFP	LCF (A4/LT only)
		Size specified	Size not specified		
A4, LT	17.5 (17.5)	17.5 (17.5)	8.5 (8.5)	17.5 (17.5)	17.5 (17.5)
B5, A4-R, ST-R					-
A4-R, B5-R, LT-R	13 (13)	13 (13)	8.5 (8.5)	13 (13)	-
B4, LG, FOLIO, COMPUTER	10.5 (10.5)	10.5 (10.5)	8.5 (8.5)	10.5 (10.5)	-
A3, LD	8.5 (8.5)	8.5 (8.5)	8.5 (8.5)	8.5 (8.5)	-

* The LCF accepts paper weight from 64g/m^2 to 105g/m^2 (17 lb. Bond to 28 lb. Bond).

Thick 2 (164 g/m^2 to 209 g/m^2 / 61 lb. Cover to 77.3 lb. Cover (115.7 lb. Index))

Thick 3 (210 g/m^2 to 256 g/m^2 / 77.3 lb. Cover to 94.5 lb. Cover (141.4 lb. Index))

Thick 4 (257 g/m^2 to 280 g/m^2 / 94.5 lb. Cover to 100 lb. Cover (150 lb. Index))

Paper supply / Paper size	Drawer	Bypass feed		PFP	LCF (A4/LT only)
		Size specified	Size not specified		
A4, LT	-	17.5 (17.5)	8.5 (8.5)	-	-
B5, A4-R, ST-R					-
A4-R, B5-R, LT-R	-	13 (13)	8.5 (8.5)	-	-
B4, LG, FOLIO, COMPUTER	-	10.5 (10.5)	8.5 (8.5)	-	-
A3, LD	-	8.5 (8.5)	8.5 (8.5)	-	-

OHP film

Paper supply / Paper size	Drawer	Bypass feed		PFP	LCF (A4/LT only)
		Size specified	Size not specified		
A4, LT	-	14.5 (14.5)	-	-	-

* "-" means "Not acceptable".
* When originals are manually placed for single side, continuous copying.
* The bypass copying speed is measured with the paper size specified.
* The values in ( ) can be realized in the color mode.

* System copy speed

Copy mode		Sec.		
		e-STUDIO2500c	e-STUDIO3500c	e-STUDIO3510c
Single-sided originals	1 set	24.35 (35.68)	24.35 (34.14)	19.75 (34.14)
↓	3 sets	60.13 (85.19)	60.13 (69.96)	48.00 (69.69)
Single-sided copies	5 sets	94.15 (130.09)	94.15 (103.57)	74.37 (103.57)
Single-sided originals	1 set	31.87 (46.43)	31.87 (42.58)	27.03 (42.58)
↓	3 sets	68.30 (92.00)	68.30 (78.86)	56.19 (78.86)
Double-sided copies	5 sets	104.60 (139.03)	104.60 (115.84)	85.56 (115.84)
Double-sided originals	1 set	65.34 (92.43)	65.34 (89.58)	62.43 (89.58)
↓	3 sets	138.60 (185.41)	138.60 (163.56)	120.69 (163.56)
Double-sided copies	5 sets	211.12 (280.40)	211.12 (235.75)	179.31 (235.75)
Double-sided originals	1 set	58.13 (84.28)	58.13 (83.29)	56.66 (83.29)
↓	3 sets	125.69 (177.34)	125.69 (151.25)	109.56 (151.25)
Single-sided copies	5 sets	193.70 (271.88)	193.70 (218.54)	162.63 (218.54)

* Shows the period of time from when the [START] button is pressed until the message "Ready" is dis-
played. (10 sheets of A4/LT size original are set on the RADF and one of the copy modes above is
selected.)

* Setting: when in the Text/Photo mode with Automatic density and APS/AMS set to OFF, or when in
the sort mode with paper fed from the 1st drawer.

* The Saddle Stitch Finisher and hole punch unit not installed.

* The values in ( ) are the speeds of when in the color mode.

• Copy paper

	ADU	Drawer	PFP	LCF	Bypass copy
Size	A3 to A5-R, FOLIO, LD to ST-R, COM-PUTER, 13"LG, 8.5"x8.5", 8K, 16K, 16K-R, 305×457mm, Full Bleed (12"x18")	A3 to A5-R, FOLIO, LD to ST-R, COMPUTER, 13"LG,8.5"x8.5", 8K, 16K, 16K-R		A4, LT	A3 to A5-R, FOLIO, LD to ST-R, COM-PUTER, 13"LG, 8.5"x8.5", 8K, 16K, 16K-R, A6-R, 305x457mm, Full Bleed (12"x18"), SRA3 (320x450mm), 320x460mm (Non-standard or user-specified sizes can be set.), Extra large copy paper (up to 305x1200mm) * * Printing Function only
Weight	64 g/m^2 to 256 g/m^2 17 lb. Bond to 94.5 lb. Cover	64 g/m^2 to 163 g/m^2 17 lb. Bond to 60 lb. Cover		64 g/m^2 to 105 g/m^2 17 lb. Bond to 28 lb. Cover	64 g/m^2 to 280 g/m^2 17 lb. Bond to 100 lb. Cover
Special paper	-	-	-	-	OHP film, Labels, Tab paper (Special paper recom-mended by Toshiba TEC)

•First copy time .... e-STUDIO2500c: Approx. 6.5 sec. (Black), approx. 8.6 sec. (Color)

e-STUDIO3500c: Approx. 6.5 sec. (Black), approx. 8.6 sec. (Color)

e-STUDIO3510c: Approx. 5.2 sec. (Black), approx. 8.6 sec. (Color)

•Warming-up time .... Approx. 99 sec. (Stand-alone, temperature: 20°C)

•Scanning speed........................ 45spm: Black (Text/Photo)

22spm: Black (Gray scale)

22spm: Color (Text/Photo)

(When scanning single-sided A4/LT landscape originals using RADF)

•Multiple copying........................ Up to 999 copies; Key in set numbers

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- Reproduction ratio .... Actual ratio: 100%±0.5%

  Zooming: 25 to 400% in increments of 1% (25 to 200% when using RADF)
- Resolution/Gradation.............. Scanning: 600 dpi × 600 dpi

  Printing: Equivalent to 2400 dpi × 600 dpi (black print, except gray scale)

  600 dpi × 600 dpi (color print / gray scale)
- Eliminated portion................... Leading edges: 3.0±2.0 mm, Side/trailing edges: 2.0±2.0 mm (black copy)

  Leading edges: 5.0±2.0 mm, Side/trailing edges: 3.0±2.0 mm (color copy)

  Leading / trailing edges: 5.0±2.0 mm, Side edges: 5.0±2.0 mm (black / color print)
- Paper feeding .... Standard drawers:

  2 drawers (stack height 60.5 mm, equivalent to 550 sheets; 64 to 80 g/m^2 (17 to 22 lb. Bond))

  PFP:

  Option (One drawer or two: stack height 60.5 mm, equivalent to 550 sheets; 64 to 80 g/m^2 (17 to 22 lb. Bond))

  LCF:

  Option (Stack height 137.5 mm x 2: equivalent to 2500 sheets; 64 to 80 g/m^2 (17 to 22 lb. Bond))

  Bypass feeding:

  Stack height 11 mm: equivalent to 100 sheets; 64 to 80 g/m^2 (17 to 22 lb. Bond)
- Capacity of originals in the reversing automatic document feeder (Option)
  .... A3 to A5-R, LD to ST-R:

  100 sheets / 80 g/m^2 (Stack height 16 mm or less)
- Automatic duplexing unit .... Stackless, Switchback type
- Toner supply .... Automatic toner density detection/supply

  Toner cartridge replacing method
- Density control........................ Automatic density mode and manual density mode selectable in 11 steps
- Weight .... Approximately 120 kg (264.55 lb.)
- Power requirements .... AC 110 V / 13.2 A, 115 V or 127 V / 12 A

  220-240 V / 8 A (50/60 Hz)

  * The acceptable value of each voltage is ±10%.
- Power consumption................. 1.5 kW or less (100 V series), 17 kW or less (200 V series)

  * The electric power is supplied to the RADF, Finisher, PFP and LCF through the equipment.
- Total counter........................... Electronical counter
- Dimensions of the equipment..................... See the figure below (W 699 x D 761 x H 759 (mm))

  * When the tilt angle of the control panel is 45 degrees.
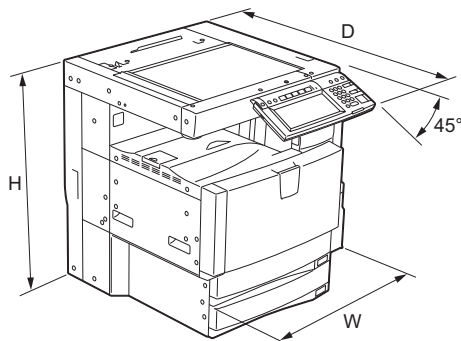
Fig. 1-1

1.2 Accessories

Unpacking/Setup instruction	1 set
Operator's manual	1 set (except for ASU)
Operator's manual pocket	1 pc.
Power cable	1 pc.
Warranty sheet	1 pc. (for NAD)
Setup report	1 set (for NAD, MJD and CND)
PM sticker	1 pc. (for MJD)
Process unit	4 pcs.
Control panel stopper	1 pc.
Rubber plug	6 pcs.
Blind seal (small / large)	3 pcs. /1 pc.
CD-ROM	2 pcs. (except for ASU)
Developer material (Y, M, C, K)	1 pc. each (for CND)
Approval sheet	1 set (for CND)
Screw	1 pc.

*   Machine version
     NAD: North America, Brazil
     MJD: Europe
     AUD: Australia
     ASD: Asia, Hong Kong, Latin America
     TWD: Taiwan
     SAD: Saudi Arabia
     ASU: Saudi Arabia, Asia
     CND: China
     KRD: Korea
     ARD: Argentina
     JPD: Japan

e-STUDIO2500c/3500c/3510c
SPECIFICATIONS/ACCESSORIES/OPTIONS/SUPPLIES

1.3 Options

Platen cover	KA-3511PC
Reversing Automatic Document Feeder (RADF)	MR-3018
Large Capacity Feeder (LCF)	KD-1019A4/LT/C
Paper Feed Pedestal (PFP)	KD-1018/C
Drawer module	MY-1031/C
Finisher	MJ-1101
Saddle stitch finisher	MJ-1030
Hole punch unit	MJ-6101N/E/F/S (for MJ-1101) MJ-6004N/E/F/S (for MJ-1030)
Staple cartridge	STAPLE-2400 (for MJ-1101) STAPLE-2000 (for MJ-1030) STAPLE-600 (for saddle stitcher of MJ-1030)
Bridge kit	KN-3500
Work table	KK-3511
Damp heater kit	MF-3500CU/CE
EFI Printer board	GA-1210/E
FAX unit	GD-1210NA/EU/AU/AS/C/TW/KR
2nd line for fax unit	GD-1160NA/EU-N/C/TW
512 MB Expansion memory (Main memory)	GC-1250
256 MB Expansion memory (Page memory)	GC-1260
512 MB Expansion memory	GC-1230 (for GA-1210/E)
Wireless LAN module	GN-1041
Bluetooth module	GN-2010
Antenna	GN-3010
Data overwrite kit	GP-1060/C
e-BRIDGE ID Gate (HID iCLASS)	KP-2004
e-BRIDGE ID Gate (MIFARE)	KP-2005
Harness kit for coin controller	GQ-1110
Desk	MH-1700

Notes:
- The bridge kit (KN-3500) is necessary for installation of the finisher (MJ-1101 or MJ-1030).
- The finisher (MJ-1101) is necessary for installation of the hole punch unit (MJ-6101N/E/F/S).
- The finisher (MJ-1030) is necessary for installation of the hole punch unit (MJ-6004N/E/F/S).
- The antenna (GN-3010) is necessary to enable the wireless LAN module (GN-1041) and the bluetooth module (GN-2010).
- The main memory can be expanded using 512 MB Expansion memory (GC-1250), and the Page memory can be expanded using 256 MB Expansion memory (GC-1260) respectively.

1.4 Supplies

Drum	OD-FC35
Developer material (K)	D-FC35K
Developer material (Y)	D-FC35Y
Developer material (M)	D-FC35M
Developer material (C)	D-FC35C
Toner cartridge (K)	PS-ZTFC35K (for North America, Central and South America) PS-ZTFC35EK (for Europe) PS-ZTFC35DK (for Australia and Asia) PS-ZTFC35CK (for China)
Toner cartridge (Y)	PS-ZTFC35Y (for North America, Central and South America) PS-ZTFC35EY (for Europe) PS-ZTFC35DY (for Australia and Asia) PS-ZTFC35CY (for China)
Toner cartridge (M)	PS-ZTFC35M (for North America, Central and South America) PS-ZTFC35EM (for Europe) PS-ZTFC35DM (for Australia and Asia) PS-ZTFC35CM (for China)
Toner cartridge (C)	PS-ZTFC35C (for North America, Central and South America) PS-ZTFC35EC (for Europe) PS-ZTFC35DC (for Australia and Asia) PS-ZTFC35CC (for China)
Toner bag	PS-TBFC35 (expect for Europe and China) PS-TBFC35E (for Europe) PS-TBFC35C (for China)

1.5 System List

e-BRIDGE ID Gate KP-2004

e-BRIDGE ID Gate KP-2005

Work Table KK-3511

Damp Heater MF-3500CU/CE

EFI Printer board GA-1210/E

512 MB Expansion memory GC-1230

Large Capacity Feeder (LCF) KD-1019 A4/LT/C

Platen Cover KA-3511PC

Reversing Automatic Document Feeder (RADF) MR-3018

Paper Feed Pedestal (PFP) KD-1018/C

Drawer Module MY-1031/C

FAX unit GD-1210 NA/AU/AS/ EU/C/TW

Wireless LAN module GN-1041

2nd Line for FAX unit GD-1160 NA/EU-N/C/TW

Bluetooth module GN-2010

Data overwrite kit GP-1060/C

Bridge Kit KN-3500

512MB Expansion memory GC-1250

Antenna GN-3010

256MB Expansion memory GC-1260

Hole Punch Unit MJ-6004 N/E/F/S

Hole Punch Unit MJ-6101 N/E/F/S

Staple Cartridge STAPLE-2000

Saddle stitch finisher MJ-1030

Staple Cartridge STAPLE-600

Staple Cartridge STAPLE-2400

Finisher MJ-1101

Fig. 1-2

2. ERROR CODE AND SELF-DIAGNOSTIC MODE

2.1 Error Code List

The following error codes is displayed at the upper right of the screen when the "CLEAR PAPER" or "CALL SERVICE" symbol is blinking.

2.1.1 Jam

Error code	Classification	Contents	Troubleshooting
E010	Paper exit jam	Jam not reaching the exit sensor: The paper which has passed through the fuser unit does not reach the exit sensor.	P. 5-1
E011	Other paper jam	Transfer belt paper-clinging jam: The paper after the 2nd transfer is clinging to the transfer belt, or a paper jam occurred between the registration roller and the paper clinging detection sensor.	P. 5-16
E020	Paper exit jam	Stop jam at the exit sensor: The trailing edge of the paper does not pass the exit sensor after its leading edge has reached this sensor.	P. 5-1
E030	Other paper jam	Power-ON jam: The paper is remaining on the paper transport path when power is turned ON.	P. 5-17
E061		Incorrect paper size setting for 1st drawer: The size of paper in the 1st drawer differs from size setting of the equipment.	P. 5-17
E062		Incorrect paper size setting for 2nd drawer: The size of paper in the 2nd drawer differs from size setting of the equipment.	P. 5-17
E063		Incorrect paper size setting for PFP upper drawer: The size of paper in the 3rd drawer differs from size setting of the equipment.	P. 5-17
E064		Incorrect paper size setting for PFP lower drawer: The size of paper in the 4th drawer differs from size setting of the equipment.	P. 5-17
E065		Incorrect paper size setting for bypass tray: The size of paper in the bypass tray differs from size setting of the equipment.	P. 5-17
E090		Image data delay jam: Image data to be printed cannot be prepared.	P. 5-18
E0A0		Image transport ready time-out jam: Image data to be printed cannot be sent.	P. 5-18

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Error code	Classification	Contents	Troubleshooting
E110	Paper misfeeding	ADU misfeeding (Paper not reaching the registration sensor): The paper which has passed through ADU does not reach the registration sensor during duplex printing.	P. 5-2
E120		Bypass misfeeding (Paper not reaching the bypass feed sensor): Paper fed from the bypass tray does not reach the bypass feed sensor.	P. 5-3
E130		1st drawer misfeeding (Paper not reaching the 1st drawer feed sensor): The paper fed from the 1st drawer does not reach the 1st drawer feed sensor.	P. 5-3
E140		2nd drawer misfeeding (Paper not reaching the 2nd drawer feed sensor): The paper fed from the 2nd drawer does not reach the 2nd drawer feed sensor.	P. 5-4
E150		PFP upper drawer misfeeding (Paper not reaching the PFP upper drawer feed sensor): The paper fed from the PFP upper drawer does not reach the PFP upper drawer feed sensor.	P. 5-5
E160		PFP lower drawer misfeeding (Paper not reaching the PFP lower drawer feed sensor): The paper fed from the PFP lower drawer does not reach the PFP lower drawer feed sensor.	P. 5-6
E190		LCF misfeeding (Paper not reaching the LCF feed sensor): The paper fed from the LCF does not reach the LCF feed sensor.	P. 5-7
E200	Paper transport jam	1st drawer transport jam (Paper not reaching the registration sensor): The paper does not reach the registration sensor after it has passed the 1st drawer feed sensor.	P. 5-8

Error code	Classification	Contents	Troubleshooting
E210	Paper transport jam	2nd drawer transport jam (Paper not reaching the registration sensor): The paper does not reach the registration sensor after it has passed the 1st drawer feed sensor.	P. 5-8
E220		2nd drawer transport jam (Paper not reaching the 1st drawer feed sensor): The paper does not reach the 1st drawer feed sensor after it has passed the 2nd drawer feed sensor.	P. 5-9
E270		Bypass transport jam (Paper not reaching the registration sensor): Paper fed from the bypass tray and passed through the bypass feed sensor does not reach the registration sensor.	P. 5-8
E300		PFP upper drawer transport jam (Paper not reaching the registration sensor): The paper does not reach the registration sensor after it has passed the 1st drawer feed sensor.	P. 5-8
E310		PFP upper drawer transport jam (Paper not reaching the 1st drawer feed sensor): The paper does not reach the 1st drawer feed sensor after it has passed the 2nd drawer feed sensor.	P. 5-9
E320		PFP upper drawer transport jam (Paper not reaching the 2nd drawer feed sensor): The paper does not reach the 2nd drawer feed sensor after it has passed the PFP upper drawer feed sensor.	P. 5-10
E330		PFP lower drawer transport jam (Paper not reaching the registration sensor): The paper does not reach the registration sensor after it has passed the 1st drawer feed sensor.	P. 5-8
E340		PFP lower drawer transport jam (Paper not reaching the 1st drawer feed sensor): The paper does not reach the 1st drawer feed sensor after it has passed the 2nd drawer feed sensor.	P. 5-9
E350		PFP lower drawer transport jam (Paper not reaching the 2nd drawer feed sensor): The paper does not reach the 2nd drawer feed sensor after it has passed the PFP upper drawer feed sensor.	P. 5-10
E360		PFP lower drawer transport jam (Paper not reaching the PFP upper drawer feed sensor): The paper does not reach the PFP upper drawer feed sensor after it has passed the PFP lower drawer feed sensor.	P. 5-11
E3C0		LCF transport jam (Paper not reaching the registration sensor): Paper fed from the LCF and passed through the 1st drawer feed sensor does not reach the registration sensor.	P. 5-8
E3D0		LCF transport jam (Paper not reaching the 1st drawer feed sensor): Paper fed from the LCF and passed through the 2nd drawer feed sensor does not reach the 1st drawer feed sensor.	P. 5-9
E3E0		LCF transport jam (Paper not reaching the 2nd drawer feed sensor): Paper fed from the LCF and passed through the LCF feed sensor does not reach the 2nd drawer feed sensor.	P. 5-10
E400	Cover open jam	Jam access cover open jam: The jam access cover has opened during printing.	P. 5-20
E410		Front cover open jam: The front cover has opened during printing.	P. 5-20

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Error code	Classification	Contents	Troubleshooting
E420	Cover open jam	PFP side cover open jam: The PFP side cover has opened during printing.	P. 5-21
E430		ADU open jam: The ADU has opened during printing.	P. 5-21
E440		Side cover open jam: The side cover has opened during printing.	P. 5-22
E450		LCF side cover open jam: The LCF side cover has opened during printing.	P. 5-22
E480		Bridge unit open jam: The bridge unit has opened during printing.	P. 5-23
E510	Paper transport jam (ADU section)	Jam not reaching the ADU entrance sensor: The paper does not reach the ADU entrance sensor after it is switchbacked in the exit section.	P. 5-12
E520		Stop jam in the ADU: The paper does not reach the ADU exit sensor after it has passed the ADU entrance sensor.	P. 5-13
E550	Other paper jam	Paper remaining jam on the transport path: The paper is remaining on the transport path when printing is finished (caused by a multiple paper feeding).	P. 5-18
E712	RADF jam	Jam not reaching the original registration sensor: The original fed from the original feeding tray does not reach the original registration sensor.	P. 5-24
E713		Cover open jam in the read ready status: Jam caused by opening of the RADF jam access cover or front cover while the RADF is waiting for the scanning start signal from the equipment.	P. 5-24
E714		Feed signal reception jam: The feed signal is received even no original exists on the original feeding tray.	P. 5-25
E721		Jam not reaching the read sensor: The original does not reach the read sensor after it has passed the registration sensor (when scanning obverse side) or the reverse sensor (when scanning reverse side).	P. 5-25
E722		Jam not reaching the original exit/reverse sensor (during scanning): The original which passed the read sensor does not reach the original exit/reverse sensor when it is transported from the scanning section to exit section.	P. 5-26
E724		Stop jam at the original registration sensor: The trailing edge of the original does not pass the original registration sensor after its leading edge has reached this sensor.	P. 5-26
E725		Stop jam at the read sensor: The trailing edge of the original does not pass the read sensor after its leading edge has reached this sensor.	P. 5-27
E731		Stop jam at the original exit/reverse sensor: The trailing edge of the original does not pass the original exit/reverse sensor after its leading edge has reached this sensor.	P. 5-27
E860		RADF jam access cover open: The RADF jam access cover has opened during RADF operation.	P. 5-27
E870		RADF open jam: RADF has opened during RADF operation.	P. 5-28

Error code	Classification	Contents	Troubleshooting
E910	Finisher jam (Bridge unit)	Jam at the bridge unit transport sensor 1: The paper does not reach the bridge unit transport sensor 1 after it has passed the exit sensor.	P. 5-29
E920		Stop jam at the bridge unit transport sensor 1: The trailing edge of the paper does not pass the bridge unit transport sensor 1 after its leading edge has reached the sensor.	P. 5-29
E930		Jam at the bridge unit transport sensor 2: The trailing edge of the paper does not reach the bridge unit transport sensor 2 after its leading edge has reached the bridge unit transport sensor 1.	P. 5-30
E940		Stop jam at the bridge unit transport sensor 2: The trailing edge of the paper does not pass the bridge unit transport sensor 2 after its leading edge has reached the bridge unit transport sensor 2.	P. 5-30
E9F0	Finisher jam (Punch unit)	Punching jam: Punching is not performed properly. [MJ-1030 (when MJ-6004 is installed)] [MJ-1101 (when MJ-6101 is installed)]	P. 5-43
EA10	Finisher jam (Finisher section)	Paper transport delay jam: The paper which has passed the bridge unit does not reach the inlet sensor. [MJ-1030/1101]	P. 5-31
EA20		Paper transport stop jam: (1) The paper does not pass through the inlet sensor. [MJ-1030] (2) The paper has passed through the inlet sensor but does not reach or pass the feed path sensor or processing tray sensor. [MJ-1030] Paper transport delay jam: The paper which has passed through the inlet sensor does not reach the transport sensor. [MJ-1101]	P. 5-32
EA21		Paper size error jam: Paper does not reach the sensor because the paper is shorter than spec. [MJ-1101]	P. 5-33
EA30		Power-ON jam: (1) Paper exists at the inlet sensor when power is turned ON. [MJ-1030] (2) Paper exists at the feed path sensor or processing tray sensor when power is turned ON. [MJ-1030]	P. 5-34
EA31		Transport path paper remaining jam: The paper which has passed through the inlet sensor does not reach the transport sensor. [MJ-1101]	P. 5-34
EA32		Exit paper remaining jam: The paper is remaining on the finishing tray when the power is turned ON. [MJ-1101]	P. 5-35
EA40		Door open jam: The upper/front cover of the finisher section or the upper/ front door of the puncher section has opened during printing. [MJ-1030] Cover open error: The front cover or stationary tray cover is opened during paper transport. [MJ-1101]	P. 5-35
EA50		Stapling jam: Stapling is not performed properly. [MJ-1030/1101]	P. 5-37

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Error code	Classification	Contents	Troubleshooting
EA60	Finisher jam (Finisher section)	Early arrival jam: The inlet sensor detects the paper earlier than a specified timing. [MJ-1030/1101]	P. 5-38
EA70		Stack exit belt home position error: The stack exit belt is not at the home position. [MJ-1101]	P. 5-39
EA80	Finisher jam (Saddle stitcher section)	Stapling jam: Stapling is not performed properly. [MJ-1030]	P. 5-40
EA90		Door open jam: The delivery cover or inlet cover has opened during printing [MJ-1030].	P. 5-40
EAA0		Power-ON jam: Paper exists at No.1 paper sensor, No. 2 paper sensor, No.3 paper sensor, vertical path paper sensor or delivery sensor when power is turned ON. [MJ-1030]	P. 5-41
EAB0		Transport stop jam: The paper which passed through the inlet sensor does not reach or pass No.1 paper sensor, No. 2 paper sensor, No.3 paper sensor or delivery sensor. [MJ-1030]	P. 5-41
EAC0		Transport delay jam: The paper which has reached the inlet sensor does not pass through the inlet sensor. [MJ-1030]	P. 5-42
EAD0	Other paper jam	Print end command time-out jam: The printing has not finished normally because of the communication error between the SYS board and LGC board at the end of printing.	P. 5-44
EAE0	Finisher jam	Receiving time time-out jam: The printing has been interrupted because of the communication error between the equipment and finisher when the paper is transported from the equipment to the finisher.	P. 5-44
EB30		Ready time time-out jam: The equipment judges that the paper transport to the finisher is disabled because of the communication error between the equipment and finisher at the start of printing.	P. 5-44
EB50	Paper transport jam	Paper remaining on the transport path: The multiple feeding of preceding paper caused the misfeeding of upcoming paper.	P. 5-14
EB60		Paper remaining on the transport path: The multiple feeding of preceding paper caused the misfeeding of upcoming paper (redetection after no jam is detected at [EB50]).	P. 5-15
ED10	Finisher jam	Skew adjustment motor (M1) home position detection abnormality: The Skew adjustment motor is not at the home position. [MJ-1101 (when MJ-6101 is installed)]	P. 5-45
ED11		Sideways adjustment motor (M2) home position detection error: The Sideways adjustment motor is not at the home position. [MJ-1101 (when MJ-6101 is installed)]	P. 5-45
ED12		Shutter home position error: The shutter is not at the home position. [MJ-1101]	P. 5-46
ED13		Front alignment plate home position error: The front alignment plate is not at the home position. [MJ-1101]	P. 5-46

Error code	Classification	Contents	Troubleshooting
ED14	Finisher jam (Finisher section)	Rear alignment plate home position error: The rear alignment plate is not at the home position. [MJ-1101]	P. 5-47
ED15		Paddle home position error: The paddle is not at the home position. [MJ-1101]	P. 5-47
ED16		Buffer tray home position error: The buffer tray is not at the home position. [MJ-1101]	P. 5-48

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2.1.2　Service call

Error code	Classification	Contents	Troubleshooting
C040	Paper feeding system related service call	PFP motor abnormality: The PFP motor is not rotating normally. (the case that paper can be fed from any drawer except the PFP)	P. 5-49
C130		1st drawer tray abnormality: The tray-up motor is not rotating or the 1st drawer tray is not moving normally. (the case that paper can be fed from any drawer except the 1st drawer)	P. 5-50
C140		2nd drawer tray abnormality: The tray-up motor is not rotating or the 2nd drawer tray is not moving normally. (the case that paper can be fed from any drawer except the 2nd drawer)	P. 5-50
C150		PFP upper drawer tray abnormality: The PFP upper drawer tray-up motor is not rotating or the PFP upper drawer tray is not moving normally. (the case that paper can be fed from any drawer except the PFP upper drawer)	P. 5-51
C160		PFP lower drawer tray abnormality: The PFP lower drawer tray-up motor is not rotating or the PFP lower drawer tray is not moving normally. (the case that paper can be fed from any drawer except the PFP lower drawer)	P. 5-51
C180		LCF tray-up motor abnormality: The LCF tray-up motor is not rotating or the LCF tray is not moving normally. (the case that paper can be fed from any drawer except the LCF)	P. 5-52
C1A0		LCF end fence motor abnormality: The LCF end fence motor is not rotating or the LCF end fence is not moving normally. (the case that paper can be fed from any drawer except the LCF)	P. 5-53
C1B0		LCF transport motor abnormality: The LCF transport motor is not rotating normally. (the case that paper can be fed from any drawer except the LCF)	P. 5-54
C260	Scanning system related service call	Peak detection error: Lighting of the exposure lamp (white reference) is not detected when power is turned ON.	P. 5-55
C270		Carriage home position sensor not turning OFF within a specified period of time: The carriage does not shift from its home position in a specified time.	P. 5-55
C280		Carriage home position sensor not turning ON within a specified period of time: The carriage does not reach to its home position in a specified period of time.	P. 5-55
C370	Copy process related service call	Transfer belt operation abnormality	P. 5-94
C380		Auto-toner sensor-K abnormality	P. 5-94
C390		Auto-toner sensor-C abnormality	P. 5-94
C3A0		Auto-toner sensor-M abnormality	P. 5-94
C3B0		Auto-toner sensor-Y abnormality	P. 5-94

Error code	Classification	Contents	Troubleshooting
C411	Fuser unit related service call	Thermistor or heater lamp abnormality at power-ON: Abnormality of the thermistor is detected when power is turned ON or the temperature of the fuser roller does not rise in a specified period of time after power is turned ON.	P. 5-56
C412		Thermistor/heater lamp abnormality at power-ON: Thermistor abnormality is detected at power-ON or the fuser roller temperature does not rise within a specified period of time after power-ON.	P. 5-56
C443		Heater lamp abnormality after abnormality judgment (not reaching to intermediate temperature)	P. 5-57
C445		Heater lamp abnormality after abnormality judgment (pre-running end temperature abnormality)	P. 5-57
C446		Heater lamp abnormality after abnormality judgment (pre-running end temperature abnormality)	P. 5-57
C447		Heater lamp abnormality after abnormality judgment (temperature abnormality at ready status)	P. 5-57
C447		Heater lamp abnormality after abnormality judgment (temperature abnormality at ready status)	P. 5-57
C448		Heater lamp continuous lighting abnormality: Heater lamp lights continuously for a certain period of time when the pressure roller temperature during ready status is higher than the specified	P. 5-57
C449		Heater lamp abnormality after abnormality judgment (temperature abnormality at high temperature	P. 5-57
C465		Pressure roller thermistor abnormality after entering ready status (pre-running end temperature abnormality)	P. 5-58
C466		Pressure roller thermistor abnormality after entering ready status (pre-running end temperature abnormality)	P. 5-58
C467		Pressure roller thermistor abnormality after entering ready status (temperature abnormality at ready status)	P. 5-58
C468		Pressure roller thermistor abnormality after entering ready status (overheating)	P. 5-58
C4B0		Fuser unit counter abnormality	–
C4C0		Fuser unit fuse abnormality (shielding disabled)	P. 5-59
C4D0		Fuser belt thermopile abnormality	P. 5-59
C550	Optional communication related service call	RADF I/F error: Communication error has occurred between the RADF and the scanner.	P. 5-60
C570		Communication error between Engine-CPU and IPC board	P. 5-60
C580		Communication error between IPC board and finisher	P. 5-60
C900	Circuit related service call	Connection error between SYS board and LGC board	P. 5-62
C940		Engine-CPU abnormality	P. 5-62
C950		LGC board abnormality, ID abnormality	P. 5-62
C961		Connection error on the IMG board, ID abnormality	P. 5-62
C970	Process related service call	High-voltage transformer abnormality: Leakage of the main charger is detected.	P. 5-94
C9E0	Circuit related service call	Connection error between SLG board and SYS board	P. 5-63

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Error code	Classification	Contents	Troubleshooting
CA00	Image control related service call	Image position alignment abnormality	P. 5-83
CA10	Laser optical unit related service call	Polygonal motor abnormality: The polygonal motor is not rotating normally.	P. 5-65
CA20		H-Sync detection error: H-Sync signal detection PC board cannot detect laser beams.	P. 5-66

Error code	Classification	Contents	Troubleshooting
CB00	Finisher related service call	Finisher not connected: Communication error has occurred between the equipment and finisher. [MJ-1101]	P. 5-68
CB01		Finisher communication error: Communication error has occurred between the equipment and finisher. [MJ-1101]	P. 5-68
CB10		Entrance motor abnormality: The entrance motor is not rotating normally. [MJ-1101]	P. 5-68
CB11		Buffer tray guide motor abnormality: The buffer tray guide motor is not rotating or the buffer tray guide is not moving normally. [MJ-1101]	P. 5-69
CB12		Buffer roller drive motor abnormality: The buffer roller drive motor is not rotating or the buffer roller is not moving normally. [MJ-1101]	P. 5-69
CB30		Tray 1/Tray 2 shift motor abnormality: Tray 1/Tray 2 shift motor is not rotating or delivery tray is not moving normally. [MJ-1030] Movable tray shift motor abnormality: The movable tray shift motor is not rotating or the movable tray is not moving normally. [MJ-1101]	P. 5-69
CB31		Movable tray paper-full detection error: The actuator of the movable tray paper-full detection sensor does not move smoothly. [MJ-1101]	P. 5-70
CB40		Rear aligning plate motor abnormality: Rear aligning plate motor is not rotating or aligning plate is not moving normally. [MJ-1030] Front alignment motor abnormality: The front alignment motor is not rotating or the front alignment plate is not moving normally. [MJ-1101]	P. 5-70
CB50		Staple motor abnormality: Staple motor is not rotating or stapler is not moving normally. [MJ-1030] Stapler home position error: The stapler home position sensor does not work. [MJ-1101]	P. 5-71
CB51		Stapler shift home position error: The stapler is not at the home position. [MJ-1101]	P. 5-72
CB60		Stapler shift motor abnormality: Stapler shift motor is not rotating or staple unit is not moving normally. [MJ-1030/1101]	P. 5-72
CB70		Paper loading amount detection sensor abnormality	
CB80		Backup RAM data abnormality: 1) Abnormality of checksum value on finisher controller PC board is detected when the power is turned ON. [MJ-1030/1101] 2) Abnormality of checksum value on punch controller PC board is detected when the power is turned ON. [MJ-1030 (when MJ-6004 is installed)]	P. 5-73
CB81		Flash ROM abnormality: Abnormality of checksum value on finisher controller PC board is detected when the power is turned ON. [MJ-1101]	P. 5-73
CB90		Paper pushing plate motor abnormality: Paper pushing plate motor is not rotating or paper pushing plate is not moving normally. [MJ-1030]	P. 5-73

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Error code	Classification	Contents	Troubleshooting
CBA0	Finisher related service call	Stitch motor (front) abnormality: Stitch motor (front) is not rotating or rotary cam is not moving normally. [MJ-1030]	P. 5-73
CBB0		Stitch motor (rear) abnormality: Stitch motor (rear) is not rotating or rotary cam is not moving normally. [MJ-1030]	P. 5-73
CBC0		Alignment motor abnormality: Alignment motor is not rotating or aligning plate is not moving normally. [MJ-1030]	P. 5-74
CBD0		Guide motor abnormality: Guide motor is not rotating or guide is not moving normally. [MJ-1030]	P. 5-74
CBE0		Paper folding motor abnormality: Paper folding motor or paper folding roller is not rotating normally. [MJ-1030]	P. 5-74
CBF0		Paper positioning plate motor abnormality: Paper positioning plate motor is not rotating or paper positioning plate is not moving normally. [MJ-1030]	P. 5-74
CC00		Sensor connector abnormality: Connector of guide home position sensor, paper pushing plate home position sensor or paper pushing plate top position sensor is disconnected. [MJ-1030]	P. 5-75
CC10		Micro switch abnormality: With all covers closed, inlet door switch, delivery door switch or front cover switch is open. [MJ-1030]	P. 5-75
CC20		Communication error between finisher and saddle stitcher: Communication error between finisher controller PC board and saddle stitcher controller board [MJ-1030]	P. 5-75
CC30		Stack transport motor abnormality: The stack transport motor is not rotating or the stack transport belt is not moving normally. [MJ-1101]	P. 5-76
CC31		Transport motor abnormality: The transport motor is not rotating or the stack transport roller -1 and -2 is not rotating normally. [MJ-1101]	P. 5-76
CC40		Swing motor abnormality: Swing motor is not rotating or swing unit is not moving normally. [MJ-1030]	P. 5-76
CC41		Paper holder cam home position abnormality: The paper holder cam is not at the home position. [MJ-1101]	P. 5-77
CC50		Horizontal registration motor abnormality: Horizontal registration motor is not rotating or puncher is not shifting normally. [MJ-1030 (when MJ-6004 is installed)]	P. 5-77
CC51		Sideways adjustment motor (M2) abnormality: Sideways adjustment motor is not rotating or puncher is not shifting normally. [MJ-1101 (when MJ-6101 is installed)]	P. 5-77
CC52		Skew adjustment motor (M1) abnormality: Skew adjustment motor is not rotating or puncher is not shifting normally. [MJ-1101 (when MJ-6101 is installed)]	P. 5-78
CC60		Punch motor abnormality: Punch motor is not rotating or puncher is not shifting normally. [MJ-1030 (when MJ-6004 is installed)]	P. 5-77
CC61		Punch motor (M3) home position detection error: Punch motor is not rotating or puncher is not shifting normally. [MJ-1101 (when MJ-6101 is installed)]	P. 5-79

Error code	Classification	Contents	Troubleshooting
CC71	Finisher related service call	Punch ROM checksum error: Abnormality of checksum value on Hole punch controller PC board is detected when the power is turned on. [MJ-1101 (when MJ-6101 is installed)]	P. 5-79
CC72		Punch RAM read/write error: Abnormality of checksum value on Hole punch controller PC board is detected when the power is turned on. [MJ-1101 (when MJ-6101 is installed)]	P. 5-79
CC80		Front aligning plate motor abnormality: Front aligning plate motor is not rotating or aligning plate is not moving normally. [MJ-1030] Rear alignment motor abnormality: The rear alignment motor is not rotating or the rear alignment plate is not moving normally. [MJ-1101]	P. 5-80
CCD0		Stack ejection motor abnormality: Stack ejection motor or stack ejection roller is not rotating normally. [MJ-1030]	P. 5-80
CCE0		Paper trailing edge assist motor abnormality: Paper trailing edge assist motor is not rotating or paper trailing edge assist is not moving normally. [MJ-1030]	P. 5-81
CCF0		Gear changing motor abnormality: Gear changing motor is not rotating normally. [MJ-1030]	P. 5-81
CD70	Process related service call	Used toner bag mixing paddle locked: The mixing paddle in the used toner bag does not rotate.	P. 5-95
CDE0	Finisher related service call	Paddle motor abnormality: The paddle motor is not rotating or the paddle is not rotating normally. [MJ-1101]	P. 5-81
CE00		Communication error between finisher and punch unit: Communication error between finisher controller PC board and punch controller PC board [MJ-1030 (when MJ-6004 is installed)] [MJ-1101 (when MJ-6101 is installed)]	P. 5-82
CE10	Image control related service call	Image quality sensor abnormality (OFF level): The output value of this sensor is out of a specified range when sensor light source is OFF.	P. 5-88
CE20		Image quality sensor abnormality (no pattern level): The output value of this sensor is out of a specified range when the image quality control test pattern is not formed.	P. 5-89
CE40		Image quality control test pattern abnormality: The test pattern is not formed normally.	P. 5-91
CE50		Temperature/humidity sensor abnormality: The output value of this sensor is out of a specified range.	P. 5-92
CE60		Drum thermistor-Y abnormality: The output value of the drum thermistor-Y is out of a specified range.	P. 5-93
CE70		Drum drive switching abnormality	P. 5-93
CE90		Drum thermistor-K abnormality: The output value of the drum thermistor-K is out of a specified range.	P. 5-93
CEC0	Copy process related service call	2nd transfer roller position detection abnormality: The 2nd transfer roller does not contact/release normally.	P. 5-96
CF10	Finisher related service call	Communication module SRAM reading failure.	P. 5-82
CF90	Laser optical unit related service call	Laser optical unit shutter abnormality.	P. 5-67
F070	Communication related service call	Communication error between System-CPU and Engine-CPU	P. 5-60

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F090	Circuit related service call	SRAM abnormality on the SYS board	P. 5-63
F091		NVRAM abnormality on the SYS board	P. 5-63
F092		SRAM and NVRAM abnormality on the SYS board	P. 5-64
F100	Other service call	HDD format error: HDD cannot be initialized normally.	P. 5-97
F101		HDD unmounted: Connection of HDD cannot be detected.	P. 5-97
F102		HDD start error: HDD cannot become 'Ready' state.	P. 5-97
F103		HDD transfer time-out: Reading/writing cannot be performed in the specified period of time.	P. 5-97
F104		HDD data error: Abnormality is detected in the data of HDD.	P. 5-97
F105		HDD other error	P. 5-97
F106		Point and Print partition damage	P. 5-97
F107		/BOX partition damage	P. 5-97
F108		/SHA partition damage	P. 5-97
F110	Communication related service call	Communication error between System-CPU and Scanner-CPU	P. 5-61
F111		Scanner response abnormality	P. 5-61
F120	Other service call	Database abnormality: Database is not operating normally.	P. 5-97
F130		Invalid MAC address	P. 5-97
F140		Accelerator ASIC format error	P. 5-98
F200		Data overwrite kit (GP-1060) is taken off	P. 5-98
F350	Circuit related service call	SLG board abnormality	P. 5-64

2.1.3　Error in Internet FAX / Scanning Function

1) Internet FAX related error

Error code	Classification	Troubleshooting
1C10	System access abnormality	P. 5-98
1C11	Insufficient memory	P. 5-98
1C12	Message reception error	P. 5-98
1C13	Message transmission error	P. 5-98
1C14	Invalid parameter	P. 5-98
1C15	Exceeding file capacity	P. 5-99
1C20	System management module access abnormality	P. 5-99
1C21	Job control module access abnormality	P. 5-99
1C22	Job control module access abnormality	P. 5-99
1C30	Directory creation failure	P. 5-99
1C31	File creation failure	P. 5-99
1C32	File deletion failure	P. 5-98
1C33	File access failure	P. 5-99
1C40	Image conversion abnormality	P. 5-99
1C60	HDD full failure during processing	P. 5-99
1C61	Address Book reading failure	P. 5-99
1C62	Memory acquiring failure	P. 5-99
1C63	Terminal IP address unset	P. 5-99
1C64	Terminal mail address unset	P. 5-99
1C65	SMTP address unset	P. 5-99
1C66	Server time time-out error	P. 5-99
1C67	NIC time time-out error	P. 5-100
1C68	NIC access error	P. 5-100
1C69	SMTP server connection error	P. 5-100
1C6A	HOST NAME error	P. 5-100
1C6B	Terminal mail address error	P. 5-100
1C6C	Destination mail address error	P. 5-100
1C6D	System error	P. 5-100
1C70	SMTP client OFF	P. 5-100
1C71	SMTP authentication error	P. 5-100
1C72	POP before SMTP error	P. 5-100
1C80	Internet FAX transmission failure when processing E-mail job received	P. 5-100
1C81	Onramp Gateway transmission failure	P. 5-100
1C82	Internet FAX transmission failure when processing FAX job received	P. 5-100
1CC0	Job canceling	-
1CC1	Power failure	P. 5-100

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2) RFC related error

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
2500	Syntax error, command unrecognized	HOST NAME error (RFC: 500) Destination mail address error (RFC: 500) Terminal mail address error (RFC: 500)	P. 5-101
2501	Syntax error in parameters or arguments	HOST NAME error (RFC: 501) Destination mail address error (RFC: 501) Terminal mail address error (RFC: 501)	P. 5-101
2503	Bad sequence of commands	Destination mail address error (RFC: 503)	P. 5-101
2504	Command parameter not implemented	HOST NAME error (RFC: 504)	P. 5-101
2550	Mailbox unavailable	Destination mail address error (RFC: 550)	P. 5-101
2551	User not local	Destination mail address error (RFC: 551)	P. 5-101
2552	Insufficient system storage	Terminal/Destination mail address error (RFC: 552)	P. 5-101
2553	Mailbox name not allowed	Destination mail address error (RFC: 553)	P. 5-101

3) Electronic Filing related error

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
2B10	There was no applicable job.	No applicable job error in job control module	P. 5-102
2B11	Job status failed.	JOB status abnormality	P. 5-102
2B20	Failed to access file.	File library function error	P. 5-102
2B30	Insufficient disk space.	Insufficient disk space in /BOX partition	P. 5-102
2B31	Failed to access Electronic Filing.	Status of specified Electronic Filing or folder is undefined or being created/deleted	P. 5-102
2B32	Failed to print Electronic Filing document.	Electronic Filing printing failure: Specified document can not be printed because of client's access (being edited, etc.).	P. 5-102
2B50	Failed to process image.	Image library error	P. 5-102
2B51	Failed to process print image.	List library error	P. 5-102
2B71	Document(s) expire(s) in a few days	Documents expiring in a few days exist	-
2B80	Hard Disk space for Electronic Filing nearly full.	Hard disk space in /BOX partition is nearly full (90%).	-
2B90	Insufficient Memory.	Insufficient memory capacity	P. 5-102
2BA0	Invalid Box password specified.	Invalid Box password	P. 5-102
2BA1	Incorrect paper size/ color mode	A Paper size or a color mode not supported in the Electronic Filing function is being selected.	P. 5-102
2BB0	Job canceled	Job canceling	-
2BB1	Power failure occurred	Power failure	P. 5-103
2BC0	System fatal error.	Fatal failure occurred	P. 5-102
2BC1	Failed to acquire resource.	System management module resource acquiring failure	P. 5-102
2BD0	Power failure occurred during e-Filing restoring.	Power failure occurred during restoring of Electronic Filing	P. 5-103
2BE0	Failed to get machine parameter.	Machine parameter reading failure	P. 5-103
2BF0	Maximum number of page range is reached.	Exceeding maximum number of pages	P. 5-103
2BF1	Maximum number of document range is reached.	Exceeding maximum number of documents	P. 5-103
2BF2	Maximum number of folder range is reached.	Exceeding maximum number of folders	P. 5-103

4) Remote scanning related error

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
2A20	Failed to acquire resource	System management module resource acquiring failure	P. 5-104
2A40	System fatal error	System error	P. 5-104
2A50	Job canceling	Job canceling	-
2A51	Power failure	Power failure	P. 5-104

5) E-mail related error

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
2C10	Illegal Job status	System access abnormality	P. 5-105
2C11	Not enough memory	Insufficient memory	P. 5-105
2C12	Illegal Job status	Message reception error	P. 5-105
2C13	Illegal Job status	Message transmission error	P. 5-105
2C14	Invalid parameter specified	Invalid parameter	P. 5-105
2C15	Message size exceeded limit or maximum size	Exceeding file capacity	P. 5-105
2C20	Illegal Job status	System management module access abnormality	P. 5-105
2C21	Illegal Job status	Job control module access abnormality	P. 5-105
2C22	Illegal Job status	Job control module access abnormality	P. 5-105
2C30	Failed to create directory	Directory creation failure	P. 5-105
2C31	Failed to create file	File creation failure	P. 5-105
2C32	Failed to delete file	File deletion failure	P. 5-105
2C33	Failed to create file	File access failure	P. 5-105
2C40	Failed to convert image file format	Image conversion abnormality	P. 5-105
2C43	Encryption error. Failed to create file	Encryption error	P. 5-105
2C44	Creating the image file was not permitted.	Encryption PDF enforced mode error	P. 5-105
2C60	Failed to process your Job. Insufficient disk space.	HDD full failure during processing	P. 5-105
2C61	Failed to read AddressBook	Address Book reading failure	P. 5-106
2C62	Not enough memory	Memory acquiring failure	P. 5-105
2C63	Invalid Domain Address	Terminal IP address unset	P. 5-106
2C64	Invalid Domain Address	Terminal mail address unset	P. 5-106
2C65	Failed to connect to SMTP server	SMTP address unset	P. 5-106
2C66	Failed to connect to SMTP server	Server time time-out error	P. 5-106
2C67	Failed to send E-Mail message	NIC time time-out error	P. 5-106
2C68	Failed to send E-Mail message	NIC access error	P. 5-106
2C69	Failed to connect to SMTP server	SMTP server connection error	P. 5-106
2C6A	Failed to send E-Mail message	HOST NAME error (No RFC error)	P. 5-106
2C6B	Invalid address specified in From: field	Terminal mail address error	P. 5-106
2C6C	Invalid address specified in To: field	Destination mail address error (No RFC error)	P. 5-106
2C6D	NIC system error	System error	P. 5-106
2C70	SMTP service is not available	SMTP client OFF	P. 5-106
2C71	Failed SMTP Authentication	SMTP authentication error	P. 5-106
2C72	POP Before SMTP Authentication Failed	POP before SMTP error	P. 5-107
2C80	Failed to process received E-mail job	E-mail transmission failure when processing E-mail job received	P. 5-107
2C81	Failed to process received Fax job	Process failure of FAX job received	P. 5-107
2CC0	Job canceled	Job canceling	-
2CC1	Power failure occurred	Power failure	P. 5-107

6) File sharing related error

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
2D10	Illegal Job status	System access abnormality	P. 5-108
2D11	Not enough memory	Insufficient memory	P. 5-108
2D12	Illegal Job status	Message reception error	P. 5-108
2D13	Illegal Job status	Message transmission error	P. 5-108
2D14	Invalid parameter specified	Invalid parameter	P. 5-108
2D15	Document size exceeded limit or maximum size.	Exceeding the maximum size for file sharing	P. 5-108
2D20	Illegal Job status	System management module access abnormality	P. 5-108
2D21	Illegal Job status	Job control module access abnormality	P. 5-108
2D22	Illegal Job status	Job control module access abnormality	P. 5-108
2D30	Failed to create directory	Directory creation failure	P. 5-108
2D31	Failed to create file	File creation failure	P. 5-108
2D32	Failed to delete file	File deletion failure	P. 5-108
2D33	Failed to create file	File access failure	P. 5-108
2D40	Failed to convert image file format	Image conversion abnormality	P. 5-108
2D43	Encryption error. Failed to create file	Encryption error	P. 5-108
2D44	Creating the image file was not permitted.	Encryption PDF enforced mode error	P. 5-108
2D60	Failed to copy file	File library access abnormality	P. 5-108
2D61	Invalid parameter specified	Invalid parameter	P. 5-108
2D62	Failed to connect to network destination. Check destination path	File server connection error	P. 5-109
2D63	Specified network path is invalid. Check destination path	Invalid network path	P. 5-109
2D64	Logon to file server failed. Check username and password	Login failure	P. 5-109
2D65	There are too many documents in the folder. Failed in creating new document.	Exceeding documents in folder: Creating new document is failed.	P. 5-109
2D66	Failed To Process your Job. Insufficient Storage space.	Storage capacity full failure during processing	P. 5-109
2D67	FTP service is not available	FTP service not available	P. 5-109
2D68	File Sharing service is not available	File sharing service not available	P. 5-109
2DA0	Expired scan documents deleted from share folder.	Periodical deletion of scanned documents completed properly.	-
2DA1	Expired Sent Fax documents deleted from shared folder.	Periodical deletion of transmitted FAX documents completed properly.	-
2DA2	Expired Received Fax documents deleted from shared folder.	Periodical deletion of received FAX documents completed properly.	-
2DA3	Scanned documents in shared folder deleted upon user's request.	Manual deletion of scanned documents completed properly.	-
2DA4	Sent Fax Documents in shared folder deleted upon user's request.	Manual deletion of transmitted FAX documents completed properly.	-
2DA5	Received Fax Documents in shared folder deleted upon user's request.	Manual deletion of received FAX documents completed properly.	-
2DA6	Failed to delete file.	File deletion failure	P. 5-108
2DA7	Failed to acquire resource.	Resource acquiring failure	P. 5-108
2DC0	Job canceled	Job canceling	-
2DC1	Power failure occurred	Power failure	P. 5-109

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7) E-mail reception related error

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
3A10	MIME Error has been detected in the received mail.	E-mail MIME error	P. 5-110
3A11	MIME Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 5-110
3A12	MIME Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 5-110
3A20	Analyze Error has been detected in the received mail.	E-mail analysis error	P. 5-110
3A21	Analyze Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 5-110
3A22	Analyze Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 5-110
3A30	Whole partial mails were not reached by timeout.	Partial mail time-out error	P. 5-110
3A40	Partial Mail Error has been detected in the received mail.	Partial mail related error	P. 5-110
3A50	HDD Full Error has been occurred in this mail.	Insufficient HDD capacity error	P. 5-110
3A51	HDD Full Error has been occurred in this mail. This mail has been transferred to the administrator.		P. 5-110
3A52	HDD Full Error has been occurred in this mail. This mail could not be transferred to the administrator.		P. 5-110
3A60	HDD Full Warning has been occurred in this mail.	Warning of insufficient HDD capacity	P. 5-110
3A61	HDD Full Warning has been occurred in this mail. This mail could not be transferred to the administrator.		P. 5-110
3A62	HDD Full Warning has been occurred in this mail. This mail could not be transferred to the administrator.		P. 5-110
3A70	Receiving partial mail was aborted since the partial mail setting has been changed to Disable.	Warning of partial mail interruption	P. 5-110
3A80	Partial mail was received during the partial mail setting is disabled.	Partial mail reception setting OFF	P. 5-110
3A81	Partial mail was received during the partial mail setting is disabled. This mail has been transferred to the administrator.		P. 5-110
3A82	Partial mail was received during the partial mail setting is disabled. This mail could not be transferred to the administrator.		P. 5-110
3B10	Format Error has been detected in the received mail.	E-mail format error	P. 5-110
3B11	Format Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 5-110
3B12	Format Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 5-110

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
3B20	Content-Type Error has been detected in the received mail.	Content-Type error	P. 5-110
3B21	Content-Type Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 5-110
3B22	Content-Type Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 5-110
3B30	Charset Error has been detected in the received mail.	Charset error	P. 5-110
3B31	Charset Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 5-110
3B32	Charset Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 5-110
3B40	Decode Error has been detected in the received mail.	E-mail decode error	P. 5-110
3B41	Decode Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 5-110
3B42	Decode Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 5-110
3C10	Tiff Analyze Error has been detected in the received mail.	TIFF analysis error	P. 5-110
3C11	Tiff Analyze Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 5-110
3C12	Tiff Analyze Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 5-110
3C13	Tiff Analyze Error has been detected in the received mail.		P. 5-110
3C20	Tiff Compression Error has been detected in the received mail.	TIFF compression error	P. 5-110
3C21	Tiff Compression Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 5-110
3C22	Tiff Compression Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 5-110
3C30	Tiff Resolution Error has been detected in the received mail.	TIFF resolution error	P. 5-111
3C31	Tiff Resolution Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 5-111
3C32	Tiff Resolution Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 5-111

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Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
3C40	Tiff Paper Size Error has been detected in the received mail.	TIFF paper size error	P. 5-111
3C41	Tiff Paper Size Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 5-111
3C42	Tiff Paper Size Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 5-111
3C50	Offramp Destination Error has been detected in the received mail.	Offramp destination error	P. 5-111
3C51	Offramp Destination Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 5-111
3C52	Offramp Destination Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 5-111
3C60	Offramp Security Error has been detected in the received mail.	Offramp security error	P. 5-111
3C61	Offramp Security Error has been detected in the received mail. This mail has been transferred to the administrator.		P. 5-111
3C62	Offramp Security Error has been detected in the received mail. This mail could not be transferred to the administrator.		P. 5-111
3C70	Power Failure has been occurred in Email receiving.	Power failure error	P. 5-111
3D10	SMTP Destination Error has been detected in the received mail. This mail was deleted.	Destination address error	P. 5-111
3D20	Offramp Destination limitation Error has been detected in the received mail.	Offramp destination limitation error	P. 5-111
3D30	Fax Board Error has been occurred in the received mail.	FAX board error	P. 5-111
3E10	POP3 Connection Error has been occurred in the received mail.	POP3 server connection error	P. 5-111
3E20	POP3 Connection Timeout Error has been occurred in the received mail.	POP3 server connection time-out error	P. 5-111
3E30	POP3 Login Error has been occurred in the received mail.	POP3 login error	P. 5-111
3E40	POP3 Login Error occurred in the received mail.	POP3 login method error	P. 5-111
3F00	File I/O Error has been occurred in this mail. The mail could not be received until File I/O is recovered.	File I/O error	P. 5-111
3F10			P. 5-111
3F20			P. 5-111
3F30			P. 5-111
3F40			P. 5-111

2.1.4 Printer function error

Following codes are displayed at the end of the user name on the print job log screen.

Error code	Contents	Troubleshooting
4031	HDD full during print - Large quantity image data by private print or invalid network print are saved in HDD.	P. 5-112
4032	Private-print-only error: Jobs other than Private print jobs cannot be performed.	P. 5-112
4033	Printing data storing limitation error: Printing with its data being stored to the HDD temporarily (Proof print, Private print, Scheduled print, etc.) cannot be performed.	P. 5-112
4034	e-Filing storing limitation error: Printing with its data being stored to the HDD (print and e-Filing, print to e-Filing, etc.) cannot be performed.	P. 5-112
4035	Local file storing limitation error: Network FAX or Internet FAX cannot be sent when "Local" is selected for the destination of the file to save.	P. 5-112
4036	User authentication error: The user who intended to print a document is not registered as a user.	P. 5-112
4040	Not being authorized to perform JOB	P. 5-112
4050	Problem in LDAP server connection or LDAP server authorization settings	P. 5-112
4300	USB direct printing: Job execution error due to functional restrictions - Printing with he USB direct printing function restricted	P. 5-112
4301	USB direct printing: File conversion error - Printing a file whose format is not supported, or an invalid file	P. 5-112
4310	Double-sign encoding error: A double-sign encoding error occurred because the PDF file is encrypted in a forbidden language or in a language not supported.	P. 5-112
4311	Printing not permitted: Printing is not permitted or only printing in a low resolution level is permitted due to the encryption language of the encrypted PDF file. * Permitted only when a user password is entered.	P. 5-112
4312	Password mismatching: The entered password is neither matched with a user password nor an owner password.	P. 5-112
A221	Print job cancellation - Print job (copy, list print, network print) is deleted from the print job screen.	P. 5-112
A222	Print job power failure - The power of the equipment is turned OFF during print job (copy, list print, network print).	P. 5-112
A290	Limit over error (Black): The numbers of output pages have exceeded those specified with both of the department code and the user code at the same time.	P. 5-113
A291	Limit over error (Black): The number of output pages has exceeded the one specified with the user code.	P. 5-113
A292	Limit over error (Black): The number of output pages has exceeded the one specified with the department code.	P. 5-113
A2A0	Limit over error (Color): The number of prints has exceeded the one specified for the department code and user code, or users (guests) are not authorized to perform color printing.	P. 5-113
A2A1	Limit over error (Color): The number of prints has exceeded the one specified for the user code, or users (guests) are not authorized to perform color printing.	P. 5-113
A2A2	Limit over error (Color): The number of output pages has exceeded the one specified with the department code.	P. 5-113

2

<<Error history>>
In the setting mode (08-253), the latest twenty groups of error data will be displayed.
Display example

EA10	99999999	06 04 14 17 57 32	064	064	23621000000
Error code	Total counter	YY MM DD HH MM SS	MMM	NNN	ABCDEFHIJLO
4 digits	8 digits	12 digits (Year is indicated with its last two digits.)	3 digits	3 digits	11 digits

A	Paper source
	0: Not selected 1: Bypass feed 2: LCF 3: 1st drawer 4: 2nd drawer 5: PFP upper drawer 6: PFP lower drawer 7: Unused 8: Unused
B	Paper size code
	0: A5/ST 1: A5-R 2: ST-R 3: LT, 4: A4 5: B5-R 6: LT-R 7: A4-R 8: OTHER/UNIV 9: B5, A: FOLIO/COMP B: LG C: B4 D: LD E: A3 F: 13"LG G: Unsed H: A6-R I: Post card J: 8.5"SQ K: A3-wide L: 305×457 mm M: 8K N: 16K-R O: 16K Z: Not selected
C	Sort mode/staple mode
	0: Non-sort/Non-staple 1: Group 2: Sort 7: Front staple 8: Double staple 9: Rear staple A: Saddle stitch
D	ADF mode
	0: Unused 1: AUTO FEED (SADF) 2: STACK FEED
E	APS/AMS mode
	0: Not selected 1: APS 2: AMS
F	Duplex mode
	0: Not selected 1: Book 2: Double-sided/Single-sided 4: Double-sided/Duplex copying 8: Single-sided/Duplex copying
G	Unused
H	Image shift
	0: Unused 1: Book 2: Left 3: Right 4: Top 5: Bottom 6: Book+Top 7: Book+Bottom 8: Left+Top 9: Left+Bottom A: Right+Top B: Right+Bottom
I	Editing
	0: Unused 1: Masking 2: Trimming 3: Mirror image 4: Unused 5: NEG/POS
J	Edge erase/Dual-page
	0: Unused 1: Edge erase 2: Dual-page 3: Edge erase & Dual-page
K	Unused
L	Function
	0: Unused 1: Copying 2: FAX/Internet FAX transmission 3: FAX/Internet FAX/E-mail reception printing 4: Unused 5: Printing/List print 6: Scan/E-mail transmission
MMM	Primary scanning reproduction ratio (Display in hexadecimal)
	(Mx256)+(Mx16)+M
NNN	Secondary scanning reproduction ratio (Display in hexadecimal)
	(Nx256)+(Nx16)+N
O	Color mode
	0: Auto color 1: Full color 2: Black 3: Mono color copy 4: Twin color copy 5: Gray scale 6: Unused 7: Image smoothing

2.1.5 TopAccess related error

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
5110	Toner Not Recognized - Please Check Toner.	Toner cartridge detection error	P. 5-114
5212	Time for Slit Glass and Main Charger Cleaning - Please Clean Slit Glass and Main Charger.	Appears when the time for main charger cleaning comes (at every output of approx. 10,000 sheets)	P. 5-114
5BD0	Power failure occurred during restore	Power supply is cut off during the restoration of database sent from TopAccess	P. 5-114
5C10	FAX Unit is not attached.	Network FAX is disabled because the FAX Unit is not attached	P. 5-114
5C11	Security error on Address Book.	The network FAX job failed because the specified address is not registered in the Address Book	P. 5-114
5C20	The file has been imported	Displayed when data have been imported from TopAccess (Not an error message)	P. 5-114
5C21	Failed to import the file - Invalid file format	Data import from TopAccess failed due to invalid file format	P. 5-114
5C22	Failed to import the file - Internal error	Data import from TopAccess failed due to an internal error, the cause of which is unknown	P. 5-114

2.2   Self-diagnosis Modes

Mode	For start	Contents	For exit	Display
Control panel check mode	[0]+[1]+ [POWER]	All LEDs on the control panel are lit, and all the LCD pixels blink.	[POWER] OFF/ON	-
Test mode	[0]+[3]+ [POWER]	Checks the status of input/output signals.	[POWER] OFF/ON	100% C A4 TEST MODE
Test print mode	[0]+[4]+ [POWER]	Outputs the test patterns.	[POWER] OFF/ON	100% P A4 TEST PRINT
Adjustment mode	[0]+[5]+ [POWER]	Adjusts various items.	[POWER] OFF/ON	100% A A4 TEST MODE
Setting mode	[0]+[8]+ [POWER]	Sets various items.	[POWER] OFF/ON	100% D TEST MODE
List print mode	[9]+[START]+ [POWER]	Prints out the data lists of the codes 05 and 08, PM support mode and pixel counter.	[POWER] OFF/ON	100% UA A4 LIST PRINT
PM support mode	[6]+[START]+ [POWER]	Clears each counter.	[POWER] OFF/ON	100% K TEST MODE
Firmware update mode	[8]+[9]+ [POWER]	Performs updating of the system firmware.	[POWER] OFF/ON	-

Note:
> To enter the desired mode, turn the power ON while pressing two digital keys designated to each mode (e.g. [0] and [5]) simultaneously. Hold the two keys until the [EXTENSION] button is lit.

To exit from Adjustment mode and Setting mode:
Shut down the equipment. When the power should be turned OFF, be sure to shut down the equipment by pressing the [ENERGY SAVER] button for a few seconds.

<Operation procedure>
- Control panel check mode (01):

$$[0][1] \rightarrow \left(\begin{array}{c} \text{LED lit/} \\ \text{LCD blinking} \end{array} \right) \rightarrow [\text{START}] \rightarrow (\text{Button check}) \rightarrow [\text{POWER}]\ \text{OFF/ON}$$

[POWER]   [START]   (Exit)
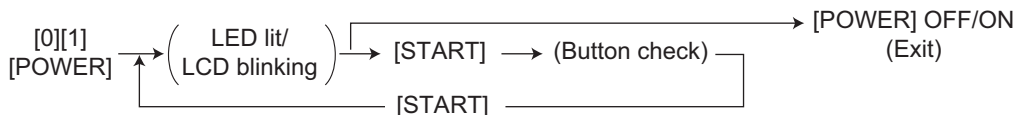
Notes:
1. A mode can be canceled by [POWER] OFF/ON when the LED is lit and the LCD is blinking.
2. Button Check
   Buttons with LED   (Press to turn OFF the LED.)
   Buttons without LED   (Press to display the message on the control panel.)
   Button on touch panel   (Press to display the screen on the control panel at power-ON.)

- Test mode (03): Refer to "2.2.1. Input check (test mode 03)" and "2.2.2. Output check (test mode 03)".

- Test print mode (04): Refer to "2.2.3. Test print mode (04)".

- Adjustment mode (05): Refer to "2.2.4. Adjustment mode (05)".

- Setting mode (08): Refer to "2.2.5. Setting mode (08)".

- List print mode (9S): The procedure varies depending on the code.

```
[9][START]
[POWER] ──→ (Code) ──────→ [START] ──→ [Digital keys] ──→ [START] ──→ [Digital keys] ──→ [START] ──→ [POWER]
              101: Adjustment mode (05)   ( Key in the first )              ( Key in the last )   ( List starts to )   OFF/ON
              102: Setting mode (08)      ( code to be printed )            ( code to be printed )( be printed )        (Exit)

         ──→ (Code) ──────────────────────────────────────────────────────────────────────────┘
              103: PM support mode
              104: Stored information of pixel counter (toner cartridge reference)
              105: Stored information of pixel counter (service technician reference)
              106: Error history (Maximum 1000 items)
              107: Error history (Latest 80 items)
```

- PM support mode (6S):

```
[6][START]
[POWER] ──────→ (Code) ──────────→ [START] ──────→ [POWER] OFF/ON
                2: PM Support Screen   (Operation started)      (Exit)
```

- Firmware update mode (89): Refer to "6. FIRMWARE UPDATING".
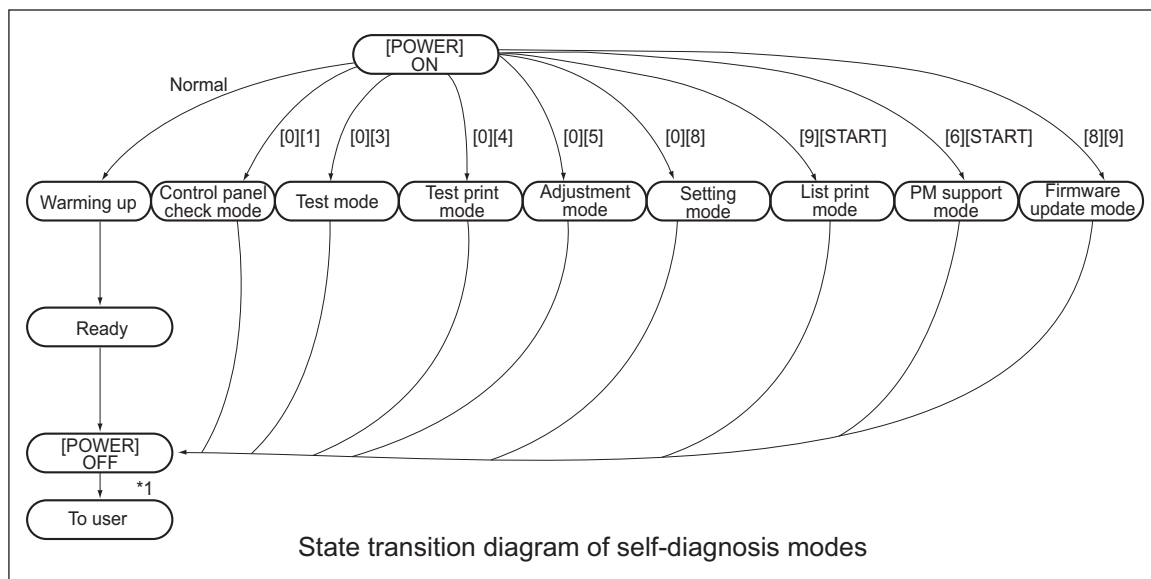
Fig. 2-1

*1 Turn OFF the power after using the self-diagnosis mode, and leave the equipment to the user.

2.2.1 Input check (Test mode 03)

The status of each input signal can be checked by pressing the [FAX] button, [COPY] button and the digital keys in the test mode (03).

<Operation procedure>

[0][3]
[POWER] ——→ [START] ——→ ([FAX] or [COPY]) ——→ [Digital keys] ——→ (LCD ON) ——→ [POWER] OFF/ON (Exit)
——————————————————[CLEAR]——————————————————
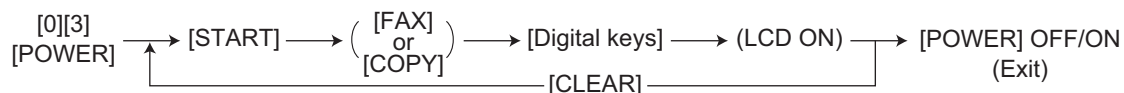
Note:
　　Initialization is performed before the equipment enters the test mode.

Fig. 2-2 Example of display during input check

Items to be checked and the condition of the equipment when the buttons [A] to [H] are highlighted are listed in the following pages.

[FAX] button: OFF/[COPY] button: OFF ([FAX] LED: OFF/[COPY] LED: OFF)

Digital key	Button	Items to check	Contents	
			Highlighted display e.g.	**Normal display** e.g.
[1]	A	-	-	-
	B	-	-	-
	C	-	-	-
	D	-	-	-
	E	-	-	-
	F	-	-	-
	G	-	-	-
	H	-	-	-

Digital key	Button	Items to check	Contents	
			Highlighted display e.g. ▲	Normal display e.g. ▲
[2]	A	-	-	-
	B	PFP upper drawer detection switch	Drawer not installed	Drawer present
	C	PFP upper drawer paper stock sensor	Paper almost empty	Paper present
	D	PFP upper drawer feed sensor	Paper present	No paper
	E	PFP connection	Not connected	Connected
	F	PFP side cover open/close switch	Cover opened	Cover closed
	G	PFP upper drawer empty sensor	No paper	Paper present
	H	PFP upper drawer tray-up sensor	Tray at upper limit position	Other than upper limit position
[3]	A	-	-	-
	B	-	-	-
	C	IMG board connection	Not connected	Connected
	D	-	-	-
	E	-	-	-
	F	IPC board connection	Not connected	Connected
	G	-	-	-
	H	HSYNC error	Error	Normal
[4]	A	2nd drawer tray-up sensor	Tray at upper limit position	Other than upper limit position
	B	1st drawer tray-up sensor	Tray at upper limit position	Other than upper limit position
	C	2nd drawer paper stock sensor	Paper almost empty	Paper present
	D	1st drawer paper stock sensor	Paper almost empty	Paper present
	E	2nd drawer detection switch	Drawer not installed	Drawer present
	F	1st drawer detection switch	Drawer not installed	Drawer present
	G	2nd drawer empty sensor	No paper	Paper present
	H	1st drawer empty sensor	No paper	Paper present
[5]	A	High voltage control leak detection status	Normal	Abnormal
	B	Fuser unit thermistor connection detection	Connected	Not connected
	C	New and old fuser unit detection	Old	New
	D	Bridge unit transport sensor-2 (Exit sensor)	Paper present	No paper
	E	Bridge unit cover open/close detection switch	Cover opened	Cover closed
	F	Bridge unit transport sensor-1 (Entrance sensor)	Paper present	No paper
	G	Bridge unit paper full detection sensor	Paper full	Paper not full
	H	Bridge unit connection	Not connected	Connected
[6]	A	-	-	-
	B	-	-	-
	C	-	-	-
	D	-	-	-
	E	-	-	-
	F	-	-	-
	G	-	-	-
	H	-	-	-

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Digital key	Button	Items to check	Contents	
			Highlighted display e.g.	**Normal display** e.g.
[7]	A	K process unit connection signal	Not connected	Connected
	B	C process unit connection signal	Not connected	Connected
	C	M process unit connection signal	Not connected	Connected
	D	Y process unit connection signal	Not connected	Connected
	E	Paper clinging detection sensor	No paper	Paper present
	F	Registration sensor	Paper present	No paper
	G	Image position aligning sensor (rear)		Toner pattern detection
	H	Image position aligning sensor (front)		Toner pattern detection
[8]	A	-	-	-
	B	PFP lower drawer detection switch	Drawer not installed	Drawer present
	C	PFP lower drawer paper stock sensor	Paper almost empty	Paper present
	D	PFP lower drawer feed sensor	Paper present	No paper
	E	PFP motor rotation status (Motor is rotating at output mode (03))	Abnormal rotation	Normal rotation
	F	-	-	-
	G	PFP lower drawer empty sensor	No paper	Paper present
	H	PFP lower drawer tray-up sensor	Tray at upper limit position	Other than upper limit position
[9]	A	LCF tray bottom sensor	Tray at bottom position	Other than upper limit position
	B	LCF standby side paper misload detection sensor	Properly loaded	Paper misload
	C	LCF drawer detection switch	Drawer not installed	Drawer present
	D	-	-	-
	E	-	-	-
	F	-	-	-
	G	-	-	-
	H	Paper stock sensor at LCF feed side	Paper almost empty	Paper present
[0]	A	LCF end fence home position sensor	Fence home position	Other than home position
	B	LCF end fence stop position sensor	Fence stop position	Other than stop position
	C	Empty sensor at LCF standby side	No paper	Paper present
	D	LCF side cover open/close switch	Cover closed	Cover opened
	E	LCF motor rotation status (Motor is rotating at output mode (03))	Normal rotation	Abnormal rotation
	F	LCF tray-up sensor	Tray at upper limit position	Other than upper limit position
	G	LCF feed sensor	No paper	Paper present
	H	Empty sensor at LCF feed side	Paper present	No paper

[FAX] button: ON/[COPY] button: OFF ([FAX] LED: ON/[COPY] LED: OFF)

Digital key	Button	Items to check	Highlighted display e.g.	Normal display e.g.
			Contents	
[1]	A	LCF connection	Not connected	Connected
	B	Exit sensor	Paper present	No paper
	C	-	-	-
	D	-	-	-
	E	Transfer belt installation detection	Not connected	Connected
	F	2nd drawer feeding jam sensor	Paper present	No paper
	G	1st drawer feeding jam sensor	Paper present	No paper
	H	-	-	-
[2]	A	Polygonal motor ready signal		Ready
	B	24V Power supply	Power ON	Power OFF
	C	ADU opening/closing switch	ADU opened	ADU closed
	D	Laser shutter open/close detection	ON	OFF
	E	Toner bag full detection sensor	Toner bag full	Not full
	F	2nd transfer roller position detection sensor	Released	Contacted
	G	Used toner motor lock detection sensor	Sensor blocked	Sensor not blocked
	H	Belt contact position detection sensor	Color	Black
[3]	A	-	-	-
	B	-	-	-
	C	-	-	-
	D	Transfer cover switch	Cover opened	Cover closed
	E	Toner cartridge detection sensor-K	Cartridge present	No Cartridge
	F	Toner cartridge detection sensor-C	Cartridge present	No Cartridge
	G	Toner cartridge detection sensor-M	Cartridge present	No Cartridge
	H	Toner cartridge detection sensor-Y	Cartridge present	No Cartridge
[4]	A	ADU exit sensor	Paper present	No paper
	B	ADU entrance sensor	Paper present	No paper
	C	Bypass feed paper existence sensor	No paper	Paper present
	D	Bypass feed sensor	No paper	Paper present
	E	Bypass feed paper width sensor 3 (Refer to table1)	Bit 1	Bit 0
	F	Bypass feed paper width sensor 2 (Refer to table1)	Bit 1	Bit 0
	G	Bypass feed paper width sensor 1 (Refer to table1)	Bit 1	Bit 0
	H	Bypass feed paper width sensor 0 (Refer to table1)	Bit 1	Bit 0
[5]	A	-	-	-
	B	-	-	-
	C	-	-	-
	D	-	-	-
	E	-	-	-
	F	RADF connection	Connected	Not connected
	G	Platen sensor	Platen cove opened	Platen cover closed
	H	Carriage home position sensor	Home position	Other than home position

Digital key	Button	Items to check	Contents	
			Highlighted display e.g. ▲	Normal display e.g. ▲
[6]	A	-	-	-
	B	-	-	-
	C	-	-	-
	D	APS sensor (APS-R)	No original	Original present
	E	APS sensor (APS-C)	No original	Original present
	F	APS sensor (APS-3)	No original	Original present
	G	APS sensor (APS-2)	No original	Original present
	H	APS sensor (APS-1)	No original	Original present
[7]	A	[RADF] Original tray sensor	Original present	No original
	B	[RADF] Original empty sensor	Original present	No original
	C	[RADF] Jam access cover sensor	Cover opened	Cover closed
	D	[RADF] RADF opening/closing sensor	RADF opened	RADF closed
	E	[RADF] Original exit/reverse sensor	Original present	No original
	F	[RADF] Original intermediate transport sensor	Original present	No original
	G	[RADF] Read sensor	Original present	No original
	H	[RADF] Original registration sensor	Original present	No original
[8]	A	[RADF] Original tray width sensor (TWID0S) (Refer to table2)	OFF (H)	ON (L)
	B	[RADF] Original tray width sensor (TWID1S) (Refer to table2)	OFF (H)	ON (L)
	C	[RADF] Original tray width sensor (TWID2S) (Refer to table2)	OFF (H)	ON (L)
	D	-	-	-
	E	[RADF] Original length detection sensor	Original present	No original
	F	[RADF] Original width detection sensor-1	Original present	No original
	G	[RADF] Original width detection sensor-2	Original present	No original
	H	-	-	-
[9]	A	-	-	-
	B	-	-	-
	C	-	-	-
	D	-	-	-
	E	Needle electrode cleaner detection sensor	Cleaner limit position	Other than cleaner limit position
	F	-	-	-
	G	-	-	-
	H	-	-	-
[0]	A	-	-	-
	B	Side cover open/close switch	Cover opened	Cover closed
	C	-	-	-
	D	-	-	-
	E	Drum mode detection signal	Color	Black
	F	-	-	-
	G	Fuser unit connection	Connected	Not connected
	H	Key copy counter connection	Not connected	Connected

Table 1. Relation between the status of the bypass paper width sensor and paper size (width).

Bypass paper width sensor				Paper width size
3	2	1	0	
0	1	1	1	A3/LD
1	0	1	1	A4-R/LT-R
1	1	0	1	A5-R/ST-R
1	1	1	0	Card size
0	0	1	1	B4-R/LG
1	0	0	1	B5-R

Table 2. Relation between the status of the original tray width sensor and paper size (width).

Original tray width sensor			Paper width size (LT series)	Paper width size (A4 series)
TWID2S	TWID1S	TWID0S		
H	H	H	LD/LT	A3/A4
H	H	L	-	B5-R
H	L	H	ST-R	A5-R
L	H	H	LD/LT	A3/A4
L	H	L	-	-
L	L	H	8.5" x 8.5" / LT-R / LG / 13" LG	A4-R/FOLIO
L	L	L	COMPUTER	B4/B5

H (= high level): Open L (= low level): Short

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[FAX] button: OFF/[COPY] button: ON ([FAX] LED: OFF/[COPY] LED: ON)

Digital key	Button	Items to check	Contents	
			Highlighted display e.g. [A]	**Normal display** e.g. [A]
[1]	-	Temperature/humidity sensor (displays temperature inside of the equipment)	-	Temperature [°C]
[2]	-	Temperature/humidity sensor (displays humidity inside of the equipment)	-	Humidity [%RH]
[3]	-	Drum thermistor-K (displays temperature on the drum surface of K color)	-	Temperature [°C]
[4]	-	Drum thermistor-Y (displays temperature on the drum surface of Y color)	-	Temperature [°C]
[5]	A	-	-	-
	B	-	-	-
	C	-	-	-
	D	-	-	-
	E	-	-	-
	F	-	-	-
	G	-	-	-
	H	-	-	-
[6]	A	-	-	-
	B	-	-	-
	C	-	-	-
	D	-	-	-
	E	-	-	-
	F	-	-	-
	G	-	-	-
	H	-	-	-
[7]	A	-	-	-
	B	-	-	-
	C	-	-	-
	D	-	-	-
	E	-	-	-
	F	-	-	-
	G	-	-	-
	H	-	-	-
[8]	A	-	-	-
	B	-	-	-
	C	-	-	-
	D	-	-	-
	E	-	-	-
	F	-	-	-
	G	-	-	-
	H	-	-	-
[9]	A	-	-	-
	B	-	-	-
	C	-	-	-
	D	-	-	-
	E	-	-	-
	F	-	-	-
	G	-	-	-
	H	-	-	-

Digital key	Button	Items to check	Contents		
			Highlighted display e.g. ▣	Normal display e.g. ▢	
[0]	A	-	-	-	
	B	-	-	-	
	C	-	-	-	
	D	Dongles for other equipments / Other USB devices	Connectable	Not connectable	
	E	Judgement for acceptable USB storage device (*1)	Acceptable	Not acceptable	
	F	-	-	-	
	G	-	-	-	
	H	-	-	-	

*1
• Be sure to install the USB storage device to the equipment and check if the device can be used with this code.
• Be sure to turn OFF the write protection (the function to prevent data from erasure by the accidental recording or deleting) of the USB storage device before performing the check, otherwise this code cannot be used.
• It may take some time (2 sec. to 10 sec.) before this check is completed depending on the USB storage device.

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2.2.2 Output check (test mode 03)

Status of the output signals can be checked by entering the following codes in the test mode 03.

<Operation procedure>

Procedure 1

[0][3] [POWER] → (Code) → [START] → (Operation ON) → (Stop code) → [START] → (Operation OFF) → [POWER] OFF/ON (Exit)

Procedure 2

[0][3] [POWER] → (Code) → [START] → (Operation One direction) → [CLEAR] → (Test mode standby) → [POWER] OFF/ON (Exit)

Procedure 3

[0][3] [POWER] → (Code) → [START] → (Operation ON) → [START] → (Operation OFF) → [CLEAR] → (Test mode standby) → [POWER] OFF/ON (Exit)

Procedure 4

[0][3] [POWER] ⟶ (Code) ⟶ [START] ⟶ [POWER] OFF
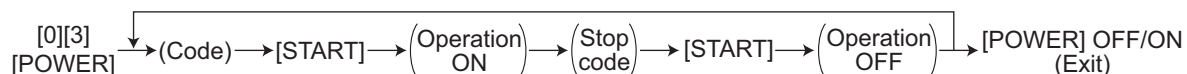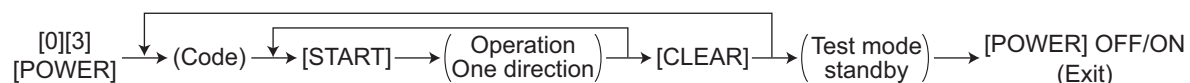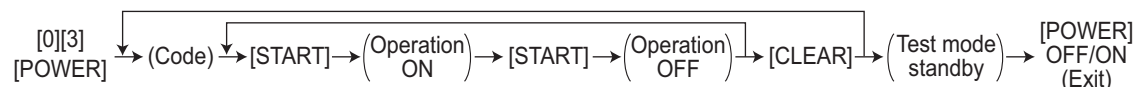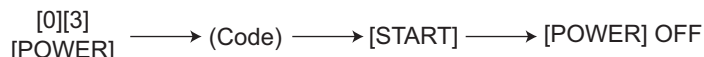
Code	Function	Code	Function	Procedure
101	Drum motor ON + Transfer belt motor ON (Operational without process unit Y/M/C/K)	151	Code No.101 function OFF	1
103	Polygonal motor (600dpi) ON	153	Code No.103 function OFF	1
108	Registration motor ON	158	Code No.108 function OFF	1
109	PFP motor ON	159	Code No.109 function OFF	1
110	ADU motor ON	160	Code No.110 function OFF	1
111	Developer unit motor Y/M/C/K ON (Operational without process unit Y/M/C/K)	161	Code No.111 function OFF	1
112	Developer unit motor K ON (Operational without process unit K)	162	Code No.112 function OFF	1
113	Fuser motor ON	163	Code No.113 function OFF	1
115	ADU motor ON (high speed during transport within ADU)	165	Code No.115 function OFF	1
116	Exit motor (reversal rotation) ON (high speed)	166	Code No.116 function OFF	1
118	Laser ON(Y: 05-2853, M: 05-2854, C: 05-2855, k: 05-2856 setting value output)	168	Code No.118 function OFF	1
119	ADU motor ON (transport speed)	169	Code No.119 function OFF	1
120	Exit motor (normal rotation) ON	170	Code No.120 function OFF	1
121	Exit motor (reversal rotation) ON	171	Code No.121 function OFF	1
122	LCF motor ON	172	Code No.122 function OFF	1
123	Transport motor ON	173	Code No.123 function OFF	1

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Code	Function	Code	Function	Procedure
125	Sensor shutter solenoid ON (open)	175	Code No.125 function OFF	1
126	Image position aligning sensor (front/rear) LED ON	176	Code No.126 function OFF	1

Code	Function	Procedure
201	1st drawer feed clutch ON/OFF	3
202	2nd drawer feed clutch ON/OFF	3
204	Bypass feed clutch ON/OFF	3
206	LCF pickup solenoid ON/OFF	3
207	LCF end fence reciprocating movement	2
208	LCF end fence motor ON/OFF	3
209	LCF feed clutch ON/OFF	3
210	LCF transport clutch ON/OFF	3
218	Key copy counter count up	2
222	ADU clutch ON/OFF	3
225	PFP transport clutch ON/OFF	3
226	PFP upper drawer feed clutch ON/OFF	3
228	PFP lower drawer feed clutch ON/OFF	3
229	Middle roller (upper) transport speed drive clutch ON/OFF	3
230	Middle roller (lower) transport speed drive clutch ON/OFF	3
231	Middle roller (upper) process speed drive clutch ON/OFF	3
232	Bridge unit gate solenoid ON/OFF	3
233	Middle roller (lower) process speed drive clutch ON/OFF	3
234	Bypass pickup solenoid ON/OFF	3
235	Discharge LED (K) ON/OFF (Do not let it radiate to the photoconductive drum for a long time.)	3
236	Discharge LED (Y/M/C) ON/OFF (Do not let it radiate to the photoconductive drum for a long time.)	3
239	Switching contact/release of 2nd transfer roller	2
240	Drum switching motor (switches position in the black/color mode)	2
241	1st transfer roller cam motor (switches contact/release of transfer belt)	2
242	1st drawer tray-up motor ON (tray up)	2
243	2nd drawer tray-up motor ON (tray up)	2
248	Developer bias (K) [DC] ON/OFF (Operational without process unit K)	3
249	Developer bias (K) [AC] ON/OFF (Operational without process unit K)	3
252	Main charger (K) ON/OFF (Operational without process unit K)	3
253	Main charger (Y/M/C) ON/OFF (Operational without process unit Y/M/C)	3
254	Developer bias (Y) [DC] ON/OFF (Operational without process unit Y)	3
255	Developer bias (M) [DC] ON/OFF (Operational without process unit M)	3
256	Developer bias (C) [DC] ON/OFF (Operational without process unit C)	3
257	Developer bias (Y/M/C) [AC] ON/OFF (Operational without process unit Y/M/C)	3
261	Scan motor ON (Automatically stops at limit position, speed can be changed by using ZOOM button)	2
264	Scanner fan motor ON/OFF	3

Code	Function	Procedure
265	Scanner fan motor OFF	3
267	Scanner exposure lamp ON/OFF	3
271	LCF tray-up motor UP/DOWN	2
278	PFP upper drawer tray-up motor ON (tray up)	2
280	PFP lower drawer tray-up motor ON (tray up)	2
281	RADF original feed motor ON/OFF (normal rotation)	3
282	RADF original feed motor ON/OFF (reverse rotation)	3
283	RADF read motor ON/OFF	3
284	RADF original exit/reverse motor ON/OFF (normal rotation)	3
285	RADF original exit/reverse motor ON/OFF (reverse rotation)	3
294	RADF gate solenoid ON/OFF	3
295	Power OFF mode	4
297	RADF fan motor ON/OFF	3
410	Toner motor (K) ON/OFF (Operational without toner cartridge K)	3
411	Toner motor (C) ON/OFF (Operational without toner cartridge C)	3
412	Toner motor (M) ON/OFF (Operational without toner cartridge M)	3
413	Toner motor (Y) ON/OFF (Operational without toner cartridge Y)	3
414	Used toner motor ON/OFF	3
417	Laser shutter (open/close)	2
433	Drum (K) recovery blade bias ON/OFF	3
434	Drum (Y/M/C) recovery blade bias ON/OFF	3
441	Fuser/exit section cooling fan (low speed) ON/OFF	3
442	Fuser/exit section cooling fan (high speed) ON/OFF	3
443	Ozone exhaust fan (low speed) ON/OFF	3
444	Ozone exhaust fan (high speed) ON/OFF	3
445	Laser unit cooling fan (low speed) ON/OFF	3
446	Laser unit cooling fan (high speed) ON/OFF	3
448	Switching regulator cooling fan ON/OFF	3
449	Internal cooling fan (low speed) ON/OFF	3
450	Internal cooling fan (high speed) ON/OFF	3

2.2.3　Test print mode (test mode 04)

The embedded test pattern can be printed out by keying in the following codes in the test print mode (04).

<Procedure 1>

[0][4]　→　(Code) → (Media selection) → [START] → Operation → [CLEAR] → [POWER]
[POWER]　　　　　　　　　　　　　　　　　(Continuous)　　　　　　OFF/ON
　　　　　　　　　　　　　　　　　　　　　(Test Printing)　　　　　(Exit)

<Procedure 2>

[0][4]　→　(Code) → (Media) → [START] → (Color) → [START] → Operation → [CLEAR] → [POWER]
[POWER]　　　　　　(selection)　　　　　(selection)　　　　　(Continuous)　　　　OFF/ON
　　　　　　　　　　　　　　　[CLEAR]　　　　　　　　　　　(Test Printing)　　　(Exit)

Notes:
1. When an error occurs, it is indicated on the panel, but the recovery operation is not performed.
   Turn OFF the power and then back ON to clear the error.
2. During test printing, the [CLEAR] button is disabled when "Wait adding toner" is displayed.

Code	Types of test pattern	Remarks	Remarks
142	Grid pattern (black)	Pattern width: 2 dots, Pitch: 10 mm	1
204	Grid pattern (color)	Pattern width: 1 dot, Pitch: 10 mm	2
219	6% test pattern		2
220	8% test pattern		2
231	Secondary scanning direction 33 gradation steps	3 pixels standard, Width: 10 mm	2
237	Halftone		2
262	Ladder pattern (4 lines ON/ 4 lines OFF)	For color deviation confirmation	2
270	Image quality control test pattern	For checking the image quality control	2

Note:
In the (Color selection) of <Procedure 2>, the printing method is different between [K(1)] and [K(4)] as follows.
[K(1)] ....Printing by bringing one K color developer unit into contact with the transfer belt
[K(4)] ....The developer units of four (YMCK) colors are brought into contact with the transfer belt, but the test pattern is printed in K color only.
* The number in parentheses indicates the contact of the developer unit and the transfer belt.

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2.2.4   Adjustment mode (05)

Items in the adjustment mode list in the following pages can be corrected or changed in this adjustment mode (05). Turn ON the power with pressing the digital keys [0] and [5] simultaneously in order to enter this mode. When the power should be turned OFF, be sure to shut down the equipment by pressing the [ENERGY SAVER] button for a few seconds.

Classification List of Adjustment Mode (05)

Classification		Adjustment Mode (05)
Scanner	[Log table]	361, 362
	[Image position]	305, 306
	[Carriage position]	359, 360
	[Fixed value]	363, 364
	[Shading position]	350, 351
	[Distortion]	308
	[Reproduction ratio]	340
Image	[Binarization]	700, 701, 702
	[ACS]	1065, 1066, 1675, 1676
	[RGB]	1080, 1081, 1082, 8372
	[STRC table]	7811, 7812, 7827, 7828
	[Tagbit]	7322-0 to 1, 8102-0 to 1
	[Displaying corrected values of leading edge adjustment]	4732-0 to 1
	[Image density]	503, 504, 505, 507, 508, 510, 512, 514, 515, 710, 714, 715, 719, 720, 724, 725, 729, 845, 846, 847, 850, 851, 852, 855, 856, 857, 860, 861, 862, 863, 931, 934, 937, 940, 1550, 1551, 1552, 1553, 1554, 1555, 1556, 1557, 1558, 1559, 1560, 1561, 1562, 1563, 1564, 1565, 1566, 1567, 1568, 1569, 1575, 1576, 1577, 1578, 1579, 1570, 1571, 1572, 1573, 1574, 1580, 1581, 1582, 1583, 1584, 1585, 1586, 1587, 1588, 1589, 7475, 7476, 7477, 7478, 7641-0 to 2, 7642-0 to 2, 8210-0 to 3, 8211-0 to 3, 8212-0 to 3, 8213-0 to 3, 8214-0 to 3, 8215-0 to 3, 8252-0 to 3, 8253-0 to 3, 8254-0 to 3, 8255-0 to 3, 8256-0 to 3, 8257-0 to 3, 8340, 8341, 8342, 8344, 8345, 8346, 8348, 8349, 8350, 8371, 8380, 8381, 8382
	[Color balance]	1779-0 to 2, 1780-0 to 2, 1781-0 to 2, 1782-0 to 2, 1783-0 to 2, 1784-0 to 2, 1785-0 to 2, 1786-0 to 2, 1787-0 to 2, 1788-0 to 2, 1789-0 to 2, 1790-0 to 2, 1791-0 to 2, 1792-0 to 2, 1793-0 to 2, 1794-0 to 2, 1795-0 to 2, 1796-0 to 2, 1797-0 to 2, 1798-0 to 2, 8050-0 to 2, 8051-0 to 2, 8052-0 to 2, 8053-0 to 2, 8054-0 to 2, 8055-0 to 2, 8056-0 to 2, 8057-0 to 2, 8058-0 to 2, 8059-0 to 2, 8060-0 to 2, 8061-0 to 2, 8062-0 to 2, 8063-0 to 2, 8064-0 to 2, 8065-0 to 2
	[Gamma adjustment]	580, 1642, 1643
	[Gamma balance]	590-0 to 2, 591-0 to 2, 592-0 to 2, 880-0 to 2, 881-0 to 2, 882-0 to 2, 883-0 to 2, 949-0 to 2, 1004-0 to 7, 1008, 7315-0 to 2, 7316-0 to 2, 7317-0 to 2, 7318-0 to 2, 7480-0 to 2
	[Black reproduction switching]	1761
	[Highlight pen]	1769-0 to 5

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Classification		Adjustment Mode (05)
Image	[Reproduction level adjustment]	1725
	[Thin line reproduction]	7340, 7341, 8130, 8131
	[Maximum text density]	1630, 1631, 1632, 1633
	[Background/Black density]	1075, 1076, 1077
	[Saturation]	8325, 8326, 8327, 8373
	[Background processing]	600, 601, 848, 853, 858, 946, 1070, 1071, 1072, 1688, 1689, 1690, 1691, 1692, 1693, 1694, 1695, 1696, 1697, 1698, 1699, 1700, 1701, 1702, 1708, 1709, 1710, 1711, 1712, 8370
	[Sharpness]	604, 605, 840, 841, 842, 843, 932, 1086, 1087, 1088, 1737, 1738, 1739, 1740, 1741, 1757, 7330, 7335, 7470, 8110, 8111, 8112, 8113, 8114, 8115, 8116, 8117, 8120, 8375
	[Switchover on screens]	7346, 7348, 8176, 8178
	[Smudged/faint text]	648, 649, 925
	[Toner saving]	664, 665, 1055, 1057
	[Toner limit threshold]	1092-0 to 1, 1093-0 to 1, 1094-0 to 1, 1095-0 to 1, 1096-0 to 1, 8076-0 to 1, 8077-0 to 1, 8078-0 to 1, 8079-0 to 1, 8080-0 to 1, 8081-0 to 1, 8082-0 to 1, 8083-0 to 1, 8084-0 to 1, 8085-0 to 1, 8086-0 to 1, 8087-0 to 1, 8088-0 to 1
	[Toner amount]	1046-0 to 1, 1047-0 to 1, 1048-0 to 1, 1049-0 to 1, 1050-0 to 1, 1051-0 to 1, 1052-0 to 1, 1053-0 to 1, 1054-0 to 1, 1612, 1613, 1614, 1615, 1616, 1617, 1618, 1619, 1620
	[Reproduction ratio]	884, 1060
	[Background processing]	9104, 9107
	[Filter process]	7324 to 1, 8104-0 to 1
	[Setting beam level conversion]	667
	[Code length adjustment]	8196
	[Image void correction]	4732-0 to 7
	[Margin]	430, 431, 432, 433, 434-0 to 5, 435, 436, 437, 438
	[Range correction]	532, 534, 570, 572, 693, 695, 825, 826, 827, 828, 830, 831, 832, 833, 835, 836, 837, 838, 913, 916, 919, 7465, 7466, 7467
Image control	[Enforced position adjustment]	4719, 4720
	[Temperature/Humidity]	393
	[Color/Black developer]	386-0 to 3
	[Contrast voltage]	330-0 to 3, 332-0 to 3, 380-0 to 3, 381-0 to 3, 1800-0 to 3, 1801-0 to 3, 1811-0 to 3, 1812-0 to 3, 1815-0 to 3
	[Performing]	394, 395, 396
	[Sensor]	388, 389, 390-0 to 3, 391-0 to 3, 392
	[Main charger]	385-0 to 3
	[Laser power]	331-0 to 3, 333-0 to 3, 382-0 to 3, 383-0 to 3, 384-0 to 3, 1802-0 to 3, 1803-0 to 3, 1816-0 to 3, 2725, 2726

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Classification		Adjustment Mode (05)
Drive system	[ADU motor]	491-0 to 11
	[PFP motor]	4707-0 to 8
	[TLCF motor]	4708-0 to 8
	[Feed/transport motor]	489-0 to 8
	[Transfer belt motor]	487-0 to 8
	[Drum motor]	481-0 to 8
	[Exit motor]	446-0 to 11
	[Fuser roller]	485-0 to 8
	[Registration motor]	483-0 to 8
Feeding system	[Aligning amount]	480, 4100-0 to 4, 4101-0 to 4, 4103-0 to 4, 4104-0 to 4, 4105-0 to 4, 4106-0 to 4, 4107-0 to 4, 4108-0 to 4, 4109-0 to 4, 4110-0 to 4, 4111, 4115-0 to 4, 4116-0 to 4, 4117-0 to 4, 4118-0 to 4, 4120-0 to 4, 4122-0 to 4, 4123-0 to 4, 4124-0 to 4, 4125-0 to 4, 4126, 4127-0 to 4, 4128-0 to 4, 4129-0 to 4
	[Paper pushing amount]	467-0 to 1
Laser	[Sideways deviation]	408, 428, 429, 497-0 to 5, 4562, 4563, 4564, 4565, 4567-0 to 5, 4568
	[Write start]	410, 411, 440, 441, 442, 444, 445, 498-0 to 1, 4065, 4066, 4067-0 to 6
	[Polygonal motor]	401, 405, 4703, 4704
Developer	[Auto-toner]	200, 201, 202, 203, 204, 205-0 to 3, 206, 2409-0 to 3, 2411
Transfer	[1st transfer]	2900-0 to 11, 2905-0 to 11, 2981-0 to 1, 2985-0 to 1, 2986-0 to 1, 2987-0 to 1, 2988-0 to 1, 2920-0 to 11, 2921-0 to 11
	[2nd transfer]	2924-0 to 7, 2925-0 to 7, 2926-0 to 7, 2927-0 to 7, 2983-0 to 1, 2984-0 to 1
	[Temperature/humidity]	247, 248, 270, 2763, 2764
	[Cleaning]	2961-0 to 1, 2962-0 to 1, 2963-0 to 1, 2966-0 to 1
	[Developer]	2627-0 to 1, 2628-0 to 1, 2629-0 to 1, 2630-0 to 1
	[Discharge]	2598-0 to 3
	[Charger grid calibration]	2622-0 to 1, 2623-0 to 1, 2624-0 to 1, 2625-0 to 1
	[Bias offset]	2934-0 to 7, 2935-0 to 7, 2936-0 to 7, 2937-0 to 7, 2938-0 to 7, 2939-0 to 7, 2940-0 to 7, 2941-0 to 7
RADF	[Aligning amount]	354, 355
	[Transporting]	357, 358, 365, 366
Finisher	[Binding/Folding position]	468-0 to 2
Maintenance	[Equipment number]	976
	[Maintenance]	4721

Procedure 1

[0][5]
[POWER] → [Digital key] (Code) → [START] → *[FUNCTION CLEAR] (Key in a value) → [ENTER] or [INTERRUPT] (Stores value in RAM) → ([FAX] ↓ [START]) (Test copy) → [POWER] OFF/ON (Exit)

[CANCEL]

[CLEAR] (Corrects value)   *Press [FUNCTION CLEAR] to enter minus (-).

Procedure 2

[0][5]
[POWER] → [Digital key] (Code) → [START] → (Value displayed) → [ENTER] or [INTERRUPT] (Value unchangeable) → ([FAX] → [START]) (Test copy) → [POWER] OFF/ON (Exit)

Procedure 3

[0][5]
[POWER] → [Digital key] (Code) → [START] → [UP] or [DOWN] (Adjust a value) → [ENTER] or [INTERRUPT] (Stores value in RAM) → ([FAX] → [START]) (Test copy) → [POWER] OFF/ON (Exit)

[CANCEL]

[CLEAR] (Corrects value)

Procedure 4

[0][5]
[POWER] → [Digital key] (Code) → [START] → [Digital key] (Sub code) → [START] → [Digital key] *[FUNCTION CLEAR] (Key in a value) → [ENTER] or [INTERRUPT] (Stores value in RAM) → ([FAX] ↓ [START]) (Test copy) → [POWER] OFF/ON (Exit)

[CANCEL]

[START]

[CLEAR] (Corrects value)

[CLEAR] (Corrects value)

*Press [FUNCTION CLEAR] to enter minus (-).

Procedure 5

[0][5]
[POWER] → [Digital key] (Code) → [START] → (Automatic adjustment) → [UP] or [DOWN] (Adjust a value) → [ENTER] or [INTERRUPT] (Stores value in RAM) → ([FAX] ↓ [START]) (Test copy) → [POWER] OFF/ON (Exit)

[CANCEL] or [CLEAR]

Procedure 6

[0][5]
[POWER] → [Digital key] (Code) → [START] → (Automatic adjustment) → ([FAX] → [COPY]) (Test copy) → [POWER]OFF/ON (Exit)

*[CANCEL] or [CLEAR]

* When the automatic adjustment ends abnormally, an error message is displayed.
* Return to standby screen by pressing the [CANCEL] or [CLEAR] button.

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Procedure 7

[0][5] [POWER] → [Digital key] (Code) → [START] → (Automatic adjustment) → [ENTER] (Stores value in RAM) → ([FAX] ↓ [START]) (Test copy) → [POWER] OFF/ON (Exit)

[CANCEL] (returns to [Digital key])

*[CANCEL] or [CLEAR]

* When the automatic adjustment ends abnormally, an error message is displayed.
* Return to standby screen by pressing the [CANCEL] or [CLEAR] button.

Procedure 10

[0][5] [POWER] → [Digital key] (Code) → [START] → [Digital key] (Sub code) → [START] → (Value displayed) → [START] → [POWER] OFF/ON (Exit)

[ENTER] or [INTERRUPT]
(Value unchangeable)

Procedure 14

[0][5] [POWER] → [Digital key] (Code) → [START] → [Digital key] (Sub code) → [START] → [UP] or [DOWN] (Adjust a value) → [ENTER] or [INTERRUPT] (Stores value in RAM) → ([FAX] ↓ [START]) (Test copy) → [POWER] OFF/ON (Exit)

[CLEAR] (Corrects value)

[CANCEL] (Corrects value)
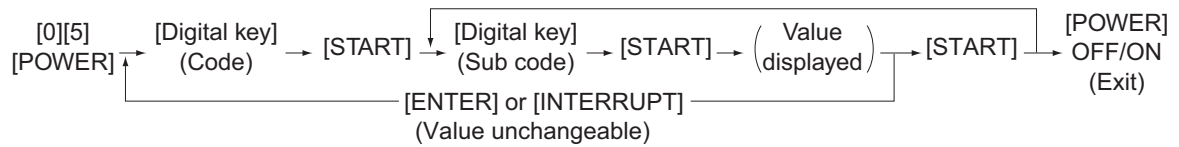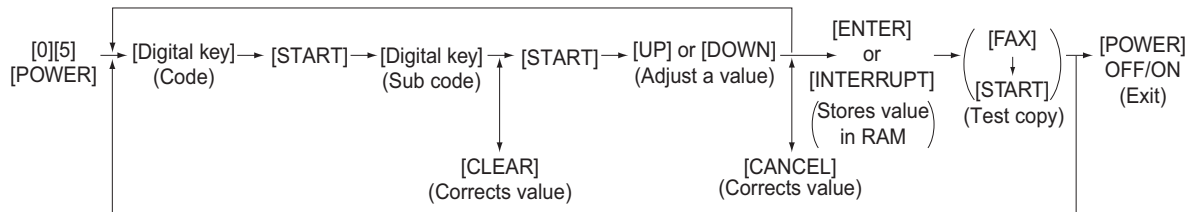
Note:
The fuser roller temperature control at the adjustment mode is different from that at the normal state.
Therefore, the problem of fusing efficiency may be occurred in the test copy at the adjustment mode.
In that case, turn ON the power normally, leave the equipment for approx. 3 minutes after it has become ready state and then start up the adjustment mode again.

Test print pattern in Adjustment Mode (05)

Operation:
One test print is printed out when the [FAX] button is pressed after the code is keyed in at Standby Screen.

Code	Types of test pattern	Remarks
1	Grid pattern (Black)	For printer related adjustment
3	Grid pattern (Black/Duplex printing)	Refer to 3.6.3 Printer related adjustment
4	For gamma adjustment (Color/Black integrated pattern)	Refer to 3.7.1 Automatic gamma adjustment
5	For gamma adjustment (Color)	Refer to 3.7.1 Automatic gamma adjustment
6	For gamma adjustment (Black)	For checking the gradation reproduction
7	For gamma adjustment (Color)	For checking the gradation reproduction
8	Grid pattern (Color)	
10	For gamma adjustment (Black)	Refer to 3.7.1 Automatic gamma adjustment
12	Secondary scanning direction 33 gradation steps (Y)	For checking the image of printer section
13	Secondary scanning direction 33 gradation steps (M)	For checking the image of printer section
14	Secondary scanning direction 33 gradation steps (C)	For checking the image of printer section
15	Secondary scanning direction 33 gradation steps (K)	For checking the image of printer section
55	Grid pattern (Full Color / Thick paper 2)	Refer to 3.6.2 Paper alignment at the registration roller
56	Grid pattern (Full Color / Thick paper 3)	Refer to 3.6.2 Paper alignment at the registration roller
57	Grid pattern (Full Color / OHP)	Refer to 3.6.2 Paper alignment at the registration roller
58	Grid pattern (Black / Thick paper 2)	Refer to 3.6.2 Paper alignment at the registration roller
59	Grid pattern (Black / Thick paper 3)	Refer to 3.6.2 Paper alignment at the registration roller
60	Grid pattern (Black / OHP)	Refer to 3.6.2 Paper alignment at the registration roller
63	For color deviation correction (Full Color)	Only for A3/LD size
70	Printer gamma correction table creation pattern (Plain paper)	Refer to 3.8.1 Automatic gamma adjustment (Printer Function)
71	Printer gamma correction table confirmation pattern (Plain paper)	Refer to 3.8.1 Automatic gamma adjustment (Printer Function)
72	Printer gamma correction table creation pattern (Thick paper 1)	Refer to 3.8.1 Automatic gamma adjustment (Printer Function)
73	Printer gamma correction table confirmation pattern (Thick paper 1)	Refer to 3.8.1 Automatic gamma adjustment (Printer Function)
74	Printer gamma correction table creation pattern (Thick paper 2)	Refer to 3.8.1 Automatic gamma adjustment (Printer Function)
75	Printer gamma correction table confirmation pattern (Thick paper 2)	Refer to 3.8.1 Automatic gamma adjustment (Printer Function)
76	Printer gamma correction table creation pattern (Thick paper 3)	Refer to 3.8.1 Automatic gamma adjustment (Printer Function)

Code	Types of test pattern	Remarks
77	Printer gamma correction table confirmation pattern (Thick paper 3)	Refer to 3.8.1 Automatic gamma adjustment (Printer Function)
78	Printer gamma correction table creation pattern (Special paper 1)	Refer to 3.8.1 Automatic gamma adjustment (Printer Function)
79	Printer gamma correction table confirmation pattern (Special paper 1)	Refer to 3.8.1 Automatic gamma adjustment (Printer Function)
80	Printer gamma correction table creation pattern (Special paper 2)	Refer to 3.8.1 Automatic gamma adjustment (Printer Function)
81	Printer gamma correction table confirmation pattern (Special paper 2)	Refer to 3.8.1 Automatic gamma adjustment (Printer Function)
82	Printer gamma correction table creation pattern (Recycled paper)	Refer to 3.8.1 Automatic gamma adjustment (Printer Function)
83	Printer gamma correction table confirmation pattern (Recycled paper)	Refer to 3.8.1 Automatic gamma adjustment (Printer Function)
84	Printer gamma correction table creation pattern (Thick paper 4)	Refer to 3.8.1 Automatic gamma adjustment (Printer Function)
85	Printer gamma correction table confirmation pattern (Thick paper 4)	Refer to 3.8.1 Automatic gamma adjustment (Printer Function)
98	Grid pattern -2 (For printing C and K / Plain paper)	Refer to 3.6.3 Printer related adjustment
99	Grid pattern -2 (For printing C and K / Thick paper 1)	
100	Grid pattern - 1 (Full color / Thick paper 1)	
101	Grid pattern - 1 (Black / Thick paper 1)	
104	Color deviation confirmation pattern (A3/LD)	

Notes:
1. The digit after the hyphen in "Code" of the following table is a sub code.
2. In "RAM", the NVRAM of the board in which the data of each code is stored is indicated. "M" stands for the LGC board and "SYS" stands for the SYS board.

Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
200	Develop-ment	Initialization of color auto-toner sensor light amount correction tar-get value	All (Y,M,C,K)	ALL	- <0-255>	M	The value starts chang-ing approx. 3 minutes after this adjustment started. The value is automati-cally set during this adjustment (approx. 2 minutes). (As the value increases, the sensor output increases correspond-ingly.) (Chap. 3.2)	5
201			Y	ALL	- <0-255>	M		5
202			M	ALL	- <0-255>	M		5
203			C	ALL	- <0-255>	M		5
204			K	ALL	- <0-255>	M		5
205-0	Develop-ment	Normal speed mode Adjustment of auto-toner ini-tial adjust-ment reference set-ting value (YMCK)	Y	ALL	130 <0-255>	M		4
205-1			M	ALL	130 <0-255>	M		4
205-2			C	ALL	130 <0-255>	M		4
205-3			K	ALL	130 <0-255>	M		4
206	Develop-ment	Initialization of auto-toner (Y), (M), (C)		ALL	- <0-255>	M		5
247	Transfer	Temperature/humidity sen-sor humidity display		ALL	50 <0-100>	M	Displays the humidity value set at the image quality open-loop con-trol transfer correction.	2
248	Transfer	Drum thermistor tempera-ture display (K)		ALL	23 <0-100>	M	(Unit: °C)	2
270	Transfer	Temperature/humidity sen-sor temperature display		ALL	23 <0-100>	M	Displays the tempera-ture value set at the image quality open-loop control transfer correc-tion.	2
305	Scanner	Image location adjustment of secondary scanning direction (scanner section)		ALL	124 <92-164>	SYS	When the value increases by "1", the image shifts by approx. 0.137 mm toward the trailing edge of the paper.	1
306	Scanner	Image location adjustment of primary scanning direc-tion (scanner section)		ALL	113 <0-255>	SYS	When the value increases by "1", the image shifts by approx. 0.0423 mm toward the front side of the paper.	1
308	Scanner	Distortion mode		ALL	-	-	Moves carriages to the adjusting position. (Chap. 3.6.4)	6

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Adjustment mode (05)							
Code	Classifi- cation	Items		Func- tion	Default <Accept- able value>	RAM	Contents	Pro- cedur e
330-0	Image control	Image quality closed-loop control con- trast voltage correction/ Mode 2 maxi- mum number of time cor- rected	Y	ALL	3 <0-16>	M	Sets the maximum cor- rection number of time of the contrast voltage in the closed-loop con- trol mode 2.	4
330-1			M	ALL	3 <0-16>	M		4
330-2			C	ALL	3 <0-16>	M		4
330-3			K	ALL	3 <0-16>	M		4
331-0	Image control	Image quality closed-loop control laser power correc- tion/Mode 2 maximum number of time corrected	Y	ALL	2 <0-16>	M	Sets the maximum cor- rection number of time of the laser power in the closed-loop control mode 2.	4
331-1			M	ALL	2 <0-16>	M		4
331-2			C	ALL	2 <0-16>	M		4
331-3			K	ALL	2 <0-16>	M		4
332-0	Image control	Image quality closed-loop control con- trast voltage correction/ Mode 1 maxi- mum number of time cor- rected	Y	ALL	1 <0-16>	M	Sets the maximum cor- rection number of time of the contrast voltage in the closed-loop con- trol mode 1.	4
332-1			M	ALL	1 <0-16>	M		4
332-2			C	ALL	1 <0-16>	M		4
332-3			K	ALL	1 <0-16>	M		4
333-0	Image control	Image quality closed-loop control laser power correc- tion/Mode 1 maximum number of time corrected	Y	ALL	1 <0-16>	M	Sets the maximum cor- rection number of time of the laser power in the closed-loop control mode 1.	4
333-1			M	ALL	1 <0-16>	M		4
333-2			C	ALL	1 <0-16>	M		4
333-3			K	ALL	1 <0-16>	M		4
340	Scanner	Reproduction ratio adjust- ment of secondary scan- ning direction (scanner section)		ALL	128 <63-193>	SYS	When the value increases by "1", the reproduction ratio in the secondary scanning direction (vertical to paper feeding direc- tion) increases by approx. 0.223%.	1
350	Scanner	Shading posi- tion adjust- ment	Original glass	ALL	117 <94-162>	SYS	0.1369 mm/step	1
351			RADF	ALL	133 <94-162>	SYS	0.1369 mm/step	1
354	RADF	Adjustment of RADF paper alignment	for single sided orig- inal	ALL	10 <0-20>	SYS	When the value increases by "1", the aligning amount increases by approx. 0.5 mm.	1
355			for double sided orig- inal	ALL	10 <0-20>	SYS		1

				Adjustment mode (05)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
357	RADF	Fine adjustment of RADF transport speed	ALL	50 <0-100>	SYS	When the value increases by "1", the reproduction ratio of the secondary scanning direction on original (fed from the RADF) increases by approx. 0.1%.	1
358	RADF	RADF sideways deviation adjustment	ALL	128 <0-255>	SYS	When the value increases by "1", the image of original fed from the RADF shifts toward the rear side of paper by approx. 0.0423 mm.	1
359	Scanner	Carriage position adjust-ment during scanning from RADF	ALL (black)	128 <0-255>	SYS	When the value increases by "1", the carriage position shifts by approx. 0.1 mm toward the exit side when using the RADF.	1
360			ALL (color)	128 <0-255>	SYS		1
361	Scanner	Log table switching for RADF copying	ALL (color)	0 <0-4>	SYS	0: Same log table as the one used at copying with original glass 1: Background repro-duction - Light 2 2: Background repro-duction - Light 1 3: Background repro-duction - Dark 1 4: Background repro-duction - Dark 2	1
362			ALL (black)	0 <0-4>	SYS	0: Same log table as the one used at copying with original glass 1: Background repro-duction - Light 2 2: Background repro-duction - Light 1 3: Background repro-duction - Dark 1 4: Background repro-duction - Dark 2	1
363	Scanner	Data transfer of character-istic value of scanner / SYS board →SLG board	SCN	-	SYS	Transfers the character-istic values of the scan-ner (shading correction factor / RGB color cor-rection / reproduction ratio color aberration correction) from the NVRAM of the SYS board to the NVRAM of the SLG board.	6

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Adjustment mode (05)							
Code	Classification	Items		Function	Default <Acceptable value>	RAM	Contents	Procedure
364	Scanner	Data transfer of characteristic value of scanner / SLG board →SYS board		SCN	-	SYS	Transfers the characteristic values of the scanner (shading correction factor / RGB color correction / reproduction ratio color aberration correction) from the NVRAM of the SLG board to the NVRAM of the SYS board.	6
365	RADF	RADF leading edge position 1 adjustment	for single sided original	ALL	50 <0-100>	SYS	When the value increases by "1", the copied image of original fed from the RADF shifts toward the trailing edge of paper by approx. 0.1 mm.	1
366			for double sided original	ALL	50 <0-100>	SYS		1
380-0	Image control	Image quality open-loop control/ contrast voltage initial value display	Y	ALL	285 <0-999>	M	Displays the contrast voltage initial value set by the open-loop control. (Unit: V)	10
380-1			M	ALL	310 <0-999>	M		10
380-2			C	ALL	310 <0-999>	M		10
380-3			K	ALL	260 <0-999>	M		10
381-0	Image control	Contrast voltage actual value display	Y	ALL	300 <0-999>	M	Displays the contrast voltage when printing is operated. (Unit: V)	10
381-1			M	ALL	300 <0-999>	M		10
381-2			C	ALL	300 <0-999>	M		10
381-3			K	ALL	300 <0-999>	M		10
382-0	Image control	Image quality open-loop control/ laser power initial value display	Y	ALL	322 <0-999>	M	Displays the laser power initial value set by the open-loop control. (Unit: μW)	10
382-1			M	ALL	322 <0-999>	M		10
382-2			C	ALL	322 <0-999>	M		10
382-3			K	ALL	322 <0-999>	M		10
383-0	Image control	Laser power actual value display	Y	ALL	82 <0-255>	M	Displays the laser power when printing is operated. (bit value)	10
383-1			M	ALL	82 <0-255>	M		10
383-2			C	ALL	82 <0-255>	M		10
383-3			K	ALL	82 <0-255>	M		10

					Adjustment mode (05)			
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
384-0	Image control	Laser power actual value display	Y	ALL	322 <0-999>	M	Displays the laser power when printing is operated. (Unit: µW)	10
384-1			M	ALL	322 <0-999>	M		10
384-2			C	ALL	322 <0-999>	M		10
384-3			K	ALL	322 <0-999>	M		10
385-0	Image control	Main charger grid bias actual value display	Y	ALL	77 <0-255>	M	Displays the main charger grid bias when printing is operated. (bit value)	10
385-1			M	ALL	77 <0-255>	M		10
385-2			C	ALL	77 <0-255>	M		10
385-3			K	ALL	77 <0-255>	M		10
386-0	Image control	Developer bias DC (-) actual value display	Y	ALL	80 <0-255>	M	Displays the developer bias when printing is operated. (bit value)	10
386-1			M	ALL	80 <0-255>	M		10
386-2			C	ALL	80 <0-255>	M		10
386-3			K	ALL	80 <0-255>	M		10
388	Image control	Output value display of image quality sensor	When the light source is OFF	ALL	0 <0-1023>	M	Displays the output value of image quality sensor when the sensor light source is OFF.	2
389			Transfer belt sur-face	ALL	0 <0-1023>	M	Displays the output value of image quality sensor (when there is no test pattern) on the transfer belt.	2
390-0			High den-sity pat-tern Y	ALL	0 <0-1023>	M	Displays the output value of image quality sensor when a high-density test pattern is written. The larger the value is, the smaller the toner amount adhered becomes.	10
390-1			High den-sity pat-tern M	ALL	0 <0-1023>	M		10
390-2			High den-sity pat-tern C	ALL	0 <0-1023>	M		10
390-3			High den-sity pat-tern K	ALL	0 <0-1023>	M		10

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ERROR CODE AND SELF-DIAGNOSTIC MODE

						Adjustment mode (05)			
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents		Pro-cedure
391-0	Image control	Output value display of image quality sensor	Low density pattern Y	ALL	0 <0-1023>	M	Displays the output value of image quality sensor when a low-density test pattern is written. The larger the value is, the smaller the toner amount adhered becomes.		10
391-1			Low density pattern M	ALL	0 <0-1023>	M			10
391-2			Low density pattern C	ALL	0 <0-1023>	M			10
391-3			Low density pattern K	ALL	0 <0-1023>	M			10
392	Image control	Light amount adjustment result of image quality sensor		ALL	0 <0-255>	M	The LED light amount adjustment value of this sensor is the reference value to set the reflected light from the belt surface.		2
393	Image control	Relative humidity display during latest closed-loop control		ALL	0 <0-100>	M	Displays the relative humidity at the latest performing of the closed-loop control.		2
394	Image control	Enforced performing of image quality open-loop control		ALL	-	-	Performs the image quality open-loop control.		6
395	Image control	Enforced performing of image quality color closed-loop control		ALL	-	M	Performs the image quality closedloop control.		6
396	Image control	Image quality control initialization		ALL	-	M	Performs the image quality control, initialize each control value.		6
401	Laser	Fine adjustment of polygonal motor rotation speed (reproduction ratio adjustment)		PRT	128 <0-255>	M	When the value increases by "1", the reproduction ratio of primary scanning direction increases by approx. 0.07%. (approx. 0.1 mm/step)		1
405				PPC	128 <0-255>	M			1
408	Laser	Leading edge position adjustment Common items		PPC	40 <0-80>	M	When the value increases by "1", the image shifts toward the trailing edge of the paper by approx. 0.15 mm.		1
410	Laser	Adjustment of primary scanning laser writing start position		PPC	128 <0-255>	M	When the value increases by "1", the writing start position shifts to the front side by approx. 0.0423 mm.		1
411				PRT	128 <0-255>	M			1
428	Laser	Leading edge position adjustment	PFP lower drawer	ALL	20 <0-40>	M	When the value increases by "1", the image shifts toward the trailing edge of the paper by approx. 0.15 mm.		1

							Adjustment mode (05)		
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents		Pro-cedure
429	Laser	Leading edge position adjustment	LCF	ALL	20 <0-40>	M	When the value increases by "1", the image shifts toward the trailing edge of the paper by approx. 0.15 mm.		1
430	Image	Top margin adjustment (blank area at the leading edge of the paper))		PPC	0 <0-255>	M	When the value increases by "1", the blank area becomes wider by approx. 0.0423 mm.		1
431	Image	Left margin adjustment (blank area at the left of the paper along the paper feeding direction)		PPC	0 <0-255>	M			1
432	Image	Right margin adjustment (blank area at the right of the paper along the paper feeding direction)		PPC	0 <0-255>	M			1
433	Image	Bottom margin adjustment (blank area at the trailing edge of the paper)		PPC	0 <0-255>	M			1
434-0	Image	Bottom margin adjustment (blank area at the trailing edge of the paper) /Reverse side at duplexing		PPC/ PRT	24 <0-255>	M	When the value increases, the blank area becomes wider.		4
434-1	Image	Right margin adjustment (blank area at the right of the paper along the paper feeding direction) /Reverse side at duplexing		PPC/ PRT	18 <0-255>	M			4
434-2	Image	Bottom margin adjustment (blank area at the trailing edge of the paper) /Reverse side at duplexing (black)		PPC/ PRT	24 <0-255>	M			4
434-3	Image	Right margin adjustment (blank area at the right of the paper along the paper feeding direction) /Reverse side at duplexing (color)		PPC/ PRT	18 <0-255>	M			4
434-4	Image	Bottom margin adjustment (blank area at the trailing edge of the paper) /Reverse side at duplexing (color)		PPC/ PRT	18 <0-255>	M			4
434-5	Image	Right margin adjustment (blank area at the right of the paper along the paper feeding direction) /Reverse side at duplexing (Thick paper 1)		PPC/ PRT	12 <0-255>	M			4
435	Image	Top margin adjustment (blank area at the leading edge of the paper)		PRT	24 <0-255>	M	When the value increases by "1", the blank area becomes wider by approx. 0.0423 mm.		1

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Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
436	Image	Left margin adjustment (blank area at the left of the paper feeding along the paper feeding direction)		PRT	0 <0-255>	M	When the value increases by "1", the blank area becomes wider by approx. 0.0423 mm.	1
437	Image	Right margin adjustment (blank area at the right of the paper feeding along the paper feeding direction)		PRT	0 <0-255>	M		1
438	Image	Bottom margin adjustment (blank area at the trailing edge of the paper)		PRT	0 <0-255>	M		1
440	Laser	Leading edge position adjustment	1st drawer	ALL	20 <0-40>	M	When the value increases by "1", the image shifts toward the trailing edge of the paper by approx. 0.15 mm.	1
441			2nd drawer	ALL	20 <0-40>	M		1
442			Bypass feeding	ALL	20 <0-40>	M		1
444			PFP	ALL	20 <0-40>	M		1
445			Duplex feeding	ALL	20 <0-40>	M		1
446-0	Drive	Fine adjust-ment of exit motor rota-tional speed	Transport speed: Normal speed	PRT	128 <0-255>	M		4
446-1				FAX	128 <0-255>	M		4
446-2				PPC	128 <0-255>	M		4
446-3			Transport speed: Decelerat-ing	PRT	128 <0-255>	M		4
446-4				FAX	128 <0-255>	M		4
446-5				PPC	128 <0-255>	M		4
446-6			Transport speed: High speed	PRT	128 <0-255>	M		4
446-7				FAX	128 <0-255>	M		4
446-8				PPC	128 <0-255>	M		4
446-9			Reverse rotation: Normal speed	ALL	128 <0-255>	M		4
446-10			Reverse rotation: Decelerat-ing	ALL	128 <0-255>	M		4
446-11			Reverse rotation: High speed	ALL	128 <0-255>	M		4

Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
467-0	Paper feeding	Adjustment of paper push-ing amount/ Duplex feed-ing (short size)	Plain paper	ALL	0 <0-255>	M	When the value increases by "1", the driving speed of ADU transport roller increases by approx. 2 ms when the paper transport is started from the registration section.	1
467-1			Thick paper 1	ALL	0 <0-255>	M		1
468-0	Finisher	Fine adjust-ment of bind-ing position/ folding posi-tion	A4-R /LT-R	ALL	0 <-14-14>	M	When the value increases by "1", the binding/folding position shifts toward the right page by 0.25 mm.	4
468-1			B4	ALL	0 <-14-14>	M		4
468-2			A3/LD	ALL	0 <-14-14>	M		4
480	Paper feeding	Paper feed aligning amount adjustment (using icons)		ALL	-	M	Press the button on the LCD.	4
481-0	Drive	Fine adjust-ment of drum motor rota-tional speed	Transport speed: Normal speed	PRT	128 <0-255>	M		4
481-1				FAX	128 <0-255>	M		4
481-2				PPC	128 <0-255>	M		4
481-3			Transport speed: Decelerat-ing	PRT	128 <0-255>	M		4
481-4				FAX	128 <0-255>	M		4
481-5				PPC	128 <0-255>	M		4
481-6			Transport speed: High speed	PRT	128 <0-255>	M		4
481-7				FAX	128 <0-255>	M		4
481-8				PPC	128 <0-255>	M		4
483-0	Drive	Fine adjust-ment of regis-tration motor rotational speed	Transport speed: Normal speed	PRT	128 <0-255>	M		4
483-1				FAX	128 <0-255>	M		4
483-2				PPC	128 <0-255>	M		4
483-3			Transport speed: Decelerat-ing	PRT	128 <0-255>	M		4
483-4				FAX	128 <0-255>	M		4
483-5				PPC	128 <0-255>	M		4
483-6			Transport speed: High speed	PRT	128 <0-255>	M		4
483-7				FAX	128 <0-255>	M		4
483-8				PPC	128 <0-255>	M		4

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				Adjustment mode (05)			
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
485-0	Drive	Fine adjust-ment of fuser roller rota-tional speed	Transport speed: Normal speed	PRT	131 <0-255>	M		4
485-1				FAX	128 <0-255>	M		4
485-2				PPC	128 <0-255>	M		4
485-3			Transport speed: Decelerat-ing	PRT	128 <0-255>	M		4
485-4				FAX	128 <0-255>	M		4
485-5				PPC	128 <0-255>	M		4
485-6			Transport speed: High speed	PRT	128 <0-255>	M		4
485-7				FAX	128 <0-255>	M		4
485-8				PPC	128 <0-255>	M		4
487-0	Drive	Fine adjust-ment of trans-fer belt motor rotational speed	Transport speed: Normal speed	PRT	128 <0-255>	M	When the value increases, the repro-duction ratio in the sec-ondary scanning direction becomes larger. (Approx. 0.1 mm/1 steps)	4
487-1				FAX	128 <0-255>	M		4
487-2				PPC	128 <0-255>	M		4
487-3			Transport speed: Decelerat-ing	PRT	128 <0-255>	M		4
487-4				FAX	128 <0-255>	M		4
487-5				PPC	128 <0-255>	M		4
487-6			Transport speed: High speed	PRT	128 <0-255>	M		4
487-7				FAX	128 <0-255>	M		4
487-8				PPC	128 <0-255>	M		4
489-0	Drive	Fine adjust-ment of feed/ transport motor rota-tional speed	Transport speed: Normal speed	PRT	136 <0-255>	M		4
489-1				FAX	128 <0-255>	M		4
489-2				PPC	128 <0-255>	M		4
489-3			Transport speed: Decelerat-ing	PRT	128 <0-255>	M		4
489-4				FAX	128 <0-255>	M		4
489-5				PPC	128 <0-255>	M		4
489-6			Transport speed: High speed	PRT	128 <0-255>	M		4
489-7				FAX	128 <0-255>	M		4
489-8				PPC	128 <0-255>	M		4

		Adjustment mode (05)					
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Pro-cedure
491-0	Drive system	Fine adjust-ment of ADU motor rota-tional speed	Transport speed: Normal speed	PRT	128 <0-255>	M	4
491-1				FAX	128 <0-255>	M	4
491-2				PPC	128 <0-255>	M	4
491-3			Transport speed: Decelerat-ing	PRT	128 <0-255>	M	4
491-4				FAX	128 <0-255>	M	4
491-5				PPC	128 <0-255>	M	4
491-6			Transport speed: High speed	PRT	128 <0-255>	M	4
491-7				FAX	128 <0-255>	M	4
491-8				PPC	128 <0-255>	M	4
491-9			Transport speed: Normal speed	ALL	128 <0-255>	M	4
491-10			Transport speed: Decelerat-ing	ALL	128 <0-255>	M	4
491-11			Transport speed: High speed	ALL	128 <0-255>	M	4
497-0	Laser	Adjustment of drawer side-ways devia-tion	1st drawer	ALL	128 <0-255>	M	When the value increases by "1", the image shifts toward the front side by 0.0423 mm.	4
497-1			2nd drawer	ALL	128 <0-255>	M		4
497-2			PFP upper drawer	ALL	128 <0-255>	M		4
497-3			PFP lower drawer	ALL	128 <0-255>	M		4
497-4			LCF	ALL	128 <0-255>	M		4
497-5			Bypass feeding	ALL	128 <0-255>	M		4
498-0	Laser	Adjustment of primary scan-ning laser writing start position at duplex feed-ing	Long size	ALL	128 <0-255>	M	When the value increases by "1", the image shifts toward the front side by 0.0423 mm.	4
498-1			Short size (A4/LT or smaller)	ALL	128 <0-255>	M		4
503	Image	Density adjustment	Text/Photo	PPC (black)	128 <0-255>	SYS	When the value increases, the image of the center step density becomes darker.	1
504		Fine adjust-ment of "man-ual density" /Center value	Text	PPC (black)	128 <0-255>	SYS		1

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			Adjustment mode (05)					
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
505	Image	Density adjustment	Text/Photo	PPC (black)	20 <0-255>	SYS	Sets the changing amount by 1 step at the density adjustment. When the value increases, the image of the "light" steps becomes lighter.	1
507		Fine adjust-ment of "man-ual density" /Light step value	Text	PPC (black)	20 <0-255>	SYS		1
508	Image	Density adjustment	Text/Photo	PPC (black)	20 <0-255>	SYS	Sets the changing amount by 1 step at the density adjustment. When the value increases, the image of the "dark" steps becomes darker.	1
510		Fine adjust-ment of "man-ual density" /Dark step value	Text	PPC (black)	20 <0-255>	SYS		1
514	Image	Density adjustment	Text/Photo	PPC (black)	128 <0-255>	SYS	When the value increases, the image becomes darker.	1
515		Fine adjust-ment of "auto-matic density"	Text	PPC (black)	128 <0-255>	SYS		1
532	Image	Range correc-tion Back-ground peak adjustment	Text/Photo	PPC (black)	40 <0-255>	SYS	When the value increases, the back-ground of the image (low density area) becomes harder to be printed out.	1
534			Text	PPC (black)	40 <0-255>	SYS		1
570	Image	Range correc-tion on origi-nal manually set on the original glass	Text/Photo	PPC (black)	22 <11-14, 21-24, 31-34, 41-44>	SYS	Sets whether the values of the background peak and text peak are fixed or not. One's place is an adjustment for "auto-matic density" and ten's place is for "manual density". Once they are fixed, the range correc-tion is performed with standard values. The values of the back-ground peak and text peak affect the repro-duction of the back-ground density and text density respectively. 1: fixed/fixed 2: varied/fixed 3: fixed/varied 4: varied/varied * Background peak/ Text peak	1
572			Text	PPC (black)	22 <11-14, 21-24, 31-34, 41-44>	SYS		1
580	Image	Automatic gamma adjust-ment		PPC (black)	-	-	Adjusts the gradation reproduction automati-cally.	7

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Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
590-0	Image	Adjustment of gamma bal-ance (Text/ Photo)	L	PPC (black)	128 <0-255>	SYS	When the value increases, the density in the target area becomes higher. L: Low density area M : Medium density area H: High density area	4
590-1			M	PPC (black)	128 <0-255>	SYS		4
590-2			H	PPC (black)	128 <0-255>	SYS		4
591-0	Image	Adjustment of gamma bal-ance (Text)	L	PPC (black)	128 <0-255>	SYS		4
591-1			M	PPC (black)	128 <0-255>	SYS		4
591-2			H	PPC (black)	128 <0-255>	SYS		4
592-0	Image	Adjustment of gamma bal-ance (Photo)	L	PPC (black)	128 <0-255>	SYS		4
592-1			M	PPC (black)	128 <0-255>	SYS		4
592-2			H	PPC (black)	128 <0-255>	SYS		4
600	Image	Background adjustment	Text/Photo	PPC (black)	5 <1-9>	SYS	When the value decreases, the back-ground becomes darker. When the value increases, the back-ground becomes lighter.	1
601			Text	PPC (black)	5 <1-9>	SYS		1
604	Image	Sharpness adjustment	Text/Photo	PPC (black)	128 <0-255>	SYS	When the value increases, the image becomes sharper. When the value decreases, the image becomes softer. The smaller the value is, the less the moire becomes. * The default value 0 is equivalent to 16 (center value).	1
605			Text	PPC (black)	128 <0-255>	SYS		1
648	Image	Adjustment of smudged/faint text	Text/Photo	PPC (black)	2 <0-4>	SYS	Adjustment of the smudged/faint text. With increasing the value, the faint text is suppressed, and with decreasing it, the smudged text is sup-pressed.	1
649			Text	PPC (black)	2 <0-4>	SYS		1
664	Image	Upper limit in toner saving mode	PS	PRT (black)	176 <0-255>	SYS	When the value decreases, the printing density becomes lighter.	1
665			PCL	PRT (black)	176 <0-255>	SYS		1

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					Adjustment mode (05)		
Code	Classifi-cation	Items		Func-tion	Default \<Accept-able value>	RAM	Contents	Pro-cedure
667-0	Image	Setting beam level conver-sion	Beam level 0/4	PPC (black)	0 \<0-255>	M	Sets the beam level for 4 divided smoothing. The primary scanning direction is divided into 4 and the dot width is set at the 5 levels (incl. level "0"). The smaller the value is, the smaller the primary scanning direction of the dot becomes.	4
667-1			Beam level 1/4	PPC (black)	63 \<0-255>	M		4
667-2			Beam level 2/4	PPC (black)	127 \<0-255>	M		4
667-3			Beam level 3/4	PPC (black)	191 \<0-255>	M		4
667-4			Beam level 4/4	PPC (black)	255 \<0-255>	M		4
693	Image	Range correc-tion on origi-nal set on the RADF	Text/Photo	PPC (black)	22 \<11-14, 21-24, 31-34, 41-44>	SYS	Sets whether the values of the background peak and text peak are fixed or not. One's place is an adjustment for "auto-matic density" and ten's place is for "manual density". Once they are fixed, the range correc-tion is performed with standard values. The values of the back-ground peak and text peak affect the repro-duction of the back-ground density and text density respectively. 1: fixed/fixed 2: varied/fixed 3: fixed/varied 4: varied/varied * Background peak/ Text peak	1
695			Text	PPC (black)	22 \<11-14, 21-24, 31-34, 41-44>	SYS		1
700	Image	Adjustment of binarized threshold (Text)	Center value	FAX (black)	125 \<0-255>	SYS	When the value increases, the image of center value density becomes lighter.	1
701			Light step value	FAX (black)	20 \<0-255>	SYS	Sets the changing amount by 1 step at the density adjustment. When the value increases, the image of "light" side becomes lighter.	1
702			Dark step value	FAX (black)	20 \<0-255>	SYS	Sets the changing amount by 1 step at the density adjustment.	1
710	Image	Density adjustment "manual den-sity" fine adjustment/ Center value	Photo	FAX (black)	128 \<0-255>	SYS	When the value increases, the image of the center step density becomes darker.	1
714			Text/Photo	FAX (black)	128 \<0-255>	SYS		1

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Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
715	Image	Density adjustment "manual den-sity" fine adjustment/ Light step value	Photo	FAX (black)	20 <0-255>	SYS	Sets the changing amount by 1 step at the density adjustment. When the value increases, the image of the "light" steps becomes lighter.	1
719			Text/Photo	FAX (black)	20 <0-255>	SYS		1
720	Image	Density adjustment "manual den-sity" fine adjustment/ Dark step value	Photo	FAX (black)	20 <0-255>	SYS	Sets the changing amount by 1 step at the density adjustment. When the value increases, the image of the "dark" steps becomes darker.	1
724			Text/Photo	FAX (black)	20 <0-255>	SYS		1
725	Image	Density adjustment "automatic density" fine adjustment	Photo	FAX (black)	128 <0-255>	SYS	When the value increases, the image becomes darker.	1
729			Text/Photo	FAX (black)	128 <0-255>	SYS		1
825	Image	Range correc-tion on origi-nal manually set on the original glass	Text/Photo	SCN (black)	12 <11-14, 21-24, 31-34, 41-44>	SYS	Sets whether the values of the background peak and text peak are fixed or not. One's place is an adjustment for "auto-matic density" and ten's place is for "manual density". Once they are fixed, the range correc-tion is performed with standard values. The values of the back-ground peak and text peak affect the repro-duction of the back-ground density and text density respectively. 1: fixed/fixed 2: varied/fixed 3: fixed/varied 4: varied/varied * Background peak/ Text peak	1
826			Text	SCN (black)	12 <11-14, 21-24, 31-34, 41-44>	SYS		1
827			Photo	SCN (black)	12 <11-14, 21-24, 31-34, 41-44>	SYS		1
828			Gray scale	SCN (black)	12 <11-14, 21-24, 31-34, 41-44>	SYS		1

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					Adjustment mode (05)				
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents		Pro-cedure
830	Image	Range correc-tion on origi-nal set on the RADF	Text/Photo	SCN (black)	12 <11-14, 21-24, 31-34, 41-44>	SYS	Sets whether the values of the background peak and text peak are fixed or not. One's place is an adjustment for "auto-matic density" and ten's place is for "manual density". Once they are fixed, the range correc-tion is performed with standard values. The values of the back-ground peak and text peak affect the repro-duction of the back-ground density and text density respectively. 1: fixed/fixed 2: varied/fixed 3: fixed/varied 4: varied/varied * Background peak/ Text peak		1
831			Text	SCN (black)	12 <11-14, 21-24, 31-34, 41-44>	SYS			1
832			Photo	SCN (black)	12 <11-14, 21-24, 31-34, 41-44>	SYS			1
833			Gray scale	SCN (black)	12 <11-14, 21-24, 31-34, 41-44>	SYS			1
835	Image	Range correc-tion Back-ground peak adjustment	Text/Photo	SCN (black)	48 <0-255>	SYS	When the value increases, the back-ground of the image (low density area) becomes harder to be printed out.		1
836			Text	SCN (black)	48 <0-255>	SYS			1
837			Photo	SCN (black)	36 <0-255>	SYS			1
838			Gray scale	SCN (black)	36 <0-255>	SYS			1
840	Image	Sharpness adjustment	Text/Photo	SCN (black)	128 <0-255>	SYS	When the value increases, the image becomes sharper. When the value decreases, the image becomes softer. The smaller the value is, the less the moire becomes.		1
841			Text	SCN (black)	128 <0-255>	SYS			1
842			Photo	SCN (black)	128 <0-255>	SYS			1
843			Gray scale	SCN (black)	128 <0-255>	SYS			1
845	Image	Density adjustment "manual den-sity" fine adjustment/ Center value	Text/Photo	SCN (black)	128 <0-255>	SYS	When the value increases, the image becomes darker.		1
846			Text	SCN (black)	64 <0-255>	SYS	When the value increases, the image becomes lighter.		1
847			Photo	SCN (black)	128 <0-255>	SYS	When the value increases, the image becomes darker.		1
848			Gray scale	SCN (black)	128 <0-255>	SYS			1

					Adjustment mode (05)			
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
850	Image	Density adjustment "manual den-sity" fine adjustment/ Light step value	Text/Photo	SCN (black)	20 <0-255>	SYS	Sets the changing amount by 1 step at density adjustment on the control panel The larger the value is, the lighter the image of the light steps becomes.	1
851			Text	SCN (black)	20 <0-255>	SYS		1
852			Photo	SCN (black)	20 <0-255>	SYS		1
853			Gray scale	SCN (black)	20 <0-255>	SYS		1
855	Image	Density adjustment "manual den-sity" fine adjustment/ Dark step value	Text/Photo	SCN (black)	20 <0-255>	SYS	Sets the changing amount by 1 step at density adjustment on the control panel The larger the value is, the darker the image of the dark steps becomes.	1
856			Text	SCN (black)	12 <0-255>	SYS		1
857			Photo	SCN (black)	20 <0-255>	SYS		1
858			Gray scale	SCN (black)	20 <0-255>	SYS		1
860	Image	Density adjustment "automatic density" fine adjustment	Text/Photo	SCN (black)	128 <0-255>	SYS	When the value increases, the image becomes darker.	1
861			Text	SCN (black)	64 <0-255>	SYS	When the value increases, the image becomes lighter.	1
862			Photo	SCN (black)	128 <0-255>	SYS	When the value increases, the image becomes darker.	1
863			Gray scale	SCN (black)	128 <0-255>	SYS		1
880-0	Image	Adjustment of gamma bal-ance (Text/ Photo)	L	SCN (black)	128 <0-255>	SYS	When the value increases, the density in the target area becomes higher. L: Low density area M: Medium density area H: High density area	4
880-1			M	SCN (black)	128 <0-255>	SYS		4
880-2			H	SCN (black)	128 <0-255>	SYS		4
881-0	Image	Adjustment of gamma bal-ance (Text)	L	SCN (black)	128 <0-255>	SYS		4
881-1			M	SCN (black)	128 <0-255>	SYS		4
881-2			H	SCN (black)	128 <0-255>	SYS		4
882-0	Image	Adjustment of gamma bal-ance (Photo)	L	SCN (black)	128 <0-255>	SYS		4
882-1			M	SCN (black)	128 <0-255>	SYS		4
882-2			H	SCN (black)	128 <0-255>	SYS		4
883-0	Image	Adjustment of gamma bal-ance (Gray scale)	L	SCN (black)	128 <0-255>	SYS		4
883-1			M	SCN (black)	128 <0-255>	SYS		4
883-2			H	SCN (black)	128 <0-255>	SYS		4

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				Adjustment mode (05)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
884	Image	Reproduction ratio fine adjustment of primary scanning direction	SCN (black)	128 <0-255>	SYS	When the value increases by "1", the reproduction ratio of pri-mary scanning direction increases by approx. 0.1%. Effective with the reso-lution other than 600 dpi.	1
913	Image	Range correction on origi-nal set on the RADF	PPC (black)	22 <11-14, 21-24, 31-34, 41-44>	SYS	Sets whether the values of the background peak and text peak are fixed or not. One's place is an adjustment for "auto-matic density" and ten's place is for "manual density". Once they are fixed, the range correc-tion is performed with standard values. The values of the back-ground peak and text peak affect the repro-duction of the back-ground density and text density respectively. 1: fixed/fixed 2: varied/fixed 3: fixed/varied 4: varied/varied Background peak/Text peak	1
916	Image	Range correction on origi-nal manually set on the original glass	PPC (black)	22 <11-14, 21-24, 31-34, 41-44>	SYS		1
919	Image	Range correction Back-ground peak adjustment	PPC (black)	40 <0-255>	SYS	When the value increases, the back-ground of the image (low density area) becomes harder to be printed out.	1
922	Image	Sharpness adjustment	PPC (black)	128 <0-255>	SYS	When the value increases, the image becomes sharper. When the value decreases, the image becomes softer. The smaller the value is, the less the moire becomes.	1
925	Image	Adjustment of smudged/ faint text	PPC (black)	2 <0-4>	SYS	Adjustment of the smudged/faint text. With increasing the value, the faint text is suppressed, and with decreasing it, the smudged text is sup-pressed.	1
931	Image	Density adjustment "man-ual density" fine adjust-ment/Center value	PPC (black)	128 <0-255>	SYS	When the value increases, the image becomes darker.	1

Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
934	Image	Density adjustment "man-ual density" fine adjust-ment/Light step value		PPC (black)	20 <0-255>	SYS	When the value increases, the image of the "light" steps becomes lighter.	1
937	Image	Density adjustment "man-ual density" fine adjust-ment/Dark step value		PPC (black)	20 <0-255>	SYS	When the value increases, the image of the "dark" steps becomes darker.	1
940	Image	Density adjustment "auto-matic density" fine adjust-ment		PPC (black)	128 <0-255>	SYS	When the value increases, the image becomes darker.	1
946	Image	Density adjustment "auto-matic density" fine adjust-ment		PPC (black)	5 <1-9>	SYS	When the value decreases, the back-ground becomes darker. When the value increases, the back-ground becomes lighter.	1
949-0	Image	Adjustment of gamma bal-ance	L	PPC (black)	128 <0-255>	SYS	When the value increases, the density in the target area becomes higher. L: Low density area M: Medium density area H: High density area	4
949-1			M	PPC (black)	128 <0-255>	SYS		4
949-2			H	PPC (black)	128 <0-255>	SYS		4
976	Mainte-nance	Equipment number (serial number) display		ALL	-	SYS	When this adjustment is performed with this code, the setting code (08-995) is also per-formed automatically. (10 digits)	1
1004-0	Image	Automatic gamma adjustment	Plain paper	PRT (color)	-	SYS	Automatic adjustment of gradation reproduc-tion in the Full Color Mode (each color of Y, M, C and K) and Black Mode.	7
1004-1			Thick paper 1	PRT (color)	-	SYS		7
1004-2			Thick paper 2	PRT (color)	-	SYS		7
1004-3			Thick paper 3	PRT (color)	-	SYS		7
1004-4			Special paper 1	PRT (color)	-	SYS		7
1004-5			Special paper 2	PRT (color)	-	SYS		7
1004-6			Recycled paper	PRT (color)	-	SYS		7
1004-7			Thick paper 4	PRT (color)	-	SYS		7
1008	Image	Automatic gamma adjust-ment		PRT (color)	-	SYS	Automatic adjustment of gradation reproduc-tion in the Full Color Mode (each color of Y, M, C and K) and Black Mode.	7

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		Adjustment mode (05)						
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1046-0	Image	Adjustment of maximum toner amount (Plain paper)	PS	PRT (color)	255 <0-255>	SYS	When the value decreases, the image becomes lighter. **Note:** When the value increases, the image offsetting may occur.	4
1046-1			PCL	PRT (color)	255 <0-255>	SYS		4
1047-0	Image	Adjustment of maximum toner amount (Thick paper 1)	PS	PRT (color)	255 <0-255>	SYS		4
1047-1			PCL	PRT (color)	255 <0-255>	SYS		4
1048-0	Image	Adjustment of maximum toner amount (Thick paper 2)	PS	PRT (color)	255 <0-255>	SYS		4
1048-1			PCL	PRT (color)	255 <0-255>	SYS		4
1049-0	Image	Adjustment of maximum toner amount (Thick paper 3)	PS	PRT (color)	255 <0-255>	SYS		4
1049-1			PCL	PRT (color)	255 <0-255>	SYS		4
1050-0	Image	Adjustment of maximum toner amount (OHP film)	PS	PRT (color)	200 <0-255>	SYS		4
1050-1			PCL	PRT (color)	200 <0-255>	SYS		4
1051-0	Image	Adjustment of maximum toner amount (Special paper 1)	PS	PRT (color)	255 <0-255>	SYS		4
1051-1			PCL	PRT (color)	255 <0-255>	SYS		4
1052-0	Image	Adjustment of maximum toner amount (Special paper 2)	PS	PRT (color)	255 <0-255>	SYS		4
1052-1			PCL	PRT (color)	255 <0-255>	SYS		4
1053-0	Image	Adjustment of maximum toner amount (Recycled paper)	PS	PRT (color)	255 <0-255>	SYS		4
1053-1			PCL	PRT (color)	255 <0-255>	SYS		4
1054-0	Image	Adjustment of maximum toner amount (Thick paper 4)	PS	PRT (color)	255 <0-255>	SYS		4
1054-1			PCL	PRT (color)	255 <0-255>	SYS		4
1055	Image	Upper limit in toner saving mode		PRT (color)	176 <0-255>	SYS	When the value decreases, the printing density becomes lighter.	1
1057				PRT (color)	176 <0-255>	SYS		1
1060	Image	Reproduction ratio fine adjustment of primary scanning direction		SCN (color)	128 <0-255>	SYS	When the value increases by "1", the reproduction ratio of pri-mary scanning direction increases by approx. 0.1%. Effective with the reso-lution other than 600 dpi.	1

Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1065	Image	Judgment threshold for ACS		SCN (color)	70 <0-255>	SYS	When the value increases, originals tend to be judged as monochrome, and when the value decreases, they tend to be judged as color in autocolor mode.	1
1066	Image	Judgment threshold for ACS on original set on the RADF		SCN (color)	70 <0-255>	SYS		1
1070	Image	Fine adjust-ment of back-ground	Text	SCN (color)	50 <0-50>	SYS	Adjusts the level of background. When the value increases, the background becomes darker.	1
1071			Printed image	SCN (color)	50 <0-50>	SYS		1
1072			Photo	SCN (color)	50 <0-50>	SYS		1
1075	Image	Fine adjust-ment of black density	Text	SCN (color)	0 <0-4>	SYS	Adjusts the black den-sity of the scanned image. When the value increases, the black density becomes darker.	1
1076			Printed image	SCN (color)	0 <0-4>	SYS		1
1077			Photo	SCN (color)	0 <0-4>	SYS		1
1080	Image	RGB conver-sion method selection	Text	SCN (color)	0 <0-3>	SYS	Sets the color space format of the output image. 0: sRGB 1: AppleRGB 2: ROMMRGB 3: AdobeRGB	1
1081			Printed image	SCN (color)	0 <0-3>	SYS		1
1082			Photo	SCN (color)	0 <0-3>	SYS		1
1086	Image	Sharpness adjustment	Text	SCN (color)	128 <0-255>	SYS	When the value increases, the image becomes sharper. When the value decreases, the image becomes softer. The smaller the value is, the less the moire becomes.	1
1087			Printed image	SCN (color)	128 <0-255>	SYS		1
1088			Photo	SCN (color)	128 <0-255>	SYS		1
1092-0	Image	Toner limit threshold set-ting / Plain paper: Smooth	PS	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
1092-1			PCL	PRT (color)	128 <0-255>	SYS		4
1093-0	Image	Toner limit threshold set-ting / Thick paper 1: Smooth	PS	PRT (color)	113 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
1093-1			PCL	PRT (color)	113 <0-255>	SYS		4
1094-0	Image	Toner limit threshold set-ting / Thick paper 2: Smooth	PS	PRT (color)	113 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
1094-1			PCL	PRT (color)	113 <0-255>	SYS		4
1095-0	Image	Toner limit threshold set-ting / Thick paper 3: Smooth	PS	PRT (color)	113 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
1095-1			PCL	PRT (color)	113 <0-255>	SYS		4

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				Adjustment mode (05)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1096-0	Image	Toner limit threshold set-ting / OHP film: Smooth	PS	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
1096-1			PCL	PRT (color)	128 <0-255>	SYS		4
1550	Image	Density adjustment "manual den-sity" fine adjustment/ Center value	Text/Photo	PPC (color)	128 <0-255>	SYS	When the value increases, the image becomes darker.	1
1551			Text	PPC (color)	128 <0-255>	SYS		1
1552			Printed image	PPC (color)	128 <0-255>	SYS		1
1553			Photo	PPC (color)	128 <0-255>	SYS		1
1554			Map	PPC (color)	128 <0-255>	SYS		1
1555	Image	Density adjustment "manual den-sity" fine adjustment/ Center value (mono color)	Text/Photo	PPC (color)	128 <0-255>	SYS	When the value increases, the image becomes darker.	1
1556			Text	PPC (color)	128 <0-255>	SYS		1
1557			Printed image	PPC (color)	128 <0-255>	SYS		1
1558			Photo	PPC (color)	128 <0-255>	SYS		1
1559			Map	PPC (color)	128 <0-255>	SYS		1
1560	Image	Density adjustment "manual den-sity" fine adjustment/ Dark step value	Text/Photo	PPC (color)	20 <0-255>	SYS	Sets the changing amount by 1 step at the density adjustment. When the value increases, the image of the "dark" steps becomes darker.	1
1561			Text	PPC (color)	20 <0-255>	SYS		1
1562			Printed image	PPC (color)	20 <0-255>	SYS		1
1563			Photo	PPC (color)	20 <0-255>	SYS		1
1564			Map	PPC (color)	20 <0-255>	SYS		1
1565	Image	Density adjustment "manual den-sity" fine adjustment/ Dark step value (mono color)	Text/Photo	PPC (color)	20 <0-255>	SYS	Sets the changing amount by 1 step at the density adjustment. When the value increases, the image of the "dark" steps becomes darker.	1
1566			Text	PPC (color)	20 <0-255>	SYS		1
1567			Printed image	PPC (color)	20 <0-255>	SYS		1
1568			Photo	PPC (color)	20 <0-255>	SYS		1
1569			Map	PPC (color)	20 <0-255>	SYS		1
1570	Image	Density adjustment "manual den-sity" fine adjustment/ Light step value	Text/Photo	PPC (color)	20 <0-255>	SYS	Sets the changing amount by 1 step at the density adjustment. When the value increases, the image of the "light" steps becomes lighter.	1
1571			Text	PPC (color)	20 <0-255>	SYS		1
1572			Printed image	PPC (color)	20 <0-255>	SYS		1
1573			Photo	PPC (color)	20 <0-255>	SYS		1
1574			Map	PPC (color)	20 <0-255>	SYS		1

					Adjustment mode (05)			
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1575	Image	Density adjustment "manual den-sity" fine adjustment/ Light step value (mono color)	Text/Photo	PPC (color)	20 <0-255>	SYS	Sets the changing amount by 1 step at the density adjustment. When the value increases, the image of the "light" steps becomes lighter.	1
1576			Text	PPC (color)	20 <0-255>	SYS		1
1577			Printed image	PPC (color)	20 <0-255>	SYS		1
1578			Photo	PPC (color)	20 <0-255>	SYS		1
1579			Map	PPC (color)	20 <0-255>	SYS		1
1580	Image	Density adjustment "automatic density" fine adjustment	Text/Photo	PPC (color)	140 <0-255>	SYS	When the value increases, the image becomes darker.	1
1581			Text	PPC (color)	128 <0-255>	SYS		1
1582			Printed image	PPC (color)	128 <0-255>	SYS		1
1583			Photo	PPC (color)	128 <0-255>	SYS		1
1584			Map	PPC (color)	128 <0-255>	SYS		1
1585	Image	Density adjustment "automatic density" fine adjustment (mono color)	Text/Photo	PPC (color)	128 <0-255>	SYS	When the value increases, the image becomes darker.	1
1586			Text	PPC (color)	128 <0-255>	SYS		1
1587			Printed image	PPC (color)	128 <0-255>	SYS		1
1588			Photo	PPC (color)	128 <0-255>	SYS		1
1589			Map	PPC (color)	128 <0-255>	SYS		1
1612	Image	Adjustment of maximum toner amount	Plain paper	PPC (color)	255 <0-255>	SYS	When the value decreases, the image becomes lighter. **Note:** When the value increases, image offsetting may occur.	1
1613			Thick paper 1	PPC (color)	252 <0-255>	SYS		1
1614			Thick paper 2	PPC (color)	252 <0-255>	SYS		1
1615			Thick paper 3	PPC (color)	252 <0-255>	SYS		1
1616			OHP film	PPC (color)	240 <0-255>	SYS		1
1617			Special paper 1	PPC (color)	252 <0-255>	SYS		1
1618			Special paper 2	PPC (color)	252 <0-255>	SYS		1
1619			Recycled paper	PPC (color)	255 <0-255>	SYS		1
1620			Thick paper 4	PPC (color)	252 <0-255>	SYS		1

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		Adjustment mode (05)						
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1630	Image	Maximum text density adjustment	Y	PPC (color)	5 <0-10>	SYS	When the value increases by "1", the maximum text density of each color becomes darker.	1
1631			M	PPC (color)	5 <0-10>	SYS		1
1632			C	PPC (color)	5 <0-10>	SYS		1
1633			K	PPC (color)	5 <0-10>	SYS		1
1642	Image	Automatic gamma adjustment	Color/ Black	PPC	-	SYS	Automatic adjustment of gradation reproduc-tion in the Full Color Mode (each color of Y, M, C and K) and Black Mode.	7
1643			Color	PPC	-	SYS	Automatic adjustment of gradation reproduc-tion in the Full Color Mode (each color of Y, M, C and K).	7
1675	Image	Judgment threshold for ACS		PPC (color)	70 <0-255>	SYS	When the value increases, originals tend to be judged as black, and when the value decreases, they tend to be judged as color in auto-color mode.	1
1676	Image	Judgment threshold for ACS on original set on the RADF		PPC (color)	70 <0-255>	SYS		1
1688	Image	Automatic off-setting adjust-ment for background processing (background density)	Text/Photo	PPC (color)	110 <0-255>	SYS	When the value increases, the back-ground becomes darker.	1
1689			Text	PPC (color)	128 <0-255>	SYS		1
1690			Printed image	PPC (color)	128 <0-255>	SYS		1
1691			Photo	PPC (color)	128 <0-255>	SYS		1
1692			Map	PPC (color)	128 <0-255>	SYS		1
1693	Image	Automatic off-setting adjust-ment for background processing (high density)	Text/Photo	PPC (color)	128 <0-255>	SYS	When the value increases, the high den-sity area darker.	1
1694			Text	PPC (color)	128 <0-255>	SYS		1
1695			Printed image	PPC (color)	128 <0-255>	SYS		1
1696			Photo	PPC (color)	128 <0-255>	SYS		1
1697			Map	PPC (color)	128 <0-255>	SYS		1

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Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1698	Image	Manual offset-ting adjust-ment for background processing (background density)	Text/Photo	PPC (color)	128 <0-255>	SYS	When the value increases, the back-ground becomes darker.	1
1699			Text	PPC (color)	128 <0-255>	SYS		1
1700			Printed image	PPC (color)	128 <0-255>	SYS		1
1701			Photo	PPC (color)	128 <0-255>	SYS		1
1702			Map	PPC (color)	128 <0-255>	SYS		1
1708	Image	Manual offset-ting adjust-ment for background processing (high density)	Text/Photo	PPC (color)	128 <0-255>	SYS	When the value increases, the high den-sity area darker.	1
1709			Text	PPC (color)	128 <0-255>	SYS		1
1710			Printed image	PPC (color)	128 <0-255>	SYS		1
1711			Photo	PPC (color)	128 <0-255>	SYS		1
1712			Map	PPC (color)	128 <0-255>	SYS		1
1725	Image	Text/Photo reproduction level adjustment		PPC (color)	0 <0-5>	SYS	0: Default 1: Photo oriented 2 (The printed image reproduction level higher than that of the Photo oriented 1) 2: Photo oriented 1 (The printed image reproduction level higher than that of the Default) 3: Equivalent to the Default 4: Text oriented 1 (The text reproduction level higher than that of the Default) 5: Text oriented 2 (The text reproduction level higher than that of the Text ori-ented 1)	1
1737	Image	Sharpness adjustment / Full Color Mode	Text/Photo	PPC (color)	128 <0-255>	SYS	When the value increases, the image becomes sharper. When the value decreases, the image becomes softer. The smaller the value is, the less the moire becomes. * The default value 0 is equivalent to 16 (center value).	1
1738			Text	PPC (color)	128 <0-255>	SYS		1
1739			Printed image	PPC (color)	128 <0-255>	SYS		1
1740			Photo	PPC (color)	128 <0-255>	SYS		1
1741			Map	PPC (color)	128 <0-255>	SYS		1

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Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1757	Image	Sharpness adjustment / Auto Color Mode (Text/Photo)		PPC (color)	128 <0-255>	SYS	When the value increases, the image becomes sharper. When the value decreases, the image becomes softer. The smaller the value is, the less the moire becomes. * The default value 0 is equivalent to 16(center value).	1
1761	Image	Black reproduction switch-ing		PPC (color)	0 <0-1>	SYS	0: Default 1: Black reproduction oriented	1
1769-0	Image	Marker color adjustment	Yellow	PPC (color)	3 <0-6>	SYS	The color of the one-touch adjustment "Marker" can be adjusted. ▭ P. 3-40 "3.7.11 Color Adjustment of Marker"	4
1769-1			Magenta	PPC (color)	3 <0-6>	SYS		4
1769-2			Cyan	PPC (color)	3 <0-6>	SYS		4
1769-3			Red	PPC (color)	3 <0-6>	SYS		4
1769-4			Green	PPC (color)	3 <0-6>	SYS		4
1769-5			Blue	PPC (color)	3 <0-6>	SYS		4

Adjustment mode (05)								
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1779-0	Image	Color bal-ance adjust-ment for "Y" (Text/Photo)	L	PPC (color)	128 <0-255>	SYS	The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area	4
1779-1			M	PPC (color)	128 <0-255>	SYS		4
1779-2			H	PPC (color)	128 <0-255>	SYS		4
1780-0	Image	Color bal-ance adjust-ment for "Y" (Text)	L	PPC (color)	128 <0-255>	SYS		4
1780-1			M	PPC (color)	128 <0-255>	SYS		4
1780-2			H	PPC (color)	128 <0-255>	SYS		4
1781-0	Image	Color bal-ance adjust-ment for "Y" (Printed image)	L	PPC (color)	128 <0-255>	SYS		4
1781-1			M	PPC (color)	128 <0-255>	SYS		4
1781-2			H	PPC (color)	128 <0-255>	SYS		4
1782-0	Image	Color bal-ance adjust-ment for "Y" (Photo)	L	PPC (color)	128 <0-255>	SYS		4
1782-1			M	PPC (color)	128 <0-255>	SYS		4
1782-2			H	PPC (color)	128 <0-255>	SYS		4
1783-0	Image	Color bal-ance adjust-ment for "Y" (Map)	L	PPC (color)	128 <0-255>	SYS		4
1783-1			M	PPC (color)	128 <0-255>	SYS		4
1783-2			H	PPC (color)	128 <0-255>	SYS		4

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Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1784-0	Image	Color bal-ance adjust-ment for "M" (Text/Photo)	L	PPC (color)	128 <0-255>	SYS	The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area	4
1784-1			M	PPC (color)	128 <0-255>	SYS		4
1784-2			H	PPC (color)	128 <0-255>	SYS		4
1785-0	Image	Color bal-ance adjust-ment for "M" (Text)	L	PPC (color)	128 <0-255>	SYS		4
1785-1			M	PPC (color)	128 <0-255>	SYS		4
1785-2			H	PPC (color)	128 <0-255>	SYS		4
1786-0	Image	Color bal-ance adjust-ment for "M" (Printed image)	L	PPC (color)	128 <0-255>	SYS		4
1786-1			M	PPC (color)	128 <0-255>	SYS		4
1786-2			H	PPC (color)	128 <0-255>	SYS		4
1787-0	Image	Color bal-ance adjust-ment for "M" (Photo)	L	PPC (color)	128 <0-255>	SYS		4
1787-1			M	PPC (color)	128 <0-255>	SYS		4
1787-2			H	PPC (color)	128 <0-255>	SYS		4
1788-0	Image	Color bal-ance adjust-ment for "M" (Map)	L	PPC (color)	128 <0-255>	SYS		4
1788-1			M	PPC (color)	128 <0-255>	SYS		4
1788-2			H	PPC (color)	128 <0-255>	SYS		4
1789-0	Image	Color bal-ance adjust-ment for "C" (Text/Photo)	L	PPC (color)	128 <0-255>	SYS		4
1789-1			M	PPC (color)	128 <0-255>	SYS		4
1789-2			H	PPC (color)	128 <0-255>	SYS		4
1790-0	Image	Color bal-ance adjust-ment for "C" (Text)	L	PPC (color)	128 <0-255>	SYS		4
1790-1			M	PPC (color)	128 <0-255>	SYS		4
1790-2			H	PPC (color)	128 <0-255>	SYS		4
1791-0	Image	Color bal-ance adjust-ment for "C" (Printed image)	L	PPC (color)	128 <0-255>	SYS		4
1791-1			M	PPC (color)	128 <0-255>	SYS		4
1791-2			H	PPC (color)	128 <0-255>	SYS		4
1792-0	Image	Color bal-ance adjust-ment for "C" (Photo)	L	PPC (color)	128 <0-255>	SYS		4
1792-1			M	PPC (color)	128 <0-255>	SYS		4
1792-2			H	PPC (color)	128 <0-255>	SYS		4

Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1793-0	Image	Color bal-ance adjust-ment for "C" (Map)	L	PPC (color)	128 <0-255>	SYS	The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area	4
1793-1			M	PPC (color)	128 <0-255>	SYS		4
1793-2			H	PPC (color)	128 <0-255>	SYS		4
1794-0	Image	Color bal-ance adjust-ment for "K" (Text/Photo)	L	PPC (color)	128 <0-255>	SYS		4
1794-1			M	PPC (color)	128 <0-255>	SYS		4
1794-2			H	PPC (color)	128 <0-255>	SYS		4
1795-0	Image	Color bal-ance adjust-ment for "K" (Text)	L	PPC (color)	128 <0-255>	SYS		4
1795-1			M	PPC (color)	128 <0-255>	SYS		4
1795-2			H	PPC (color)	128 <0-255>	SYS		4
1796-0	Image	Color bal-ance adjust-ment for "K" (Printed image)	L	PPC (color)	128 <0-255>	SYS		4
1796-1			M	PPC (color)	128 <0-255>	SYS		4
1796-2			H	PPC (color)	128 <0-255>	SYS		4
1797-0	Image	Color bal-ance adjust-ment for "K" (Photo)	L	PPC (color)	128 <0-255>	SYS		4
1797-1			M	PPC (color)	128 <0-255>	SYS		4
1797-2			H	PPC (color)	128 <0-255>	SYS		4
1798-0	Image	Color bal-ance adjust-ment for "K" (Map)	L	PPC (color)	128 <0-255>	SYS		4
1798-1			M	PPC (color)	128 <0-255>	SYS		4
1798-2			H	PPC (color)	128 <0-255>	SYS		4
1800-0	Image control	Upper limit value of con-trast voltage	Y	ALL	600 <350-700>	M	Sets the upper limit value of the contrast voltage at the image quality control. (Unit: V)	4
1800-1			M	ALL	600 <350-700>	M		4
1800-2			C	ALL	600 <350-700>	M		4
1800-3			K	ALL	600 <350-700>	M		4

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Adjustment mode (05)								
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1801-0	Image control	Lower limit value of con-trast voltage	Y	ALL	150 <120-350>	M	Sets the lower limit value of the contrast voltage at the image quality control. (Unit: V)	4
1801-1			M	ALL	150 <120-350>	M		4
1801-2			C	ALL	150 <120-350>	M		4
1801-3			K	ALL	140 <120-350>	M		4
1802-0	Image control	Upper limit value of laser power	Y	ALL	600 <322-750>	M	Sets the upper limit value of the laser power at the image quality control. (Unit: μW)	4
1802-1			M	ALL	600 <322-750>	M		4
1802-2			C	ALL	600 <322-750>	M		4
1802-3			K	ALL	600 <322-750>	M		4
1803-0	Image control	Lower limit value of laser power	Y	ALL	260 <150-322>	M	Sets the lower limit value of the laser power at the image quality control. (Unit: μW)	4
1803-1			M	ALL	260 <150-322>	M		4
1803-2			C	ALL	260 <150-322>	M		4
1803-3			K	ALL	260 <150-322>	M		4
1811-0	Image control	Contrast volt-age/upper limit actual value display	Y	ALL	600 <0-999>	M	Displays the upper limit value of the contrast voltage when printing is operated. (Unit: V)	10
1811-1			M	ALL	600 <0-999>	M		10
1811-2			C	ALL	600 <0-999>	M		10
1811-3			K	ALL	600 <0-999>	M		10
1812-0	Image control	Contrast volt-age/lower limit actual value display	Y	ALL	150 <0-999>	M	Displays the lower limit value of the contrast voltage when printing is operated. (Unit: V)	10
1812-1			M	ALL	150 <0-999>	M		10
1812-2			C	ALL	150 <0-999>	M		10
1812-3			K	ALL	140 <0-999>	M		10

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Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1815-0	Image control	Contrast volt-age/correc-tion number of time display	Y	ALL	0 <0-255>	M	Displays the actual number of time the con-trast voltage has been corrected at the closed-loop control.	10
1815-1			M	ALL	0 <0-255>	M		10
1815-2			C	ALL	0 <0-255>	M		10
1815-3			K	ALL	0 <0-255>	M		10
1816-0	Image control	Laser power correction/ number of time display	Y	ALL	0 <0-255>	M	Displays the actual number of time the laser power has been corrected at the closed-loop control.	10
1816-1			M	ALL	0 <0-255>	M		10
1816-2			C	ALL	0 <0-255>	M		10
1816-3			K	ALL	0 <0-255>	M		10
2409-0	Develop-ment	Decelerating mode Adjustment of auto-toner ini-tial adjust-ment reference set-ting value (YMCK)	Y	ALL	125 <0-255>	M		4
2409-1			M	ALL	125 <0-255>	M		4
2409-2			C	ALL	125 <0-255>	M		4
2409-3			K	ALL	125 <0-255>	M		4
2411	Develop-ment	High speed mode Adjustment of auto-toner initial adjustment refer-ence setting value (BK)		ALL	137 <0-255>	M		1
2598-0	Transfer	Discharge blade bias high-voltage adjustment value	Y	ALL	875 <600-1200>	M		4
2598-1			M	ALL	875 <600-1200>	M		4
2598-2			C	ALL	875 <600-1200>	M		4
2598-3			K	ALL	875 <600-1200>	M		4
2622-0	Transfer	Main charger grid calibra-tion voltage (Y)	Low	ALL	300 <0-1400>	M	(Unit: V)	4
2622-1			High	ALL	1200 <0-1400>	M		4
2623-0	Transfer	Main charger grid calibra-tion voltage (M)	Low	ALL	300 <0-1400>	M	(Unit: V)	4
2623-1			High	ALL	1200 <0-1400>	M		4
2624-0	Transfer	Main charger grid calibra-tion voltage (C)	Low	ALL	300 <0-1400>	M	(Unit: V)	4
2624-1			High	ALL	1200 <0-1400>	M		4

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Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
2625-0	Transfer	Main charger grid calibra-tion voltage (K)	Low	ALL	300 <0-1400>	M	(Unit: V)	4
2625-1			High	ALL	1200 <0-1400>	M		4
2627-0	Transfer	Developer bias DC (-) calibration voltage (Y)	Low	ALL	200 <0-1000>	M	(Unit: V)	4
2627-1			High	ALL	900 <0-1000>	M		4
2628-0	Transfer	Developer bias DC (-) calibration voltage (M)	Low	ALL	200 <0-1000>	M	(Unit: V)	4
2628-1			High	ALL	900 <0-1000>	M		4
2629-0	Transfer	Developer bias DC (-) calibration voltage (C)	Low	ALL	200 <0-1000>	M	(Unit: V)	4
2629-1			High	ALL	900 <0-1000>	M		4
2630-0	Transfer	Developer bias DC (-) calibration voltage (K)	Low	ALL	200 <0-1000>	M	(Unit: V)	4
2630-1			High	ALL	900 <0-1000>	M		4
2725	Image control	Upper limit value of laser power	Black / High speed	ALL	750 <428-750>	M	Sets the upper limit value of the laser power at the image quality control. (Unit: μW)	1
2726	Image control	Lower limit value of laser power	Black / High speed	ALL	340 <150-428>	M	Sets the lower limit value of the laser power at the image quality control. (Unit: μW)	1
2764	Transfer	Drum thermistor tempera-ture display (Y)		ALL	23 <0-100>	M	(Unit: °C)	2

Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
2900-0	Transfer	1st transfer bias RMS value in the normal mode	Y normal speed	ALL	97 <0-255>	M	Displays the 1st trans-fer bias in printing. (bit value)	10
2900-1			M normal speed	ALL	102 <0-255>	M		10
2900-2			C normal speed	ALL	108 <0-255>	M		10
2900-3			K normal speed	ALL	102 <0-255>	M		10
2900-4			CK nor-mal speed	ALL	97 <0-255>	M		10
2900-5			BK Normal speed / High speed	ALL	Refer to content <0-255>	M		10
2900-6			Y deceler-ating	ALL	85 <0-255>	M		10
2900-7			M deceler-ating	ALL	91 <0-255>	M		10
2900-8			C deceler-ating	ALL	102 <0-255>	M	2900-5 <Default value> e-STUDIO2500c:97 e-STUDIO3500c:97 e-STUDIO3510c:108	10
2900-9			K deceler-ating	ALL	91 <0-255>	M		10
2900-10			CK decel-erating	ALL	85 <0-255>	M		10
2900-11			BK decel-erating	ALL	85 <0-255>	M		10
2905-0	Transfer	1st transfer bias resis-tance detec-tion offset	Y normal speed	ALL	5 <0-10>	M	Sets the offset amount of the 1st transfer bias. Offsetting level 0: 0.75 1: 0.80 2: 0.85 3: 0.90 4: 0.95 5: 1.00 6: 1.05 7: 1.10 8: 1.15 9: 1.20 10: 1.25 (Unit: Correcting factor)	4
2905-1			M normal speed	ALL	5 <0-10>	M		4
2905-2			C normal speed	ALL	5 <0-10>	M		4
2905-3			K normal speed	ALL	5 <0-10>	M		4
2905-4			CK nor-mal speed	ALL	5 <0-10>	M		4
2905-5			BK (35/45) Normal speed / High speed	ALL	5 <0-10>	M		4
2905-6			Y deceler-ating	ALL	5 <0-10>	M		4
2905-7			M deceler-ating	ALL	5 <0-10>	M		4
2905-8			C deceler-ating	ALL	5 <0-10>	M		4
2905-9			K deceler-ating	ALL	5 <0-10>	M		4
2905-10			CK decel-erating	ALL	5 <0-10>	M		4
2905-11			BK decel-erating	ALL	5 <0-10>	M		4

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Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
2920-0	Transfer	1st transfer roller bias actual value display of the leading/trail-ing edge of the paper	Y normal speed	ALL	86 <0-255>	M	Displays the 1st trans-fer roller bias (leading/trailing edge of the paper) in printing (bit value)	10
2920-1			M normal speed	ALL	91 <0-255>	M		10
2920-2			C normal speed	ALL	96 <0-255>	M		10
2920-3			K normal speed	ALL	91 <0-255>	M		10
2920-4			CK nor-mal speed	ALL	86 <0-255>	M		10
2920-5			BK (35/45) Normal speed / High speed	ALL	86 <0-255>	M		10
2920-6			Y deceler-ating	ALL	77 <0-255>	M		10
2920-7			M deceler-ating	ALL	81 <0-255>	M		10
2920-8			C deceler-ating	ALL	91 <0-255>	M		10
2920-9			K deceler-ating	ALL	81 <0-255>	M		10
2920-10			CK decel-erating	ALL	77 <0-255>	M		10
2920-11			BK decel-erating	ALL	77 <0-255>	M		10
2921-0	Transfer	1st transfer roller bias cor-rection factor of the leading/trailing edge of the paper	Y normal speed	ALL	85 <50-100>	M	Corrects the 1st trans-fer leading/trailing edge bias	4
2921-1			M normal speed	ALL	85 <50-100>	M		4
2921-2			C normal speed	ALL	85 <50-100>	M		4
2921-3			K normal speed	ALL	85 <50-100>	M		4
2921-4			CK nor-mal speed	ALL	85 <50-100>	M		4
2921-5			BK (35/45) Normal speed / High speed	ALL	85 <50-100>	M		4
2921-6			Y deceler-ating	ALL	85 <50-100>	M		4
2921-7			M deceler-ating	ALL	85 <50-100>	M		4
2921-8			C deceler-ating	ALL	85 <50-100>	M		4
2921-9			K deceler-ating	ALL	85 <50-100>	M		4
2921-10			CK decel-erating	ALL	85 <50-100>	M		4
2921-11			BK decel-erating	ALL	85 <50-100>	M		4

Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
2924-0	Transfer	2nd transfer bias RMS value in the color mode (Top side)	Plain paper	ALL	Refer to content <0-255>	M	Displays the 2nd trans-fer bias when printing the top side in the color mode. (bit value) 2924-0, 2924-7 <Default value> e-STUDIO2500c:142 e-STUDIO3500c:142 e-STUDIO3510c:137 2924-3 <Default value> e-STUDIO2500c:137 e-STUDIO3500c:137 e-STUDIO3510c:127	10
2924-1			Thick paper 1	ALL	142 <0-255>	M		10
2924-2			Thick paper 2	ALL	132 <0-255>	M		10
2924-3			Thick paper 3 / Thick paper 4	ALL	Refer to content <0-255>	M		10
2924-4			Overhead transpar-encies	ALL	127 <0-255>	M		10
2924-5			Special paper 1	ALL	127 <0-255>	M		10
2924-6			Special paper 2	ALL	127 <0-255>	M		10
2924-7			Recycled paper	ALL	Refer to content <0-255>	M		10
2925-0	Transfer	2nd transfer bias RMS value in the color mode (Back side)	Plain paper	ALL	Refer to content <0-255>	M	Displays the 2nd trans-fer bias when printing the back side in the color mode. (bit value) 2925-0, 2925-7 <Default value> e-STUDIO2500c:125 e-STUDIO3500c:125 e-STUDIO3510c:120	10
2925-1			Thick paper 1	ALL	107 <0-255>	M		10
2925-2			Thick paper 2	ALL	87 <0-255>	M		10
2925-3			Thick paper 3 / Thick paper 4	ALL	87 <0-255>	M		10
2925-5			Special paper 1	ALL	87 <0-255>	M		10
2925-6			Special paper 2	ALL	87 <0-255>	M		10
2925-7			Recycled paper	ALL	Refer to content <0-255>	M		10

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Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
2926-0	Transfer	2nd transfer bias RMS value in the black mode (Top side)	Plain paper	ALL	Refer to content <0-255>	M	Displays the 2nd trans-fer bias when printing the top side in the black mode. (bit value)	10
2926-1			Thick paper 1	ALL	142 <0-255>	M		10
2926-2			Thick paper 2	ALL	132 <0-255>	M		10
2926-3			Thick paper 3 / Thick paper 4	ALL	127 <0-255>	M		10
2926-4			Overhead transpar-encies	ALL	127 <0-255>	M	2926-0, 2926-7 <Default value>	10
2926-5			Special paper 1	ALL	127 <0-255>	M	e-STUDIO2500c:142 e-STUDIO3500c:142	10
2926-6			Special paper 2	ALL	127 <0-255>	M	e-STUDIO3510c:137	10
2926-7			Recycled paper	ALL	Refer to content <0-255>	M		10
2927-0	Transfer	2nd transfer bias RMS value in the black mode (Back side)	Plain paper	ALL	Refer to content <0-255>	M	Displays the 2nd trans-fer bias when printing the back side in the black mode. (bit value)	10
2927-1			Thick paper 1	ALL	107 <0-255>	M		10
2927-2			Thick paper 2	ALL	87 <0-255>	M		10
2927-3			Thick paper 3 / Thick paper 4	ALL	87 <0-255>	M		10
2927-5			Special paper 1	ALL	87 <0-255>	M	2927-0, 2927-7 <Default value>	10
2927-6			Special paper 2	ALL	87 <0-255>	M	e-STUDIO2500c:125 e-STUDIO3500c:125	10
2927-7			Recycled paper	ALL	Refer to content <0-255>	M	e-STUDIO3510c:120	10

Adjustment mode (05)

Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
2934-0	Transfer	Bias offset in the color mode (Top side)	Plain paper	ALL	5 <0-10>	M	Sets the bias offset amount of the 2nd transfer bias in the color mode (Top side). Offsetting level 0: 0 1: 0.2 2: 0.4 3: 0.6 4: 0.8 5: 1.0 6: 1.2 7: 1.4 8: 1.6 9: 1.8 10: 2.0	4
2934-1			Thick paper 1	ALL	5 <0-10>	M		4
2934-2			Thick paper 2	ALL	5 <0-10>	M		4
2934-3			Thick paper 3 / Thick paper 4	ALL	5 <0-10>	M		4
2934-4			Overhead transpar-encies	ALL	5 <0-10>	M		4
2934-5			Special paper 1	ALL	5 <0-10>	M		4
2934-6			Special paper 2	ALL	5 <0-10>	M		4
2934-7			Recycled paper	ALL	5 <0-10>	M		4
2935-0	Transfer	Bias offset in the color mode (Back side)	Plain paper	ALL	5 <0-10>	M	Sets the bias offset amount of the 2nd transfer bias in the color mode (Back side). Offsetting level 0: 0 1: 0.2 2: 0.4 3: 0.6 4: 0.8 5: 1.0 6: 1.2 7: 1.4 8: 1.6 9: 1.8 10: 2.0	4
2935-1			Thick paper 1	ALL	5 <0-10>	M		4
2935-2			Thick paper 2	ALL	5 <0-10>	M		4
2935-3			Thick paper 3 / Thick paper 4	ALL	5 <0-10>	M		4
2935-5			Special paper 1	ALL	5 <0-10>	M		4
2935-6			Special paper 2	ALL	5 <0-10>	M		4
2935-7			Recycled paper	ALL	5 <0-10>	M		4
2936-0	Transfer	Bias offset in the black mode (Top side)	Plain paper	ALL	5 <0-10>	M	Sets the bias offset amount of the 2nd transfer bias in the black mode (Top side). Offsetting level 0: 0 1: 0.2 2: 0.4 3: 0.6 4: 0.8 5: 1.0 6: 1.2 7: 1.4 8: 1.6 9: 1.8 10: 2.0	4
2936-1			Thick paper 1	ALL	5 <0-10>	M		4
2936-2			Thick paper 2	ALL	5 <0-10>	M		4
2936-3			Thick paper 3 / Thick paper 4	ALL	5 <0-10>	M		4
2936-4			Overhead transpar-encies	ALL	5 <0-10>	M		4
2936-5			Special paper 1	ALL	5 <0-10>	M		4
2936-6			Special paper 2	ALL	5 <0-10>	M		4
2936-7			Recycled paper	ALL	5 <0-10>	M		4

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					Adjustment mode (05)			
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
2937-0	Transfer	Bias offset in the black mode (Back side)	Plain paper	ALL	5 <0-10>	M	Sets the bias offset amount of the 2nd transfer bias in the black mode (Back side). Offsetting level 0: 0 1: 0.2 2: 0.4 3: 0.6 4: 0.8 5: 1.0 6: 1.2 7: 1.4 8: 1.6 9: 1.8 10: 2.0	4
2937-1			Thick paper 1	ALL	5 <0-10>	M		4
2937-2			Thick paper 2	ALL	5 <0-10>	M		4
2937-3			Thick paper 3 / Thick paper 4	ALL	5 <0-10>	M		4
2937-5			Special paper 1	ALL	5 <0-10>	M		4
2937-6			Special paper 2	ALL	5 <0-10>	M		4
2937-7			Recycled paper	ALL	5 <0-10>	M		4
2938-0	Transfer	2nd transfer leading/trail-ing edge bias correction fac-tor (Top side in the color mode)	Plain paper	ALL	0 <0-10>	M	Corrects the 2nd trans-fer leading/trailing edge bias (Top side in the color mode). Offsetting level 0: 1.00 1: 0.95 2: 0.90 3: 0.85 4: 0.80 5: 0.75 6: 0.70 7: 0.65 8: 0.60 9: 0.55 10: 0.50	4
2938-1			Thick paper 1	ALL	0 <0-10>	M		4
2938-2			Thick paper 2	ALL	0 <0-10>	M		4
2938-3			Thick paper 3 / Thick paper 4	ALL	0 <0-10>	M		4
2938-4			Overhead transpar-encies	ALL	0 <0-10>	M		4
2938-5			Special paper 1	ALL	0 <0-10>	M		4
2938-6			Special paper 2	ALL	0 <0-10>	M		4
2938-7			Recycled paper	ALL	0 <0-10>	M		4
2939-0	Transfer	2nd transfer leading/trail-ing edge bias correction fac-tor (Back side in the color mode)	Plain paper	ALL	0 <0-10>	M	Corrects the 2nd trans-fer leading/trailing edge bias (Back side in the color mode). Offsetting level 0: 1.00 1: 0.95 2: 0.90 3: 0.85 4: 0.80 5: 0.75 6: 0.70 7: 0.65 8: 0.60 9: 0.55 10: 0.50	4
2939-1			Thick paper 1	ALL	0 <0-10>	M		4
2939-2			Thick paper 2	ALL	0 <0-10>	M		4
2939-3			Thick paper 3 / Thick paper 4	ALL	0 <0-10>	M		4
2939-5			Special paper 1	ALL	0 <0-10>	M		4
2939-6			Special paper 2	ALL	0 <0-10>	M		4
2939-7			Recycled paper	ALL	0 <0-10>	M		4

Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
2940-0	Transfer	2nd transfer leading/trail-ing edge bias correction fac-tor (Top side in the black mode)	Plain paper	ALL	0 <0-10>	M	Corrects the 2nd trans-fer leading/trailing edge bias (Top side in the black mode). Offsetting level 0: 1.00 1: 0.95 2: 0.90 3: 0.85 4: 0.80 5: 0.75 6: 0.70 7: 0.65 8: 0.60 9: 0.55 10: 0.50	4
2940-1			Thick paper 1	ALL	0 <0-10>	M		4
2940-2			Thick paper 2	ALL	0 <0-10>	M		4
2940-3			Thick paper 3 / Thick paper 4	ALL	0 <0-10>	M		4
2940-4			Overhead transpar-encies	ALL	0 <0-10>	M		4
2940-5			Special paper 1	ALL	0 <0-10>	M		4
2940-6			Special paper 2	ALL	0 <0-10>	M		4
2940-7			Recycled paper	ALL	0 <0-10>	M		4
2941-0	Transfer	2nd transfer leading/trail-ing edge bias correction fac-tor (Back side in the black mode)	Plain paper	ALL	0 <0-10>	M	Corrects the 2nd trans-fer leading/trailing edge bias (Back side in the black mode). Offsetting level 0: 1.00 1: 0.95 2: 0.90 3: 0.85 4: 0.80 5: 0.75 6: 0.70 7: 0.65 8: 0.60 9: 0.55 10: 0.50	4
2941-1			Thick paper 1	ALL	0 <0-10>	M		4
2941-2			Thick paper 2	ALL	0 <0-10>	M		4
2941-3			Thick paper 3 / Thick paper 4	ALL	0 <0-10>	M		4
2941-5			Special paper 1	ALL	0 <0-10>	M		4
2941-6			Special paper 2	ALL	0 <0-10>	M		4
2941-7			Recycled paper	ALL	0 <0-10>	M		4
2961-0	Transfer	Number of time of clean-ing at printing end	Normal speed / High speed	ALL	0 <0-7>	M	0: once 1: twice 2: 3times 3: 5times 4: 7times 5: 10times 6: 12times 7: 15times	4
2961-1			Decelerat-ing	ALL	0 <0-7>	M		4
2962-0	Transfer	Number of time of clean-ing at jam recovery / bypass non-standard printing / tab paper printing.	Normal speed / High speed	ALL	5 <0-7>	M	0: once 1: twice 2: 3times 3: 5times 4: 7times 5: 10times 6: 12times 7: 15times	4
2962-1			Decelerat-ing	ALL	5 <0-7>	M		4
2963-0	Transfer	Number of time of clean-ing at image quality con-trol end	Normal speed / High speed	ALL	0 <0-7>	M	0: once 1: twice 2: 3times 3: 5times 4: 7times 5: 10times 6: 12times 7: 15times	4
2963-1			Decelerat-ing	ALL	0 <0-7>	M		4

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Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
2966-0	Transfer	Enforced toner supply / Number of time of clean-ing at the end of fusing-wait period	Normal speed / High speed	ALL	2 <0-7>	M	0: once 1: twice 2: 3times 3: 5times 4: 7times 5: 10times 6: 12times 7: 15times	4
2966-1			Decelerat-ing	ALL	2 <0-7>	M		4
2981-0	Transfer	1st transfer bias constant-current trans-former cali-bration value (K only)	Low	ALL	5 <0-50>	M	(Unit: µA)	4
2981-1			High	ALL	50 <0-50>	M		4
2983-0	Transfer	2nd transfer bias constant-current trans-former cali-bration value	Low	ALL	-50 <-60-30>	M	(Unit: µA)	4
2983-1			High	ALL	20 <-60-30>	M		4
2984-0	Transfer	2nd transfer bias constant-voltage trans-former cali-bration value	Low	ALL	-6000 <-7000-3200>	M	(Unit: V)	4
2984-1			High	ALL	2000 <-7000-3200>	M		4
2985-0	Transfer	1st transfer bias constant-voltage cali-bration value (Y)	Low	ALL	400 <300-4400>	M	(Unit: V)	4
2985-1			High	ALL	4000 <300-4400>	M		4
2986-0	Transfer	1st transfer bias constant-voltage cali-bration value (M)	Low	ALL	400 <300-4400>	M	(Unit: V)	4
2986-1			High	ALL	4000 <300-4400>	M		4
2987-0	Transfer	1st transfer bias constant-voltage cali-bration value (C)	Low	ALL	400 <300-4400>	M	(Unit: V)	4
2987-1			High	ALL	4000 <300-4400>	M		4
2988-0	Transfer	1st transfer bias constant-voltage cali-bration value (K)	Low	ALL	400 <300-4400>	M	(Unit: V)	4
2988-1			High	ALL	4000 <300-4400>	M		4
4065	Laser	Leading edge position adjustment / Common correction items when decelerating		ALL	40 <0-80>	M	When the value increases by "1", the image shifts toward the trailing edge of the paper by approx. 0.15 mm.	1

Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
4066	Laser	Leading edge position adjustment / Common correction items at high speed		ALL	40 <0-80>	M	When the value increases by "1", the image shifts toward the trailing edge of the paper by approx. 0.2 mm.	1
4067-0	Laser	Leading edge position adjustment Correction items at high speed	1st drawer	ALL	20 <0-40>	M	When the value increases by "1", the image shifts toward the trailing edge of the paper by approx. 0.2 mm.	4
4067-1			2nd drawer	ALL	20 <0-40>	M		4
4067-2			PFP upper drawer	ALL	20 <0-40>	M		4
4067-3			PFP lower drawer	ALL	20 <0-40>	M		4
4067-4			Bypass feed	ALL	20 <0-40>	M		4
4067-5			ADU	ALL	20 <0-40>	M		4
4067-6			LCF	ALL	20 <0-40>	M		4
4100-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section (1st drawer / Plain paper)	Plain paper Long size	ALL	25 <0~63>	M	When the value increases by "1", the aligning amount increases by approx. 0.6 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4100-1			Plain paper Middle size	ALL	25 <0-63>	M		4
4100-2			Plain paper Short size 1	ALL	25 <0-63>	M		4
4100-3			Plain paper Short size 2	ALL	25 <0-63>	M		4
4100-4			Plain paper Short size 3	ALL	25 <0-63>	M		4

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Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
4101-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section (2nd drawer / Plain paper)	Plain paper Long size	ALL	25 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.6 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4101-1			Plain paper Middle size	ALL	25 <0-63>	M		4
4101-2			Plain paper Short size 1	ALL	25 <0-63>	M		4
4101-3			Plain paper Short size 2	ALL	25 <0-63>	M		4
4101-4			Plain paper Short size 3	ALL	25 <0-63>	M		4
4103-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section (Bypass feed / Plain paper)	Plain paper Long size	ALL	20 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.6 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4103-1			Plain paper Middle size	ALL	20 <0-63>	M		4
4103-2			Plain paper Short size 1	ALL	20 <0-63>	M		4
4103-3			Plain paper Short size 2	ALL	22 <0-63>	M		4
4103-4			Plain paper Short size 3	ALL	22 <0-63>	M		4
4104-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section (Bypass feed / Thick paper 1)	Thick paper 1 Long size	ALL	30 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.6 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4104-1			Thick paper 1 Middle size	ALL	30 <0-63>	M		4
4104-2			Thick paper 1 Short size 1	ALL	35 <0-63>	M		4
4104-3			Thick paper 1 Short size 2	ALL	35 <0-63>	M		4
4104-4			Thick paper 1 Short size 3	ALL	35 <0-63>	M		4

Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
4105-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section (Bypass feed / Thick paper 2)	Thick paper 2 Long size	ALL	35 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.6 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4105-1			Thick paper 2 Middle size	ALL	35 <0-63>	M		4
4105-2			Thick paper 2 Short size 1	ALL	35 <0-63>	M		4
4105-3			Thick paper 2 Short size 2	ALL	35 <0-63>	M		4
4105-4			Thick paper 2 Short size 3	ALL	35 <0-63>	M		4
4106-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section (Bypass feed / Thick paper 3)	Thick paper 3 Long size	ALL	35 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.6 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4106-1			Thick paper 3 Middle size	ALL	35 <0-63>	M		4
4106-2			Thick paper 3 Short size 1	ALL	35 <0-63>	M		4
4106-3			Thick paper 3 Short size 2	ALL	35 <0-63>	M		4
4106-4			Thick paper 3 Short size 3	ALL	35 <0-63>	M		4
4107-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section (Bypass feed / OHP film)	OHP film Long size	ALL	30 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.6 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4107-1			OHP film Middle size	ALL	30 <0-63>	M		4
4107-2			OHP film Short size 1	ALL	30 <0-63>	M		4
4107-3			OHP film Short size 2	ALL	30 <0-63>	M		4
4107-4			OHP film Short size 3	ALL	30 <0-63>	M		4

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Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
4108-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section (PFP upper drawer / Plain paper)	Plain paper Long size	ALL	25 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.6 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4108-1			Plain paper Middle size	ALL	25 <0-63>	M		4
4108-2			Plain paper Short size 1	ALL	25 <0-63>	M		4
4108-3			Plain paper Short size 2	ALL	25 <0-63>	M		4
4108-4			Plain paper Short size 3	ALL	25 <0-63>	M		4
4109-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section (PFP lower drawer / Plain paper)	Plain paper Long size	ALL	25 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.6 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4109-1			Plain paper Middle size	ALL	25 <0-63>	M		4
4109-2			Plain paper Short size 1	ALL	25 <0-63>	M		4
4109-3			Plain paper Short size 2	ALL	25 <0-63>	M		4
4109-4			Plain paper Short size 3	ALL	25 <0-63>	M		4

Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
4110-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section (ADU / Plain paper)	Plain paper Long size	ALL	18 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.8 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm	4
4110-1			Plain paper Middle size	ALL	18 <0-63>	M		4
4110-2			Plain paper Short size 1	ALL	6 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 1.0 mm. <Paper length> Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4110-3			Plain paper Short size 2	ALL	6 <0-63>	M		4
4110-4			Plain paper Short size 3	ALL	6 <0-63>	M		4
4111	Paper feeding	Paper aligning amount adjustment at the registra-tion section (LCF)		ALL	25 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.6 mm.	1
4115-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section (1st drawer / Thick paper 1)	Thick paper 1 Long size	ALL	35 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.6 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4115-1			Thick paper 1 Middle size	ALL	35 <0-63>	M		4
4115-2			Thick paper 1 Short size 1	ALL	35 <0-63>	M		4
4115-3			Thick paper 1 Short size 2	ALL	35 <0-63>	M		4
4115-4			Thick paper 1 Short size 3	ALL	35 <0-63>	M		4

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							Adjustment mode (05)		
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents		Pro-cedure
4116-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section (2nd drawer / Thick paper 1)	Thick paper 1 Long size	ALL	35 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.6 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter		4
4116-1			Thick paper 1 Middle size	ALL	35 <0-63>	M			4
4116-2			Thick paper 1 Short size 1	ALL	35 <0-63>	M			4
4116-3			Thick paper 1 Short size 2	ALL	35 <0-63>	M			4
4116-4			Thick paper 1 Short size 3	ALL	35 <0-63>	M			4
4117-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section (PFP upper drawer / Thick paper 1)	Thick paper 1 Long size	ALL	35 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.6 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter		4
4117-1			Thick paper 1 Middle size	ALL	35 <0-63>	M			4
4117-2			Thick paper 1 Short size 1	ALL	35 <0-63>	M			4
4117-3			Thick paper 1 Short size 2	ALL	35 <0-63>	M			4
4117-4			Thick paper 1 Short size 3	ALL	35 <0-63>	M			4
4118-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section (PFP lower drawer / Thick paper 1)	Thick paper 1 Long size	ALL	35 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.6 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter		4
4118-1			Thick paper 1 Middle size	ALL	35 <0-63>	M			4
4118-2			Thick paper 1 Short size 1	ALL	35 <0-63>	M			4
4118-3			Thick paper 1 Short size 2	ALL	35 <0-63>	M			4
4118-4			Thick paper 1 Short size 3	ALL	35 <0-63>	M			4

Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
4120-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section (ADU / Thick paper 1)	Thick paper 1 Long size	ALL	22 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.8 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4120-1			Thick paper 1 Middle size	ALL	22 <0-63>	M		4
4120-2			Thick paper 1 Short size 1	ALL	22 <0-63>	M		4
4120-3			Thick paper 1 Short size 2	ALL	22 <0-63>	M		4
4120-4			Thick paper 1 Short size 3	ALL	22 <0-63>	M		4
4122-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section: 200mm/s(1st drawer / Plain paper)	Plain paper Long size	ALL	15 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.8 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4122-1			Plain paper Middle size	ALL	15 <0-63>	M		4
4122-2			Plain paper Short size 1	ALL	15 <0-63>	M		4
4122-3			Plain paper Short size 2	ALL	15 <0-63>	M		4
4122-4			Plain paper Short size 3	ALL	15 <0-63>	M		4
4123-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section: 200mm/s(2nd drawer / Plain paper)	Plain paper Long size	ALL	15 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.8 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4123-1			Plain paper Middle size	ALL	15 <0-63>	M		4
4123-2			Plain paper Short size 1	ALL	15 <0-63>	M		4
4123-3			Plain paper Short size 2	ALL	15 <0-63>	M		4
4123-4			Plain paper Short size 3	ALL	15 <0-63>	M		4

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					Adjustment mode (05)			

Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
4124-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section: 200mm/s(PFP upper drawer / Plain paper)	Plain paper Long size	ALL	15 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.8 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4124-1			Plain paper Middle size	ALL	15 <0-63>	M		4
4124-2			Plain paper Short size 1	ALL	15 <0-63>	M		4
4124-3			Plain paper Short size 2	ALL	15 <0-63>	M		4
4124-4			Plain paper Short size 3	ALL	15 <0-63>	M		4
4125-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section: 200mm/s(PFP lower drawer / Plain paper)	Plain paper Long size	ALL	15 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.8 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4125-1			Plain paper Middle size	ALL	15 <0-63>	M		4
4125-2			Plain paper Short size 1	ALL	15 <0-63>	M		4
4125-3			Plain paper Short size 2	ALL	15 <0-63>	M		4
4125-4			Plain paper Short size 3	ALL	15 <0-63>	M		4
4126	Paper feeding	Paper aligning amount adjustment at the registra-tion section: 200mm/s(LCF)		ALL	15 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.8 mm.	1

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Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
4127-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section: 200mm/s(Bypass feed / Plain paper)	Plain paper Long size	ALL	15 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.8 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4127-1			Plain paper Middle size	ALL	15 <0-63>	M		4
4127-2			Plain paper Short size 1	ALL	15 <0-63>	M		4
4127-3			Plain paper Short size 2	ALL	15 <0-63>	M		4
4127-4			Plain paper Short size 3	ALL	15 <0-63>	M		4
4128-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section (Bypass feed / Special paper 1)	Special paper 1 Long size	ALL	30 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.6 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4128-1			Special paper 1 Middle size	ALL	30 <0-63>	M		4
4128-2			Special paper 1 Short size 1	ALL	30 <0-63>	M		4
4128-3			Special paper 1 Short size 2	ALL	30 <0-63>	M		4
4128-4			Special paper 1 Short size 3	ALL	30 <0-63>	M		4
4129-0	Paper feeding	Paper aligning amount adjustment at the registra-tion section (Bypass feed / Special paper 1)	Special paper 2 Long size	ALL	30 <0-63>	M	When the value increases by "1", the aligning amount increases by approx. 0.6 mm. <Paper length> Long size: 330 mm or longer Middle size: 220 mm to 329 mm Short size 1: 205 mm to 219 mm Short size 2: 160 mm to 204 mm Short size 3: 159 mm or shorter	4
4129-1			Special paper 2 Middle size	ALL	30 <0-63>	M		4
4129-2			Special paper 2 Short size 1	ALL	30 <0-63>	M		4
4129-3			Special paper 2 Short size 2	ALL	30 <0-63>	M		4
4129-4			Special paper 2 Short size 3	ALL	30 <0-63>	M		4

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Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Pro-cedure
4562	Laser	Leading edge position adjustment correction item on each media type (when decel-erating)	1st drawer	ALL	21 <0-40>	M	When the value increases by "1", the image shifts toward the trailing edge of the paper by approx. 0.15 mm.	1
4563	Laser		2nd drawer	ALL	21 <0-40>	M		1
4564	Laser		PFP upper drawer	ALL	21 <0-40>	M		1
4565	Laser		PFP lower drawer	ALL	21 <0-40>	M		1
4567-0	Laser	Leading edge position adjustment correction item on each media type Bypass feed (when decel-erating)	Thick paper 1	ALL	21 <0-40>	M	When the value increases by "1", the image shifts toward the trailing edge of the paper by approx. 0.15 mm.	4
4567-1			Thick paper 2	ALL	21 <0-40>	M		4
4567-2			Thick paper 3	ALL	21 <0-40>	M		4
4567-3			OHP film	ALL	21 <0-40>	M		4
4567-4			Special paper 1	ALL	21 <0-40>	M		4
4567-5			Special paper 2	ALL	21 <0-40>	M		4
4568	Laser	Leading edge position adjustment correction item on each media type (when decel-erating)	ADU	ALL	21 <0-40>	M	When the value increases by "1", the image shifts toward the trailing edge of the paper by approx. 0.15 mm.	1
4703	Laser	Fine adjustment of polygo-nal motor rotational speed (PPC): High speed		ALL	128 <0-255>	M		1
4704	Laser	Fine adjustment of polygo-nal motor rotational speed (PRT): High speed		ALL	128 <0-255>	M		1
4707-0	Drive	Fine adjust-ment of PFP motor rota-tional speed	Transport speed: Normal speed	PRT	128 <0-255>	M		4
4707-1				FAX	128 <0-255>	M		4
4707-2				PPC	128 <0-255>	M		4
4707-3			Transport speed: Decelerat-ing	PRT	128 <0-255>	M		4
4707-4				FAX	128 <0-255>	M		4
4707-5				PPC	128 <0-255>	M		4
4707-6			Transport speed: High speed	PRT	128 <0-255>	M		4
4707-7				FAX	128 <0-255>	M		4
4707-8				PPC	128 <0-255>	M		4

Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
4708-0	Drive	Fine adjust-ment of TLCF motor rota-tional speed	Transport speed: Normal speed	PRT	128 <0-255>	M		4
4708-1				FAX	128 <0-255>	M		4
4708-2				PPC	128 <0-255>	M		4
4708-3			Transport speed: Decelerat-ing	PRT	128 <0-255>	M		4
4708-4				FAX	128 <0-255>	M		4
4708-5				PPC	128 <0-255>	M		4
4708-6			Transport speed: High speed	PRT	128 <0-255>	M		4
4708-7				FAX	128 <0-255>	M		4
4708-8				PPC	128 <0-255>	M		4
4719	Image control	Enforced position adjust-ment		ALL	-	M	Forcibly performs the color registration con-trol adjustment in order to eliminate the color deviation of Y, M, C and K colors.	6
4720	Mainte-nance	Displaying parameters for position adjustment detec-tion abnormality		ALL	- <0-255>	M	Checks the cause of a "CA00" error when it occurs.	2
4721	Mainte-nance	Tilt motor initial excitation setting		ALL	-	M	Perform this adjustment when the NVRAM on the laser unit or the LGC board has been replaced.	6
4731-0	Image	Image void correction code	Top mar-gin	PPC (black)	0 <0-255>	M		4
4731-1				PPC (color)	48 <0-255>	M		4
4731-2				PRT (black)	48 <0-255>	M		4
4731-3				PRT (color)	48 <0-255>	M		4
4731-4			Bottom margin	PPC (black)	24 <0-255>	M		4
4731-5				PPC (color)	24 <0-255>	M		4
4731-6				PRT (black)	0 <0-255>	M		4
4731-7				PRT (color)	0 <0-255>	M		4
4732-0	Image	Displaying corrected val-ues of lead-ing edge adjustment	Absolute humidity reference value	ALL	255 <0-255>	M		10
4732-1			Absolute humidity RMS value	ALL	255 <0-255>	M		10

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ERROR CODE AND SELF-DIAGNOSTIC MODE

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Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
7315-0	Image	Gamma bal-ance adjust-ment (PS / Smooth / 8-bit)	L	PRT (black)	128 <0-255>	SYS	When the value increases, the density in the target area becomes higher. L: Low density area M: Medium density area H: High density area	4
7315-1			M	PRT (black)	128 <0-255>	SYS		4
7315-2			H	PRT (black)	128 <0-255>	SYS		4
7316-0	Image	Gamma bal-ance adjust-ment (PS / Detail / 8-bit)	L	PRT (black)	128 <0-255>	SYS	When the value increases, the density in the target area becomes higher. L: Low density area M: Medium density area H: High density area	4
7316-1			M	PRT (black)	128 <0-255>	SYS		4
7316-2			H	PRT (black)	128 <0-255>	SYS		4
7317-0	Image	Gamma bal-ance adjust-ment (PCL / Smooth / 8-bit)	L	PRT (black)	128 <0-255>	SYS	When the value increases, the density in the target area becomes higher. L: Low density area M: Medium density area H: High density area	4
7317-1			M	PRT (black)	128 <0-255>	SYS		4
7317-2			H	PRT (black)	128 <0-255>	SYS		4
7318-0	Image	Gamma bal-ance adjust-ment (PCL / Detail / 8-bit)	L	PRT (black)	128 <0-255>	SYS	When the value increases, the density in the target area becomes higher. L: Low density area M: Medium density area H: High density area	4
7318-1			M	PRT (black)	128 <0-255>	SYS		4
7318-2			H	PRT (black)	128 <0-255>	SYS		4
7322-0	Image	Tagbit exten-sion process-ing for printing (Black mode)	PS	PRT (black)	1 <0-1>	SYS	0: OFF 1: ON	4
7322-1			PCL	PRT (black)	1 <0-1>	SYS		4
7324-0	Image	Filter process switching for printing (Black mode)	PS	PRT (black)	0 <0-2>	SYS	0: Default 1: Thin lines are emphasized. 2: All the lines are emphasized.	4
7324-1			PCL	PRT (black)	0 <0-2>	SYS		4
7330	Image	Fine adjust-ment of sharpness center value for printer (Multilevel processing)	PS	PRT (black)	128 <0-255>	SYS	The larger the value is, the sharper the image becomes. The smaller the value is, the softer the image becomes.	1
7335	Image		PCL	PRT (black)	128 <0-255>	SYS		1
7340	Image	Thin line reproduction adjustment	PS	PRT (black)	0 <0-8>	SYS	The larger the value is, the darker the small characters or fine lines in a halftone image become. The image faint is then enhanced.	1
7341			PCL	PRT (black)	0 <0-8>	SYS		1
7346	Image	Switchover on printer-related screens	PS	PRT (black)	0 <0-1>	SYS	0: High screen ruling value (smoother image) 1: Low screen ruling value (rougher image)	1
7348			PCL	PRT (black)	0 <0-1>	SYS		1

Adjustment mode (05)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
7465	Image	Range correction on origi-nal manually set on the original glass / User cus-tom mode	SCN (black)	12 <11-14, 21-24, 31-34, 41-44>	SYS	Sets whether the values of the background peak and text peak are fixed or not. One's place is an adjustment for "auto-matic density" and ten's place is for "manual density". Once they are fixed, the range correc-tion is performed with standard values. The values of the back-ground peak and text peak affect the repro-duction of the back-ground density and text density respectively. 1: fixed/fixed 2: varied/fixed 3: fixed/varied 4: varied/varied Background peak/Text peak	1
7466	Image	Range correction on origi-nal set on the RADF / User custom mode	SCN (black)	12 <11-14, 21-24, 31-34, 41-44>	SYS		1
7467	Image	Range correction Back-ground peak adjustment / User custom mode	SCN (black)	56 <0-255>	SYS	When the value increases, the back-ground of the image (low density area) becomes harder to be printed out.	1
7470	Image	Sharpness adjustment / User custom mode	SCN (black)	128 <0-255>	SYS	When the value increases, the image becomes sharper. When the value decreases, the image becomes softer. The smaller the value is, the less the moire becomes.	1
7475	Image	Density adjustment "man-ual density" fine adjust-ment/Center value / User custom mode	SCN (black)	128 <0-255>	SYS	The larger the value is, the darker the image of the center step density becomes. However, if the base is in the Text mode, the larger the value is, the lighter the image of the center step density becomes.	1
7476	Image	Density adjustment "man-ual density" fine adjust-ment/Light step value / User custom mode	SCN (black)	20 <0-255>	SYS	Sets the changing amount by 1 step at density adjustment on the control panel The larger the value is, the lighter the image of the light steps becomes.	1

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Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
7477	Image	Density adjustment "man-ual density" fine adjust-ment/Dark step value / User custom mode		SCN (black)	20 <0-255>	SYS	Sets the changing amount by 1 step at density adjustment on the control panel The larger the value is, the darker the image of the dark steps becomes.	1
7478	Image	Density adjustment "auto-matic density" fine adjust-ment / User custom mode		SCN (black)	128 <0-255>	SYS	The larger the value is, the darker the image becomes. However, if the base is in the Text mode, the larger the value is, the lighter the image becomes.	1
7480-0	Image	Adjustment of gamma bal-ance / User custom mode	L	SCN (black)	128 <0-255>	SYS	When the value increases, the density in the target area becomes higher. L: Low density area M: Medium density area H: High density area	4
7480-1			M	SCN (black)	128 <0-255>	SYS		4
7480-2			H	SCN (black)	128 <0-255>	SYS		4
7641-0	Image	Black area adjustment value 1 (Twin color)	H	PPC (color)	128 <0-255>	SYS	The larger the value is, the larger the area rec-ognized as black in the original becomes. The smaller the value is, he Larger the area recog-nized as the color other than black becomes.	4
7641-1			M	PPC (color)	128 <0-255>	SYS		4
7641-2			L	PPC (color)	128 <0-255>	SYS		4
7642-0	Image	Black area adjustment value 2 (Twin color - red and black)	H	PPC (color)	128 <0-255>	SYS	The larger the value is, the larger the black area becomes. The smaller the value is, the larger the red area becomes.	4
7642-1			M	PPC (color)	128 <0-255>	SYS		4
7642-2			L	PPC (color)	128 <0-255>	SYS		4
7811	Image	STRC table selection	Text/Photo	PPC (color)	0 <0-8>	SYS		1
7812			Text	PPC (color)	0 <0-8>	SYS		1
7827	Image	STRC table selection ACS	Text/Photo	PPC (color)	0 <0-8>	SYS		1
7828			Text	PPC (color)	0 <0-8>	SYS		1

Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
8050-0	Image	Color bal-ance adjust-ment (PS / Smooth / Y)	L	PRT (color)	128 <0-255>	SYS	The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area	4
8050-1			M	PRT (color)	128 <0-255>	SYS		4
8050-2			H	PRT (color)	128 <0-255>	SYS		4
8051-0	Image	Color bal-ance adjust-ment (PS / Smooth / M)	L	PRT (color)	128 <0-255>	SYS		4
8051-1			M	PRT (color)	128 <0-255>	SYS		4
8051-2			H	PRT (color)	128 <0-255>	SYS		4
8052-0	Image	Color bal-ance adjust-ment (PS / Smooth / C)	L	PRT (color)	128 <0-255>	SYS		4
8052-1			M	PRT (color)	128 <0-255>	SYS		4
8052-2			H	PRT (color)	128 <0-255>	SYS		4
8053-0	Image	Color bal-ance adjust-ment (PS / Smooth / K)	L	PRT (color)	128 <0-255>	SYS		4
8053-1			M	PRT (color)	128 <0-255>	SYS		4
8053-2			H	PRT (color)	128 <0-255>	SYS		4
8054-0	Image	Color bal-ance adjust-ment (PS / Detail / Y)	L	PRT (color)	128 <0-255>	SYS	The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area	4
8054-1			M	PRT (color)	128 <0-255>	SYS		4
8054-2			H	PRT (color)	128 <0-255>	SYS		4
8055-0	Image	Color bal-ance adjust-ment (PS / Detail / M)	L	PRT (color)	128 <0-255>	SYS		4
8055-1			M	PRT (color)	128 <0-255>	SYS		4
8055-2			H	PRT (color)	128 <0-255>	SYS		4
8056-0	Image	Color bal-ance adjust-ment (PS / Detail / C)	L	PRT (color)	128 <0-255>	SYS		4
8056-1			M	PRT (color)	128 <0-255>	SYS		4
8056-2			H	PRT (color)	128 <0-255>	SYS		4
8057-0	Image	Color bal-ance adjust-ment (PS / Detail / K)	L	PRT (color)	128 <0-255>	SYS		4
8057-1			M	PRT (color)	128 <0-255>	SYS		4
8057-2			H	PRT (color)	128 <0-255>	SYS		4

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					Adjustment mode (05)			
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
8058-0	Image	Color bal-ance adjust-ment (PCL / Smooth / Y)	L	PRT (color)	128 <0-255>	SYS	The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area	4
8058-1			M	PRT (color)	128 <0-255>	SYS		4
8058-2			H	PRT (color)	128 <0-255>	SYS		4
8059-0	Image	Color bal-ance adjust-ment (PCL / Smooth / M)	L	PRT (color)	128 <0-255>	SYS		4
8059-1			M	PRT (color)	128 <0-255>	SYS		4
8059-2			H	PRT (color)	128 <0-255>	SYS		4
8060-0	Image	Color bal-ance adjust-ment (PCL / Smooth / C)	L	PRT (color)	128 <0-255>	SYS		4
8060-1			M	PRT (color)	128 <0-255>	SYS		4
8060-2			H	PRT (color)	128 <0-255>	SYS		4
8061-0	Image	Color bal-ance adjust-ment (PCL / Smooth / K)	L	PRT (color)	128 <0-255>	SYS		4
8061-1			M	PRT (color)	128 <0-255>	SYS		4
8061-2			H	PRT (color)	128 <0-255>	SYS		4
8062-0	Image	Color bal-ance adjust-ment (PCL / Detail / Y)	L	PRT (color)	128 <0-255>	SYS	The target color, mode and density area become darker as the value increases. L: Low density area M: Medium density area H: High density area	4
8062-1			M	PRT (color)	128 <0-255>	SYS		4
8062-2			H	PRT (color)	128 <0-255>	SYS		4
8063-0	Image	Color bal-ance adjust-ment (PCL / Detail / M)	L	PRT (color)	128 <0-255>	SYS		4
8063-1			M	PRT (color)	128 <0-255>	SYS		4
8063-2			H	PRT (color)	128 <0-255>	SYS		4
8064-0	Image	Color bal-ance adjust-ment (PCL / Detail / C)	L	PRT (color)	128 <0-255>	SYS		4
8064-1			M	PRT (color)	128 <0-255>	SYS		4
8064-2			H	PRT (color)	128 <0-255>	SYS		4
8065-0	Image	Color bal-ance adjust-ment (PCL / Detail / K)	L	PRT (color)	128 <0-255>	SYS		4
8065-1			M	PRT (color)	128 <0-255>	SYS		4
8065-2			H	PRT (color)	128 <0-255>	SYS		4
8076-0	Image	Toner limit threshold set-ting / Special paper 1: Smooth	PS	PRT (color)	113 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
8076-1			PCL	PRT (color)	113 <0-255>	SYS		4

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		Adjustment mode (05)						
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
8077-0	Image	Toner limit threshold setting / Special paper 2: Smooth	PS	PRT (color)	113 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
8077-1			PCL	PRT (color)	113 <0-255>	SYS		4
8078-0	Image	Toner limit threshold setting / Recycled paper: Smooth	PS	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
8078-1			PCL	PRT (color)	128 <0-255>	SYS		4
8079-0	Image	Toner limit threshold setting / Thick paper 4: Smooth	PS	PRT (color)	113 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
8079-1			PCL	PRT (color)	113 <0-255>	SYS		4
8080-0	Image	Toner limit threshold setting / Plain paper: Detail	PS	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
8080-1			PCL	PRT (color)	128 <0-255>	SYS		4
8081-0	Image	Toner limit threshold setting / Thick paper 1: Detail	PS	PRT (color)	113 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
8081-1			PCL	PRT (color)	113 <0-255>	SYS		4
8082-0	Image	Toner limit threshold setting / Thick paper 2: Detail	PS	PRT (color)	113 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
8082-1			PCL	PRT (color)	113 <0-255>	SYS		4
8083-0	Image	Toner limit threshold setting / Thick paper 3: Detail	PS	PRT (color)	113 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
8083-1			PCL	PRT (color)	113 <0-255>	SYS		4
8084-0	Image	Toner limit threshold setting / OHP film: Detail	PS	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
8084-1			PCL	PRT (color)	128 <0-255>	SYS		4
8085-0	Image	Toner limit threshold setting / Special paper 1: Detail	PS	PRT (color)	113 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
8085-1			PCL	PRT (color)	113 <0-255>	SYS		4
8086-0	Image	Toner limit threshold setting / Special paper 2: Detail	PS	PRT (color)	113 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
8086-1			PCL	PRT (color)	113 <0-255>	SYS		4
8087-0	Image	Toner limit threshold setting / Recycled paper: Detail	PS	PRT (color)	128 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
8087-1			PCL	PRT (color)	128 <0-255>	SYS		4

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ERROR CODE AND SELF-DIAGNOSTIC MODE

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Adjustment mode (05)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
8088-0	Image	Toner limit threshold set-ting / Thick paper 4: Detail	PS	PRT (color)	113 <0-255>	SYS	The larger the value is, the darker the image in the high density area becomes.	4
8088-1			PCL	PRT (color)	113 <0-255>	SYS		4
8102-0	Image	Tagbit exten-sion process-ing for printing (Color mode)	PS	PRT (color)	1 <0-1>	SYS	0: OFF 1: ON	4
8102-1			PCL	PRT (color)	1 <0-1>	SYS		4
8104-0	Image	Filter process switching for printing (Color mode)	PS	PRT (color)	0 <0-2>	SYS	0: Default 1: Thin lines are emphasized. 2: All the lines are emphasized.	4
8104-1			PCL	PRT (color)	0 <0-2>	SYS		4
8110	Image	Fine adjust-ment value of sharpness for printer / PS	General	PRT (color)	128 <0-255>	SYS	The larger the value is, the sharper the image becomes. The smaller the value is, the softer the image becomes.	1
8111			Photo-graphic	PRT (color)	128 <0-255>	SYS		1
8112			Presenta-tion	PRT (color)	128 <0-255>	SYS		1
8113			Line art	PRT (color)	128 <0-255>	SYS		1
8114	Image	Fine adjust-ment value of sharpness for printer / PCL	General	PRT (color)	128 <0-255>	SYS	The larger the value is, the sharper the image becomes. The smaller the value is, the softer the image becomes.	1
8115			Photo-graphic	PRT (color)	128 <0-255>	SYS		1
8116			Presenta-tion	PRT (color)	128 <0-255>	SYS		1
8117			Line art	PRT (color)	128 <0-255>	SYS		1
8120	Image	Adjustment of sharpness boundary position		PRT (color)	0 <0-1>	SYS	📖 P. 3-54 "3.8.16 Sharpness adjustment"	1
8130	Image	Thin line reproduction adjustment	PS	PRT (color)	0 <0-1>	SYS	The larger the value is, the darker the small characters or fine lines in a halftone image become. The image faint is then enhanced.	1
8131			PCL	PRT (color)	0 <0-1>	SYS		1
8176	Image	Switchover on printer-related screens	PS	PRT (color)	0 <0-1>	SYS	0: High screen ruling value (smoother image) 1: Low screen ruling value (rougher image)	1
8178			PCL	PRT (color)	0 <0-1>	SYS		1
8196	Image	Code length adjustment value		PRT (color)	63 <60-64>	SYS	📖 P. 3-55 "3.8.17 Quantization parame-ter for intermediate file creation"	1

					Adjustment mode (05)			
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
8210-0	Image	PureBlack Text thresh-old (PCL)	General	PRT (color)	8 <1-15>	SYS	When the value increases, the color range to be printed only with the black toner becomes wider. When the value decreases, this color range becomes narrower.	4
8210-1			Photo-graphic	PRT (color)	8 <1-15>	SYS		4
8210-2			Presenta-tion	PRT (color)	8 <1-15>	SYS		4
8210-3			Line art	PRT (color)	8 <1-15>	SYS		4
8211-0	Image	PureBlack Graphics threshold (PCL)	General	PRT (color)	1 <1-15>	SYS	When the value increases, the color range to be printed only with the black toner becomes wider. When the value decreases, this color range becomes narrower.	4
8211-1			Photo-graphic	PRT (color)	1 <1-15>	SYS		4
8211-2			Presenta-tion	PRT (color)	1 <1-15>	SYS		4
8211-3			Line art	PRT (color)	8 <1-15>	SYS		4
8212-0	Image	PureBlack Image thresh-old (PCL)	General	PRT (color)	1 <1-15>	SYS	When the value increases, the color range to be printed only with the black toner becomes wider. When the value decreases, this color range becomes narrower.	4
8212-1			Photo-graphic	PRT (color)	1 <1-15>	SYS		4
8212-2			Presenta-tion	PRT (color)	1 <1-15>	SYS		4
8212-3			Line art	PRT (color)	8 <1-15>	SYS		4
8213-0	Image	PureGray Text threshold (PCL)	General	PRT (color)	8 <1-15>	SYS	When the value increases, the color range to be printed only with the black toner becomes wider. When the value decreases, this color range becomes narrower.	4
8213-1			Photo-graphic	PRT (color)	8 <1-15>	SYS		4
8213-2			Presenta-tion	PRT (color)	8 <1-15>	SYS		4
8213-3			Line art	PRT (color)	8 <1-15>	SYS		4
8214-0	Image	PureGray Graphics threshold (PCL)	General	PRT (color)	1 <1-15>	SYS	When the value increases, the color range to be printed only with the black toner becomes wider. When the value decreases, this color range becomes narrower.	4
8214-1			Photo-graphic	PRT (color)	1 <1-15>	SYS		4
8214-2			Presenta-tion	PRT (color)	1 <1-15>	SYS		4
8214-3			Line art	PRT (color)	8 <1-15>	SYS		4
8215-0	Image	PureGray Image thresh-old (PCL)	General	PRT (color)	1 <1-15>	SYS	When the value increases, the color range to be printed only with the black toner becomes wider. When the value decreases, this color range becomes narrower.	4
8215-1			Photo-graphic	PRT (color)	1 <1-15>	SYS		4
8215-2			Presenta-tion	PRT (color)	1 <1-15>	SYS		4
8215-3			Line art	PRT (color)	8 <1-15>	SYS		4

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					Default			Pro-
Code	Classifi-cation	Items		Func-tion	<Accept-able value>	RAM	Contents	cedure
8252-0	Image	DevicePure-Black/Gray Text thresh-old adjust-ment (PS)	General	PRT (color)	128 <113-143>	SYS	When the value increases, the color range to be printed only with the black toner becomes wider. When the value decreases, this color range becomes narrower.	4
8252-1			Photo-graphic	PRT (color)	128 <113-143>	SYS		4
8252-2			Presenta-tion	PRT (color)	128 <113-143>	SYS		4
8252-3			Line art	PRT (color)	128 <113-143>	SYS		4
8253-0	Image	DevicePure-Black/Gray Image thresh-old adjust-ment (PS)	General	PRT (color)	128 <113-143>	SYS	When the value increases, the color range to be printed only with the black toner becomes wider. When the value decreases, this color range becomes narrower.	4
8253-1			Photo-graphic	PRT (color)	128 <113-143>	SYS		4
8253-2			Presenta-tion	PRT (color)	128 <113-143>	SYS		4
8253-3			Line art	PRT (color)	128 <113-143>	SYS		4
8254-0	Image	DevicePure-Black/Gray Graphics threshold adjustment (PS)	General	PRT (color)	128 <113-143>	SYS	When the value increases, the color range to be printed only with the black toner becomes wider. When the value decreases, this color range becomes narrower.	4
8254-1			Photo-graphic	PRT (color)	128 <113-143>	SYS		4
8254-2			Presenta-tion	PRT (color)	128 <113-143>	SYS		4
8254-3			Line art	PRT (color)	128 <113-143>	SYS		4
8255-0	Image	CIEBased-PureBlack/Gray Text threshold adjustment (PS)	General	PRT (color)	128 <113-143>	SYS	When the value increases, the color range to be printed only with the black toner becomes wider. When the value decreases, this color range becomes narrower.	4
8255-1			Photo-graphic	PRT (color)	128 <113-143>	SYS		4
8255-2			Presenta-tion	PRT (color)	128 <113-143>	SYS		4
8255-3			Line art	PRT (color)	128 <113-143>	SYS		4

Table title: **Adjustment mode (05)**

Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
8256-0	Image	CIEBased-PureBlack/ Gray Image threshold adjustment (PS)	General	PRT (color)	128 <113-143>	SYS	When the value increases, the color range to be printed only with the black toner becomes wider. When the value decreases, this color range becomes narrower.	4
8256-1			Photo-graphic	PRT (color)	128 <113-143>	SYS		4
8256-2			Presenta-tion	PRT (color)	128 <113-143>	SYS		4
8256-3			Line art	PRT (color)	128 <113-143>	SYS		4
8257-0	Image	CIEBased-PureBlack/ Gray Graph-ics threshold adjustment (PS)	General	PRT (color)	128 <113-143>	SYS	When the value increases, the color range to be printed only with the black toner becomes wider. When the value decreases, this color range becomes narrower.	4
8257-1			Photo-graphic	PRT (color)	128 <113-143>	SYS		4
8257-2			Presenta-tion	PRT (color)	128 <113-143>	SYS		4
8257-3			Line art	PRT (color)	128 <113-143>	SYS		4
8325	Image	Saturation adjustment	Text	SCN (color)	128 <0-255>	SYS	The larger the value is, the brighter the image becomes. The smaller the value is, the duller the image becomes.	1
8326			Photo	SCN (color)	128 <0-255>	SYS		1
8327			Printed image	SCN (color)	128 <0-255>	SYS		1
8340	Image	Density adjustment Fine curve compensation / Center value	Text	SCN (color)	128 <0-255>	SYS	The larger the value is, the darker the image of the center step density becomes.	1
8341			Photo	SCN (color)	128 <0-255>	SYS		1
8342			Printed image	SCN (color)	128 <0-255>	SYS		1
8344	Image	Density adjustment Fine curve compensation / Light step value	Text	SCN (color)	20 <0-255>	SYS	Sets the changing amount by 1 step at density adjustment on the control panel The larger the value is, the lighter the image of the light steps becomes.	1
8345			Photo	SCN (color)	20 <0-255>	SYS		1
8346			Printed image	SCN (color)	20 <0-255>	SYS		1
8348	Image	Density adjustment Fine curve compensation / Dark step value	Text	SCN (color)	20 <0-255>	SYS	Sets the changing amount by 1 step at density adjustment on the control panel The larger the value is, the darker the image of the dark steps becomes.	1
8349			Photo	SCN (color)	20 <0-255>	SYS		1
8350			Printed image	SCN (color)	20 <0-255>	SYS		1
8370	Image	Fine adjust-ment of back-ground peak adjustment	User cus-tom mode	SCN (color)	50 <0-50>	SYS	Adjusts the level of background. When the value increases, the background becomes darker.	1

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e-STUDIO2500c/3500c/3510c
ERROR CODE AND SELF-DIAGNOSTIC MODE

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Adjustment mode (05)								
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
8371	Image	Fine adjust-ment of black density	User cus-tom mode	SCN (color)	0 <0-4>	SYS	Adjusts the black den-sity of the scanned image. When the value increases, the black density becomes darker.	1
8372	Image	RGB conver-sion method selection	User cus-tom mode	SCN (color)	0 <0-3>	SYS	Sets the color space format of the output image. 0: sRGB 1: AppleRGB 2: ROMMRGB 3: AdobeRGB	1
8373	Image	Saturation adjustment	User cus-tom mode	SCN (color)	128 <0-255>	SYS	The larger the value is, the brighter the image becomes. The smaller the value is, the duller the image becomes.	1
8375	Image	Sharpness adjustment	User cus-tom mode	SCN (color)	128 <0-255>	SYS	When the value increases, the image becomes sharper. When the value decreases, the image becomes softer. The smaller the value is, the less the moire becomes.	1
8380	Image	Density adjustment Fine curve compensation / Center value	User cus-tom mode	SCN (color)	128 <0-255>	SYS	The larger the value is, the darker the image of the center step density becomes.	1
8381	Image	Density adjustment / Light step value	User cus-tom mode	SCN (color)	20 <0-255>	SYS	Sets the changing amount by 1 step at density adjustment on the control panel The larger the value is, the lighter the image of the light steps becomes.	1
8382	Image	Density adjustment / Dark step value	User cus-tom mode	SCN (color)	20 <0-255>	SYS	Sets the changing amount by 1 step at density adjustment on the control panel The larger the value is, the darker the image of the dark steps becomes.	1
9104	Image	Compression quality of s SLIM PDF background processing		SCN (color)	5 <0-10>	SYS	0-10 0: High compression, low image quality 10: Low compression, high image quality	1
9107	Image	Resolution adjustment of SLIM PDF background processing		SCN (color)	1 <0-3>	SYS	0: 75dpi 1: 100dpi 2: 150dpi 3: 200dpi	1

2.2.5 Setting mode (08)

The items in the setting code list can be set or changed in this setting mode (08).
When the power should be turned OFF, be sure to shut down the equipment by pressing the [ENERGY SAVER] button for a few seconds.

Classification List of Setting Mode (08)

Classification		Setting Mode (08)
User interface	[ACS]	9698
	[AMS]	605
	[APS]	9185
	[X in 1]	650
	[Color specification]	643, 644
	[Indicator]	671
	[Edit copying]	645, 646
	[Sound]	610, 969, 970
	[Counter]	202
	[Cascade]	652, 653
	[ACS]	268
	[Screen]	207, 602
	[Administrator]	263, 9882
	[Feeding setting]	658, 659
	[Language]	220, 221, 1929, 1930, 1931, 1932, 1933, 1934, 1935
	[Original counter]	302
	[Original direction]	628
	[Copy volume]	300
	[Automatic calibration]	632
	[Default setting]	276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 289, 331, 503, 585, 587, 588, 603, 604, 607, 618, 642
	[Jam releasing]	9359
	[Offsetting between jobs]	682
	[Security level]	1708
	[Sorting]	627, 634, 641, 649
	[Timer]	204, 205, 206
	[Template]	1140
	[Image shift]	636, 1429, 1430
	[Tray reset]	648
	[Panel calibration]	9051
	[Date]	640
	[Annotation]	651, 657
	[Displaying number]	342
	[Job Build]	1130, 1131, 9891
	[File]	209, 218, 219
	[Department management]	617, 620, 621, 622, 623, 624, 629
	[Black-free]	343
	[Book duplexing]	611
	[Box printing]	951, 953, 954
	[Paper size]	613

Classification		Setting Mode (08)
User interface	[Blank copy prevention]	625
	[User mode]	506, 508, 580, 590
Scanner	[E-mail]	272, 273
Fax	[FAX mistransmission prevention function]	3847, 3848, 3849
	[Function]	1498, 1926
	[Destination]	701
	[Default setting]	274
	[Priority drawer]	689
Image	[ACS]	609-0 to 4, 7606, 7615, 7616, 7617, 9825
	[Gamma correction]	597
	[Automatic calibration]	595
	[Default setting]	550, 1149, 9382, 9897, 9898, 9899
	[Smoothing]	560, 562
	[Image repeat gap]	7612
Image control	[2nd transfer]	548
	[Abnormality detection]	573, 574, 575, 576
	[Contrast voltage]	556, 2513-0 to 3, 2514-0 to 3, 2515
	[Automatic starting]	559, 565, 566, 567, 568, 569, 570, 571, 572
	[Smoothing]	560
	[Laser power]	557, 2525-0 to 3, 2526-0 to 3, 2527
Feeding system	[SFB setting]	3835
	[Feeding setting]	254, 255, 619
	[Paper source]	480, 481, 1135, 1431, 4016-0 to 1
	[detection]	449, 1492, 4621, 4622
	[Setting]	988
	[Coated paper Mode]	675-0 to 4
	[Paper size]	224, 225, 226, 227, 228, 256, 8548
	[Paper dimension]	210, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 470, 471, 4567, 4568
	[Paper retry]	463-0 to 1, 464-0 to 1, 465-0 to 1, 466-0 to 1, 467-0 to 1, 468-0 to 1, 482, 1390, 1391, 1392, 1393, 1394, 1395, 1396, 1397, 1398, 1399, 1400, 1401
	[Pushing Paper]	4553-0 to 4
Laser	[Polygonal motor]	398, 399, 478, 483, 484, 485, 486, 489, 490
Main charger	[Cleaning]	1389
	[Charger]	808
Developer	[Toner nearly empty]	1415, 1416, 1416-0 to 3, 6452-0 to 3, 6453-0 to 3, 6454-0 to 3
	[Toner cartridge rotation counter]	1376-0 to 3
	[Toner density ratio manual offset control]	2707-0 to 3
	[Prevention of color toner low density]	2692, 2693
	[Used toner mixing paddles]	4551-0 to 1, 4554-0 to 1, 4561, 6209-0 to 2
	[Paper exit speed control switching]	4563
	[Duplex reversing position correction control]	4564

Classification		Setting Mode (08)
Transfer	[1st transfer]	816, 2512
	[2nd transfer]	2490
	[Position adjustment]	4546, 4550-0 to1, 4562
	[Enforced toner supply]	2411-0 to 2, 2412-0 to 2, 2413-0 to 2
	[Resistance detection]	2511
	[Transfer bias]	2510
	[Drum reverse rotation amount control]	2367
	[Discharge blade]	2553
	[Toner cartridge]	4554-0 to 1, 4561, 6209-0 to 2
Fuser	[Temperature]	409, 410-0 to 1, 412, 413-0 to 1, 437, 438, 448, 450-0 to 1, 451-0 to 1, 452, 453, 518, 534-0 to 1, 1902, 1903, 1904, 1905, 2017-0 to 1, 2018-0 to 1, 2019-0 to 1, 2151-0 to 1, 2153-0 to 1, 2155, 2159, 2161, 2255, 4545
	[Status counter]	400
	[Fuser reverse rotation setting]	4569
	[Pre-running]	417, 439, 440-0 to 1, 441-0 to 1, 526, 584, 855, 2020-0 to 1
	[Fuser unit]	4549
Image processing	[Counter]	1371, 1372, 1378, 1380, 1382, 1383, 1385, 1386, 1387, 1388
RADF	[Switchback]	462
Finisher	[Stapling]	704-0 to 1, 1911, 9811
	[Hole punching]	9847
	[Finisher model switching]	1912
Network	[AppleTalk]	1014, 1015, 1936, 3729, 3730
	[Bindery]	1026
	[Community]	1065, 1066
	[DDNS]	1020, 1112, 3737, 3745, 3746, 3747, 3748
	[DHCP]	1755, 1756, 1757, 1759, 1760, 1762, 3772, 3773, 3774, 3778, 3779, 3780
	[Directory]	1028, 1029
	[DNS]	1017, 1018, 1019, 3736, 3781, 3782, 3784
	[DPWS]	3749, 3750, 3751, 3752, 3753, 3754, 3755, 3757, 3758, 3759, 3760, 3765, 3766, 3785, 3796
	[E-mail]	265, 1097, 1098, 1477, 1478, 1489, 1491, 3837, 9384, 9946, 9947, 9980
	[File]	1779, 1782, 1783, 1784, 1785, 1786
	[FTP]	1055, 1059, 1060, 1089, 1090, 1091, 1092, 3739, 3804
	[HTTP]	1030, 1031, 1032
	[IP Conflict]	1440
	[IP Filter]	1720, 1721, 1722, 1723, 1724, 1725, 1726, 1727, 1728, 1729, 1730, 1731, 1732, 1733, 1734, 1735, 1736, 1737, 1738, 1739
	[IPP]	1078, 1079, 1080, 1081, 1082, 1083, 1084, 1085, 1086, 1087, 1088, 1447,1448, 1449, 1450, 1451, 3725, 3726
	[IPv6]	3767, 3768, 3770, 3775, 3776, 3777
	[IPX]	1011, 1099

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Classification		Setting Mode (08)
Network	[IP address]	1006, 1007, 1008, 1009, 1010, 1767, 1768, 3769
	[LDAP]	1016, 1138, 1488, 1923, 1924, 3743, 9629, 9933
	[LLMNR]	3794
	[LLTD]	3793
	[LPD]	1075, 1076, 1077
	[MAC address]	1141
	[MIB]	1063
	[Network logs]	8535, 8536
	[NDS]	1027
	[NIC]	1002
	[Novell]	1093, 1094
	[PCL setting]	973
	[POP3]	1046, 1047, 1048, 1049, 1050, 1051, 1052, 3742, 3744
	[RawPort]	945
	[Raw/TCP]	1073, 1074, 3731, 3732
	[Raw printing]	290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 978, 979
	[Bonjour]	1103, 1104, 1105
	[Role Base Access]	1493, 1928, 3831
	[Samba]	1464, 3783, 3833
	[SearchRoot]	1095
	[SMB]	1023, 1024, 1025, 1117, 1124, 1950, 1951
	[SMTP]	1022, 1037, 1038, 1039, 1040, 1041, 1042, 1100, 1101, 1102, 1111, 3741
	[SNMP]	3845
	[SNTP]	1441, 1442, 1444, 1445, 1446, 3740
	[SSL]	1740, 1741, 1742, 1743, 1744, 1745, 1746, 1747, 1748, 1749, 1750, 9819, 9822
	[TRAP]	1069, 1070
	[InternetFAX]	266, 1114, 1485, 3812
	[Offramp]	1043, 1044, 1045
	[Function]	1432, 1435, 1436
	[Automatic transferring]	660, 661
	[Initialization]	1119
	[Scan setting]	1781-0 to 1, 1940, 3805, 3815, 3816, 3817, 3818
	[Speed and settings]	1003
	[Direct SMTP]	3810, 3811
	[Data retention period]	259, 260, 264
	[Domain]	1113, 1121, 1122, 1123
	[Authentication]	1484, 1486, 1487, 1920, 1921, 1922, 1925, 1937, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 3722, 3723, 3724, 8823
	[Print queue]	1096
	[Prefix]	3771
	[Frame type]	1012
	[Temporary communication password]	9798
	[Local I/F]	614
	[telnet]	3864, 3865, 3866, 3867, 3868

Classification		Setting Mode (08)
Wireless LAN	[Supplicant]	1679, 1681, 1682, 1684, 1685, 1686, 1689, 1690, 1691, 1692, 1693, 1696, 1697, 1699, 1700, 1701, 1704, 1705, 1706, 1707, 1764, 1765, 1766
	[Driver]	1661, 1662, 1663, 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1677, 1678
Bluetooth	[Data encryption]	1715
	[Setting]	1710, 1711, 1712, 1713, 1714, 1719, 1769, 1941
Counter	[HDD]	390, 391, 392, 393
	[External counter]	381, 1126, 8549
	[Counter copy]	257
	[Calibration counter]	6817
	[Count method]	616, 663
	[Paper source]	356, 357, 358, 359, 360, 370, 372, 374
	[Black toner cartridge drive]	1410-0 to 3
	[Paper size]	301-0 to 17, 303-0 to 17, 304-0 to 17, 305-0 to 17, 306-0 to 17, 307-0 to 17, 308-0 to 17, 309-0 to 17, 310-0 to 17, 311-0 to 17, 312-0 to 17, 313-0 to 17, 314-0 to 17, 315-0 to 17, 316-0 to 17, 6027-0 to 17, 6078-0 to 3
	[Accelerating/Decelerating mode]	6900, 6901, 6905-0 to 3, 6906-0 to 3, 6907-0 to 3, 6908-0 to 3, 6925-0 to 3, 6926-0 to 3, 6927-0 to 3, 6928-0 to 3, 6929-0 to 3, 6930-0 to 3, 6931-0 to 3, 6932-0 to 3, 6933-0 to 3, 6935-0 to 3, 6950-0 to 3, 6955-0 to 3, 6956-0 to 3, 6960-0 to 3, 6962-0 to 3
	[Tab paper]	1412
	[Special paper]	6243
	[Extra long size]	3800-0 to 1
	[Double count]	344, 346, 347, 348, 349, 352, 353, 6018
	[Large/Small size]	317-0 to 2, 318-0 to 2, 319-0 to 2, 320-0 to 2, 321-0 to 2, 322-0 to 2, 323-0 to 2, 324-0 to 2, 325-0 to 2, 326-0 to 2, 327-0 to 2, 328-0 to 2, 329-0 to 2, 330-0 to 2, 332-0 to 2, 333-0 to 2, 334-0 to 2, 335-0 to 2
	[n-UP printing]	1530-0 to 4, 1531-0 to 4, 1532-0 to 4, 1533-0 to 1, 1534-0 to 1, 1535, 6806-0 to 7,6810-0 to 7,6811-0 to 7, 6812-0 to 7,6813-0 to 7,6814-0 to 7, 6815-0 to 7,6816-0 to 7
Version	[FAX]	915
	[HDD]	944
	[Engine]	903, 905, 907, 908
	[System]	900, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 933, 934, 935, 936, 937, 938, 939
	[Finisher]	911, 9945

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Classification		Setting Mode (08)
Maintenance	[FSMS]	999
	[HTTP]	726, 727, 728, 729, 730, 731
	[PM counter]	223, 251, 252, 375, 376
	[Error history]	253
	[Equipment number]	995
	[Calibration]	9059
	[Emergency Mode]	710, 711
	[Service notification]	702, 703, 707, 715, 716, 717, 718, 719, 720, 721, 723, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 1145, 1495, 9739
	[Supply order]	732, 733, 734, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765
	[Telephone]	250
	[Panel calibration]	692
Electronic Filing	[Setting]	267, 270, 950, 976, 1497
Data overwrite kit	[HDD]	1422, 1424, 1426
	[NVRAM]	1427
	[SRAM]	1428
	[Releasing F200]	633

Classification		Setting Mode (08)
General	[HDD]	271, 670, 690, 691, 693, 694, 9379
	[ASIC]	9046
	[EFI]	700, 9950
	[PJL]	3797
	[Raw printing]	9117
	[S-ACS]	4565, 9934
	[USB]	3802, 9889
	[TAT partition]	1118
	[Address book]	1125
	[Easy setup]	9047
	[Proof copy]	3635
	[Card authentication]	1776
	[Card reader]	1772, 1773, 1774, 1775,
	[Counter data transmission]	9801, 9802
	[Custom size]	9381
	[Administrator's password]	1778
	[Summer time]	3852, 3853, 3854, 3855, 3856, 3857, 3858, 3859, 3860, 3861, 3862, 3863
	[Destination]	201
	[Initialization]	947
	[Setting]	949, 975, 986, 1132, 1470, 1471, 1494, 9814, 9815, 9826, 9828, 9829, 9848, 9892, 9893, 9894
	[Direct print]	3803
	[Databases]	684, 685, 686
	[Default repeat count]	9789
	[Template]	3851, 9886, 9888
	[Partition]	662, 666, 667
	[Banner]	678, 679, 680
	[Date/Time]	200, 638
	[File]	288, 1913, 1914, 1916
	[Department management]	672
	[BANNER MESSAGE button]	681
	[Memory]	615
	[User data management]	1468, 1469, 1472, 1473, 1474, 1481, 1482, 1483, 1496
	[Line]	203
	[Duplex printing]	683
	[KS/KSSM]	1960, 1961, 1963, 1964, 1965, 1966, 1967, 1968, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994
	[Profile]	1790-0 to 23, 1791, 1792, 1793, 1794-0 to 23, 1795, 1796, 1797, 1798-0 to 23, 3600-0 to 23, 3601, 3602, 3603, 3604-0 to 23, 3605, 3606, 3607, 3608-0 to 23,
	[Counter/Job list print]	9954
	[Wide A4 Mode (for PCL)]	8511

Procedure 1

[0][8]
[POWER] → [Digital key] → [START] → [Digital key] → [ENTER] or [INTERRUPT] → [POWER] OFF/ON
            (Code)   *[FUNCTION CLEAR]   (Stores value in RAM)   (Exit)
                                (Sets or
                                  changes value)

← [CANCEL] ─────────────────────

[CLEAR]
(Corrects value)

    *   Press [FUNCTION CLEAR] to enter minus (-).

Procedure 2

[0][8]
[POWER] → [Digital key] → [START] → [ENTER] or [INTERRUPT] → [POWER]OFF/ON
            (Code)   (Adjustment value   (Exit)
                                        cannot be changed)

Procedure 3

[0][8]
[POWER] → [Digital key] → [START] → [ENTER] or [INTERRUPT] → (Automatic setting) → [POWER] OFF/ON
            (Code)   (Stores value in RAM)   (Exit)

         [CANCEL] or [CLEAR]

Procedure 4

[0][8]
[POWER] → [Digital key] → [START] → [Digital key] → [START] → [Digital key] → [ENTER] or [INTERRUPT] → [POWER] OFF/ON
            (Code)   (Sub-code)   * [FUNCTION CLEAR]   (Stores value   (Exit)
                                                                (Sets or   in RAM)
                                                                  changes value)

─── [CANCEL] ───────────────────────

─── [START] ───────

[CLEAR]   [CLEAR]
(Corrects value)   (Corrects value)

    *   Press [FUNCTION CLEAR] to enter minus (-).

Procedure 5

[0][8]
[POWER] → [Digital key] → [START] → [Digital key] → [ENTER] or [INTERRUPT] → [POWER] OFF/ON
            (Code)   *[HELP]   (Stores value in RAM)   (Exit)
                                     (Sets or
                                       changes value)

← [CANCEL] ─────────────────────

[CLEAR]
(Corrects value)

    *   Press [HELP] to enter "-".

Procedure 7

[0][8]
[POWER] → [Digital key] (Code) → [START] → [Digital key] (Setting) → [ENTER] or [INTERRUPT] (Stores value in RAM) → (HDD formatting) → [POWER] OFF/ON (Exit)

[CANCEL]

[CLEAR] (Corrects value)

Procedure 9

[0][8]
[POWER] → [Digital key] (Code) → [START] → [Select button] → [ENTER] or [INTERRUPT] (Stores value in RAM) → [POWER] OFF/ON (Exit)

[CANCEL]

[CLEAR] (Corrects value)

Procedure 10

[0][8]
[POWER] → [Digital key] (Code) → [START] → [Digital key] (1st setting) → [START] → [Digital key] (2nd setting) → [ENTER] or [INTERRUPT] (Stores value in RAM) → [POWER] OFF/ON (Exit)

[CANCEL]

[CLEAR] (Corrects value)

[CLEAR] (Corrects value)

Procedure 11 and 12

[0][8]
[POWER] → [Digital key] (Code) → [START] → [Digital key] or [Software keyboard] *1 [MONITOR/PAUSE] (Sets or changes value) → *2(Stores value in RAM) [ENTER] → [POWER] OFF/ON (Exit)

[CANCEL]

[CLEAR] (Corrects value)

*1 Press [MONITOR/PAUSE] to enter "-", when entering telephone number.
*2 The data are stored in SYS-RAM in procedure 11 and stored in NIC-RAM in procedure 12.

Procedure 14
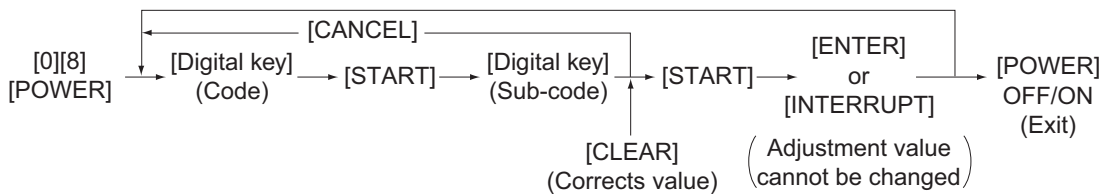
[0][8]
[POWER] → [Digital key] (Code) → [START] → [Digital key] (Sub-code) → [START] → [ENTER] or [INTERRUPT] (Adjustment value cannot be changed) → [POWER] OFF/ON (Exit)

[CANCEL]

[CLEAR] (Corrects value)

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Notes:
1. The digit after the hyphen in "Code" of the following table is a sub code.
2. In "RAM", the NVRAM of the board in which the data of each code is stored is indicated. "M" stands for the LGC board, "SYS", "NIC" and "UTY" stands for the SYS board.

Code	Classification	Items	Function	Default <Acceptable value>	RAM	Contents	Procedure
				Setting mode (08)			
200	General	Date and time setting	ALL	- <13 digits>	-	Year/month/date/day/ hour/minute/second Example: 03 07 0 13 13 27 48 "Day" - "0" is for "Sunday". Proceeds Monday through Saturday from "1" to "6".	5
201	General	Destination selection	ALL	EUR: 0 UC: 1 JPN: 2 <0-3>	M	0: EUR 1: UC 2: JPN 3: Other	1
202	User interface	Counter installed externally	ALL	0 <0-4>	M	0: No external counter 1: Coin controller 2: Copy key card (This value is valid only when "2" is set to 08-201.) 3: Key copy counter 4: Key card for OEM1	1
203	General	Line adjustment mode	ALL	0 <0-1>	M	0: For factory shipment 1: For line * Field: "0" must be selected	1
204	User interface	Auto-clear timer setting	ALL	3 <0-10>	SYS	Timer to return the equipment to the default settings when the [START] button is not pressed after the function and the mode are set 0: Not cleared 1 to 10: Set number x 15 sec.	1
205	User interface	Auto power save mode timer setting	ALL	6 <0, 6-15>	SYS	Timer to automatically switch to the energy saving mode when the equipment has not been used 0: Invalid 6: 3min. 7: 4min. 8: 5min. 9: 7min. 10: 10min. 11: 15min. 12: 20min. 13: 30min. 14: 45min. 15: 60min.	1

				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
206	User interface	Auto Shut Off Mode timer setting (Sleep Mode)	ALL	0 <0-20>	SYS	Timer to enter the Sleep Mode automatically when the equipment has not been used 0: 3min. 1: 5min. 2: 10min. 3: 15min. 4: 20min. 5: 25min. 6: 30min. 7: 40min. 8: 50min. 9: 60min. 10: 70min. 11: 80min. 12: 90min. 13: 100min. 14: 110min. 15: 120min. 16: 150min. 17:180min. 18: 210min. 19:240min. 20: Not used	1
207	User interface	Highlighting display on LCD	ALL	0 <0-1>	SYS	0: Black letter on white background 1: White letter on black background	1
209	User interface	Default setting of filing for-mat when E-mailing (black mode)	ALL (color)	1 <0-6>	SYS	0: TIFF (Multi) 1: PDF (Multi) 2: Not used 3: TIFF (Single) 4: PDF (Single) 5: XPS (Multi) 6: XPS (Single)	1
210	Paper feeding	Paper size (A6-R) feeding/widthwise direction	PRT	148/105 <148-432/105-297>	M		10
218	User interface	Default setting of filing for-mat when storing files (at color/ACS modes)	SCN (color)	1 <0-8>	SYS	0: TIFF (Multi) 1: PDF (Multi) 2: JPG 3: TIFF (Single) 4: PDF (Single) 5: SLIM PDF (Multi) 6: SLIM PDF (Single) 7: XPS (Multi) 8: XPS (Single)	1
219	User interface	Default setting of filing for-mat when storing files (at black mode)	ALL (black)	0 <0-6>	SYS	0: TIFF (Multi) 1: PDF (Multi) 2: JPG 3: TIFF (Single) 4: PDF (Single) 5: XPS (Multi) 6: XPS (Single)	1
220	User interface	Language displayed at power-ON	ALL	EUR: 0 UC: 0 JPN: 5 <0-6>	SYS	0: Language 1 1: Language 2 2: Language 3 3: Language 4 4: Language 5 5: Language 6 6: Language 7	1

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ERROR CODE AND SELF-DIAGNOSTIC MODE

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
221	User interface	Language selection in UI data at Web power ON	ALL	EUR: 0 UC: 0 JPN: 5 <0-6>	SYS	0: Language 1 1: Language 2 2: Language 3 3: Language 4 4: Language 5 5: Language 6 6: Language 7	1
223	Mainte-nance	Switching of output pages/ driving counts at PM	ALL	0 <0-1>	M	Selects the reference to notify the PM timing. (The message is dis-played on the LCD screen.) 0: PM sheet counter (The number of out-put pages is set at 08-251.) 1: PM driving counter (The timing is set at 08-375.)	1
224	Paper feeding	Paper size for bypass feed	PPC	UNDEF (255) <0-255>	SYS	Press the button on the LCD to select the size.	9
225	Paper feeding	Paper size for 1st drawer	ALL	EUR: A4 UC: LT JPN: A4	M	Press the button on the LCD to select the size.	9
226	Paper feeding	Paper size for 2nd drawer	ALL	EUR: A3 UC: LD JPN: A3	M	Press the button on the LCD to select the size.	9
227	Paper feeding	Paper size for PFP upper drawer	ALL	EUR: A4-R UC: LT-R JPN: A4-R	M	Press the button on the LCD to select the size.	9
228	Paper feeding	Paper size for PFP lower drawer	ALL	EUR: A4 UC: LG JPN: B4	M	Press the button on the LCD to select the size.	9
229	Paper feeding	Paper size (A3-R) feeding/widthwise direction	ALL	420/297 <182-432/140-297>	M		10
230	Paper feeding	Paper size (A4-R) feeding/widthwise direction	ALL	297/210 <182-432/140-297>	M		10
231	Paper feeding	Paper size (A5-R) feeding/widthwise direction	ALL	210/148 <182-432/140-297>	M		10
232	Paper feeding	Paper size (B4-R) feeding/widthwise direction	ALL	364/257 <182-432/140-297>	M		10
233	Paper feeding	Paper size (B5-R) feeding/widthwise direction	ALL	257/182 <182-432/140-297>	M		10

				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
234	Paper feeding	Paper size (LT-R) feeding/widthwise direction	ALL	279/216 <182-432/140-297>	M		10
235	Paper feeding	Paper size (LD) feeding/widthwise direction	ALL	432/279 <182-432/140-297>	M		10
236	Paper feeding	Paper size (LG) feeding/widthwise direction	ALL	356/216 <182-432/140-297>	M		10
237	Paper feeding	Paper size (ST-R) feeding/widthwise direction	ALL	216/140 <182-432/140-297>	M		10
238	Paper feeding	Paper size (COMPUTER) feeding/widthwise direction	ALL	356/257 <182-432/140-297>	M		10
239	Paper feeding	Paper size (FOLIO) feeding/widthwise direction	ALL	330/210 <182-432/140-297>	M		10
240	Paper feeding	Paper size (13"LG) feeding/widthwise direction	ALL	330/216 <182-432/140-297>	M		10
241	Paper feeding	Paper size (8.5"X8.5") feeding/widthwise direction	ALL	216/216 <182-432/140-297>	M		10
242	Paper feeding	Paper size (Non-standard) feeding/widthwise direction	ALL	432/279 <148-432/105-297>	SYS		10
243	Paper feeding	Memory 1 Paper size (bypass feed-ing/non-standard type) feeding/widthwise direction	ALL	148/100 <148-432/100-297>	SYS	Registers the paper size of bypass feed (non-standard type) into [MEMORY 1].	10
244	Paper feeding	Paper size (8K) feeding/widthwise direction	ALL	390/270 <182-432/140-297>	M		10
245	Paper feeding	Paper size (16K-R) feeding/widthwise direction	ALL	270/195 <182-432/140-297>	M		10
246	Paper feeding	Paper size (A3-wide) feeding/widthwise direction	ALL	457/305 <182-457/140-305>	M		10
247	Paper feeding	Memory 2 Paper size (bypass feed-ing/non-standard type) feeding/widthwise direction	ALL	148/100 <148-432/100-297>	SYS	Registers the paper size of bypass feed (non-standard type) into [MEMORY 2].	10

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				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
248	Paper feeding	Memory 3 Paper size (bypass feed-ing/non-standard type) feeding/widthwise direction	ALL	148/100 <148-432/100-297>	SYS	Registers the paper size of bypass feed (non-standard type) into [MEMORY 3].	10
249	Paper feeding	Memory 4 Paper size (bypass feed-ing/non-standard type) feeding/widthwise direction	ALL	148/100 <148-432/100-297>	SYS	Registers the paper size of bypass feed (non-standard type) into [MEMORY 4].	10
250	Mainte-nance	Service technician tele-phone number	ALL	0 <32 dig-its>	SYS	A telephone number can be entered up to 32 digits. Use the [MONI-TOR/PAUSE] button to enter a hyphen(-).	11
251	Mainte-nance	Setting value of PM sheet counter	ALL	Refer to content <8 digits>	M	<Default> e-STUDIO2500c UC, EUR: 50,000 JPN: 0 e-STUDIO3500c UC, EUR: 70,000 JPN: 0 e-STUDIO3510c UC, EUR: 70,000 JPN: 0	1
252	Mainte-nance	Current value of PM driving counter Display/0 clearing	ALL	0 <8 digits>	M	Counts up when the registration sensor is ON.	1
253	Mainte-nance	Error history display	ALL	-	SYS	Displays the latest 20 errors data	2
254	Paper feeding	LT↔A4/LD↔A3	PRT	0 <0-1>	SYS	Sets whether the data is printed on the different but similar size paper or not when the paper of corresponding size is not available. 0: Valid (The data is printed on A4/A3 when LT/LD is selected or vice versa.) 1: Invalid (The mes-sage to use the selected paper size is displayed.)	1
255	Paper feeding	PFP/LCF installation	ALL	0 <0-4>	M	0: Automatic 1: PFP single-drawer type installed 2: PFP dual-drawer type installed 3: LCF installed 4: Not installed	1
256	Paper feeding	Paper size setting /LCF	ALL	EUR: A4 UC: LT JPN: A4	M	Press the icon on the LCD to select the size.	9

							Setting mode (08)	

Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
257	Counter	Counter copy	ALL	- <1-2>	-	1: Electrical counter -> Backup counter (LGC board -> SYS board) 2: Backup counter -> Electrical counter (SYS board -> LGC board) (P. 2-284)	6
259	Network	Storage period at trail and private	PRT	14 <0-35>	SYS	0: No limits 1 to 30: 1 to 30 days 31: 1 hour 32: 2 hours 33: 4 hours 34: 8 hours 35: 12 hours	1
260	Network	Web data retention period	ALL	10 <3 digits>	SYS	When a certain period of time has passed without operation after accessing TopAccess, the data being regis-tered is automatically reset. This period is set at this code. (Unit: Minute)	1
263	User interface	Administrator's password (Maximum 10 digits)	ALL	123456 <10 dig-its>	-	The password can be entered in alphabets and figures (A-Z, a-z and 0-9) within 10 dig-its.	11
264	Network	File retention period	ALL	30 <0-999>	SYS	0: No limits 1 to 999: 1 to 999 days	1
265	Network	Maximum data capacity at E-mailing	ALL	30 <2-30>	SYS	2 to 30 M bytes	1
266	Network	Maximum data capacity at Internet FAX	ALL	30 <2-30>	SYS	2 to 30 M bytes	1
267	Elec-tronic filing	e-Filing document guaran-tee mode	ALL	1 <0-1>	SYS	Sets the file retention level during edition in e-Filing (when the docu-ment cut/save com-mand is used) 0: Not retained (Docu-ments could be lost due to We session timeout / electricity cutoff during docu-ment cut/save.) 1: Full retained - Docu-ments are retained until cut/save com-mand completion. * When "1" is set, documents are not lost even if disk full occurs during com-mand execution.	1

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				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
268	User interface	Binarizing level selection (When judging as black in the ACS Mode)	ALL	3 <1-5>	SYS	0: Step -2 1: Step -1 2: Step 0 (center) 3: Step 1 4: Step 2 * The binarizing level of each step is set at 08-609.	1
270	Elec-tronic filing	Default setting of user box retention period	ALL	0 <0-999>	SYS	Sets the data retention period when creating a user box. 0: Not deleted 1 to 999: Retention period (Unit: Day)	1
271	General	Warning notification of the File Share and e-Filling partitions are filled	ALL	90 <0-100>	SYS	Sets the percentage of HDD partition filled when warning notifica-tion is sent. 0 to 100: 0 to 100% * Related code 08-288	1
272	Scanning	Notification setting of E-mail saving time limit	ALL	3 <0-99>	SYS	Sets the days left the notification of E-mail saving time limit appears 0 to 99: 0 to 99 days	1
273	Scanning	Default setting of partial size when transmitting E-mail	ALL	0 <0-6>	SYS	Sets the default value for the partial size of E-mail to be transmitted when creating a tem-plate. 0: Not divided 1: 64 2: 128 3: 256 4: 512 5: 1024 6: 2048 (Unit: KB)	1
274	FAX	Default setting of page by page when transmitting Internet FAX	ALL	0 <0-4>	SYS	Sets the default value for the page by page of Internet FAX to be transmitted when creat-ing a template. 0: Not divided 1: 256 2: 512 3: 1024 4: 2048 (Unit: KB)	1

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
276	User interface	Default setting of density adjustment (Black)	SCN (black)	0 <0-11>	SYS	0: Automatic density 1: Step -5 2: Step -4 3: Step -3 4: Step -2 5: Step -1 6: Step 0 (center) 7: Step +1 8: Step +2 9: Step +3 10: Step +4 11: Step +5 (1 to 11: Manual den-sity)	1
277	User interface	Default setting of back-ground adjustment (Full Color)	SCN (color)	5 <1-9>	SYS	1: Step -2 2: Step -1 3: Step 0 (center) 4: Step +1 5: Step +2	1
278	User interface	Default setting of color mode	SCN	0 <0-4>	SYS	0: Black 1: Gray Scale 2: Unused 3: Full Color 4: Auto Color	1
279	User interface	Default setting of resolution (Full Color)	SCN (color)	2 <0-3>	SYS	0: 100 dpi 1: 150 dpi 2: 200 dpi 3: 300dpi 4: 400 dpi 5: 600dpi	1
280	User interface	Default setting of resolution (Gray Scale)	SCN (black)	2 <0-4>	SYS	0: 100 dpi 1: 150 dpi 2: 200 dpi 3: 300dpi 4: 400 dpi 5: 600 dpi	1
281	User interface	Default setting of resolution (Black)	SCN (black)	1 <0-4>	SYS	0: 150 dpi 1: 200 dpi 2: 300 dpi 3: 400dpi 4: 600 dpi	1
282	User interface	Default setting of original mode (Full Color)	SCN (color)	0 <0-3>	SYS	0: Text 1: Photo 2: Print 3: Custom (Valid only when other than "0" is set in 08-590)	1
283	User interface	Default setting of original mode (Black)	SCN (black)	0 <0-3>	SYS	0: Text 1: Text/Photo 2: Photo 3: Custom (Valid only when other than "0" is set in 08-580)	1
284	User interface	Default setting of scanning mode	SCN	0 <0-2>	SYS	0: Single 1: Book 2: Tablet	1

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
285	User interface	Default setting of rotation mode	SCN	0 <0-3>	SYS	0: 0 degree 1: 90 degrees 2: 180 degrees 3: 270 degrees	1
286	User interface	Default setting of original paper size	SCN	0 <0-22>	SYS	0: Automatic 1: A3 2: A4 3: LD 4: LT 5: A4-R 6: A5-R 7: LT-R 8: LG 9: B4 10: B5 11: ST-R 12: COMP 13: B5-R 14: FOLIO 15: 13"LG 16: 8.5"x 8.5" 18: A6-R 19: Size mixed 20: 8K 21: 16K 22: 16K-R	1
288	General	Searching interval of delet-ing expired files and check-ing capacity of HDD partitions	SCN	12 <1-24>	SYS	Sets the search inter-val of deleting expired files and checking capacity of HDD parti-tions. (Unit: Hour) * Related code 08-271	1
289	User interface	Default setting of back-ground adjustment (Gray Scale)	SCN	5 <1-9>	SYS	1: Step -4 2: Step -3 3: Step -2 4: Step -1 5: Step 0 (center) 6: Step +1 7: Step +2 8: Step +3 9: Step +4	1
290	Network	Raw printing job (Duplex)	PRT	1 <0-1>	SYS	0: Valid 1: Invalid	1
291	Network	Raw printing job (Paper size)	PRT	EUR: 6 UC: 2 JPN: 6 <0 -13>	SYS	0: LD 1: LG 2: LT 3: COMP 4: ST 5: A3 6: A4 7: A5 8: A6 9: B4 10: B5 11: FOLIO 12: 13 "LG 13: 8.5" x 8.5"	1
292	Network	Raw printing job (Paper type)	PRT	0 <0-5>	SYS	0: Plain paper 1: Thick paper 1 2: Thick paper 2 3: Thick paper 3 4: OHP film 5: Thick paper 4	1
293	Network	Raw printing job (Paper direction)	PRT	0 <0-1>	SYS	0: Portrait 1: Landscape	1
294	Network	Raw printing job (Staple)	PRT	1 <0-1>	SYS	0: Valid 1: Invalid	1

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		Setting mode (08)					
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
295	Network	Raw printing job (Exit tray)	PRT	0 <0-6>	SYS	0:Inner Tray 1:Finisher Tray1 2:Finisher Tray2 3:Unused 4:Job Separator Upper 5:Job Separator Lower 6:Exit Tray	1
296	Network	Raw printing job (Number of form lines)	PRT	1200 <500-12800>	SYS	Sets the number of form lines from 5 to 128. (A hundredfold of the number of form lines is defined as the setting value.)	1
297	Network	Raw printing job (PCL font pitch)	PRT	1000 <44-9999>	SYS	Sets the font pitch from 0.44 to 99.99. (A hun-dredfold of the font pitch is defined as the setting value.)	1
298	Network	Raw printing job (PCL font size)	PRT	1200 <400-99975>	SYS	Sets the font size from 4 to 999.75. (A hundredfold of the font size is defined as the setting value.)	1
299	Network	Raw printing job (PCL font number)	PRT	0 <0-79>	SYS	Sets the PCL font num-ber.	1
300	User interface	Maximum number of copy volume (MAX9)	PPC	0 <0-2>	SYS	0: 999 1: 99 2: 9	1
301-0 301-1 301-2 301-3 301-4 301-5 301-6 301-7 301-8 301-9 301-10 301-11 301-12 301-13 301-14 301-15 301-17	Counter	Number of output pages at Full Color Mode in Copier Func-tion	A3 A4 A5 A6 B4 B5 FOLIO LD LG LT ST COMP 13"LG 8.5" x 8.5" 16K 8K Others	PPC (color)	0 <8 digits>	SYS	Counts the output pages at the Full Color Mode in the Copier Function for each paper size according to the setting for the count setting of large sized paper (08-352) and the definition setting of large-sized paper (08-353).	4
302	User interface	Original counter display	PPC	EUR: 2 UC: 0 JPN: 0 <0, 2, 4>	SYS	Sets whether the origi-nal counter is dis-played or not. 0: Not displayed 2: Displayed 4: Displayed (Double sized original is counted as 2.)	1

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e-STUDIO2500c/3500c/3510c
ERROR CODE AND SELF-DIAGNOSTIC MODE

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
303-0	Counter	Number of output pages at Full Color Mode in Printer Func-tion	A3	PRT (color)	0 <8 digits>	SYS	Counts the output pages at the Full Color Mode in the Printer Function for each paper size according to the setting for the count setting of large sized paper (08-352) and the definition setting of large-sized paper (08-353).	4
303-1			A4					
303-2			A5					
303-3			A6					
303-4			B4					
303-5			B5					
303-6			FOLIO					
303-7			LD					
303-8			LG					
303-9			LT					
303-10			ST					
303-11			COMP					
303-12			13"LG					
303-13			8.5" x 8.5"					
303-14			16K					
303-15			8K					
303-16			Extra long size paper					
303-17			Others					
304-0	Counter	Number of output pages at Twin Color / Monocolor Mode in Copier Func-tion	A3	PPC (color)	0 <8 digits>	SYS	Counts the output pages at the Twin Color Mode in the Copier Function for each paper size according to the setting for the count setting of large sized paper (08-352) and the definition setting of large-sized paper (08-353).	4
304-1			A4					
304-2			A5					
304-3			A6					
304-4			B4					
304-5			B5					
304-6			FOLIO					
304-7			LD					
304-8			LG					
304-9			LT					
304-10			ST					
304-11			COMP					
304-12			13"LG					
304-13			8.5" x 8.5"					
304-14			16K					
304-15			8K					
304-17			Others					

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
305-0	Counter	Number of output pages at Black Mode in Copier Function	A3	PPC (black)	0 <8 digits>	SYS	Counts the output pages at the Black Mode in the Copier Function for each paper size according to the setting for the count setting of large-sized paper (08-352) and the definition setting of large-sized paper (08-353).	4
305-1			A4					
305-2			A5					
305-3			A6					
305-4			B4					
305-5			B5					
305-6			FOLIO					
305-7			LD					
305-8			LG					
305-9			LT					
305-10			ST					
305-11			COMP					
305-12			13"LG					
305-13			8.5" x 8.5"					
305-14			16K					
305-15			8K					
305-17			Others					
306-0	Counter	Number of output pages at Black Mode in Printer Function	A3	PRT (black)	0 <8 digits>	SYS	Counts the output pages at the Black Mode in the Printer Function for each paper size according to the setting for the count setting of large-sized paper (08-352) and the definition setting of large-sized paper (08-353).	4
306-1			A4					
306-2			A5					
306-3			A6					
306-4			B4					
306-5			B5					
306-6			FOLIO					
306-7			LD					
306-8			LG					
306-9			LT					
306-10			ST					
306-11			COMP					
306-12			13"LG					
306-13			8.5" x 8.5"					
306-14			16K					
306-15			8K					
306-16			Extra long size paper					
306-17			Others					

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				Setting mode (08)				
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
307-0	Counter	Number of output pages at List Print Mode	A3	PRT (black)	0 <8 digits>	SYS	Counts the output pages at the List Print Mode for each paper size according to the setting for the count setting of large-sized paper (08-352) and the definition setting of large sized paper (08-353).	4
307-1			A4					
307-2			A5					
307-3			A6					
307-4			B4					
307-5			B5					
307-6			FOLIO					
307-7			LD					
307-8			LG					
307-9			LT					
307-10			ST					
307-11			COMP					
307-12			13"LG					
307-13			8.5" x 8.5"					
307-14			16K					
307-15			8K					
307-17			Others					
308-0	Counter	Number of output pages in FAX Func-tion	A3	FAX	0 <8 digits>	SYS	Counts the output pages in the FAX Func-tion for each paper size according to the setting for the count setting of large-sized paper (08-352) and the definition setting of large-sized paper (08-353).	4
308-1			A4					
308-2			A5					
308-3			A6					
308-4			B4					
308-5			B5					
308-6			FOLIO					
308-7			LD					
308-8			LG					
308-9			LT					
308-10			ST					
308-11			COMP					
308-12			13"LG					
308-13			8.5" x 8.5"					
308-14			16K					
308-15			8K					
308-17			Others					

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
309-0	Counter	Number of scanning pages at Full Color Mode in Copier Func-tion	A3	PPC (color)	0 <8 digits>	SYS	Counts the scanning pages at the Full Color Mode in the Copier Function for each paper size according to the setting for the count setting of large-sized paper (08-352) and the definition setting of large-sized paper (08-353).	4
309-1			A4					
309-2			A5					
309-3			A6					
309-4			B4					
309-5			B5					
309-6			FOLIO					
309-7			LD					
309-8			LG					
309-9			LT					
309-10			ST					
309-11			COMP					
309-12			13"LG					
309-13			8.5" x 8.5"					
309-14			16K					
309-15			8K					
309-17			Others					
310-0	Counter	Number of scanning pages at Full Color Mode in Scanning Function	A3	SCN (color)	0 <8 digits>	SYS	Counts the scanning pages at the Full Color Mode in the Scanning Function for each paper size according to the setting for the count setting of large-sized paper (08-352) and the definition setting of large-sized paper (08-353).	4
310-1			A4					
310-2			A5					
310-3			A6					
310-4			B4					
310-5			B5					
310-6			FOLIO					
310-7			LD					
310-8			LG					
310-9			LT					
310-10			ST					
310-11			COMP					
310-12			13"LG					
310-13			8.5" x 8.5"					
310-14			16K					
310-15			8K					
310-17			Others					

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
311-0	Counter	Number of scanning pages at Twin Color / Mono-color Mode in Copier Func-tion	A3	PPC (color)	0 <8 digits>	SYS	Counts the scanning pages at the Twin Color Mode in the Copier Function for each paper size according to the setting for the count setting of large-sized paper (08-352) and the definition setting of large-sized paper (08-353).	4
311-1			A4					
311-2			A5					
311-3			A6					
311-4			B4					
311-5			B5					
311-6			FOLIO					
311-7			LD					
311-8			LG					
311-9			LT					
311-10			ST					
311-11			COMP					
311-12			13"LG					
311-13			8.5" x 8.5"					
311-14			16K					
311-15			8K					
311-17			Others					
312-0	Counter	Number of scanning pages at Black Mode in Copier Func-tion	A3	PPC (black)	0 <8 digits>	SYS	Counts the scanning pages at the Black Mode in the Copier Function for each paper size according to the setting for the count setting of large sized paper (08-352) and the definition setting of large-sized paper (08-353).	4
312-1			A4					
312-2			A5					
312-3			A6					
312-4			B4					
312-5			B5					
312-6			FOLIO					
312-7			LD					
312-8			LG					
312-9			LT					
312-10			ST					
312-11			COMP					
312-12			13"LG					
312-13			8.5" x 8.5"					
312-14			16K					
312-15			8K					
312-17			Others					

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
313-0	Counter	Number of scanning pages in Scanning Function	A3	SCN (black)	0 <8 digits>	SYS	Counts the scanning pages at the Black Mode in the Scanning Function for each paper size according to the setting for the count setting of large sized paper (08-352) and the definition setting of large-sized paper (08-353).	4
313-1			A4					
313-2			A5					
313-3			A6					
313-4			B4					
313-5			B5					
313-6			FOLIO					
313-7			LD					
313-8			LG					
313-9			LT					
313-10			ST					
313-11			COMP					
313-12			13"LG					
313-13			8.5" x 8.5"					
313-14			16K					
313-15			8K					
313-17			Others					
314-0	Counter	Number of scanning pages in FAX Function	A3	FAX	0 <8 digits>	SYS	Counts the scanning pages in the FAX Func-tion for each paper size according to the setting for the count setting of large-sized paper (08-352) and the definition setting of large sized paper (08-353).	4
314-1			A4					
314-2			A5					
314-3			A6					
314-4			B4					
314-5			B5					
314-6			FOLIO					
314-7			LD					
314-8			LG					
314-9			LT					
314-10			ST					
314-11			COMP					
314-12			13"LG					
314-13			8.5" x 8.5"					
314-14			16K					
314-15			8K					
314-17			Others					

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					Setting mode (08)			
Code	**Classifi-cation**	**Items**		**Func-tion**	**Default \<Accept-able value>**	**RAM**	**Contents**	**Pro-cedure**
315-0	Counter	Number of transmitted pages in FAX Function	A3	FAX	0 \<8 digits>	SYS	Counts the transmitted pages in the FAX Func-tion for each paper size according to the setting for the count setting of large-sized paper (08-352) and the definition setting of large sized paper (08-353).	4
315-1			A4					
315-2			A5					
315-3			A6					
315-4			B4					
315-5			B5					
315-6			FOLIO					
315-7			LD					
315-8			LG					
315-9			LT					
315-10			ST					
315-11			COMP					
315-12			13"LG					
315-13			8.5" x 8.5"					
315-14			16K					
315-15			8K					
315-17			Others					
316-0	Counter	Number of received pages in FAX Function	A3	FAX	0 \<8 digits>	SYS	Counts the received pages in the FAX Func-tion for each paper size according to the setting for the count setting of large-sized paper (08-352) and the definition setting of large sized paper (08-353).	4
316-1			A4					
316-2			A5					
316-3			A6					
316-4			B4					
316-5			B5					
316-6			FOLIO					
316-7			LD					
316-8			LG					
316-9			LT					
316-10			ST					
316-11			COMP					
316-12			13"LG					
316-13			8.5" x 8.5"					
316-14			16K					
316-15			8K					
316-17			Others					

						Setting mode (08)			
Code	**Classifi-cation**	**Items**		**Func-tion**	**Default <Accept-able value>**	**RAM**	**Contents**		**Pro-cedure**
317-0	Counter	Display of number of output pages at Full Color Mode in Copier Func-tion	Large	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages at the Full Color Mode in the Copier Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number out-put pages of all paper sizes.		14
317-1	Counter		Small	PPC (color)	0 <8 digits>	SYS			14
317-2	Counter		Total	PPC (color)	0 <8 digits>	SYS			14
318-0	Counter	Display of number of output pages at Full Color Mode in Printer Func-tion	Large	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages at the Full Color Mode in the Printer Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number out-put pages of all paper sizes.		14
318-1	Counter		Small	PRT (color)	0 <8 digits>	SYS			14
318-2	Counter		Total	PRT (color)	0 <8 digits>	SYS			14
319-0	Counter	Display of number of output pages at Twin Color / Monocolor Mode in Copier Func-tion	Large	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages at the Twin Color Mode in the Copier Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number out-put pages of all paper sizes.		14
319-1	Counter		Small	PPC (color)	0 <8 digits>	SYS			14
319-2	Counter		Total	PPC (color)	0 <8 digits>	SYS			14

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e-STUDIO2500c/3500c/3510c
ERROR CODE AND SELF-DIAGNOSTIC MODE

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
320-0	Counter	Display of number of output pages at Black Mode in Copier Function	Large	PPC (black)	0 <8 digits>	SYS	Counts the number of output pages at the Black Mode in the Copier Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes.	14
320-1	Counter		Small	PPC (black)	0 <8 digits>	SYS		14
320-2	Counter		Total	PPC (black)	0 <8 digits>	SYS		14
321-0	Counter	Display of number of output pages at Black Mode in Printer Function	Large	PRT (black)	0 <8 digits>	SYS	Counts the number of output pages at the Black Mode in the Printer Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes.	14
321-1	Counter		Small	PRT (black)	0 <8 digits>	SYS		14
321-2	Counter		Total	PRT (black)	0 <8 digits>	SYS		14
322-0	Counter	Display of number of output pages at List Print Mode	Large	PRT (black)	0 <8 digits>	SYS	Counts the number of output pages at the List Print Mode Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes.	14
322-1	Counter		Small	PRT (black)	0 <8 digits>	SYS		14
322-2	Counter		Total	PRT (black)	0 <8 digits>	SYS		14

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
323-0	Counter	Display of number of output pages in FAX Func-tion	Large	FAX	0 <8 digits>	SYS	Counts the number of output pages in the FAX Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number out-put pages of all paper sizes.	14
323-1	Counter		Small	FAX	0 <8 digits>	SYS		14
323-2	Counter		Total	FAX	0 <8 digits>	SYS		14
324-0	Counter	Display of number of scanning pages at Full Color Mode in Copier Func-tion	Large	PPC (color)	0 <8 digits>	SYS	Counts the number of scanning pages at the Full Color Mode in the Copier Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number out-put pages of all paper sizes.	14
324-1	Counter		Small	PPC (color)	0 <8 digits>	SYS		14
324-2	Counter		Total	PPC (color)	0 <8 digits>	SYS		14
325-0	Counter	Display of number of scanning pages at Full Color Mode in Scanning Function	Large	SCN (color)	0 <8 digits>	SYS	Counts the number of scanning pages at the Full Color Mode in the Scanning Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number out-put pages of all paper sizes.	14
325-1	Counter		Small	SCN (color)	0 <8 digits>	SYS		14
325-2	Counter		Total	SCN (color)	0 <8 digits>	SYS		14

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
326-0	Counter	Display of number of scanning pages at Twin Color / Mono-color Mode in Copier Func-tion	Large	PPC (color)	0 <8 digits>	SYS	Counts the number of scanning pages at the Twin Color Mode in the Copier Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number out-put pages of all paper sizes.	14
326-1	Counter		Small	PPC (color)	0 <8 digits>	SYS		14
326-2	Counter		Total	PPC (color)	0 <8 digits>	SYS		14
327-0	Counter	Display of number of scanning pages at Black Mode in Copier Func-tion	Large	PPC (black)	0 <8 digits>	SYS	Counts the number of scanning pages at the Black Mode in the Copier Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number out-put pages of all paper sizes.	14
327-1	Counter		Small	PPC (black)	0 <8 digits>	SYS		14
327-2	Counter		Total	PPC (black)	0 <8 digits>	SYS		14
328-0	Counter	Display of number of scanning pages in FAX Function	Large	FAX	0 <8 digits>	SYS	Counts the number of scanning pages in the FAX Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number out-put pages of all paper sizes.	14
328-1	Counter		Small	FAX	0 <8 digits>	SYS		14
328-2	Counter		Total	FAX	0 <8 digits>	SYS		14

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
329-0	Counter	Display of number of scanning pages in Scanning Function	Large	SCN (black)	0 <8 digits>	SYS	Counts the number of scanning pages in the Scanning Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes.	14
329-1	Counter		Small	SCN (black)	0 <8 digits>	SYS		14
329-2	Counter		Total	SCN (black)	0 <8 digits>	SYS		14
330-0	Counter	Display of number of transmitted pages in FAX Function	Large	FAX	0 <8 digits>	SYS	Counts the number of transmitted pages in the FAX Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number output pages of all paper sizes.	14
330-1	Counter		Small	FAX	0 <8 digits>	SYS		14
330-2	Counter		Total	FAX	0 <8 digits>	SYS		14
331	User interface	Default setting of screen		ALL	0 <0-5>	SYS	Sets the screen to be displayed after the auto-clear time has passed or it has recovered from the energy saving mode or sleep mode. 0: Copier 1: Fax 2: Scan 3: Box 4: Job Status 5: Template	1

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
332-0	Counter	Display of number of received pages in FAX Function	Large	FAX	0 <8 digits>	SYS	Counts the number of received pages in the FAX Function according to its size (large/small). Large: Number of output pages of large-sized paper defined at 08-353 Small: Number of output pages other than set as large-sized paper Total: Total number out-put pages of all paper sizes.	14
332-1	Counter		Small	FAX	0 <8 digits>	SYS		14
332-2	Counter		Total	FAX	0 <8 digits>	SYS		14
333-0	Counter	Display of total number of pages at Full Color Mode	Large	ALL (color)	0 <8 digits>	SYS	Displays the total num-ber of pages at Full Color Mode in the Copier/Printer/Scan-ning Functions.	14
333-1	Counter		Small	ALL (color)	0 <8 digits>	SYS		14
333-2	Counter		Total	ALL (color)	0 <8 digits>	SYS		14
334-0	Counter	Display of total number of pages at Twin Color / Monocolor Mode	Large	ALL (color)	0 <8 digits>	SYS	Displays the total num-ber of pages at Twin Color Mode in the Copier Function.	14
334-1	Counter		Small	ALL (color)	0 <8 digits>	SYS		14
334-2	Counter		Total	ALL (color)	0 <8 digits>	SYS		14
335-0	Counter	Display of total number of pages at Black Mode	Large	ALL (black)	0 <8 digits>	SYS	Displays the total num-ber of pages at Black Mode in the Copier/ Printer/Scanning/FAX Functions.	14
335-1	Counter		Small	ALL (black)	0 <8 digits>	SYS		14
335-2	Counter		Total	ALL (black)	0 <8 digits>	SYS		14
342	User interface	Displaying number of original pages placed on original glass		PPC	0 <0-1>	SYS	This setting is whether the number of pages of originals placed on the original glass is dis-played or not. 0: Not displayed 1: Displayed	1
343	User interface	Black-free function		ALL	0 <0-1>	SYS	0: Disabled 1: Enabled When "1" (enabled) is set at this code, "1" (black) is automatically set at the code 08-588.	1
344	Counter	Count setting of tab paper (PM)		ALL	1 <0-1>	M	0: Counted as 1 1: Counted as 2	1
346	Counter	Count setting of large-sized paper (PM)		ALL	1 <0-1>	M	0: Counted as 1 1: Counted as 2	1
347	Counter	Definition setting of large sized paper (PM)		ALL	1 <0-1>	M	0: A3/LD 1: A3/LD/B4/LG/ FOLIO/COMP	1

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedur e
348	Counter	Count setting of thick paper (PM)	ALL	1 <0-1>	M	0: Counted as 1 1: Counted as 2	1
349	Counter	Count setting of OHP film (PM)	ALL	1 <0-1>	M	0: Counted as 1 1: Counted as 2	1
352	Counter	Count setting of large-sized paper (Fee charging system counter)	ALL	JPN: 0 OTHER: 1 <0-2>	M	0: Counted as 1 1: Counted as 2 2: Counted as 1 (Mechanical counter is double counter)	1
353	Counter	Definition setting of large sized paper (Fee charging system counter)	ALL	0 <0-1>	M	0: A3/LD 1: A3/LD/B4/LG/ FOLIO/COMP/8k	1
356	Counter	Counter for 1st drawer feeding	ALL	0 <8 digits>	M	Counts the number of sheets fed from 1st drawer	2
357	Counter	Counter for 2nd drawer feeding	ALL	0 <8 digits>	M	Counts the number of sheets fed from 2nd drawer	2
358	Counter	Counter for bypass feeding	ALL	0 <8 digits>	M	Counts the number of sheets fed from bypass feed	2
359	Counter	Counter for LCF feeding	ALL	0 <8 digits>	M	Counts the number of sheets fed from LCF	2
360	Counter	Counter for PFP upper drawer feeding	ALL	0 <8 digits>	M	Counts the number of sheets fed from PFP upper drawer	2
370	Counter	Counter for PFP lower drawer feeding	ALL	0 <8 digits>	M	Counts the number of sheets fed from PFP lower drawer	2
372	Counter	Counter for ADU	ALL	0 <8 digits>	M	Counts the number of output pages of duplex printing.	2
374	Counter	Counter for RADF	ALL	0 <8 digits>	SYS	Counts the number of originals fed from RADF	2

375	Mainte-nance	Setting value of PM driving counter display/0 clearing	ALL	Refer to content <8 digits>	M	<Default>
						e-STUDIO2500c
						   JPN:0
						   UC, EUR: 140,000
						e-STUDIO3500c
						   JPN:0
						   UC, EUR: 140,000
						e-STUDIO3510c
						   JPN:0
						   UC, EUR: 140,000
							1

376	Mainte-nance	Current value of PM driving counter	ALL	0 <8 digits>	M	Counts the drum driving time.	1
381	Counter	Setting for counter installed externally	ALL	1 <0-7>	M	Selects the job to count up for the external counter. 0: Not selected 1: Copier 2: FAX 3: Copier/FAX 4: Printer 5: Copier/Printer 6: Printer/FAX 7: Copier/Printer/FAX	1

Setting mode (08)							
Code	Classification	Items	Function	Default \<Acceptable value>	RAM	Contents	Procedure
390	Counter	Number of errors in HDD (Copying)	PPC	0 \<8 digits>	SYS	The number of error is reset at HDD formatting.	2
391	Counter	Number of errors in HDD (FAX)	FAX	0 \<8 digits>	SYS		2
392	Counter	Number of errors in HDD (Scanning)	SCN	0 \<8 digits>	SYS		2
393	Counter	Number of errors in HDD (Printer)	PRT	0 \<8 digits>	SYS		2
398	Laser	Number of polygonal motor rotational speed switching	ALL	0 \<8 digits>	M	Counts the number of time the polygonal motor has switched its rotational speed between normal rotation and standby rotation	2
399	Laser	Accumulated time of polygonal motor at normal rotation	ALL	0 \<8 digits>	M	Accumulates the time the polygonal motor has rotated at normal rotation.	2
400	Fuser	Fuser unit error status counter	ALL	0 \<0-65>	M	0: No error 1: C411 2: C412 3: C433 4: Unused 5: C445, C465 6: C446 7: C447 8: C468 9: C449 10 to 17: Unused 18: C468 19: C449 20: C468 21: C449 22: C449 23: C449 24: C446, C447 25: C449 26: C468 27: C449 28: C468 29: C449 30: C4C0 31: C4D0 32: C448 33: C467 34: C467 35 to 41: Unused 42: C443 43 to 50: Unused 51: C443 52: C445 53: C448 54: C445 55: C448 56: C443 57 to 58: Unused 59: C445 60: Unused 61: C448 62: Unused 63: C448 64: C446 65: C448	1

Setting mode (08)								
Code	Classifi-cation	Items			Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
409	Fuser	Fusing temperature in the low power mode (Center)			ALL	3 <0-25>	M	0: OFF 1: 40°C 2: 45°C 3: 50°C 4: 55°C 5: 60°C 6: 65°C 7: 70°C 8: 75°C 9: 80°C 10: 85°C 11: 90°C 12: 95°C 13: 100°C 14: 105°C 15: 110°C 16: 115°C 17: 120°C 18: 125°C 19: 130°C 20: 135°C 21: 140°C 22: 145°C 23: 150°C 24: 155°C 25: 160°C	1
410-0	Fuser	Fusing temperature during printing (Center / Plain paper)			ALL (black)	8 <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C <Default value> e-STUDIO2500c:8 e-STUDIO3500c:8 e-STUDIO3510c:9	4
410-1	Fuser				ALL (color)	Refer to content <0-16>	M			4
412	Fuser	Fusing temperature during printing (Center / Thick paper 3) / (Center / Thick paper 4)			ALL	9 <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C	1
413-0	Fuser	Fusing tem-perature dur-ing printing (Center / Thick paper 1)	Normal || ALL (black)	8 <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C	4
413-1			Extra long size paper		ALL (black)	8 <0-16>	M			4
417	Fuser	Pre-running time for first printing (Thick paper 3) / (Thick paper 4)			ALL	0 <0-16>	M	0: Invalid 1: 0 sec. 2: 2 sec. 3: 3 sec. 4: 4 sec. 5: 5 sec. 6: 6 sec. 7: 7 sec. 8: 8 sec. 9: 10 sec. 10: 12 sec. 11: 14 sec. 12: 16 sec. 13: 18 sec. 14: 20 sec. 15: 25 sec. 16: 30 sec.	1

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e-STUDIO2500c/3500c/3510c
ERROR CODE AND SELF-DIAGNOSTIC MODE

				Setting mode (08)			
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
437	Fuser	Fusing temperature during printing (Center / Thick paper 2)		ALL	8 <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C	1
438	Fuser	Fusing temperature during printing (Center / OHP film)		ALL	9 <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C	1
439	Fuser	Pre-running time for first printing (Thick paper 2)		ALL	0 <0-16>	M	0: Invalid 1: 0 sec. 2: 2 sec. 3: 3 sec. 4: 4 sec. 5: 5 sec. 6: 6 sec. 7: 7 sec. 8: 8 sec. 9: 10 sec. 10: 12 sec. 11: 14 sec. 12: 16 sec. 13: 18 sec. 14: 20 sec. 15: 25 sec. 16: 30 sec.	1
440-0	Fuser	Pre-running time for first printing (Plain paper/Low tempera-ture environment)		ALL (black)	0 <0-16>	M	0: Invalid 1: 0 sec. 2: 2 sec. 3: 3 sec. 4: 4 sec. 5: 5 sec. 6: 6 sec. 7: 7 sec. 8: 8 sec. 9: 10 sec. 10: 12 sec. 11: 14 sec. 12: 16 sec. 13: 18 sec. 14: 20 sec. 15: 25 sec. 16: 30 sec.	4
440-1				ALL (color)	0 <0-16>	M		4
441-0	Fuser	Pre-running time for first printing (Thick paper 1)	Normal	ALL	0 <0-16>	M	0: Invalid 1: 0 sec. 2: 2 sec. 3: 3 sec. 4: 4 sec. 5: 5 sec. 6: 6 sec. 7: 7 sec. 8: 8 sec. 9: 10 sec. 10: 12 sec. 11: 14 sec. 12: 16 sec. 13: 18 sec. 14: 20 sec. 15: 25 sec. 16: 30 sec.	4
441-1			Extra long size paper	ALL	0 <0-16>	M		4

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
448	Fuser	Fusing temperature in the low power mode (Side)		ALL	3 <0-25>	M	0: OFF°C1: 40°C 2: 45°C 3: 50°C 4: 55°C 5: 60°C 6: 65°C 7: 70°C 8: 75°C 9: 80°C 10: 85°C 11: 90°C 12: 95°C 13: 100°C 14: 105°C 15: 110°C 16: 115°C 17: 120°C 18: 125°C 19: 130°C 20: 135°C 21: 140°C 22: 145°C 23: 150°C 24: 155°C 25: 160°C	1
449	Paper feeding	Switching for incorrect paper size jam detection		ALL	0 <0-1>	M	0: Enabled 1: Disabled	1
450-0	Fuser	Fusing tem-perature dur-ing printing (Side / Plain paper)	BK mode	ALL (black)	Refer to content <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C <Default value> e-STUDIO2500c:8 e-STUDIO3500c:8 e-STUDIO3510c:9	4
450-1			C or CK mode	ALL (color)	8 <0-16>	M		4
451-0	Fuser	Fusing tem-perature dur-ing printing (Side / Thick paper 1)	Normal length paper	ALL	8 <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C	4
451-1			Extra long size paper	ALL	8 <0-16>	M		4
452	Fuser	Fusing temperature during printing (Side / Thick paper 2)		ALL	8 <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C	1
453	Fuser	Fusing temperature during printing (Side / Overhead transparencies)		ALL	9 <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C	1

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
462	RADF	Setting for switchback operation in mixed-size copying using RADF		ALL	0 <0-2>	SYS	This setting is whether the original length is detected or not by transporting without scanning in reverse when A4-R/FOLIO paper or LT-R/LG paper is detected in a mixed-size copying. 0: Disabled - AMS: A series - Judges as A4-R without trans-porting in reverse with no scanning. LT series - Judges whether it is LT-R or LG by its length without transporting in reverse with no scanning. APS: A series - Judges whether it is A4-R or FOLIO without transporting in reverse with no scanning. LT series - Judges whether it is LT-R or LG without trans-porting in reverse with no scanning. 1: Enable 1 AMS: A series - Judges whether it is A4-R or FOLIO by transport-ing without scanning in reverse to detect its length. LT series - Judges whether it is LT-R or LG by transporting without scanning in reverse to detect its length. APS: The same as that of APS in 0: Disabled. 2: Enable 2 AMS/APS: The same as that of AMS in 1: Enable 1.	1
463-0	Paper feeding	Feeding retry number set-ting (1st drawer)	Plain paper	ALL	5 <0-5>	M	Sets the number of times of the feeding retry from the 1st drawer.	4
463-1			Others	ALL	5 <0-5>	M		4

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
464-0	Paper feeding	Feeding retry number set-ting (2nd drawer)	Plain paper	ALL	5 <0-5>	M	Sets the number of times of the feeding retry from the 2nd drawer.	4
464-1			Others	ALL	5 <0-5>	M		4
465-0	Paper feeding	Feeding retry number set-ting (PFP upper drawer)	Plain paper	ALL	5 <0-5>	M	Sets the number of times of the feeding retry from the PFP upper drawer.	4
465-1			Others	ALL	5 <0-5>	M		4
466-0	Paper feeding	Feeding retry number set-ting (PFP lower drawer)	Plain paper	ALL	5 <0-5>	M	Sets the number of times of the feeding retry from the PFP lower drawer.	4
466-1			Others	ALL	5 <0-5>	M		4
467-0	Paper feeding	Feeding retry number set-ting (bypass feed)	Plain paper	ALL	5 <0-5>	M	Sets the number of times of the feeding retry from the bypass tray.	4
467-1			Others	ALL	5 <0-5>	M		4
468-0	Paper feeding	Feeding retry number set-ting (LCF)	Plain paper	ALL	5 <0-5>	M	Sets the number of times of the feeding retry from the LCF.	4
468-1			Others	ALL	5 <0-5>	M		4
470	Paper feeding	Paper size (305x457 mm) feeding/widthwise direction		ALL	457/305 <148-457/105-305>	M		10
471	Paper feeding	Paper size (Post card) feeding/widthwise direction		ALL	148/100 <148-432/100-297>	M	* Post card is sup-ported only for JPN model.	10
478	Laser	Judged number of polygo-nal motor rotation error (Normal rotation)		ALL	0 <0-2>	M	Displays the error [CA10] when the set number of rotation error has been detected. 0: 2 times 1: 10 times 2: 20 times	1
480	Paper feeding	Default setting of paper source		PPC	0 <0-5>	SYS	0: A4/LT 1: LCF 2: 1st drawer 3: 2nd drawer 4: PFP upper drawer 5: PFP lower drawer	1

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				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
481	Paper feeding	Automatic change of paper source	PPC	1 <0-2>	SYS	Sets whether or not changing the drawer automatically to the other drawer with the paper of the same size when paper in the selected drawer has run out. 0: OFF 1: ON (Changes to the drawer with the same paper direc-tion and size: ex. A4 to A4) 2: ON (Changes to the drawer with the same paper size. Paper with the dif-ferent direction is acceptable as long as the size is the same: ex., A4 to A4-R, LT-R to LT. "1" is applied when the staple/holepunch is specified.)	1
482	Paper feeding	Feeding retry setting	ALL	0 <0-1>	M	0: ON 1: OFF	1
482 (EFI)	Paper feeding	Feeding retry setting	ALL	1 <0-1>	M	0: ON 1: OFF	1
483	Laser	Pre-running rotation of polygonal motor	ALL	0 <0-2>	SYS	Sets whether or not switching the polygonal motor from the standby rotation to the normal rotation when the origi-nal is set on the RADF or the platen cover is opened. 0: Valid (when using RADF and the origi-nal is set manually) 1: Invalid 2: Valid (when using RADF only)	1
484	Laser	Polygonal motor rotational status switching at the Auto Clear Mode	ALL	0 <0-1>	SYS	Sets whether or not switching the polygonal motor from the normal rotation to the standby rotation at the Auto Clear Mode. 0: Valid 1: Invalid	1
485	Laser	Rotational status of polygo-nal motor on standby	ALL	0 <0-1>	SYS	Sets the rotational sta-tus of polygonal motor on standby. 0: Rotated (The rota-tional speed is set at 08-490.) 1: Stopped	1

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
486	Laser	Timing of auto-clearing of polygonal motor pre-run-ning rotation	ALL	0 <0-2>	SYS	Switches the polygonal motor to the standby rotation when a certain period of time has passed from the pre-running. At this code, the period to switch the status to the standby rotation is set. 0: 15 sec. 1: 30 sec. 2: 45 sec. * This setting is effec-tive when "0" or "2" is set at 08-483.	1
489	Laser	Polygonal motor rotation number on standby	ALL	3 <0-3>	M	0: 38090.55rpm 1: 35000rpm 2: 30000rpm 3: 25000rpm 4: 20000rpm 5: 10000rpm	1
490	Laser	Polygonal motor rotation in the energy saving mode	ALL	0 <0-3>	M	0: Stopped 1: 10000rpm.	1
499	Transfer	Detection level of toner cartridge detection sensors	ALL	1 <0-2>	M	0: Level 0 (No detec-tion) 1: Level 1 (Only warn-ing display) 2: Level 3 (Warning display -> Stop)	1
503	User interface	Default setting of density adjustment	PPC (black)	0 <0-1>	SYS	0: Automatic 1: Manual (Center)	1
506	User interface	User mode setting	PPC (color)	0 <0-1>	SYS	0: Unused 1: TEXT/PHOTO base	1
508	User interface	User mode setting	PPC (black)	0 <0-1>	SYS	0: Unused 1: TEXT/PHOTO base	1
518	Fuser	Fusing temperature during printing (Side / Thick paper 3) / (Side / Thick paper 4)	ALL	9 <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C	1
526	Fuser	Pre-running time for first printing (OHP film)	ALL	0 <0-16>	M	0: Invalid 1: 0 sec. 2: 2 sec. 3: 3 sec. 4: 4 sec. 5: 5 sec. 6: 6 sec. 7: 7 sec. 8: 8 sec. 9: 10 sec. 10: 12 sec. 11: 14 sec. 12: 16 sec. 13: 18 sec. 14: 20 sec. 15: 25 sec. 16: 30 sec.	1

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e-STUDIO2500c/3500c/3510c
ERROR CODE AND SELF-DIAGNOSTIC MODE

				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
534-0	Fuser	Temperature drop control during printing	ALL (black)	1 <0-8>	M	0: Disabled 1: Enabled - Plain paper, thick paper 1 (Fuser roller and pressure roller at the normal or low temperature) 2: Enabled - Plain paper, thick paper 1 (Fuser roller at the normal or low tem-perature) 3: Enabled - Plain paper (Fuser roller at the normal or low temperature) 4: Enabled - Plain paper (Fuser roller at the normal tem-perature) 5: Enabled - Plain paper, thick paper 1 (Fuser roller at the normal tempera-ture) 6: Enabled - Plain paper (Fuser roller and pressure roller at the normal or low temperature) 7: Enabled - Plain paper (Fuser roller and pressure roller at the normal tem-perature) 8: Enabled - Plain paper, thick paper 1 (Fuser roller and pressure roller at the normal tempera-ture)	4
534-1	Fuser		ALL (color)	1 <0-8>	M		4
548	Transfer	Setting of 2nd transfer bias table (for each destination/ paper thickness)	ALL	EUR:0 UC:1 JPN:2 <0-5>	M	0:80 g/m2 (21.3 lb.)/ EUR 1: 75 g/m2 (20 lb.)/UC 2: 64 g/m2 (17.1 lb.)/ JPN 3: - 4: - 5: -	1
550	Image	Default setting of Original mode	PPC (black)	0 <0-4>	SYS	0: Text/Photo 1: Photo 2: Text 3: Gray Scale	1
556	Image control	Image quality closed-loop control/Contrast voltage	ALL	1 <0-1>	M	Sets whether or not cor-recting the contrast volt-age in closed-loop control. 0: Invalid 1: Valid	1

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
557	Image control	Image quality closed-loop control/Laser power	ALL	1 <0-1>	M	Sets whether or not cor-recting the laser power in closed-loop control. 0: Invalid 1: Valid	1
559	Image control	Image quality closed-loop control automatic start-up / At the first power-ON in the morning	ALL (color)	2 <0-2>	M	Sets whether perform-ing closed-loop control automatically at power-ON when the fuser roller temperature becomes below the specified level. 0: Invalid 1: Valid (mode1: for Quick Image Quality Control) 2: Valid (mode2: for Standard Image Quality Control)	1
560	Image	Process switching for image smoothing (Text/Photo)	PPC (black)	1 <0-1>	M	Sets whether or not performing a smooth-ing process (primary scanning direction, 2,400 dpi or equiva-lent). 0: Invalid 1: Valid	1
562	Image	Process switching for image smoothing (Text)	PPC (black)	1 <0-1>	M	Sets whether or not performing a smooth-ing process (primary scanning direction, 2,400 dpi or equiva-lent). 0: Invalid 1: Valid	1
565	Image control	Image quality closed-loop control automatic start-up/ Relative humidity variation	ALL (color)	2 <0-2>	M	Sets whether or not performing closed-loop control automatically when the relative humidity becomes below the specified level from the previous control. 0: Invalid 1: Valid (mode1: for Quick Image Quality Control) 2: Valid (mode2: for Standard Image Quality Control)	1

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
566	Image control	Image quality closed-loop control automatic start-up/ Period of time unattended	ALL (color)	2 <0-2>	M	Sets whether or not performing closed-loop control automatically at the operation start when the equipment has not been used for a specified period of time in the energy saving mode. 0: Invalid 1: Valid (mode1: for Quick Image Quality Control) 2: Valid (mode2: for Standard Image Quality Control)	1
567	Image control	Image quality closed-loop control automatic start-up/ Accumulated print volume	ALL (color)	2 <0-2>	M	Sets whether or not performing closed-loop control automatically when the specified number of sheets has been printed out from the previous control. 0: Invalid 1: Valid (mode1: for Quick Image Quality Control) 2: Valid (mode2: for Standard Image Quality Control)	1
568	Image control	Image quality closed-loop control automatic start-up/ When recovered from "Toner empty"	ALL (color)	2 <0-2>	M	Sets whether or not performing closed-loop control automatically when recovered from "Toner empty". 0: Invalid 1: Valid (mode1: for Quick Image Quality Control) 2: Valid (mode2: for Standard Image Quality Control)	1
569	Image control	Image quality closed-loop control automatic start-up/ Temperature setting of fuser roller at power-ON	ALL (color)	8 <0-20>	M	Sets the fuser roller temperature to perform closed-loop control when "1" or "2" (valid) is set in 08-559. 0: 20°C 1: 25°C 2: 30°C 3: 35°C 4: 40°C 5: 45°C 6: 50°C 7: 55°C 8: 60°C 9: 65°C 10: 70°C 11: 75°C 12: 80°C 13: 85°C 14: 90°C 15: 95°C 16: 100°C 17: 105°C 18: 110°C 19: 115°C 20: 120°C	1

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
570	Image control	Image quality closed-loop control automatic start-up/ Relative humidity differ-ence setting	ALL (color)	2 <0-6>	M	Sets the relative humid-ity difference to per-form the closed-loop control when "1" or "2" (valid) is set in 08-565. 0: 0% 1: 5% 2: 10% 3: 15% 4: 20% 5: 25% 6: 30%	1
571	Image control	Image quality closed-loop control automatic start-up/ Setting of period of time unattended	ALL (color)	4 <0-24>	M	Sets the period of time unattended to perform closed-loop control when "1" or "2" (valid) is set in 08-566. Setting value x 1 (hour)	1
572	Image control	Image quality closed-loop control automatic start-up/ Setting of accumulated print volume	ALL (color)	10 <0-30>	M	Sets the number of accumulated print vol-ume to perform closed-loop control when "1" or "2" (valid) is set in 08-567. Setting value x 100 (pages)	1
573	Image control	Abnormality detection count (Y) Display/0 clearing	ALL	0 <0-16>	M	Counts the abnormality detection of image qual-ity control. Accumulat-ing total of [CE10], [CE20] and [CE40]	1
574	Image control	Abnormality detection count (M) Display/0 clearing	ALL	0 <0-16>	M	Counts the abnormality detection of image qual-ity control. Accumulat-ing total of [CE10], [CE20] and [CE40]	1
575	Image control	Abnormality detection count (C) Display/0 clearing	ALL	0 <0-16>	M	Counts the abnormality detection of image qual-ity control. Accumulat-ing total of [CE10], [CE20] and [CE40]	1
576	Image control	Abnormality detection count (K) Display/0 clearing	ALL	0 <0-16>	M	Counts the abnormality detection of image qual-ity control. Accumulat-ing total of [CE10], [CE20] and [CE40]	1
580	User interface	User custom mode setting	SCN (black)	0 <0-3>	SYS	0: Unused 1: B/W TEXT/PHOTO base 2: B/W TEXT base 3: B/W PHOTO base	1
584	Fuser	Fuser motor speed of pre-running at ready status	ALL	1 <0-1>	M	0: 150mm/s 1: 75mm/s	1
585	User interface	Default setting of Original mode	PPC (color)	0 <0-5>	SYS	0: Text/Photo 1: Text 2: Printed image 3: Photo 4: Map 5: Custom	1
587	User interface	Default setting of Density mode	PPC (color)	1 <0-1>	SYS	0: Automatic 1: Manual (Center)	1

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				Setting mode (08)			
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
588	User interface	Default setting of Color mode		PPC	2 <0-2>	SYS	0: Auto color 1: Black 2: Full color	1
590	User interface	User custom mode setting		SCN (color)	0 <0-4>	SYS	0: Unused 1: TEXT base 2: Printed image base 3: Photo base 4: e-document base	1
595	Image	Scanning operation switch-ing at automatic calibration		PPC (color)	0 <0-1>	SYS	0: Scanning color/ black integrated pat-tern 1: Scanning color pat-tern only	1
597	Image	Gamma correction table all clearing		PRT (color)	-	SYS	Initializes the status of automatic gamma adjustment in color printing.	3
602	User interface	Screen setting for auto-matic energy saver/auto-matic power OFF		ALL	EUR:0 UC:1 JPN:1 <0-1>	SYS	0: OFF 1: ON	1
603	User interface	Setting for automatic duplexing mode		ALL	0 <0-3>	SYS	0: Invalid 1: Single-sided to duplex copying 2: Two-sided to duplex copying 3: User selection	1
604	User interface	Default setting for APS/ AMS		ALL	0 <0-2>	SYS	0: APS (Automatic Paper Selection) 1: AMS (Automatic Magnification Selec-tion) 2: Not selected	1
605	User interface	Centering printing of pri-mary/secondary direction at AMS		PPC	1 <0-1>	SYS	0: Invalid 1: Valid	1
607	User interface	Default setting of RADF mode		PPC	0 <0-1>	SYS	0: Continuous feeding (by pressing the [START] button) 1: Single feeding (by setting original on the tray)	1
609-0	Image	Binarizing level setting (When judg-ing as black in the ACS Mode)	Step -2	ALL	88 <0-255>	SYS	Sets the binarizing level of each step. When the value increases, the image becomes darker. When the value decreases, the image becomes lighter. * Refer to 08-268.	4
609-1			Step -1	ALL	108 <0-255>	SYS		4
609-2			Step 0 (center)	ALL	148 <0-255>	SYS		4
609-3			Step +1	ALL	178 <0-255>	SYS		4
609-4			Step +2	ALL	208 <0-255>	SYS		4
610	User interface	Key touch sound of control panel		ALL	1 <0-1>	SYS	0: OFF 1: ON	1

				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
611	User interface	Book type original priority	PPC	0 <0-1>	SYS	0: Left page to right page 1: Right page to left page	1
613	User interface	Paper size selection for [OTHER] button	PPC	EUR: FOLIO UC: COMP JPN: A5-R	SYS	Press the icon on the LCD to select the size.	9
614	Network	Local I/F time-out period	ALL	6 <1-50>	SYS	Sets the period of time when the job is judged as completed in local I/F printing (USB or parallel). 1: 1.0 sec. 2: 1.5 sec. 50: 25.5 sec. (in increments of 0.5 sec.)	1
615	General	Size information of main memory and page memory	ALL	-	SYS	Displays the sizes of the main memory and page memory. Enables to check if each memory is properly recognized.	2
616	Counter	Counting method in Twin Color Mode (Limitation Function)	ALL	JPN: 1 UC: 0 EUR: 0 <0-1>	SYS	Sets the counting method in Twin Color Mode with the Limitation Function. 0: Count as color 1: Count as black	1
617	User interface	Print setting without department code	ALL	1 <0-2>	SYS	0: Printed forcibly 1: Not printed 2: Deleted forcibly	1
618	User interface	Default setting of RADF original size	PPC	0 <0-1>	SYS	0: Same size originals 1: Mixed size originals	1
619	Paper feeding	Time lag before auto-start of bypass feeding	ALL	4 <0-10>	SYS	Sets the time taken to add paper feeding when paper in the bypass tray has run out during the bypass feed copying. 0: Paper is not drawn in unless the [START] button is pressed. 1-10: Setting value x 0.5sec.	1
620	User interface	Department management setting (Copier)	PPC	1 <0-1>	SYS	0: Invalid 1: Valid	1
621	User interface	Department management setting (FAX)	FAX	1 <0-1>	SYS	0: Invalid 1: Valid	1
622	User interface	Department management setting (Printer)	PRT	1 <0-1>	SYS	0: Invalid 1: Valid	1
623	User interface	Department management setting (Scanner)	SCN	1 <0-1>	SYS	0: Invalid 1: Valid	1

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				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default \<Accept-able value>	RAM	Contents	Pro-cedure
624	User interface	Department management setting (List print)	PRT	1 \<0-1>	SYS	0: Invalid 1: Valid	1
625	User interface	Blank copying prevention mode during RADF jam-ming	PPC	0 \<0-1>	SYS	0: OFF 1: ON (Start printing when the scanning of each page is fin-ished)	1
627	User interface	Rotation printing at the nonsorting	ALL	0 \<0-1>	SYS	0: Not rotating 1: Rotating	1
628	User interface	Direction priority of original image	PPC	0 \<0-1>	SYS	0: Automatic 1: Portrait	1
629	User interface	Department management setting	ALL	0 \<0-1>	SYS	0: Invalid 1: Valid	1
632	User interface	Automatic calibration dis-closure level	PPC	1 \<0-2>	SYS	Sets the disclosing level of automatic calibration. 0: Service technician 1: Administrator 2: User	1
633	Data overwrite kit	Releasing F200 service call	ALL	0 \<0-2>	SYS	0: Not used 1: Board installed 2: Service call	1
634	User interface	Inner receiving tray priority at Non-sort Mode	ALL	0 \<0-1>	SYS	0: Normal 1: Inner receiving tray	1
636	User interface	Width setting for image shift copying (linkage of front side and back side)	PPC	0 \<0-1>	SYS	0: ON 1: OFF	1
638	General	Time differences	ALL	EUR: 24 UC: 40 JPN: 6 \<0-47>	SYS	0: +12.0h 1: +11.5h 2: +11.0h 3: +10.5h 4: +10.0h 5: 9.5h 6: +9.0h 7: +8.5h 8: +8.0h 9: +7.5h 10: +7.0h 11: +6.5h 12: +6.0h 13: +5.5h 14: +5.0h 15: +4.5h 16: +4.0h 17: +3.5h 18: +3.0h 19: +2.5h 20: +2.0h 21: +1.5h 22: +1.0h 23: +0.5h 24: 0.0h 25:-0.5h 26: -1.0h 27: -1.5h 28: -2.0h 29: -2.5h 30: -3.0h 31: -3.5h 32: -4.0h 33: -4.5h 34: -5.0h 35: -5.5h 36: -6.0h 37: -6.5h 38: -7.0h 39: -7.5h 40: -8.0h 41: -8.5h 42: -9.0h 43: -9.5h 44: -10.0h 45: -10.5h 46: -11.0h 47: -11.5h	1
640	User interface	Date display format	ALL	EUR:1 UC:2 JPN:0 \<0-2>	SYS	0: YYYY.MM.DD. 1: DD.MM.YYYY 2: MM.DD.YYYY	1

Setting mode (08)

Code	Classification	Items	Function	Default <Acceptable value>	RAM	Contents	Procedure
641	User interface	Automatic Sorting Mode setting (RADF)	PPC	2 <0-4>	SYS	0: Invalid 1: STAPLE 2: SORT 3: GROUP 4: ROTATE SORT	1
642	User interface	Default setting of Sorter Mode	PPC	0 <0-4>	SYS	0: NON-SORT 1: STAPLE 2: SORT 3: GROUP 4: ROTATE SORT	1
643	User interface	Color 1 at twin color selection (Select what color black in original is copied)	PPC (color)	0 <0-6>	SYS	0: K 1: Y 2: M 3: C 4: R 5: G 6: B	1
644	User interface	Color 2 at twin color selection (Select what color other than black in original is copied)	PPC (color)	4 <0-6>	SYS	0: K 1: Y 2: M 3: C 4: R 5: G 6: B	1
645	User interface	Correction of reproduction ratio in editing copy	PPC	10 <0-10>	SYS	Sets the reproduction ratio for the "X in 1" printing (including magazine sort) to the "Reproduction ratio x Correction ratio". 0: 90% 1: 91% 2: 92% 3: 93% 4: 94% 5: 95% 6: 96% 7: 97% 8: 98% 9: 99% 10: 100%	1
646	User interface	Image position in editing	ALL	2 <0-3>	SYS	Sets the page pasted position for "X in 1" to the upper left corner/ center. 0: Cornering (PPC)/ Cornering (PRT) 1: Centering (PPC)/ Cornering (PRT) 2: Cornering (PPC)/ Centering (PRT) 3: Centering (PPC)/ Centering (PRT)	1
648	User interface	Returning finisher tray when printing is finished	ALL	0 <0-1>	SYS	Sets whether or not returning the finisher tray to the bin 1 when printing is finished. 0: Not returned 1: Returned	1
649	User interface	Magazine sort setting	PPC	0 <0-1>	SYS	0: Left page to right page 1: Right page to left page	1
650	User interface	2 in 1/4 in 1 page allocating order setting	PPC	0 <0-1>	SYS	0: Horizontal 1: Vertical	1

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ERROR CODE AND SELF-DIAGNOSTIC MODE

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
651	User interface	Printing format setting for Time Stamp and Page Number	PPC	2 <0-3>	SYS	Hyphen (with page number) /Dropout (with date, time and page number) 0: OFF/OFF 1: ON/OFF 2: OFF/ON 3: ON/ON **Note:** Hyphen printing format ON: -1- OFF: 1	1
652	User interface	Cascade operation setting	PPC	0 <0-1>	SYS	0: OFF 1: ON	1
653	User interface	Cascade operation setting	PRT	0 <0-1>	SYS	0: OFF 1: ON	1
657	User interface	Default setting of printing direction for Time Stamp and Page Number	PPC	0 <0-1>	SYS	0: Short edge 1: Long edge	1
658	User interface	Auto-start setting for bypass feed printing (Remote)	PRT	0 <0-1>	SYS	Sets whether or not feeding a paper auto-matically into the copier when it is placed on the bypass tray. 0: OFF (Press the [START] button to start feeding.) 1: ON (Automatic feeding)	1
659	User interface	Auto-start setting for bypass feed printing (Local)	PPC	1 <0-1>	SYS	Sets whether or not feeding a paper auto-matically into the copier when it is placed on the bypass tray. 0: OFF (Press the [START] button to start feeding.) 1: ON (Automatic feeding)	1
660	Network	Auto-forwarding setting of received FAX	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
661	Network	Auto-forwarding setting of received E-mail	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
662	General	Clearing of SMS partition	ALL	-	SYS	Clears SMS partition. (Performs when the service call [F106] has occurred.)	3
663	Counter	Counting method in Twin Color Mode	PPC	0 <0-2>	SYS	Sets the counting method of fee charging or duplexing count in the Twin Color Mode. 0: Count as Twin Color Mode 1: Count as Black Mode 2: Count as Full Color Mode	1

			Setting mode (08)				
Code	Classifi-cation	Items		Func-tion	Default \<Accept-able value>	RAM	Contents	Pro-cedure
666	General	BOX partition clearing		ALL	-	SYS	Initializes the Elec-tronic Filing.	3
667	General	/SHA partition clearing		ALL	-	SYS	Initializes the shared folder.	3
670	General	HDD diagnostic menu dis-play		ALL	-	SYS	Display the HDD infor-mation (Chap. 5.3.7)	2
671	User interface	Size indicator		ALL	0 \<0-1>	SYS	0: Invalid 1: Valid	1
672	General	Initialization of department management information		-	-	SYS	Initializing of the depart-ment management information * Enter the code with the digital keys and press the [INITIAL-IZE] button to per-form the initialization. If the area storing the department management infor-mation is destroyed for some reason, "Enter Department Code" is displayed on the control panel even if the depart-ment management function is not set on. In this case, ini-tialize the area with this code. This area is normally initial-ized at the factory.	3
675-0	Paper feeding	Coated Paper Mode setting for paper source	1st drawer	ALL	0 \<0-1>	SYS	Sets whether or not applying the Coated Paper Mode to each paper source. 0: Normal mode 1: Coated Paper Mode * Coated Paper Mode - This mode is selected when the paper which often causes the misfeed-ing (ex. coated paper) is used. The occurrence of mis-feeding is reduced by lengthening the jam detection time. However, the print-ing speed is low-ered since the printing cycle is also lengthened with the lengthened jam detection time.	4
675-1			2nd drawer	ALL	0 \<0-1>	SYS		4
675-2			PFP upper drawer	ALL	0 \<0-1>	SYS		4
675-3			PFP lower drawer	ALL	0 \<0-1>	SYS		4
675-4			LCF	ALL	0 \<0-1>	SYS		4

				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
678	General	Setting of banner advertis-ing display	ALL	0 <0-1>	SYS	Sets whether or not dis-playing the banner advertising. The setting contents of 08-679 and 08-680 are displayed at the time display section on the right top of the screen. When both are set, each content is dis-played alternately. 0: Not displayed 1: Displayed	1
679	General	Banner advertising display 1	ALL	-	SYS	Maximum 27 letters (one-byte character)	11
680	General	Banner advertising display 2	ALL	-	SYS	Maximum 27 letters (one-byte character)	11
681	General	Display of [BANNER MES-SAGE] button	ALL	0 <0-1>	SYS	0: Not displayed 1: Displayed * This button enables the entry of "Banner advertising display 1 (08-679)" and "Ban-ner advertising dis-play 2 (08-680)" on the control panel.	1
682	Use interface	Offsetting between jobs	ALL	1 <0-1>	SYS	0: Invalid 1: Valid	1
683	General	Duplex printing setting when coin controller is used	ALL	1 <0-1>	SYS	When the duplex print-ing is short paid with a coin controller, reverse side of the original is not printed and is con-sidered as a defect (printing job may be cleared). To solve this problem, the selection of printing method is enabled with this set-ting. 0: Invalid (Both sides printed) 1: Valid (Only one side printed)	1
684	General	Rebuilding all databases	ALL	-	SYS	Rebuilds all databases.	3
685	General	Rebuilding all databases related to Address Book	ALL	-	SYS	Rebuilds all databases related to the Address Book.	3
686	General	Rebuilding all databases related to log	ALL	-	SYS	Rebuilds all databases related to the logs.	3
689	FAX	Adaptation of paper source priority selection	FAX	0 <0-1>	SYS	0: Not subjected for APS judgment 1: Subjected for APS judgment	1
690	General	HDD formatting	ALL	2 <2>	SYS	2: Normal formatting	7
691	General	HDD type display	ALL	- <0-2>	SYS	0: Not formatted 1: Not used 2: Normal format	7

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
692	Mainte-nance	Performing panel calibra-tion		ALL	-	SYS	Performs the calibration of the pressing position on the touch panel (LCD screen). The cali-bration is performed by pressing 2 reference positions after this code is started up.	1
693	General	Initialization of NIC infor-mation		ALL	-	SYS	Returns the value to the factory shipping default value.	3
694	General	Performing HDD testing		ALL	-	SYS	Checks the bad sector.	3
700	General	Default setting of the EFI controller		ALL	-	-	Performs when the EFI controller is used	3
701	FAX	Destination setting for FAX		FAX	EUR: 5 UC: 4 JPN: 0 Other: 1 <0-25>	SYS	0: Japan 1: Asia 2: Australia 3: Hong Kong 4: U.S.A./Canada 5: Germany 6: U.K. 7: Italy 8: Belgium 9: Netherlands 10: Finland 11: Spain 12: Austria 13: Switzerland 14: Sweden 15: Denmark 16: Norway 17: Portugal 18: France 19: Greece 20: Poland 21: Hungary 22: Czech 23: Turkey 24: South Africa 25: Taiwan	1
702	Mainte-nance	Remote-controlled service function		ALL	2 <0-2>	SYS	0: Valid (Remote-con-trolled server) 1: Valid (L2) 2: Invalid	1
703	Mainte-nance	Remote-controlled service HTTP server URL setting		ALL	-	SYS	Maximum 256 Bytes	11
704-0		Interruption of stapling oper-ation (no sta-ple)	Copying	ALL	1 <0-1>	SYS	0: Continues printing by switching sort setting 1: Interrupts printing	4
704-1			Printing / BOX print-ing	ALL	0 <0-1>	SYS	0: Continues printing by switching sort setting 1: Interrupts printing	4

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\multicolumn{8}{c}{Setting mode (08)}
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
707	Mainte-nance	Remote-controlled service HTTP initially-registered server URL setting	ALL	https://device.mfp-sup-port.com:443/device/fir-streg-ist.ashx	SYS	Maximum 256 Bytes	11
710	Mainte-nance (Remote)	Short time interval setting of recovery from Emer-gency Mode	ALL	24 <1-48>	SYS	Sets the time interval to recover from the Emer-gency Mode to the Nor-mal Mode. (Unit: Hour)	1
711	Mainte-nance	Short time interval setting of Emergency Mode	ALL	60 <30-360>	SYS	Unit: Minute	1
715	Mainte-nance	Remote-controlled service periodical polling timing (Hour/Hour/Minute/Minute)	ALL	1230	SYS	0 (0:00) to 2359 (23:59)	1
716	Mainte-nance	Remote-controlled service Writing data of self-diag-nostic code	ALL	0 <0-1>	SYS	0: Prohibited 1: Accepted	1
717	Mainte-nance	Remote-controlled service response waiting time (Timeout)	ALL	3 <1-30>	SYS	Unit: Minute	1
718	Mainte-nance	Remote-controlled service initial registration	ALL	0 <0-3>	SYS	0: OFF 1: Start 2: Only certification is scanned 3: Satellite communi-cation starts	1
719	Mainte-nance	Remote-controlled service tentative password	ALL	-	SYS	Maximum 10 letters	11
720	Mainte-nance	Status of remote-con-trolled service initial regis-tration (Display only)	ALL	0 <0-1>	SYS	0: Not registered 1: Registered	2
721	Mainte-nance	Service center call function	ALL	2 <0-2>	SYS	0: OFF 1: Notifies all service calls 2: Notifies all but paper jams	1
723	Mainte-nance	Service center call HTTP server URL setting	ALL	-	SYS	Maximum 256 letters	11
726	Mainte-nance	HTTP proxy setting	ALL	1 <0-1>	SYS	0: Valid 1: Invalid	1
727	Mainte-nance	HTTP proxy IP address setting	ALL	-	SYS	000.000.000.000 - 255.255.255.255 (Default value 000.000.000.000)	11
728	Mainte-nance	HTTP proxy port number setting	ALL	0 <0-65535>	SYS		1
729	Mainte-nance	HTTP proxy ID setting	ALL	-	SYS	Maximum 30 letters	11
730	Mainte-nance	HTTP proxy password set-ting	ALL	-	SYS	Maximum 30 letters	11
731	Mainte-nance	HTTP proxy panel display	ALL	1 <0-1>	SYS	0: Valid 1: Invalid	1

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
732	Mainte-nance (Remote)	Automatic ordering func-tion of supplies	ALL	3 <0-3>	SYS	0: Ordered by FAX 1: Ordered by E-mail 2: Ordered by HTTP 3: OFF	1
733	Mainte-nance (Remote)	Automatic ordering func-tion of supplies FAX number	ALL	-	SYS	Maximum 32 digits Enter hyphen with the [Monitor/Pause] button	11
734	Mainte-nance (Remote)	Automatic ordering func-tion of supplies E-mail address	ALL	-	SYS	Maximum 192 letters List: 256 digits	11
738	Mainte-nance (Remote)	Automatic ordering func-tion of supplies User's name	ALL		SYS	Maximum 50 letters	11
739	Mainte-nance (Remote)	Automatic ordering func-tion of supplies User's telephone number	ALL		SYS	Maximum 32 digits Enter hyphen with the [Monitor/Pause] button	11
740	Mainte-nance (Remote)	Automatic ordering func-tion of supplies User's E-mail address	ALL		SYS	Maximum 192 letters List: 256 digits	11
741	Mainte-nance (Remote)	Automatic ordering func-tion of supplies User's address	ALL		SYS	Maximum 100 letters	11
742	Mainte-nance (Remote)	Automatic ordering func-tion of supplies Service number	ALL		SYS	Maximum 5 digits	11
743	Mainte-nance (Remote)	Automatic ordering func-tion of supplies Service technician's name	ALL		SYS	Maximum 50 letters	11
744	Mainte-nance (Remote)	Automatic ordering func-tion of supplies Service technician's tele-phone number	ALL		SYS	Maximum 32 digits Enter hyphen with the [Monitor/Pause] button	11
745	Mainte-nance (Remote)	Automatic ordering func-tion of supplies Service technician's E-mail address	ALL		SYS	Maximum 192 letters List: 256 digits	11
746	Mainte-nance (Remote)	Automatic ordering func-tion of supplies Supplier's name	ALL		SYS	Maximum 50 letters	11
747	Mainte-nance (Remote)	Automatic ordering func-tion of supplies Supplier's address	ALL		SYS	Maximum 100 letters	11
748	Mainte-nance (Remote)	Automatic ordering func-tion of supplies Notes	ALL		SYS	Maximum 128 letters	11
749	Mainte-nance (Remote)	Information about supplies Part number of toner car-tridge C	ALL		SYS	Maximum 20 digits	11
750	Mainte-nance (Remote)	Information about supplies Order quantity of toner car-tridge C	ALL	1 <1-99>	SYS		1
751	Mainte-nance (Remote)	Information about supplies Condition number of toner cartridge C	ALL	1 <1-99>	SYS		1
752	Mainte-nance (Remote)	Information about supplies Part number of toner car-tridge M	ALL		SYS	Maximum 20 digits	11

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
753	Mainte-nance (Remote)	Information about supplies Order quantity of toner car-tridge M	ALL	1 <1-99>	SYS		1
754	Mainte-nance (Remote)	Information about supplies Condition number of toner cartridge M	ALL	1 <1-99>	SYS		1
755	Mainte-nance (Remote)	Information about supplies Part number of toner car-tridge Y	ALL	-	SYS	Maximum 20 digits	11
756	Mainte-nance (Remote)	Information about supplies Order quantity of toner car-tridge Y	ALL	1 <1-99>	SYS		1
757	Mainte-nance (Remote)	Information about supplies Condition number of toner cartridge Y	ALL	1 <1-99>	SYS		1
758	Mainte-nance (Remote)	Information about supplies Part number of toner car-tridge K	ALL	-	SYS	Maximum 20 digits	11
759	Mainte-nance (Remote)	Information about supplies Order quantity of toner car-tridge K	ALL	1 <1-99>	SYS		1
760	Mainte-nance (Remote)	Information about supplies Condition number of toner cartridge K	ALL	1 <1-99>	SYS		1
761	Mainte-nance (Remote)	Information about supplies Part number of toner bag	ALL	-	SYS	Maximum 20 digits	11
762	Mainte-nance (Remote)	Information about supplies Order quantity of toner bag	ALL	1 <1-99>	SYS		1
763	Mainte-nance (Remote)	Information about supplies Condition number of toner bag	ALL	1 <1-99>	SYS		1
764	Mainte-nance (Remote)	Automatic ordering sup-plies Result table printout	ALL	1 <0-2>	SYS	0: OFF 1: Always 2: ON Error	1
765	Mainte-nance (Remote)	Automatic ordering sup-plies Display	ALL	EUR: 2 UC: 0 JPN: 2 <0-2>	SYS	0: Valid (FAX/Internet FAX) 1: Valid (FAX/Internet FAX/ HTTP) 2: Invalid	1
767	Mainte-nance (Remote)	Service Notification setting	ALL	0 <0-2>	SYS	Enables to set up to 3 E-mail addresses to be sent. (08-768, 777, 778) 0: Invalid 1: Valid (E-mail) 2: Valid (FAX)	1
768	Mainte-nance (Remote)	Destination E-mail address 1	ALL	-	SYS	Maximum 192 letters	11
769	Mainte-nance (Remote)	Total counter information transmission setting	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
770	Mainte-nance (Remote)	Total counter transmission date setting	ALL	0 <0-31>	SYS	0 to 31	1
771	Mainte-nance (Remote)	PM counter notification set-ting	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
772	Mainte-nance	Dealer's name	ALL	-	SYS	Maximum 100 letters Needed at initial regis-tration	11
773	Mainte-nance	Login name	ALL	-	SYS	Maximum 20 letters Needed at initial regis-tration	11
774	Mainte-nance (Remote)	Display setting of [Service Notification] button	ALL	EUR: 0 UC: 1 JPN: 0 <0-1>	SYS	0: Not displayed 1: Displayed	1
775	Mainte-nance (Remote)	Sending error contents of equipment	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
776	Mainte-nance (Remote)	Setting total counter trans-mission interval (Hour/Hour/Minute/Minute)	ALL	-	SYS		1
777	Mainte-nance (Remote)	Destination E-mail address 2	ALL	-	SYS	Maximum 192 letters	11
778	Mainte-nance (Remote)	Destination E-mail address 3	ALL	-	SYS	Maximum 192 letters	11
780	Mainte-nance	Remote-controlled service polling day selection Day-1	ALL	0 <0-31>	SYS	0: OFF 1 to 31: 1st to 31st of a month	1
781	Mainte-nance	Remote-controlled service polling day selection Day-2	ALL	0 <0-31>	SYS	0: OFF 1 to 31: 1st to 31st of a month	1
782	Mainte-nance	Remote-controlled service polling day selection Day-3	ALL	0 <0-31>	SYS	0: OFF 1 to 31: 1st to 31st of a month	1
783	Mainte-nance	Remote-controlled service polling day selection Day-4	ALL	0 <0-31>	SYS	0: OFF 1 to 31: 1st to 31st of a month	1
784	Mainte-nance	Remote-controlled service polling day selection Sun-day	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
785	Mainte-nance	Remote-controlled service polling day selection Mon-day	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
786	Mainte-nance	Remote-controlled service polling day selection Tues-day	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
787	Mainte-nance	Remote-controlled service polling day selection Wednesday	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1

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e-STUDIO2500c/3500c/3510c
ERROR CODE AND SELF-DIAGNOSTIC MODE

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				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
788	Mainte-nance	Remote-controlled service polling day selection Thursday	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
789	Mainte-nance	Remote-controlled service polling day selection Friday	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
790	Mainte-nance	Remote-controlled service polling day selection Satur-day	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
791	Mainte-nance	Information of supplies set-ting of toner cartridge C	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
792	Mainte-nance	Information of supplies set-ting of toner cartridge M	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
793	Mainte-nance	Information of supplies set-ting of toner cartridge Y	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
794	Mainte-nance	Information of supplies set-ting of toner cartridge K	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
795	Mainte-nance	Information of supplies set-ting of toner bag	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
796	Mainte-nance	Remote-controlled service lengthened interval polling (End of month)	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
808	Main charger	Main charger / Slit glass cleaning cycle setting	ALL	4 <0-9>	M	0: Invalid 1: 3000pages 2: 5000pages 3: 7500pages 4: 10000pages 5: 15000pages 6: 20000pages 7: 25000pages 8: 30000pages 9: 35000pages	1
816	Transfer	1st transfer roller bias resistance detection con-trol	ALL	1 <0-1>	M	0: Disabled 1: Enabled	1
855	Fuser	Pre-running ON/OFF set-ting when recovering to warming-up	ALL	1 <0-1>	M	1: Valid 2: Invalid	1
900	Version	System firmware ROM ver-sion	ALL	-	-	JPN: T380SY0JXXX UC: T380SY0UXXX EUR: T380SY0EXXX Others: T380SY0XXXX	2
903	Version	Engine ROM version	ALL	-	-	380M-XXX	2
905	Version	Scanner ROM version	ALL	-	-	380S-XXX	2
907	Version	RADF ROM version	ALL	-	-	DF-XXXX	2
908	Version	Finisher ROM version	ALL	-	-	SDL-XX FIN-XX	2
911	Version	Finisher punch ROM ver-sion	ALL	-	-	PUN-XXX	2
915	Version	FAX board ROM version	FAX	-	-	F562-XXX	2
920	Version	FROM basic section soft-ware version	ALL	-	-	VX.XX/X.XX	2
921	Version	FROM internal program version	ALL	-	-	VXXX.XXX X	2
922	Version	UI data fixed section ver-sion	ALL	-	-	VXXX.XXX X	2
923	Version	UI data common section version	ALL	-	-	VXXX.XXX X	2

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
924	Version	Version of UI data lan-guage 1 in HDD	ALL	-	-	VXXX.XXX X	2
925	Version	Version of UI data lan-guage 2 in HDD	ALL	-	-	VXXX.XXX X	2
926	Version	Version of UI data lan-guage 3 in HDD	ALL	-	-	VXXX.XXX X	2
927	Version	Version of UI data lan-guage 4 in HDD	ALL	-	-	VXXX.XXX X	2
928	Version	Version of UI data lan-guage 5 in HDD	ALL	-	-	VXXX.XXX X	2
929	Version	Version of UI data lan-guage 6 in HDD	ALL	-	-	VXXX.XXX X	2
930	Version	Version of UI data in FROM displayed at power-ON	ALL	-	-	VXXX.XXX X	2
931	Version	Version of UI data lan-guage 7 in HDD	ALL	-	-	VXXX.XXX X	2
933	Version	Web data whole version	ALL	-	-	VXXX.XXX X	2
934	Version	Web UI data in HDD Version: Language 1	ALL	-	-	VXXX.XXX X	2
935	Version	Web UI data in HDD Version: Language 2	ALL	-	-	VXXX.XXX X	2
936	Version	Web UI data in HDD Version: Language 3	ALL	-	-	VXXX.XXX X	2
937	Version	Web UI data in HDD Version: Language 4	ALL	-	-	VXXX.XXX X	2
938	Version	Web UI data in HDD Version: Language 5	ALL	-	-	VXXX.XXX X	2
939	Version	Web UI data in HDD Version: Language 6	ALL	-	-	VXXX.XXX X	2
944	Version	HDD version	ALL	-	-	JPN: T380HD0JXXX UC: T380HD0UXXX EUR: T380HD0EXXX Others: T380HD0XXXX	2
945	Network	Two-way setting of Raw-Port 9100	ALL	2 <1-2>	UTY	1: Valid 2: Invalid	12
947	General	Initialization after software version upgrade	ALL	-	SYS	Perform this code when the software in this equipment has been upgraded.	3
949	General	Automatic interruption page number setting for printing	ALL	5 <0-100>	SYS	Sets the number of pages to interrupt the printing automatically. 0-100: 0 to 100 pages	1
950	Elec-tronic filing	Start-up method of Elec-tronic Filing	ALL	0 <0-2>	SYS	Sets the start-up method of the Elec-tronic Filing. 0: Standard 1: Forced start-up (Not recovered) 2: Forced start-up (Recovered)	1
951	User interface	Image setting for Electronic Filing printing (Only for color image)	ALL	0 <0-3>	SYS	0: General 1: Photograph 2: Presentation 3: Line art	1

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ERROR CODE AND SELF-DIAGNOSTIC MODE

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
953	User interface	Access code entry for Electronic Filing printing	ALL	0 <0-1>	SYS	0: Renewed automati-cally 1: Enter every time	1
954	User interface	Clearing timing for files and Electronic Filing Agent	ALL	1 <0-1>	SYS	0: Immediately after the completion of scanning 1: Cleared by Auto Clear	1
969	User interface	Error sound	ALL	1 <0-1>	SYS	0: OFF 1: ON	1
970	User interface	Sound setting when switching to Energy Saving Mode	ALL	EUR: 1 UC: 1 JPN: 0 <0-1>	SYS	0: OFF 1: ON	1
973	Network	PCL line feed code setting	PRT	0 <0-3>	SYS	Sets the PCL line feed code. 0: Automatic setting 1: CR=CR, LF=LF 2: CR=CR+LF, LF=LF 3: CR=CR, LF=CR+LF	1
975	General	Job handling when print-ing is short paid with coin controller	ALL	1 <0-1>	SYS	Sets whether pause or stop the printing job when it is short paid using a coin controller. 0: Pause the job 1: Stop the job	1
976	Scanning	Equipment name and user name setting to a folder when saving files	ALL	0 <0-2>	SYS	Sets whether or not adding the equipment name and user name to the folder when saving files. 0: Not add 1: Add the equipment name 2: Add the user name	1
978	Network	Raw printing job (Paper feeding drawer)	PRT	0 <0-5>	SYS	0: AUTO 1: 1st drawer 2: 2nd drawer 3: PFP upper drawer 4: PFP lower drawer 5: LCF	1

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
979	Network	Raw printing job (PCL symbol set)	PRT	0 <0-39>	SYS	0: Roman-8 1: ISO 8859/1 Latin 1 2: ISO 8859/2 Latin 2 3: ISO 8859/9 Latin 5 4: PC-8, Code Page 437 5: PC-8 D/N, Danish/ Norwegian 6: PC-850, Multilingual 7: PC-852, Latin2 8: PC-8 Turkish 9: Windows 3.1 Latin 1 10: Windows 3.1 Latin 2 11: Windows 3.1 Latin 5 12: DeskTop 13: PS Text 14: Ventura Interna-tional 15: Ventura US 16: Microsoft Publishing 17: Math-8 18: PS Math 19: Ventura Math 20: Pi Font 21: Legal 22: ISO 4: United King-dom 23: ISO 6: ASCII 24: ISO 11 25: ISO 15: Italian 26: ISO 17 27: ISO 21: German 28: ISO 60: Danish/Nor-wegian 29: ISO 69: French 30: Windows 3.0 Latin 1 31: MC Text 32: PC Cyrillic 33: ITC Zapf Dingbats 34: ISO 8859/10 Latin 6 35: PC-775 36: PC-1004 37: Symbol 38: Windows Baltic 39: Wingdings	1
983	User interface	JOB STATUS initial screen setting	ALL	0 <0-1>	SYS	0: Print 1: Private	1
986	General	Copy function setting	PPC	0 <0-1>	SYS	Sets the copy function to be invalid. 0: Valid 1: Invalid	1
988	Paper feeding	Setting of paper size switching to 13" LG	ALL	0 <0-2>	SYS	0: Not switched 1: LG→13"LG 2: FOLIO→13"LG	1
995	Mainte-nance	Equipment number (serial number) display	ALL	- <10 dig-its>	SYS	This code can be also keyed in from the adjustment mode (05-976). 10 digits	11

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
999	Mainte-nance	FSMS total counter	ALL	0 <8 digits>	SYS	Refer to values of total counter.	1
1002	Network	Selection of NIC board sta-tus information	ALL	1 <1-2>	NIC	1: Not printed out when the copier is restarted 2: Printed out when the copier is restarted	12
1003	Network	Communication speed and settings of Ethernet	ALL	1 <1-5>	NIC	1: Auto 2: 10MBPS Half Duplex 3: 10MBPS Full Duplex 4: 100MBPS Half Duplex 5: 100MBPS Full Duplex	12
1006	Network	Address Mode	ALL	2 <1-3>	NIC	1: Fixed IP address 2: Dynamic IP address 3: Dynamic IP address without AutoIP	12
1006 (EFI)	Network	Address Mode	ALL	1 <1-3>	NIC	1: Fixed IP address 2: Dynamic IP address 3: Dynamic IP address without AutoIP * The default value is reflected by per-forming 08-700 when the EFI con-troller is connected.	12
1007	Network	Domain name	ALL	-	NIC	Maximum 96 letters	12
1008	Network	IP address	ALL	-	NIC	000.000.000.000-255.255.255.255 (Default value 000.000.000.000)	12
1008 (EFI)	Network	IP address	ALL	-	NIC	000.000.000.000-255.255.255.255 (Default value 10.250.250.249) * The default value is reflected by per-forming 08-700 when the EFI con-troller is connected.	12
1009	Network	Subnet mask	ALL	-	NIC	000.000.000.000-255.255.255.255 (Default value 000.000.000.000)	12
1009 (EFI)	Network	Subnet mask	ALL	-	NIC	000.000.000.000-255.255.255.255 (Default value 255.255.255.252) * The default value is reflected by per-forming 08-700 when the EFI con-troller is connected.	12

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1010	Network	Gateway	ALL	-	NIC	000.000.000.000-255.255.255.255 (Default value 000.000.000.000)	12
1010 (EFI)	Network	Gateway	ALL	-	NIC	000.000.000.000-255.255.255.255 (Default value 10.250.250.250) * The default value is reflected by per-forming 08-700 when the EFI con-troller is connected.	12
1011	Network	Availability of IPX	ALL	1 <1-2>	NIC	1: Available 2: Not available	12
1011 (EFI)	Network	Availability of IPX	ALL	2 <1-2>	NIC	1: Available 2: Not available * The default value is reflected by per-forming 08-700 when the EFI con-troller is connected.	12
1012	Network	Network frame type	ALL	1 <1-5>	NIC	1: Automatic 2: IEEE802.3 3: Ethernet II 4: IEEE802.3 SNAP 5: IEEE802.2	12
1014	Network	Availability of AppleTalk	ALL	1 <1-2>	NIC	1: Available 2: Not available	12
1014 (EFI)	Network	Availability of AppleTalk	ALL	2 <1-2>	NIC	1: Available 2: Not available * The default value is reflected by per-forming 08-700 when the EFI con-troller is connected.	12
1015	Network	Zone setting of AppleTalk	ALL	*	NIC	Maximum 32 letters *: Wildcard character	12
1016	Network	Availability of LDAP	ALL	1 <1-2>	NIC	1: Available 2: Not available	12
1017	Network	Availability of DNS	ALL	1 <1-2>	NIC	1: Available 2: Not available	12
1018	Network	IP address to DNS server (Primary)	ALL	-	NIC	000.000.000.000-255.255.255.255 (Default value 000.000.000.000)	12
1019	Network	IP address to DNS server (Secondary)	ALL	-	NIC	000.000.000.000-255.255.255.255 (Default value 000.000.000.000)	12
1020	Network	DDNS Desired level	ALL	1 <1-5>	NIC	1: Invalid 2: Valid 3: Valid 4: Valid 5: Valid	12

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				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1022	Network	From Name Creation set-ting in SMTP authentica-tion	ALL	0 <0-1>	SYS	0: Not edited 1: Account name of From Address +Device name	1
1023	Network	NetBios name	ALL	MFP_ serial	UTY	Maximum 15 letters The network-related serial number of the equipment appears at "serial"	12
1024	Network	Name of WINS server or IP address (Primary)	ALL	-	UTY	000.000.000.000- 255.255.255.255 (Default value 000.000.000.000)	12
1025	Network	Name of WINS server or IP address (Secondary)	ALL	-	UTY	000.000.000.000- 255.255.255.255 (Default value 000.000.000.000)	12
1026	Network	Availability of Bindery	ALL	1 <1-2>	NIC	1: Available 2: Not available	12
1027	Network	Availability of NDS	ALL	1 <1-2>	NIC	1: Available 2: Not available	12
1028	Network	Directory service context	ALL	-	NIC	Maximum 127 letters	12
1029	Network	Directory service tree	ALL	-	NIC	Maximum 47 letters	12
1030	Network	Availability of HTTP server	ALL	1 <1-2>	NIC	1: Available 2: Not available	12
1031	Network	Port number to NIC HTTP server	ALL	80 <1-65535>	NIC		12
1032	Network	Port number to system HTTP server	ALL	8080 <1-65535>	NIC		12
1037	Network	Availability of SMTP client	ALL	1 <1-2>	NIC	1: Available 2: Not available	12
1038	Network	FQDN or IP address to SMTP server	ALL	-	NIC	Maximum 128 Bytes	12
1039	Network	TCP port number of SMTP client	ALL	25 <1-65535>	NIC		12
1040	Network	Availability of SMTP server	ALL	1 <1-2>	UTY	1: Available 2: Not available	12
1041	Network	TCP port number of SMTP server	ALL	25 <1-65535>	UTY		12
1042	Network	E-mail box name to SMTP server	ALL	-	UTY	Maximum 192 letters	12
1043	Network	Availability of Offramp	ALL	2 <1-2>	UTY	1: Available 2: Not available	12
1044	Network	Offramp security	ALL	1 <1-2>	UTY	1: Available 2: Not available	12
1045	Network	Printing at Offramp	ALL	1 <1-2>	UTY	1: Available 2: Not available	12
1046	Network	Availability of POP3 clients	ALL	1 <1-2>	NIC	1: Available 2: Not available	12
1047	Network	FQDN or IP address to POP3 server	ALL	-	NIC	Maximum 128 Bytes	12

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1048	Network	Types of POP3 server	ALL	1 <1-3>	NIC	1: Automatic 2: POP3 3: APOP	12
1049	Network	Login name to POP3 server	ALL	-	NIC	Maximum 96 letters	12
1050	Network	Login password to POP3	ALL	-	NIC	Maximum 96 letters	12
1051	Network	E-mail reception interval	ALL	5 <0-4096>	NIC	Unit: Minute	12
1052	Network	TCP port number of POP3 client	ALL	110 <1-65535>	NIC		12
1055	Network	TCP port number of FTP client	ALL	21 <1-65535>	UTY		12
1059	Network	Availability of FTP server	ALL	1 <1-2>	NIC	1: Available 2: Not available	12
1060	Network	TCP port number of FTP server	ALL	21 <1-65535>	UTY		12
1060 (EFI)	Network	TCP port number of FTP server	ALL	50021 <1-65535>	UTY	* The default value is reflected by per-forming 08-700 when the EFI con-troller is connected.	12
1063	Network	MIB function	ALL	1 <1-2>	NIC	1: Valid 2: Invalid	12
1065	Network	Setting of read Community	ALL	public	NIC	Maximum 31 letters	12
1066	Network	Setting of read/Write Com-munity	ALL	private	NIC	Maximum 31 letters	12
1069	Network	TRAP destination IP address	ALL	-	UTY	000.000.000.000-255.255.255.255 (Default value 000.000.000.000)	12
1070	Network	Community setting of TRAP (via IP)	ALL	public	NIC	Maximum 31 letters	12
1073	Network	Availability of Raw/TCP	ALL	1 <1-2>	NIC	1: Valid 2: Invalid	12
1073 (EFI)	Network	Availability of Raw/TCP	ALL	2 <1-2>	NIC	1: Valid 2: Invalid * The default value is reflected by per-forming 08-700 when the EFI con-troller is connected.	12
1074	Network	TCP port number of Raw	ALL	9100 <1-65535>	NIC		12
1075	Network	Availability of LPD client	ALL	1 <1-2>	NIC	1: Valid 2: Invalid	12
1075 (EFI)	Network	Availability of LPD client	ALL	2 <1-2>	NIC	1: Valid 2: Invalid * The default value is reflected by per-forming 08-700 when the EFI con-troller is connected.	12

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1076	Network	TCP port number of LPD	ALL	515 <1-65535>	NIC		12
1077	Network	LPD queue name	ALL	-	NIC	Maximum 31 letters	12
1078	Network	Availability of IPP	ALL	1 <1-2>	NIC	1: Valid 2: Invalid	12
1078 (EFI)	Network	Availability of IPP	ALL	2 <1-2>	NIC	1: Valid 2: Invalid * The default value is reflected by per-forming 08-700 when the EFI con-troller is connected.	12
1079	Network	Availability of IPP port number "80"	ALL	1 <1-2>	NIC	1: Valid 2: Invalid	12
1080	Network	TCP port number of IPP	ALL	631 <1-65535>	NIC		12
1081	Network	IPP printer name	ALL	MFP_ serial	NIC	Maximum 127 letters The network-related serial number of the equipment appears at "serial"	12
1082	Network	IPP printer location	ALL	-	NIC	Maximum 127 letters	12
1083	Network	IPP printer information	ALL	-	NIC	Maximum 127 letters	12
1084	Network	IPP printer information (more)	ALL	http:// www.e-studi-oseries.com	NIC	Maximum 127 letters	12
1085	Network	Installer of IPP printer driver	ALL	http:// www.e-studi-oseries.com	NIC	Maximum 127 letters	12
1086	Network	IPP printer "Make and Model"	ALL	-	NIC	Maximum 127 letters	12
1087	Network	IPP printer information (more) MFGR	ALL	-	NIC	Maximum 127 letters	12
1088	Network	IPP message from opera-tor	ALL	-	NIC	Maximum 127 letters	12
1089	Network	Availability of FTP print	ALL	1 <1-2>	NIC	1: Available 2: Not available	12
1089 (EFI)	Network	Availability of FTP print	ALL	2 <1-2>	NIC	1: Available 2: Not available * The default value is reflected by per-forming 08-700 when the EFI con-troller is connected.	12
1090	Network	Printer user name of FTP	ALL	print	NIC	Maximum 31 letters	12
1091	Network	Printer user password of FTP	ALL	-	NIC	Maximum 31 letters	12

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1092	Network	TCP port number to FTP print server	ALL	21 <1-65535>	NIC		12
1093	Network	Login name to Novell print server	ALL	MFP_ serial	NIC	Maximum 47 letters The network-related serial number of the equipment appears at "serial"	12
1094	Network	Login password to Novell print server	ALL	-	NIC	Maximum 31 letters	12
1095	Network	Name of SearchRoot server	ALL	-	NIC	Maximum 31 letters	12
1096	Network	Scan rate setting of print queue	ALL	5 <1-255>	NIC	Unit: Second	12
1097	Network	Page number limitation for printing text of received Email	ALL	5 <1-99>	UTY		12
1098	Network	MDN return mail setting when receiving E-mail	ALL	2 <1-2>	UTY	1: Valid 2: Invalid	12
1099	Network	Trap destination of IPX	ALL	-	UTY	24 letters (Valid from 0 to 9 and from A to F)	12
1100	Network	Method of SMTP server authentication	ALL	1 <1-7,10>	NIC	1: Disable 2: Plain 3: Login 4; Cram-MD5 5: Digest MD5 6: Kerberos 7: NTLM 10: Auto	12
1101	Network	Login name for SMTP server authentication	ALL	-	NIC	Maximum 64 letters	12
1102	Network	Login password for SMTP server authentication	ALL	-	NIC	Maximum 64 letters	12
1103	Network	Bonjour setting	ALL	1 <1-2>	NIC	1: Valid 2: Invalid	12
1103 (EFI)	Network	Bonjour setting	ALL	2 <1-2>	NIC	1: Valid 2: Invalid * The default value is reflected by per-forming 08-700 when the EFI con-troller is connected.	12
1104	Network	Link local host name	ALL	MFP_ serial	NIC	Maximum 127 letters The network-related serial number of the equipment appears at "serial"	12

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ERROR CODE AND SELF-DIAGNOSTIC MODE

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1105	Network	Service name setting	ALL	Refer to contents	NIC	Maximum 63 letters The network-related serial number of the equipment appears at "serial" <Default value> e-STUDIO2500c: TOSHIBA e-STUDIO2500c_serial e-STUDIO3500c: TOSHIBA e-STUDIO3500c_serial e-STUDIO3510c: TOSHIBA e-STUDIO3510c_serial	12
1111	Network	POP Before SMTP setting	ALL	2 <1-2>	NIC	1: Valid 2: Invalid	12
1112	Network	Host name	ALL	MFP_ serial	NIC	Maximum 63 letters The network-related serial number of the equipment appears at "serial"	12
1113	Network	Windows domain No.1 of user authentication	ALL	-	UTY	Maximum 128 letters	12
1114	Network	Sending mail text of Inter-netFAX	ALL	1 <0-1>	SYS	0: Invalid 1: Valid	1
1117	Network	SMB time-out period	ALL	300 <1-9999>	SYS	Unit: Second	1
1118	General	Clearing of TAT partition	ALL	-	SYS		3
1119	Network	Initialization of NIC infor-mation	ALL	-	-	Initializes only the infor-mation of the Network setting items.	3
1121	Network	PDC (Primary Domain Controller) name No.1 of authentication	ALL	-	UTY	Maximum 128 letters	12
1122	Network	BDC (Backup Domain Controller) name No.1 of authentication	ALL	-	UTY	Maximum 128 letters	12
1123	Network	Windows domain of device authentication	ALL	4 <3-4>	UTY	3: ON (Domain selected) 4: OFF (Work group selected)	12
1124	Network	Workgroup name	ALL	work-group	UTY	Maximum 15 letters	12
1125	General	Data writing of address book data import (overwriting method)	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
1126	Counter	Validity of interrupt copy-ing when external counters are installed	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
1130	User interface	Job Build Function	ALL	1 <0-1>	SYS	Sets the Job Build Function. 0: Invalid 1: Valid	1

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1131	User interface	Maximum number of time job build performed	ALL	1000 <5-1000>	SYS	Sets the maximum number of time a job build has been per-formed. 5-1000: 5 to 1000 times	1
1132	General	Default screen selection of the User Function menu	ALL	1 <0-1>	SYS	Selects the default screen when entering the User Function menu by pressing the [USER FUNCTIONS] button. 0: ADDRESS 1: COUNTER	1
1135	Paper feeding	Default setting of drawers (Printer/BOX)	ALL	1 <1-5>	SYS	1: LCF 2: 1st drawer 3: 2nd drawer 4: PFP upper drawer 5: PFP lower drawer	1
1138	Network	LDAP search method set-ting	ALL	0 <0-3>	SYS	Sets the search method when performing a LDAP search. 0: Partial match 1: Prefix match 2: Suffix match 3: Full match	1
1140	User interface	Restriction of the template function with the adminis-trator privilege	ALL	0 <0-1>	SYS	Selects the restriction of the template function usage setting. 0: No restriction 1: Only available with the administrator privilege.	1
1141	Network	Display of MAC address	ALL	-	SYS	(**:**:**:**:**:**) The address is dis-played as above (6-byte data is divided by a colon at every 1 bytes).	2
1145	Mainte-nance (Remote)	Counter notification Remote FAX setting	ALL	-	SYS	Maximum 32 digits Enter a hyphen with the [MONITOR/PAUSE] button.	11
1149	General	Enhanced bold for PCL6	ALL	0 <0-1>	SYS	0: OFF 1: ON(Enhanced bold for PCL6.)	1
1371	Image process-ing	Accumulated counter of output pages since the per-forming of image quality control	ALL	0 <4 digits>	M	Cleared to "0" by the image quality closed-loop control. Counts up with the number of printing job received after this control.	2

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1372	Image process-ing	Heater and energizing time accumulating counter Dis-play/0 clearing		ALL	0 <8 digits>	M	Counts up the heater lamp control time accu-mulated (when power of the copier is ON) but does not count at the Sleep Mode. When the counter value of the fuser belt is cleared, this counter value is also cleared in sync at PM support mode.	1
1376-0	Develop-ment	Toner car-tridge rotation counter	Y	ALL	0 <8 digits>	M		4
1376-1			M	ALL	0 <8 digits>	M		4
1376-2			C	ALL	0 <8 digits>	M		4
1376-3			K	ALL	0 <8 digits>	M		4
1378	Image process-ing	Fuser roller ready tempera-ture time accumulating counter		ALL	0 <8 digits>	M	Counts up the heater lamp control time accu-mulated (on standby). When the counter value of the fuser belt is cleared, this counter value is also cleared in sync at PM support mode.	1
1380	Image process-ing	Fuser roller printing tem-perature time accumulating counter		ALL	0 <8 digits>	M	Counts up the heater lamp control time accu-mulated (during print-ing). When the counter value of the fuser belt is cleared, this counter value is also cleared in sync at PM support mode.	1
1382	Image process-ing	Fuser roller energy saving temperature time accumu-lating counter Display/0 clearing		ALL	0 <8 digits>	M	Counts up the heater lamp control time accu-mulated (at energy sav-ing mode). When the counter value of the fuser belt is cleared, this counter value is also cleared in sync at PM support mode.	1
1383	Image process-ing	Number of output pages (Thick paper 4)		ALL	0 <8 digits>	M	Counts up when the registration sensor is ON in the thick paper 4 mode.	1
1385	Image process-ing	Number of output pages (Thick paper 1)		ALL	0 <8 digits>	M	Counts up when the registration sensor is ON in the thick paper 1 mode.	1
1386	Image process-ing	Number of output pages (Thick paper 2)		ALL	0 <8 digits>	M	Counts up when the registration sensor is ON in the thick paper 2 mode.	1

				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default \<Accept-able value>	RAM	Contents	Pro-cedure
1387	Image process-ing	Number of output pages (Thick paper 3)	ALL	0 \<8 digits>	M	Counts up when the registration sensor is ON in the thick paper 3 mode.	1
1388	Image process-ing	Number of output pages (OHP film)	ALL	0 \<8 digits>	M	Counts up when the registration sensor is ON in the OHP film mode.	1
1389	Main charger	Main charger needle elec-trode cleaning counter dis-play/0 clearing	ALL	0 \<8 digits>	M	Does not count up when cleaning is not effective.	1
1390	Paper feeding	Feeding retry counter (1st drawer)	ALL	0 \<8 digits>	M	Counts the number of times of the feeding retry from the 1st drawer.	1
1391	Paper feeding	Feeding retry counter (2nd drawer)	ALL	0 \<8 digits>	M	Counts the number of times of the feeding retry from the 2nd drawer.	1
1392	Paper feeding	Feeding retry counter (PFP upper drawer)	ALL	0 \<8 digits>	M	Counts the number of times of the feeding retry from the PFP upper drawer.	1
1393	Paper feeding	Feeding retry counter (PFP lower drawer)	ALL	0 \<8 digits>	M	Counts the number of times of the feeding retry from the PFP lower drawer.	1
1394	Paper feeding	Feeding retry counter (bypass feed)	ALL	0 \<8 digits>	M	Counts the number of times of the feeding retry from the bypass tray.	1
1395	Paper feeding	Feeding retry counter (LCF)	ALL	0 \<8 digits>	M	Counts the number of times of the feeding retry from the LCF.	1
1396	Paper feeding	Feeding retry counter upper limit value (1st drawer)	ALL	10 \<8 digits>	M	When the number of feeding retry (08-1390 to 08-1395) exceeds the setting value, the feeding retry will not be performed subse-quently. In case "0" is set as a setting value, however, the feeding retry continues regard-less of the counter set-ting value. Refer to (Note 1).	1
1397	Paper feeding	Feeding retry counter upper limit value (2nd drawer)	ALL	10 \<8 digits>	M		1
1398	Paper feeding	Feeding retry counter upper limit value (PFP upper drawer)	ALL	10 \<8 digits>	M		1
1399	Paper feeding	Feeding retry counter upper limit value (PFP lower drawer)	ALL	10 \<8 digits>	M		1
1400	Paper feeding	Feeding retry counter upper limit value (bypass feed)	ALL	20 \<8 digits>	M		1
1401	Paper feeding	Feeding retry counter upper limit value (LCF)	ALL	10 \<8 digits>	M		1

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Setting mode (08)								
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1410-0	Counter	Counter for period of toner car-tridge rotation time	Y	ALL	0 <8 digits>	M	Counts up the period of rotation time of toner cartridge.	4
1410-1			M	ALL	0 <8 digits>	M		4
1410-2			C	ALL	0 <8 digits>	M		4
1410-3			K	ALL	0 <8 digits>	M		4
1412	Counter	Counter for tab paper		ALL	0 <8 digits>	M	Counts up when the registration sensor is ON in the tab paper mode.	1
1415	Image process-ing	Detection/control that the toner cartridge is nearly empty		ALL	1 <0-1>	M	Sets ON or OFF of the detection/control that the toner cartridge is nearly empty. 0: OFF 1: ON	1
1416-0	Image process-ing	Threshold for detecting that black toner cartridge is nearly empty	Threshold to display the near-empty message	ALL	136800 <8 digits>	M		4
1416-1			Remain-ing level threshold: 75	ALL	41800 <8 digits>	M		4
1416-2			Remain-ing level threshold: 50	ALL	83600 <8 digits>	M		4
1416-3			Remain-ing level threshold: 25	ALL	125400 <8 digits>	M		4
1422	Data over-write kit	HDD data overwriting type setting		ALL	0 <0-2>	SYS	Select the type of the overwriting level; LOW, MEDIUM, or HIGH for deleting HDD data. (This setting is enabled only when the GP-1060 is installed.) 0: LOW 1: MEDIUM 2: HIGH	1
1424	Data over-write kit	HDD data clearing type setting (forcible clearing)		ALL	0 <0-2>	SYS	Select the type of the overwriting level; LOW, MEDIUM, or HIGH for deleting HDD data. (This setting is enabled only when the GP-1060 is installed.) 0: LOW 1: MEDIUM 2: HIGH	1

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				Setting mode (08)			
Code	Classifi- cation	Items	Func- tion	Default <Accept- able value>	RAM	Contents	Pro- cedur e
1426	Data over- write kit	Forcible HDD data clearing	ALL	-	-	HDD data is cleared in the procedure set in 08-1424. * This setting is enabled only when the GP-1060 is installed.	3
1427	Data over- write kit	Forcible NVRAM data all clearing	ALL	-	-	When this code is per-formed, the equipment cannot be started up. * This setting is enabled only when the GP-1060 is installed.	3
1428	Data over- write kit	Forcible SRAM backup data all clearing	ALL	-	-	When this code is per-formed, the equipment cannot be started up. * This setting is enabled only when the GP-1060 is installed.	3
1429	User interface	Margin width (Top/Bottom, Left/Right)	ALL	Front: 7/ Back: 7 <2-100/ -100- 100>	SYS	This setting is not reflected in "Right", even if the value less than 2 is set for "Back".	10
1430	User interface	Margin width (Bookbinding margin)	ALL	14 <2-30>	SYS		1
1431	Network	ACC (AT_CASETTE_CHANGE) for Printer/Box printing	ALL	1 <0-2>	SYS	0: ACC prohibited 1: Only in the same paper direction 2: In both same direc-tion and different directions	1
1432	Network	Private-print-only mode	ALL	0 <0-1>	SYS	0: Normal 1: Private-print-only mode	1
1435	Network	"Disable private and proof print save" function	ALL	0 <0-1>	SYS	0: Function OFF (no restriction on data saving or other operations) 1: Function ON (Data saving or other operations are restricted)	1
1436	Network	"Disable fax save" function	ALL	0 <0-1>	SYS	0: Function OFF (no restriction on data saving or other operations) 1: Function ON (Data saving or other operations are restricted	1
1440	Network	IP Conflict Detect	ALL	1 <1-2>	-	OFF/ON 1: Valid 2: Invalid	12

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				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1441	Network	SNTP Enable	ALL	2 <1-2>	-	OFF/ON 1: Valid 2: Invalid	12
1442	Network	SNTP Polling rate	ALL	24 <1-168>	-	Data obtaining interval (Unit: Hour)	12
1444	Network	Primary SNTP Address	ALL	-	-	SNTP server IP Address (Primary)	12
1445	Network	Secondary SNTP Address	ALL	-	-	SNTP server IP Address (Secondary)	12
1446	Network	Port number to SNTP	ALL	123 <1-65535>	-		12
1447	Network	IPP administrator name	ALL	-	-	This should be an account which can con-trol all IPP jobs.	12
1448	Network	IPP administrator pass-word	ALL	-	-	This should be the password of an account which can control all IPP jobs.	12
1449	Network	IPP authentication method	ALL	1 <1-2>	-	1: Disabled 2: Basic	12
1450	Network	User name for IPP authen-tication	ALL	-	-	This should be the account at the time IPP authentication was per-formed.	12
1451	Network	Password for IPP authenti-cation	ALL	-	-	This should be the password of the account at the time IPP authentication was per-formed.	12
1464	Network	Samba server ON/OFF setting	ALL	1 <1-4>	NIC	1: Samba enabled 2: Samba disabled 3: Print Share disabled 4: File Share disabled	12
1464 (EFI)	Network	Samba server ON/OFF setting	ALL	2 <1-4>	NIC	1: Samba enabled 2: Samba disabled 3: Print Share disabled 4: File Share disabled * The default value is reflected by per-forming 08-700 when the EFI con-troller is connected.	12
1468	General	User data management limitation setting	ALL (color)	0 <0-1>	SYS	0: Disabled 1: Enabled	1
1469	General	User data management limitation Setting by num-ber of printouts	ALL (color)	0 <7 digits>	SYS	0-9,999,999: 0-9,999,999 sheets	1
1470	General	Device authentication func-tion setting	ALL	0 <0-1>	SYS	0: OFF 1: ON	1
1471	General	User authentication method	ALL	0 <0-5>	SYS	0: Local 1: NTLM (NT Domain) 2: LDAP 3: Kerberos (Active Directory) 4: Netware	1

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					Setting mode (08)		
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1472	General	User data management automatic registration func-tion setting	ALL	0 <0-1>	SYS	0: Disabled 1: Enabled	1
1473	General	User data management limitation setting	ALL (black)	0 <0-1>	SYS	0: Disabled 1: Enabled	1
1474	General	User data management limitation Setting by num-ber of printouts	ALL (black)	0 <7 digits>	SYS	0-9,999,999: 0-9,999,999 sheets	1
1476	Network	Restriction on Address book operation by adminis-trator	ALL	0 <0-1>	SYS	Some restrictions can be given on the admin-istrator for operating the Address book. 0: No restriction 1: Can be operated only under the administrator's authorization	1
1477	Network	Restriction on "To" ("cc") address	ALL	0 <0-3>	SYS	0: No restriction 1: Can be set from both of the Address book and LDAP server 2: Can be set only from the Address book 3: Can be set only from the LDAP server	1
1478	User interface	Display of paper size set-ting by installation opera-tion of drawers	ALL	JPN: 0 UC/EUR: 1 <0-1>	SYS	0: Not displayed 1: Displayed	1
1481	General	User data management clearing	ALL	-	-	All the user data in the database and backup files can be deleted.	3
1482	General	User data department management	ALL	0 <0-1>	SYS	0: Disabled 1: Enabled	1
1483	General	User data recovery	ALL	-	-	The data in the data-base is overwritten with the data in the backup file.	3
1484	Network	Authentication method of "Scan to Email"	ALL	0 <0-2>	SYS	0: Disabled 1: SMTP authentica-tion 2: LDAP authentica-tion	1
1485	Network	Setting whether use of the Internet FAX is permitted at the time of authentication	ALL	0 <0-1>	SYS	0: Not permitted 1: Permitted	1
1487	Network	"From" address assign-ment method at the time of authentication	ALL	0 <0-2>	SYS	0: User name + @ + Domain name 1: LDAP searching 2: Use the address registered at "From" field of E-mail set-ting	1
1489	Network	Setting for "From" address edit at "Scan to Email"	ALL	0 <0-1>	SYS	0: Not permitted 1: Permitted	1

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1491	Network	E-mail domain name	ALL	-	SYS	96 + 2 (delimiter) character * ASCII sequence only	11
1492	Paper feeding	Detection method of 13" LG for single-size document	ALL	0 <0-1>	SYS	0: Disabled 1: Enabled	1
1493	Network	Role Base Access Function	ALL	0 <0-1>	SYS	0: Function off (No restriction on data saving and other operations) 1: Function on (Data saving and other operations have some restrictions)	1
1494	General	Limitation check method	ALL	0 <0-1>	SYS	0: Checked at every page printed 1: Checked at every job printed	1
1495	Mainte-nance	Service call checking period setting	ALL	6 <0-12>	SYS	0: No checking period specified (= Calls service technician immediately) 0: 10 minutes 1: 30 minutes 3: 1 hour 4: 6 hours 5: 12 hours 6: 24 hours 7: 48 hours 8: 7 days 9: 1 month 10: 1 year 11: 5 years 12: Not limited (= Calls service technician if such error has occurred in the past even once or more)	1
1496	General	Operation setting for User authentication/registration	ALL	1 <0-1>	SYS	0: Disables operation setting for User authentication/regis-tration 1: Enables operation setting for User authentication/regis-tration	1
1496 (EFI)	General	Operation setting for User authentication/registration	ALL	0 <0-1>	SYS	0: Disables operation setting for User authentication/regis-tration 1: Enables operation setting for User authentication/regis-tration	1
1497	Elec-tronic Fil-ing	e-Filing Access Mode (for Client)	ALL	0 <0-2>	SYS	0: Mode 1 1: Mode 2 2: Mode 3	1

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1498	FAX	Inbound FAX function (Forwarding by TSI)		FAX	1 <0-1>	SYS	0: OFF (Function disabled) 1: ON (Function enabled)	1
1530-0	Counter	Number of output pages in black mode	1-UP / Duplex printing	PPC (black)	0 <8 digits>	SYS	Counts the number of output pages printed only in the black mode.	4
1530-1			2-UP / Duplex printing	PPC (black)	0 <8 digits>	SYS	Counts the number of output pages printed in the black mode using [2IN1] or [MAGAZINE SORT].	4
1530-2			2-UP / Simplex printing	PPC (black)	0 <8 digits>	SYS	Counts the number of sheets printed in the black mode using [2IN1] or [MAGAZINE SORT].	4
1530-3			4-UP / Duplex printing	PPC (black)	0 <8 digits>	SYS	Counts the number of output pages printed in the black mode using [4IN1].	4
1530-4			4-UP / Simplex printing	PPC (black)	0 <8 digits>	SYS	Counts the number of sheets printed in the black mode using [4IN1].	4
1530-7			1-UP / Simplex printing	PPC (black)	0 <8 digits>	SYS	Counts the number of output pages printed only in the black mode.	4
1531-0	Counter	Number of output pages in full color mode	1-UP / Duplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages printed only in the full color mode.	4
1531-1			2-UP / Duplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the full color mode using [2IN1] or [MAGA-ZINE SORT].	4
1531-2			2-UP / Simplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the full color mode using [2IN1] or [MAGAZINE SORT].	4
1531-3			4-UP / Duplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the full color mode using [4IN1].	4
1531-4			4-UP / Simplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the full color mode using [4IN1].	4
1531-7			1-UP / Simplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages printed only in the full color mode.	4

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1532-0	Counter	Number of output pages at Twin Color / Monocolor Mode in Copier Func-tion	1-UP / Duplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages printed only in the twin color mode.	4
1532-1			2-UP / Duplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the twin color mode using [2IN1] or [MAGA-ZINE SORT].	4
1532-2			2-UP / Simplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the twin color mode using [2IN1] or [MAGAZINE SORT].	4
1532-3			4-UP / Duplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the twin color mode using [4IN1].	4
1532-4			4-UP / Simplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the twin color mode using [4IN1].	4
1532-7			1-UP / Simplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages printed only in the twin color mode.	4

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1533-0	Counter	Number of output pages of the printer or BOX	1-UP / Duplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of output pages printed in the black mode.	4
1533-1			2-UP / Duplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of output pages printed in the black mode using [2IN1] or [MAGAZINE SORT]. * When printing is performed using a Windows driver, the 1-UP image will be output.	4
1533-2			2-UP / Simplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of sheets printed in the black mode using [2IN1] or [MAGAZINE SORT].	4
1533-3			4-UP / Duplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of output pages printed in the black mode using [4IN1].	4
1533-4			4-UP / Simplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of sheets printed in the black mode using [4IN1].	4
1533-5			N-UP / Duplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of output pages printed in the black mode using [N IN1].	4
1533-6			N-UP / Simplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of sheets printed in the black mode using [N IN1].	4
1533-7			1-UP / Simplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of output pages printed only in the black mode.	4

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			Setting mode (08)					
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1534-0	Counter	Number of output pages of the printer or BOX (Full color)	1-UP / Duplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed only in the full color mode.	4
1534-1			2-UP / Duplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the full color mode using [2IN1] or [MAGA-ZINE SORT]. * When printing is performed using a Windows driver, the 1-UP image will be output.	4
1534-2			2-UP / Simplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the full color mode using [2IN1] or [MAGAZINE SORT].	4
1534-3			4-UP / Duplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the full color mode using [4IN1].	4
1534-4			4-UP / Simplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the full color mode using [4IN1].	4
1534-5			N-UP / Duplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the full color mode using [N IN1].	4
1534-6			N-UP / Simplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the full color mode using [N IN1].	4
1534-7			1-UP / Simplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed only in the full color mode.	4
1535-0	Counter	Number of output pages of the FAX printing (1-UP / Duplex print-ing)	1-UP / Duplex printing	FAX (black)	0 <8 digits>	SYS	Counts the number of output pages in the default settings.	4
1535-7			1-UP / Simplex printing	FAX (black)	0 <8 digits>	SYS		4
1661	Wireless LAN	Wireless LAN driver SSID		ALL	-	-	Maximum 32 letters	12
1662	Wireless LAN	Wireless LAN driver Network type		ALL	1 <1-2>	-	1: Infrastructure 2: Ad-Hoc	12
1663	Wireless LAN	Wireless LAN driver Security		ALL	4 <1-7>	-	1: 802.1x 2: WPA-PSK 3: WEP 4: NONE 5: WPA 6: WPA2 7: WPA2PSK	12
1664	Wireless LAN	Wireless LAN driver Encryption system		ALL	1 <1-3>	-	1: TKIP 2: AES 3: Dynamic WEP	12

				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1665	Wireless LAN	Wireless LAN driver Transmission output power	ALL	1 <1-5>	-	1: 100% 2: 50% 3: 25% 4: 12.5% 5: min	12
1666	Wireless LAN	Wireless LAN driver Transmission rate	ALL	1 <1-2>	-	1: Auto 2: Manual	12
1667	Wireless LAN	Wireless LAN driver Transmission rate value	ALL	1 <1-12>	-	1: 1 2: 2 3: 5.5 4: 11 5: 6 6: 9 7: 12 8: 18 9: 24 10: 36 11: 48 12: 54	12
1668	Wireless LAN	Wireless LAN driver Operation channel	ALL	1 <1-2>	-	1: Auto 2: Manual	12
1669	Wireless LAN	Wireless LAN driver Operation channel value	ALL	1 <1-11>	-		12
1670	Wireless LAN	Wireless LAN driver WEP bit number	ALL	1 <1-3>	-	1:64 2: 128 3: 152	12
1671	Wireless LAN	Wireless LAN driver WEP key entry system	ALL	2 <1-2>	-	1: Hex 2: ASCII	12
1672	Wireless LAN	Wireless LAN driver WEP key value	ALL	-	-	Maximum 32 letters	12
1673	Wireless LAN	Wireless LAN driver WPA-PSK passphrase	ALL	-	-	Maximum 64 letters	12
1674	Wireless LAN	Wireless LAN driver Sleep mode setting	ALL	1 <1-3>	-	1: Off 2: Max 3: Normal	12
1675	Wireless LAN	Wireless LAN driver Slot-time limitation	ALL	1 <1-2>	-	1: Long 2: Short	12
1676	Wireless LAN	Wireless LAN driver Number of times of soft-ware retry	ALL	5 <0-1000>	-		12
1677	Wireless LAN	Wireless LAN driver Preamble	ALL	1 <1-2>	-	1: Long 2: Longshort	12
1678	Wireless LAN	Wireless LAN driver Operation mode	ALL	1 <1-3>	-	1: All 2: 11b 3: 11g	12
1679	Wireless LAN	Wireless LAN supplicant Wireless LAN setting	ALL	1 <1-3>	-	This setting is whether the wireless LAN con-nection is enabled or disabled. 1: Unset 2: Enabled 3: Disabled	12
1681	Wireless LAN	Wireless LAN supplicant Path name for client certifi-cate	ALL	-	-	This should be the path name in full where the client certificate is located. (Maximum 255 letters)	12
1682	Wireless LAN	Wireless LAN supplicant Path name for secret key of client certificate	ALL	-	-	This should be the path name in full where the client certificate is located. (Maximum 255 letters)	12
1684	Wireless LAN	Wireless LAN supplicant Path name for CA self-cer-tificate	ALL	-	-	This should be the path name in full where the CA self-certificate is located. (Maximum 255 letters)	12

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\multicolumn{8}{c}{**Setting mode (08)**}							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1685	Wireless LAN	Wireless LAN supplicant EAP user name	ALL	-	-	This should be the user name when the EAP-TLS is used.	12
1686	Wireless LAN	Wireless LAN supplicant EAP user name	ALL	-	-	This should be the user name when the PEAP is used.	12
1689	Wireless LAN	Wireless LAN supplicant Authentication interval	ALL	30 <30-65535>	-	This should be the time-out interval between EAP responses. 30: 30 seconds	12
1690	Wireless LAN	Wireless LAN supplicant Holding interval	ALL	60 <60-65535>	-	The EAP authentica-tion will start after hav-ing been waited in this period when an EAP failure was received. 60: 60 seconds	12
1691	Wireless LAN	Wireless LAN supplicant EAPOL-Start Number of times of packet retry	ALL	3 <1-65535>	-	When an EAPOL-Start packet has been sent and the request ID can-not be received, this EAPOL-Start packet will be re-sent for the num-ber of times set in this code. 3: 3 times	12
1692	Wireless LAN	Wireless LAN supplicant Session resume	ALL	2 <1-2>	-	This setting is whether the pre-master key should be updated or not upon a TLS re-negotiation. 1: Session is resumed 2: Session is not resumed	12
1693	Wireless LAN	Wireless LAN supplicant MAC Frame size	ALL	1398 <1-1398>	-	This is a MAC frame size used in the wire-less LAN connection. The data is fragmented into this size. 1398: 1398 bytes	12
1696	Wireless LAN	Wireless LAN supplicant Device file setting for obtaining random number	ALL	/AGB/dev/ran-dom	-	This should be the device file name which can obtain a seed to ini-tialize the WEP PRNG for xsupplicant. (Maximum 255 letters)	12
1697	Wireless LAN	Wireless LAN supplicant CRL directory designation	ALL	-	-	This should be the path name of the directory in full where the CRL file is located. (Maximum 255 letters)	12
1699	Wireless LAN	Wireless LAN supplicant EAP authentication type	ALL	1 <1-3>	-	This setting is for the EAP authentication type which xsupplicant can authenticate. 1: EAP-TLS 2: PEAP 3: EAP-TLS and PEAP	12

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1700	Wireless LAN	Wireless LAN supplicant CN name	ALL	-	-	This should be an authentication server name (basically a domain name in full). (Maximum 255 letters)	12
1701	Wireless LAN	Wireless LAN supplicant CN name check	ALL	1 <1-2>	-	1: NO 2: YES	12
1704	Wireless LAN	Wireless LAN supplicant Update interval of PTK (Pairwise Transient Key)	ALL	0 <0-720>	-	The update interval of a secret key across AP (Access Point) and STA (Station) can be set. This interval is for updating the secret key from STA. 0: Not updated 1-720: 1-720 minutes of interval	12
1705	Wireless LAN	Wireless LAN supplicant Strict packet check	ALL	1 <1-2>	-	The Ack bit and request bit of EAPOL-Key is checked. 1: Not checked 2: Checked	12
1706	Wireless LAN	Wireless LAN supplicant Priority change at 4-way handshake	ALL	1 <1-2>	-	A higher priority is given to the xsupplicant task when a 4-way hand-shake is started. 1: Priority not changed 2: Priority changed	12
1707	Wireless LAN	Wireless LAN supplicant Security level	ALL	1 <1-3>	-	The encryption capabil-ity output in TLS clien-tHello message can be selected. 1: LOW 2: MIDDLE 3: HIGH	12
1708		Selectable security level (EAP-TLS)	ALL	1 <1-3>	-	These are the security level which can be selected from the user interface. This setting is not applied in case of PEAP. ("LOW" and "MIDDLE" is manda-tory for PEAP) 1: LOW + MIDDLE + HIGH 2: MIDDLE + HIGH 3: HIGH	12
1710	Blue-tooth	Bluetooth ON/OFF setting	ALL	1 <0-1>	SYS	0: OFF 1: ON	1
1711	Blue-tooth	Bluetooth Device name	ALL	MFP	SYS	Maximum 32 letters	11
1712	Blue-tooth	Bluetooth Discovery	ALL	1 <0-1>	SYS	0: Not allowed 1: Allowed	1
1713	Blue-tooth	Bluetooth Security	ALL	1 <0-1>	SYS	0: Security function OFF 1: Security function ON	1

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1714	Blue-tooth	Bluetooth PIN	ALL	0000	SYS	Maximum 8 digits (8-digit sequence) This setting is valid only when the bluetooth security function is ON.	11
1715	Blue-tooth	Bluetooth Data encryption	ALL	1 <0-1>	SYS	0: Not encrypted 1: Encrypted This setting is valid only when the bluetooth security function is ON.	1
1719	Blue-tooth	Bluetooth BIP Print type	ALL	0 <0-3>	SYS	0: Fit page 1: 1/2 size 2: 1/4 size 3: 1/8 size	1
1720	Network	IP address range for IP fil-ter (Minimum area 1)	ALL	-	-	IP filter minimum area 1 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1721	Network	IP address range for IP fil-ter (Maximum area 1)	ALL	-	-	IP filter maximum area 1 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1722	Network	IP address range for IP fil-ter I (Minimum area 2)	ALL	-	-	IP filter minimum area 2 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1723	Network	IP address range for IP fil-ter (Maximum area 2)	ALL	-	-	IP filter maximum area 2 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1724	Network	IP address range for IP fil-ter (Minimum area 3)	ALL	-	-	IP filter minimum area 3 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1725	Network	IP address range for IP fil-ter (Maximum area 3)	ALL	-	-	IP filter maximum area 3 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1726	Network	IP address range for IP fil-ter (Minimum area 4)	ALL	-	-	IP filter minimum area 4 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1727	Network	IP address range for IP fil-ter (Maximum area 4)	ALL	-	-	IP filter maximum area 4 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12

				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1728	Network	IP address range for IP fil-ter (Minimum area 5)	ALL	-	-	IP filter minimum area 5 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1729	Network	IP address range for IP fil-ter (Maximum area 5)	ALL	-	-	IP filter maximum area 5 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1730	Network	IP address range for IP fil-ter (Minimum area 6)	ALL	-	-	IP filter minimum area 6 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1731	Network	IP address range for IP fil-ter (Maximum area 6)	ALL	-	-	IP filter maximum area 6 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1732	Network	IP address range for IP fil-ter (Minimum area 7)	ALL	-	-	IP filter minimum area 7 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1733	Network	IP address range for IP fil-ter (Maximum area 7)	ALL	-	-	IP filter maximum area 7 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1734	Network	IP address range for IP fil-ter (Minimum area 8)	ALL	-	-	IP filter minimum area 8 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1735	Network	IP address range for IP fil-ter (Maximum area 8)	ALL	-	-	IP filter maximum area 8 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1736	Network	IP address range for IP fil-ter (Minimum area 9)	ALL	-	-	IP filter minimum area 9 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1737	Network	IP address range for IP fil-ter (Maximum area 9)	ALL	-	-	IP filter maximum area 9 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12

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\multicolumn{8}{c}{Setting mode (08)}

Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1738	Network	IP address range for IP filter (Minimum area 10)	ALL	-	-	IP filter minimum area 10 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1739	Network	IP address range for IP filter (Maximum area 10)	ALL	-	-	IP filter maximum area 10 000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12
1740	Network	SSL setting SSL ftp server OFF/ON	ALL	2 <1-2>	-	1: Enabled 2: Disabled	12
1741	Network	SSL setting HTTP server port number	ALL	10443 <1-65535>	-	SSL HTTP server port number	12
1742	Network	SSL setting IPP server OFF/ON setting	ALL	2 <1-2>	-	1: Enabled 2: Disabled	12
1743	Network	SSL setting IPP server port number	ALL	443 <1-65535>	-	SSL IPP server port number	12
1744	Network	SSL setting SSL ftp server OFF/ON	ALL	2 <1-2>	-	OFF/ON 1: Valid 2: Invalid	12
1745	Network	SSL setting SSL ftp server Port	ALL	990 <1-65535>	-	Port number to FTP Server	12
1746	Network	SSL setting SSL LDAP Client OFF/ON	ALL	2 <1-3>	-	OFF/ON 1: Valid (Accepts all the cer-tification of the server) 2: Invalid 3: Use the imported certification.	12
1747	Network	SSL setting SSL LDAP Client Port	ALL	636 <1-65535>	-	Port number to LDAP Server	12
1748	Network	SSL setting SSL POP3 Client OFF/ON	ALL	2 <1-3>	-	OFF/ON 1: Valid (Accepts all the cer-tification of the server) 2: Invalid 3: Use the imported certification.	12
1749	Network	SSL setting SSL POP3 Client Port	ALL	995 <1-65535>	-	Port number to POP3 Server	12

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1750	Network	SSL setting SSL SMTP Client OFF/ON		ALL	2 <2-6>	-	OFF/ON 2: Invalid 3: SMTP with TLS (STARTTLS) Accept all the certification of the server. 4: SMTPS (SMTP over SSL) Accept all the certification of the server. 5: SMTP with TLS (STARTTLS) Use the imported certifi-cation. 6: SMTPS (SMTP over SSL) Use the imported certifica-tion.	12
1755	Network	Enabling server's IP address acquired by DHCP		ALL	1 <1-2>	-	Domain Name Server option (6) 1: Enabled 2: Disabled * This value is used only when DHCP is enabled.	12
1756	Network	Enabling server's IP address acquired by DHCP		ALL	1 <1-2>	-	NetBIOS over TCP/IP Name Server option (44) = Primary and Secondary Wins NAME 1: Enabled 2: Disabled * This value is used only when DHCP is enabled.	12
1757	Network	Enabling server's IP address acquired by DHCP		ALL	2 <1-2>	-	The Host Name Ven-dor Extension option (12) 1: Enabled 2: Disabled This value is used only when DHCP is enabled.	12
1759	Network	Enabling server's IP address acquired by DHCP	SMTP Server Option (69) Sim-ple Mail Server Address	ALL	2 <1-2>	-	OFF/ON 1: Valid 2: Invalid	12
1760			POP3 Server Option (70) Post Office Server Address	ALL	2 <1-2>	-	OFF/ON 1: Valid 2: Invalid	12

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1762	Network	Enabling server's IP address acquired by DHCP	ALL	2 <1-2>	-	SNTP Server Option (42) NTP Server Address 1: Enabled 2: Disabled * This value is used only when DHCP is enabled.	12
1764	Wireless LAN	Wireless LAN supplicant Control sequence setting of "Cipher Suite"	ALL	-	-	Maximum 255 letters	12
1765	Wireless LAN	Wireless LAN supplicant Path name for user certifi-cate	ALL	-	-	Maximum 63 letters	12
1766	Wireless LAN	Wireless LAN supplicant Path name entered for CA self-certificate	ALL	-	-	Maximum 63 letters	12
1767	Network	Enabling server's IP address acquired by DHCP	ALL	1 <1-2>	-	DNS domain name Option (15) DNS domain name of the cli-ent 1: Enabled 2: Disabled * This value is used only when DHCP is enabled.	12
1768	Network	Previous IP address	ALL	-	-	000.000.000.000-255.255.255.255 (Default value: 000.000.000.000)	12

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure

1772	General	Card reading device set-ting	ALL	0 <8 digits>	SYS	To enable the e-Bridge ID Gate, a card reading device should be set in the order of "ABYYZZZZ". (Enter the corresponding val-ues to "A", "B", "YY" and "ZZZZ".)
						- AB:Special setting
						- A :Debugging NIC
						   0: Not used
						   1: Used
						- B :Interface
						   0: USB connection
						   1: N/A
						- YY: Authentication
						   00: No authentica-tion using a noncon-tact IC card
						   02: Authentication using a noncontact IC card (KP-2003)
						   03: Authentication using a noncontact IC card (KP-2005)
						   04: Authentication using a noncontact IC card (KP-2004)
						- ZZZZ: Sub-code
						   0000: No authenti-cation using a non-contact IC card
						   0001: Use CSN (Card Serial Num-ber) of a noncon-tact IC card
						   0002: Use the Data Area Address Infor-mation of a noncon-tact IC card
							5

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e-STUDIO2500c/3500c/3510c
ERROR CODE AND SELF-DIAGNOSTIC MODE

07/06

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1773	General	Card reader format infor-mation -1	ALL	-	SYS	To access the data in the noncontact IC card, the Key Information "LLLL" and the Sector Number "MMMM" should be set. The "LLLL" should be set first, and then "MMMM". KP-2003: LLLL: System code (hexadecimal number) MMMM: Service code (hexadecimal number) KP-2005: LLLL : Key information MMMM: Sector number (hexadecimal number)	5
1774	General	Card reader format infor-mation -2	ALL	-	SYS	The data of the block number in the noncon-tact IC is set. KP-2003: <PPQRSSTU (hexadecimal number)> PP:1st block Q: 1st block beginning byte R: 1st block ending-byte SS:2nd block T: 2nd block begin-ning byte U: 2nd block ending byte KP-2005: <RRBSEbse (hexadecimal number)> RR:00 (Fixed) B: 1st area block num-ber S: 1st area beginning byte offset E: 1st area ending byte offset b: 2nd area block number s: 2nd area beginning byte offset e: 2nd area ending byte offset * If the 2nd block/area is not used, set the SSTU to "FFFF" (hexadeci-mal number), the bse to"FFF" (hexadecimal number).	5

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1775	General	Card reader format infor-mation -3		ALL	-	SYS	Security key "KKKKKKKKKKKK" (12 digits) <hexadecimal number> in the [Key Information] of the [Sec-tor Number] set in the code 08-1773 should be entered.	5
1776	General	Card authentication LDAP server		ALL	0 <0-100>	SYS	LDAP server number for the card authentica-tion when a noncontact IC card is used should be set.	1
1778	General	Period for locking the con-trol panel when an incor-rect administrator password has been entered 3 consecutive times		ALL	1 <0-7>	SYS	0: 0 min. 1: 0.5 min. (30 sec.) 2: 1 min. 3: 3 min. 4: 5 min. 5: 10 min. 6: 15 min. 7: 30 min.	1
1779	Network	Default data saving direc-tory of "Scan to File"		ALL	0 <0-2>	SYS	0: Local directory 1: REMOTE 1 2: REMOTE 2	1
1780	User interface	Converting 1-byte kata-kana into 2 byte-katakana at e-mail transmission		ALL	0 <0-1>	SYS	0: Non-conversion 1: With conversion	1
1781-0	Network	Notification of scan job	When job completed	ALL	0 <0-1>	SYS	Sets the notification method of scan job completion. 0: Invalid 1: Valid	4
1781-1			On error	ALL	0 <0-1>	SYS		4
1782	Network	File name format of "Save as file" and Email transmis-sion		ALL	0 <0-6>	SYS	Sets the file naming method for "Save as file" and Email trans-mission. 0: [FileName]-[Data]-[Page] 1: [FileName]-[Page]-[Data] 2: [Data]-[FileName]-[Page] 3: [Data]-[Page]-[File-Name] 4: [Page]-[FileName]-[Data] 5: [Page]-[Data]-[File-Name] 6: [HostName]_[Data]-[Page]	1

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e-STUDIO2500c/3500c/3510c
ERROR CODE AND SELF-DIAGNOSTIC MODE

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				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1783	Network	Date display format of the file name of "Save as file" and Email transmission	ALL	0 <0-5>	SYS	Sets the data display format of the file for "Save as file" and Email transmission. 0: [YYYY][MM][DD][HH][mm][SS] 1: [YY][MM][DD][HH][mm][SS] 2: [YYYY][MM][DD] 3: [YY][MM][DD] 4: [HH][mm][SS] 5: [YYYY][MM][DD][HH][mm][SS][mm0] The order of [YY], [MM] and [DD] varies depending on the set-ting of the code 08-640 (Data display format).	1
1784	Network	Single page data saving directory at "Save as file"	ALL	0 <0-1>	SYS	Sets the directory where the file of "Save as file" is saved. 0: Save it under a sub-folder 1: Save it without cre-ating a subfolder	1
1785	Network	Page number display for-mat of the file of "Save as file" and Email transmis-sion	ALL	4 <3-6>	SYS	Sets the digit of a page number attached on the file. 3-6: 3-6 digits	1
1786	Network	Extension (suffix) format of the file of "Save as file"	ALL	3 <3-6>	SYS	Sets the extension dig-its of the file to be saved. 3: Auto 4: 4 digits 5: 5 digits 6: 6 digits	1

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1790-0	General	Available pro-file display	PS_OP_00.icc	ALL	-	SYS	Displaying the current Output Profile and PG CIEBasedPureGray-TRC attribute (PG CIEBasedPure-GrayTRC attribute in the same sub-code is displayed at the same time.)	14
1790-1			PS_OP_01.icc	ALL	-	SYS		14
1790-2			PS_OP_02.icc	ALL	-	SYS		14
1790-3			PS_OP_03.icc	ALL	-	SYS		14
1790-4			PS_OP_04.icc	ALL	-	SYS		14
1790-5			PS_OP_05.icc	ALL	-	SYS		14
1790-6			PS_OP_06.icc	ALL	-	SYS		14
1790-7			PS_OP_07.icc	ALL	-	SYS		14
1790-8			PS_OP_08.icc	ALL	-	SYS		14
1790-9			PS_OP_09.icc	ALL	-	SYS		14
1790-10			PS_OP_10.ICC	ALL	-	SYS		14
1790-11			PS_OP_11.icc	ALL	-	SYS		14
1790-12			PS_OP_12.icc	ALL	-	SYS		14
1790-13			PS_OP_13.icc	ALL	-	SYS		14
1790-14			PS_OP_14.icc	ALL	-	SYS		14
1790-15			PS_OP_15.icc	ALL	-	SYS		14
1790-16			PS_OP_16.icc	ALL	-	SYS		14
1790-17			PS_OP_17.icc	ALL	-	SYS		14
1790-18			PS_OP_18.icc	ALL	-	SYS		14
1790-19			PS_OP_19.icc	ALL	-	SYS		14
1790-20			PS_OP_20.ICC	ALL	-	SYS		14
1790-21			PS_OP_21.icc	ALL	-	SYS		14
1790-22			PS_OP_22.icc	ALL	-	SYS		14
1790-23			PS_OP_23.icc	ALL	-	SYS		14

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1791	General	Recovery of the profile at the shipment	ALL	0 <0-23>	SYS	Recovers the default Output Profile and PG CIEBasedPureGray-TRC (PG CIEBasedPure-GrayTRC in the same sub-code is recovered to the default.) 0: PS_OP_00 1: PS_OP_01 2: PS_OP_02 3: PS_OP_03 4: PS_OP_04 5: PS_OP_05 6: PS_OP_06 7: PS_OP_07 8: PS_OP_08 9: PS_OP_09 10: PS_OP_10 11: PS_OP_11 12: PS_OP_12 13: PS_OP_13 14: PS_OP_14 15: PS_OP_15 16: PS_OP_16 17: PS_OP_17 18: PS_OP_18 19: PS_OP_19 20: PS_OP_20 21: PS_OP_21 22: PS_OP_22 23: PS_OP_23	1
1792	General	Copying the profile at the shipment to USB memory	ALL	0 <0-23>	SYS	Copies the default Out-put Profile and PG CIE-BasedPureGrayTRC to the USB memory. 0: PS_OP_00 1: PS_OP_01 2: PS_OP_02 3: PS_OP_03 4: PS_OP_04 5: PS_OP_05 6: PS_OP_06 7: PS_OP_07 8: PS_OP_08 9: PS_OP_09 10: PS_OP_10 11: PS_OP_11 12: PS_OP_12 13: PS_OP_13 14: PS_OP_14 15: PS_OP_15 16: PS_OP_16 17: PS_OP_17 18: PS_OP_18 19: PS_OP_19 20: PS_OP_20 21: PS_OP_21 22: PS_OP_22 23: PS_OP_23	1

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1793	General	Uploading the profile at the shipment from UBS memory	ALL	0 <0-23>	SYS	Uploads the default Output Profile and PG CIEBasedPureGray-TRC from the USB memory. 0: PS_OP_00 1: PS_OP_01 2: PS_OP_02 3: PS_OP_03 4: PS_OP_04 5: PS_OP_05 6: PS_OP_06 7: PS_OP_07 8: PS_OP_08 9: PS_OP_09 10: PS_OP_10 11: PS_OP_11 12: PS_OP_12 13: PS_OP_13 14: PS_OP_14 15: PS_OP_15 16: PS_OP_16 17: PS_OP_17 18: PS_OP_18 19: PS_OP_19 20: PS_OP_20 21: PS_OP_21 22: PS_OP_22 23: PS_OP_23	1

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					Setting mode (08)			
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1794-0	General	Displaying the attribute of the profile at the shipment	PS_OP_00.000	ALL	-	SYS	Displays the default Output Profile and PG CIEBasedPureGray-TRC attribute. (PG CIEBasedPure-GrayTRC attribute in the same sub-code is displayed at the same time.)	14
1794-1			PS_OP_01.000	ALL	-	SYS		14
1794-2			PS_OP_02.000	ALL	-	SYS		14
1794-3			PS_OP_03.000	ALL	-	SYS		14
1794-4			PS_OP_04.000	ALL	-	SYS		14
1794-5			PS_OP_05.000	ALL	-	SYS		14
1794-6			PS_OP_06.000	ALL	-	SYS		14
1794-7			PS_OP_07.000	ALL	-	SYS		14
1794-8			PS_OP_08.000	ALL	-	SYS		14
1794-9			PS_OP_09.000	ALL	-	SYS		14
1794-10			PS_OP_10.000	ALL	-	SYS		14
1794-11			PS_OP_11.000	ALL	-	SYS		14
1794-12			PS_OP_12.000	ALL	-	SYS		14
1794-13			PS_OP_13.000	ALL	-	SYS		14
1794-14			PS_OP_14.000	ALL	-	SYS		14
1794-15			PS_OP_15.000	ALL	-	SYS		14
1794-16			PS_OP_16.000	ALL	-	SYS		14
1794-17			PS_OP_17.000	ALL	-	SYS		14
1794-18			PS_OP_18.000	ALL	-	SYS		14
1794-19			PS_OP_19.000	ALL	-	SYS		14
1794-20			PS_OP_20.000	ALL	-	SYS		14
1794-21			PS_OP_21.000	ALL	-	SYS		14
1794-22			PS_OP_22.000	ALL	-	SYS		14
1794-23			PS_OP_23.000	ALL	-	SYS		14

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1795	General	Making the profile available	ALL	0 <0-23>	SYS	Selecting a profile Overwrites the adjusted Output Profile on the current area (PG CIEBasedPure-GrayTRC in the same sub-code is replaced with the adjusted pro-file at the same time.) 0: PS_OP_00 1: PS_OP_01 2: PS_OP_02 3: PS_OP_03 4: PS_OP_04 5: PS_OP_05 6: PS_OP_06 7: PS_OP_07 8: PS_OP_08 9: PS_OP_09 10: PS_OP_10 11: PS_OP_11 12: PS_OP_12 13: PS_OP_13 14: PS_OP_14 15: PS_OP_15 16: PS_OP_16 17: PS_OP_17 18: PS_OP_18 19: PS_OP_19 20: PS_OP_20 21: PS_OP_21 22: PS_OP_22 23: PS_OP_23	1

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1796	General	Copying the adjusted pro-file to USB memory	ALL	0 <0-23>	SYS	Copies the adjusted Output Profile and PG CIEBasedPureGray-TRC to the USB mem-ory. (PG CIEBasedPure-GrayTRC in the same sub-code is copied to the USB memory at the same time.) 0: PS_OP_00 1: PS_OP_01 2: PS_OP_02 3: PS_OP_03 4: PS_OP_04 5: PS_OP_05 6: PS_OP_06 7: PS_OP_07 8: PS_OP_08 9: PS_OP_09 10: PS_OP_10 11: PS_OP_11 12: PS_OP_12 13: PS_OP_13 14: PS_OP_14 15: PS_OP_15 16: PS_OP_16 17: PS_OP_17 18: PS_OP_18 19: PS_OP_19 20: PS_OP_20 21: PS_OP_21 22: PS_OP_22 23: PS_OP_23	1

			Setting mode (08)					
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure	
1797	General	Uploading the adjusted profile from USB memory	ALL	0 <0-23>	SYS	Uploads the Output Profile and PG CIE-BasedPureGrayTRC from the USB memory. 0: PS_OP_00 1: PS_OP_01 2: PS_OP_02 3: PS_OP_03 4: PS_OP_04 5: PS_OP_05 6: PS_OP_06 7: PS_OP_07 8: PS_OP_08 9: PS_OP_09 10: PS_OP_10 11: PS_OP_11 12: PS_OP_12 13: PS_OP_13 14: PS_OP_14 15: PS_OP_15 16: PS_OP_16 17: PS_OP_17 18: PS_OP_18 19: PS_OP_19 20: PS_OP_20 21: PS_OP_21 22: PS_OP_22 23: PS_OP_23	1	2

e-STUDIO2500c/3500c/3510c
ERROR CODE AND SELF-DIAGNOSTIC MODE

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1798-0	General	Displaying the attribute of the profile at the shipment	PS_OP_ 00.001	ALL	-	SYS	Displays the adjusted Output Profile and PG CIEBasedPureGray-TRC attribute in the same sub-code.	14
1798-1			PS_OP_ 01.001	ALL	-	SYS		14
1798-2			PS_OP_ 02.001	ALL	-	SYS		14
1798-3			PS_OP_ 03.001	ALL	-	SYS		14
1798-4			PS_OP_ 04.001	ALL	-	SYS		14
1798-5			PS_OP_ 05.001	ALL	-	SYS		14
1798-6			PS_OP_ 06.001	ALL	-	SYS		14
1798-7			PS_OP_ 07.001	ALL	-	SYS		14
1798-8			PS_OP_ 08.001	ALL	-	SYS		14
1798-9			PS_OP_ 09.001	ALL	-	SYS		14
1798-10			PS_OP_ 10.001	ALL	-	SYS		14
1798-11			PS_OP_ 11.001	ALL	-	SYS		14
1798-12			PS_OP_ 12.001	ALL	-	SYS		14
1798-13			PS_OP_ 13.001	ALL	-	SYS		14
1798-14			PS_OP_ 14.001	ALL	-	SYS		14
1798-15			PS_OP_ 15.001	ALL	-	SYS		14
1798-16			PS_OP_ 16.001	ALL	-	SYS		14
1798-17			PS_OP_ 17.001	ALL	-	SYS		14
1798-18			PS_OP_ 18.001	ALL	-	SYS		14
1798-19			PS_OP_ 19.001	ALL	-	SYS		14
1798-20			PS_OP_ 20.001	ALL	-	SYS		14
1798-21			PS_OP_ 21.001	ALL	-	SYS		14
1798-22			PS_OP_ 22.001	ALL	-	SYS		14
1798-23			PS_OP_ 23.001	ALL	-	SYS		14
1902	Fuser	Fusing error temperature (Temperature of the fuser belt center thermopiles)		ALL	0 <0-255>	M		1
1903	Fuser	Fusing error temperature (Temperature of the fuser belt rear thermopiles)		ALL	0 <0-255>	M		1

				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1904	Fuser	Fusing error temperature (Temperature of the heat roller front thermistor)	ALL	0 <0-255>	M		1
1905	Fuser	Fusing error temperature (Temperature of the pres-sure roller center ther-mistor)	ALL	0 <0-255>	M		1
1911	Paper feeding	Manual stapling time-out period	ALL	15 <0-30>	M	3-30sec. (In increments of 1sec.)	1
1912	Paper feeding	Finisher model switching setting value	ALL	0 <0-1>	M	0: MJ-1030 1: MJ-1101	1
1913	General	Addition of the page num-ber to the multi-page file name of a File/Email	ALL	0 <0-1>	SYS	0: Valid (Page number not added) 1: Invalid (Page num-ber added)	1
1914	General	Maximum number of deci-mals in the extension fields	ALL	2 <0-6>	SYS	0 to 6 digits	1
1916	General	The default value of the stored/attached file name of a File/Email	ALL	0 <0-1>	SYS	0: DOCYYMMDD 1: NetBios name	1
1920	Network	Domain name of Windows Domain Authentication	ALL	-	UTY	Maximum 128 letters	12
1921	Network	Windows domain No. 2 of user authentication	ALL	-	UTY	Maximum 128 letters	12
1922	Network	Windows domain No. 3 of user authentication	ALL	-	UTY	Maximum 128 letters	12
1923	Network	LDAP authentication Server type	ALL	1 <1-2>	NIC	1: Windows Server 2: Not Windows Server	12
1924	Network	LDAP authentication User attribute	ALL	-	NIC	Sets a user attribute name.	12
1925	Network	Execution of user authenti-cation when the user ID is not entered	ALL	2 <0-2>	SYS	0: Forcible execution 1: Execution impossi-ble (pooled in the invalid queue) 2: Forcible deletion	1
1926	FAX	Tab/cover sheet printing at FAX reception Printing stop function	ALL	0 <0-1>	SYS	Sets on or off of the printing function of spe-cial sheets such as tab or cover sheet of FAX, Email or list print. 0: Function off 1: Function on	1
1927	Network	LDAP server attribute name settings for the card authentication	ALL	eBMUser Card	SYS	Up to 32 letters	11
1928	Network	Role Based Access LDAP search index	ALL	0 <0-4294967 295>	SYS	This code is used to specify the ID for the LDAP server to imple-ment Role-Based Access Control.	5
1929	User interface	Key arrangement for lan-guage 1	ALL	0 <0-2>	SYS	0: QWERTY layout (for EUR) 1: QWERTZ layout 2: AZERTY layout	1

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e-STUDIO2500c/3500c/3510c
ERROR CODE AND SELF-DIAGNOSTIC MODE

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				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1930	User interface	Key arrangement for lan-guage 2	ALL	1 <0-2>	SYS	0: QWERTY layout (for EUR) 1: QWERTZ layout 2: AZERTY layout	1
1931	User interface	Key arrangement for lan-guage 3	ALL	EUR: 2 UC: 0 JPN: 0 <0-2>	SYS	0: QWERTY layout (for EUR) 1: QWERTZ layout 2: AZERTY layout	1
1932	User interface	Key arrangement for lan-guage 4	ALL	0 <0-2>	SYS	0: QWERTY layout (for EUR) 1: QWERTZ layout 2: AZERTY layout	1
1933	User interface	Key arrangement for lan-guage 5	ALL	0 <0-2>	SYS	0: QWERTY layout (for EUR) 1: QWERTZ layout 2: AZERTY layout	1
1934	User interface	Key arrangement for lan-guage 6	ALL	0 <0-2>	SYS	0: QWERTY layout (for EUR) 1: QWERTZ layout 2: AZERTY layout	1
1935	User interface	Key arrangement for lan-guage 7	ALL	0 <0-2>	SYS	0: QWERTY layout (for EUR) 1: QWERTZ layout 2: AZERTY layout	1
1936	Network	AppleTalk device name	ALL	MFP-serial	UTY	Maximum 32 letters The Network-related serial number of the equipment appears at "serial".	12
1937	Network	User name and password at user authentication or "Save as file"	ALL	0 <0-2>	SYS	0: User name and password of the device 1: User name and password at the user authentication (Template registra-tion information comes first when a template is retrieved.) 2: User name and password at the user authentication (User information of the authentication comes first when a template is retrieved.)	1
1940	General	STAGE port number	SCN	20080 <0-65535>	SYS	Port number used for the remote scanning is set.	1

				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default \<Accept-able value\>	RAM	Contents	Pro-cedure
1941	Blue-tooth	Bluetooth BIP Paper size	ALL	EUR: 6 UC: 2 JPN: 6 \<0-13\>	SYS	0: LD　　1: LG 2: LT　　3: COMP 4: ST　　5: A3 6: A4　　7: A5 8: A6　　9: B4 10: B5　11: FOLIO 12: 13"LG 13: 8.5" x 8.5"	1
1950	Network	SMB signature for SMB server	ALL	1 \<1-3\>	UTY	1: Auto 2: Valid 3: Invalid	12
1951	Network	SMB signature for SMB cli-ent	ALL	1 \<1-3\>	UTY	1: Auto 2: Valid 3: Invalid	12
1952	Network	Logon User Name of Win-dows Domain Authentica-tion	ALL	-	UTY	Maximum 128 letters	12
1953	Network	Logon User Name Pass-word of of Windows Domain Authentication	ALL	-	UTY	Maximum 128 letters	12
1954	Network	PDC2 of user authentica-tion	ALL	-	UTY	Maximum 128 letters	12
1955	Network	BDC2 of user authentica-tion	ALL	-	UTY	Maximum 128 letters	12
1956	Network	PDC3 of user authentica-tion	ALL	-	UTY	Maximum 128 letters	12
1957	Network	BDC3 of user authentica-tion	ALL	-	UTY	Maximum 128 letters	12
1958	Network	PDC of Windows Domain Authentication	ALL	-	UTY	Maximum 128 letters	12
1959	Network	BDC of device authentica-tion	ALL	-	UTY	Maximum 128 letters	12
1960	General	KS Filter operation mode	ALL	0 \<0-1\>	SYS	0: Disabled 1: Enabled	1
1961	General	KS/KSSM setting all clear-ing	ALL	-	-	Does not reset the value of the code 08-1960 but resets those of the codes 08-1963 to 1994.	3
1963	General	KS Filter Emulation Mode	ALL	0 \<0-2\>	SYS	0: Auto 1: KS 2: KSSM	1
1964	General	KS Filter Paper Size	ALL	1 \<0-5\>	SYS	0: A3 1: A4 2: B4 3: B5 4: Letter 5: Legal	1
1965	General	KS Filter Orientation	ALL	0 \<0-1\>	SYS	0: Portrait 1: Landscape	1
1966	General	KS Filter Copies	ALL	0 \<1-999\>	SYS		1
1967	General	KS Paper Source	ALL	0 \<0-1\>	SYS		1
1968	General	KS Duplex Mode	ALL	0 \<0-2\>	SYS		1

			Setting mode (08)				
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1970	General	KS CPI (English CPI/ Hangle CPI)	ALL	1 <0-10>	SYS	0: (5/10) 1: (6/12) 2: (6.7/13.3) 3: (6.9/13.8) 4: (7.5/15) 5: (8.3/16.7) 6: (9/18) 7: (10/10) 8: (10/20) 9: (12/24) 10: (15/30)	1
1971	General	KS LPI	ALL	60 <30-160>	SYS	Key in the value 10 times as the desired font size. (e.g.: Key in "45" for a font size 4.5.)	1
1972	General	KS Type Face	ALL	0 <0-5>	SYS	0: MYUNGJO 1: GOTHIC 2: GUNGSEO 3: GULLIM 4: GRAPH 5: SAMMUL	1
1973	General	KS Font Size	ALL	96 <96-160>	SYS	Key in the value 10 times as the desired font size. (e.g.: Key in "100" for a font size 10.0.)	1
1974	General	KS Zoom	ALL	100 <20-400>	SYS		1

1975	General	KS CR/LF Mode	ALL	2 <0-3>	SYS	0: CR->CR,
						   LF->LF
						1: CR->CR+LF,
						   LF->LF
						2: CR->CR,
						   LF->CR+LF
						3: CR->CR+LF,
						   LF->CR+LF
							1

1976	General	KS Top Margin	ALL	0 <0-50>	SYS	Key in the value 10 times as the desired font size. (e.g.: Key in "40" for a font size 4.0.)	1
1977	General	KS Left Margin	ALL	0 <0-50>	SYS	Key in the value 10 times as the desired font size. (e.g.: Key in "40" for a font size 4.0.)	1
1978	General	KS Auto Wrap	ALL	0 <0-1>	SYS	0: OFF 1: ON	1
1979	General	KS Han Mode	ALL	1 <0-1>	SYS	0: OFF 1: ON	1
1980	General	KS Han Code	ALL	0 <0-1>	SYS	0: Wansung 1: Johap	1

					Setting mode (08)		
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1984	General	KSSM CPI (English CPI/ Hangle CPI)	ALL	1 <0-10>	SYS	0: (5/10) 1: (6/12) 2: (6.7/13.3) 3: (6.9/13.8) 4: (7.5/15) 5: (8.3/16.7) 6: (9/18) 7: (10/10) 8: (10/20) 9: (12/24) 10: (15/30)	1
1985	General	KSSM LPI	ALL	60 <30-160>	SYS	Key in the value 10 times as the desired font size. (e.g.: Key in "45" for a font size 4.5.)	1
1986	General	KSSM Type Face	ALL	0 <0-5>	SYS	0: MYUNGJO 1: GOTHIC 2: GUNGSEO 3: GULLIM 4: GRAPH 5: SAMMUL	1
1987	General	KSSM Font Size	ALL	96 <96-160>	SYS	Key in the value 10 times as the desired font size. (e.g.: Key in "100" for a font size 10.0.)	1
1988	General	KSSM Zoom	ALL	100 <20-400>	SYS		1
1989	General	KSSM CR/LF Mode	ALL	2 <0-3>	SYS	0: CR->CR, LF->LF 1: CR->CR+LF, LF->LF 2: CR->CR, LF->CR+LF 3: CR->CR+LF, LF->CR+LF	1
1990	General	KSSM Top Margin	ALL	0 <0-50>	SYS	Key in the value 10 times as the desired font size. (e.g.: Key in "40" for a font size 4.0.)	1
1991	General	KSSM Left Margin	ALL	0 <0-50>	SYS	Key in the value 10 times as the desired font size. (e.g.: Key in "40" for a font size 4.0.)	1
1992	General	KSSM Auto Wrap	ALL	0 <0-1>	SYS	0: OFF 1: ON	1
1993	General	KSSM Han Mode	ALL	1 <0-1>	SYS	0: OFF 1: ON	1
1994	General	KSSM Han Code	ALL	0 <0-1>	SYS	0: Wansung 1: Johap	1

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					Setting mode (08)			
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
2017-0	Fuser	Fusing tem-perature (Center / Spe-cial paper)	Special paper 1	ALL	9 <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C	4
2017-1			Special paper 2	ALL	9 <0-16>	M		4
2018-0	Fuser	Fusing tem-perature (Side / Special paper)	Special paper 1	ALL	9 <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C	4
2018-1			Special paper 2	ALL	9 <0-16>	M		4
2019-0	Fuser	Fusing tem-perature (Pressure roller / Spe-cial paper)	Special paper 1	ALL	2 <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C	4
2019-1			Special paper 2	ALL	2 <0-16>	M		4
2020-0	Fuser	Pre-running time for first printing (Spe-cial paper)	Special paper 1	ALL	0 <0-16>	M	0: Invalid 1: 0sec. 2: 2sec. 3: 3sec. 4: 4sec. 5: 5sec. 6: 6sec. 7: 7sec. 8: 8sec. 9: 10sec. 10: 12sec. 11: 14sec. 12: 16sec. 13: 18sec. 14: 20sec. 15: 25sec. 16: 30sec.	4
2020-1			Special paper 2	ALL	0 <0-16>	M		4
2151-0	Fuser	Fusing tem-perature dur-ing printing (Pressure roller / Plain paper)	BK mode	ALL	2 <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C	4
2151-1			C or CK mode	ALL	2 <0-16>	M		4
2153-0	Fuser	Fusing tem-perature dur-ing printing (Pressure roller / Thick paper 1)	Normal length paper	ALL	2 <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C	4
2153-1			Extra long size paper	ALL	2 <0-16>	M		4

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
2155	Fuser	Fusing temperature during printing (Pressure roller / Thick paper 2)		ALL	2 <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C	1
2159	Fuser	Fusing temperature during printing (Pressure roller / Thick paper 3) / (Pressure roller / Thick paper 4)		ALL	2 <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C	1
2161	Fuser	Fusing temperature during printing (Pressure roller / Overhead transparencies)		ALL	2 <0-16>	M	0: 120°C 1: 125°C 2: 130°C 3: 135°C 4: 140°C 5: 145°C 6: 150°C 7: 155°C 8: 160°C 9: 165°C 10: 170°C 11: 175°C 12: 180°C 13: 185°C 14: 190°C 15: 195°C 16: 200°C	1
2255	Fuser	Fusing temperature in the low power mode (Pressure roller)		ALL	19 <0-25>	M	0: OFF°C 1: 40°C 2: 45°C 3: 50°C 4: 55°C 5: 60°C 6: 65°C 7: 70°C 8: 75°C 9: 80°C 10: 85°C 11: 90°C 12: 95°C 13: 100°C 14: 105°C 15: 110°C 16: 115°C 17: 120°C 18: 125°C 19: 130°C 20: 135°C 21: 140°C 22: 145°C 23: 150°C 24: 155°C 25: 160°C	1
2367	Transfer	ON/OFF setting of drum reverse rotation amount control		ALL	1 <0-1>	M	0: OFF 1: ON	1
2411-0	Transfer	Enforced toner supply / Motor ON set-ting value	Transport speed: Normal speed	ALL	60 <0-255>	M		4
2411-1			Transport speed: Decelerat-ing	ALL	60 <0-255>	M		4
2411-2			Transport speed: High speed	ALL	60 <0-255>	M		4

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ERROR CODE AND SELF-DIAGNOSTIC MODE

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
2412-0	Transfer	Enforced toner supply / Motor OFF setting value	Transport speed: Normal speed	ALL	70 <0-255>	M		4
2412-1			Transport speed: Decelerat-ing	ALL	70 <0-255>	M		4
2412-2			Transport speed: High speed	ALL	70 <0-255>	M		4
2413-0	Transfer	Enforced toner supply / Setting value of the number of repetition times	Transport speed: Normal speed	ALL	6 <0-10>	M		4
2413-1			Transport speed: Decelerat-ing	ALL	6 <0-10>	M		4
2413-2			Transport speed: High speed	ALL	6 <0-10>	M		4
2490	Transfer	2nd transfer bias resis-tance detection control		ALL	1 <0-1>	M	0: Invalid 1: Valid	1
2510	Transfer	Transfer bias control		ALL	1 <0-1>	M	0: Invalid 1: Valid	1
2511	Transfer	Main charger open-loop control for resistance detection		ALL	1 <0-1>	M	0: Invalid 1: Valid	1
2512	Transfer	1st transfer life count con-trol switching		ALL	1 <0-1>	M	0: Invalid 1: Valid	1
2513-0	Image control	Contrast volt-age offset cor-rection setting (Normal speed)	Y	ALL	5 <0-10>	M	0: -100 1: -80 2: -60 3: -40 4: -20 5: 0 6: +20 7: +40 8: +60 9: +80 10: +100 (Unit: V)	4
2513-1			M	ALL	5 <0-10>	M		4
2513-2			C	ALL	5 <0-10>	M		4
2513-3			K	ALL	5 <0-10>	M		4
2514-0		Contrast volt-age offset cor-rection setting (Decelerating)	Y	ALL	5 <0-10>	M		4
2514-1			M	ALL	5 <0-10>	M		4
2514-2			C	ALL	5 <0-10>	M		4
2514-3			K	ALL	5 <0-10>	M		4
2515	Image control	Contrast voltage offset cor-rection setting (High speed)		ALL	5 <0-10>	M		1

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
2525-0	Image control	Laser power offset correc-tion setting (Normal speed)	Y	ALL	5 <0-10>	M	0: -50 1: -40 2: -30 3: -20 4: -10 5: 0 6: +10 7: +20 8: +30 9: +40 10: +50 (Unit: μW)	4
2525-1			M	ALL	5 <0-10>	M		4
2525-2			C	ALL	5 <0-10>	M		4
2525-3			K	ALL	5 <0-10>	M		4
2526-0		Laser power offset correc-tion setting (Decelerating)	Y	ALL	5 <0-10>	M		4
2526-1			M	ALL	5 <0-10>	M		4
2526-2			C	ALL	5 <0-10>	M		4
2526-3			K	ALL	5 <0-10>	M		4
2527		Laser power offset correc-tion setting (High speed)		ALL	5 <0-10>	M		1
2553	Transfer	Switchover on discharge blade bias output		ALL	0 <0-1>	M	0: Enabled 1: Disabled	1
2692	Develop-ment	Prevention of color toner low density / ON/OFF set-ting		ALL	0 <0-1>	M	Prevents color toner low density which occurs when the ratio of black printing is high. Since toner density in the color developer unit is checked at every number of sheets set in 08-2693, the perfor-mance will be lowered. 0: OFF 1: ON	1
2693	Develop-ment	Prevention of color toner low density / Judged num-ber of sheets setting		ALL	20 <1-255>	M	Sets the timing to check toner density in the color developer unit when 08-2692 is "1: ON". Setting value x 10 sheets	1
2707-0	Develop-ment	Toner density ratio manual offset control	Y	ALL	0 <0-8>	M	0: Invalid 1: +2bit 2: +4bit 3: +6bit 4: +8bit 5: -2bit 6: -4bit 7: -6bit 8: -8bit	4
2707-1			M	ALL	0 <0-8>	M		4
2707-2			C	ALL	0 <0-8>	M		4
2707-3			K	ALL	0 <0-8>	M		4

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		Setting mode (08)						
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
3600-0	General	Available pro-file display	PS_IS34_00.ICC	ALL	-	SYS	Displays PG Device-PureGrayTRC attribute for the current RGBInk-Sim profile and the same sub-code.	14
3600-1			PS_IS34_01.icc	ALL	-	SYS		14
3600-2			PS_IS34_02.icc	ALL	-	SYS		14
3600-3			PS_IS34_03.icc	ALL	-	SYS		14
3600-4			PS_IS34_04.icc	ALL	-	SYS		14
3600-5			PS_IS34_05.icc	ALL	-	SYS		14
3600-6			PS_IS34_06.icc	ALL	-	SYS		14
3600-7			PS_IS34_07.icc	ALL	-	SYS		14
3600-8			PS_IS34_08.icc	ALL	-	SYS		14
3600-9			PS_IS34_09.icc	ALL	-	SYS		14
3600-10			PS_IS34_10.ICC	ALL	-	SYS		14
3600-11			PS_IS34_11.icc	ALL	-	SYS		14
3600-12			PS_IS34_12.icc	ALL	-	SYS		14
3600-13			PS_IS34_13.icc	ALL	-	SYS		14
3600-14			PS_IS34_14.icc	ALL	-	SYS		14
3600-15			PS_IS34_15.icc	ALL	-	SYS		14
3600-16			PS_IS34_16.icc	ALL	-	SYS		14
3600-17			PS_IS34_17.icc	ALL	-	SYS		14
3600-18			PS_IS34_18.icc	ALL	-	SYS		14
3600-19			PS_IS34_19.icc	ALL	-	SYS		14
3600-20			PS_IS34_20.ICC	ALL	-	SYS		14
3600-21			PS_IS34_21.icc	ALL	-	SYS		14
3600-22			PS_IS34_22.icc	ALL	-	SYS		14
3600-23			PS_IS34_23.icc	ALL	-	SYS		14

				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
3601	General	Recovery of the profile at the shipment	ALL	0 <0-23>	SYS	Recovers the default RGBInkSim profile and PG DevicePureGray-TRC in the same sub-code. 0: PS_IS34_00 1: PS_IS34_01 2: PS_IS34_02 3: PS_IS34_03 4: PS_IS34_04 5: PS_IS34_05 6: PS_IS34_06 7: PS_IS34_07 8: PS_IS34_08 9: PS_IS34_09 10: PS_IS34_10 11: PS_IS34_11 12: PS_IS34_12 13: PS_IS34_13 14: PS_IS34_14 15: PS_IS34_15 16: PS_IS34_16 17: PS_IS34_17 18: PS_IS34_18 19: PS_IS34_19 20: PS_IS34_20 21: PS_IS34_21 22: PS_IS34_22 23: PS_IS34_23	1
3602	General	Copying the profile at the shipment to USB memory	ALL	0 <0-23>	SYS	Copies the default RGBInkSim profile and PG DevicePureGray-TRC in the same sub-code to the USB mem-ory. 0: PS_IS34_00 1: PS_IS34_01 2: PS_IS34_02 3: PS_IS34_03 4: PS_IS34_04 5: PS_IS34_05 6: PS_IS34_06 7: PS_IS34_07 8: PS_IS34_08 9: PS_IS34_09 10: PS_IS34_10 11: PS_IS34_11 12: PS_IS34_12 13: PS_IS34_13 14: PS_IS34_14 15: PS_IS34_15 16: PS_IS34_16 17: PS_IS34_17 18: PS_IS34_18 19: PS_IS34_19 20: PS_IS34_20 21: PS_IS34_21 22: PS_IS34_22 23: PS_IS34_23	1

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
3603	General	Updating the profile at the shipment from UBS mem-ory	ALL	0 <0-23>	SYS	Uploads the default RGBInkSim profile and PG DevicePureGray-TRC in the same sub-code from the USB memory. 0: PS_IS34_00 1: PS_IS34_01 2: PS_IS34_02 3: PS_IS34_03 4: PS_IS34_04 5: PS_IS34_05 6: PS_IS34_06 7: PS_IS34_07 8: PS_IS34_08 9: PS_IS34_09 10: PS_IS34_10 11: PS_IS34_11 12: PS_IS34_12 13: PS_IS34_13 14: PS_IS34_14 15: PS_IS34_15 16: PS_IS34_16 17: PS_IS34_17 18: PS_IS34_18 19: PS_IS34_19 20: PS_IS34_20 21: PS_IS34_21 22: PS_IS34_22 23: PS_IS34_23	1

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
3604-0	General	Displaying the attribute of the profile at the shipment	PS_IS34_00.000	ALL	-	SYS	Displays the default RGBInkSim profile and PG DevicePureGray-TRC attribute in the same sub-code.	14
3604-1			PS_IS34_01.000	ALL	-	SYS		14
3604-2			PS_IS34_02.000	ALL	-	SYS		14
3604-3			PS_IS34_03.000	ALL	-	SYS		14
3604-4			PS_IS34_04.000	ALL	-	SYS		14
3604-5			PS_IS34_05.000	ALL	-	SYS		14
3604-6			PS_IS34_06.000	ALL	-	SYS		14
3604-7			PS_IS34_07.000	ALL	-	SYS		14
3604-8			PS_IS34_08.000	ALL	-	SYS		14
3604-9			PS_IS34_09.000	ALL	-	SYS		14
3604-10			PS_IS34_10.000	ALL	-	SYS		14
3604-11			PS_IS34_11.000	ALL	-	SYS		14
3604-12			PS_IS34_12.000	ALL	-	SYS		14
3604-13			PS_IS34_13.000	ALL	-	SYS		14
3604-14			PS_IS34_14.000	ALL	-	SYS		14
3604-15			PS_IS34_15.000	ALL	-	SYS		14
3604-16			PS_IS34_16.000	ALL	-	SYS		14
3604-17			PS_IS34_17.000	ALL	-	SYS		14
3604-18			PS_IS34_18.000	ALL	-	SYS		14
3604-19			PS_IS34_19.000	ALL	-	SYS		14
3604-20			PS_IS34_20.000	ALL	-	SYS		14
3604-21			PS_IS34_21.000	ALL	-	SYS		14
3604-22			PS_IS34_22.000	ALL	-	SYS		14
3604-23			PS_IS34_23.000	ALL	-	SYS		14

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
3605	General	Making the profile available	ALL	0 <0-23>	SYS	Selecting a profile Overwrites the adjusted RGBInkSym profile on the current area (PG CIEBasedPure-GrayTRC in the same sub-code is overwritten to the current area.) 0: PS_IS34_00 1: PS_IS34_01 2: PS_IS34_02 3: PS_IS34_03 4: PS_IS34_04 5: PS_IS34_05 6: PS_IS34_06 7: PS_IS34_07 8: PS_IS34_08 9: PS_IS34_09 10: PS_IS34_10 11: PS_IS34_11 12: PS_IS34_12 13: PS_IS34_13 14: PS_IS34_14 15: PS_IS34_15 16: PS_IS34_16 17: PS_IS34_17 18: PS_IS34_18 19: PS_IS34_19 20: PS_IS34_20 21: PS_IS34_21 22: PS_IS34_22 23: PS_IS34_23	1

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
3606	General	Copying the adjusted pro-file to USB memory	ALL	0 <0-23>	SYS	Copies the adjusted RGBInkSim profile and PG CIEBasedPure-GrayTRC in the same sub-code to USB mem-ory. 0: PS_IS34_00 1: PS_IS34_01 2: PS_IS34_02 3: PS_IS34_03 4: PS_IS34_04 5: PS_IS34_05 6: PS_IS34_06 7: PS_IS34_07 8: PS_IS34_08 9: PS_IS34_09 10: PS_IS34_10 11: PS_IS34_11 12: PS_IS34_12 13: PS_IS34_13 14: PS_IS34_14 15: PS_IS34_15 16: PS_IS34_16 17: PS_IS34_17 18: PS_IS34_18 19: PS_IS34_19 20: PS_IS34_20 21: PS_IS34_21 22: PS_IS34_22 23: PS_IS34_23	1
3607	General	Uploading the adjusted profile from USB memory	ALL	0 <0-23>	SYS	Uploads the adjusted RGBInkSim profile and PG CIEBasedPure-GrayTRC in the same sub-code from the USB memory. 0: PS_IS34_00 1: PS_IS34_01 2: PS_IS34_02 3: PS_IS34_03 4: PS_IS34_04 5: PS_IS34_05 6: PS_IS34_06 7: PS_IS34_07 8: PS_IS34_08 9: PS_IS34_09 10: PS_IS34_10 11: PS_IS34_11 12: PS_IS34_12 13: PS_IS34_13 14: PS_IS34_14 15: PS_IS34_15 16: PS_IS34_16 17: PS_IS34_17 18: PS_IS34_18 19: PS_IS34_19 20: PS_IS34_20 21: PS_IS34_21 22: PS_IS34_22 23: PS_IS34_23	1

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e-STUDIO2500c/3500c/3510c
ERROR CODE AND SELF-DIAGNOSTIC MODE

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
3608-0	General	Displaying the attribute of the profile at the shipment	PS_IS34_00.001	ALL	-	SYS	Displays the adjusted Output Profile and PG CIEBasedPureGray-TRC attribute in the same sub-code.	14
3608-1			PS_IS34_01.001	ALL	-	SYS		14
3608-2			PS_IS34_02.001	ALL	-	SYS		14
3608-3			PS_IS34_03.001	ALL	-	SYS		14
3608-4			PS_IS34_04.001	ALL	-	SYS		14
3608-5			PS_IS34_05.001	ALL	-	SYS		14
3608-6			PS_IS34_06.001	ALL	-	SYS		14
3608-7			PS_IS34_07.001	ALL	-	SYS		14
3608-8			PS_IS34_08.001	ALL	-	SYS		14
3608-9			PS_IS34_09.001	ALL	-	SYS		14
3608-10			PS_IS34_10.001	ALL	-	SYS		14
3608-11			PS_IS34_11.001	ALL	-	SYS		14
3608-12			PS_IS34_12.001	ALL	-	SYS		14
3608-13			PS_IS34_13.001	ALL	-	SYS		14
3608-14			PS_IS34_14.001	ALL	-	SYS		14
3608-15			PS_IS34_15.001	ALL	-	SYS		14
3608-16			PS_IS34_16.001	ALL	-	SYS		14
3608-17			PS_IS34_17.001	ALL	-	SYS		14
3608-18			PS_IS34_18.001	ALL	-	SYS		14
3608-19			PS_IS34_19.001	ALL	-	SYS		14
3608-20			PS_IS34_20.001	ALL	-	SYS		14
3608-21			PS_IS34_21.001	ALL	-	SYS		14
3608-22			PS_IS34_22.001	ALL	-	SYS		14
3608-23			PS_IS34_23.001	ALL	-	SYS		14
3635	General	Proof copy function setting		ALL	1 <0-1>	SYS	Sets the proof copy function. 0: Disabled 1: Enabled	1
3722	Network	PDC/BDC timeout value of Windows Domain Authenti-cation (Unit: Seconds)		ALL	60 <1-180>	NIC	Applied to the device authentication	12

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
3723	Network	User authentication PDC/BDC time-out period (Unit: Seconds)	ALL	30 <1-180>	NIC	Applied to the user authentication	12
3724	Network	Windows Domain Authenti-cation method of Windows Domain/User Authentica-tion	ALL	1 <1-3>	NIC	1: Auto 2: Kerberos 3: NTLMv2	12
3725	Network	IPP max connection	ALL	16 <1-16>	NIC		12
3726	Network	IPP active connection	ALL	10 <1-16>	NIC		12
3727	Network	LPD max connection	ALL	10 <1-16>	NIC		12
3728	Network	LPD active connection	ALL	10 <1-16>	NIC		12
3729	Network	ATalk PS max Connection	ALL	10 <1-16>	NIC		12
3730	Network	ATalk PS active Connec-tion	ALL	10 <1-16>	NIC		12
3731	Network	Raw TCP max Connection	ALL	10 <1-16>	NIC		12
3732	Network	Raw TCP active connec-tion	ALL	10 <1-16>	NIC		12
3736	Network	DNS client TimeOut	ALL	60 <1-180>	NIC	Use when a timeout occurred at DNS client connection	12
3737	Network	DDNS client TimeOut	ALL	60 <1-180>	NIC	Use when a timeout occurred at DDNS cli-ent connection	12
3738	Network	HTTP Client TimeOut (EWB and Satellite)	ALL	60 <1-180>	NIC	Use when a timeout occurred at HTTP cli-ent connection	12
3739	Network	FTP Client TimeOut (SCAN)	ALL	30 <1-180>	NIC	Use when a timeout occurred at DNS client connection	12
3740	Network	SNTP Client TimeOut	ALL	30 <1-180>	NIC	Use when a timeout occurred at SNTP client connection	12
3741	Network	SMTP Client TimeOut	ALL	30 <1-180>	NIC	Use when a timeout occurred at SMTP client connection	12
3742	Network	POP3 Client TimeOut	ALL	30 <1-180>	NIC	Use when a timeout occurred at POP3 client connection	12
3743	Network	LDAP client TimeOut	ALL	30 <1-180>	NIC	Use when a timeout occurred at LDAP cli-ent connection	12
3744	Network	POP3 Authentication method	ALL	1 <1-3>	NIC	POP3 authentication method setting 1: Disable (Default) 2: NTLM 3: Kerberos	12
3745	Network	Secure DDNS Primary Login Name	ALL	- <1-128>	NIC	User Name for Secure DDNS for Primary	12
3746	Network	Secure DDNS Primary Password	ALL	- <1-128>	NIC	Password for Secure DDNS for Primary	12

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				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
3747	Network	Secure DDNS Secondary Login Name	ALL	- <1-128>	NIC	User Name for Secure DDNS for Secondary	12
3748	Network	Secure DDNS Secondary Password	ALL	- <1-128>	NIC	Password for Secure DDNS for Secondary	12
3749	General	DPWS Friendly Name	ALL	-	NIC	MFP name indicated in DPWS search result <Default value> TOSHIBA e-STUDIOxxx [NIC serial number]	12
3750	General	DPWS Printer Name	ALL	-	NIC	Printer name used for installing the printer with DPWS <Default value> TOSHIBA e-STUDIOxxx Printer-[NIC serial number]	12
3751	General	DPWS Scanner Name	ALL	-	NIC	Scanner name used for installing the printer with DPWS <Default value> TOSHIBA e-STUDIOxxx Scanner-[NIC serial number]	12
3752	General	DPWS Printer Information	ALL	-	NIC	Information regarding DPWS printer <Default value> NULL	12
3753	General	DPWS Scanner Informa-tion	ALL	-	NIC	Information regarding DPWS scanner <Default value> NULL	12
3754	Network	Switching DPWS Printer setting	ALL	1 <1-3>	NIC	DPWS printer function is switched. 1: Enabled 2: Disabled 3: Security system enabled	12
3755	Network	Switching DPWS Scanner setting	ALL	1 <1-2>	NIC	DPWS scanner function is switched. 1: Enabled 2: Disabled	12
3757	Network	DPWS Discovery Port Number	ALL	3702 <1-65535>	NIC	Port number used for DPWS Discovery	12
3758	Network	DPWS Metadata Exchange Port Number	ALL	50081 <1-65535>	NIC	Port number used for DPWS Metadata Exchange	12
3759	Network	DPWS Print Port Number	ALL	50082 <1-65535>	NIC	Port number used for DPWS Print	12
3760	Network	DPWS Scan Port Number	ALL	50083 <1-65535>	NIC	Port number used for DPWS Scan	12
3765	Network	DPWS Print Max numbers of connection	ALL	10 <1-20>	NIC	Maximum numbers received from more than one connection request in the DPWS print	12

				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
3766	Network	DPWS Print Max numbers of reception	ALL	10 <1-20>	NIC	Maximum numbers of data received from more than one clients in the DPWS print	12
3767	Network	Switching IPv6 setting	ALL	2 <1-2>	NIC	IPv6 function is switched. 1: Enabled 2: Disabled	12
3768	Network	Switching IP(IPv6) Address Acquisition	ALL	2 <1-2>	NIC	IP(IPv6) Address Acquisition setting is switched. 1: Manual 2: Auto configuration	12
3769	Network	Link Local Address	ALL	- <0-16>	NIC	Link Local Address is displayed. Unique IP address (128 bits) is set using Mac address.	12
3770	Network	IPv6 Address	ALL	0 <0-16>	NIC	DHCPv6 Address in Manual/Auto configura-tion is displayed.	12
3771	Network	Prefix display setting	ALL	0 <0-128>	NIC	The range of Prefix dis-play is set.	12
3772	Network	Default Gateway setting	ALL	0 <0-16>	NIC	Default Gateway of DHCPv6 Address in Manual/Auto configura-tion is set.	12
3773	Network	Displaying previous DHCPv6 Address	ALL	0 <0-16>	NIC	The previous DHCPv6 Address is displayed.	12
3774	Network	DHCPv6 Option setting	ALL	2 <1-2>	NIC	DHCPv6 Option is switched when the Manual is set. 1: Enabled 2: Disabled	12
3775	Network	Stateless Address Auto Configuration	ALL	1 <1-2>	NIC	Stateless Address Auto Configuration is switched. 1: Enabled 2: Disabled	12
3776	Network	Stateless Address setting continuation	ALL	2 <1-2>	NIC	When Prefix sent from router is changed, Stateless Address is continued to be set. 1: Enabled 2: Disabled	12
3777	Network	Stateless Address setting	ALL	2 <1-2>	NIC	IP Address is acquired by both Stateless and State full Address. 1: Enabled 2: Disabled	12
3778	Network	Acquiring DHCPv6 Option	ALL	2 <1-2>	NIC	When Stateless Address is selected, an option is acquired from DHCPv6 server. 1: Enabled 2: Disabled	12

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				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
3779	Network	State full Address setting	ALL	2 <1-2>	NIC	IP Address is acquired from DHCPv6 server. 1: Enabled 2: Disabled	12
3780	Network	State full Option setting	ALL	2 <1-2>	NIC	An option is acquired from DHCPv6 server. 1: Enabled 2: Disabled	12
3781	Network	Primary DNS Server Address Registration	ALL	0 <0-16>	NIC	Registration of Primary DNS Server Address	12
3782	Network	Secondary DNS Server Address Registration	ALL	0 <0-16>	NIC	Registration of Second-ary DNS Server Address	12
3783	Network	Selecting SAMBA Protocol	ALL	2 <2-3>	NIC	Either IPv6 or IPv4 is selected to use SAMBA. 2: IPv6 3: IPv4	12
3784	Network	DSN Server resolve type	ALL	4 <1-4>	NIC	Either "ip6.arpa" or "ip6.int" is selected for the name resolution in DNS. 1: "ip6.arpa" only 2: "ip6.int" only 3: In case of error with "ip6.int", "ip6.arpa" is requested. 4: In case of error with "ip6.arpa", "ip6.int" is requested.	12
3785	Network	DPWS IPv4 or IPv4 with IPv6	ALL	2 <1-2>	NIC	Either IPv4 only or IPv6 together with it is selected to operate Print, Scan and Secu-rity related with DPWS. 1: Multi (IPv4 and IPv6) 2: IPv4	12
3793	Network	LLTD function setting	ALL	1 <1-2>	NIC	Sets the LLTD function. 1: Enabled 2: Disabled	12
3794	Network	LLMNR function setting	ALL	2 <1-2>	NIC	Sets the LLMNR func-tion. 1: Enabled 2: Disabled	12
3796	Network	DPWS EventRate	ALL	5 <1-600>	NIC	Sets the value of DPWS event rate from 1 to 600.	12

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
3797	General	Response to PJL job com-mands		ALL	1 <0-1>	SYS	During bidirectional communication, the next job will not be accepted until the print-ing of the sent data (all pages) is finished. If the next job must be accepted during bidi-rectional communica-tion, set the value at "0: (Solicited)". 0: (Solicited) - Immedi-ately responds to the host side after the completion of RIP. 1: (Unsolicited) - Responds to the host side after the printing is finished.	1
3800-0	Counter	Extra long size paper count switch-ing setting	Feeding direction 445-800 mm	ALL	2 <1-30>	SYS	Sets the number of mul-tiples. A sheet is counted as N sheets when extra long size paper is used for print-ing.	4
3800-1			Feeding direction 801-1200 mm	ALL	3 <1-30>	SYS		4
3802	General	USB media direct printing Paper size		ALL	EUR: 6 UC: 2 JPN: 6 <0-13>	SYS	0: Ledger 1: Legal 2: Letter 3: Computer 4: Statement 5: A3 6: A4 7: A5 8: A6 9: B4 10: B5 11: Folio 12: Legal13" 13: Letter Square	1
3803	General	Enable direct print function		ALL	1 <0-1>	SYS	1: Invalid 2: Valid	1
3804	Network	List analyzing logic of San to File (FTP)		ALL	0 <0-1>	SYS	0: NLST 1: LIST	1
3805	Scanner	Department Management setting by Remote Scan		ALL	3 <0-3>	SYS	Department Manage-ment is set when Remote Scan is per-formed. 0: w/o GUI OFF, w/ GUI OFF 1: w/o GUI ON, w/ GUI OFF 2: w/o GUI OFF, w/ GUI ON 3: w/o GUI ON, w/ GUI ON	1

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ERROR CODE AND SELF-DIAGNOSTIC MODE

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				Setting mode (08)			
Code	Classifi- cation	Items	Func- tion	Default <Accept- able value>	RAM	Contents	Pro- cedur e
3810	Network	Direct SMTP communica- tion setting	ALL	0 <0-1>	SYS	When an Internet Fax is sent, Direct SMTP com- munication is set. 0: Disabled 1: Enabled When "0: Disabled" is set, an Internet Fax is sent using an SMTP server. When "1: Enabled" is set, direct SMTP com- munication is enabled and an Internet Fax is sent to MFPs on the intranet without using an SMTP server. Since no SMTP server is used, the SSL encryp- tion and SMTP-AUTH function cannot be used for internet Fax trans- mission. If "1: Enabled" is set in 08-3810, set "1: Enabled" in 08-3812 as well.	1
3811	Network	Image encrypting at the Direct SMTP communica- tion	ALL	0 <0-1>	SYS	When Direct SMTP communication is per- formed, an attached image is encrypted. 0: Disabled 1: Enabled	1
3812	Scanner	Dummy full mode at the Internet Fax transmission	ALL	0 <0-1>	SYS	When an Internet Fax is sent, the resolution ratio and the paper size of an attached image are set to the full mode. 0: Disabled 1: Enabled If "1: Enabled" is set in 08-3810, set "1: Enabled" in 08-3812 as well.	1
3815	Scanner	XPS file thumbnail addition	ALL	1 <0-1>	SYS	Thumbnail is added to the XPS file produced by the Scan function. 0: Not added 1: Only the top page added	1
3816	Scanner	XPS file paper size setting	ALL	1 <0-1>	SYS	The paper size of the XPS file produced by the Scan function is set. 0: Scanned image size 1: Standard size	1

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				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
3817	Scanner	PDF file version setting	ALL	4 <0, 1, 4>	SYS	The version of PDF file produced by the Scan function is set. 0: PDF V1.3 1: PDF V1.4 4: PDF V1.7	1
3818	Scanner	DPWS Scan operation mode	ALL	1 <0-1>	SYS	The operation mode in the DPWS Scan func-tion is switched. 0: Batch type 1: Serial type	1
3831	Network	Mode switching for Role Based Access Control function	ALL	0 <0-1>	SYS	0: Require eBMUser-Role attribute 1: User available LDAP attribute	1
3833	General	Home directory function	ALL	0 <0-1>	SYS	Function to store a file in the user's home directory 0: Disabled 1: Enabled	2
3834	General	Backup file encryption	ALL	0 <0-1>	SYS	When the backup file is created from TopAc-cess, it is encrypted. 0: Enabled (Encryp-tion) 1: Disabled (No encryption)	1
3835	Paper feeding	SFB switching setting (new/old)	ALL	1 <0-1>	SYS	0: Old type SFB (SRA3 not sup-ported) 1: New type SFB (SRA3 supported)	1
3837	General	Display switching for the machine name/computer name shown in the notifi-cation	ALL	0 <0-1>	SYS	The display method of the machine name/ computer name shown in the eventrelated noti-fication is switched. 0: URL 1: NetBIOS name/ FQDN	1
3845	Network	SNMP Trap Enterprize OID mode setting	ALL	0 <0-1>	SYS	Sets the compatibility of Enterprize OID of Trap with the old models. 0: Standard 1: Compatibility with the old models.	1
3847	FAX	FAX mistransmission pre-vention	FAX	0 <0-1>	SYS	FAX mistransmission prevention function is switched. 0: OFF (Disabled) 1: ON (Enabled)	1

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				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
3848	FAX	Restriction on Address Book destination setting	FAX	0 <0-1>	SYS	Availability of destina-tion selection from the Address Book is switched as one of FAX mistransmission pre-vention functions when setting FAX destina-tions. 0: OFF (Disabled) 1: ON (Enabled)	1
3849	FAX	Restriction on destination direct entry	FAX	0 <0-1>	SYS	Availability of direct entry is switched as one of FAX mistransmis-sion prevention func-tions when setting FAX destinations. 0: OFF (Disabled) 1: ON (Enabled)	1
3851	General	Template display	ALL	0 <0-1>	SYS	0: ID number order 1: Alphabetical order	1
3852	General	Summer timeAutomatic change function	ALL	0 <0-1>	SYS	0: Disabled 1: Enabled	1
3853	General	Summer time Offset value	ALL	2 <0-7>	SYS	0: +2:00 1: +1:30 2: +1:00 3: +0:30 4: -0:30 5: -1:00 6: -1:30 7: -2:00	1
3854	General	Summer time Setting value (Starting month)	ALL	1 <1-12>	SYS	1: Jan 2: Feb 3: Mar 4: Apr 5: May 6: Jun 7: Jul 8: Aug 9: Sep 10: Oct 11: Nov 12: Dec	1
3855	General	Summer time Setting value (Starting week)	ALL	1 <1-5>	SYS	1: 1st 2: 2nd 3: 3rd 4: 4th 5: Last	1
3856	General	Summer time Setting value (Starting day)	ALL	0 <0-6>	SYS	0: Sun 1: Mon 2: Tue 3: Wed 4: Thu 5: Fri 6: Sat	1
3857	General	Summer time Setting value (Starting hour)	ALL	0 <0-23>	SYS	0 to 23	1

Setting mode (08)								
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents		Pro-cedure
3858	General	Summer time Setting value (Starting minute)	ALL	0 <0-59>	SYS	0 to 59		1
3859	General	Summer time Setting value (Ending month)	ALL	1 <1-12>	SYS	1: Jan 2: Feb 3: Mar 4: Apr 5: May 6: Jun 7: Jul 8: Aug 9: Sep 10: Oct 11: Nov 12: Dec		1
3860	General	Summer time Setting value (Ending week)	ALL	1 <1-5>	SYS	1: 1st 2: 2nd 3: 3rd 4: 4th 5: Last		1
3861	General	Summer time Setting value (Ending day)	ALL	0 <0-6>	SYS	0: Sun 1: Mon 2: Tue 3: Wed 4: Thu 5: Fri 6: Sat		1
3862	General	Summer time Setting value (Starting hour)	ALL	0 <0-23>	SYS	0 to 23		1
3863	General	Summer time Setting value (Starting minute)	ALL	0 <0-59>	SYS	0 to 59		1
3864	Network	Disclosure of telnet func-tion	ALL	0 <0-1>	SYS	0: Not disclosed 1: Disclosed When this value is set at "1", the value of code 08-9834 must be "0". When this value is set at "0", the value of code 08-3865 must be "2".		1
3865	Network	Availability of telnet server	ALL	2 <1-2>	NIC	1: Enable 2: Disable		12
3866	Network	Telnet server TCP port number	ALL	23 <1-65535>	NIC			12
3867	Network	Telnet server administrator User name	ALL	Admin -	NIC	Maximum 15 letters		12
3868	Network	Telnet server administrator Administrator password	ALL	System -	NIC	Maximum 15 letters		12

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
4016-0	Paper feeding	ACC function when a drawer is specified	Copying	ALL	0 <0-1>	SYS	Sets whether the ACC function is enabled only for automatic drawer selection or enabled when a particular drawer is specified as well. 0: Enabled only for automatic drawer selection 1: Enabled when a drawer is specified	4
4016-1			Printing / BOX print-ing	ALL	0 <0-1>	SYS		4
4545	Fuser	Fusing error temperature (Temperature of the pres-sure roller rear thermistor)		ALL	0 <0-255>	M		1
4546	Transfer	Position adjustment control mode setting		ALL	5 <0-5>	M	0: Not performed auto-matically 1: (a) 2: (b) 3: (a) + (b) 4: (b) + (c) 5: (a) + (b) + (c) [Description] (a) Performs the adjust-ment automatically at warming-up. (b) Performs the adjust-ment automatically when printing after a specified period of time has been com-pleted. (c) Performs the adjust-ment automatically at a ready status after a specified period of time, or at a forcible interrup-tion of large amount of printing.	1
4549	Fuser	Judgment of new or used fuser unit		ALL	0 <0-1>	M	0: Valid 1: Invalid	1

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
4550-0	Transfer	Start-up time setting value for image position adjustment	1st start-up	ALL	5 <5-255>	M	1st image position adjustment start-up time [unit: minute] auto-matically set when the image position adjust-ment has not been per-formed automatically at power ON, recovery from the ready status or recovery from the sleep mode.	4
4550-1			2nd or subse-quent start-ups	ALL	30 <5-255>	M	Start-up time [unit: minute] for 2nd or sub-sequent image position adjustment start-ups automatically set when the image position adjustment has been automatically per-formed after a speci-fied period of time.	4
4551-0	Develop-ment	Used toner mixing pad-dle setting (during print-ing)	Mixing start	ALL	1 <0-6>	M	0: 600 counts 1: 1200 counts 2: 2400 counts 3: 3000 counts 4: 3600 counts 5: 6000 counts 6: 300 counts	4
4551-1			Rotation period	ALL	1 <0-6>	M	0: Not agitated 1: Agitated for 1 sec. 2: Agitated for 2 sec. 3: Agitated for 3 sec. 4: Agitated for 4 sec. 5: Agitated for 5 sec 6: Agitated for 6 sec	4
4553-0	Paper feeding	Pausing of pushing recy-cled paper	1st drawer	ALL	1 <0-1>	M	0: Disabled 1: Enabled	4
4553-1			2nd drawer	ALL	1 <0-1>	M		4
4553-2			PFP upper drawer	ALL	1 <0-1>	M		4
4553-3			PFP lower drawer	ALL	1 <0-1>	M		4
4553-4			Bypass feed	ALL	1 <0-1>	M		4
4554-0	Develop-ment	Used toner mixing pad-dles setting (during warm-ing-up)	At normal status	ALL	1 <0-5>	M	0: Not mixing 1: Mix for 1 second 2: Mix for 2 seconds 3: Mix for 3 seconds 4: Mix for 5 seconds 5: Mix for 8 seconds	4
4554-1			During warming-up after used toner full status detection	ALL	2 <0-5>	M	0: Not mixing 1: Mix for 5 second 2: Mix for 8 seconds 3: Mix for 10 seconds 4: Mix for 15 seconds 5: Mix for 20 seconds	4

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
4561	Develop-ment	Detection of the lockup of used toner mixing paddles	ALL	1 <0-1>	M	0: Valid 1: Invalid	1
4562	Transfer	Time of pausing continu-ous printing for image posi-tioning	ALL	5 <1-60>	M	Sets the time from reaching the start-up for image positioning to pausing the printing (Unit: Minute)	1
4563	Develop-ment	Paper exit speed control switching	ALL	0 <0-1>	M	0: Disabled 1: Enabled	1
4564	Develop-ment	Duplex reversing position correction control	ALL	0 <0-1>	M	0: No correction 1: Correction	1
4565	General	S-ACS level coefficient	ALL	0 <0-99>	M		2
4567	Paper feeding	Paper size(SRA3) feeding/widthwise direction	ALL	450/320 <148-460/105-320>	M		10
4568	Paper feeding	Paper size(460mm X 320mm) feeding/widthwise direction	ALL	460/320 <148-460/105-320>	M		10
4569	Fuser	Fuser reverse rotation set-ting	ALL	0 <0-1>	M	0: Enabled 1: Disabled	1
4621	Paper feeding	Bypass paper size detec-tion setting	PPC/PRT	0 <0-1>	M	Detects whether the size of paper fed by bypass feeding is the same as the paper size set on the control panel. If the sizes are not the same, the warning mes-sage is displayed (Paper jam does not occur). When the bypass paper size detection is broken, the equipment can be used without the size detec-tion by disabling this setting. After repair, enable this setting. 0: Enabled 1: Disabled	1
4622	Paper feeding	Bypass paper size detec-tion counter	PPC/PRT	0 <0-65535>	M	This is a counter for bypass paper size detection setting. If the printing is executed with the paper size that dif-fers from the paper size set on the control panel, the counter is counted up.	1
6018	Counter	Count setting of special paper (PM)	ALL	1 <0-1>	M	0: Counted as 1 1: Counted as 2	1

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Setting mode (08)

Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
6027-0	Counter	Number of output pages at Twin Color / Monocolor Mode in Printer Func-tion	A3	PPC (color)	0 <8 digits>	SYS		4
6027-1			A4					4
6027-2			A5					4
6027-3			A6					4
6027-4			B4					4
6027-5			B5					4
6027-6			FOLIO					4
6027-7			LD					4
6027-8			LG					4
6027-9			LT					4
6027-10			ST					4
6027-11			COMP					4
6027-12			13"LG					4
6027-13			8.5"SQ					4
6027-14			16k					4
6027-15			8k					4
6027-16			Extra long size paper					4
6027-17			Other					4
6078-0	Counter	Display of number of output pages at Twin Color / Monocolor Mode in Printer Func-tion	Large	PRT (color)	0 <8 digits>	SYS		14
6078-1			Small					14
6078-2			Total					14
6209-0	Develop-ment	Counter set-ting of used toner mixing paddles rota-tion	During printing	PRT (color)	0 <8 digits>	M	1 count per 1 mixing operation	4
6209-1			During warming-up					4
6209-2			During warming-up after used toner full status detection					4
6243	Counter	Counter for special paper		ALL	0 <8 digits>	M	Counts up when the registration sensor is ON in the special paper mode.	1

				Setting mode (08)				
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
6452-0	Image process-ing	Threshold for detecting that Y toner car-tridge is nearly empty	Threshold to display the near-empty message	ALL	136800 <8 digits>	M		4
6452-1			Remain-ing level threshold: 75	ALL	41800 <8 digits>	M		4
6452-2			Remain-ing level threshold: 50	ALL	83600 <8 digits>	M		4
6452-3			Remain-ing level threshold: 25	ALL	125400 <8 digits>	M		4
6453-0	Image process-ing	Threshold for detecting that M toner car-tridge is nearly empty	Threshold to display the near-empty message	ALL	136800 <8 digits>	M		4
6453-1			Remain-ing level threshold: 75	ALL	41800 <8 digits>	M		4
6453-2			Remain-ing level threshold: 50	ALL	83600 <8 digits>	M		4
6453-3			Remain-ing level threshold: 25	ALL	125400 <8 digits>	M		4
6454-0	Image process-ing	Threshold for detecting that C toner car-tridge is nearly empty	Threshold to display the near-empty message	ALL	136800 <8 digits>	M		4
6454-1			Remain-ing level threshold: 75	ALL	41800 <8 digits>	M		4
6454-2			Remain-ing level threshold: 50	ALL	83600 <8 digits>	M		4
6454-3			Remain-ing level threshold: 25	ALL	125400 <8 digits>	M		4

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
6806-0	Counter	Number of output pages in printing / BOX printing (Twin color / Monocolor)	1-UP / Duplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed only in the twin color mode.	4
6806-1			2-UP / Duplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the twin color mode using [2IN1] or [MAGA-ZINE SORT].	4
6806-2			2-UP / Simplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the twin color mode using [2IN1] or [MAGAZINE SORT].	4
6806-3			4-UP / Duplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the twin color mode using [4IN1].	4
6806-4			4-UP / Simplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the twin color mode using [4IN1].	4
6806-5			N-UP / Duplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the twin color mode using [N IN1].	4
6806-6			N-UP / Simplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the twin color mode using [N IN1].	4
6806-7			1-UP / Simplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed only in the twin color mode.	4

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
6810-0	Counter	Number of output pages in black mode / Large size	1-UP / Duplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of output pages printed only in the black mode.	4
6810-1			2-UP / Duplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of output pages printed in the black mode using [2IN1] or [MAGAZINE SORT].	4
6810-2			2-UP / Simplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of sheets printed in the black mode using [2IN1] or [MAGAZINE SORT].	4
6810-3			4-UP / Duplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of output pages printed in the black mode using [4IN1].	4
6810-4			4-UP / Simplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of sheets printed in the black mode using [4IN1].	4
6810-7			1-UP / Simplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of output pages printed only in the black mode.	4
6811-0	Counter	Number of output pages in full color mode / Large	1-UP / Duplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages printed only in the full color mode.	4
6811-1			2-UP / Duplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the full color mode using [2IN1] or [MAGA-ZINE SORT].	4
6811-2			2-UP / Simplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the full color mode using [2IN1] or [MAGAZINE SORT].	4
6811-3			4-UP / Duplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the full color mode using [4IN1].	4
6811-4			4-UP / Simplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the full color mode using [4IN1].	4
6811-7			1-UP / Simplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages printed only in the full color mode.	4

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
6812-0	Counter	Number of output pages at Twin Color / Monocolor Mode (Large)	1-UP / Duplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages printed only in the twin color mode.	4
6812-1			2-UP / Duplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the twin color mode using [2IN1] or [MAGA-ZINE SORT].	4
6812-2			2-UP / Simplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the twin color mode using [2IN1] or [MAGAZINE SORT].	4
6812-3			4-UP / Duplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the twin color mode using [4IN1].	4
6812-4			4-UP / Simplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the twin color mode using [4IN1].	4
6812-7			1-UP / Simplex printing	PPC (color)	0 <8 digits>	SYS	Counts the number of output pages printed only in the twin color mode.	4

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ERROR CODE AND SELF-DIAGNOSTIC MODE

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
6813-0	Counter	Number of output pages of the printer or BOX / Large	1-UP / Duplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of output pages printed in the black mode.	4
6813-1			2-UP / Duplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of output pages printed in the black mode using [2IN1] or [MAGAZINE SORT].	4
6813-2			2-UP / Simplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of sheets printed in the black mode using [2IN1] or [MAGAZINE SORT].	4
6813-3			4-UP / Duplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of output pages printed in the black mode using [4IN1].	4
6813-4			4-UP / Simplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of sheets printed in the black mode using [4IN1].	4
6813-5			N-UP / Duplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of output pages printed in the black mode using [N IN1].	4
6813-6			N-UP / Simplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of sheets printed in the black mode using [N IN1].	4
6813-7			1-UP / Simplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of output pages printed only in the black mode.	4

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
6814-0	Counter	Number of output pages of the printer or BOX / Large (Full color)	1-UP / Duplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed only in the full color mode.	4
6814-1			2-UP / Duplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the full color mode using [2IN1] or [MAGA-ZINE SORT].	4
6814-2			2-UP / Simplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the full color mode using [2IN1] or [MAGAZINE SORT].	4
6814-3			4-UP / Duplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the full color mode using [4IN1].	4
6814-4			4-UP / Simplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the full color mode using [4IN1].	4
6814-5			N-UP / Duplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the full color mode using [N IN1].	4
6814-6			N-UP / Simplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the full color mode using [N IN1].	4
6814-7			1-UP / Simplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed only in the full color mode.	4
6815-0	Counter	Number of output pages of the FAX printing / Large	1-UP / Simplex printing	PRT (black)	0 <8 digits>	SYS	Counts the number of output pages in the default settings.	4
6815-7			1-UP / Duplex printing	PRT (black)	0 <8 digits>	SYS		4

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
6816-0	Counter	Number of output pages in printing / BOX printing (Large) (Twin color / Mono-color)	1-UP / Duplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed only in the twin color mode.	4
6816-1			2-UP / Duplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the twin color mode using [2IN1] or [MAGA-ZINE SORT].	4
6816-2			2-UP / Simplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the twin color mode using [2IN1] or [MAGAZINE SORT].	4
6816-3			4-UP / Duplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the twin color mode using [4IN1].	4
6816-4			4-UP / Simplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the twin color mode using [4IN1].	4
6816-5			N-UP / Duplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed in the twin color mode using [N IN1].	4
6816-6			N-UP / Simplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of sheets printed in the twin color mode using [N IN1].	4
6816-7			1-UP / Simplex printing	PRT (color)	0 <8 digits>	SYS	Counts the number of output pages printed only in the twin color mode.	4
6817	Counter	Calibration counter		ALL	0 <8 digits>	SYS		1
6900	Counter	Total counter (in Thick paper decelerating mode)		ALL	0 <8 digits>	M		1
6901	Counter	Total counter (in Plain paper Black Mode : e-STUDIO3510c only)		ALL	0 <8 digits>	M		1

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
6905-0	Counter	Decelerating mode counter: Photoconduc-tive drum (K)	Present number of output pages	ALL	0 <8 digits>	M		4
6905-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6905-2			Present drive counts	ALL	0 <8 digits>	M		4
6905-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4
6906-0	Counter	Decelerating mode counter: Photoconduc-tive drum (Y)	Present number of output pages	ALL	0 <8 digits>	M		4
6906-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6906-2			Present drive counts	ALL	0 <8 digits>	M		4
6906-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4
6907-0	Counter	Decelerating mode counter: Photoconduc-tive drum (M)	Present number of output pages	ALL	0 <8 digits>	M		4
6907-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6907-2			Present drive counts	ALL	0 <8 digits>	M		4
6907-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4

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ERROR CODE AND SELF-DIAGNOSTIC MODE

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				Setting mode (08)				
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
6908-0	Counter	Decelerating mode counter: Photoconduc-tive drum (C)	Present number of output pages	ALL	0 <8 digits>	M		4
6908-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6908-2			Present drive counts	ALL	0 <8 digits>	M		4
6908-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4
6925-0	Counter	Decelerating mode counter: Developer material (K)	Present number of output pages	ALL	0 <8 digits>	M		4
6925-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6925-2			Present drive counts	ALL	0 <8 digits>	M		4
6925-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4
6926-0	Counter	Decelerating mode counter: Developer material (Y)	Present number of output pages	ALL	0 <8 digits>	M		4
6926-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6926-2			Present drive counts	ALL	0 <8 digits>	M		4
6926-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
6927-0	Counter	Decelerating mode counter: Developer material (M)	Present number of output pages	ALL	0 <8 digits>	M		4
6927-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6927-2			Present drive counts	ALL	0 <8 digits>	M		4
6927-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4
6928-0	Counter	Decelerating mode counter: Developer material (C)	Present number of output pages	ALL	0 <8 digits>	M		4
6928-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6928-2			Present drive counts	ALL	0 <8 digits>	M		4
6928-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4
6929-0	Counter	Decelerating mode counter: Transfer unit (K) (Needle electrode / roller / 1st transfer power supply roller)	Present number of output pages	ALL	0 <8 digits>	M		4
6929-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6929-2			Present drive counts	ALL	0 <8 digits>	M		4
6929-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
6930-0	Counter	Decelerating mode counter: Transfer unit (Y) (Needle electrode / roller / 1st transfer power supply roller)	Present number of output pages	ALL	0 <8 digits>	M		4
6930-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6930-2			Present drive counts	ALL	0 <8 digits>	M		4
6930-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4
6931-0	Counter	Decelerating mode counter: Transfer unit (M) (Needle electrode / roller / 1st transfer power supply roller)	Present number of output pages	ALL	0 <8 digits>	M		4
6931-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6931-2			Present drive counts	ALL	0 <8 digits>	M		4
6931-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4
6932-0	Counter	Decelerating mode counter: Transfer unit (C) (Needle electrode / roller / 1st transfer power supply roller)	Present number of output pages	ALL	0 <8 digits>	M		4
6932-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6932-2			Present drive counts	ALL	0 <8 digits>	M		4
6932-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
6933-0	Counter	Decelerating mode counter: Transfer belt	Present number of output pages	ALL	0 <8 digits>	M		4
6933-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6933-2			Present drive counts	ALL	0 <8 digits>	M		4
6933-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4
6935-0	Counter	Decelerating mode counter: 2nd transfer roller	Present number of output pages	ALL	0 <8 digits>	M		4
6935-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6935-2			Present drive counts	ALL	0 <8 digits>	M		4
6935-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4
6950-0	Counter	Accelerating mode counter: Photoconduc-tive drum (K)	Present number of output pages	ALL	0 <8 digits>	M		4
6950-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6950-2			Present drive counts	ALL	0 <8 digits>	M		4
6950-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4

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ERROR CODE AND SELF-DIAGNOSTIC MODE

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\multicolumn{9}{c}{**Setting mode (08)**}
Code	**Classifi-cation**	**Items**		**Func-tion**	**Default <Accept-able value>**	**RAM**	**Contents**	**Pro-cedure**
6955-0	Counter	Accelerating mode counter: Developer material (K)	Present number of output pages	ALL	0 <8 digits>	M		4
6955-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6955-2			Present drive counts	ALL	0 <8 digits>	M		4
6955-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4
6956-0	Counter	Accelerating mode counter: Transfer unit (K) (Wire / roller / 1st transfer power supply roller)	Present number of output pages	ALL	0 <8 digits>	M		4
6956-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6956-2			Present drive counts	ALL	0 <8 digits>	M		4
6956-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4
6960-0	Counter	Accelerating mode counter: Transfer belt	Present number of output pages	ALL	0 <8 digits>	M		4
6960-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6960-2			Present drive counts	ALL	0 <8 digits>	M		4
6960-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
6962-0	Counter	Accelerating mode counter: 2nd transfer roller	Present number of output pages	ALL	0 <8 digits>	M		4
6962-1			Number of output pages at the last replace-ment	ALL	0 <8 digits>	M		4
6962-2			Present drive counts	ALL	0 <8 digits>	M		4
6962-3			Drive counts at the last replace-ment	ALL	0 <8 digits>	M		4
7606	Image	ACS original mode default setting ACS		PPC (color)	0 <0-2>	SYS	0: TEXT/PHOTO 1: TEXT 2: Printed image	1
7612	Image	Image repeat gap		ALL	5 <0-10>	SYS	Unit: mm	1
7615	Image	ACS black mode image quality switch-ing	Text/Photo	PPC (color)	0 <0-2>	SYS	Selects the method of image processing when the original is judged as black in the ACS Mode. 0: Processing for Image Smoothing 1: Processing when judging as black in the ACS Mode	1
7616			Text	PPC (color)	0 <0-2>	SYS		1
7617			Photo	PPC (color)	0 <0-2>	SYS		1
8511	General	Wide A4 Mode (for PCL)		PRT	0 <0-1>	SYS	0: Disable 1: Enable	1
8535	Network	Storing network logs in the HDD		ALL	2 <1-2>	SYS	Stores the network logs of SRAM in the HDD when network-related trouble occurred. 1: Enabled 2: Disabled	1
8536	Network	Data size when storing net-work logs in the HDD		ALL	30 <1-30>	SYS	Specifies the size of network logs to bestored in the HDD. 1-30: 1-30 MB	1
8548	Paper feeding	Operation of cassette size change when printing is interrupted by size mis-match		PRT	0 <0-1>	SYS	0: Operation of cassette size change is disabled. 1: Operation of cassette size change is enabled.	1
8549	Counter	Hardware key control when external counter is installed		ALL	0 <0-1>	SYS	0: No control 1: Mode switch key is disabled.	1

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Setting mode (08)							
Code	Classification	Items	Function	Default \<Acceptable value\>	RAM	Contents	Procedure
8823	Network	Port number 139 for user authentication	ALL	1 \<1-2\>	NIC	If the connection to port number 139 is blocked, attempt to connect to port number 139 is skipped by setting this code to "2: disabled." This code is enabled when "Windows Domain Authentication" is selected in [User Management Setting] - [Authentication] - [User Management Setting]. 1: Enabled 2: Disabled	12
9046	General	Accelerator ASIC initialization abnormality	ALL	0 \<0-2\>	-	0: IC26 on SYS board format error 1: IC1 on JSP board format error 2: Formatted	2
9047	General	Process control flag setting of easy setup (manual unpacking adjustment)	ALL	0 \<0-2\>	SYS	0: No change of manual unpacking adjustment 1: OFF status of manual unpacking adjustment flag 2: Returns to the initial unpacking mode	1
9051	User interface	Panel calibration setting value display	ALL	0 \<0-1\>	SYS	Switches whether the screen for displaying panel calibration setting values is displayed or not. 0: Disabled (screen not displayed) 1: Enabled (screen displayed)	1

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Setting mode (08)							
Code	Classifi- cation	Items	Func- tion	Default <Accept- able value>	RAM	Contents	Pro- cedur e
9059	Mainte- nance	Operation switching at cali- bration	ALL	0 <0-2>	SYS	Switches the engine operation and UI dis- play before printing the gamma correction pat- tern at the calibration (image processing gamma automatic adjustment). 0: Not performing pro- cess image quality control before print- ing the gamma cor- rection pattern. 1: Performing process image quality con- trol (No paper selecting buttons displayed) 2: Performing process image quality con- trol (The paper select- ing buttons are dis- played on a screen for printing the printer gamma cor- rection pattern.)	1
9117	General	Raw printing job Do not Print Blank Pages	ALL	0 <0-1>	SYS	0: OFF 1: ON	1
9185	User interface	Media types usable for APS	ALL	3 <1-3>	SYS	1: Plain paper 2: Recycled paper 3: Plain & recycled paper	1
9359	User interface	Printing resume after jam releasing	ALL	0 <0-1>	SYS	0: Auto resume 1: Resume by users	1
9379	User interface	AES data encryption func- tion setting (Except for CND)	ALL	0 <0-2>	SYS	0: Encryption invalid 1: Encryption valid (Security priority) Encrypts all of the user's data. 2: Encryption valid (Performance prior- ity) Encrypts the user's data except the files temporarily created and deleted in the image processing such as copying or printing.	1
9381	General	Custom size (Photo size) Feeding / Widthwise	ALL	148 <10-434> 100 <10-300>	SYS	Feeding Widthwise	10
9382	Image	Erasing leading edge shade on A3-wide (full- page copying)	ALL	0 <0-1>	SYS	0: Whole page copied (No void) 1: Leading edge masked	1

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
9384	Network	Default E-mail file format (Color/ACS mode)	ALL	1 <0-8>	SYS	0: TIFF (Multi) 1: PDF (Multi) 2: JPG 3: TIFF (Single) 4: PDF (Single) 5: SLIM PDF (Multi) 6: SLIM PDF (Single) 7: XPS (Multi) 8: XPS (Single)	1
9394	Network	Single-page option for stor-ing File and sending Email	ALL	0 <0-1>	SYS	0: Sets 1 page as 1 file 1: Makes a file based on the original	1
9629	Network	Attribute name for LDAP Role Based Access	ALL	eBMUserR <->	SYS		11
9698	User interface	Color mode notification setting at ACS	ALL	0 <0-1>	SYS	0: Color 1: Black	1
9739	Mainte-nance	Remote service Toner-end notification	ALL	0 <0-2>	SYS	0: RDMS toner empty notified immediately 1: RDMS toner empty notified once a day 2: RDMS toner empty not notified	1
9789	General	Default repeat count	ALL	2 <2-8>	SYS	Unit: times	1
9798	Network	Temporary communication password setting	ALL	-	SYS	Sets a temporary com-munication password. The password can be entered in alphanu-meric characters (A to Z, a to z, 0 to 9) up to 10 digits. The entered password is displayed with "*" on the touch panel and the self-diag-nostic lists. (Maximum 10 digits, minimum 5 digits)	11
9811	Finisher	Upper limit number of sheets stapled in one go	ALL	0 <0-2>	SYS	0: 50/30/15 sheets $(64-80g/m^2)$ 1: 30/15/10 sheets $(81-105g/m^2$: MJ-1011) 2: 24/15/10 sheets $(81-105g/m^2$: MJ-1030) (Short/Long/Saddle)	1

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
9814	General	Number of output pages for pausing continuous printing for 2nd transfer resistance detection con-trol	At normal tempera-ture	ALL	4 <0-100>	SYS	When the setting value of this code is "1" or higher, the 2nd transfer resistance detection is performed every time the number of pages of (setting value X 100) have output.	1
9815	General		At low tempera-ture	ALL	10 <0-100>	SYS	When the setting value of this code is "1" or higher, the 2nd transfer resistance detection is performed every time the number of pages of (setting value X 10) have output.	1
9819	General	STAGE SSL		ALL	1 <0-1>	SYS	When remote scanning is performed, the SSL communication is car-ried out. 0: Disabled 1: Enabled (SSL com-munication)	1
9822	General	STAGE SSL port number		ALL	20443 <0-65535>	SYS	When remote scanning is performed using SSL communication, the SSL port number is set.	1
9825	Image	Image quality of the black part in the ACS mode		ALL	0 <0-1>	SYS	0: Black 1: Gray scale	1
9826	General	Disabling Media File Save		ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
9828	General	Remote scanning mode		ALL	1 <0-1>	SYS	0: Batch 1: Sequential	1
9829	General	Department management limitation setting		ALL	0 <0-3>	SYS	Decide the default limi-tation setting when the new department code is created. 0: No limit 1: Limited only in the black mode 2: Limited in the color mode 3: Limited in the black/ color mode	1
9847	Finisher	Hole punching setting		ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
9848	General	Registration disclosure level setting		ALL	1 <0-2>	SYS	Displays no icons 1: ADMIN 2: USER	1
9880	General	Total counter data trans-mission date 2		ALL	0 <0-31>	SYS	0 to 31	1
9881	General	Day of the total counter data transmission		ALL	0 <0-127>	SYS	1 byte 00000000(0)-01111111(127) From the 2nd bit - Sun-day, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday	1

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				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
9882	General	Display mode of the used capacity on the e-Filing administrator page	ALL	1 <0-1>	SYS	0: All files search mode 1: Performance priority mode	1
9886	General	Decimal point indication for Enhanced Scan Template	ALL	EUR: 0 UC: 1 JPN: 1 <0-1>	SYS	0: Comma 1: Full stop	1
9888	General	Permission setting for changing the scan parame-ter when recalling an extension	ALL	0 <0-1>	SYS	0: Prohibited 1: Accepted	1
9889	General	Status display of the USB data cloning permission	ALL	1 <0-1>	SYS	0: Accepted 1: Prohibited	2
9891	User interface	Warning message on the touch panel when PM (Periodic Maintenance) time has come	ALL	1 <0-1>	SYS	0: No warning notifica-tion 1: Warning notification	1
9892	General	Monocolor counting method	ALL	0 <0-2>	SYS	Sets the counting method of fee charging or duplexing count in the Monocolor mode. Department and user counters are not appli-cable. 0: Mono/Twin Color 1: Black 2: Full Color	1
9893	General	Limitation Monocolor counting method	ALL	EUR: 0 UC: 0 JPN: 1 <0-1>	SYS	0: Count as color 1: Count as black	1
9894	General	Calibration chart charging method	ALL	0 <0-1>	SYS	Decide whether the cal-ibration chart printing is charged or not 0: No charge 1: Charge	1
9897	Image	Default value setting of background peak adjust-ment (Black)	ALL	5 <1-9>	SYS	1: -4 2: -3 3: -2 4: -1 5: 0 6: +1 7: +2 8: +3 9: +4	1
9898	Image	Default value setting of density in the scan mode (Color)	ALL	6 <1-11>	SYS	1: -5 2: -4 3: -3 4: -2 5: -1 6: 0 7: +1 8: +2 9: +3 10: +4 11: +5	1
9899	Image	Default value setting of density in the scan mode (Gray)	ALL	6 <1-11>	SYS	1: -5 2: -4 3: -3 4: -2 5: -1 6: 0 7: +1 8: +2 9: +3 10: +4 11: +5	1

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
9933	Network	Domain participation con-firmation of printing when LDAP authentication is used		ALL	1 <0-1>	SYS	When LDAP is selected as authentication method for user authen-tication, checking of domain participation of client computer for print job authentication is set. This function is enabled only when department manage-ment is enabled. 0: Disabled 1: Enabled	1
9934-0	General	S-ACS opera-tion setting	Copy	ALL	9 <1-9>	SYS	1: The number of con-tact control: 1 Continuous color control: 1 sheet 2: The number of con-tact control: 2 Continuous color control: 2 sheets 3: The number of con-tact control: 3 Continuous color control: 3 sheets 4: The number of con-tact control: 4 Continuous color control: 4 sheets 5: The number of con-tact control: 5 Continuous color control: 5 sheets 6: The number of con-tact control: 6 Continuous color control: 6 sheets 7: The number of con-tact control: 7 Continuous color control: 7 sheets 8: The number of con-tact control: 8 Continuous color control: 8 sheets 9: The number of con-tact control: 9 Continuous color control: 9 sheets	4
9934-1	General		Print	ALL	9 <1-9>	SYS		4
9934-2	General		Box, Others	ALL	9 <1-9>	SYS		4
9945	Version	Converter board ROM ver-sion		ALL	-	-	CNV-xxx	2
9946	General	Number of Email transmis-sion retries		ALL	3 <0-14>	SYS	0 to 14 times	1
9947	General	Email transmission retry interval		ALL	1 <0-15>	SYS	0 to 15 min.	1
9950	General	EFI controller setting con-firmation		ALL	0 <0-1>	SYS	0: Not initialized 1: Initializing com-pleted	2

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
9952	General	Restore setting of the EFI controller	ALL	-	-	-	3
9954	General	Control box counter / job list printing operation (Individual customer)	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1
9980	Network	Receiver's address fixing function at authentication	ALL	0 <0-1>	SYS	Fixes the receiver's address ("To: Destination" field) when the user authentication and E-mail authentication are enabled. 0: Disabled 1: Enabled	1

Note:

In this equipment, a toner image is formed on the transfer belt prior to a paper feeding.

When the feeding retry occurs and the transport timing is delayed, the toner image on the transfer belt is cleaned off without the 2nd transfer since the paper cannot be reached for the 2nd transfer process.

After that, the toner image formation is retried while the paper is waited.

In this case, the toner for this image formation is consumed wastefully since the toner image on the transfer belt is already cleaned off, even though the printing is normally completed.

Therefore, note that the excessive toner will be consumed consequently when the upper limit value of feeding retry counter is set larger or set as "0" (no limit).

The toner is also consumed wastefully when the paper misfeeding occurs. Replace the roller at earlier timing if the paper misfeedings have occurred frequently.

<<Pixel counter related code>>(Chap. 2.2.6)

Note:

In the pixel counter function, the twin color copy mode is regarded as the full color mode.

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1500	Pixel counter	Standard paper size setting	ALL	EUR: 0 UC: 1 JPN: 0 <0-1>	SYS	Selects the standard paper size to convert it into the pixel count (%). 0: A4 1: LT	1
1501	Pixel counter	Pixel counter all clearing	ALL	-	SYS	Clears all information related to the pixel counter.	3
1502	Pixel counter	Service technician refer-ence counter clearing	ALL	-	SYS	Clears all information related to the service technician reference pixel counter.	3
1503	Pixel counter	Toner cartridge reference counter clearing	ALL	-	SYS	Clears all information related to the toner car-tridge reference pixel counter.	3
1504	Pixel counter	Pixel counter display set-ting	ALL	1 <0-1>	SYS	Selects whether or not to display the pixel counter on the LCD screen. 0: Displayed 1: Not displayed	1
1505	Pixel counter	Displayed reference set-ting	ALL	0 <0-1>	SYS	Selects the reference when displaying the pixel counter on the LCD screen. 0: Service technician reference 1: Toner cartridge ref-erence	1
1506	Pixel counter	Toner empty determination counter setting	ALL	0 <0-1>	SYS	Selects the counter to determine toner empty. 0: Output pages 1: Pixel counter	1
1507	Pixel counter	Threshold setting for toner empty determination (Out-put pages)	ALL	500 <0-999>	SYS	Sets the number of out-put pages to determine toner empty. This set-ting is valid when "0" is set at 08-1506.	1
1508	Pixel counter	Threshold setting for toner empty determination (Pixel counter)	ALL	21500 <0-60000>	SYS	Sets the number of out-put pages to determine toner empty. This set-ting is valid when "1" is set at 08-1506.	1
1509	Pixel counter	Pixel counter clear flag/ Service technician refer-ence	ALL	0 <0-1>	SYS	Becomes "1" when 08-1502 is performed.	2
1510	Pixel counter	Service technician refer-ence cleared date	ALL	-	SYS	Displays the date on which 08-1502 was per-formed.	2
1511	Pixel counter	Toner cartridge reference cleared date (Y)	ALL (color)	-	SYS	Displays the date on which 08-1503 was per-formed.	2

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ERROR CODE AND SELF-DIAGNOSTIC MODE

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1512	Pixel counter	Toner cartridge reference cleared date (M)	ALL (color)	-	SYS	Displays the date on which 08-1503 was per-formed.	2
1513	Pixel counter	Toner cartridge reference cleared date (C)	ALL (color)	-	SYS	Displays the date on which 08-1503 was per-formed.	2
1514	Pixel counter	Toner cartridge reference cleared date (K)	ALL	-	SYS	Displays the date on which 08-1503 was per-formed.	2
1515	Pixel counter	Toner cartridge reference count started date (Y)	ALL (color)	-	SYS	Displays the date on which 08-1503 was per-formed.	2
1516	Pixel counter	Toner cartridge reference count started date (M)	ALL (color)	-	SYS	Displays the date on which 08-1503 was per-formed.	2
1517	Pixel counter	Toner cartridge reference count started date (C)	ALL (color)	-	SYS	Displays the date on which 08-1503 was per-formed.	2
1518	Pixel counter	Toner cartridge reference count started date (K)	ALL	-	SYS	Displays the date on which 08-1503 was per-formed.	2
1547	Pixel counter	Number of output pages/ fullcolor (Service technicianrefer-ence)	PPC (color)	<8 digits>	SYS	Counts the number of output pages con-verted to the standard paper size in the copy function, full color mode and service technician reference. [Unit. page]	2
1548	Pixel counter	Number of output pages/ black (Service technician reference)	PPC (black)	<8 digits>	SYS	Counts the number of output pages con-verted to the standard paper size in the copy function, black mode and service technician reference. [Unit. page]	2
1549	Pixel counter	Number of output pages/ fullcolor (Service techni-cian reference)	PRT (color)	<8 digits>	SYS	Counts the number of output pages con-verted to the standard paper size in the printer function, full color mode and service technician reference. [Unit. page]	2
1550	Pixel counter	Number of output pages/ black (Service technician reference)	PRT (black)	<8 digits>	SYS	Counts the number of output pages con-verted to the standard paper size in the printer function, black mode and service technician reference. [Unit. page]	2

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1551	Pixel counter	Number of output pages/ black (Service technician reference)	FAX (black)	<8 digits>	SYS	Counts the number of output pages converted to the standard paper size in the FAX function, black mode and service technician reference. [Unit. page]	2
1552	Pixel counter	Number of output pages/ full color (K) (Toner cartridge reference)	PPC (color)	<8 digits>	SYS	Counts the number of output pages converted to the standard paper size in the copy function, full color mode, toner K and toner cartridge reference. [Unit. page]	2
1553	Pixel counter	Number of output pages/ black (Toner cartridge reference)	PPC (black)	<8 digits>	SYS	Counts the number of output pages converted to the standard paper size in the copy function, black mode and toner cartridge reference. [Unit. page]	2
1554	Pixel counter	Number of output pages/ full color (K) (Toner cartridge reference)	PRT (color)	<8 digits>	SYS	Counts the number of output pages converted to the standard paper size in the printer function, full color mode, toner K and toner cartridge reference. [Unit. page]	2
1555	Pixel counter	Number of output pages/ black (Toner cartridge reference)	PRT (black)	<8 digits>	SYS	Counts the number of output pages converted to the standard paper size in the printer function, black mode and toner cartridge reference. [Unit. page]	2
1556	Pixel counter	Number of output pages/ black (Toner cartridge reference)	FAX (black)	<8 digits>	SYS	Counts the number of output pages converted to the standard paper size in the FAX function, black mode and toner cartridge reference. [Unit. page]	2
1557	Pixel counter	Number of output pages/ full color (Y) (Toner cartridge reference)	PPC (color)	<8 digits>	SYS	Counts the number of output pages converted to the standard paper size in the copy function, full color mode, toner Y and toner cartridge reference. [Unit. page]	2

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ERROR CODE AND SELF-DIAGNOSTIC MODE

				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1558	Pixel counter	Number of output pages/ full color (Y) (Toner car-tridge reference)	PRT (color)	<8 digits>	SYS	Counts the number of output pages con-verted to the standard paper size in the printer function, full color mode, toner Y and toner cartridge refer-ence. [Unit. page]	2
1559	Pixel counter	Number of output pages/ full color (M) (Toner car-tridge reference)	PPC (color)	<8 digits>	SYS	Counts the number of output pages con-verted to the standard paper size in the copy function, full color mode, toner M and toner cartridge refer-ence. [Unit. page]	2
1560	Pixel counter	Number of output pages/ full color (M) (Toner car-tridge reference)	PRT (color)	<8 digits>	SYS	Counts the number of output pages con-verted to the standard paper size in the printer function, full color mode, toner M and toner cartridge refer-ence. [Unit. page]	2
1561	Pixel counter	Number of output pages/ full color (C) (Toner car-tridge reference)	PPC (color)	<8 digits>	SYS	Counts the number of output pages con-verted to the standard paper size in the copy function, full color mode, toner C and toner cartridge refer-ence. [Unit. page]	2
1562	Pixel counter	Number of output pages/ full color (C) (Toner car-tridge reference)	ALL (color)	<8 digits>	SYS	Counts the number of output pages con-verted to the standard paper size in the printer function, full color mode, toner C and toner cartridge refer-ence. [Unit. page]	2
1563	Pixel counter	Toner cartridge Y replace-ment counter	ALL (color)	<3 digits>	SYS	Counts the number of time of the toner car-tridge Y replacement.	2
1564	Pixel counter	Toner cartridge M replace-ment counter	ALL (color)	<3 digits>	SYS	Counts the number of time of the toner car-tridge M replacement.	2
1565	Pixel counter	Toner cartridge C replace-ment counter	ALL (color)	<3 digits>	SYS	Counts the number of time of the toner car-tridge C replacement.	2
1566	Pixel counter	Toner cartridge K replace-ment counter	ALL	<3 digits>	SYS	Counts the number of time of the toner car-tridge K replacement.	2

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1577	Pixel counter	Average pixel count/full color (Y+M+C+K) (Service technician reference)	PPC (color)	0 <0-10000>	SYS	Displays the average pixel count in the copy function, full color mode, all toner and service technician reference. [Unit: 0.01%]	2
1578	Pixel counter	Average pixel count/full color (Y) (Service technician reference)	PPC (color)	0 <0-10000>	SYS	Displays the average pixel count in the copy function, full color mode, toner Y and service technician reference. [Unit: 0.01%]	2
1579	Pixel counter	Average pixel count/full color (M) (Service technician reference)	PPC (color)	0 <0-10000>	SYS	Displays the average pixel count in the copy function, full color mode, toner M and service technician reference. [Unit: 0.01%]	2
1580	Pixel counter	Average pixel count/full color (C) (Service technician reference)	PPC (color)	0 <0-10000>	SYS	Displays the average pixel count in the copy function, full color mode, toner C and service technician reference. [Unit: 0.01%]	2
1581	Pixel counter	Average pixel count/full color (K) (Service technician reference)	PPC (color)	0 <0-10000>	SYS	Displays the average pixel count in the copy function, full color mode, toner K and service technician reference. [Unit: 0.01%]	2
1582	Pixel counter	Average pixel count/full color (Y+M+C+K) (Service technician reference)	PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the printer function, full color mode, all toner and service technician reference. [Unit: 0.01%]	2
1583	Pixel counter	Average pixel count/full color (Y) (Service technician reference)	PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the printer function, full color mode, toner Y and service technician reference. [Unit: 0.01%]	2
1584	Pixel counter	Average pixel count/full color (M) (Service technician reference)	PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the printer function, full color mode, toner M and service technician reference. [Unit: 0.01%]	2

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ERROR CODE AND SELF-DIAGNOSTIC MODE

				Setting mode (08)			
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1585	Pixel counter	Average pixel count/full color (C) (Service techni-cian reference)	PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the printer function, full color mode, toner C and ser-vice technician refer-ence. [Unit: 0.01%]	2
1586	Pixel counter	Average pixel count/full color (K) (Service techni-cian reference)	PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the printer function, full color mode, toner K and ser-vice technician refer-ence. [Unit: 0.01%]	2
1587	Pixel counter	Average pixel count/full color (Y+M+C+K) (Service technician reference)	PPC/ PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the copy/ printer function, full color mode, all toner and service technician reference. [Unit: 0.01%]	2
1588	Pixel counter	Average pixel count/full color (Y) (Service techni-cian reference)	PPC/ PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the copy/ printer function, full color mode, toner Y and service technician refer-ence. [Unit: 0.01%]	2
1589	Pixel counter	Average pixel count/full color (M) (Service techni-cian reference)	PPC/ PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the copy/ printer function, full color mode, toner M and service technician reference. [Unit: 0.01%]	2
1590	Pixel counter	Average pixel count/full color (C) (Service techni-cian reference)	PPC/ PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the copy/ printer function, full color mode, toner C and service technician reference. [Unit: 0.01%]	2
1591	Pixel counter	Average pixel count/full color (K) (Service techni-cian reference)	PPC/ PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the copy/ printer function, full color mode, toner K and service technician refer-ence. [Unit: 0.01%]	2
1592	Pixel counter	Average pixel count/black (Service technician refer-ence)	PPC (black)	0 <0-10000>	SYS	Displays the average pixel count in the copy function, black mode and service technician reference. [Unit: 0.01%]	2

Setting mode (08)							
Code	Classifi- cation	Items	Func- tion	Default <Accept- able value>	RAM	Contents	Pro- cedur e
1593	Pixel counter	Average pixel count/black (Service technician refer- ence)	PRT (black)	0 <0- 10000>	SYS	Displays the average pixel count in the printer function, black mode and service technician reference. [Unit: 0.01%]	2
1594	Pixel counter	Average pixel count/black (Service technician refer- ence)	FAX (black)	0 <0- 10000>	SYS	Displays the average pixel count in the FAX function, black mode and service technician reference. [Unit: 0.01%]	2
1595	Pixel counter	Average pixel count/black (Service technician refer- ence)	PPC/ PRT/ FAX (black)	0 <0- 10000>	SYS	Displays the average pixel count in the copy/ printer/FAX function, black mode and ser- vice technician refer- ence. [Unit: 0.01%]	2
1596	Pixel counter	Latest pixel count/full color (Y+M+C+K) (Service tech- nician reference)	PPC (color)	0 <0- 10000>	SYS	Displays the latest pixel count in the copy func- tion, full color mode, all toner and service tech- nician reference. [Unit: 0.01%]	2
1597	Pixel counter	Latest pixel count/full color (Y) (Service technician ref- erence)	PPC (color)	0 <0- 10000>	SYS	Displays the latest pixel count in the copy func- tion, full color mode, toner Y and service technician reference. [Unit: 0.01%]	2
1598	Pixel counter	Latest pixel count/full color (M) (Service technician ref- erence)	PPC (color)	0 <0- 10000>	SYS	Displays the latest pixel count in the copy func- tion, full color mode, toner M and service technician reference. [Unit: 0.01%]	2
1599	Pixel counter	Latest pixel count/full color (C) (Service technician ref- erence)	PPC (color)	0 <0- 10000>	SYS	Displays the latest pixel count in the copy func- tion, full color mode, toner C and service technician reference. [Unit: 0.01%]	2
1600	Pixel counter	Latest pixel count/full color (K) (Service technician ref- erence)	PPC (color)	0 <0- 10000>	SYS	Displays the latest pixel count in the copy func- tion, full color mode, toner K and service technician reference. [Unit: 0.01%]	2
1601	Pixel counter	Latest pixel count/full color (Y+M+C+K) (Service tech- nician reference)	PRT (color)	0 <0- 10000>	SYS	Displays the latest pixel count in the printer function, full color mode, all toner and ser- vice technician refer- ence. [Unit: 0.01%]	2

2

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1602	Pixel counter	Latest pixel count/full color (Y) (Service technician ref-erence)	PRT (color)	0 <0-10000>	SYS	Displays the latest pixel count in the printer function, full color mode, toner Y and ser-vice technician refer-ence. [Unit: 0.01%]	2
1603	Pixel counter	Latest pixel count/full color (M) (Service technician ref-erence)	PRT (color)	0 <0-10000>	SYS	Displays the latest pixel count in the printer function, full color mode, toner M and ser-vice technician refer-ence. [Unit: 0.01%]	2
1604	Pixel counter	Latest pixel count/full color (C) (Service technician ref-erence)	PRT (color)	0 <0-10000>	SYS	Displays the latest pixel count in the printer function, full color mode, toner C and ser-vice technician refer-ence. [Unit: 0.01%]	2
1605	Pixel counter	Latest pixel count/full color (K) (Service technician ref-erence)	PRT (color)	0 <0-10000>	SYS	Displays the latest pixel count in the printer function, full color mode, toner K and ser-vice technician refer-ence. [Unit: 0.01%]	2
1606	Pixel counter	Latest pixel count/black (Service technician refer-ence)	PPC (black)	0 <0-10000>	SYS	Displays the latest pixel count in the copy func-tion, black mode and service technician refer-ence. [Unit: 0.01%]	2
1607	Pixel counter	Latest pixel count/black (Service technician refer-ence)	PRT (black)	0 <0-10000>	SYS	Displays the latest pixel count in the printer function, black mode and service technician reference. [Unit: 0.01%]	2
1608	Pixel counter	Latest pixel count/black (Service technician refer-ence)	FAX (black)	0 <0-10000>	SYS	Displays the latest pixel count in the FAX func-tion, black mode and service technician refer-ence. [Unit: 0.01%]	2
1609	Pixel counter	Average pixel count/full color (Y) (Toner cartridge reference)	PPC (color)	0 <0-10000>	SYS	Displays the average pixel count in the copy function, full color mode, toner Y and toner cartridge refer-ence. [Unit: 0.01%]	2

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Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1610	Pixel counter	Average pixel count/full color (M) (Toner cartridge reference)	PPC (color)	0 <0-10000>	SYS	Displays the average pixel count in the copy function, full color mode, toner M and toner cartridge refer-ence. [Unit: 0.01%]	2
1611	Pixel counter	Average pixel count/full color (C) (Toner cartridge reference)	PPC (color)	0 <0-10000>	SYS	Displays the average pixel count in the copy function, full color mode, toner C and toner cartridge refer-ence. [Unit: 0.01%]	2
1612	Pixel counter	Average pixel count/full color (K) (Toner cartridge reference)	PPC (color)	0 <0-10000>	SYS	Displays the average pixel count in the copy function, full color mode, toner K and toner cartridge refer-ence. [Unit: 0.01%]	2
1613	Pixel counter	Average pixel count/black (Toner cartridge reference)	PPC (black)	0 <0-10000>	SYS	Displays the average pixel count in the copy function, black mode and toner cartridge ref-erence. [Unit: 0.01%]	2
1614	Pixel counter	Average pixel count/full color (K)+black (Toner car-tridge reference)	PPC	0 <0-10000>	SYS	Displays the average pixel count in the copy function, full color/black mode, toner K and toner cartridge refer-ence. [Unit: 0.01%]	2
1615	Pixel counter	Average pixel count/full color (Y) (Toner cartridge reference)	PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the printer function, full color mode, toner Y and toner cartridge refer-ence. [Unit: 0.01%]	2
1616	Pixel counter	Average pixel count/full color (M) (Toner cartridge reference)	PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the printer function, full color mode, toner M and toner cartridge refer-ence. [Unit: 0.01%]	2
1617	Pixel counter	Average pixel count/full color (C) (Toner cartridge reference)	PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the printer function, full color mode, toner C and toner cartridge refer-ence. [Unit: 0.01%]	2

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ERROR CODE AND SELF-DIAGNOSTIC MODE

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1618	Pixel counter	Average pixel count/full color (K) (Toner cartridge reference)	PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the printer function, full color mode, toner K and toner cartridge refer-ence. [Unit: 0.01%]	2
1619	Pixel counter	Average pixel count/black (Toner cartridge reference)	PRT (black)	0 <0-10000>	SYS	Displays the average pixel count in the printer function, black mode and toner cartridge ref-erence. [Unit: 0.01%]	2
1620	Pixel counter	Average pixel count/full color (K)+black (Toner car-tridge reference)	PRT	0 <0-10000>	SYS	Displays the average pixel count in the printer function, full color/black mode, toner K and toner cartridge refer-ence. [Unit: 0.01%]	2
1621	Pixel counter	Average pixel count/full color (Y) (Toner cartridge reference)	PPC/PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the copy/printer function, full color mode, toner Y and toner cartridge refer-ence. [Unit: 0.01%]	2
1622	Pixel counter	Average pixel count/full color (M) (Toner cartridge reference)	PPC/PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the copy/printer function, full color mode, toner M and toner cartridge ref-erence. [Unit: 0.01%]	2
1623	Pixel counter	Average pixel count/full color (C) (Toner cartridge reference)	PPC/PRT (color)	0 <0-10000>	SYS	Displays the average pixel count in the copy/printer function, full color mode, toner C and toner cartridge ref-erence. [Unit: 0.01%]	2
1624	Pixel counter	Average pixel count/full color (K)+black (Toner car-tridge reference)	PPC/PRT/FAX	0 <0-10000>	SYS	Displays the average pixel count in the copy/printer/FAX function, black mode, toner K and toner cartridge ref-erence. [Unit: 0.01%]	2
1625	Pixel counter	Average pixel count/black (Toner cartridge reference)	FAX (black)	0 <0-10000>	SYS	Displays the average pixel count in the FAX function, black mode and toner cartridge ref-erence. [Unit: 0.01%]	2

Setting mode (08)							
Code	Classifi-cation	Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1626	Pixel counter	Latest pixel count/full color (Y) (Toner cartridge refer-ence)	PPC (color)	0 <0-10000>	SYS	Displays the latest pixel count in the copy func-tion, full color mode, toner Y and toner car-tridge reference. [Unit:0.01%]	2
1627	Pixel counter	Latest pixel count/full color (M) (Toner cartridge refer-ence)	PPC (color)	0 <0-10000>	SYS	Displays the latest pixel count in the copy func-tion, full color mode, toner M and toner car-tridge reference. [Unit: 0.01%]	2
1628	Pixel counter	Latest pixel count/full color (C) (Toner cartridge refer-ence)	PPC (color)	0 <0-10000>	SYS	Displays the latest pixel count in the copy func-tion, full color mode, toner C and toner car-tridge reference. [Unit: 0.01%]	2
1629	Pixel counter	Latest pixel count/full color (K) (Toner cartridge refer-ence)	PPC (color)	0 <0-10000>	SYS	Displays the latest pixel count in the copy func-tion, full color mode, toner K and toner car-tridge reference. [Unit: 0.01%]	2
1630	Pixel counter	Latest pixel count/full color (Y) (Toner cartridge refer-ence)	PRT (color)	0 <0-10000>	SYS	Displays the latest pixel count in the printer function, full color mode, toner Y and toner cartridge refer-ence. [Unit: 0.01%]	2
1631	Pixel counter	Latest pixel count/full color (M) (Toner cartridge refer-ence)	PRT (color)	0 <0-10000>	SYS	Displays the latest pixel count in the printer function, full color mode, toner M and toner cartridge refer-ence. [Unit: 0.01%]	2
1632	Pixel counter	Latest pixel count/full color (C) (Toner cartridge refer-ence)	PRT (color)	0 <0-10000>	SYS	Displays the latest pixel count in the printer function, full color mode, toner C and toner cartridge refer-ence. [Unit: 0.01%]	2
1633	Pixel counter	Latest pixel count/full color (K) (Toner cartridge refer-ence)	PRT (color)	0 <0-10000>	SYS	Displays the latest pixel count in the printer function, full color mode, toner K and toner cartridge refer-ence. [Unit: 0.01%]	2
1634	Pixel counter	Latest pixel count/black (Toner cartridge reference)	FAX (black)	0 <0-10000>	SYS	Displays the latest pixel count in the FAX func-tion, black mode and toner cartridge refer-ence. [Unit: 0.01%]	2

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ERROR CODE AND SELF-DIAGNOSTIC MODE

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1639	Pixel counter	Latest pixel count/black (Toner cartridge reference)		PPC (black)	0 <0-10000>	SYS	Displays the latest pixel count in the copy func-tion, black mode and toner cartridge refer-ence. [Unit: 0.01%]	2
1640	Pixel counter	Latest pixel count/black (Toner cartridge reference)		PRT (black)	0 <0-10000>	SYS	Displays the latest pixel count in the printer function, black mode and toner cartridge ref-erence. [Unit: 0.01%]	2
1641-0	Pixel counter	Pixel count distribution/ full color (Y)	0-5%	PPC (color)	<8 digits>	SYS	The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distribu-tions in the copy func-tion, full color mode and toner Y are displayed. [Unit: page]	14
1641-1			5.1-10%	PPC (color)	<8 digits>	SYS		14
1641-2			10.1-15%	PPC (color)	<8 digits>	SYS		14
1641-3			15.1-20%	PPC (color)	<8 digits>	SYS		14
1641-4			20.1-25%	PPC (color)	<8 digits>	SYS		14
1641-5			25.1-30%	PPC (color)	<8 digits>	SYS		14
1641-6			30.1-40%	PPC (color)	<8 digits>	SYS		14
1641-7			40.1-60%	PPC (color)	<8 digits>	SYS		14
1641-8			60.1-80%	PPC (color)	<8 digits>	SYS		14
1641-9			80.1-100%	PPC (color)	<8 digits>	SYS		14
1642-0	Pixel counter	Pixel count distribution/ full color (M)	0-5%	PPC (color)	<8 digits>	SYS	The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distribu-tions in the copy func-tion, full color mode and toner M are displayed. [Unit: page]	14
1642-1			5.1-10%	PPC (color)	<8 digits>	SYS		14
1642-2			10.1-15%	PPC (color)	<8 digits>	SYS		14
1642-3			15.1-20%	PPC (color)	<8 digits>	SYS		14
1642-4			20.1-25%	PPC (color)	<8 digits>	SYS		14
1642-5			25.1-30%	PPC (color)	<8 digits>	SYS		14
1642-6			30.1-40%	PPC (color)	<8 digits>	SYS		14
1642-7			40.1-60%	PPC (color)	<8 digits>	SYS		14
1642-8			60.1-80%	PPC (color)	<8 digits>	SYS		14
1642-9			80.1-100%	PPC (color)	<8 digits>	SYS		14

				Setting mode (08)				
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1643-0	Pixel counter	Pixel count distribution/ full color (C)	0-5%	PPC (color)	<8 digits>	SYS	The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distribu-tions in the copy func-tion, full color mode and toner C are displayed. [Unit: page]	14
1643-1			5.1-10%	PPC (color)	<8 digits>	SYS		14
1643-2			10.1-15%	PPC (color)	<8 digits>	SYS		14
1643-3			15.1-20%	PPC (color)	<8 digits>	SYS		14
1643-4			20.1-25%	PPC (color)	<8 digits>	SYS		14
1643-5			25.1-30%	PPC (color)	<8 digits>	SYS		14
1643-6			30.1-40%	PPC (color)	<8 digits>	SYS		14
1643-7			40.1-60%	PPC (color)	<8 digits>	SYS		14
1643-8			60.1-80%	PPC (color)	<8 digits>	SYS		14
1643-9			80.1-100%	PPC (color)	<8 digits>	SYS		14
1644-0	Pixel counter	Pixel count distribution/ full color (K)	0-5%	PPC (color)	<8 digits>	SYS	The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distribu-tions in the copy func-tion, full color mode and toner K are displayed. [Unit: page]	14
1644-1			5.1-10%	PPC (color)	<8 digits>	SYS		14
1644-2			10.1-15%	PPC (color)	<8 digits>	SYS		14
1644-3			15.1-20%	PPC (color)	<8 digits>	SYS		14
1644-4			20.1-25%	PPC (color)	<8 digits>	SYS		14
1644-5			25.1-30%	PPC (color)	<8 digits>	SYS		14
1644-6			30.1-40%	PPC (color)	<8 digits>	SYS		14
1644-7			40.1-60%	PPC (color)	<8 digits>	SYS		14
1644-8			60.1-80%	PPC (color)	<8 digits>	SYS		14
1644-9			80.1-100%	PPC (color)	<8 digits>	SYS		14

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ERROR CODE AND SELF-DIAGNOSTIC MODE

Setting mode (08)
Code	Classifi-cation		Items	Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1645-0	Pixel counter	Pixel count distribution/ full color (Y)	0-5%	PRT (color)	<8 digits>	SYS	The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distribu-tions in the printer func-tion, full color mode and toner Y are displayed. [Unit: page]	14
1645-1			5.1-10%	PRT (color)	<8 digits>	SYS		14
1645-2			10.1-15%	PRT (color)	<8 digits>	SYS		14
1645-3			15.1-20%	PRT (color)	<8 digits>	SYS		14
1645-4			20.1-25%	PRT (color)	<8 digits>	SYS		14
1645-5			25.1-30%	PRT (color)	<8 digits>	SYS		14
1645-6			30.1-40%	PRT (color)	<8 digits>	SYS		14
1645-7			40.1-60%	PRT (color)	<8 digits>	SYS		14
1645-8			60.1-80%	PRT (color)	<8 digits>	SYS		14
1645-9			80.1-100%	PRT (color)	<8 digits>	SYS		14
1646-0	Pixel counter	Pixel count distribution/ full color (M)	0-5%	PRT (color)	<8 digits>	SYS	The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distribu-tions in the printer func-tion, full color mode and toner M are displayed. [Unit: page]	14
1646-1			5.1-10%	PRT (color)	<8 digits>	SYS		14
1646-2			10.1-15%	PRT (color)	<8 digits>	SYS		14
1646-3			15.1-20%	PRT (color)	<8 digits>	SYS		14
1646-4			20.1-25%	PRT (color)	<8 digits>	SYS		14
1646-5			25.1-30%	PRT (color)	<8 digits>	SYS		14
1646-6			30.1-40%	PRT (color)	<8 digits>	SYS		14
1646-7			40.1-60%	PRT (color)	<8 digits>	SYS		14
1646-8			60.1-80%	PRT (color)	<8 digits>	SYS		14
1646-9			80.1-100%	PRT (color)	<8 digits>	SYS		14

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1647-0	Pixel counter	Pixel count distribution/ full color (C)	0-5%	PRT (color)	<8 digits>	SYS	The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distribu-tions in the printer func-tion, full color mode and toner C are displayed. [Unit: page]	14
1647-1			5.1-10%	PRT (color)	<8 digits>	SYS		14
1647-2			10.1-15%	PRT (color)	<8 digits>	SYS		14
1647-3			15.1-20%	PRT (color)	<8 digits>	SYS		14
1647-4			20.1-25%	PRT (color)	<8 digits>	SYS		14
1647-5			25.1-30%	PRT (color)	<8 digits>	SYS		14
1647-6			30.1-40%	PRT (color)	<8 digits>	SYS		14
1647-7			40.1-60%	PRT (color)	<8 digits>	SYS		14
1647-8			60.1-80%	PRT (color)	<8 digits>	SYS		14
1647-9			80.1-100%	PRT (color)	<8 digits>	SYS		14
1648-0	Pixel counter	Pixel count distribution/ full color (K)	0-5%	PRT (color)	<8 digits>	SYS	The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distribu-tions in the printer func-tion, full color mode and toner K are displayed. [Unit: page]	14
1648-1			5.1-10%	PRT (color)	<8 digits>	SYS		14
1648-2			10.1-15%	PRT (color)	<8 digits>	SYS		14
1648-3			15.1-20%	PRT (color)	<8 digits>	SYS		14
1648-4			20.1-25%	PRT (color)	<8 digits>	SYS		14
1648-5			25.1-30%	PRT (color)	<8 digits>	SYS		14
1648-6			30.1-40%	PRT (color)	<8 digits>	SYS		14
1648-7			40.1-60%	PRT (color)	<8 digits>	SYS		14
1648-8			60.1-80%	PRT (color)	<8 digits>	SYS		14
1648-9			80.1-100%	PRT (color)	<8 digits>	SYS		14

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Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1649-0	Pixel counter	Pixel count distribution/ black	0-5%	PPC (black)	<8 digits>	SYS	The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distribu-tions in the copy func-tion and black mode are displayed. [Unit: page]	14
1649-1			5.1-10%	PPC (black)	<8 digits>	SYS		14
1649-2			10.1-15%	PPC (black)	<8 digits>	SYS		14
1649-3			15.1-20%	PPC (black)	<8 digits>	SYS		14
1649-4			20.1-25%	PPC (black)	<8 digits>	SYS		14
1649-5			25.1-30%	PPC (black)	<8 digits>	SYS		14
1649-6			30.1-40%	PPC (black)	<8 digits>	SYS		14
1649-7			40.1-60%	PPC (black)	<8 digits>	SYS		14
1649-8			60.1-80%	PPC (black)	<8 digits>	SYS		14
1649-9			80.1-100%	PPC (black)	<8 digits>	SYS		14
1650-0	Pixel counter	Pixel count distribution/ black	0-5%	PRT (black)	<8 digits>	SYS	The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distribu-tions in the printer func-tion and black mode are displayed. [Unit: page]	14
1650-1			5.1-10%	PRT (black)	<8 digits>	SYS		14
1650-2			10.1-15%	PRT (black)	<8 digits>	SYS		14
1650-3			15.1-20%	PRT (black)	<8 digits>	SYS		14
1650-4			20.1-25%	PRT (black)	<8 digits>	SYS		14
1650-5			25.1-30%	PRT (black)	<8 digits>	SYS		14
1650-6			30.1-40%	PRT (black)	<8 digits>	SYS		14
1650-7			40.1-60%	PRT (black)	<8 digits>	SYS		14
1650-8			60.1-80%	PRT (black)	<8 digits>	SYS		14
1650-9			80.1-100%	PRT (black)	<8 digits>	SYS		14

Setting mode (08)							
Code	Classifi-cation	Items		Func-tion	Default <Accept-able value>	RAM	Contents	Pro-cedure
1651-0	Pixel counter	Pixel count distribution/ black	0-5%	FAX (black)	<8 digits>	SYS	The pixel count data are divided into 10 ranges. The number of output pages in each range is displayed. In this code, the distribu-tions in the FAX func-tion and black mode are displayed. [Unit: page]	14
1651-1			5.1-10%	FAX (black)	<8 digits>	SYS		14
1651-2			10.1-15%	FAX (black)	<8 digits>	SYS		14
1651-3			15.1-20%	FAX (black)	<8 digits>	SYS		14
1651-4			20.1-25%	FAX (black)	<8 digits>	SYS		14
1651-5			25.1-30%	FAX (black)	<8 digits>	SYS		14
1651-6			30.1-40%	FAX (black)	<8 digits>	SYS		14
1651-7			40.1-60%	FAX (black)	<8 digits>	SYS		14
1651-8			60.1-80%	FAX (black)	<8 digits>	SYS		14
1651-9			80.1-100%	FAX (black)	<8 digits>	SYS		14

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e-STUDIO2500c/3500c/3510c
ERROR CODE AND SELF-DIAGNOSTIC MODE

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<<PM support mode related code>>
- The management items at PM support mode can also be operated at setting mode (08). The following items are displayed or set by using sub-codes at PM management setting in the table below.

<Sub-codes>
0: Present number of output pages
  - Means the present number of output pages.
1: Recommended number of output pages for replacement
  - Means the recommended number of output pages for replacement.
2: Number of output pages at the last replacement
  - Means the number of output pages at the last replacement.
3: Present driving counts
  - Means the present drive counts (1 count = 2 seconds).
4: Recommended driving counts to be replaced
  - Means the recommended drive counts for replacement (1 count = 2 seconds).
5: Driving counts at the last replacement
  - Means the drive counts at the last replacement.
6: Present output pages for control
  - Means the present number of output pages for controlling.
7: Present driving counts for control
  - Means the present drive counts for controlling (1 count = 2 seconds).
8: Number of times replaced
  - Counts up when clearing the counter of each unit in the PM Support Mode Screen.

Notes:
- Sub-code 0 is equivalent to sub-code 6.
- Sub-code 3 is equivalent to sub-code 7.
- When the value of sub-code 3 is changed, the value of sub-code 7 is also updated and vice versa.
- When "0" is set at one of sub-codes 0, 3, 6 and 7, the rest of them are automatically updated to "0".

Items	PM management setting <Procedure 4> *Indicated in 8 digits	Date of previous replacement <Procedure 2>	Remarks
Photoconductive drum (K)	1150-0 to 8	1151	<Default values of code 1150 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Photoconductive drum (Y)	1152-0 to 8	1153	<Default values of code 1152 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Photoconductive drum (M)	1154-0 to 8	1155	<Default values of code 1154 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Photoconductive drum (C)	1156-0 to 8	1157	<Default values of code 1156 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Drum cleaning blade (K)	1158-0 to 8	1159	<Default values of code 1158 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Drum blade cleaner (Y)	1160-0 to 8	1161	<Default values of code 1160 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Drum blade cleaner (M)	1162-0 to 8	1163	<Default values of code 1162 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Drum blade cleaner (C)	1164-0 to 8	1165	<Default values of code 1164 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Charger grid (K)	1174-0 to 8	1175	<Default values of code 1174 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000

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Items	PM management setting <Procedure 4> *Indicated in 8 digits	Date of previous replacement <Procedure 2>	Remarks
Charger grid (Y)	1176-0 to 8	1177	<Default values of code 1176 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Charger grid (M)	1178-0 to 8	1179	<Default values of code 1178 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Charger grid (C)	1180-0 to 8	1181	<Default values of code 1180 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Charger (Wire/needle)(K)	1182-0 to 8	1183	<Default values of code 1182 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Charger (Wire/needle)(Y)	1184-0 to 8	1185	<Default values of code 1184 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Charger (Wire/needle)(M)	1186-0 to 8	1187	<Default values of code 1186 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Charger (Wire/needle)(C)	1188-0 to 8	1189	<Default values of code 1188 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Charger cleaning pad (K)	1190-0 to 8	1191	<Default values of code 1190 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Charger cleaning pad (Y)	1192-0 to 8	1193	<Default values of code 1192 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000

Items	PM management setting <Procedure 4> *Indicated in 8 digits	Date of previous replacement <Procedure 2>	Remarks
Charger cleaning pad (M)	1194-0 to 8	1195	<Default values of code 1194 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Charger cleaning pad (C)	1196-0 to 8	1197	<Default values of code 1196 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Ozone filter-1	1198-0 to 8	1199	<Default values of code 1198 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 140,000/140,000/ 140,000
Developer material	1200-0 to 8	1201	<Default values of code 1200 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 105,000/105,000/ 105,000
Developer material Y	1202-0 to 8	1203	<Default values of code 1202 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 105,000/105,000/ 105,000
Developer material M	1204-0 to 8	1205	<Default values of code 1204 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 105,000/105,000/ 105,000
Developer material C	1206-0 to 8	1207	<Default values of code 1206 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 50,000/70,000/70,000 Sub-code 4: 105,000/105,000/ 105,000
1st transfer roller (K)	1214-0 to 8	1215	<Default values of code 1214 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 500,000/700,000/ 700,000 Sub-code 4: 1,400,000/1,400,000/ 1,400,000
1st transfer roller (Y)	1216-0 to 8	1217	<Default values of code 1216 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 500,000/700,000/ 700,000 Sub-code 4: 1,400,000/1,400,000/ 1,400,000

Items	PM management setting <Procedure 4> *Indicated in 8 digits	Date of previous replacement <Procedure 2>	Remarks
1st transfer roller (M)	1218-0 to 8	1219	<Default values of code 1218 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 500,000/700,000/ 700,000 Sub-code 4: 1,400,000/1,400,000/ 1,400,000
1st transfer roller (C)	1220-0 to 8	1221	<Default values of code 1220 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 500,000/700,000/ 700,000 Sub-code 4: 1,400,000/1,400,000/ 1,400,000
Transfer belt	1228-0 to 8	1229	<Default values of code 1228 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 250,000/350,000/ 350,000 Sub-code 4: 700,000/700,000/ 700,000
Drive roller cleaning mylar	1230-0 to 8	1231	<Default values of code 1230 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 200,000/280,000/ 280,000 Sub-code 4: 560,000/560,000/ 560,000
Transfer belt cleaning blade	1232-0 to 8	1233	<Default values of code 1232 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 100,000/140,000/ 140,000 Sub-code 4: 280,000/280,000/ 280,000
2nd transfer roller	1240-0 to 8	1241	<Default values of code 1240 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 250,000/350,000/ 350,000 Sub-code 4: 700,000/700,000/ 700,000
Pressure roller	1250-0 to 8	1251	<Default values of code 1250 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 250,000/350,000/ 350,000 Sub-code 4: 280,000/280,000/ 280,000
Pressure roller separation finger	1270-0 to 8	1271	<Default values of code 1270 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 100,000/140,000/ 140,000 Sub-code 4: 280,000/280,000/ 280,000

Items	PM management setting <Procedure 4> *Indicated in 8 digits	Date of previous replacement <Procedure 2>	Remarks
Fuser belt	1272-0 to 8	1273	<Default values of code 1272 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 250,000/350,000/350,000 Sub-code 4: 280,000/280,000/280,000
Fuser roller	1274-0 to 8	1275	<Default values of code 1274 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 250,000/350,000/350,000 Sub-code 4: 280,000/280,000/280,000
Fuser belt guide	1276-0 to 8	1277	<Default values of code 1276 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 250,000/350,000/350,000 Sub-code 4: 280,000/280,000/280,000
Pickup roller (RADF)	1282-0, 1, 2, 8	1283	<Default values of code 1282 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 120,000/120,000/120,000
Feed roller (RADF)	1284-0,1,2,8	1285	<Default values of code 1284 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 120,000/120,000/120,000
Separation roller (RADF)	1286-0, 1, 2, 8	1287	<Default values of code 1286 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 120,000/120,000/120,000
Pickup roller (1st drawer)	1290-0, 1, 2, 8	1291	<Default values of code 1290 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000
Pickup roller (2nd drawer)	1292-0,1,2,8	1293	<Default values of code 1292 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000
Pickup roller (LCF)	1294-0,1,2,8	1295	<Default values of code 1294 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 160,000/160,000/160,000
Feed roller (1st drawer)	1298-0,1,2,8	1299	<Default values of code 1298 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000
Feed roller (2nd drawer)	1300-0,1,2,8	1301	<Default values of code 1300 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000

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Items	PM management setting <Procedure 4> *Indicated in 8 digits	Date of previous replacement <Procedure 2>	Remarks
Feed roller (LCF)	1302-0, 1, 2, 8	1303	<Default values of code 1302 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 160,000/160,000/ 160,000
Separation roller (1st drawer)	1306-0,1,2,8	1307	<Default values of code 1306 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000
Separation roller (2nd drawer)	1308-0,1,2,8	1309	<Default values of code 1308 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000
Separation roller (LCF)	1310-0,1,2,8	1311	<Default values of code 1310 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 160,000/160,000/ 160,000
Separation roller (PFP upper drawer)	1312-0,1,2,8	1313	<Default values of code 1312 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000
Separation roller (PFP lower drawer)	1314-0,1,2,8	1315	<Default values of code 1314 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000
Separation roller (Bypass unit)	1316-0,1,2,8	1317	<Default values of code 1316 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000
Feed roller (PFP upper drawer)	1320-0,1,2,8	1321	<Default values of code 1320 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000
Feed roller (PFP lower drawer)	1322-0,1,2,8	1323	<Default values of code 1322 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000
Feed roller (Bypass unit)	1324-0,1,2,8	1325	<Default values of code 1324 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000
Pickup roller (PFP upper drawer)	1328-0,1,2,8	1329	<Default values of code 1328 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000
Pickup roller (PFP lower drawer)	1330-0,1,2,8	1331	<Default values of code 1330 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000
Pickup roller (Bypass unit)	1332-0,1,2,8	1333	<Default values of code 1332 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 8: 0/0/0 Sub-code 1: 80,000/80,000/80,000

Items	PM management setting <Procedure 4> *Indicated in 8 digits	Date of previous replacement <Procedure 2>	Remarks
Pressure roller cleaning pad	1336-0 to 8	1337	<Default values of code 1272 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-codes 1: 100,000/140,000/ 140,000 Sub-codes 4: 280,000/280,000/ 280,000
Ozone filter-2	1340-0 to 8	1341	<Default values of code 1340 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 200,000/280,000/ 280,000 Sub-code 4: 560,000/560,000/ 560,000
2nd transfer facing roller cleaning mylar	1342-0 to 8	1343	<Default values of code 1342 (e-STUDIO2500c/3500c/3510c)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0 Sub-code 1: 200,000/280,000/ 280,000 Sub-code 4: 560,000/560,000/ 560,000

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e-STUDIO2500c/3500c/3510c
ERROR CODE AND SELF-DIAGNOSTIC MODE

<<Procedure to copy the total counter value (08-257)>>

(1) Turn ON the power while [0] and [8] are pressed simultaneously.
(2) Key in the code "257" with the digital keys and press the [START] button (the following is dis-
     played).
     Note:
        Before performing the following operations, note the current counter values.

```
 0%      257
SYSTEM MODE
99999999  99999999




  ..........................................................
  [ CANCEL ]
```
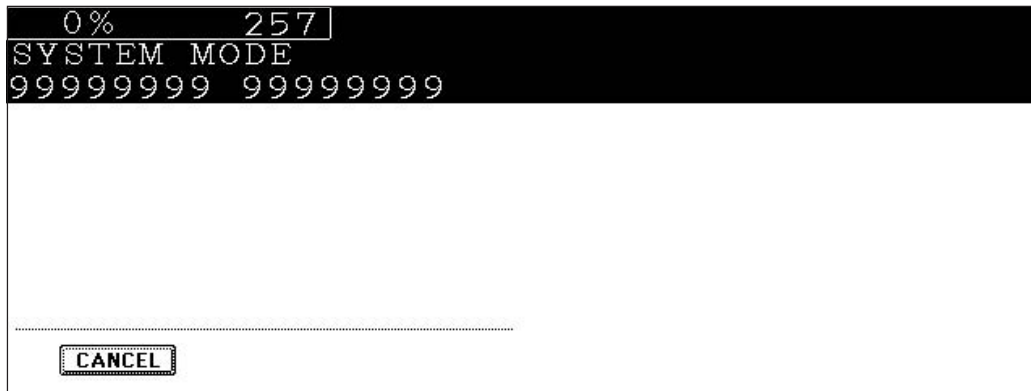
Fig. 2-3

(3) Key in the value "1" or "2" and press the [START] button.
     The value entered is displayed on the left of the "%", and the [ENTER] button is displayed.
     Note:
        The value can be erased by pressing the [CLEAR] button to change as long as the [START] but-
        ton is not pressed. (The value on the left of the "%" is reset to "0" by pressing the [CLEAR] but-
        ton.)

• Key in "1" to copy the value of the total
   counter (LGC board) (A) onto the value of
   the backup counter (SYS board) (B).

```
 1%      257
SYSTEM MODE
99999999>99999999
         ↑          ↑
        (A)        (B)

  ..........................................................
  [ CANCEL ]        [ ENTER ]
```
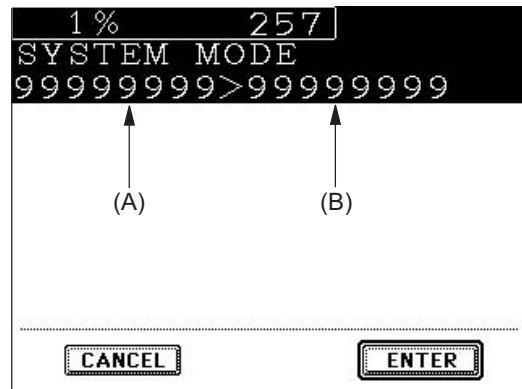
Fig. 2-4

- Key in "2" to copy the value of the backup counter (SYS board) (B) onto the value of the total counter (LGC board) (A).
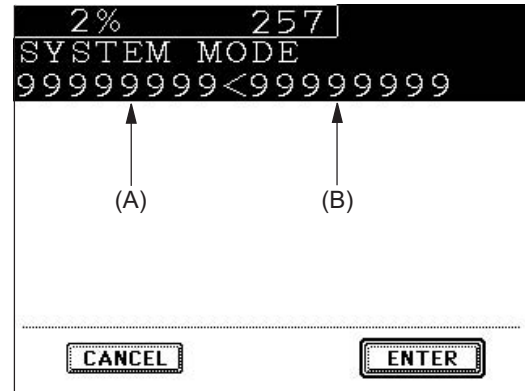
Fig. 2-5

(4)   Press the [ENTER] button to complete overwriting of the counter value.

Note:
The screen returns to the code entry screen without copying (overwriting) the value when the [CANCEL] button is pressed.

<<Default setting / restore setting of the EFI controller>>

The codes whose value can be changed by performing "Default setting of the EFI controller (08-700)" or "Restore setting of the EFI controller (08-9952)" are listed below.

Adjustment mode (05)

Code	Item		Default value when 08-700 is performed	Default value when 08-9952 is performed
7322-0	Tagbit extension processing for printing (Black mode)	PS	1	1
7322-1		PCL	1	1
7324-0	Filter process switching for printing (Black mode)	PS	0	0
7324-1		PCL	0	0
7330	Fine adjustment of sharpness center value for printer (Multilevel processing)	PS	128	128
7335		PCL	128	128
8102-0	Tagbit extension processing for printing (Color mode)	PS	1	1
8102-1		PCL	1	1
8104-0	Filter process switching for printing (Color mode)	PS	0	0
8104-1		PCL	0	0
8110	Fine adjustment value of sharpness for printer / PS / General		128	128
8114	Fine adjustment value of sharpness for printer / PCL / General		128	128
8120	Adjustment of sharpness boundary position		0	0

Setting mode (08)

Code	Item	Default value when 08-700 is performed	Default value when 08-9952 is performed
482	Feeding retry setting	1	0
1006	Address Mode	1	2
1008	IP address	10 250 250 249	000 000 000 000
1009	Subnet mask	255 255 255 252	000 000 000 000
1010	Gateway	10 250 250 250	000 000 000 000
1011	Availability of IPX	2	1
1014	Availability of AppleTalk	2	1
1060	TCP port number of FTP server	50021	21
1073	Availability of Raw/TCP	2	1
1075	Availability of LPD client	2	1
1078	Availability of IPP	2	1
1089	Availability of FTP print	2	1
1103	Bonjour setting	2	1
1464	Samba server ON/OFF setting	2	1
1482	User data department management	0	0
1496	Operation setting for User authentication/registration	0	1

<<S-ACS setting (08-9934) >>

1. Outline

When print data including color and black pages are printed using [Auto Color], including the color setting [Auto] of the printer function in the color mode, the printing operation switches [Full Color] to [Black] and vice versa, resulting in performance degradation. The S-ACS function prevents this.

2. Switching operation and performance

Due to the switching operation, the performance of [Auto Color] differs compared to that of [Black] and [Full Color].

Fig. 2-6

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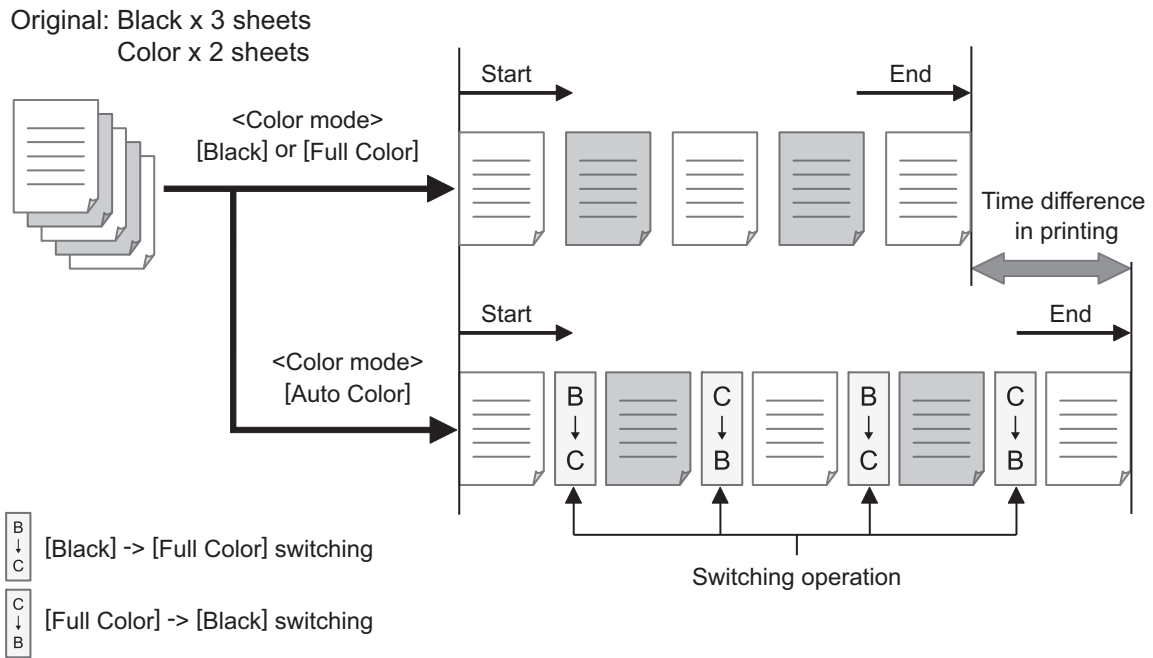
3. Printing status

When performing the code (08)9934 "S-ACS operation setting", you need to understand how the user is performing printing in order to maintain a proper balance between the performance level and the consumption level of supplies.

- Color rate
  Calculate the color rate with counter values displayed by your pressing the following buttons in the order:
  [USER FUNCTIONS] (Control panel) -> [COUNTER] -> [TOTAL COUNTER] -> [PRINT COUNTER]
  (The color rate can be figured out by your pressing the following buttons in the order: [USER FUNCTIONS] (control panel) -> [COUNTER] -> [PRINT OUT TOTAL COUNTER])

  <Example: Displayed counter values>

	Full Color	Twin/Mono Color	Black	Total	
Copy	7175	60	14399	21634	← (2)
Fax	0	0	0	0	
Printer	53261	5	26735	80001	← (3)
List	0	0	103	103	
Total	60436	65	41237	101738	← (1)

  - When matching the settings of "Copy" and "Printer"
    Calculate the color rate with the total counter value (1) as follows:
      60436 (Full Color) / 101739(Total) x 100 = 59 [%]
  - When setting "Copy" and "Printer" differently (In case the color rates of the copier and the printer significantly differ)
    Calculate the color rate with the copy counter value (2) as follows:
      7175 (Full Color) / 21634 (Total) x 100 = 33 [%]
    Calculate the color rate with the printer counter value (3) as follows:
      53261 (Full Color) / 80001 (Total) x 100 = 66 [%]
- MCV
- S-ACS level coefficient <(08)4565>
- Default setting of the color mode
  Check that the color mode of the equipment is set to one of [Black], [Full Color] and [Auto Color].

4. Setting

Perform the S-ACS operation setting referring to the table.

S-ACS operation setting <Copy>: (08)9934-0
S-ACS operation setting <Print>: (08)9934-1
S-ACS operation setting <Box>: (08)9934-2 (The setting value must be the same as that of <Print>.)

Setting value of the S-ACS operation setting	Printing status			
	Color rate	MCV	S-ACS level coefficient	Default setting of the color mode
9	25% or less	5k or more	23 or more	[Auto Color]
2		less than 5k		
2	25 to less than 50%		17 to less than 23	[Black] / [Auto Color] / [Full Color]
2 or 1	50 to less than 75%	-	17 or less	
1	75% or more		17 or less	

Since each value in the printing status is indicated as a guide to set the S-ACS operation, the setting value does not have to correspond exactly.

Flow chart for determining setting values

Determine each setting value with the color rate.
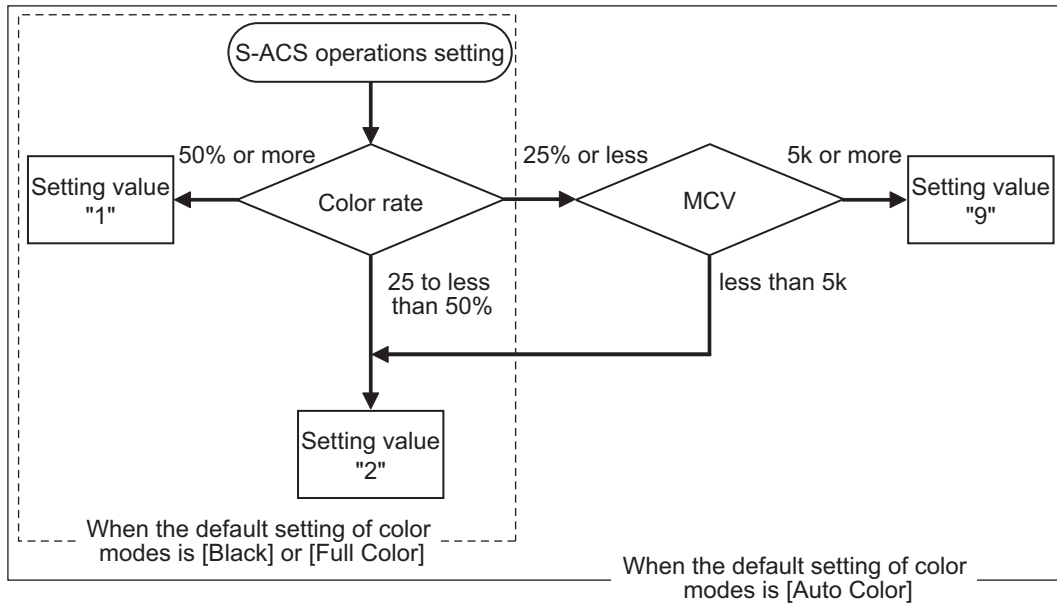
Fig. 2-7

Determine each setting value with S-ACS level coefficients.
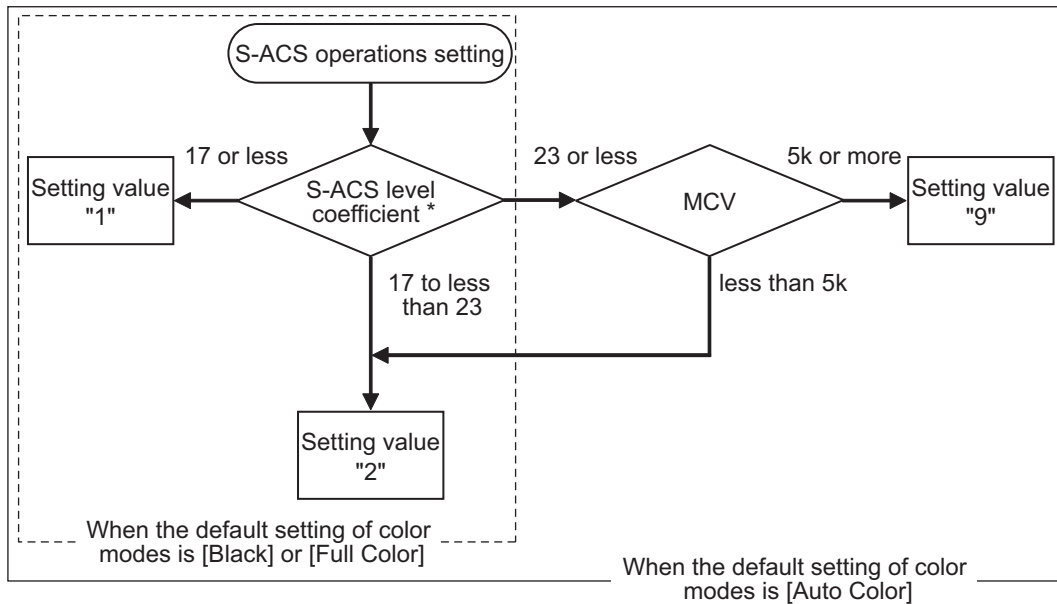
* Note: S-ACS level coefficients are only a reference and therefore they are acceptable if they fall within ±3.

Fig. 2-8

5. Precautions for setting
- The default value of (08)9934 varies depending on the system ROM version.

System ROM version	Default value of (08)9934
T380SY0*200 to T380SY0*210	9
T380SY0*310 or later	2

- When documents including a large amount of color pages are printed, set a smaller value for <(08)9934> (S-ACS operation setting) so that the performance level and the consumption level of supplies will be maintained in a better balance. However, when the documents to be printed include more black pages, such as when MCV is 5k or more, the consumption of supplies related to Y, M and C will increase because printing will be performed mostly in the "Color mode".
- When documents including a large amount of black pages are printed, set a larger value for <(08)9934> (S-ACS operation setting) so that the consumption level of the supplies related to Y, M and C will be lower. However, when the documents to be printed include more color and black pages, the performance may not be affected.
- When the printing tendency of the user has changed significantly (e.g. Color rate changed from 80% to 20%), the performance level or the consumption level of the supplies may also change. In this case, check these levels after a specific period so that the most appropriate setting values can be determined.
- The number of outputs in [Auto Color] are counted as follows:
     Color outputs: Counted as color
     Black outputs: Counted as black
- When the "Color mode" is [Auto Color], black pages are printed only with toner K and thus only the toner K is consumed.

2.2.6　Pixel counter

1) Outline

Pixel counter is a function that counts the number of dots emitted by the laser and converts it into the print ratio (%) per standard paper size. This "Print ratio (%) per standard paper size" is called Pixel count (%).

This function enables you to know how each user uses the equipment and to grasp the tendency of toner consumption (number of output pages per cartridge).

2) Factors affecting toner consumption

Standard number of output pages per cartridge shows the average number of output pages under the condition that the data of print ratio 6% is printed on the standard paper size (A4/LT) at a normal temperature and humidity.

However, users do not always print under the above condition. As for the type of original, copy/print mode and environment, each user has different tendency, and as a result, the number of output pages per cartridge becomes different depending on the user.

The major factors affecting toner consumption are as follows:

- Original/Data coverage
- Original/Data density
- Original/Print mode
- Density setting

Also there are other factors in addition to the above, such as environment, individual difference of equipment, difference in lot quality of materials, toner density and drum surface potential.

e-STUDIO2500c/3500c/3510c
ERROR CODE AND SELF-DIAGNOSTIC MODE

The general relations between the above 4 factors and toner consumption per output page in the copy function are as follows:
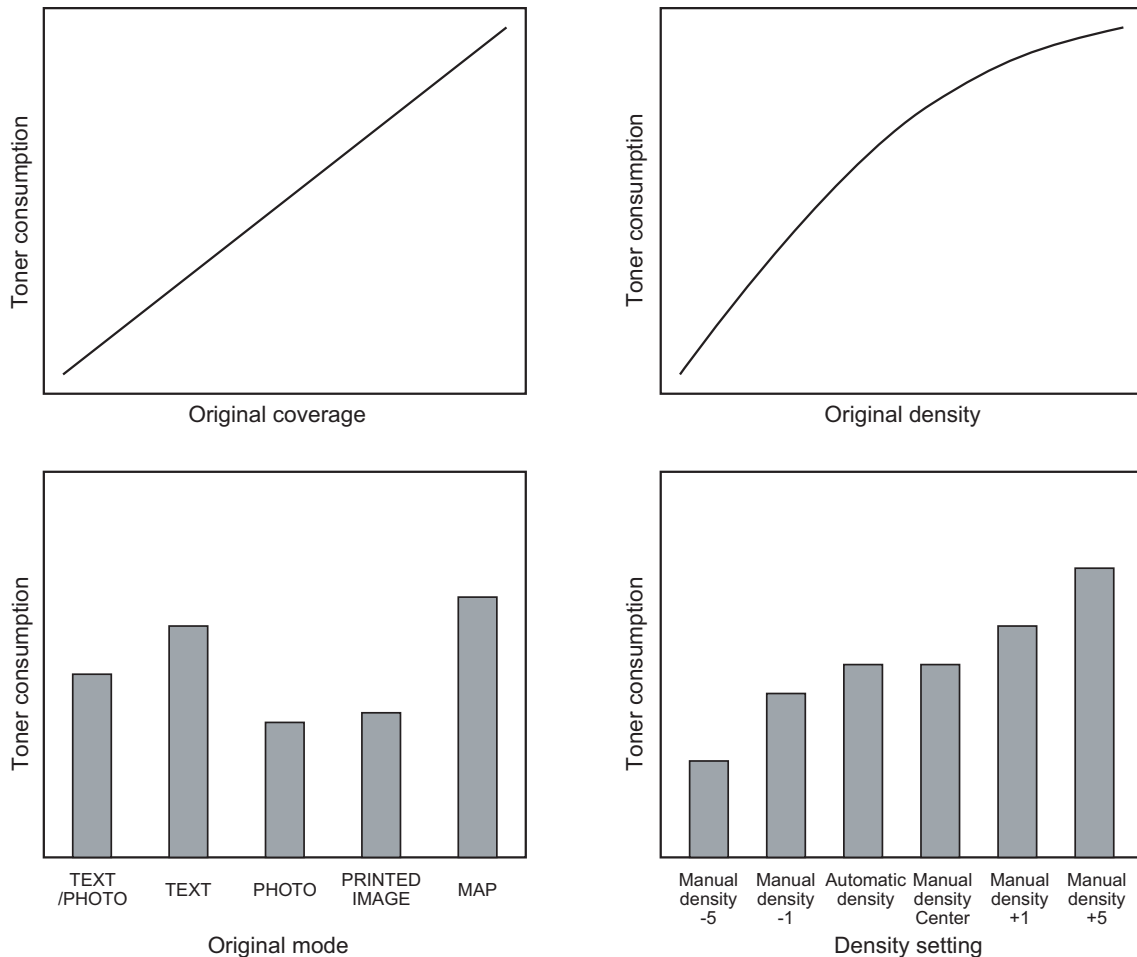
Fig. 2-9 Factors affecting toner consumption and the tendency

3) Details of pixel counter
   - Toner cartridge reference and service technician reference
     The pixel counter function in this equipment has 2 references, toner cartridge reference and service technician reference.

     Toner cartridge reference
     This is a system that accumulates data between the installation of a new toner cartridge and next installation.
     The installation of new toner cartridge is judged when the total number of pixel count or output pages after the detection of toner cartridge empty has exceeded the threshold.
     The threshold to be used is selectable in the setting mode (08-1506) between the pixel count and output pages (0: Output pages 1: Pixel counter). The threshold of pixel count is set in the setting mode (08-1508) and that of output pages is set in the setting mode (08-1507). When the new toner cartridge is judged as installed, the data related with the previous cartridge is cleared and replaced with the data after the installation of new cartridge. Clearing of the counter of the toner cartridge reference is performed in the setting mode (08-1503).

Service technician reference

This is a system that accumulates data between clearing the counter of the service technician reference by service technician and subsequently clearing the same counter.
Clearing of the counter of the service technician reference is performed in the setting mode (08-1502).

- Print count (number of output pages)
  The number of output pages shown at the pixel counter is counted after converting all paper sizes to the standard paper size (A4/LT). Printing on other than the standard size is converted by paper area ratio. The standard paper size is set in the setting mode (08-1500).
  The examples of conversion are as follows:

  Ex.)
  "1" is added to the print count when printing on A4/LT size.

  "2" is added to the print count when printing on A3/LD size. (area ratio to A4/LT: 200%)

  "1.49" is added to the print count when printing on B4 size. (area ratio to A4: 149%)

  "1.27" is added to the print count when printing on LG size. (area ratio to LT: 127%)

- Pixel count (%)
  Pixel count (%) shows the ratio of laser emitting pixels to all pixels on standard paper.
  The examples of pixel count are as follows:

  Note:
  In the following examples, 'solid copy' is considered to be 100%. But since the image has 4 margins, it never becomes 100% actually.

  Ex.)
  Printing 5 pages on A4/LT size with solid copy (Laser emits to all pixels.)
  →Pixel count: 100%, Print count: 5

  Printing 5 pages on A4/LT size with blank copy (Laser never emits.)
  →Pixel count: 0%, Print count: 5

  Printing 2 pages on A4/LT size with solid copy (Laser emits to all pixels.)
  Printing 2 pages on A4/LT size with blank copy (Laser never emits.)
  →Pixel count: 50%, Print count: 4

  Printing 3 pages on A4/LT size with 6% of laser emission
  Printing 1 page on A4/LT size with 2% of laser emission
  →Pixel count: 5%, Print count: 4

  Printing 2 pages on A3/LD size with solid copy (Laser emits to all pixels.)
  →Pixel count: 100%, Print count: 4

  Printing 2 pages on A3/LD size with 6% of laser emission
  →Pixel count: 6%, Print count: 4

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ERROR CODE AND SELF-DIAGNOSTIC MODE

- Average pixel count (%) and latest pixel count (%)
  There are 2 types of the value calculated as the pixel count, average pixel count (%) and latest pixel count (%).

  Average pixel count (%)
  The average value of all pixel count data after each reference data is cleared is calculated and displayed.

  Latest pixel count (%)
  The value is displayed for printing just before the pixel counter is confirmed.

- Type of calculated data
  Since this is multifunctional and color equipment, the data of pixel count is calculated for each function and color.
  The following list is the information that can be confirmed by LCD screen. But actually, more information can be confirmed by the setting mode (08).
  See after-mentioned "5)-Display in the setting mode (08)" for details.

O: With data
—: Without data

| | Toner cartridge reference | | | | Service technician reference | | | | | |
| | | | | | Full color/Twin color | | | | | Black |
	Yellow	Magenta	Cyan	Black	Total	Yellow	Magenta	Cyan	Black	
Copier function	O	O	O	O	O	O	O	O	O	O
Printer function	O	O	O	O	O	O	O	O	O	O
FAX function	-	-	-	O	-	-	-	-	-	O
Total	O	O	O	O	O	O	O	O	O	O

Table 2-201 Type of calculated data

- Setting related with the pixel counter function
  Standard paper size setting
  The standard paper size (A4 or LT) to convert it into the pixel count is selected (08-1500).

  Pixel counter display setting
  Whether or not to display the pixel counter on the LCD screen is selected (08-1504).

  Display reference setting
  The reference when displaying the pixel counter on the LCD screen (toner cartridge reference or service technician reference) is selected (08-1505).

  Determination counter of toner empty
  This is the counter to determine the replacement of new toner cartridge after the toner empty is detected.
  After the toner empty is detected by the auto-toner sensor, this counter checks if toner empty is not detected one more time while the specified number of pixel count or output pages is counted.

  Pixel counter clearing
  There are 3 types for the pixel count clear as follows:
  08-1501: All information related to the pixel count is cleared.
  08-1502: All information related to the service technician reference pixel count is cleared.
  08-1503: All information related to the toner cartridge reference pixel count is cleared.

4) Relation between pixel count and toner consumption
The user's printing out the image with large coverage or high density may cause the large value of pixel count. And the setting that toner consumption becomes high in the original mode or density setting may cause it as well.

In this case, the replacement cycle of toner cartridge is faster than the standard number of output pages. Therefore, this trend needs to be grasped for the service.

The relation between pixel count and number of output pages per cartridge is as follows:
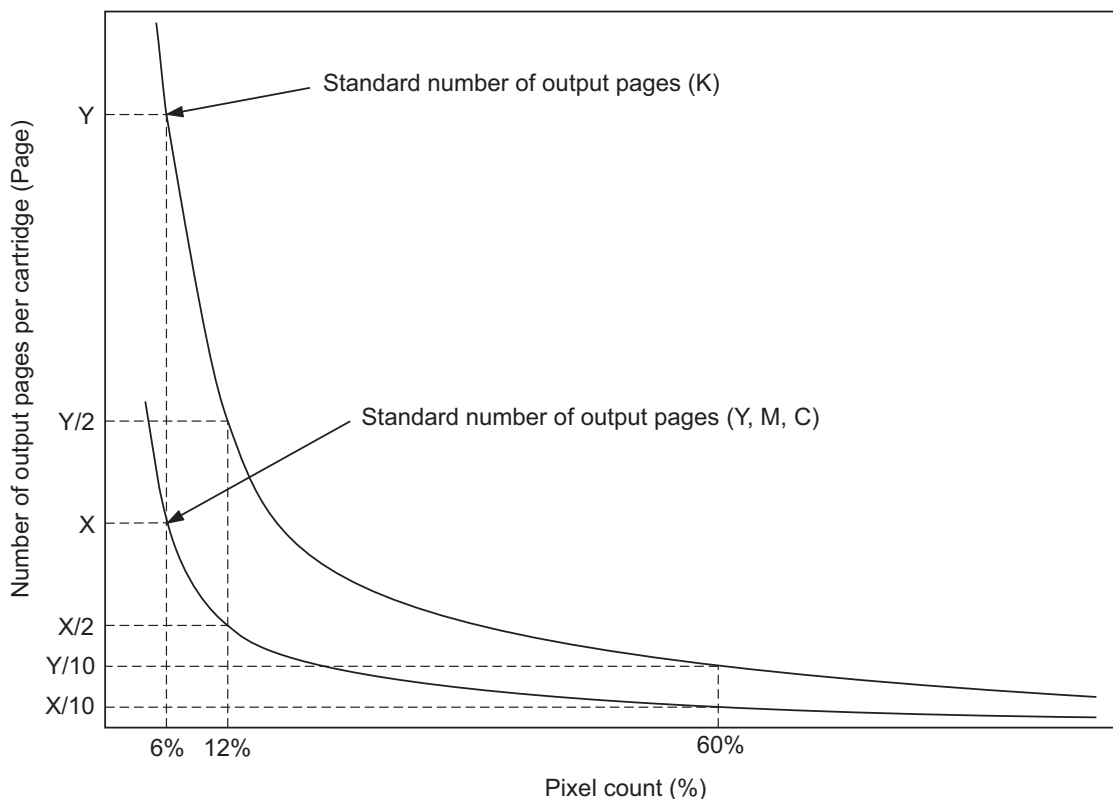
Fig. 2-10 Pixel count and number of output pages per cartridge

5) Pixel counter confirmation
   - Display on LCD screen
     Whether or not to display the pixel counter on the LCD screen is selected (0: Displayed, 1: Not displayed) in the setting mode (08-1504), and whether or not to display it at the service technician reference or toner cartridge reference is selected (0: Service technician reference, 1: Toner cartridge reference) in the setting mode (08-1505).

     The following screen is displayed when the buttons, [USER FUNCTIONS], [COUNTER] and [PIXEL COUNTER] are pressed in this order after "Displayed" is selected with the code above and the power is, as usual, turned ON. (The displayed buttons are depending on the setting of 08-1505.)
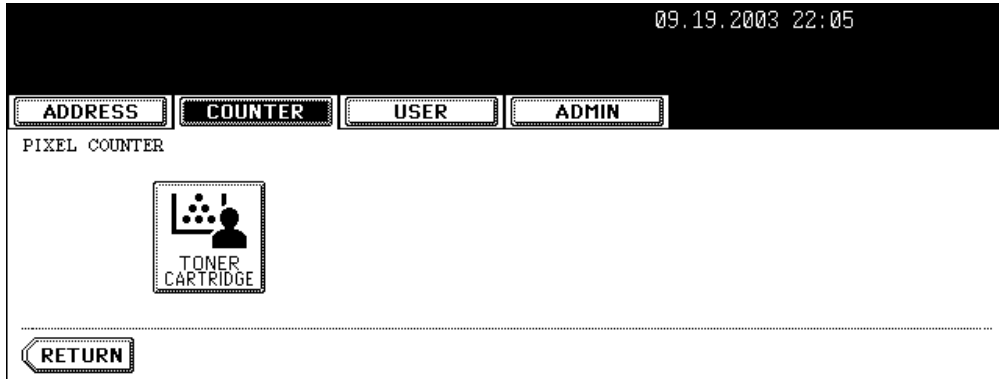
Fig. 2-11
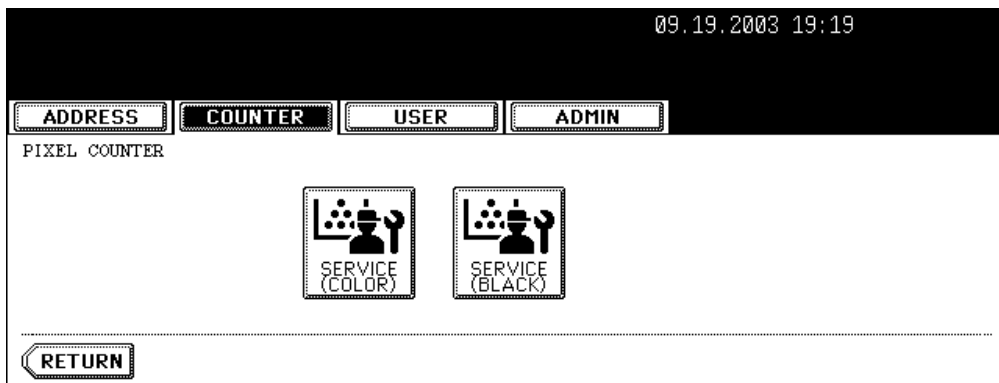
Fig. 2-12 Reference selection screen

When selecting and pressing the button in the above screen, each pixel counter screen is displayed.
[TONER CARTRIDGE] button: Information screen of toner cartridge reference is displayed.
[SERVICE (COLOR)] button: Information screen of service technician reference (full color) is displayed.
[SERVICE (BLACK)] button: Information screen of service technician reference (black) is displayed.

The following screen is displayed when pressing the [TONER CARTRIDGE] button.
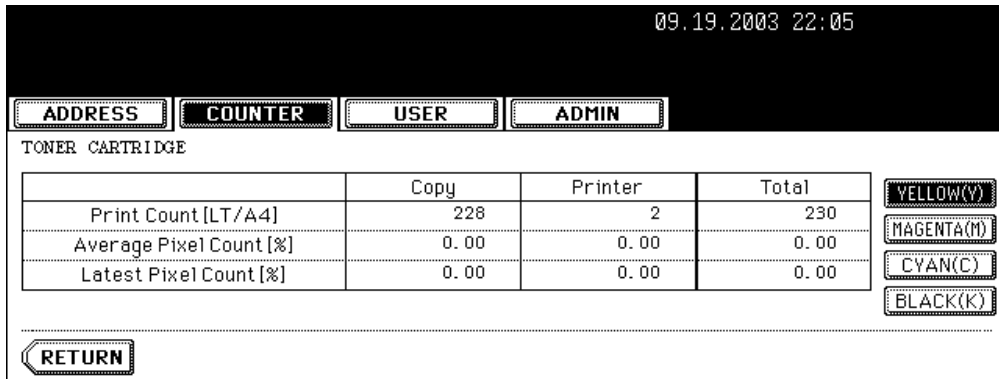
Fig. 2-13 Information screen of toner cartridge reference

The following screen is displayed when pressing the [SERVICE (COLOR)] button.
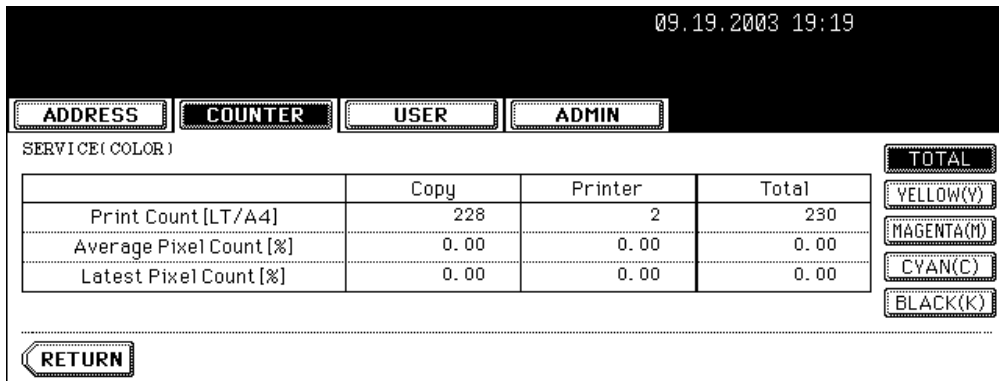
Fig. 2-14 Information screen of service technician reference (full color)

The following screen is displayed when pressing the [SERVICE (BLACK)] button.
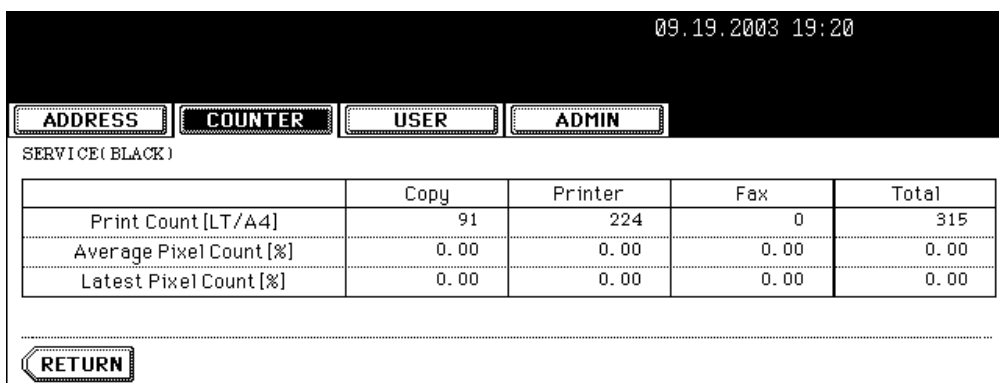
Fig. 2-15 Information screen of service technician reference (black)

e-STUDIO2500c/3500c/3510c
ERROR CODE AND SELF-DIAGNOSTIC MODE

- Data list printing
  The data for pixel counter can be printed in the list print mode (9S).
  9S-104: The data of the toner cartridge reference is printed.
  9S-105: The data of service technician reference is printed.

```
PIXEL COUNTER CODE LIST

2005.6.14  09:55

SERVICEMAN

No   DATE     Col.                              PPC    PRN    FAX    TOTAL
 0  20050614   Y    Print Count [LT/A4]        12345  23456   - - -  45678
 1  20050614   Y    Average  Pixel Count [%]   12345  23456   - - -  45678
 2  20050614   Y    Latest Pixel Count [%]     12345  23456   - - -  45678

 9  20050614   K    Print Count [LT/A4]        12345  23456  12345  45678
10  20050614   K    Average  Pixel Count [%]   12345  23456  12345  45678
11  20050614   K    Latest Pixel Count [%]     12345  23456  12345  45678
```

Fig. 2-16 Data list of toner cartridge reference

```
PIXEL COUNTER CODE LIST

2005.6.14  09:55

TONERCARTRIDGE

No   DATE     Col.                              PPC    PRN    FAX    TOTAL
 0  20050614   Y    Print Count [LT/A4]        12345  23456   - - -  45678
 1  20050614   Y    Average  Pixel Count [%]   12345  23456   - - -  45678
 2  20050614   Y    Latest Pixel Count [%]     12345  23456   - - -  45678

 9  20050614   K    Print Count [LT/A4]        12345  23456  12345  45678
10  20050614   K    Average  Pixel Count [%]   12345  23456  12345  45678
11  20050614   K    Latest Pixel Count [%]     12345  23456  12345  45678
```

Fig. 2-17 Data list of service technician reference

- Display in the setting mode (08)
  Information of pixel count can be also checked in the setting mode (08).
  For details, see 📖 P. 2-109 "2.2.5 Setting mode (08)".

Print count, pixel count

		Full color/Twin color				Black	Black (at color) + Black
		Yellow	Magenta	Cyan	Black		
Copier function	Print count (page)	1557	1559	1561	1552	1553	-
	Average pixel count (%)	1609	1610	1611	1612	1613	1614
	Latest pixel count (%)	1626	1627	1628	1629	1639	-
Printer function	Print count (page)	1558	1560	1562	1554	1555	-
	Average pixel count (%)	1615	1616	1617	1618	1619	1620
	Latest pixel count (%)	1630	1631	1632	1633	1640	-
FAX function	Print count (page)	-	-	-	-	1556	-
	Average pixel count (%)	-	-	-	-	1625	-
	Latest pixel count (%)	-	-	-	-	1634	-
Total	Average pixel count (%)	1621	1622	1623	-	-	1624

Table 2-202 Pixel count code table (toner cartridge reference)

		Full color/Twin color					Black
		Total	Yellow	Magenta	Cyan	Black	
Copier function	Print count (page)	1547	-	-	-	-	1548
	Average pixel count (%)	1577	1578	1579	1580	1581	1592
	Latest pixel count (%)	1596	1597	1598	1599	1600	1606
Printer function	Print count (page)	1549	-	-	-	-	1550
	Average pixel count (%)	1582	1583	1584	1585	1586	1593
	Latest pixel count (%)	1601	1602	1603	1604	1605	1607
FAX function	Print count (page)	-	-	-	-	-	1551
	Average pixel count (%)	-	-	-	-	-	1594
	Latest pixel count (%)	-	-	-	-	-	1608
Total	Average pixel count (%)	1587	1588	1589	1590	1591	1595

Table 2-203 Pixel count code table (service technician reference)

Pixel count distribution

		Full color/Twin color				Black
		Yellow	Magenta	Cyan	Black	
Copier function	Print count distribution (page)	1641	1642	1643	1644	1549
Printer function	Print count distribution (page)	1645	1646	1647	1648	1650
FAX function	Print count distribution (page)	-	-	-	-	1651

Table 2-204 Pixel count code table

Note:
By entering the sub code at the above code, the pixel count distribution can be displayed dividing into 10 ranges. The sub codes are as follows.

0: 0 - 5%   1: 5.1 - 10%   2: 10.1 - 15%   3: 15.1 - 20%   4: 20.1 - 25%
5: 25.1 - 30%   6: 30.1 - 40%   7: 40.1 - 60%   8: 60.1- 80%   9: 80.1 - 100%

Other information
Toner cartridge replacement counter.
The toner cartridge replacement count is displayed.
    08-1563: Toner cartridge Y
    08-1564: Toner cartridge M
    08-1565: Toner cartridge C
    08-1566: Toner cartridge K

Toner cartridge reference count started date
The toner cartridge reference count started date is displayed.
    08-1515: Toner cartridge Y
    08-1516: Toner cartridge M
    08-1517: Toner cartridge C
    08-1518: Toner cartridge K

Service technician reference cleared date
The service technician reference cleared date (08-1510) is displayed.
The date (08-1502 was performed) is stored.

Toner cartridge reference cleared date
The toner cartridge reference cleared date is displayed.
The date (08-1503 was performed) is stored.
    08-1511: Toner cartridge Y
    08-1512: Toner cartridge M
    08-1513: Toner cartridge C
    08-1514: Toner cartridge K

3. ADJUSTMENT

3.1 Adjustment Order (Image Related Adjustment)

This chapter mainly explains the procedures for image related adjustment. When replacing components which have other specified instructions for adjustment, those specified instructions are to be obeyed in priority.

In the following diagram, the solid lines with arrow lead to essential adjustments, while the dotted lines lead to adjustments to be performed if necessary.

Parts to be replaced			
Developer material	Photoconductive drum	Laser optical unit	Transfer belt
	1st transfer roller	Drum cleaning blade	Needle electrode
	Main charger grid	Image position aligning sensor	Image quality sensor

Item to be adjusted	Code in mode 05
3.2 Adjustment of the auto-toner sensor	200, 201, 202, 203, 204

Item to be adjusted	Code in mode 05
3.3 Adjustment of image quality control / Automatic initialization of image quality control	396

Item to be adjusted	Code in mode 05
3.4 Adjustment of color registration control	4719

Item to be adjusted	Code in mode 05
3.5 Adjustment of the transfer belt due to environmental factors	408

3.6 Image dimensional adjustment

Order	Items		Code in mode 05
1	3.6.2 Paper alignment at the registration roller		4100, 4101, 4103, 4104, 4105, 4106, 4107, 4108, 4109, 4110, 4111, 4115, 4116, 4117, 4118, 4120, 4122, 4123, 4124, 4125, 4126, 4127, 4128, 4129
2	3.6.3 Printer related adjustment	(a) Reproduction ratio of primary scanning direction	401
3		(b) Primary scanning data laser writing start position	411
4		(c) Reproduction ratio of secondary scanning direction	487
5		(d) Secondary scanning data laser writing start position	408, 440, 441, 444, 428, 442, 445
6		(e) Primary scanning data laser writing start position at duplexing	498
7	3.6.4 Scanner related adjustment	(a) Image distortion	–
8		(b) Reproduction ratio of primary scanning direction	405
9		(c) Image location of primary scanning direction	306
10		(d) Reproduction ratio of secondary scanning direction	340
11		(e) Image location of secondary scanning direction	305
12		(f) Top margin	430
13		(g) Right margin	432
14		(h) Bottom margin	433

Item to be adjusted	Code in mode 05
3.7.1 Automatic gamma adjustment (PPC)	1642, (1643, 580)
3.8.1 Automatic gamma adjustment (PRT)	1008, 1004 - 0 to 7

Adjust the image quality if necessary. ► (Chapter 3.7, 3.8, 3.9, 3.10)

END

Fig. 3-1

e-STUDIO2500c/3500c/3510c
ADJUSTMENT

07/06

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3.2 Adjustment of the Auto-Toner Sensor

When the developer material is replaced, adjust the auto-toner sensor in the following procedure.

(1) Install the cleaner and developer unit.

Note:
Do not install the toner cartridge.

(2) While pressing [0] and [5] simultaneously, turn the power ON. The following message will be displayed.

[0] [5]
[POWER] →

100%	A	A3
TEST MODE		

Fig. 3-2

(3) Key in a code and press the [START] button.
Code   200: All developer materials   201: Developer material Y   202: Developer material M
            203: Developer material C   204: Developer material K

(Code)
↓

100%	200	A3
TEST MODE		
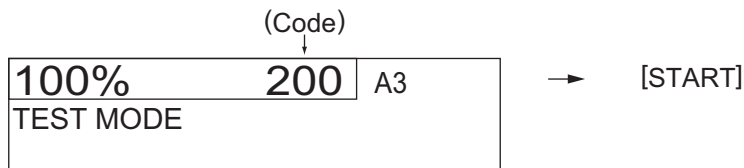
→   [START]

Fig. 3-3

(4) The message below will be displayed approx. 2 minutes later and the adjustment starts:
   • During the adjustment, "Current sensor voltage (V)" shown in (B) automatically changes and gradually approaches to "Target value (V) for adjustment reference voltage" shown in (A).

(B) → | Y: x.xxV | M: x.xxV | C: x.xxV | K: x.xxV |
(C) → | Y:**** | M:**** | C:**** | K:**** | ww% |
(A) → | Y: z.zzV | M: z.zzV | C: z.zzV | K: z.zzV |

(B): Current sensor voltage (V)

(C): Adjustment value, Humidity (%)

(A): Target value (V) for adjustment reference voltage

Fig. 3-4

(5) When the "Current sensor voltage (V)" in (B) is converged and the "Sensor output control value (bit value)" corresponding to the value for initial developer material is displayed in (C), the adjustment is completed.
   • When the adjustment is completed, the [ENTER] button is displayed on the screen.

e-STUDIO2500c / 3500c

(B) → | Y: x.xxV | M: x.xxV | C: x.xxV | K: x.xxV |
(C) → | Y: yyy | M: yyy | C: yyy | K: yyy |
(A) → | Y: z.zzV | M: z.zzV | C: z.zzV | K: z.zzV |

e-STUDIO3510c

(B) → | Y: ****V | M: ****V | C: ****V | K: x.xxV |
(C) → | Y: **** | M: **** | C: **** | K: yyy |
(A) → | Y: ****V | M: ****V | C: ****V | K: z.zzV |

(B): Current sensor voltage (V)

(C): Sensor output control value (bit value)

(A): Target value (V) for adjustment reference voltage

Fig. 3-5

Note:
   The values in (A), (B) and (C) vary with humidity.

(6) Press the [ENTER] button to store the adjustment result in the memory.

(7) Turn the power OFF.

(8) Install the toner cartridges.

3.3 Performing Image Quality Control (IQC)

(1) When unpacking
Prior to image dimensional adjustment, perform the "Automatic initialization of image quality control (05-396)" procedure.

(2) When any of the following parts is replaced, be sure to perform the "Automatic initialization of image quality control (05-396)" procedure.

• Photoconductive drum	• Developer material	• Laser optical unit
• Transfer belt	• 1st transfer roller	• Drum cleaning blade
• Needle electrode	• Main charger grid	• Image position aligning sensor
• Image quality sensor		

Notes:
- When performing "Automatic gamma adjustment" in addition, "Automatic initialization of image quality control (05-396)" should be done first.
- If "Readjust from IQC-Adjustment" is displayed, perform "Automatic initialization of image quality control (05-396)."

(3) When performing "Automatic gamma adjustment" in cases no parts written above are replaced, do the "Forced performing of image quality closed-loop control (05-395)" procedure before "Automatic gamma adjustment".

Code	Item to be adjusted	Contents

395	Forced performing of image quality closed-loop control	<Procedure>
		1) While pressing [0] and [5] simultaneously, turn the power ON.
		    →Adjustment Mode
		2) Key in [395] and press the [START] button.
		3) "WAIT" is displayed.
		4) When the adjustment finishes normally, the equipment returns to the initial state of Adjustment Mode.
		
		When an error occurs
		<When "Toner bag replacement" is displayed>
		(See "4.3.2 (F) Toner bag replacement" in the Service Manual.)
		1) Replace the toner bag with a new one and close the front cover.
		2) Press and hold the [ENERGY SAVER] button for a few seconds to shut down the equipment.
		3) Turn the power ON.
		4) Release the toner bag full status by the warming-up operation.
		5) Check that "WAIT" is displayed.
		
		<When an adjustment error is displayed>
		(See "4.3.2 (D) No toner in the cartridge" in the Service Manual.)
		1) Press and hold the [ENERGY SAVER] button for a few seconds to shut down the equipment in order to check the toner empty status.
		2) Turn the power ON.
		3) Check the toner supply operation in warming-up.
		    When a message prompts you to replace the toner cartridge, open the front cover and replace the cartridge with a new one.
		4) Check that "WAIT" is displayed.
		
		<Other abnormalities>
		Take the appropriate action described in Troubleshooting.
		📖 P. 5-1 "5. TROUBLESHOOTING"

Code	Item to be adjusted	Contents
396	Automatic initialization of image quality control	<Procedure> 1) While pressing [0] and [5] simultaneously, turn the power ON. →Adjustment Mode 2) Key in [396] and press the [START] button. 3) "WAIT" is displayed. 4) When the adjustment finishes normally, the equipment will return to initial state of the Adjustment Mode. When an error occurs <When "Toner bag replacement" is displayed> (See "4.3.2 (F) Toner bag replacement" in the Service Manual.) 1) Replace the toner bag with a new one and close the front cover. 2) Press and hold the [ENERGY SAVER] button for a few seconds to shut down the equipment. 3) Turn the power ON. 4) Release the toner bag full status by the warming-up operation. 5) Check that "WAIT" is displayed. <When an adjustment error is displayed> (See "4.3.2 (D) No toner in the cartridge" in the Service Manual.) 1) Press and hold the [ENERGY SAVER] button for a few seconds to shut down the equipment in order to check the toner empty status. 2) Turn the power ON. 3) Check the toner supply operation in warming-up. When a message prompts you to replace the toner cartridge, open the front cover and replace the cartridge with a new one. 4) Check that "WAIT" is displayed. <Other abnormalities> Take the appropriate action described in Troubleshooting. 📖 P. 5-1 "5. TROUBLESHOOTING"

3

e-STUDIO2500c/3500c/3510c
ADJUSTMENT

3.4 Adjustment of Color Registration Control

After having finished the "Automatic initialization of image quality control (05-396)" procedure, perform the "Forced performing of color registration control adjustment (05-4719)" procedure.

Code	Item to be adjusted	Contents
4719	Forced performing of color registration control	**\<Procedure\>** 1) While pressing [0] and [5] simultaneously, turn the power ON. →Adjustment mode 2) Key in [4719] and press the [START] button. 3) When the adjustment finishes normally, the equipment returns to the initial state of Adjustment Mode. When an error occurs \<When "Toner bag replacement" is displayed\> (See "4.3.2 (F) Toner bag replacement" in the Service Manual.) 1) Replace the toner bag with a new one and close the front cover. 2) Press and hold the [ENERGY SAVER] button for a few seconds to shut down the equipment. 3) Turn the power ON. 4) Release the toner bag full status by the warming-up operation. 5) Check that "WAIT" is displayed. \<When an adjustment error is displayed\> (See "4.3.2 (D) No toner in the cartridge" in the Service Manual.) 1) Press and hold the [ENERGY SAVER] button for a few seconds to shut down the equipment in order to check the toner empty status. 2) Turn the power ON. 3) Check the toner supply operation in warming-up. When a message prompts you to replace the toner cartridge, open the front cover and replace the cartridge with a new one. 4) Check that "WAIT" is displayed. \<Other abnormalities\> Take the appropriate action described in Troubleshooting. 📖 P. 5-1 "5. TROUBLESHOOTING"

3.5　Adjustment of the transfer belt due to environmental factors

The length of the transfer belt may change depending on the environmental temperature and humidity, and this will cause change to the leading edge position of the image.
Although image position adjustment has been performed at factory shipment, when the equipment is installed or any part is replaced, it is necessary to check the difference between the "05-4732-0: Reference value" and "05-4732-1: actual value" of the "Displaying corrected values of leading edge adjustment", because there may be a difference between the environment of the factory and that of the installation location. If the difference between the reference value and actual value is 10 bits or more, be sure to perform "Image location adjustment of secondary scanning direction (05-408)".

- The equipment automatically corrects the change in the leading edge position caused by any environmental change. However, readjustment for the leading edge position in the installation environment (i.e. obtaining the reference value) can make the automatic correction even more precise, since it can suppress inconsistency caused by the dispersion of units, parts and sensors.

- A difference between the reference value and actual value may occur even if the equipment has not been moved. However, you do not have to perform "05-408" every time a difference is found, if it has already been performed after installation of the equipment or replacement of parts.

Code	Adjustment item	Remarks
4732-0	Displaying corrected values of leading edge adjustment Absolute humidity reference value	Displays the absolute value of the corrected value of the leading edge adjustment
4732-1	Displaying corrected values of leading edge adjustment Absolute humidity actual value	Displays the actual value of the corrected value of the leading edge adjustment
408	Image location adjustment of secondary scanning direction	Performs the image location adjustment of the secondary scanning direction (laser writing start position adjustment)

Note:

When checking "Displaying corrected values of leading edge adjustment (05-4732-0), (05-4732-1)" and "Image location adjustment of secondary scanning direction (05-408)", be sure to do this in a few hours after the equipment has been installed or any part has been replaced.
The length of the transfer belt changes slowly according to the environment, so the larger the environmental change is, the longer it takes the belt length to become stable. And if you perform this adjustment immediately after installation or replacement work, the adjustment value may not be proper, and therefore, deviation in the leading edge position is likely to occur when the equipment becomes stable.

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.

(2) Perform paper selection for the drawer, key in [98], and then press the [FAX] button to output the grid pattern (to update the actual value).

(3) Key in [4732] and press the [START] button.

(4) Key in [0] and press the [START] button.

(5) Record the displayed "Reference value (A)" and press the [ENTER] button.

(6) Key in [4732] and press the [START] button.

(7) Key in [1] and press the [START] button.

(8) Record the displayed "actual value (B)" and press the [ENTER] button.

(9) Calculate the difference between "Reference value (A)" and "actual value (B)" to obtain "Difference (C)".

Range of difference (C)	Remarks
$C \leq 10$	Perform the image location adjustment of the secondary scanning direction. Proceed to step (10).
$-10 < C < 10$	The image location of the secondary scanning direction is set properly. Proceed to step (12).
$10 \leq C$	Perform the image location adjustment of the secondary scanning direction. Proceed to step (10).

* When the difference between "05-4732-0: Reference value" and "05-4732-1: actual value" is 10 bits, the equipment has already performed automatic correction by approx. 1 mm.

(10) Key in [408] and press the [START] button.

(11) Enter the adjustment value by means of the following procedure.
In order to enter the adjustment value, it is necessary to key in a value other than the current one to clear the previously stored one. Then enter the value which has been displayed as the current one after keying in the code [408] again.

```
E.g.: when the adjustment value is 50
┌─────────────────────────────┐
│ 100%          408  A4       │
│ TEST MODE                   │      Record the current adjustment value.
│          50           50    │
└─────────────────────────────┘
      ↑                ↑
Current adjustment value    Adjustment value newly keyed in.
                            (If there has been no entering,
                            the current adjustment value
                            is displayed.)
              ⇩
┌─────────────────────────────┐
│ 100%          408  A4       │      In order to clear the adjustment value
│ TEST MODE                   │      previously stored in the memory,
│          50           49    │      key in any value other than the current
└─────────────────────────────┘      one and press the [ENTER] button.
                       ↑
              Key in a value other than
              the current adjustment one.
              ⇩
┌─────────────────────────────┐
│ 100%          408  A4       │      Key in the code [408] again
│ TEST MODE                   │      and press the [START] button.
│          49           49    │
└─────────────────────────────┘
              ⇩
┌─────────────────────────────┐
│ 100%          408  A4       │      Key in the recorded adjustment value
│ TEST MODE                   │      again and press the [ENTER] button.
│          49           50    │
└─────────────────────────────┘
                       ↑
              Key in the recorded
              adjustment value.
              ⇩
┌─────────────────────────────┐
│ 100%          408  A4       │      Check the adjustment value.
│ TEST MODE                   │
│          50           50    │
└─────────────────────────────┘
      ↑
Check the adjustment value
```

Fig. 3-6

(12) Turn the power OFF.

3.6 Image Dimensional Adjustment

3.6.1 General description

There are several adjustment items in the image dimensional adjustment, as listed below. Prior to this image dimensional adjustment, perform the "Automatic initialization of image quality control (05-396)". When adjusting these items, the following adjustment order should strictly be observed.

Item to be adjusted		Code in mode 05
1) Paper alignment at the registration roller		4100, 4101, 4103, 4104, 4105, 4106, 4107, 4108, 4109, 4110, 4111, 4115, 4116, 4117, 4118, 4120, 4122, 4123, 4124, 4125, 4126, 4127, 4128, 4129
Printer related adjustment	Reproduction ratio of primary scanning direction (Fine adjustment of polygonal motor rotation speed)	401
	Primary scanning data laser writing start position	411
	Reproduction ratio of secondary scanning direction (Fine adjustment of transfer belt motor rotation speed)	487
	Secondary scanning data laser writing start position	408, 440, 441, 444, 428, 442, 445
	Primary scanning data laser writing start position at duplexing	498
Scanner related adjustment	Image distortion	-
	Reproduction ratio of primary scanning direction	405
	Image location of primary scanning direction	306
	Reproduction ratio of secondary scanning direction	340
	Image location of secondary scanning direction	305
	Top margin	430
	Right margin	432
	Bottom margin	433

[Procedure to key in adjustment values]

In accordance with the procedure described below, make adjustment of each adjustment item so that the measured values obtained from test copies satisfy the specification. By pressing the [FAX] button, immediately after starting the Adjustment Mode (05), single-sided test copying can be performed (normal copy mode).
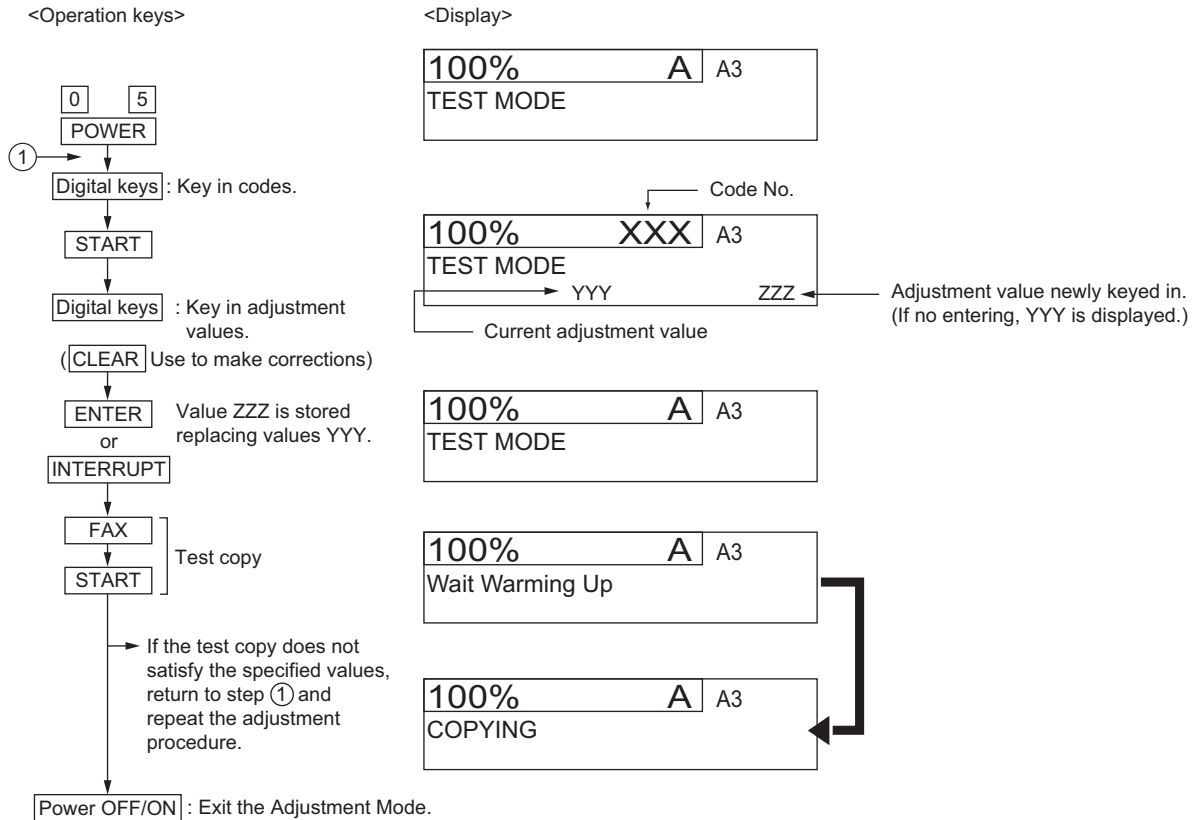
Fig. 3-7

3.6.2 Paper alignment at the registration roller

[A] Adjustment with touch panel

Paper alignment at the registration roller can be adjusted in the following procedure by performing the code 05-480.

1) Select the drawer.
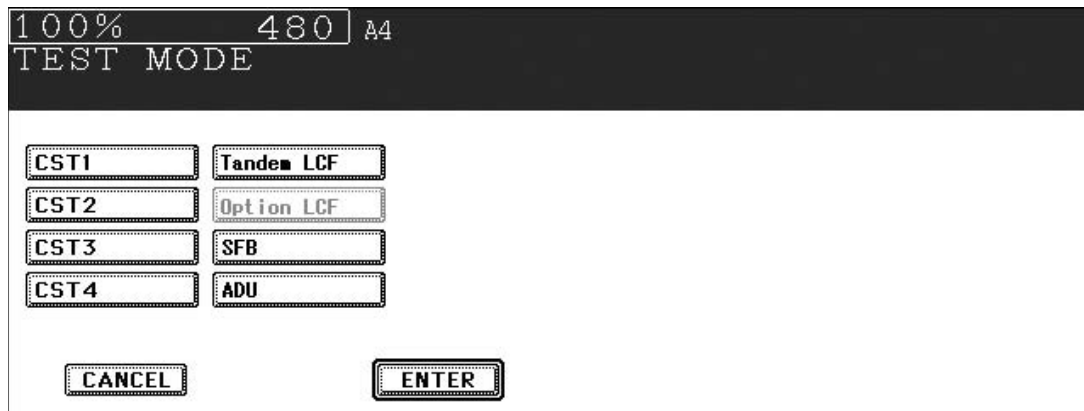
Fig. 3-8

2) Select the paper size.
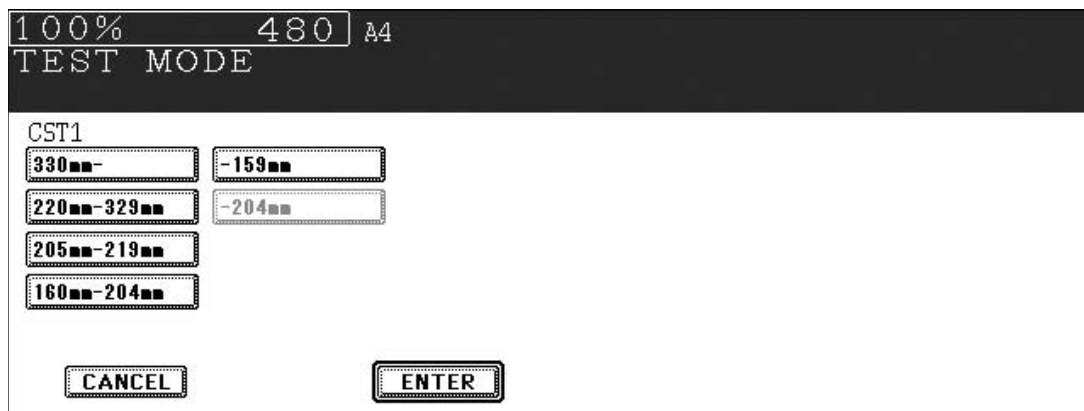
Fig. 3-9

3) Select the media type.
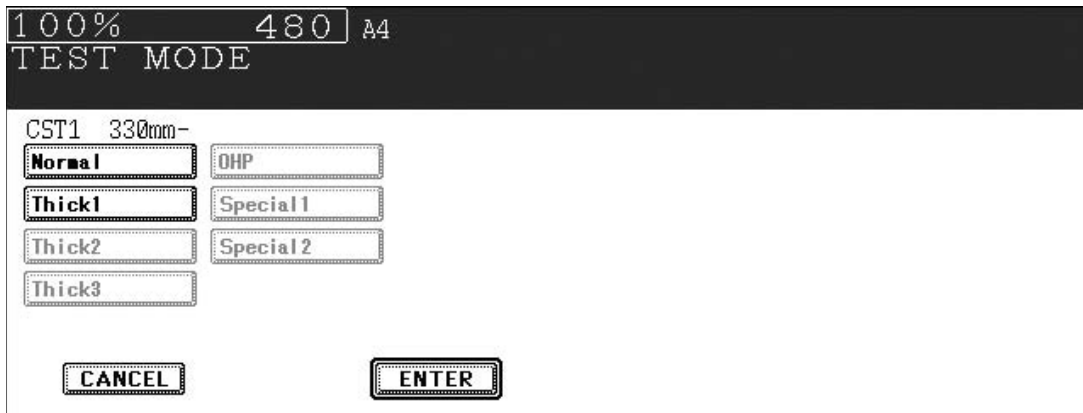
Fig. 3-10

4) Select the copy speed. (Plain paper only)
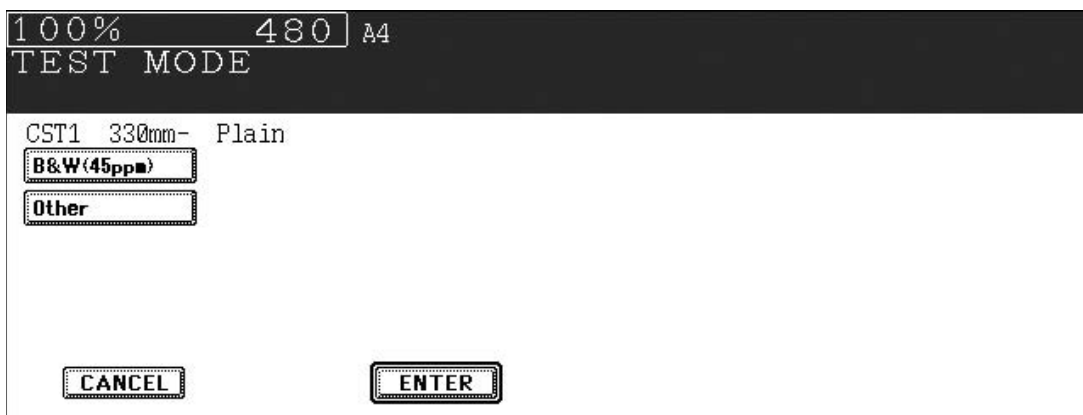
Fig. 3-11

5) Key in the adjustment value.
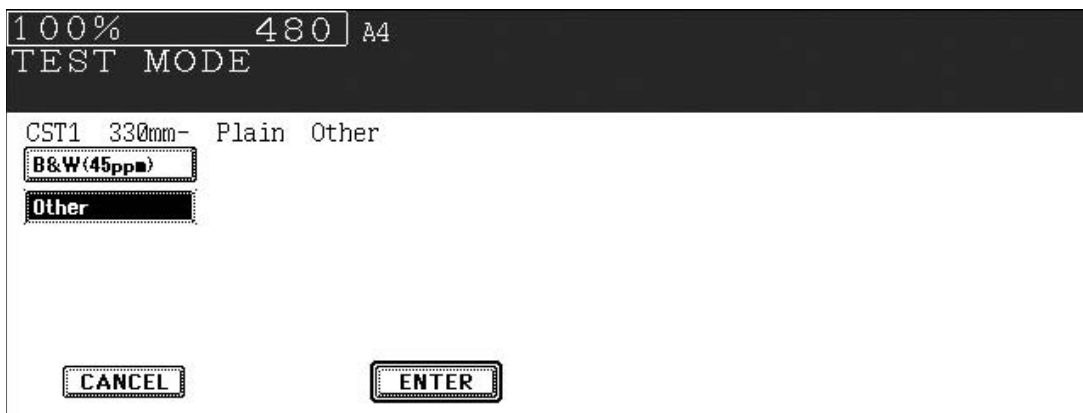
Fig. 3-12

6) Press the [ENTER] button to finish the adjustment.
   * Press the [FUNCTION CLEAR] button to return to the previous menu.

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[B] Adjustment by direct code entry

The aligning amount is adjusted by using the following codes in Adjustment Mode (05).

Drawer	Code	Sub code	Paper size (Select the paper size with the sub code.)		Paper type[*]
1st drawer (CST1)	4100	0,1,2,3,4	0: 330 mm or longer (13.0 inches or longer) 1: 220–329 mm (8.7–12.9 inches) 2: 205–219 mm (8.1–8.6 inches) 3: 160-204 mm (6.3–8.0 inches) 4: 159 mm or shorter (6.26 inches or shorter)		Plain paper
	4115	0,1,2,3,4			Thick paper 1
	4122	0,1,2,3,4			Plain paper (e-STUDIO3510c only)
2nd drawer (CST2)	4101	0,1,2,3,4			Plain paper
	4116	0,1,2,3,4			Thick paper 1
	4123	0,1,2,3,4			Plain paper (e-STUDIO3510c only)
PFP upper drawer (CST3)	4108	0,1,2,3,4			Plain paper
	4117	0,1,2,3,4			Thick paper 1
	4124	0,1,2,3,4			Plain paper (e-STUDIO3510c only)
PFP lower drawer (CST4)	4109	0,1,2,3,4			Plain paper
	4118	0,1,2,3,4			Thick paper 1
	4125	0,1,2,3,4			Plain paper (e-STUDIO3510c only)
Bypass feed	4103	0,1,2,3,4			Plain paper
	4104	0,1,2,3,4			Thick paper 1
	4105	0,1,2,3,4			Thick paper 2
	4106	0,1,2,3,4			Thick paper 3 / Thick paper 4
	4107	0,1,2,3,4			OHP
	4127	0,1,2,3,4			Plain paper (e-STUDIO3510c only)
	4128	0,1,2,3,4			Special paper 1
	4129	0,1,2,3,4			Special paper 2
LCF	4111		-		Plain paper
	4126		-		Plain paper (e-STUDIO3510c only)
ADU	4110	0,1,2,3,4	0: 330 mm or longer (13.0 inches or longer) 1: 220–329 mm (8.7–12.9 inches) 2: 205–219 mm (8.1–8.6 inches) 3: 160-204 mm (6.3–8.0 inches) 4: 159 mm or shorter (6.26 inches or shorter)		Plain paper
	4120	0,1,2,3,4			Thick paper 1

*Weight:

Plain paper: 64 to 105 g/m^2 (17 lb. Bond to 28 lb. Bond)

Thick paper 1: 106 to 163 g/m^2 (28 lb. Bond to 60 lb. Cover (90 lb. Index))

Thick paper 2: 164 to 209 g/m^2 (61 lb. Cover to 77.3 lb. Cover (115.7 lb. Index))

Thick paper 3: 210 to 256 g/m^2 (77.3 lb. Cover to 94.5 lb. Cover (141.4 lb. Index))

Thick paper 4: 257 to 280 g/m^2 (94.5 lb. Cover to 100 lb. Cover (150 lb. Index))

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<Procedure>

[0][5] → (Code) → [START] ⌐ ─(Not necessary for LCF)─ ┐ → (Current value displayed) → (Enter new value)
[Power]   └─▶ (Sub-code) → [START] ┘

→ [SET] or [INTERRUPT] Stores in memory → [Drawer selection] → (*1) +[FAX] (Test print) → [POWER] OFF/ON (Exit)
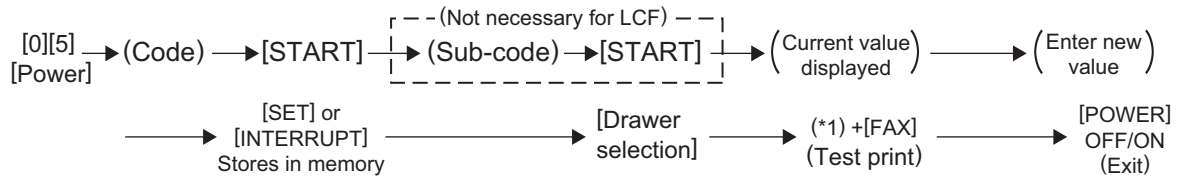
(*1) 1:   Single-sided grid pattern in Black Mode
      3:    Double-sided grid pattern in Black Mode
      55:   Grid pattern of thick paper 2 in Full Color Mode
      56:   Grid pattern of thick paper 3 / thick paper 4 in Full Color Mode
      57:   Grid pattern of OHP film in Full Color Mode
      58:   Single-sided grid pattern of thick paper 2 in Black Mode
      59:   Single-sided grid pattern of thick paper 3 / thick paper 4 in Black Mode
      60:   Single-sided grid pattern of OHP film in Black Mode
      98:   Single-sided grid pattern in CK Mode

Note:
   If the aligning amount is too large, abnormal noise (paper-folding noise) or actual paper folding
   may occur during paper feeding. If the aligning amount is too small, on the other hand, a skew,
   an image dislocation in feeding direction or a paper exit jam (E010) may occur. Pay attention to
   the above and select the appropriate value.

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3.6.3　Printer related adjustment

The printer related adjustment is performed by using the printed out grid pattern.
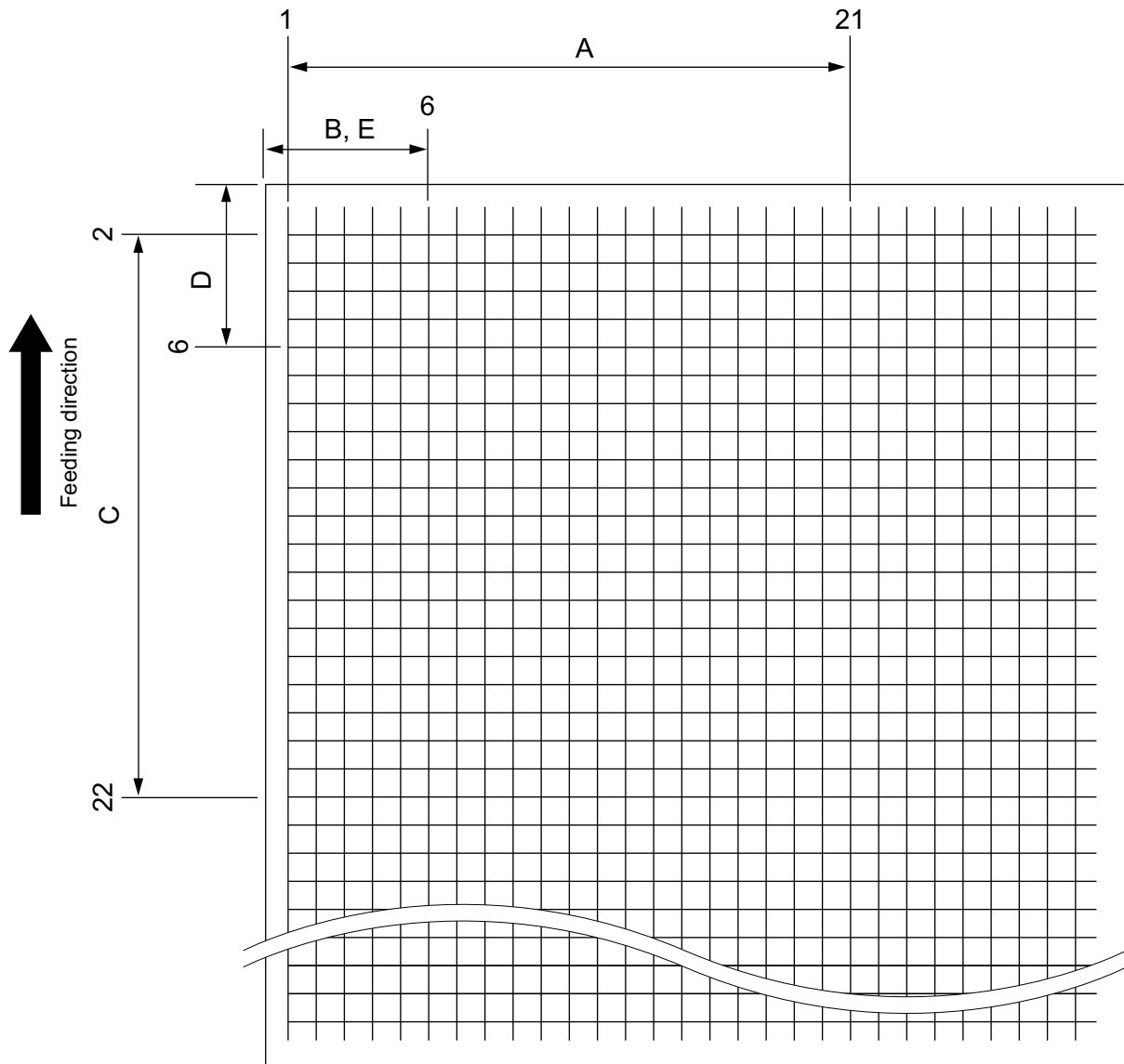
Fig. 3-13

	Adjustment Tolerance	Detail of adjustment
A	200 ± 0.5mm	Refer to "[A] Reproduction ratio of primary scanning direction (Fine adjustment of polygonal motor rotation speed (Printer))"
B	52 ± 0.5mm	Refer to "[B] Primary scanning data laser writing start position (Printer)"
C	200 ± 0.5mm	Refer to "[C] Reproduction ratio of secondary scanning direction (Fine adjustment of transfer belt motor rotation speed (Printer))"
D	52 ± 0.5mm	Refer to "[D] Secondary scanning data laser writing start position"
E	52 ± 0.5mm	Refer to "[E] Primary scanning data laser writing start position at duplexing"

[A] Reproduction ratio of primary scanning direction (Fine adjustment of polygonal motor rotation speed (Printer))

(1) While pressing [0] and [5] simultaneously, turn the power ON.→(Adjustment Mode)
(2) Press [98] →[FAX]. (A grid pattern with 10 mm squares is printed out. Use A3/LD from the 2nd drawer.)
(3) Measure the distance A from the 1st line to the 21st line of the grid pattern.
(4) Check if the distance A is within 200±0.5 mm.
(5) If not, use the following procedure to change values and measure the distance A again.
   <Procedure>
   (Adjustment Mode) →(Key in the code [401]) →[START]
   →(Key in a value (acceptable values: 0 to 255))
   →[ENTER] or [INTERRUPT] (Stored in memory)
   →"100% A" is displayed.
   →Press [98] →[FAX] →(A grid pattern is printed out.)
   *   The larger the adjustment value is, the longer the distance A becomes (approx. 0.08 mm/step).

[B] Primary scanning data laser writing start position (Printer)

(1) While pressing [0] and [5] simultaneously, turn the power ON. →(Adjustment Mode)
(2) Press [98] →[FAX]. (A grid pattern with 10 mm squares is printed out. Use A3/LD from the 2nd drawer.)
(3) Measure the distance B from the left edge of the paper to the 6th line of the grid pattern.
(4) Check if the distance B is within 52±0.5 mm.
(5) If not, use the following procedure to change values and measure the distance B again.
   <Procedure>
   (Adjustment Mode) →(Key in the code [411]) →[START]
   →(Key in a value (acceptable values: 0 to 255))
   →[ENTER] or [INTERRUPT] (Stored in memory)
   →"100% A" is displayed
   →Press [98] →[FAX] →(A grid pattern is printed out.))
   *   The larger the adjustment value is, the longer the distance B becomes (approx. 0.04 mm/step).
(6) After the adjustment for the code 411 is completed, apply the same adjustment value for the code 410.

   (Adjustment Mode) →(Key in the code [410]) →[START]
   →(Key in the same value in the step 5 above)
   →Press [ENTER] or [INTERRUPT] (Stored in memory).

   Note:
   Make sure the first line of the grid pattern is printed out since the line is occasionally vanished.

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[C] Reproduction ratio of secondary scanning direction (Fine adjustment of transfer belt motor rotation speed)

Code	Sub code	Transport speed	Function	Remarks
487	0	Normal speed	PRT	When the value increases, the reproduction ratio in the secondary scanning direction becomes larger. (Approx. 0.09 mm/1steps)
	1	Normal speed	FAX	
	2	Normal speed	PPC	
	3	Decelerating	PRT	
	4	Decelerating	FAX	
	5	Decelerating	PPC	Normal speed: Plain paper, Black/Color
	6	High speed	PRT	Decelerating: Thick paper, Black/Color
	7	High speed	FAX	High Speed: Plain paper, Black (e-STUDIO3510c only)
	6	High speed	PPC	

(1) While pressing [0] and [5] simultaneously, turn the power ON. →(Adjustment Mode)

(2) Press [98] →[FAX]. (A grid pattern with 10 mm squares is printed out. Use A3/LD from the 2nd drawer.)

(3) Measure the distance C from the 2nd line at the leading edge of the paper to the 22nd line of the grid pattern.
   * Normally, the 1st line of the grid pattern is not printed.

(4) Check if the distance C is within 200±0.5 mm.

(5) If not, use the following procedure to change values and measure the distance C again.

(6) Perform the color registration (4719) after the adjustment.
   <Procedure>
   (Adjustment Mode) →(Key in the code [487]) →[START] →(Key in the sub-code shown above)
   →[START] →(Key in a value (acceptable values: 0 to 255))
   →[ENTER] or [INTERRUPT] (Stored in memory)
   * When the value is not within the recommended values, the trailing edge area of the image may be out of position for the paper length or the density at the trailing edge area of the image may become lower. Perform the adjustment confirming the image.
   →"100% A" is displayed
   →Press [98] →[FAX] →(A grid pattern is printed out.)
   * The larger the adjustment value is, the longer the distance C becomes (approx. 0.09 mm/step).
   →(Key in the code [4719]) →[START] Æ (Enforced color registration)

[D] Secondary scanning data laser writing start position

Performing the code 05-408 covers this adjustment for all paper sources.
The adjustment for each paper source is also available.

For all paper sources

Code	Paper size	Acceptable value	Remarks
408	A3/LD	0 to 80	Performs the adjustment for all paper sources.

For each paper source

Order for adjustment	Paper source	Code	Paper size	Acceptable value	Remarks
1	1st drawer	440	A4/LT	0 to 40	
2	2nd drawer	441	A3/LD	0 to 40	
3	PFP upper drawer	444	A4/LT	0 to 40	
4	PFP lower drawer	428	A4/LT	0 to 40	
5	Bypass feed	442	A4/LT	0 to 40	
6	Duplexing	445	A3/LD	0 to 40	Paper fed from the 2nd drawer

(1) While pressing [0] and [5] simultaneously, turn the power ON. →(Adjustment Mode)
(2) Press [98] ([3] for duplexing) →[FAX]. (A grid pattern with 10 mm squares is printed out.)
(3) Measure the distance D from the leading edge of the paper to the 6th line of the grid pattern.
   * Normally, the 1st line of the grid pattern is not printed.
   * At the duplexing, measure it on the top side of the grid pattern.
(4) Check if the distance D is within 52±0.5 mm.
(5) If not, use the following procedure to change values and measure the distance D again.
   <Procedure>
   (Adjustment Mode) →(Key in the code shown above) →[START]
   →(Key in an acceptable value shown above)
   →[ENTER] or [INTERRUPT] (Stored in memory)
   →"100% A" is displayed
   →Press [98] ([3] for duplexing)
   →[FAX] →(A grid pattern is printed out.)
   * The larger the adjustment value is, the longer the distance D becomes (approx. 0.15 mm/ step).

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[E]   Primary scanning data laser writing start position at duplexing

   Note:
      Make sure the first line of the grid pattern is printed out since the line is occasionally vanished.

[E-1]   Adjustment for long-sized paper

(1)   While pressing [0] and [5] simultaneously, turn the power ON. →(Adjustment Mode)
(2)   Press [3] →[FAX]. (A grid pattern with 10 mm squares is printed out. Use A3/LD from the 2nd drawer.)
(3)   Check the grid pattern on the test print and measure the distance E from the left edge of the paper to the 6th line of the grid pattern.
(4)   Check if the distance E is within 52±0.5 mm.
(5)   If not, use the following procedure to change values and measure the distance E again.
      <Procedure>
       (Adjustment Mode) →(Key in the code [498]) →[START] →[0] →[START]
      →(Key in a value (acceptable values: 0 to 255))
      →[ENTER] or [INTERRUPT] (Stored in memory)
      →"100% A" is displayed.
      →Press [3] →[FAX] →(A grid pattern is printed out.)
      *   The larger the adjustment value is, the longer the distance E becomes (approx. 0.04 mm/ step).

[E-2]   Adjustment for short-sized paper

(1)   While pressing [0] and [5] simultaneously, turn the power ON. →(Adjustment Mode)
(2)   Press [3] →[FAX]. (A grid pattern with 10 mm squares is printed out. Use A4/LT from the 1st drawer.)
(3)   Check the grid pattern on the test print and measure the distance E from the left edge of the paper to the 6th line of the grid pattern.
(4)   Check if the distance E is within 52±0.5 mm.
(5)   If not, use the following procedure to change values and measure the distance E again.
      <Procedure>
      (Adjustment Mode) →(Key in the code [498]) →[START] →[1] →[START]
      →(Key in a value (acceptable values: 0 to 255))
      →[ENTER] or [INTERRUPT] (Stored in memory)
      →"100% A" is displayed
      →Press [3] →[FAX] →(A grid pattern is printed out.)
      *   The larger the adjustment value is, the longer the distance E becomes (approx. 0.04 mm/ step).

<Adjustment procedure summarization for A to E>
      [0] [5] [Power ON] →[98] ([3](05-445, 498) for duplexing) →[FAX]
      A: 05-401 (2nd drawer, A3/LD)   → 200±0.5 mm (0.08 mm/step)
      B: 05-411 (2nd drawer, A3/LD)   → 52±0.5 mm (0.04 mm/step)
                                               → Key in the same value for 05-410.
      C: 05-487-0 to 8 (2nd drawer, A3/LD)   → 200±0.5 mm (0.09 mm/step)
      D: 05-408 (2nd drawer, A3/LD)   → 52±0.5 mm (0.15 mm/step)
           05-440 (1st drawer, A4/LT)
           05-441 (2nd drawer, A3/LD)
           05-444 (PFP upper drawer, A4/LT)
           05-428 (PFP lower drawer, A4/LT)
           05-442 (Bypass feed, A4/LT)
           05-445 (Duplexing, A3/LD)
      E: 05-498-0 (2nd drawer, A3/LD),   → 52±0.5 mm (0.04 mm/step)
           05-498-1 (1st drawer, A4/LT)

3.6.4 Scanner related adjustment

[A] Image distortion
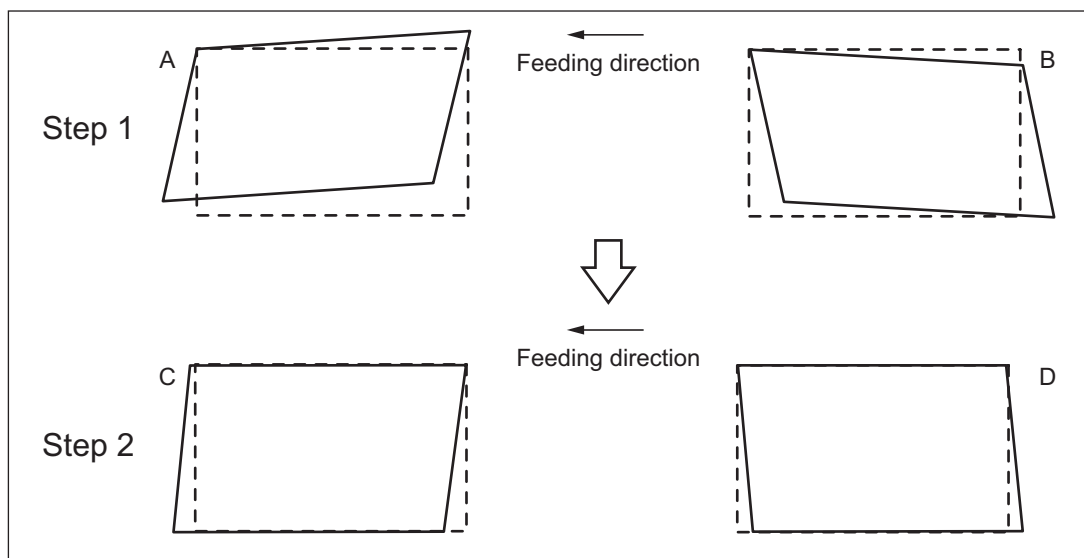
Fig. 3-14

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Press [FAX] to make a copy of any image on a sheet of A3/LD paper.

(3) Key in [308] and press the [START] button to move the carriage to the adjustment position.

(4) Make an adjustment in the order of step 1 and 2.
Step 1
In case of A:
Tighten the mirror-3 adjustment screw (CW).
In case of B:
Loosen the mirror-3 adjustment screw (CCW).

Adjustment screw for the mirror-3 (Rear)

Carriage-2
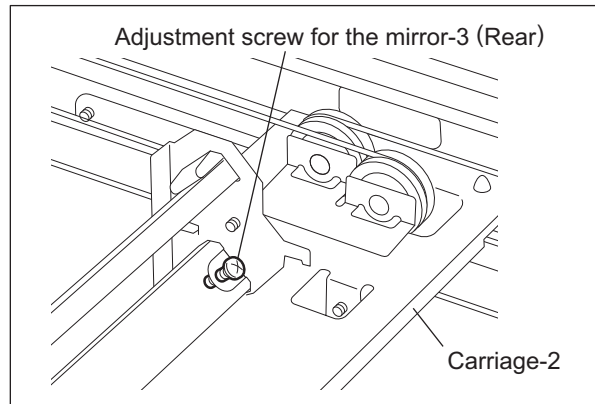
Fig. 3-15

Step 2
In case of C:
Tighten the mirror-1 adjustment screw (CW).
In case of D:
Loosen the mirror-1 adjustment screw (CCW).

Adjustment screw
for the mirror-1 (Rear)

Carriage-1
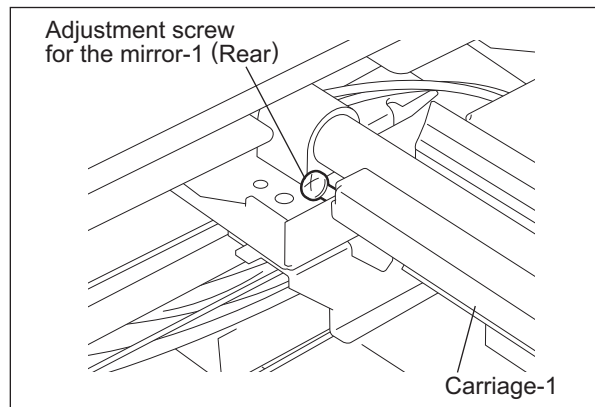
Fig. 3-16

(5) Apply the screw locking agents to the adjustment screws. (2 areas)
   • Recommended screw lock agent
     Manufacturer: Three Bond
     Product name: 1401E

The following adjustments (b) to (e) should be performed with Test Chart No. TCC-1.
📖 P. 3-28 " Adjustments and Checks using Test Chart No. TCC-1"

[B] Reproduction ratio adjustment of primary scanning direction

(1) While pressing [0] and [5] simultaneously, turn the power ON. →(Adjustment Mode)
(2) Place Test Chart No. TCC-1 on the original glass (with the arrow positioned at the left rear side).
(3) Press [FAX] →[START] to make a copy at the mode of A4/LT, 100%, Full color and Text/Photo.
(4) Measure the distance A between M1 and M2 on the copy with a ruler.
(5) Check if the distance A is within 200±0.5 mm.
(6) If not, use the following procedure to change values and repeat step 3. to 5. above.
    <Procedure>
    (Adjustment Mode) →(Key in the code [405]) →[START]
    →(Key in a value (acceptable values: 0 to 255) with digital keys)
    →[ENTER] or [INTERRUPT] (Stored in memory)
        * The larger the adjustment value is, the longer the distance A becomes (approx. 0.1 mm/step).

[C] Image location of primary scanning direction

(1) While pressing [0] and [5] simultaneously, turn the power ON. →(Adjustment Mode)
(2) Place Test Chart No. TCC-1 on the original glass (with the arrow positioned at the left rear side).
(3) Press [FAX] →[START] to make a copy at the mode of A4/LT, 100%, Full color and Text/Photo.
(4) Measure the distance B from the left paper edge to the 10 mm line of left grid pattern on the copy with a ruler.
(5) Check if the distance B is within 10±0.5 mm.
(6) If not, use the following procedure to change values and repeat step 3. to 5. above.
    <Procedure>
    (Adjustment Mode) →(Key in code [306]) →[START]
    →(Key in a value (acceptable values: 0 to 255))
    →[ENTER] or [INTERRUPT] (Stored in memory)
    * The larger the adjustment value is, the longer the distance B becomes (approx. 0.04 mm/step).

[D] Reproduction ratio of secondary scanning direction

(1) While pressing [0] and [5] simultaneously, turn the power ON. →(Adjustment Mode)
(2) Place Test Chart No. TCC-1 on the original glass (with the arrow positioned at the left rear side).
(3) Press [FAX] →[START] to make a copy at the mode of A4/LT, 100%, Full color and Text/Photo.
(4) Measure the distance C between M3 and M4 on the copy with a ruler.
(5) Check if the distance C is within 150±0.5 mm.
(6) If not, use the following procedure to change values and repeat step 3. to 5. above.
    <Procedure>
    (Adjustment Mode) →(Key in the code [340]) →[START]
    →(Key in a value (acceptable values: 0 to 255))
    →[ENTER] or [INTERRUPT] (Stored in memory)
    * The larger the adjustment value is, the longer the distance C becomes (approx. 0.05 mm/step).

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[E] Image location of secondary scanning direction

(1) While pressing [0] and [5] simultaneously, turn the power ON. →(Adjustment Mode)
(2) Place Test Chart No. TCC-1 on the original glass (with the arrow positioned at the left rear side).
(3) Press [FAX] →[START] to make a copy at the mode of A4/LT, 100%, Full color and Text/Photo.
(4) Measure the distance D from the top paper edge to the 10 mm line of top grid pattern on the copy with a ruler.
(5) Check if the distance D is within 10±0.5 mm.
(6) If not, use the following procedure to change values and repeat step 3. to 5. above.
    <Procedure>
    (Adjustment Mode) →(Key in the code [305]) →[START]
    →(Key in a value (acceptable values: 92 to 164))
    →[ENTER] or [INTERRUPT] (Stored in memory)
    * The larger the adjustment value is, the longer the distance D becomes (approx. 0.14 mm/step).

[F]   Top margin

(1)   While pressing [0] and [5] simultaneously, turn the power ON. →(Adjustment Mode)
(2)   Open the platen cover or RADF.
(3)   Press [FAX] →[START] to make a copy at the mode of A3/LD, 100%, Full color, Text/Photo and 2nd drawer.
(4)   Measure the blank area E at the leading edge of the copied image.
(5)   Check if the blank area E is within the range.

Function	Black	Color
Copy	3±2.0 mm	5-1.0 mm, 5+2.0 mm (4.0 to 7.0 mm)
Printer	5±2.0 mm	5±2.0 mm

(6)   If not, use the following procedure to change values and repeat the steps 3. to 5. above.
<Procedure>
(Adjustment Mode) →(Key in the code [430]) →[START]
→(Key in a value (acceptable values: 0 to 255))
→[ENTER] or [INTERRUPT] (Stored in memory)
→("100% A" is displayed.)
*   The larger the adjustment value is, the wider the blank area becomes (approx. 0.04 mm/ step).
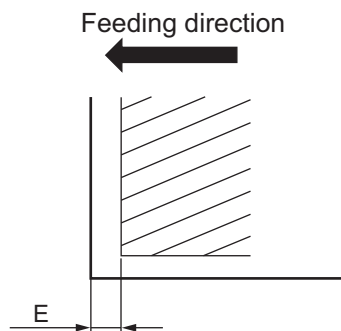
Fig. 3-17

Note:

Paper jams tend to occur in equipment in which thin paper such as 64g/m^2 (17lb. Bond) paper is used or a large amount of high density images such as pictures are output. For this equipment, we recommend that you adjust the top margin "in the plus direction" in order to prevent paper jamming.

Range of top margin adjustment (e.g.)

Function	Black	Color
Copy	3.0 - 5.0 mm	5.0 - 7.0 mm
Printer	5.0 - 7.0 mm	5.0 - 7.0 mm

[G] Right margin

(1) While pressing [0] and [5] simultaneously, turn the power ON. →(Adjustment Mode)
(2) Open the platen cover or RADF.
(3) Press [FAX] →[START] to make a copy at the mode of A3/LD, 100%, Full color, Text/Photo and 2nd drawer.
(4) Measure the blank area F at the right side of the copied image.
(5) Check if the blank area F is within the range.

Function	Black	Color
Copy	2±2.0 mm	2±2.0 mm
Printer	5±2.0 mm	5±2.0 mm

(6) If not, use the following procedure to change values and repeat the steps 3. to 5. above.
  <Procedure>
  (Adjustment Mode) →(Key in the code [432]) →[START]
  →(Key in a value (acceptable values: 0 to 255))
  →[ENTER] or [INTERRUPT] (Stored in memory).
  →("100% A" is displayed.)
  * The larger the adjustment value is, the wider the blank area at the right side becomes (approx. 0.04 mm/step).

Feeding direction
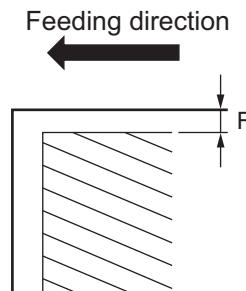
Fig. 3-18

[H] Bottom margin

(1) While pressing [0] and [5] simultaneously, turn the power ON. →(Adjustment Mode)
(2) Open platen cover or RADF.
(3) Press the [FAX] →[START] to make a copy at the mode of A3/LD, 100%, Full color, Text/Photo and 2nd drawer.
(4) Measure the blank area G at the trailing edge of the copied image.
(5) Check if the blank area G is within the range.

Function	Black	Color
Copy	3±2.0 mm	3±2.0 mm
Printer	5±2.0 mm	5±2.0 mm

(6) If not, use the following procedure to change values and repeat the steps 3. to 5. above.
   <Procedure>
   (Adjustment Mode) →(Key in the code [433]) →[START]
   →(Key in value (acceptable values: 0 to 255))
   →[ENTER] or [INTERRUPT] (stored in memory)
   →("100% A" is displayed.)
   * The larger the adjustment value is, the wider the blank area at the trailing edge becomes (approx. 0.04 mm/step).

Feeding direction
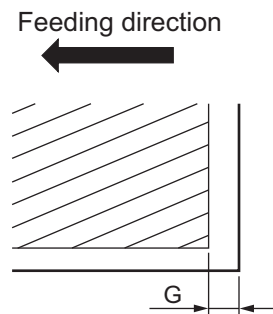
Fig. 3-19

Adjustments and Checks using Test Chart No. TCC-1

Following items can be checked with the Test Chart No. TCC-1.

1) Points to be measured in the chart
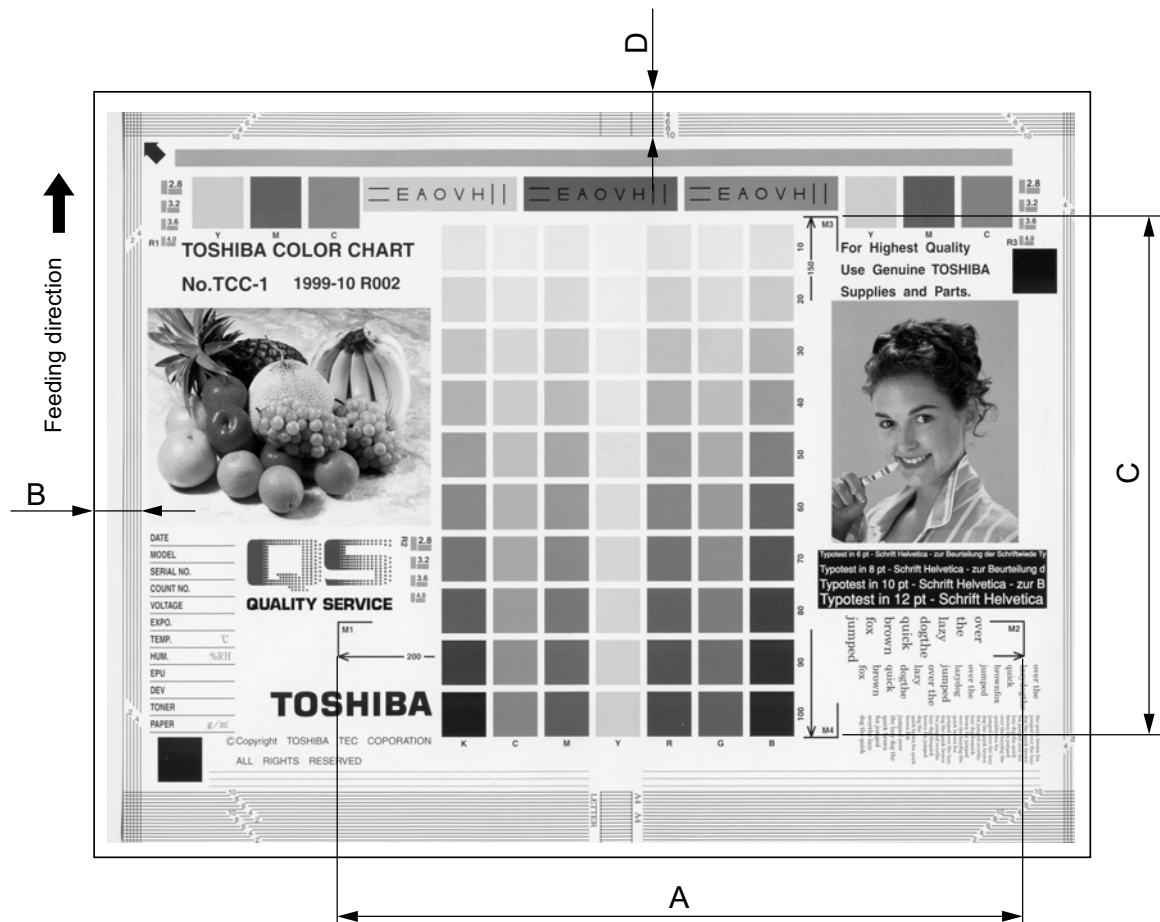
Fig. 3-20

<Adjustment order>

[0] [5] [Power ON] →(Chart TCC-1) →[FAX] →[START] (A3/LD, 100%, Full color and Text/Photo)

A: 05-405 →200±0.5 mm (0.1 mm/step)

B: 05-306 →10±0.5 mm (0.04 mm/step)

C: 05-340 →150±0.5 mm (0.05 mm/step)

D: 05-305 →10±0.5 mm (0.14 mm/step)

2) Checking areas of the chart and their descriptions
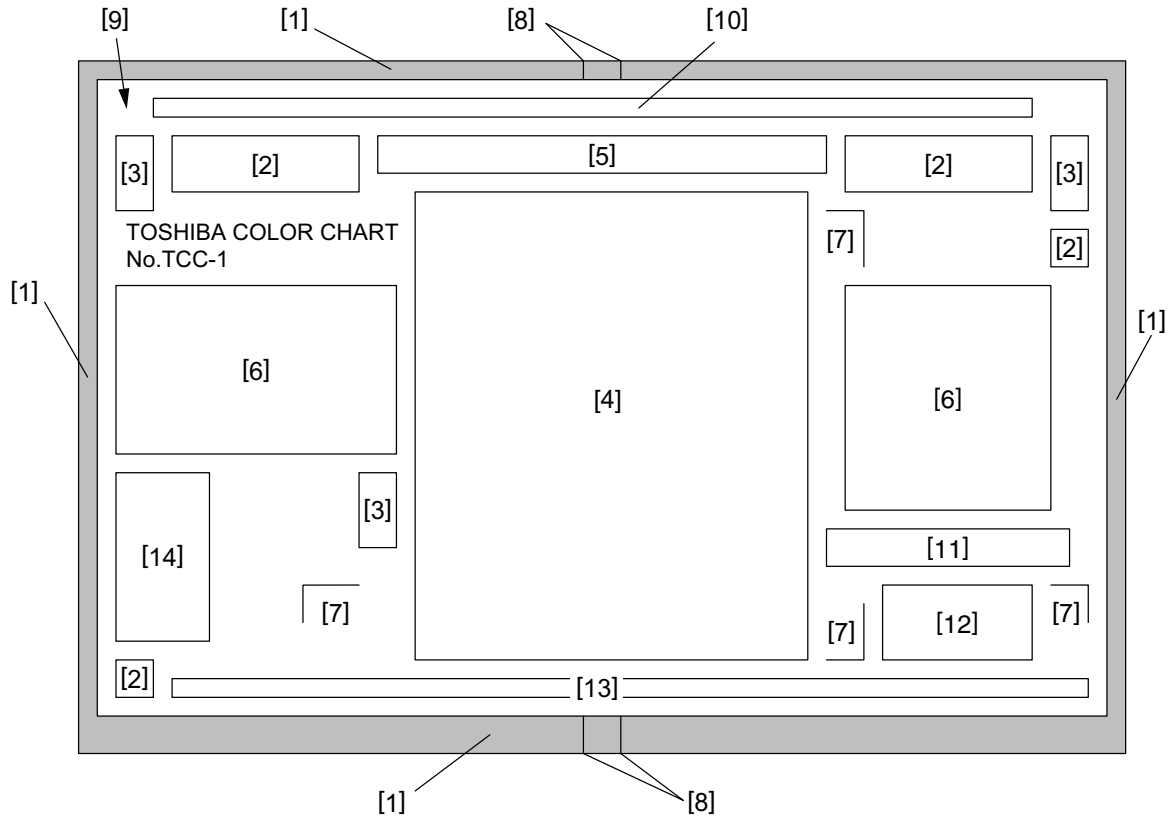
Fig. 3-21

[1]	Grid patterns	: For adjusting margin (void) and scanner section
[2]	YMCK patches	: For checking uniformity
[3]	Resolution patterns	: For checking resolution
[4]	Gradation pattern	: Gradation pattern of seven colors (Y, M, C, R, G, B and K) Coverage: 10-100% For adjusting the halftone reproduction and gray balance
[5]	Color registration pattern	: For checking color registration
[6]	Pictures	: For checking color reproduction and moire
[7]	Magnification lines	: For checking the magnification error of primary and secondary scanning directions
[8]	Center lines	: Center lines for A4/LT sizes
[9]	Arrow	: A mark for placing the chart properly onto the original glass (place it to the left rear corner of the original glass.)
[10]	Halftone band	: For checking uniformity
[11]	White text on the black solid	: For checking the reproduction of white text on black solid
[12]	Text	: For checking reproduction of text
[13]	Thin lines	: For checking reproduction of the thin lines (line width: 100μm)
[14]	Note area	: For recording the date, conditions, etc.

3.7 Image Quality Adjustment (Copying Function)

3.7.1 Automatic gamma adjustment

When the reproduction of gradation is not appropriate, the gradation reproducibility of all colors Y, M, C and K can be corrected by performing this automatic gamma adjustment. In case the gradation reproduction of the image checked is not satisfactory, make this adjustment as described below at parts replacement.

(1)   When unpacking or any of the following parts has been replaced, be sure to make this adjustment:
- Photoconductive drum
- Developer material
- Laser optical unit
- Transfer belt
- 1st transfer roller
- Drum cleaning blade
- Needle electrode
- Main charger grid
- Image position aligning sensor
- Image quality sensor
- NVRAM (LGC board)

(2)   When any of the following parts are replaced or adjusted, make a copy and check the image to determine if adjustment is necessary:
- 2nd transfer roller

   Notes:
   1. Be sure that this adjustment be made after performing the image adjustment in 📖 P. 3-4 "3.3 Performing Image Quality Control (IQC)" and 📖 P. 3-10 "3.6 Image Dimensional Adjustment".
   2. Normally, only the adjustment of color/black integrated pattern is needed. When the adjustment of 📖 P. 3-41 "3.7.12 Beam level conversion setting" is made, color pattern and black pattern need to be adjusted individually.

<Adjustment Mode (05)>

Code	Item to be adjusted	Contents
1642 (1643) (580)	Automatic gamma adjustment	When the reproduction of gradation is not appropriate, the gradation reproducibility of all colors Y, M, C and K can be corrected by performing this automatic gamma adjustment.

<Procedure>

1) While pressing [0] and [5] simultaneously, turn the power ON. →Adjustment Mode

2) Select the A4/LT drawer. Key in the pattern number and press the [FAX] button to output a "Patch chart for gamma adjustment".

Pattern No.	Pattern	Remarks
4	Color/black integrated	When performing code 1642
10*	Black	When performing code 580
5*	Color	When performing code 1643

  *   This adjustment is performed only when 📖 P. 3-41 "3.7.12 Beam level conversion setting" is performed. Usually, only the adjustment with the color/black integrated pattern (05-1642) is performed.

3) Place the patch chart for adjustment printed in step (2) face down on the original glass. In the cases of patterns 4 and 5, place the chart aligning its side with 2 black squares against the original scale. In the case of pattern 10, place the chart aligning its black side of the gradation pattern against the original scale.

4) Key in a code and press the [START] button.
  →The scanner reads the chart automatically and performs automatic gamma adjustment calculation (approx. 30 sec.).

5) When the adjustment has finished normally, "ENTER" is shown. Press the [ENTER] button to have the adjustment results reflected.
(To cancel the reflection of adjustment results, press the [CANCEL] button.)
In the case of an abnormal ending, "ADJUSTMENT ERROR" is shown.
Press the [CANCEL] button to clear the error display. When it is cleared, the control panel display will return to the ready state. Then, check if the patch chart on the original glass is placed in the wrong direction or if it is placed inclined on the original glass, and then repeat step (3) and afterward.

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3.7.2 Density adjustment

The center density and the density variation controlled by density adjustment keys can be adjusted as follows.

<div align="right"><Adjustment Mode (05)></div>

Color mode	Original mode					Item to be adjusted	Remarks
	Text/ Photo*	Text*	Printed Image*	Photo	Map		
Full Color	1550	1551	1552	1553	1554	Manual density mode center value	The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128)
	1560	1561	1562	1563	1564	Manual density mode dark step value	The larger the value is, the darker the dark side becomes. Acceptable values: 0 to 255 (Default: 20)
	1570	1571	1572	1573	1574	Manual density mode light step value	The larger the value is, the lighter the light side becomes. Acceptable values: 0 to 255 (Default: 20)
	1580	1581	1582	1583	1584	Automatic density mode	The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128)

* If this setting has been changed, the density levels of the "ACS", "IMAGE SMOOTHING" or "Photo" in the black mode may be affected.

<div align="right"><Adjustment Mode (05)></div>

Color mode	Original mode					Item to be adjusted	Remarks
	Text/ Photo	Text	Printed Image	Photo	Map		
Mono-color	1555	1556	1557	1558	1559	Manual density mode center value	The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128)
	1565	1566	1567	1568	1569	Manual density mode dark step value	The larger the value is, the darker the dark side becomes. Acceptable values: 0 to 255 (Default: 20)
	1575	1576	1577	1578	1579	Manual density mode light step value	The larger the value is, the lighter the light side becomes. Acceptable values: 0 to 255 (Default: 20)
	1585	1586	1587	1588	1589	Automatic density mode	The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128)

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<Adjustment Mode (05)>

Color mode	Original mode			Item to be adjusted	Remarks
	Text/ Photo	Text	User custom		
Black	503	504	931	Manual density mode center value	The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128)
	508	510	937	Manual density mode dark step value	The larger the value is, the darker the dark side becomes. Acceptable values: 0 to 255 (Default: 20)
	505	507	934	Manual density mode light step value	The larger the value is, the lighter the light side becomes. Acceptable values: 0 to 255 (Default: 20)
	514	515	940	Automatic density mode	The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128)

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustments according to the following procedure.

Note:
Be sure that this adjustment is made after performing 📖 P. 3-30 "3.7.1 Automatic gamma adjustment".

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in a code and press the [START] button.
(3) Key in an adjustment value.
(To correct the value once keyed in, press the [CLEAR] button.)
(4) Press the [ENTER] or [INTERRUPT] button to store the value. →The equipment goes back to the ready state.
(5) Press the [FAX] button and then press the [START] button to make a test copy.
(6) If the desired image quality has not been attained, repeat step (2) to (5).

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3.7.3　Color balance adjustment

The color balance is adjusted by adjusting the density of each color at the Full Color Mode. The adjustment is performed by selecting its density area from the following: low density, medium density and high density.

<Adjustment Mode (05)>

Color	Original mode					Item to be adjusted	Remarks
	Text/ Photo	Text	Printed Image	Photo	Map		
Yellow	1779-0	1780-0	1781-0	1782-0	1783-0	Low density	The larger the value is, the darker the color to be adjusted becomes. Acceptable values: 0 to 255 (Default: 128)
	1779-1	1780-1	1781-1	1782-1	1783-1	Medium density	
	1779-2	1780-2	1781-2	1782-2	1783-2	High density	
Magenta	1784-0	1785-0	1786-0	1787-0	1788-0	Low density	
	1784-1	1785-1	1786-1	1787-1	1788-1	Medium density	
	1784-2	1785-2	1786-2	1787-2	1788-2	High density	
Cyan	1789-0	1790-0	1791-0	1792-0	1793-0	Low density	
	1789-1	1790-1	1791-1	1792-1	1793-1	Medium density	
	1789-2	1790-2	1791-2	1792-2	1793-2	High density	
Black	1794-0	1795-0	1796-0	1797-0	1798-0	Low density	
	1794-1	1795-1	1796-1	1797-1	1798-1	Medium density	
	1794-2	1795-2	1796-2	1797-2	1798-2	High density	

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustments according to the following procedure.

Notes:
- Be sure that this adjustment is made after performing 📖 P. 3-30 "3.7.1 Automatic gamma adjustment".
- Changing the adjustment setting influences the adjacent density area slightly.
  E.g.: When the value of the medium density is larger, the adjacent areas in the low density and high density range will become slightly darker.

<Procedure>

(1)　While pressing [0] and [5] simultaneously, turn the power ON.
(2)　Key in the code of the mode to be adjusted (color and original mode) and press the [START] button.
(3)　Select the density area to be adjusted with digital keys (0, 1 or 2), and press the [START] button.
　　　0: Low density (L)
　　　1: Medium density (M)
　　　2: High density (H)
(4)　Key in an adjustment value. (To correct the value once keyed in, press the [CLEAR] button.)
(5)　Press the [ENTER] or [INTERRUPT] button to store the value in memory.
　　　→The equipment goes back to the ready state.
(6)　For resetting the value, repeat step (2) to (5).
(7)　Press the [FAX] button and then press the [START] button to make a test copy.
(8)　If the desired image quality has not been attained, repeat step (2) to (7).

<Range of the density area (low density, medium density, high density)>

The color from 10 to 30 (low density), from 40 to 70 (medium density) and from 80 to 100 (high density) in No. TCC-1 chart can be used as a guide for the range of the density area influenced by the change of the adjustment value (low density, medium density, high density).
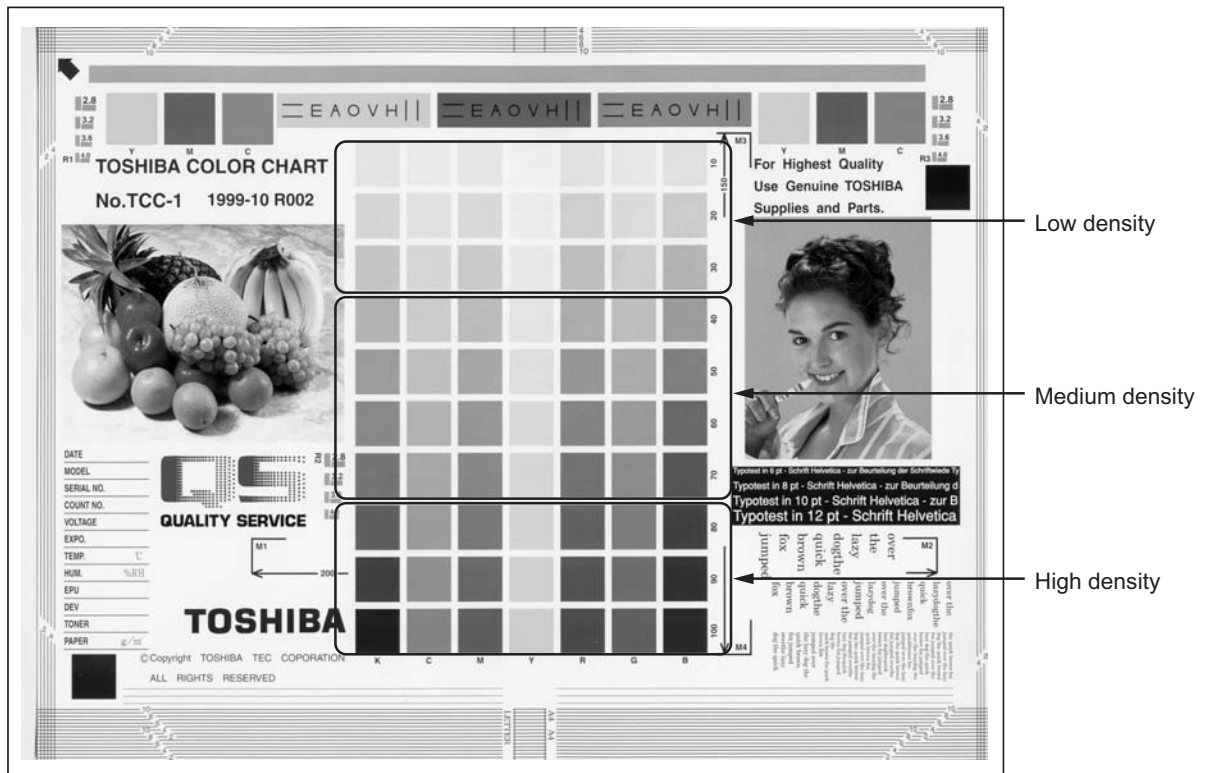
Fig. 3-22

3.7.4   Gamma balance adjustment

The density adjustment at the Black Mode is performed by selecting its density area from the following: low density, medium density and high density.

<Adjustment Mode (05)>

Color mode	Original mode				Item to be adjusted	Remarks
	Text/ Photo	Text	Photo	User custom		
Black	590-0	591-0	592-0	949-0	Low density	The larger the value is, the density of the item to be adjusted becomes darker.
	590-1	591-1	592-1	949-1	Medium density	
	590-2	591-2	592-2	949-2	High density	Acceptable values: 0 to 255 (Default: 128)

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustments according to the following procedure.

Note:
Be sure that this adjustment is made after performing 📖 P. 3-30 "3.7.1 Automatic gamma adjustment".

<Procedure>
The procedure is the same as that of 📖 P. 3-34 "3.7.3 Color balance adjustment".

3.7.5 Offsetting adjustment for background / high density area processing

The density of background and high density area can be adjusted as follows.

<Adjustment Mode (05)>

Color mode	Original mode					Item to be adjusted	Remarks
	Text/ Photo*	Text*	Printed Image*	Photo	Map		
Full Color	1688	1689	1690	1691	1692	Automatic density adjustment for background	The larger the value is, the darker the background becomes. (Automatic) Acceptable values: 0 to 255 (Default: 128)
	1693	1694	1695	1696	1697	Automatic density adjustment for high density area	The larger the value is, the darker the high density area becomes. (Automatic) Acceptable values: 0 to 255 (Default: 128)
	1698	1699	1700	1701	1702	Manual density adjustment for background	The larger the value is, the darker the background becomes. (Manual) Acceptable values: 0 to 255 (Default: 128)
	1708	1709	1710	1711	1712	Manual density adjustment for high density area	The larger the value is, the darker the high density area becomes. (Manual) Acceptable values: 0 to 255 (Default: 128)

* If this setting has been changed, the density levels of the "ACS", "IMAGE SMOOTHING" or "Photo" in the black mode may be affected.

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment using the following procedure.

<Procedure>
The procedure is the same as that of 📖 P. 3-32 "3.7.2 Density adjustment".

3.7.6　Judgment threshold for ACS

The judgment level is adjusted for the automatic identification of whether the original set on the glass is black or color. Namely, this is to adjust the judgment level used when "Auto Color" is selected at a color mode. The adjustment is available for each of the manually-set original and the original used with the RADF.

<Adjustment Mode (05)>

Code	Item to be adjusted	Contents
1675	Item to be adjusted Judgment threshold for ACS when original is set manually	The larger the value is, the more an original tends to be judged as black even at the Auto Color Mode. The smaller value is, the more it tends to be judged as color. Acceptable values: 0 to 255 (Default: 70)
1676	Judgment threshold for ACS when original is set on RADF	

Make a test copy and compare the image obtained with the current settings; if necessary and make adjustment.

<Procedure>
The procedure is the same as that of 📖 P. 3-32 "3.7.2 Density adjustment".

3.7.7　Sharpness adjustment

If you want to make copy images look softer or sharper, perform the following adjustment. The adjustment can be made for each of the color modes and original modes independently.

<Adjustment Mode (05)>

Code	Color mode	Original mode	Contents
1737	Full Color	Text/Photo*	• The larger the value is, the sharper the image becomes; while the smaller the value is, the softer the image becomes. • The smaller the value is, the less moire tends to appear. • Acceptable values: 0 to 255 (Default: 128)
1738		Text*	
1739		Printed Image*	
1740		Photo	
1741		Map	
604	Black	Text/Photo	
605		Text	
922		User custom	
1757	Auto Color	Text/Photo	

*　Any change in these settings affects the settings of "IMAGE SMOOTHING" and "Photo" in the black mode, and "Text/Photo", "Text" and "Printed Image" in the twin color mode.

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment.

> **Note:**
> You have to make adjustment by balancing between moire and sharpness.

<Procedure>
The procedure is the same as that of 📖 P. 3-32 "3.7.2 Density adjustment".

3.7.8 Setting range correction

The values of the background peak/text peak in the range correction at the Black Mode can be switched to "varied" or "fixed" in the following codes.
If they are fixed, the range correction is performed with standard values.
The values of the background peak affects the reproduction of the background density, and the values of the text peak affects that of the text density.

<Adjustment Mode (05)>

Original mode			Item to be adjusted	Remarks
Text/ Photo	Text	User custom		
570	572	913	Range correction for original manually set on the original glass	The following are the default values set for each original mode. Text/Photo: 22, Text: 22, User custom: 22 Each digit stands for: One's place: Automatic density mode Ten's place: Manual density mode
693	695	916	Range correction for original set on the RADF	The setting conditions possible are as follows:

The setting conditions possible are as follows:

	Background peak	Text peak
1:	fixed	fixed
2:	varied	fixed
3:	fixed	varied
4:	varied	varied

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment.

<Procedure>
The procedure is the same as that of 📖 P. 3-32 "3.7.2 Density adjustment".

3.7.9 Setting range correction (Adjustment of background peak)

The levels of the background peak for the range correction at a Black Mode can be set at the following codes.
This setting is valid only when the background peak is fixed.

<Adjustment Mode (05)>

Original mode			Item to be adjusted	Remarks
Text/ Photo	Text	User custom		
532	534	919	Background peak for range correction	When the value increases, the background (low density area) of the image is not output. Acceptable values: 0 to 255 (Default: Text/Photo: 40, Text: 40, User custom: 40)

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment.

<Procedure>
The procedure is the same as that of 📖 P. 3-32 "3.7.2 Density adjustment".

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3.7.10 Adjustment of smudged/faint text

The smudge/faint text at a Black Mode can be set at the following codes.

Original mode			Item to be adjusted	Remarks
Text/ Photo	Text	User custom		
648	649	925	Adjustment of smudged/ faint text	When the value decreases, the faint text is improved. When the value increases, the smudged text is improved. Acceptable values: 0 to 4 (Default: 2)

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment.

Note:
Remember the image specifications and life span of the replacing parts may not meet the standard when the setting value is changed from the default value.

\<Procedure\>
The procedure is the same as that of 📖 P. 3-32 "3.7.2 Density adjustment".

3.7.11 Color Adjustment of Marker

The color of the one touch adjustment "MARKER" can be adjusted so that any marker colors already on the original can be distinguished.

Code	Item to be adjusted	Relation between the adjustment value and the color (Acceptable values: 0 to 6)		
		0 to 2	3 (Default)	4 to 6
1769-0	Yellow	The smaller the value is, the more reddish the color becomes.	Yellow	The larger the value is, the more greenish the color becomes.
1769-1	Magenta	The smaller the value is, the more bluish the color becomes.	Magenta	The larger the value is, the more reddish the color becomes.
1769-2	Cyan	The smaller the value is, the more greenish the color becomes.	Cyan	The larger the value is, the more bluish the color becomes.
1769-3	Red	The smaller the value is, the closer to Magenta the color becomes.	Red	The larger the value is, the more yellowish the color becomes.
1769-4	Green	The smaller the value is, the more yellowish the color becomes.	Green	The larger the value is, the closer to Cyan the color becomes.
1769-5	Blue	The smaller the value is, the closer to Cyan the color becomes.	Blue	The larger the value is, the closer to Magenta the color becomes.

Note:
The color may not always be reproduced precisely due to the characteristics of the fluorescent ink.

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<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in a code and press the [START] button.
(3) Key in a sub-code and press the [START] button.
(4) Key in an adjustment value.
    (To correct a value once keyed in, press the [CLEAR] button.)
(5) Press the [ENTER] or [INTERRUPT] button to store the value. →The equipment goes back to the ready state.
(6) Turn the power OFF and back ON in the normal mode. Then make a copy in the one touch adjustment "MARKER" mode.
(7) If the desired image quality has not been attained, repeat step (1) to (6).

3.7.12 Beam level conversion setting

The beam level for 4 divided smoothing is set at the Black Mode. This adjustment enables to adjust the dot size.

<Adjustment Mode (05)>

Code	Item to be adjusted	Remarks
667-0	Beam level 0/4	The smaller the value is, the smaller the beam width becomes. Therefore, the smaller dot is reproduced accordingly. Acceptable values: 0 to 255 (Default: Level 0/4: 0, Level 1/4: 63, Level 2/4: 127, Level 3/4: 191, Level 4/4: 255)
667-1	Beam level 1/4	
667-2	Beam level 2/4	
667-3	Beam level 3/4	
667-4	Beam level 4/4	

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustments according to the following procedure.

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in a code and press the [START] button.
(3) Key in a sub-code and press the [START] button.
(4) Key in an adjustment value.
    (To correct a value once keyed in, press the [CLEAR] button.)
(5) Press the [ENTER] or [INTERRUPT] button to store the value. →The equipment goes back to the ready state.
(6) Press the [FAX] button and then press the [START] button to make a test copy.
(7) If the desired image quality has not been attained, repeat step (2) to (6).

Notes:
1. When this adjustment is performed, "3.5.1 Automatic gamma adjustment (Black Mode)" (05-580) needs to be performed since the reproduction of density at Black Mode varies. The result of this adjustment is not reflected to color/black integrated pattern. Namely, each automatic gamma adjustment of Black Mode (05-580) or of Color Mode (05-1643) needs to be performed individually after this adjustment.
2. After this adjustment, set "1" in 08-595 so that the correction result of the Black Mode is not reflected on "Automatic Calibration".
3. The setting value must increase as the beam level number (0 to 4) becomes higher. Do not increase this order when setting the values.
4. Usually, beam level 4 / 4 is most effective on black mode.

3.7.13　Maximum toner density adjustment to paper type

The maximum toner amount adhering to the paper can be controlled.

<Adjustment Mode (05)>

Code	Paper type	Remarks
1612	Plain paper	The smaller the value is, the toner amount adhered decreases of the high density area (ex. prevention of fusing offsetting, etc.). Acceptable values: 0 to 255 (Default: Plain paper: 255, Thick paper 1: 252, Thick paper 2: 252, Thick paper 3: 252, OHP film: 240, special paper 1: 252, special paper 2: 252, Recycled paper: 255, Thick paper 4: 252)
1613	Thick paper 1	
1614	Thick paper 2	
1615	Thick paper 3	
1616	OHP film	
1617	Special paper 1	
1618	Special paper 2	
1619	Recycled paper	
1620	Thick paper 4	

> **Note:**
> The larger the value is, the more frequently fusing offsetting occurs.

<Procedure>
The procedure is the same as that of 📖 P. 3-32 "3.7.2 Density adjustment".

3.7.14　Maximum text density adjustment

The maximum text density of each color at Full Color Mode can be adjusted as follows.

<Adjustment Mode (05)>

Color	Code	Item to be adjusted	Remarks
Yellow	1630	Maximum text density	The larger the value is, the darker the maximum text density of each color to be adjusted becomes. Acceptable values: 0 to 10 (Default: 5)
Magenta	1631		
Cyan	1632		
Black	1633		

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustments according to the following procedure.

> **Note:**
> Be sure that this adjustment is made after performing 📖 P. 3-30 "3.7.1 Automatic gamma adjustment".

<Procedure>
The procedure is the same as that of 📖 P. 3-32 "3.7.2 Density adjustment".

3.7.15 Text/Photo reproduction level adjustment

Text/Photo reproduction level at the Full color mode, Auto color mode and Gray scale mode can be adjusted.
Text/Photo reproduction level adjustment can be switched to "Photo oriented 1", "Photo oriented 2", "Text oriented 1" or "Text oriented 2" in the following codes.

<Adjustment Mode (05)>

Mode	Item to be adjusted	Contents
Text/Photo		
1725	Text/Photo reproduction level adjustment	0: Default 1: Photo oriented 2 (The printed image reproduction level higher than that of the Photo oriented 1) 2: Photo oriented 1 (The printed image reproduction level higher than that of the Default) 3: Equivalent to the Default 4: Text oriented 1 (The text reproduction level higher than that of the Default) 5: Text oriented 2 (The text reproduction level higher than that of the Text oriented 1)

Notes:
- The text reproduction level is lower when the mode is switched from the default value to the Photo oriented 1 or Photo oriented 2. (The text reproduction level in Photo oriented 2 is lower than that in Photo oriented 1.)
- Changing the setting value from default value to the Text oriented 1 or Text oriented 2 causes image noise in the printed photo image with few lines per inch. (Photo oriented 2 causes more image noise than Photo oriented 1.)

<Procedure>
The procedure is the same as that of 📖 P. 3-32 "3.7.2 Density adjustment".

3.7.16 Black reproduction switching at the Twin color copy mode

Black reproduction can be switched at the Twin color (Black/Red) copy mode.

<Adjustment Mode (05)>

Mode	Code	Item to be adjusted	Remarks
Twin color copy mode (Black/Red)	1761	Black reproduction switching	0: Default 1: Black reproduction oriented

Note:
The boundary between Red and Black may not be smooth when the setting value is "1".

<Procedure>
The procedure is the same as that of 📖 P. 3-32 "3.7.2 Density adjustment".

3.7.17 Background adjustment (Black Mode)

Background can be adjusted with the following codes.

<Adjustment Mode (05)>

Original mode			Item to be adjusted	Remarks
Text/ Photo	Text	User custom		
600	601	946	Background adjustment	The smaller the value is, the background becomes lighter. Acceptable values: 1 to 9 (Default: 5)

<Procedure>
The procedure is the same as that of 📖 P. 3-32 "3.7.2 Density adjustment".

3.7.18 Black header density level adjustment

The density level of headers in the black mode is adjusted.

<Adjustment Mode (05)>

Color mode	Code	Original mode	Remarks
Full Color	7811	Text/Photo *	The larger the value is, the darker the headers become. However, the density level differs depending on the modes. Acceptable values: 0 to 8 (Default: 0)
	7812	Text	
Auto Color	7827	Text/Photo	
	7828	Text	

* If this setting has been changed, the density level of the "IMAGE SMOOTHING" in the black mode may be affected.

Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment.

<Procedure>
The procedure is the same as that of 📖 P. 3-32 "3.7.2 Density adjustment".

3.7.19 Black area adjustment in twin color copy mode

<Adjustment Mode (05)>

Mode	Code	Item to be adjusted	Remarks
Twin color mode with selected colors	7641-0	High density	The larger the value is, the larger the area recognized as black in the original becomes. The smaller the value is, the larger the area recognized as the color other than black becomes. Acceptable values: 0 to 255 (Default: 128)
	7641-1	Medium density	
	7641-2	Low density	
Twin color mode (Black and red)	7642-0	High density	The larger the value is, the larger the black area becomes. The smaller the value is, the larger the red area becomes. Acceptable values: 0 to 255 (Default: 128)
	7642-1	Medium density	
	7642-2	Low density	

<Procedure>
The procedure is the same as that of 📖 P. 3-34 "3.7.3 Color balance adjustment".

3.8 Image Quality Adjustment (Printing Function)

3.8.1 Automatic gamma adjustment

When the reproduction of gradation is not appropriate, the gradation reproducibility of all colors Y, M, C and K can be corrected by performing this automatic gamma adjustment. In case the gradation reproduction of the image checked is not satisfactory, make this adjustment as described below at parts replacement.

1) When unpacking or any of the following parts has been replaced, be sure to make this adjustment:
   - Photoconductive drum
   - Developer material
   - Laser optical unit
   - Transfer belt
   - 1st transfer roller
   - Drum cleaning blade
   - Needle electrode
   - Main charger grid
   - Image position aligning sensor
   - Image quality sensor
   - NVRAM (LGC board)

2) When any of the following parts are replaced or adjusted, make a print and check the image to determine if adjustment is necessary:
   - 2nd transfer roller

   Note:
   Be sure that this adjustment be made after performing the image adjustment in 📖 P. 3-4 "3.3 Performing Image Quality Control (IQC)" and 📖 P. 3-10 "3.6 Image Dimensional Adjustment".

<Adjustment Mode (05)>

Code	Paper type	Remarks
1008, 1004-0	Plain paper	When the reproduction of gradation is not appropriate, the gradation reproducibility of all colors Y, M, C and K can be corrected by performing this automatic gamma adjustment.
1004-1	Thick paper 1	
1004-2	Thick paper 2	
1004-3	Thick paper 3	
1004-4	Special paper 1	
1004-5	Special paper 2	
1004-6	Recycled paper	
1004-7	Thick paper 4	

<Procedure>
1) While pressing [0] and [5] simultaneously, turn the power ON. Æ Adjustment Mode
2) Select the A4/LT drawer. Key in the pattern number and press the [FAX] button to output a "Patch chart for gamma adjustment".

Pattern No.	Paper type	Remarks
70	Plain paper	Used when the code 1008, 1004-0 is performed
71	Plain paper	Used for checking the result of the code 1008, 1004-0
72	Thick paper 1	Used when the code 1004-1 is performed
73	Thick paper 1	Used for checking the result of the code 1004-1
74	Thick paper 2	Used when the code 1004-2 is performed
75	Thick paper 2	Used for checking the result of the code 1004-2
76	Thick paper 3	Used when the code 1004-3 is performed
77	Thick paper 3	Used for checking the result of the code 1004-3
78	Special paper 1	Used when the code 1004-4 is performed
79	Special paper 1	Used for checking the result of the code 1004-4
80	Special paper 2	Used when the code 1004-5 is performed
81	Special paper 2	Used for checking the result of the code 1004-5
82	Recycled paper	Used when the code 1004-6 is performed
83	Recycled paper	Used for checking the result of the code 1004-6
84	Thick paper 4	Used when the code 1004-7 is performed
85	Thick paper 4	Used for checking the result of the code 1004-7

Note:
Gamma correction result to be applied when the patterns are printed out should follow the setting values of the code 08-9059 (calibration switchover).

Code	Remarks
08-9059	0: No process image quality control is performed before printing out the gamma correction pattern. 1: The process image quality control is performed. (The paper selection buttons are not displayed.) 0: The process image quality control is performed. (The paper selection buttons are displayed on the screen for printing the gamma correction pattern.)

3) Place the patch chart for adjustment printed in step (2) face down on the original glass, with its side, on which two black squares are present, aligned against the original scale.
4) Key in a code and press the [START] button. Æ The scanner reads the chart automatically and performs automatic gamma adjustment calculation (approx. 30 sec.).
5) When the adjustment has finished normally, "ENTER" is shown.
Press the [ENTER] button to have the adjustment results reflected.
(To cancel the reflection of adjustment results, press the [CANCEL] button.)
In the case of an abnormal ending, "ADJUSTMENT ERROR" is shown. Press the [CANCEL] button to clear the error display.
When it is cleared, the control panel display will return to the ready state. Then, check if the patch chart on the original glass is placed in the wrong direction or if it is placed inclined on the original glass, and then repeat step (3) and afterward.

3.8.2 Gamma balance adjustment (Black Mode)

The gamma balance is adjusted by adjusting the density at the Black Mode. The adjustment is performed by selecting its density area from the following: low density, medium density and high density.

<Adjustment Mode (05)>

Color mode	Language and screen				Item to be adjusted	Remarks
	Smooth (PS)	Detail (PS)	Smooth (PCL)	Detail (PCL)		
Black	7315-0	7316-0	7317-0	7318-0	Low density	The larger the value is, the density of the item to be adjusted becomes darker.
	7315-1	7316-1	7317-1	7318-1	Medium density	
	7315-2	7316-2	7317-2	7318-2	High density	Acceptable values: 0 to 255 (Default: 128)

Notes:
- Be sure that this adjustment be made after performing 📖 P. 3-45 "3.8.1 Automatic gamma adjustment".
- Changing the adjustment setting influences the adjacent density area slightly.
  E.g.: When the value of the medium density is larger, the adjacent areas in the low density and high density range will become slightly darker.

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in the codes to be adjusted (language and screen) and press the [START] button.
(3) Key in the value corresponding to the density area to be adjusted (0, 1 or 2) and press the [START] button.
    0: Low density (L) 1: Medium density (M) 2: High density (H)
(4) Key in the adjustment value. (To correct the value once keyed in, press the [CLEAR] button.)
(5) Press the [ENTER] or [INTERRUPT] button to store the value in memory. →The equipment goes back to the ready state.
(6) For resetting the value, repeat step (2) to (5).
(7) Let the equipment restart and perform the printing job.
(8) If the image density has not been attained, repeat step (1) to (7).

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<Range of the density area (low density, medium density, high density)>
The color from the 1st to the 7th stage (low density), from the 8th to the 11th stage (medium density) and from the 12th to the 13th stage (high density) in "Patch chart for gamma adjustment ([71] [Fax])" output in "3.8.1 Automatic gamma adjustment" can be used as a guide for the range of the density area influenced by the adjustment with the change of the adjustment value (low density, medium density, high density).
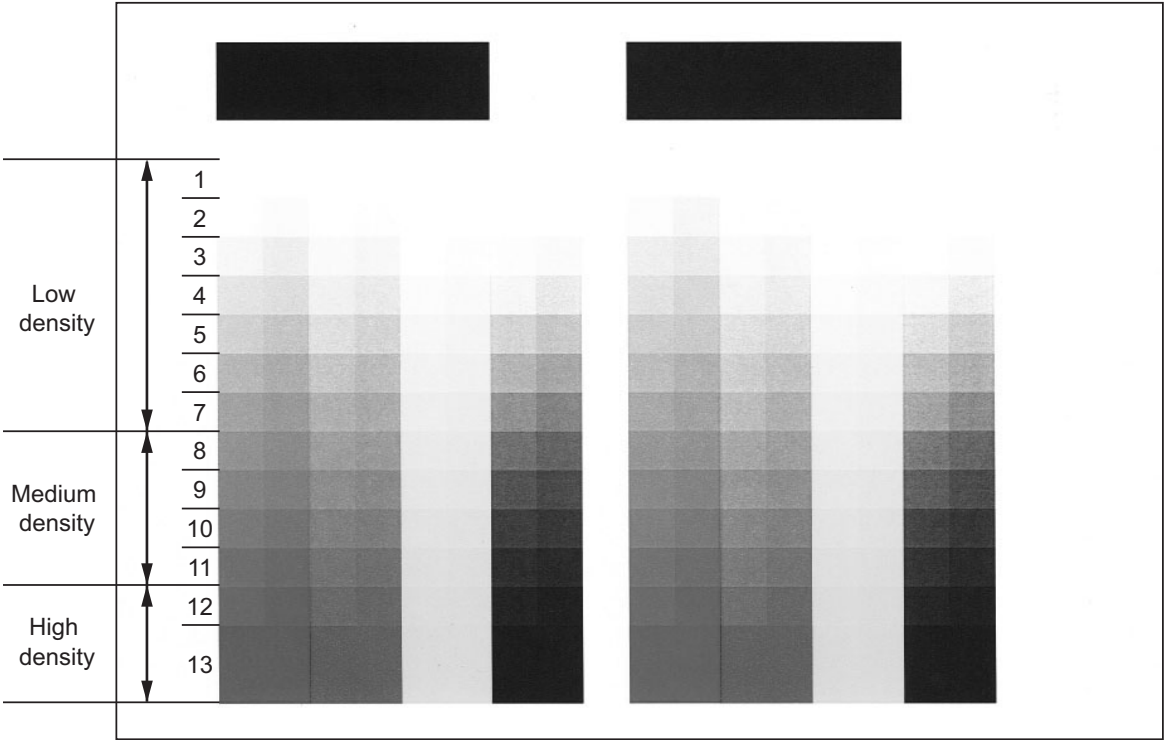
Fig. 3-23

3.8.3　Color balance adjustment (Color Mode)

The color balance is adjusted by adjusting the density of each color. The adjustment is performed by selecting its density area from the following: low density, medium density and high density.

<Adjustment Mode (05)>

Color	PS		PCL		Density	Remarks
	Smooth	Detail	Smooth	Detail		
Yellow	8050-0	8054-0	8058-0	8062-0	Low	The larger the value is, the darker the color to be adjusted becomes. Acceptable values: 0 to 255 (Default: 128)
	8050-1	8054-1	8058-1	8062-1	Medium	
	8050-2	8054-2	8058-2	8062-2	High	
Magenta	8051-0	8055-0	8059-0	8063-0	Low	
	8051-1	8055-1	8059-1	8063-1	Medium	
	8051-2	8055-2	8059-2	8063-2	High	
Cyan	8052-0	8056-0	8060-0	8064-0	Low	
	8052-1	8056-1	8060-1	8064-1	Medium	
	8052-2	8056-2	8060-2	8064-2	High	
Black	8053-0	8057-0	8061-0	8065-0	Low	
	8053-1	8057-1	8061-1	8065-1	Medium	
	8053-2	8057-2	8061-2	8065-2	High	

Notes:
- Be sure that this adjustment be made after performing 📖 P. 3-45 "3.8.1 Automatic gamma adjustment".
- Changing the adjustment setting influences the adjacent density area slightly.
  E.g.: When the value of the medium density is larger, the adjacent areas in the low density and high density range will become slightly darker.

<Procedure>
The procedure is the same as that of 📖 P. 3-47 "3.8.2 Gamma balance adjustment (Black Mode)".

<Range of the density area (low density, medium density, high density)>
The color from the 1st to the 7th stage (low density), from the 8th to the 11th stage (medium density) and from the 12th to the 13th stage (high density) in "Patch chart for gamma adjustment ([71] [Fax])" output in "3.8.1 Automatic gamma adjustment" can be used as a guide for the range of the density area influenced by the adjustment with the printer driver and the change of the adjustment value (low density, medium density, high density (Refer to P. 3-48 "Fig. 3-23").

3.8.4   Adjustment of smudged/faint text

The smudged or faint text can be improved in the following codes.

<Adjustment Mode (05)>

Black mode		Color mode		Remarks
PS	PCL	PS	PCL	
7340	7341	8130	8131	When the small characters or fine lines in a halftone image are faint, they can be improved by increasing the value to raise the density level. Acceptable values: 0 to 8 (Default: 0)

<Procedure>

(1)   While pressing [0] and [5] simultaneously, turn the power ON.
(2)   Key in the codes to be adjusted and press the [START] button.
(3)   Key in the adjustment value. (To correct the value once keyed in, press the [CLEAR] button.)
(4)   Press the [ENTER] or [INTERRUPT] button to store the value in memory. →The equipment goes back to the ready state.
(5)   For resetting the value, repeat step (2) to (4).
(6)   Let the equipment restart and perform the printing job.
(7)   If the desired image has not been attained, repeat step (1) to (6).

3.8.5   Upper limit value at Toner Saving Mode

The upper limit value is adjusted at the Toner Saving Mode.

<Adjustment Mode (05)>

Black mode		Color mode		Remarks
PS	PCL	PS	PCL	
664	665	1055	1057	The smaller the value is, the lighter the density of image becomes. Acceptable values: 0 to 255 (Default: 176)

<Procedure>
The procedure is the same as that of 🕮 P. 3-50 "3.8.4 Adjustment of smudged/faint text".

3.8.6　Maximum toner density adjustment to paper type

The maximum toner amount adhering to the paper can be controlled.

<div align="right"><Adjustment Mode (05)></div>

Code		Paper type	Remarks
PS	PCL		
1046-0	1046-1	Plain paper	The smaller the value is, the toner amount adhered decreases of the high density area (ex. prevention of fusing offsetting, etc.). Acceptable values: 0 to 255 (Default: Plain paper: 255, Thick paper 1: 255, Thick paper 2: 255, Thick paper 3: 255, OHP film: 200, special paper 1: 255, special paper 2: 255, Recycled paper: 255, Thick paper 4: 255)
1047-0	1047-1	Thick paper 1	
1048-0	1048-1	Thick paper 2	
1049-0	1049-1	Thick paper 3	
1050-0	1050-1	OHP film	
1051-0	1051-1	Special paper 1	
1052-0	1052-1	Special paper 2	
1053-0	1053-1	Recycled paper	
1054-0	1054-1	Thick paper 4	

<Procedure>

The procedure is the same as that of 📖 P. 3-47 "3.8.2 Gamma balance adjustment (Black Mode)".

Note:
　The larger the value is, the more frequently fusing offsetting occurs.

3.8.7　Image processing: Gamma correction table all clearing

The state of calibration is initialized at the Setting Mode (08-597). This setting is to be performed when a defect occurs in "Automatic gamma adjustment (05-1004-0 to 7)". The cause of defect is presumed as an image failure (jittering or uneven image density) at the patch chart for gamma adjustment.

3.8.8　Fine line enhancement switchover

<div align="right"><Adjustment Mode (05)></div>

Black mode		Color mode		Remarks
PS	PCL	PS	PCL	
7322-0	7322-1	8102-0	8102-1	Whether fine lines are enhanced or not can be switched. 0: OFF 1: ON Acceptable values: 0 to 1 (Default: 1)

<Procedure>

The procedure is the same as that of 📖 P. 3-41 "3.7.12 Beam level conversion setting".

3.8.9　Filter switchover

<div align="right"><Adjustment Mode (05)></div>

Black mode		Color mode		Remarks
PS	PCL	PS	PCL	
7324-0	7324-1	8104-0	8104-1	A filtering method applied for print objects can be switched. 0: Default 1: Enhance fine lines 2: Enhance the whole image Acceptable values: 0 to 2 (Default: 0)

<Procedure>

The procedure is the same as that of 📖 P. 3-41 "3.7.12 Beam level conversion setting".

3.8.10 "PureBlack" threshold adjustment (PCL)

<Adjustment Mode (05)>

Original mode				Item to be adjusted	Remarks
General	Photo-graphic	Presenta-tion	Line art		
8210-0	8210-1	8210-2	8210-3	Text	The larger the value is, the wider the color range to be printed only with the black toner becomes. The smaller the value is, the narrower this color range becomes. Acceptable values: 1 to 15
8211-0	8211-1	8211-2	8211-3	Graphics	
8212-0	8212-1	8212-2	8212-3	Image	

<Procedure>
The procedure is the same as that of 📖 P. 3-41 "3.7.12 Beam level conversion setting".

3.8.11 "PureGray" threshold adjustment (PCL)

<Adjustment Mode (05)>

Original mode				Item to be adjusted	Remarks
General	Photo-graphic	Presenta-tion	Line art		
8213-0	8213-1	8213-2	8213-3	Text	The larger the value is, the wider the color range to be printed only with the black toner becomes. The smaller the value is, the narrower this color range becomes. Acceptable values: 1 to 15
8214-0	8214-1	8214-2	8214-3	Graphics	
8215-0	8215-1	8215-2	8215-3	Image	

<Procedure>
The procedure is the same as that of 📖 P. 3-41 "3.7.12 Beam level conversion setting".

3.8.12 "PureBlack/Gray" threshold adjustment (PS-Device color)

<Adjustment Mode (05)>

Original mode				Item to be adjusted	Remarks
General	Photo-graphic	Presenta-tion	Line art		
8252-0	8252-1	8252-2	8252-3	Text	The larger the value is, the wider the color range to be printed only with the black toner becomes. The smaller the value is, the narrower this color range becomes. Acceptable values: 113 to 143 (Default: 128)
8254-0	8254-1	8254-2	8254-3	Graphics	
8253-0	8253-1	8253-2	8253-3	Image	

<Procedure>
The procedure is the same as that of 📖 P. 3-41 "3.7.12 Beam level conversion setting".

3.8.13 "PureBlack/Gray" threshold adjustment (PS-CIE Based color)

<Adjustment Mode (05)>

Original mode				Item to be adjusted	Remarks
General	Photo-graphic	Presenta-tion	Line art		
8255-0	8255-1	8255-2	8255-3	Text	The larger the value is, the wider the color range to be printed only with the black toner becomes. The smaller the value is, the narrower this color range becomes. Acceptable values: 113 to 143 (Default: 128)
8257-0	8257-1	8257-2	8257-3	Graphics	
8256-0	8256-1	8256-2	8256-3	Image	

<Procedure>

The procedure is the same as that of 📖 P. 3-41 "3.7.12 Beam level conversion setting".

3.8.14 Toner limit threshold adjustment

<Adjustment Mode (05)>

Smooth (PS)	Detail (PS)	Smooth (PCL)	Detail (PCL)	Original mode	Remarks
1092-0	8080-0	1092-1	8080-1	Plain paper	The larger the value is, the darker the image in the high density area becomes. Acceptable values: 113 to 143 (Default: Plain paper: 128, Thick paper 1: 113, Thick paper 2: 113, Thick paper 3: 113, OHP film: 128, special paper 1: 113, special paper 2: 113, Recycled paper: 128, Thick paper 4: 113)
1093-0	8081-0	1093-1	8081-1	Thick paper 1	
1094-0	8082-0	1094-1	8082-1	Thick paper 2	
1095-0	8083-0	1095-1	8083-1	Thick paper 3	
1096-0	8084-0	1096-1	8084-1	OHP	
8076-0	8085-0	8076-1	8085-1	Special paper 1	
8077-0	8086-0	8077-1	8086-1	Special paper 2	
8078-0	8087-0	8078-1	8087-1	Recycled paper	
8079-0	8088-0	8079-1	8088-1	Thick paper 4	

<Procedure>

The procedure is the same as that of 📖 P. 3-41 "3.7.12 Beam level conversion setting".

3.8.15 Screen switchover

<Adjustment Mode (05)>

Black mode		Color mode		Remarks
PS	PCL	PS	PCL	
7346	7348	8176	8178	The level of screen ruling shown in the screen selecting menu of the printer driver can be switched. 0: High screen ruling value (smoother image) 1: Low screen ruling value (rougher image)

<Procedure>

The procedure is the same as that of 📖 P. 3-32 "3.7.2 Density adjustment".

3.8.16 Sharpness adjustment
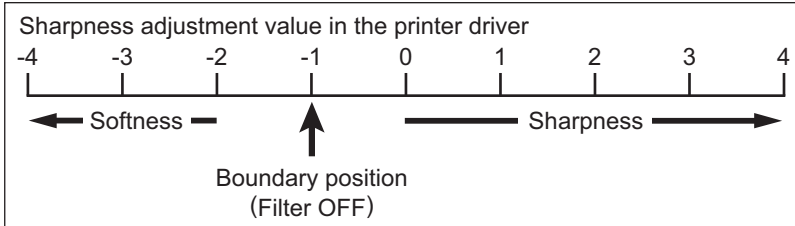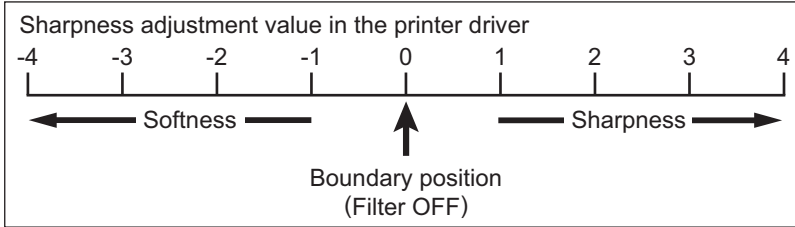
This adjustment is applied when images need to be softer or sharper.
The adjustment for each printer language, color mode or original mode is available.

<Adjustment Mode (05)>

Color mode	PS	PCL	Original mode	Remarks
Black	7330	7335	-	The larger the value is, the sharper the image becomes. The smaller the value is, the softer the image becomes. Acceptable values: 0 to 255 (Default: 128)
Color	8110	8114	General	
	8111	8115	Photographic	
	8112	8116	Presentation	
	8113	8117	Line art	

Adjustment of sharpness boundary position

Code	Remarks
8120	This adjustment is applied to determine the boundary position between sharpness and softness. 0: Set the printer driver adjustment value to "-1" (default) for the boundary position. 1: Set the printer driver adjustment value to "±0" for the boundary position. Switching the boundary position adjustment value will result in the filter operation being turned ON/OFF, since the filter operation is OFF in the boundary position. <Adjustment value of sharpness boundary position: "0" >

<Adjustment value of sharpness boundary position: "0" >

Sharpness adjustment value in the printer driver	Effect
-4 to -2	The smaller the value is, the softer the image becomes.
0 to 4	The larger the value is, the sharper the image becomes.
-1	The sharpness is OFF.

Sharpness adjustment value in the printer driver

```
-4      -3      -2      -1      0      1      2      3      4
```
← Softness —   Boundary position (Filter OFF)   — Sharpness →

<Adjustment value of sharpness boundary position: "1" >

Sharpness adjustment value in the printer driver	Effect
-4 to -1	The smaller the value is, the softer the image becomes.
1 to 4	The larger the value is, the sharper the image becomes.
0	The sharpness is OFF.

Sharpness adjustment value in the printer driver

```
-4      -3      -2      -1      0      1      2      3      4
```
← Softness —   Boundary position (Filter OFF)   — Sharpness →

<Procedure>
The procedure is the same as that of 📖 P. 3-50 "3.8.4 Adjustment of smudged/faint text".

3.8.17 Quantization parameter for intermediate file creation

This adjustment is applied when a specified file cannot be printed from a PC even though it has been attempted repeatedly.

<Adjustment Mode (05)>

Code	Item to be adjusted	Remarks
8196	Code length adjustment value	Select a value which does not cause printing errors within the acceptable range for the code length. Acceptable values: 60 to 64 (Default: 63)

<Procedure>
The procedure is the same as that of 📖 P. 3-50 "3.8.4 Adjustment of smudged/faint text".

3

e-STUDIO2500c/3500c/3510c
ADJUSTMENT

3.9 Image Quality Adjustment (Scanning Function)

3.9.1 Gamma balance adjustment

The gamma balance at the Black Mode is adjusted by adjusting the density. The adjustment is performed by selecting its density area from the following: low density, medium density and high density.

<Adjustment Mode (05)>

Black				Gray Scale	Item to be adjusted	Remarks
Original mode						
Text/ Photo	Text	Photo	User custom			
880-0	881-0	882-0	7480-0	883-0	Low density	The larger the value is, the density of the item to be adjusted becomes darker. Acceptable values: 0 to 255 (Default: 128)
880-1	881-1	882-1	7480-1	883-1	Medium density	
880-2	881-2	882-2	7480-2	883-2	High density	

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in the code corresponding to the desired original mode and press the [START] button.
(3) Key in the value corresponding to the density area to be adjusted (0, 1 or 2) and press the [START] button.
   0: Low density (L), 1: Medium density (M), 2: High density (H)
(4) Key in the adjustment value. (To correct the value once keyed in, press the [CLEAR] button.)
(5) Press the [ENTER] or [INTERRUPT] button to store the value in memory. → The equipment goes back to the ready state.
(6) For resetting the value, repeat step (2) to (5).
(7) Let the equipment restart and perform the scanning job.
(8) If the desired image has not been attained, repeat step (1) to (7).

3.9.2 Density adjustment

Adjusts the center density and the variation of density adjustment buttons.

Color Mode	Original mode				Item to be adjusted	Remarks
	Text	Photo	Printed image	User custom		
Color	8340	8341	8342	8380	Manual density center value	The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128)
	8344	8345	8346	8381	Manual density light step value	Sets the changing amount by 1 step at the density adjustment on the control panel. The larger the value is, the lighter the light side becomes. Acceptable values: 0 to 255 (Default: 20)
	8348	8349	8350	8382	Manual density dark step value	Sets the changing amount by 1 step at the density adjustment on the control panel. The larger the value is, the darker the dark side becomes. Acceptable values: 0 to 255 (Default: 20)

Black				Gray Scale	Item to be adjusted	Remarks
Original mode						
Text/ Photo	Text	Photo	User custom			
845	846	847	7475	848	Manual density center value	[TEXT/PHOTO], [PHOTO], [Gray Scale]: The larger the value is, the darker the image of the center step density becomes. [Text]: The larger the value is, the lighter the image of the center step density becomes. [User custom]: The larger the value is, the darker the image of the center step density becomes. However, if the base is in the Text mode, the larger the value is, the lighter the image of the center step density becomes. Acceptable values: 0 to 255 (Default: 128)
850	851	852	7476	853	Manual density light step value	Sets the changing amount by 1 step at the density adjustment on the control panel. The larger the value is, the lighter the light side becomes. Acceptable values: 0 to 255 (Default: 20)
855	856	857	7477	858	Manual density dark step value	Sets the changing amount by 1 step at the density adjustment on the control panel. The larger the value is, the darker the dark side becomes. Acceptable values: 0 to 255 (Default: 20)

Black				Gray Scale	Item to be adjusted	Remarks
Original mode						
Text/ Photo	Text	Photo	User custom			
860	861	862	7478	863	Automatic density	[TEXT/PHOTO], [PHOTO], [Gray Scale]: The larger the value is, the darker the image of the center step density becomes. [Text]: The larger the value is, the lighter the image of the center step density becomes. [User custom]: The larger the value is, the darker the image of the center step density becomes. However, if the base is in the Text mode, the larger the value is, the lighter the image of the center step density becomes. Acceptable values: 0 to 255 (Default: 128)

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in a code and press the [START] button.
(3) Key in an adjustment value (acceptable values: 0 to 255).
   (To correct a value once keyed in, press the [CLEAR] button.)
(4) Press the [ENTER] or [INTERRUPT] button to store the value in memory. → The equipment goes back to the ready state.
(5) Let the equipment restart and perform the scanning.
(6) If the desired image quality has not been attained, repeat step (1) to (5).

3.9.3 Background adjustment (Color Mode)

The adjustment level of background center value is adjusted. The control value of background adjustment button is automatically adjusted to the same level as the adjusted center value.
For example, when the control value of background adjustment key ranges from 0 to 6, the background center value (-2 to +2) is used to be the range from 6 to 14 accordingly.

Before adjustment	+2	+1	0	-1	-2

```
0  1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  16  17
```

After adjustment	+2	+1	0	-1	-2

<Adjustment Mode (05)>
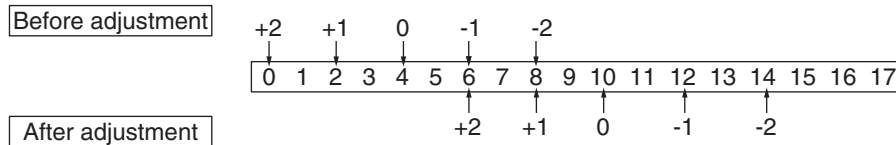
Code	Original mode	Remarks
1070	Text	The larger the value is, the background becomes darker. Acceptable values: 0 to 50 (Default: 50)
1071	Printed Image	
1072	Photo	
8370	User custom	

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in the codes and press the [START] button.
(3) Key in the adjustment values. Acceptable values: 0 to 50. (To correct the value once keyed in, press the [CLEAR] button.)
(4) Press the [ENTER] or [INTERRUPT] button to store the value in memory. → The equipment goes back to the ready state.
(5) Let the equipment restart and perform the scanning job.
(6) If the desired image has not been attained, repeat step (1) to (5).

3.9.4 Judgment threshold for ACS

The judgment level is adjusted for the automatic identification of whether the original set on the glass is black or color. Namely, this is to adjust the judgment level used when "Auto Color" is selected at color modes. The adjustment is available for both the manually-set original and the original used with the RADF.

<Adjustment Mode (05)>

Code	Item to be adjusted	Contents
1065	Judgment threshold for ACS when original is set manually	The larger the value is, the more an original tends to be judged as black even at the Auto Color Mode. The smaller the value is, the more it tends to be judged as color. Acceptable values: 0 to 255 (Default: 70)
1066	Judgment threshold for ACS when original is set on RADF	

<Procedure>:
The procedure is the same as that of 📖 P. 3-57 "3.9.2 Density adjustment".

3.9.5 Sharpness adjustment

If you want to make scan images look softer or sharper, perform the following adjustment. The adjustment can be made for each of the color modes and original modes independently.

<Adjustment Mode (05)>

Code	Color mode	Original mode	Contents
1086	Full Color	Text	• The larger the value is, the sharper the image becomes; while the smaller the value is, the softer the image becomes. • The smaller the value is, the less moire tends to appear. • The acceptable values are 0 to 255. The center value is 128.
1087		Printed Image	
1088		Photo	
8375		User custom	
840	Black	Text/Photo	
841		Text	
842		Photo	
7470		User custom	
843	Gray Scale	-	

Note:
You have to make adjustment by balancing between moire and sharpness.

<Procedure>
The procedure is the same as that of 📖 P. 3-57 "3.9.2 Density adjustment".

3.9.6 Setting range correction

The values of the background peak / text peak in the range correction at the Black Mode can be switched to "varied" or "fixed" in the following codes.
If they are fixed, the range correction is performed with standard values.
The values of the background peak affects the reproduction of the background density and the values of the text peak affects that of the text density.

<Adjustment Mode (05)>

Black				Gray Scale	Item to be adjusted	Remarks
Original mode						
Text/ Photo	Text	Photo	User custom			
825	826	827	7465	828	Range correction for original manually set on the original glass	The following are the default values set for each original mode. Photo/Text: 12, Text: 12, Photo: 12, Gray Scale: 12 Each digit stands for: Ones place: Automatic density mode Tens place: Manual density mode
830	831	832	7466	833	Range correction for original set on the RADF	The setting conditions possible are as follows: Background peak Text peak 1: fixed fixed 2: varied fixed 3: fixed varied 4: varied varied

<Procedure>
The procedure is the same as that of 📖 P. 3-57 "3.9.2 Density adjustment".

3.9.7 Setting range correction (Adjustment of background peak)

The levels of the background peak for the range correction at the Black Mode can be set at the following codes.

<Adjustment Mode (05)>

Black				Gray Scale	Item to be adjusted	Remarks
Original mode						
Text/ Photo	Text	Photo	User custom			
835	836	837	7467	838	Background peak for range correction	When the value increases, the background (low density section) of the image is not output. Acceptable vales: 0 to 255 (Default: Text/Photo: 48, Text: 48, Photo: 36, User custom: 56, Gray Scale: 36)

<Procedure>
The procedure is the same as that of 📖 P. 3-57 "3.9.2 Density adjustment".

3.9.8 Fine adjustment of black density

The density of black side on scanned image is adjusted at color-scanning.

<Adjustment Mode (05)>

Code	Original mode	Remarks
1075	Text	The larger the value is, the black side of the image becomes darker.
1076	Printed Image	Acceptable values: 0 to 4 (Default: 0)
1077	Photo	
8371	User custom	

Note:
Be careful for the value not to be too large since the gradation is reproduced worse in darker side.

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in the codes and press the [START] button.
(3) Key in the adjustment values. Acceptable values: 0 to 4. (To correct the value once keyed in, press the [CLEAR] button.)
(4) Press the [ENTER] or [INTERRUPT] button to store the value in memory. ‡ The equipment goes back to the ready state.
(5) Let the equipment restart and perform the scanning job.
(6) If the desired image has not been attained, repeat step (1) to (5).

3.9.9　RGB conversion method selection

The color space conversion method of image is decided at color-scanning.

<div align="right"><Adjustment Mode (05)></div>

Code	Original mode	Remarks
1080	Text	0: sRGB, 1: AppleRGB, 2: ROMMRGB, 3: AdobeRGB (Default: 0)
1081	Printed Image	
1082	Photo	
8372	User custom	

<Procedure>

(1)　While pressing [0] and [5] simultaneously, turn the power ON.
(2)　Key in the codes and press the [START] button.
(3)　Key in the adjustment values. Acceptable values: 0 to 3. (To correct the value once keyed in, press the [CLEAR] button.)
(4)　Press the [ENTER] or [INTERRUPT] button to store the value in memory. ‡ The equipment goes back to the ready state.
(5)　Let the equipment restart and perform the scanning job.
(6)　If the desired image has not been attained, repeat step (1) to (5).

3.9.10　Adjustment of brightness

The brightness of the scanned image is adjusted at color-scanning.

<div align="right"><Adjustment Mode (05)></div>

Code	Original mode	Remarks
8325	Text	The larger the value is, the brighter the image becomes. The smaller the value is, the duller the image becomes. Acceptable values: 0 to 255 (Default: 128)
8326	Printed Image	
8327	Photo	
8373	User custom	

<Procedure>

(1)　While pressing [0] and [5] simultaneously, turn the power ON.
(2)　Key in the codes and press the [START] button.
(3)　Key in the adjustment values. Acceptable values: 0 to 255.
　　　(To correct the value once keyed in, press the [CLEAR] button.)
(4)　Press the [ENTER] or [INTERRUPT] button to store the value in the memory. ‡ The equipment goes back to the ready state.
(5)　Let the equipment restart and perform the scanning job.
(6)　If the desired image has not been attained, repeat step (1) to (5).

3.9.11 Reproduction ratio of primary scanning direction (black)

The reproduction ratio of primary scanning direction with the resolution other than 600 dpi is adjusted in Scanning Function for black image.

<Adjustment Mode (05)>

Code	Remarks
884	When the value increases, the image is zoomed in. When the value decreases, the image is zoomed out. Acceptable values: 0 to 255 (Default: 128) * 0.1%/step

<Procedure>
The procedure is the same as that of 📖 P. 3-57 "3.9.2 Density adjustment".

3.9.12 Reproduction ratio of primary scanning direction (color)

The reproduction ratio of primary scanning direction with the resolution other than 600 dpi is adjusted in Scanning Function for color image.

<Adjustment Mode (05)>

Code	Remarks
1060	When the value increases, the image is zoomed in. When the value decreases, the image is zoomed out. Acceptable values: 0 to 255 (Default: 128) * 0.1%/step

<Procedure>
The procedure is the same as that of 📖 P. 3-57 "3.9.2 Density adjustment".

3.10 Image Quality Adjustment (FAX Function)

3.10.1 Density adjustment

The center density and the density variation controlled by density adjustment keys can be adjusted as follows.

<Adjustment Mode (05)>

Color mode	Original mode			Item to be adjusted	Remarks
	Text/ Photo	Text *	Photo		
Black	714	700	710	Manual density center value	[TEXT/PHOTO], [PHOTO]: The larger the value is, the darker the image becomes. [Text]: The larger the value is, the lighter the image becomes. Acceptable values: 0 to 255 (Default: 128)
	724	702	720	Manual density dark step value	The larger the value is, the darker the dark side becomes. Acceptable values: 0 to 255 (Default: 20)
	719	701	715	Manual density light step value	The larger the value is, the lighter the light side becomes. Acceptable values: 0 to 255 (Default: 20)
	729	-	725	Automatic density mode	The larger the value is, the darker the image becomes. Acceptable values: 0 to 255 (Default: 128)

* Since the gradation in this mode is reproduced in a binary image (black and white), this adjustment should be a simple binary threshold adjustment.

<Procedure>

(1) While pressing [0] and [5] simultaneously, turn the power ON.
(2) Key in a code and press the [START] button.
(3) Key in an adjustment value.
    (To correct the value once keyed in, press the [CLEAR] button.)
(4) Press the [ENTER] or [INTERRUPT] button to store the value. ‡ The equipment goes back to the ready state.
(5) Turn the power OFF.

<Confirmation>
If possible, perform a Fax transmission and check the adjusted density with the image on the recipient's side.

3.11 High-Voltage Transformer Setting

3.11.1 General description

The high-voltage transformers (PS-HVT-380) supply high-voltage to the parts related to charging, development, transfer and Discharging blade.
The high-voltage transformer has the following high-voltage outputs.

CH1	1	Main charger needle (Y)
	2	Main charger needle (M)
	3	Main charger needle (C)
	4	Main charger needle (K)
CH2	1	Main charger grid bias (Y)
	2	Main charger grid bias (M)
	3	Main charger grid bias (C)
	4	Main charger grid bias (K)
CH3	1	Developer bias (Y)
	2	Developer bias (M)
	3	Developer bias (C)
	4	Developer bias (K)
CH4	1	1st transfer roller bias (Y)
	2	1st transfer roller bias (M)
	3	1st transfer roller bias (C)
	4	1st transfer roller bias (K)
CH5	-	2nd transfer roller bias
CH6	1	Recovery blade bias (Y)
	2	Recovery blade bias (M)
	3	Recovery blade bias (C)
	4	Recovery blade bias (K)

Note:
Never move the variable resistance on the board since the output adjustment has been performed at the shipment for the high-voltage transformer supplied as a service part. Also do not perform the setting change when the high-voltage power supply is replaced.

3.12 Adjustment of the Scanner Section

3.12.1 Carriages

(1) Installing carriage wires
When replacing the carriage wires, refer illustrations below:

[Front side]
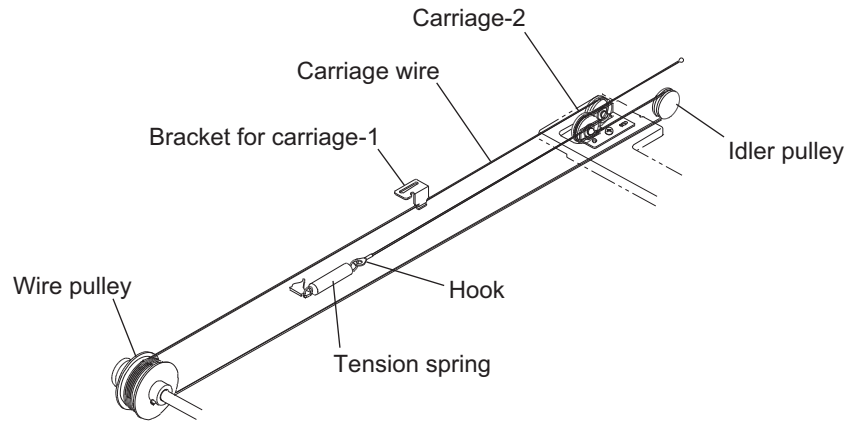
Fig. 3-24

[Rear side]
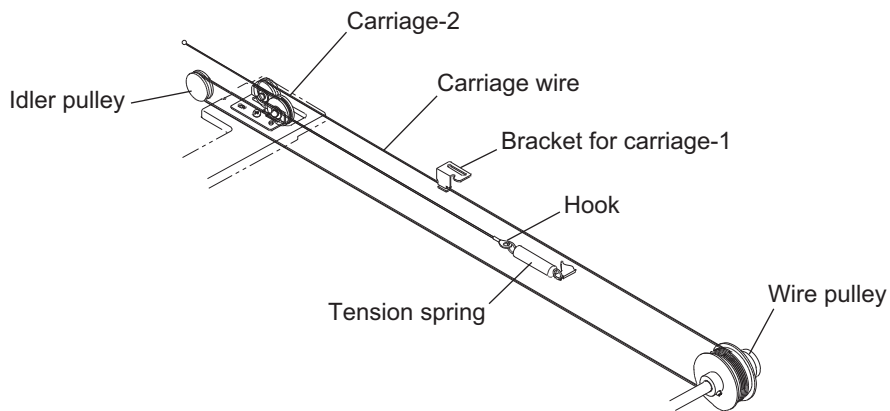
Fig. 3-25

Adjustment of the carriage wire tension is not necessary since a certain tension is applied to the carriage wires by the tension springs.

Note:
Make sure the tension applied to the wire is normal.

(2) Adjusting carriages-1 and -2 positions
   • Move the carriage-2 toward the exit side.
   • Loosen the screws fixing the front side pulley bracket, make the sections A and B of the carriage-2 touch with the inside of the exit side frame and screw them up.

Carriage-2   Pulley bracket

[Rear]   [Front]

Exit side frame

B   A   Enlarged view of carriage
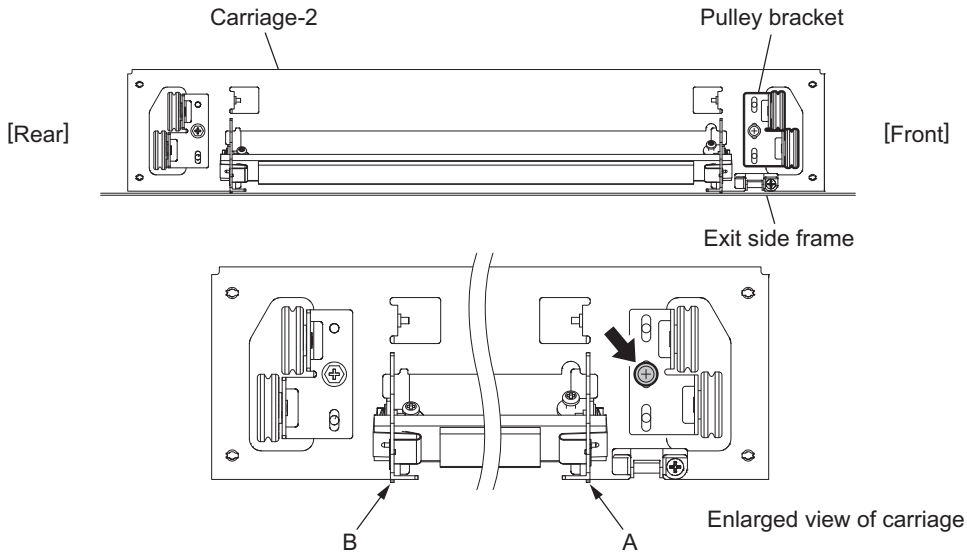
Fig. 3-26

   • Put the carriage-1 on the rail, make the sections C and D of it touch with the inside of the exit frame and screw up the front/rear side of the bracket to fix it.

Note:
   Make sure that the sections A and B of the carriage-2 touch with the exit side frame.

Carriage-1

[Rear]   [Front]

Exit side frame

Bracket   Bracket

D   C   Enlarged view of carriage
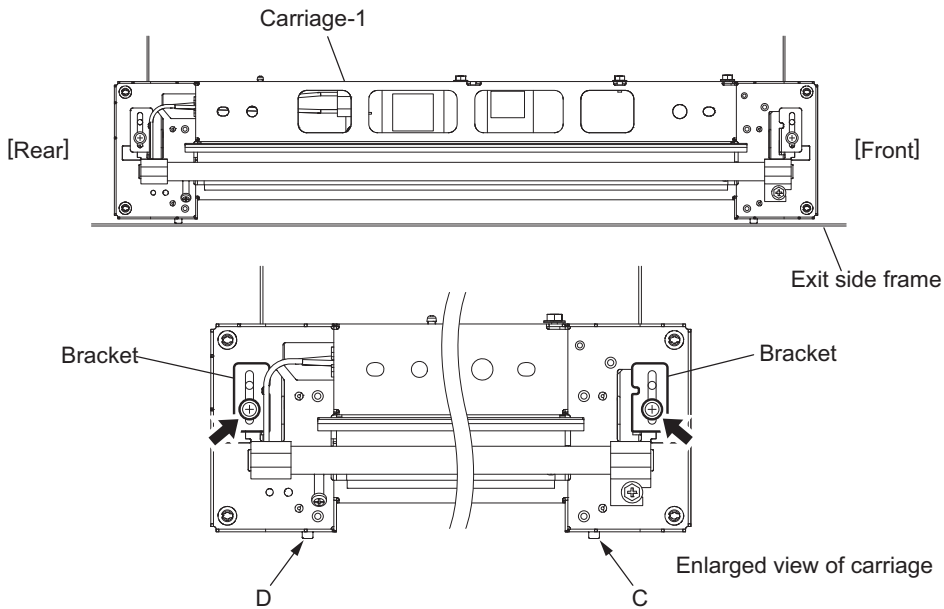
Fig. 3-27

(3) Assembling carriage wires
Winding the wire around the wire pulley:
- Pull the Ø3 ball terminal located at the center of the wire into a hole on the wire pulley.
  One end of the wire with a hook attached comes to the outside.
- Wind the wires around the wire pulleys of the front and rear sides. The number of turns to be wound are as follows:
  - 2 turns toward the opposite side of the boss
  - 4 turns toward the boss side

Notes:
Pay attention to the followings when the wires are wound around the pulleys:
- Do not twist the wire.
- Wind the wires tightly so that they are in complete contact with the surface of the pulleys.
- Each turn should be pushed against the previously wound turn so that there is no space between them.
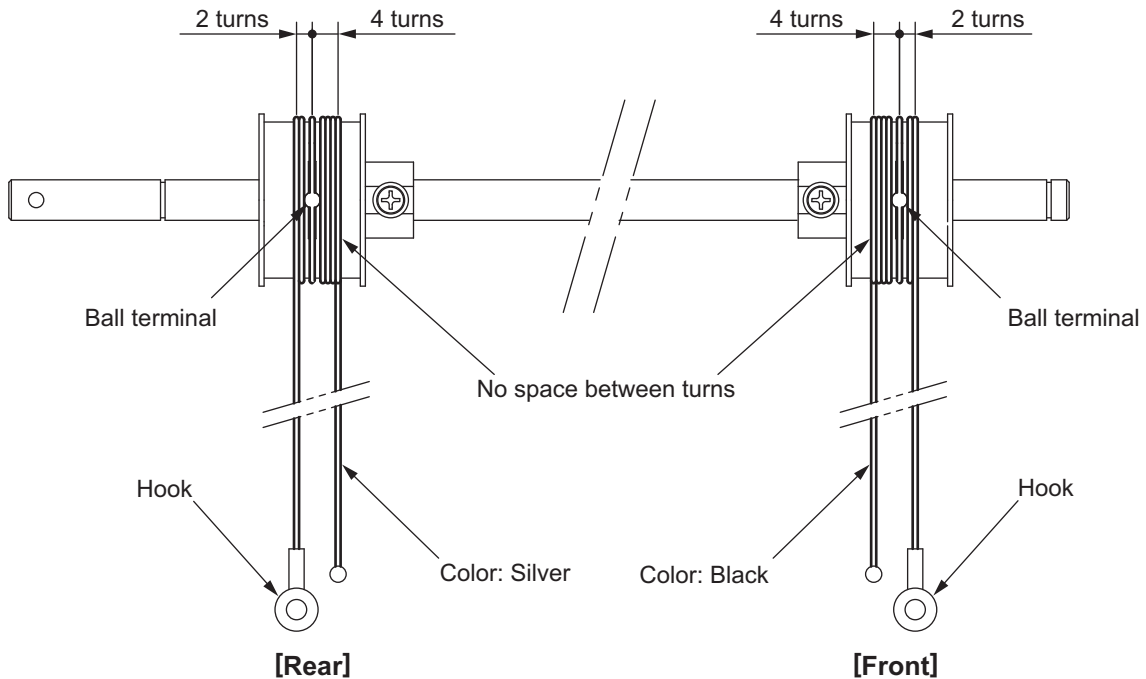
Fig. 3-28

- After winding the wires around the pulleys, attach the wire holder jigs not to loosen the wires.

Notes:
1. When the wire holder jig is attached, make sure that the wire is not shifted or loosened.
2. The wire should come out of the slot of the wire holder jig and be passed under the arm of it.

Arm

Wire holder jig

Wire holder jig

Fig. 3-29

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ADJUSTMENT
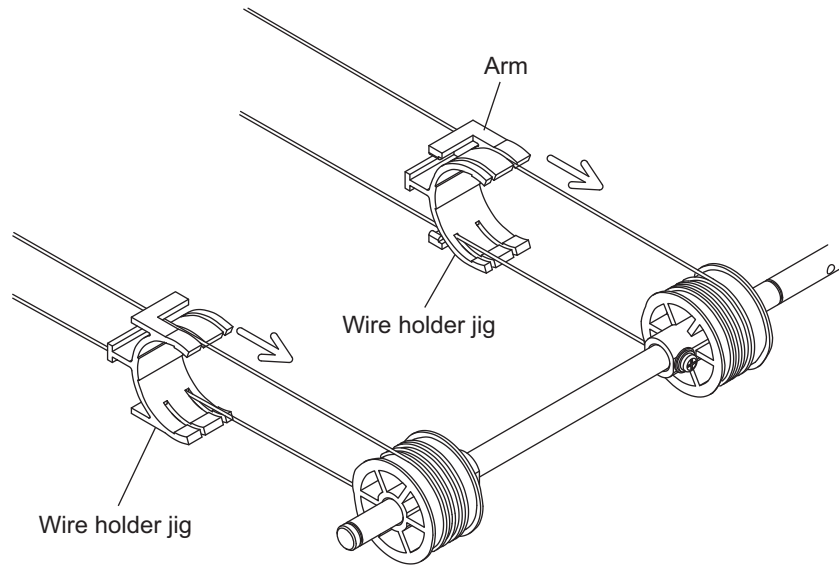
3.12.2 Lens unit

(1) Replacing the lens unit
- The lens unit must not be readjusted and some part of its components must not be replaced in the field since the unit is precisely adjusted. If any of the components is defective, replace the whole unit.
- When replacing the unit, do not loosen or remove the 8 screws indicated with the arrows.
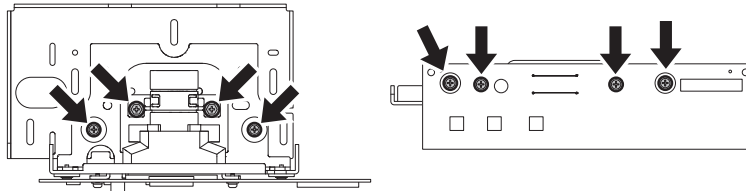
Fig. 3-30

- Handle the unit with care. Do not hold the lens and adjusted part (hold the unit as shown below).
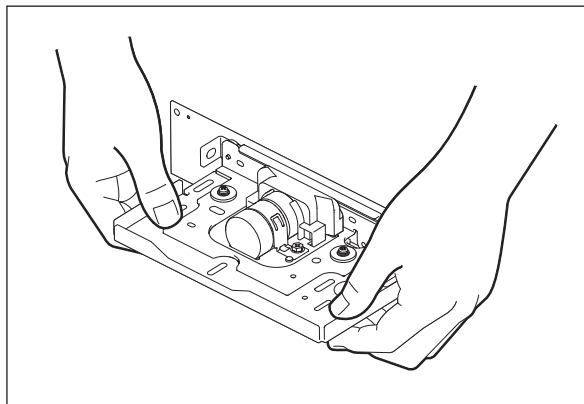
Fig. 3-31

(2) Installation of lens unit
Follow the procedure below when installing and replacing the lens unit.

e-STUDIO2500c/3500c/3510c
ADJUSTMENT

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<Procedure>

(1)   Attach the lens unit and fix it temporarily with 2 screws.
(2)   Match the center scale of the plate in which the unit is to be installed and the rightmost scale of the adjusting hole on the lens unit plate.

[Rear]

Screw

[Front]
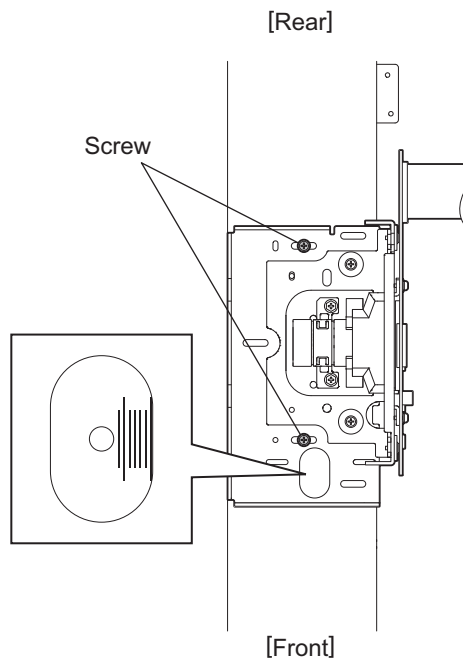
Fig. 3-32

(3)   Tighten 5 screws securely to fix the lens unit while pushing it to the rear side .

[Rear]

Screw

Screw

Screw

[Front]

Fig. 3-33

e-STUDIO2500c/3500c/3510c
ADJUSTMENT
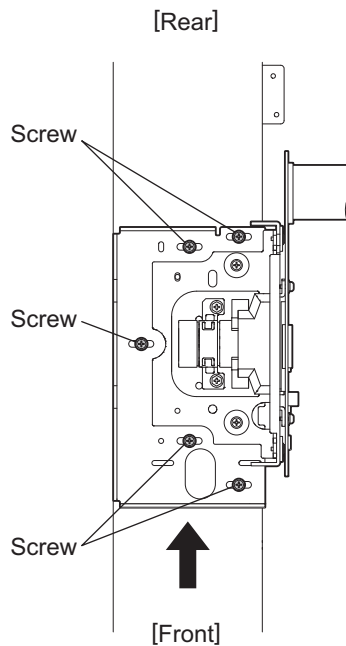
3.12.3 Belt tension adjustment for the scan motor

Whenever the scan motor is taken off, be sure to perform the belt tension adjustment: the replacement of the scan motor, timing belt, pulley, etc.
Jig: Belt tension jig
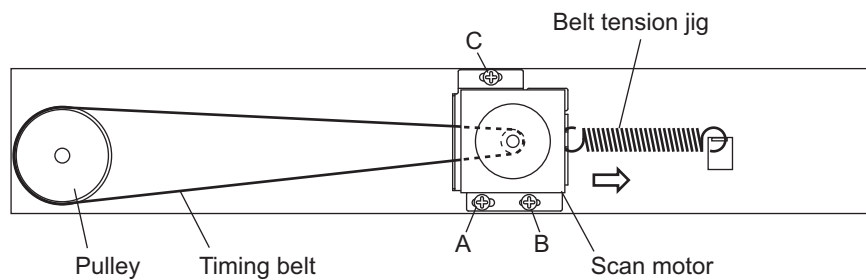
Fig. 3-34

<Adjustment procedure>

(1) Hook the belt tension jig to the motor bracket and the flame.

(2) Loosen screw-B and -C. (There is no need to loosen screw-A, since it is a shoulder screw.)

(3) The scan motor is pulled by the belt tension jig. Fix screw-B and then -C at the stopped position.

(4) Remove the belt tension jig.

3.13 Adjustment of the Paper Feeding System

3.13.1 Sheet sideways deviation caused by paper feeding

<Procedure>
• The center of the printed image shifts to the front side. →Move the guide to the front side (Arrow (A) direction in the lower figure).
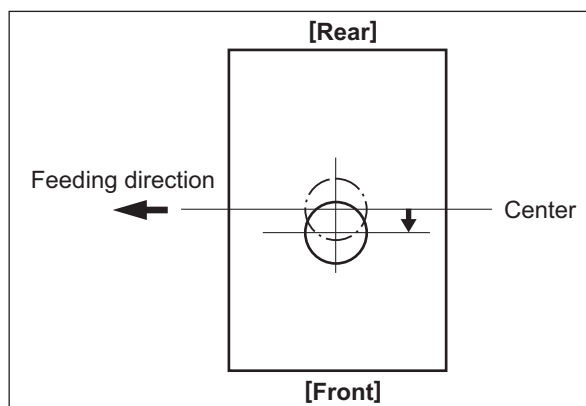
Fig. 3-35

• The center of the printed image shifts to the rear side. →Move the guide to the rear side (Arrow (B) direction in the lower figure).
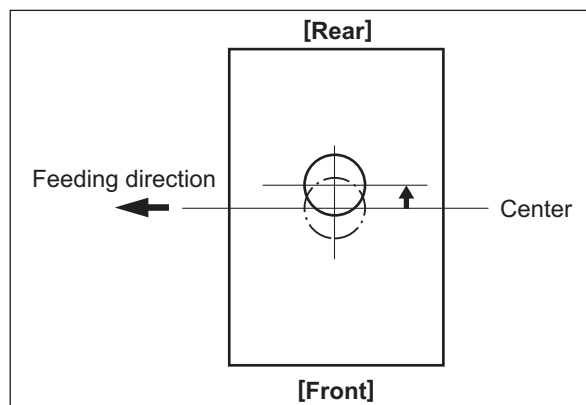
Fig. 3-36

• Bypass feeding

1) Loosen the screen.
2) Move the entire guide to the front or rear side.
3) Tighten the screw.
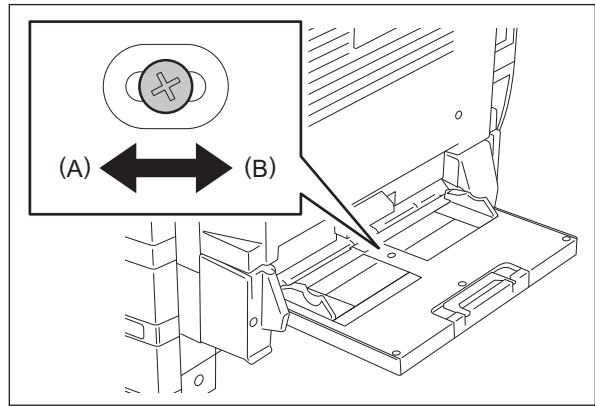
Fig. 3-37

• Drawer feeding

1) Loosen 2 screws.
2) Move the entire guide to the front or rear side.
3) Tighten the screws.
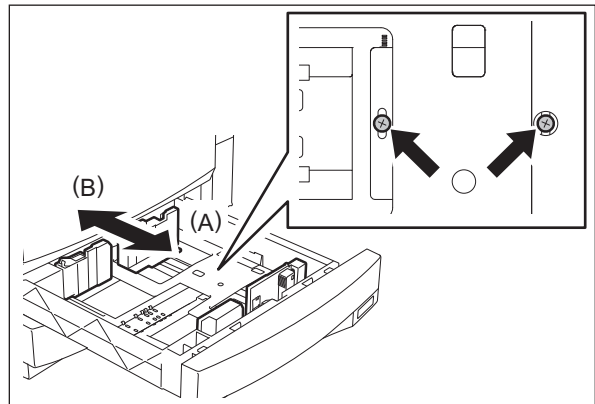
Fig. 3-38

3.14 Adjustment of the doctor-to-sleeve gap

For the adjustment of the doctor-to-sleeve gap, perform the same procedure for the Y, M, C and K developer units.
Adjustment tool to use: Doctor-sleeve gap jig

<Adjustment procedure>

(1) Take off the process unit from the equipment.
(2) Take off the developer unit from the process unit.
  See chapter 11 of the Service Manual for the disassembling procedures.
(3) Take off the developer material cover. Then discharge the developer material.

  Note:
  While reattaching the developer material cover set the latches securely.
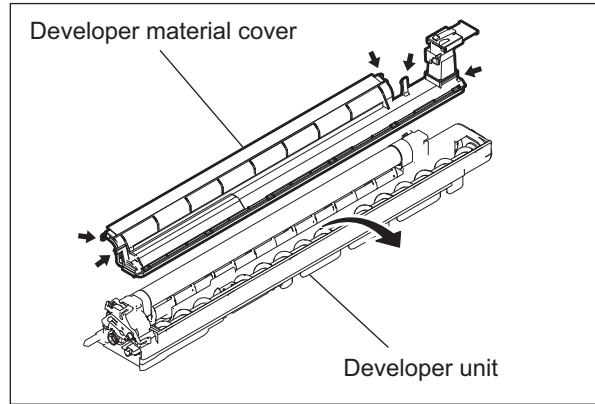
Fig. 3-39

(4) Loosen 2 doctor blade fixing screws. Insert the gauge "0.60" of the doctor sleeve jig between the developer sleeve and doctor blade to adjust the gap, and tighten the screws.

Fig. 3-40

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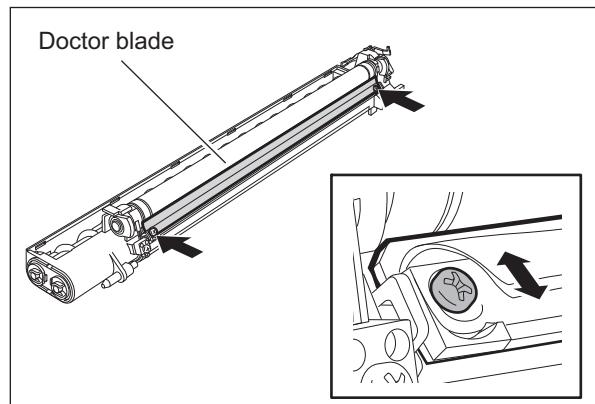
Notes:

1. Flip up 2 protection sheets for the doctor blade from the sleeve before inserting the gauge. Also, be sure not to damage the protection sheets.
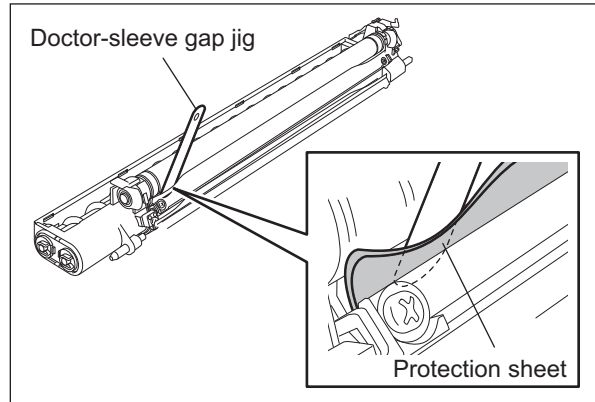
Fig. 3-41

2. When confirming and adjusting the gap between the developer sleeve and the doctor blade, insert the gauges into the gap after rotating the developer sleeve so that its marking faces the doctor blade.
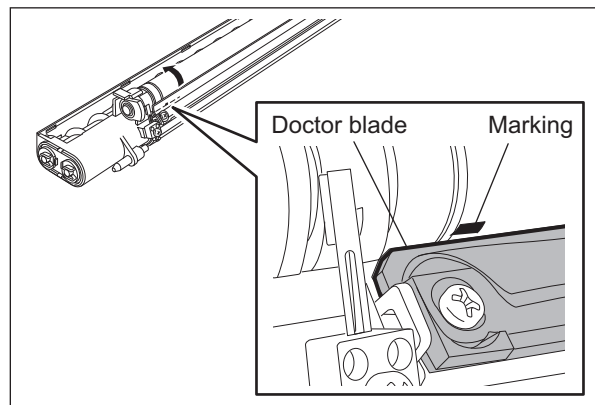
Fig. 3-42

(5) Insert the gauge "0.55" of the doctor-sleeve jig into the gap between the developer sleeve and the doctor blade and make sure that the gauge can move smoothly in the front/rear direction. In addition, confirm that the gauge "0.65" cannot be inserted into the gap.

Fig. 3-43

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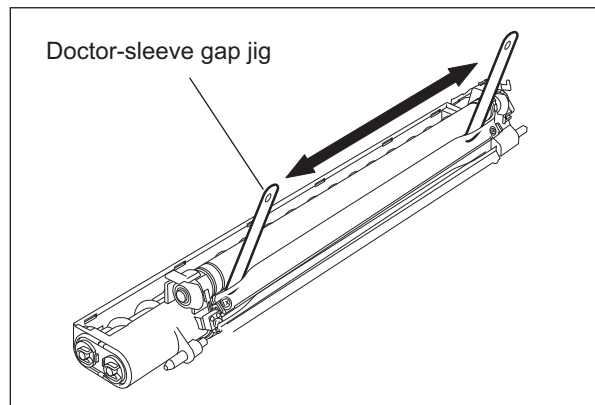
3.15 Adjustment of Gap between Transfer Belt Unit (TBU) Drive Gears

Perform this adjustment for setting the gap between the shafts of the TBU drive transmission gear and the TBU drive gear.

Since the gap can be adjusted only by the tension of the spring, no jig is required.

Perform this adjustment after replacing or disassembling any of the parts described below. (If this adjustment is not performed, image problems or abnormal noise may occur.)

A. When the TBU drive unit was replaced
   (It is limited to the case the unit includes brackets. The adjustment is not required when only the gear or the motor itself was replaced.)
B. When the TBU drive transmission gear was replaced
C. When the TBU was replaced
D. When the frame of the TBU was disassembled for parts replacement
   (The adjustment is not required when only the transfer belt or only the TBU drive gear was replaced.)
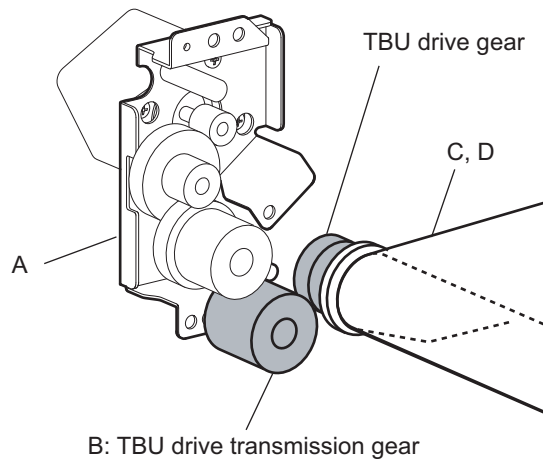
Fig. 3-44

<Procedure>
   Note:
   Perform the adjustment while the TBU releasing lever is being pressed down after the installation of the TBU.

   (1)   Take off 1 ozone filter, 2 rear covers and the ozone exhausting duct.

   (2)   Loosen 3 screws shown in the figure. (Tension is applied by the spring.)

   (3)   Tighten the 3 screws loosened in step 2.

(4) Reinstall the parts taken off in step 1.
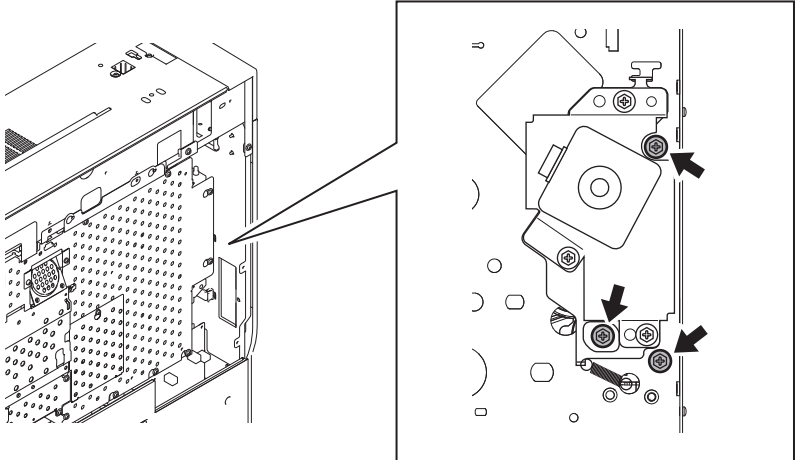
3.16 Adjustment of the Separation Plate Gap (Fuser unit)

Perform this adjustment when the following parts are replaced or disassembled.

| Separation plate | Fuser belt | Fuser roller |
| Frame of fuser unit | Heat roller | |

Adjustment tool to use: Separation plate gap jig
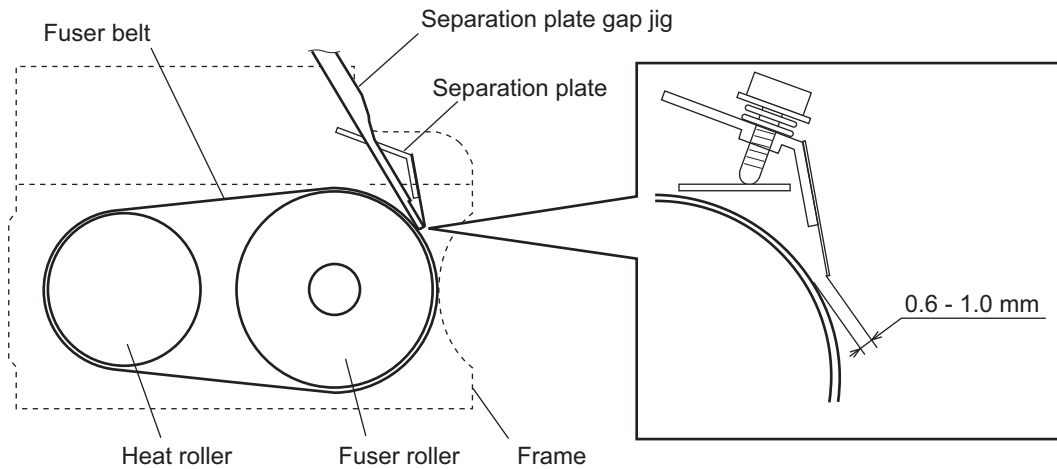
Fig. 3-45

Notes:
1. Perform gap adjustment when the fuser unit is at a normal temperature.
2. Make sure that the pressure roller is released.
3. Be careful not to damage the fuser belt and jig (to protect the fuser belt, the jig is made from ABS).

<Adjustment procedure>

(1) Take out the fuser unit from the equipment and disassemble it so that the adjustment can be performed.

See the Service Handbook for the disassembly procedure.

(2) Insert the jig end (with a hole) into the first window on the separation plate viewed from the front. Adjust it with a screw so that the 0.6 mm jig can be inserted between the separation plate and the fuser belt, but the 1.0 mm jig cannot.

(3) Insert the jig into the last window on the separation plate viewed from the front, and then adjust it in the same manner.

(4) Insert the jig into the remaining three windows on the separation plate, and then adjust them in the same manner.
   * If the 0.6 mm jig cannot be inserted, the gap is too narrow. Adjust it again.
   * If the 1.0 mm jig can be inserted, the gap is too wide. Adjust it again.
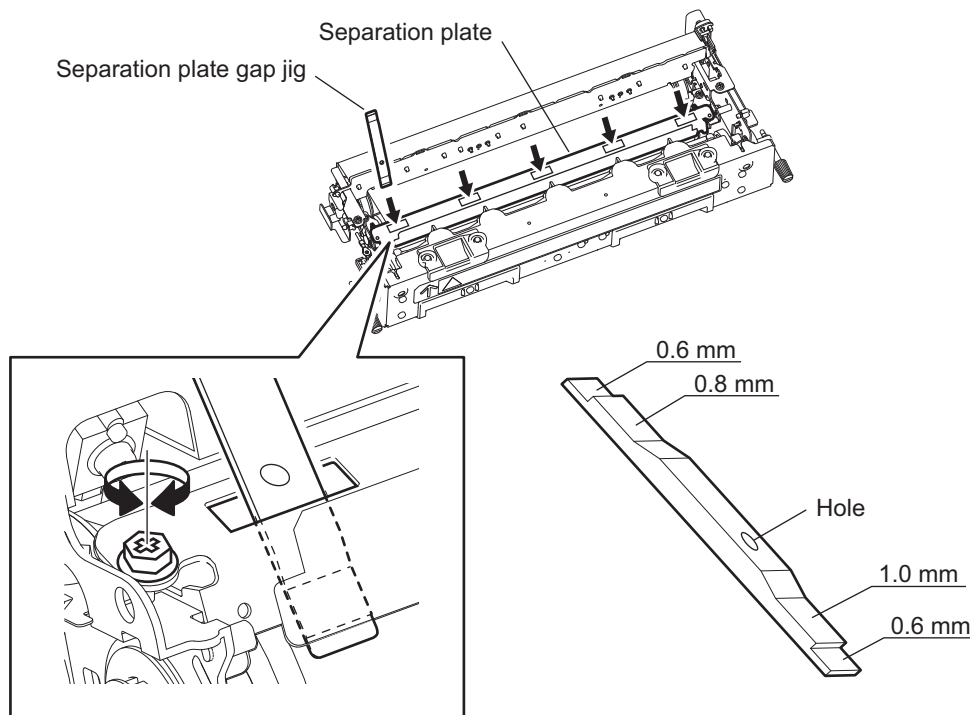
Note:
When thin paper or paper with a small leading edge margin is used, the gap needs to be narrower. In this case, use the jig end (without a hole). (The procedure is the same.)

* Using the jig end (with a hole): The gap is between 0.6 mm and 1.0 mm.
* Using the jig end (without a hole): The gap is between 0.6 mm and 0.8 mm.

Note:
Paper jams tend to occur in equipment in which thin paper such as 64g/m^2 (17lb. Bond) paper is used or a large amount of high density images such as pictures are output. For this equipment, we recommend that you adjust the gap of the separation plate within the range of 0.6 mm to 0.8 mm in order to prevent paper jamming.

3.17 Adjustment of the RADF (MR-3018)

3.17.1 Adjustment of RADF Position

Perform this adjustment when the RADF is not installed in the correct position.

Note:

Check if the image adjustment for the equipment is performed properly before this adjustment of the RADF.

[A] Checking

(1) Open the RADF and install 2 positioning pins (the positioning pins are installed to the back side of the hinge which is on the left side of the RADF).
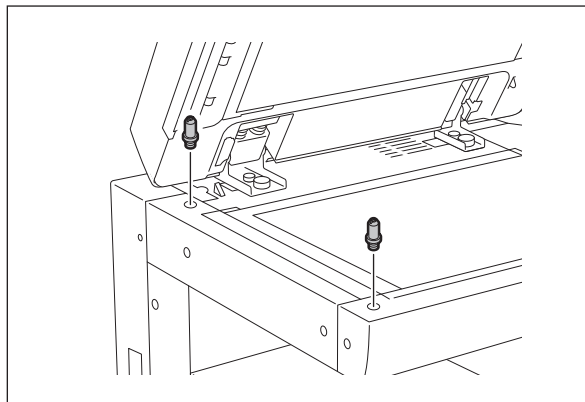
Fig. 3-46

(2) Remove the platen sheet.
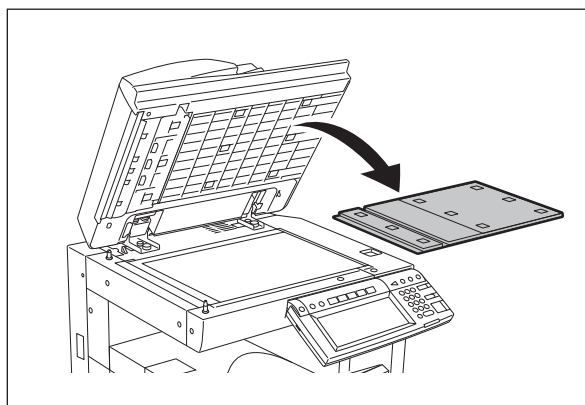
Fig. 3-47

(3) Close the RADF and check if the positioning pins fit the holes on the RADF.
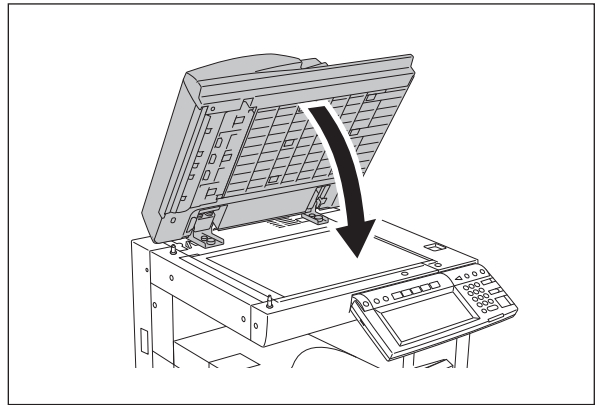
Fig. 3-48

[B] Adjustment

If the pins cannot be fitted into the holes, perform the adjustment according to the following procedure.

(1) Remove the right-hand hinge screw at the rear side.
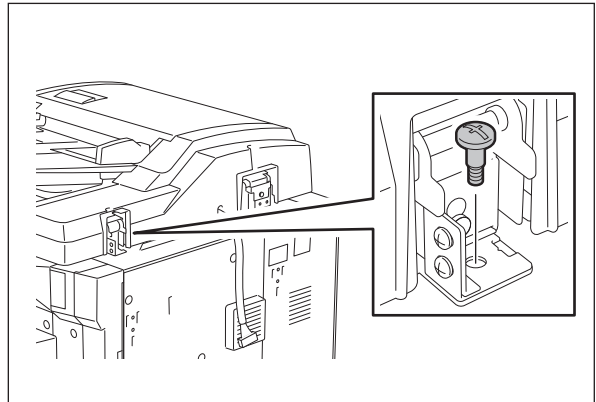
Fig. 3-49

(2) Loosen the left-hand hinge screw at the rear side.
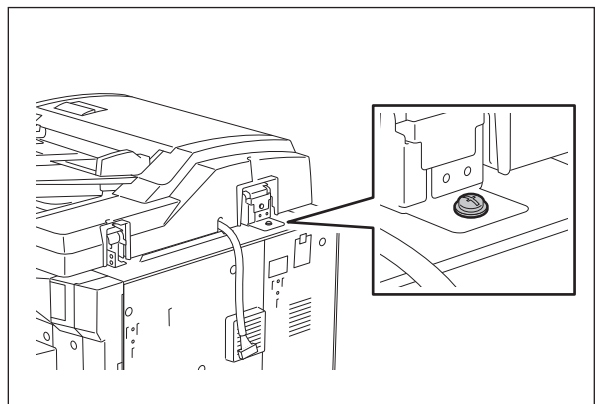
Fig. 3-50

(3) Loosen the hinge screws at the front side.
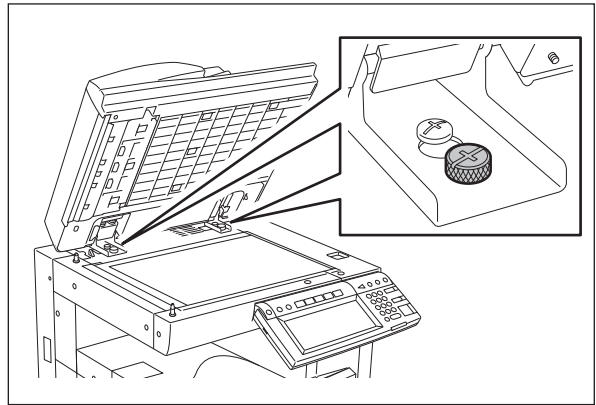
Fig. 3-51

(4) Position the pins with the holes on the RADF by moving it so that the pins fit into the holes when the RADF is closed.
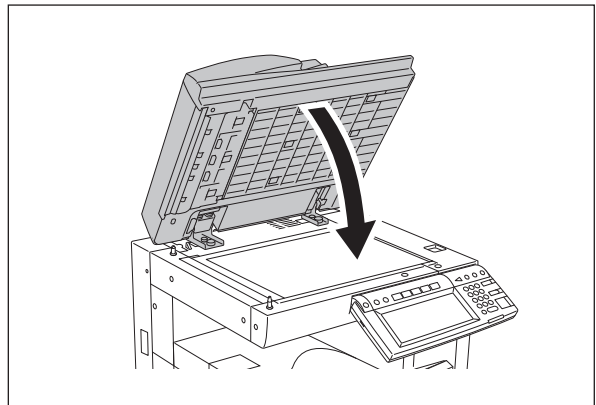
Fig. 3-52

(5) Tighten the left-hand hinge screw at the rear side.
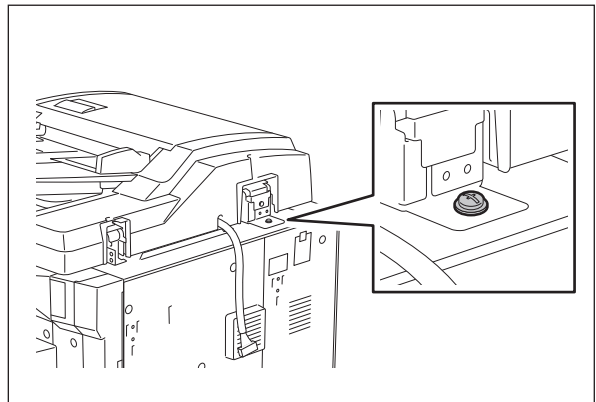
Fig. 3-53

(6) Loosen the hole position adjustment screws on the right hand side.
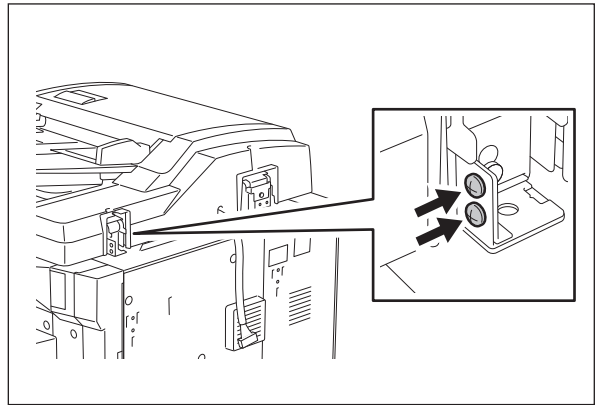
Fig. 3-54

(7) Match the screw hole positions.
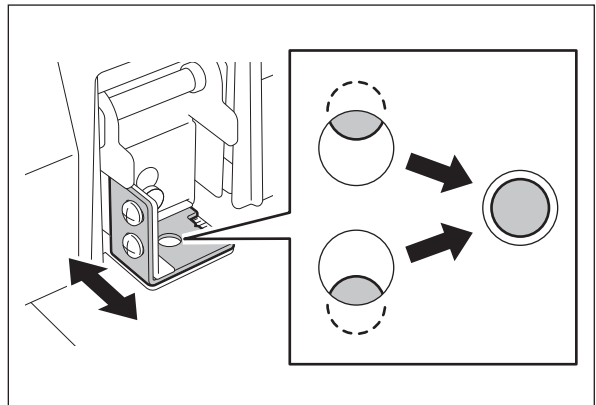
Fig. 3-55

(8) Install the right-hand hinge screw at the rear side.
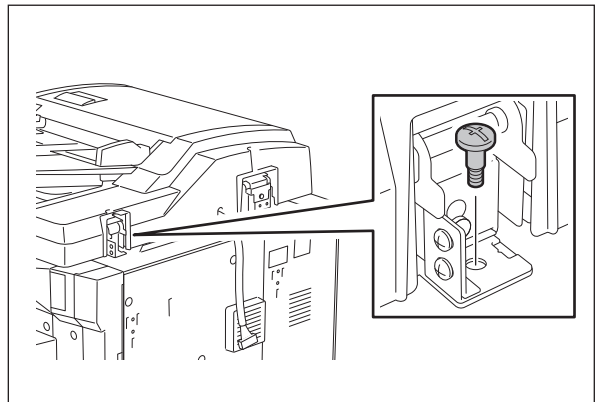
Fig. 3-56

(9) Loosen the hinge screws at the front side.
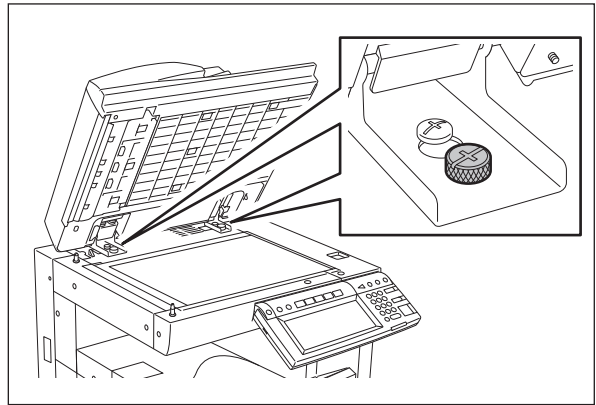
Fig. 3-57

(10) Place the platen sheet on the original glass
     and align it to the top left corner.
     Close the RADF gently and open it to check
     if the platen sheet is attached properly.
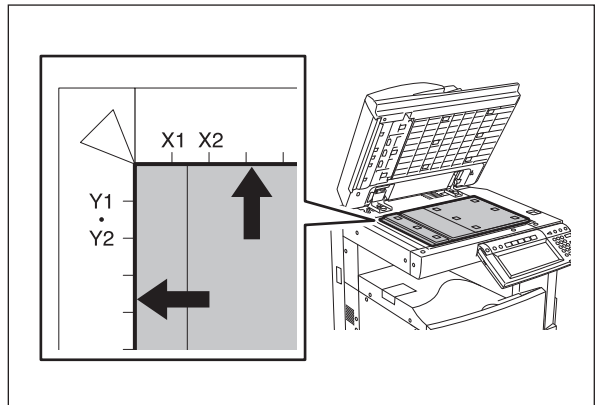
Fig. 3-58

3.17.2 Adjustment of RADF Height

Note:

Check if the image adjustment for the equipment is performed properly before this adjustment of the RADF.

[A] Checking

(1) Close the RADF.
(2) Light the exposure lamp.
 • Turn the power ON while pressing [0] and [3] simultaneously.
 • Key in [267] and then press the [START] button. The exposure lamp is turned ON for a given length of time.
(3) Visually check the gap between platen guide holder "A" and upper surface of the original glass "B" from the left hand side of the equipment. If the value is not within the tolerance, perform the adjustment according to the following procedure.

[Tolerance of the gap]
Rear side: 0 - 0.5 mm
Front side: 0 mm
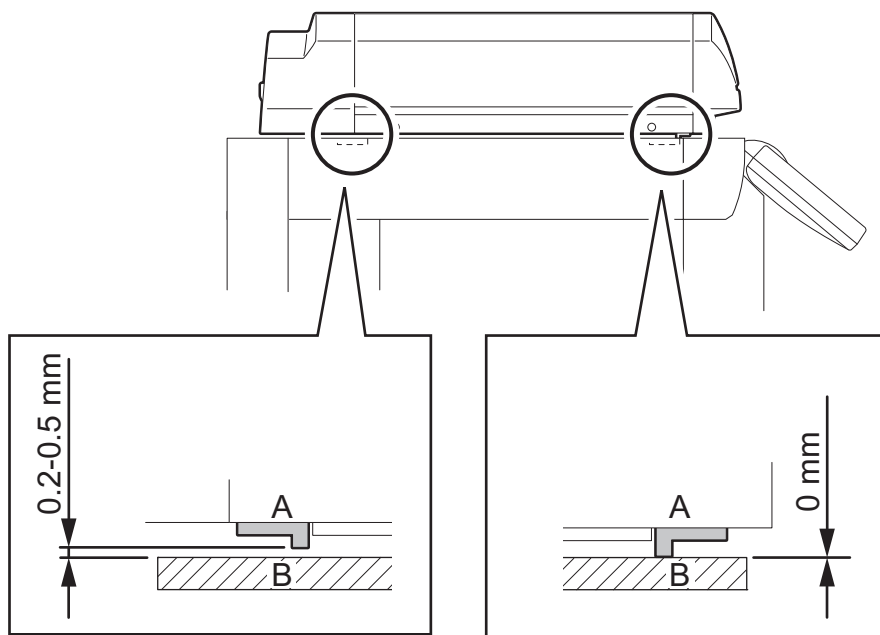
Fig. 3-59

[B] Adjustment

(1) Close the RADF.
(2) Adjust it by turning the adjustment screws on the hinges.
  - Adjust the height on the rear side by means of the screw on the hinge on the feed side of the RADF.

  Turn it clockwise .... Heightened
  Turn it counterclockwise ...... Lowered
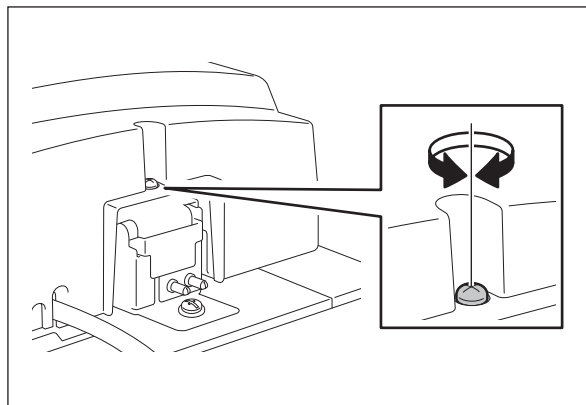
Fig. 3-60

  - Adjust the gap on the rear side by means of the screw on the hinge on the feed side of the RADF.

  Turn it clockwise .... Lowered
  Turn it counterclockwise ...... Heightened

Fig. 3-61

e-STUDIO2500c/3500c/3510c
ADJUSTMENT
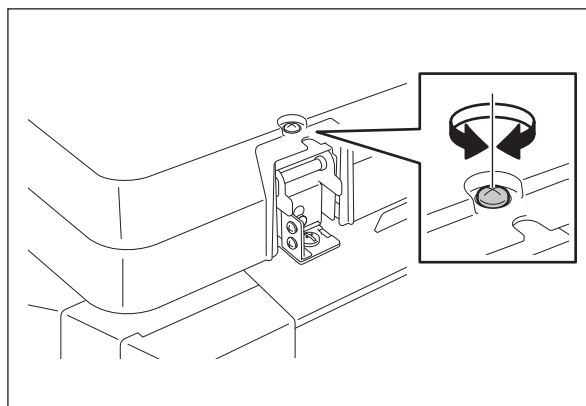
3.17.3 Adjustment of Skew

Note:

Check if the image adjustment for the equipment is performed properly before this adjustment of the RADF. Also, the RADF position and height shall be adjusted properly.

[A] Checking

Check the image using the chart (original) with vertical and horizontal lines in the following procedure.
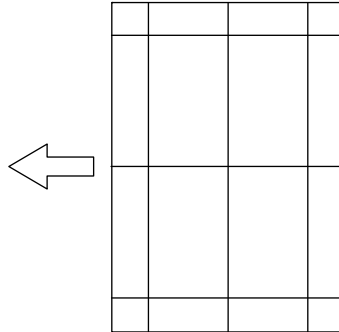
Fig. 3-62 Chart (Original)

<u>Simplex copying:</u>

(1) Place the chart provided as an original with its face up on the original tray of the RADF, select [1 Sided -> 1 Sided] and press the [START] button.
(2) Superimpose the chart on the copy and check the inclination of the copy image.

<u>Duplex copying:</u>

(1) Place the chart provided as an original with its face up on the original tray of the RADF, select [2 Sided -> 2 Sided] and press the [START] button.
(2) Superimpose the chart on the copy and check the inclination of the copy image.

[B] Adjustment

Simplex copying:

(1) Shift the aligning plate with the scale as the guide shown in the figure below to adjust the skew.
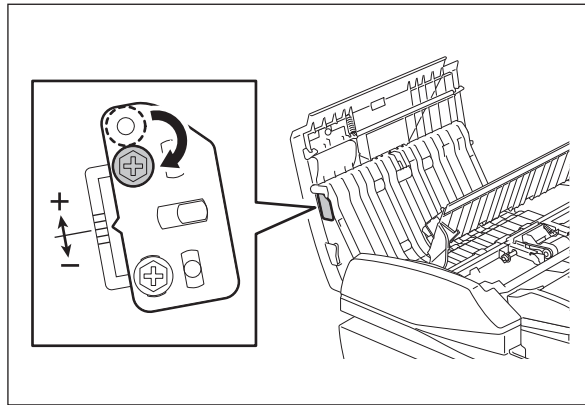
Fig. 3-63

(2) If the image skew is "C" as shown in the figure below, shift the aligning plate in the direction of "+", and if "D", shift it to "-".
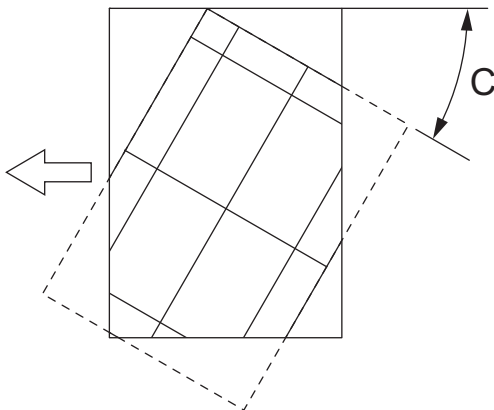
Fig. 3-64

Shift the aligning plate in the direction of "+".
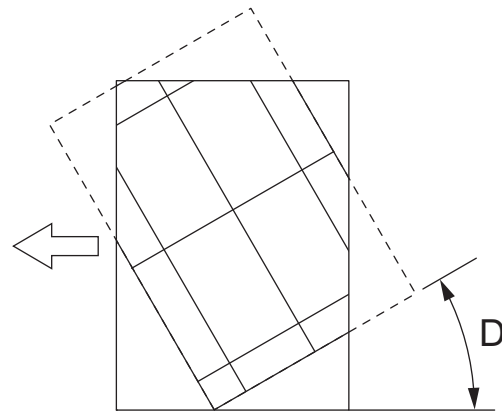
Fig. 3-65

Shift the aligning plate in the direction of "-".

e-STUDIO2500c/3500c/3510c
ADJUSTMENT

Duplex copying:

(1) Shift the aligning plate with the scale as the guide shown in the figure below to adjust the skew.
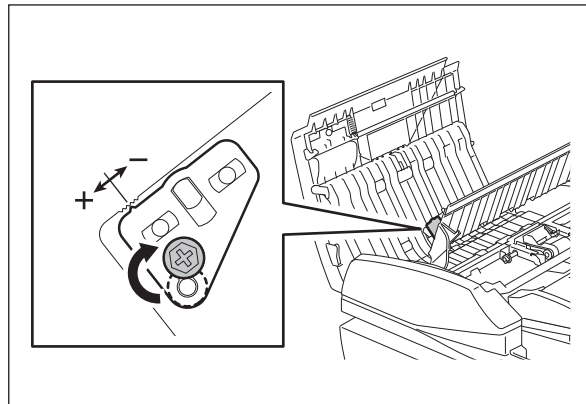
Fig. 3-66

(2) If the image skew is "C" as shown in the figure below, shift the aligning plate in the direction of "-", and if "D", shift it to "+".
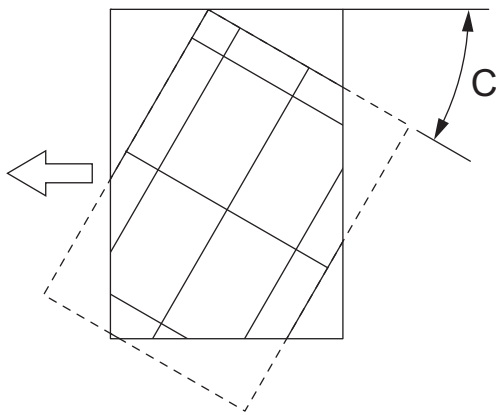
Fig. 3-67

Shift the aligning plate in the direction of "-".
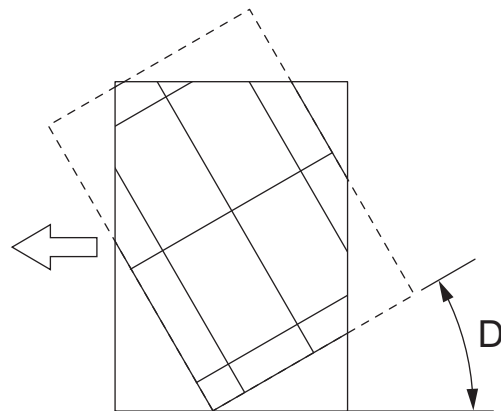
Fig. 3-68

Shift the aligning plate in the direction of "+".

3.17.4 Adjustment of the Leading Edge Position

Note:
Check if the image adjustment for the equipment is performed properly before this adjustment of the RADF. Also, the RADF position and height shall be adjusted properly.

[A] Checking

Check the image using the chart (original) with vertical and horizontal lines in the following procedure.

Simplex copying:

(1) Place the chart provided as an original with its face up on the original tray of the RADF, select [1 Sided -> 1 Sided] and press the [START] button.
(2) Superimpose the chart on the copy and check the leading edge E of the chart and F of the copy.

Duplex copying:

(1) Place the chart provided as an original with its face up on the original tray of the RADF, select [2 Sided -> 2 Sided] and press the [START] button.
(2) Superimpose the chart on the copy and check the leading edge E of the chart and F of the copy.
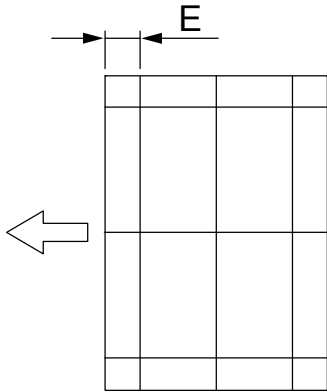
Fig. 3-69 Chart (Original)
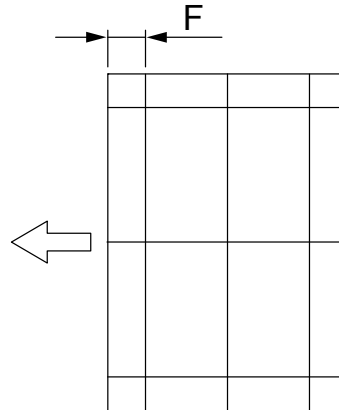
Fig. 3-70 Copy

[B] Adjustment

Simplex copying:

(1) Turn the power ON while pressing [0] and [5] simultaneously, key in [365] and then press the [START] button.
(2) Enter the value.
   • If the leading edge (F) margin of the copy image is larger than the (E) margin of the chart, enter a value smaller than the current one.
   Note:
   Changing one value shifts the copy image by 0.1 mm.

   • If the leading edge (F) margin of the copy image is smaller than the (E) margin of the chart, enter a value larger than the current one.
   Note:
   Changing one value shifts the copy image by 0.1 mm.

(3) Press the [ENTER] button.

Duplex copying:

(1) Turn the power ON while pressing [0] and [5] simultaneously, key in [366] and then press the [START] button.
(2) Enter the value.
- If the leading edge (F) margin of the copy image is larger than the (E) margin of the chart, enter a value smaller than the current one.

Note:
Changing one value shifts the copy image by 0.1 mm.

- If the leading edge (F) margin of the copy image is smaller than the (E) margin of the chart, enter a value larger than the current one.

Note:
Changing one value shifts the copy image by 0.1 mm.

(3) Press the [ENTER] button.

3.17.5 Adjustment of Horizontal Position

Note:
Check if the image adjustment for the equipment is performed properly before this adjustment of the RADF. Also, the RADF position and height shall be adjusted properly.

[A] Checking

Check the image using the chart (original) with a center line in the following procedure.

(1) Place the chart provided as an original with its face up on the original tray of the RADF.
(2) Press the [START] button.
(3) Fold the copy in half and check if the center line is misaligned.

[B] Adjustment

(1) Turn the power ON while pressing [0] and [5] simultaneously.
(2) Key in [358] and then press the [START] button.
- If the center line of the copy image is shifted to the front side of the equipment, enter a value larger than the current one.

Note:
Changing one value shifts the copy image by 0.0423 mm.
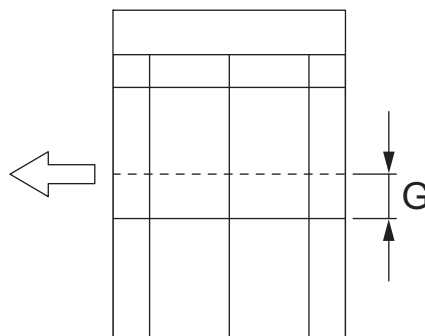
Fig. 3-71

- If the center line of the copy image is shifted to the rear side of the equipment, enter a value smaller than the current one.

Note:
Changing one value shifts the copy image by 0.0423 mm.
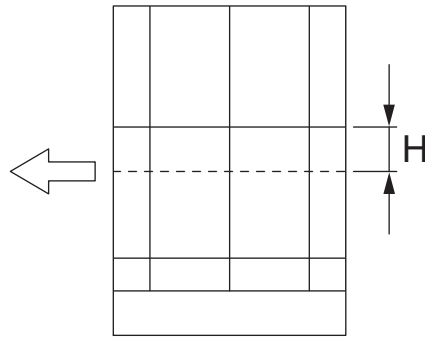
Fig. 3-72

(3) Press the [ENTER] button.

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ADJUSTMENT

3.17.6 Adjustment of Copy Ratio

Note:

Check if the image adjustment for the equipment is performed properly before this adjustment of the RADF. Also, the RADF position and height shall be adjusted properly.

[A] Checking

Check the image using the chart (original) with vertical and horizontal lines in the following procedure.

(1) Place the chart provided as an original with its face up on the original tray of the RADF.
(2) Press the [START] button.
(3) Superimpose the chart on the copy and check the image dimension "I".

[B] Adjustment

(1) Turn the power ON while pressing [0] and [5] simultaneously.
(2) Key in [357] and then press the [START] button.
   - If the copy image dimension "I" is larger than the chart dimension, enter a value smaller than the current one.
   - If the copy image dimension "I" is smaller than the chart dimension, enter a value larger than the current one.
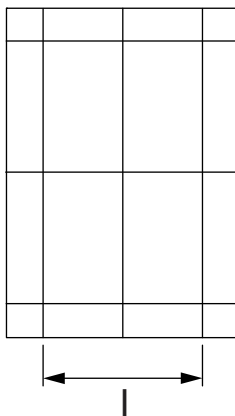
Fig. 3-73

(3) Press the [ENTER] button.

3.17.7 Adjustment of RADF Opening/Closing Sensor

Adjust the bracket position so that the sensor is turned ON when the height "A" becomes 100 mm or less (within the empty weight falling limit).

Fig. 3-74

Fig. 3-75

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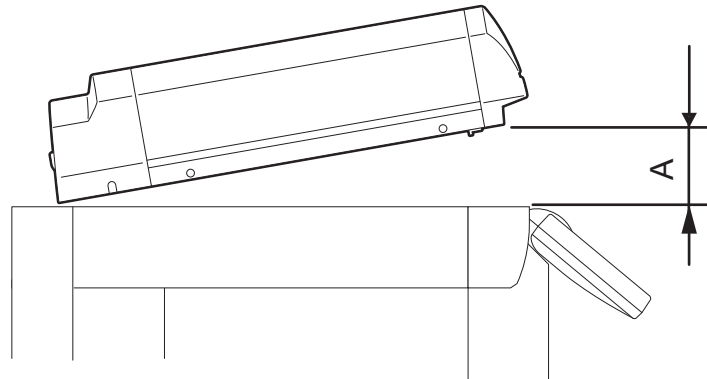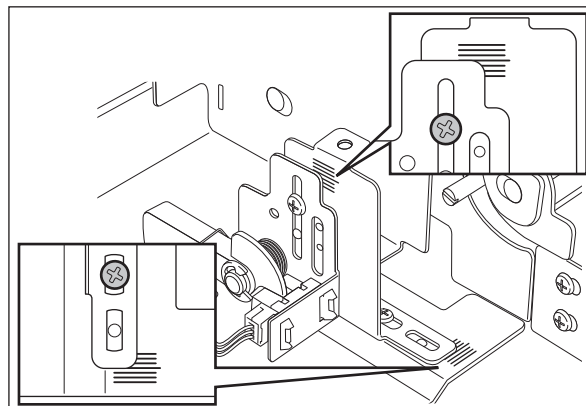
3.18 Adjustment of the Finisher (MJ-1101)

Note:
> Before performing each adjustment, make sure that all covers (incl. those of the finisher and host machine) are closed. Otherwise, the power is not supplied to the finisher and the adjustment may not be performed properly.

3.18.1 Adjusting the Alignment Position

Perform this adjustment after replacing the Finisher control board or when the alignment position must be changed for some reason.

(1) Turn OFF the power of the equipment.

(2) Remove 1 screw and take off the board access cover.

(3) Set the SW1 on the Finisher control board as shown in the figures below.
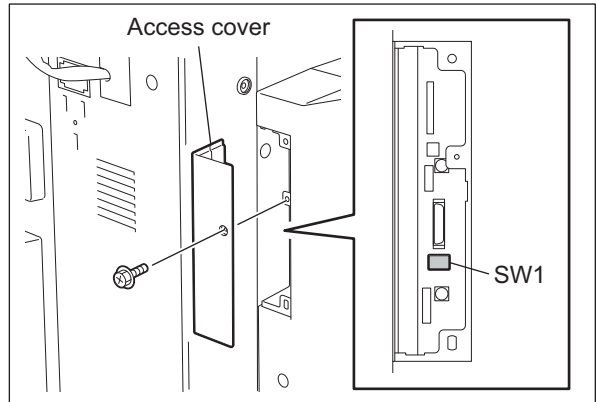
Fig. 3-76
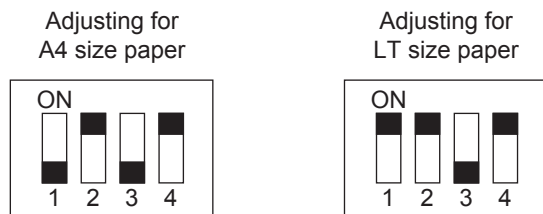
Fig. 3-77

(4) Turn ON the power of the equipment while [0] button and [8] button are pressed simultaneously.
The alignment plate moves to the A4 or LT size position and stops.
(It stops at the position of -5 steps from the center value of the adjustment range.)

Fig. 3-78

(5) Press the [Button1] to adjust the alignment position.
Every time the [Button1] is pressed, the alignment plate shifts 1 step (0.419 mm/step) toward the "+ "direction. (The gap between the alignment plates becomes narrower.)
Adjustment range is from -5 to +5 steps.
If the [Button1] is pressed when the alignment position is at the "+5 step", the plate will return to the home position and then moves to the position of "-5 step".

(6) When the adjustment is completed, press the [Button2] on the finisher control panel to store the adjustment value in memory.
When the value is stored normally, the [LED1] on the control panel will blink for a number of times that corresponds to the adjustment value set for the equipment.
See the following table for the number of times the [LED1] blinks and its corresponding adjustment value.

Number of Blinking	Adjustment Value
1	-5
2	-4
3	-3
4	-2
5	-1
6	0
7	+1
8	+2
9	+3
10	+4
11	+5

(7) Turn OFF the power of the equipment.

(8) Turn OFF all bits of the SW1 on the Finisher control board.

(9) Install the board access cover.
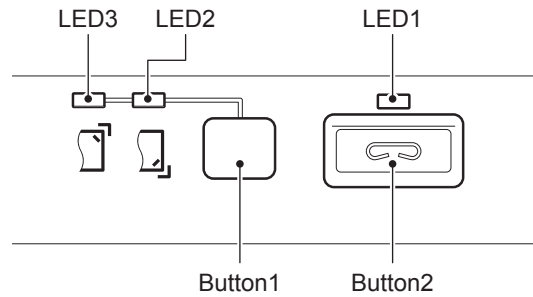
3.18.2 Adjusting the Stapling Position

Perform this adjustment after replacing the Finisher control board or when the stapling position must be changed for some reason.

(1) Turn OFF the power of the equipment.

(2) Remove 1 screw and take off the board access cover.
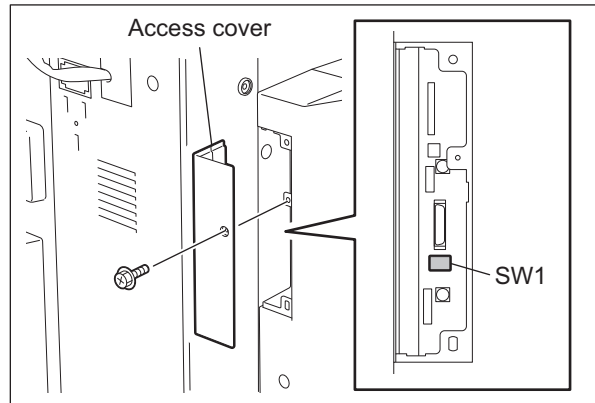
Fig. 3-79

(3) Set the SW1 on the Finisher control board as shown in the figures below.

When adjusting the trailing edge side for A4 size paper
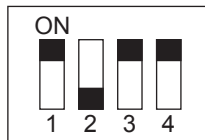
When adjusting the trailing edge side for LT size paper
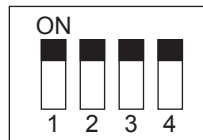
When adjusting the leading edge side for A4 size paper
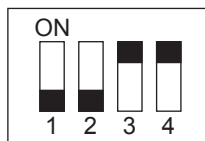
When adjusting the leading edge side for LT size paper
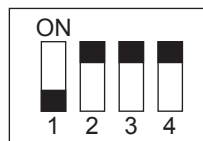
Fig. 3-80

(4) Turn ON the power of the equipment while [0] button and [8] button are pressed simultaneously.
The alignment plate moves to the rear side stapling position and stops. (It stops at the position of -20 steps from the center value of the adjustment range.)
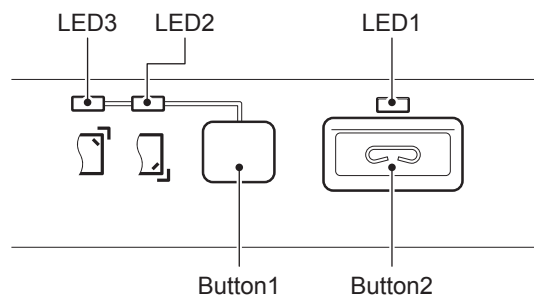
Fig. 3-81

(5) Press [Button 1] to adjust the stapling posi-
tion.
Every time [Button 1] is pressed, the align-
ment plate shifts 4 steps (0.45 mm) toward
the "+" direction.
(It moves toward the rear side.)
Adjustment range is from -20 to +20 steps. If
[Button 1] is pressed when the alignment
position is at the "+20 steps", the plate will
return to the home position and then moves
to the position of "- 20 steps".

Note:
Stapling for checking the position can be done by pressing [Button 2] with sheets placed on the
finishing tray. (Stapled on the rear side)

(6) When the adjustment is completed, press [Button 2] on the finisher control panel to store the
adjustment value in memory without sheets on the finishing tray.
When the value is stored normally, [LED 1] on the control panel will blink for a number of times
that corresponds to the adjustment value set for the equipment.
See the following table for the number of times [LED 1] blinks and its corresponding adjustment
value.

Number of Blinking	Adjustment Value
1	-20
2	-16
3	-12
4	-8
5	-4
6	0
7	+4
8	+8
9	+12
10	+16
11	+20

(7) Turn OFF the power of the equipment.

(8) Turn OFF all bits of the SW1 on the Finisher control board.

(9) Install the board access cover.

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3.18.3   B4-size recycled paper mode settings

Set this mode if the trailing edge of the paper gets caught by the exit section of the finisher while B4-size recycled paper is used. This mode increases the paper exiting speed when the paper exits to the movable tray in the sort mode, or to the stationary tray in the non-sort mode.

(1)   Turn OFF the power of the equipment.

(2)   Set the SW1 on the Finisher control board as shown in the figures below.

(3)   Remove 1 screw and take off the board access cover.
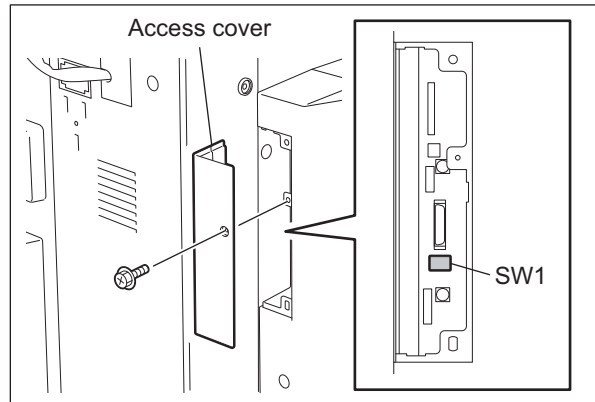
Fig. 3-82
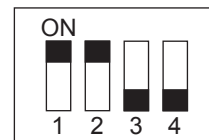
Fig. 3-83

(4)   Turn ON the power of the equipment while [0] button and [8] button are pressed simultaneously.

(5) Press [Button1] and [Button2] as described in the following table to set the B4-size recycled paper mode. Press [Button1] and [Button2] on the control panel as below to set the B4-size recycled paper mode.

Note:
Be sure to press [Button1] and [Button2] the correct number of times.
Press [Button1] and [Button2] simultaneously to cancel the operation.
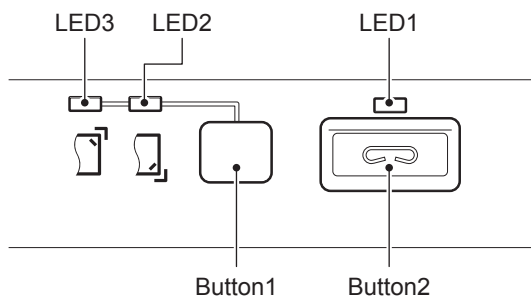
Fig. 3-84

B4-size recycled paper mode

Step	Buttons	Number of pressing	Remarks
1	Button1	1	
2	Button2	1	Confirms the input value
3	Button1	8	
4	Button2	1	Confirms the input value

Note:
To change settings from the B4-size recycled paper mode to the normal mode, perform steps (1) through (4), and then press [Button1] and [Button2] on the control panel as shown below to set the normal mode.

Normal mode

Step	Buttons	Number of pressing	Remarks
1	Button1	1	
2	Button2	1	Confirms the input value
3	Button1	6	
4	Button2	1	Confirms the input value

(6) When the settings are stored normally, [LED1] on the control panel is lit. [LED1] blinks, if an error occurs. In this case, turn the power OFF and make the settings again from step (4).

(7) Turn OFF the power of the equipment.

(8) Turn OFF all bits of the SW1 on the Finisher control board.

(9) Install the board access cover.

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3.19　Adjustment of the Finisher (MJ-1030)

Note:

Before performing each adjustment, make sure that all covers (incl. those of the finisher and host machine) are closed. Otherwise, the power is not supplied to the finisher and the adjustment may not be performed properly.

3.19.1　Adjusting the alignment position (Finisher unit)

Perform this adjustment after replacing the finisher controller PC board or when the alignment position must be changed for some reason.

(1)　Remove the rear cover of the finisher unit.
(2)　Check that the power is OFF and set SW104 on the finisher controller PC board as follows according to the paper used for adjustment.

A4 paper　　　　　　　　　　　　　　LT paper
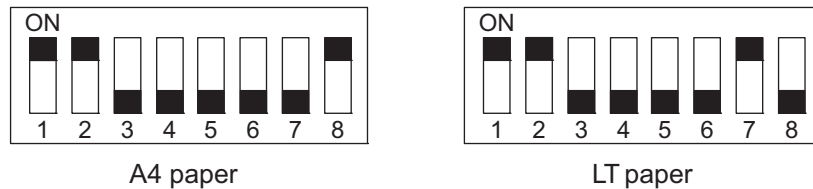
Fig. 3-85

(3)　Turn ON the power.
(4)　Press SW103 on the finisher controller PC board.
- When SW103 is pressed, the swing guide opens and the alignment plate moves to prescribed position.
(5)　Place ten sheets of A4/LT paper between the alignment plates and push them against the stopper.
(6)　Press SW101 or SW102 on the finisher controller PC board and push the alignment plate against the paper.
- When SW101 is pressed, alignment plate moves 0.42 mm forward.
- When SW102 is pressed, alignment plate moves 0.42 mm backward.
(7)　When adjustment is complete, remove paper and press SW103 on the finisher controller PC board once to store the adjustment in memory.
(8)　Turn OFF all bits of finisher controller PC board SW104.
(9)　Turn OFF the power and install the rear cover of the finisher unit.

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3.19.2 Adjusting the staple position (Finisher unit)

Perform this adjustment after replacing the finisher controller PC board or when the staple position must be changed for some reason. This adjustment adjusts the front/rear stitches with A4/A4-R when the paper used for adjustment is AB type and with LT/LT-R when the paper is INCH type.

(1) Remove the rear cover of the finisher unit.
(2) Check that the power is OFF and set SW104 on the finisher controller PC board as follows according to paper/stitch position used for adjustment.

A4/front stitch   A4/rear stitch

A4-R/front stitch   A4-R/rear stitch

LT/front stitch   LT/rear stitch

LT-R/front stitch   LT-R/rear stitch
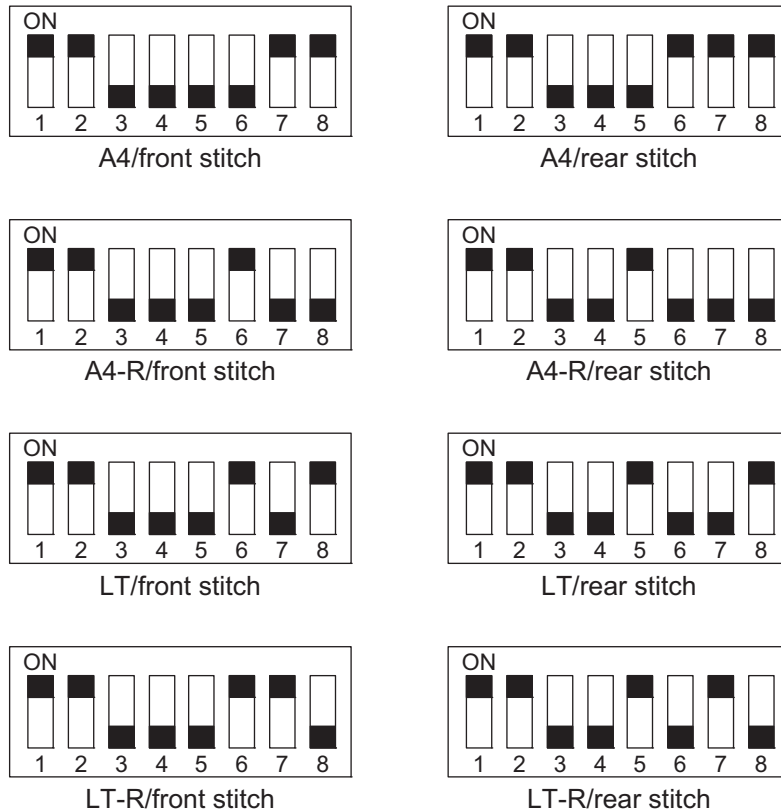
Fig. 3-86

(3) Turn ON the power.
(4) Press SW103 on the finisher controller PC board.
   - When SW103 is pressed, the swing guide opens and the alignment plate moves to prescribed position.
(5) Place a sheet of paper between the alignment plates. Push it against the stopper and push the rear edge of the paper against the rear alignment plate. If the gap between the front alignment plate and front edge of the paper is 1 mm or greater, stop the staple position adjustment and repeat the staple position adjustment after completing alignment plate adjustment.
(6) Press SW103 on the finisher controller PC board once to staple. However, remove the stapled paper manually because the paper is not ejected. Press SW103 on the finisher controller PC board once again.
(7) Verify the staple position. If any adjustment is needed, proceed to the step 8). If no adjustment is needed, proceed to the step 9).
(8) Press SW101 or SW102 on the finisher controller PC board to adjust the staple position.
   - When SW101 is pressed, the staple position shifts 0.49 mm to the front side.
   - When SW102 is pressed, the staple position shifts 0.49 mm to the rear side.
   Repeat the steps 5) to 7).

(9) After confirming that the staple position is adjusted correctly, place a sheet of paper between the alignment plates and push it against the stopper and push the rear edge of the paper against the rear alignment plate. Then press SW103 once. (Stapling is performed and the adjustment value is stored in memory.)

   •   The staple position adjustment is completed.

(10) Turn OFF all bits of SW104 on the finisher controller PC board.

(11) Turn OFF the power and install the rear cover of the finisher unit.

3.19.3   Adjusting the folding position (Saddle stitcher unit)

The folding position is adjusted by changing setting of bits 6 through 8 of SW504 on the saddle stitcher controller PC board to match the stitching position (adjusting the distance over which the paper positioning plate is moved to the folding position from the stitching position).

If you have replaced the saddle stitcher controller PC board, be sure to set the new SW504 so that the settings will be the same as those on the old SW504. Perform this adjustment if, for any reason, you must change the folding position.

(1) Check that the power is OFF and separate the finisher from the host machine. If the optional puncher unit is installed, remove it from the finisher.

(2) Remove the PC board cover and set bits 1 through 4 of SW504 on the saddle stitcher controller PC board as follows:
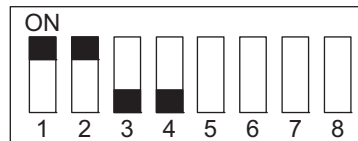
Do not change bits 5 through 8.

Fig. 3-87

(3) Remove the rear cover, open the inlet cover of the saddle stitcher unit and tape the actuator of inlet cover sensor (PI9) and inlet door switch (SW1).

(4) Before inserting the paper, mark the top of the paper. You will be using two sheets of A3 or LD paper.
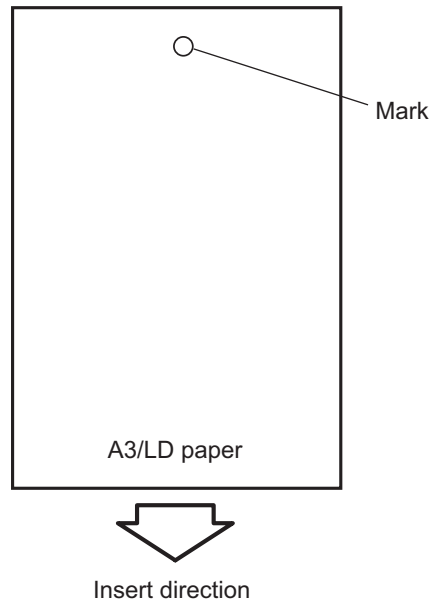
Fig. 3-88

(5) Turn ON the power.
(6) Press SW1 on the saddle stitcher controller PC board so that the feed motor (M1) starts to rotate. (Press SW1 three seconds or more if LD paper is used.)
(7) Open the inlet cover and insert two sheets of paper. Push them in by hand until the front edge of the sheets push against the paper positioning plate.
(8) Close the inlet cover.
(9) Press SW1 on the saddle stitcher controller PC board.
   • The saddle stitcher unit will "stitch" the sheets, and fold and deliver the stack automatically.

(10) Measure the distance (L) between the stitching position and the folding position. Then perform "positive width adjustment" or "negative width adjustment" to suit the relationship between the stitching position and the folding position.
- If the stitching position is below the folding position, perform "positive width adjustment."
- If the stitching position is above the folding position, perform "negative width adjustment."

Positive Width Adjustment

Mark

Folding position
Stitching position

Unit: mm
Example: If L is 1 mm, provide "+1 mm".

Negative Width Adjustment

Mark

Stitching position
Folding position

Unit: mm
Example: If L is 0.5 mm, provide "-0.5 mm".
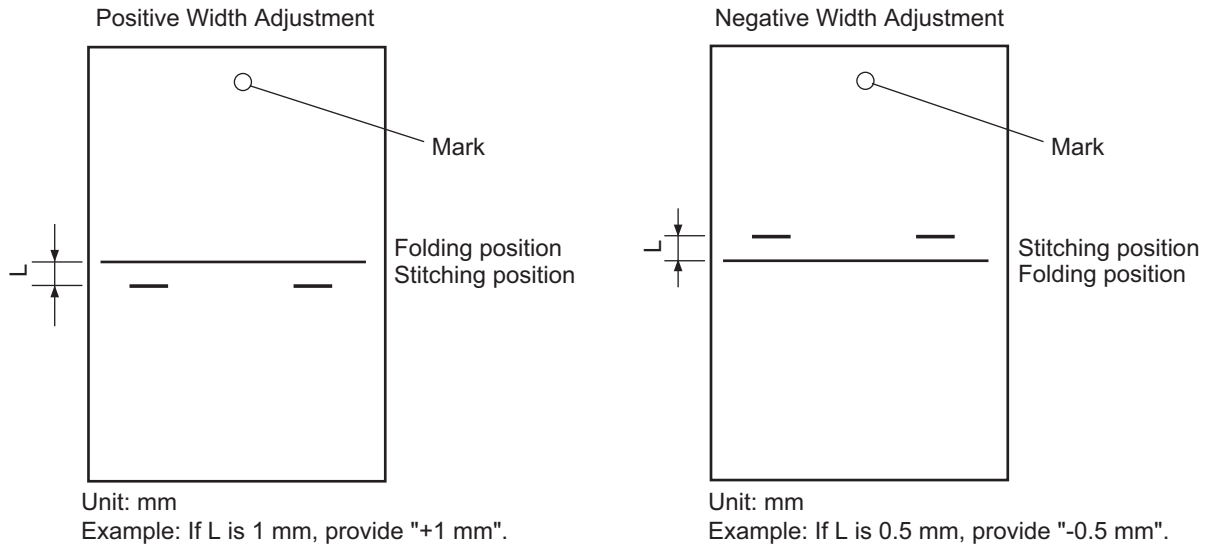
Fig. 3-89

(11) Change the settings of bits 6 through 8 on SW504 referring to the following table.
- If the width adjustment is 0
  The stitching position and the folding position match, requiring no change.
- If for "positive width adjustment"
  Set SW504 so that the difference resulting from subtraction of the interval from the appropriate setting in the table below is provided.
  Example: If SW504 is currently set to +2 and the interval is +1 mm, set SW504 to reflect - 2.
- If for "negative width adjustment"
  Set SW504 so that the sum resulting from addition of the interval from the appropriate setting in the table below is provided.
  Example: If SW504 is currently set to -1 and the interval is -0.5mm, set SW504 to reflect +1.

DIPSW1 bit settings			Setting (in units of 0.5 mm)
Bit 6	Bit 7	Bit 8	
OFF	ON	ON	+3
OFF	ON	OFF	+2
OFF	OFF	ON	+1
OFF	OFF	OFF	0
ON	OFF	ON	-1
ON	ON	OFF	-2
ON	ON	ON	-3

Do not use the following setting		
Bit 6	Bit 7	Bit 8
ON	OFF	OFF

(12) Set SW504 bits 1 to 4 to OFF.

3.19.4　Fine adjustment of binding/folding position (Saddle stitcher unit)

The binding position/folding position can be adjusted in the following (05) codes.

Code	Paper size	Remarks
468-0	A4-R / LT-R	When the value increases, the binding/folding position shifts toward the right page. (0.25mm/step)
468-1	B4	Acceptable values: -14 to 14 (Default: 0)
468-2	A3 / LD	

Increase the adjustment value when the sheet of paper which has exited is "A".
Decrease the adjustment value when the sheet of paper which has exited is "B".

A: When the upper side of the folding is longer than the lower side
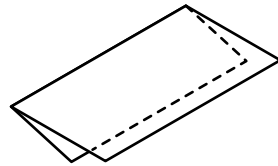
B: When the upper side of the folding is shorter than the lower side
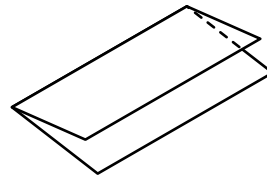
← Paper feeding direction　　　　　← Paper feeding direction

Fig. 3-90

3.19.5　Sensor output adjustment (Puncher unit)

Perform this adjustment when replacing the punch controller PC board, transmittance sensor (photo-sensor PC board/LED PC board), or deflection sensor (scrap full detector PC board unit).

(1) Check that the power is OFF and then remove the rear cover of the puncher.
(2) Set SW601 on the punch controller PC board as shown below.

ON

1　2　3　4
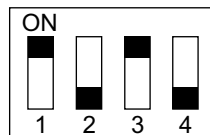
Fig. 3-91

(3) Turn ON the power.
(4) Press SW602 on the punch controller PC board. Sensor output is adjusted automatically when the switch is pressed.
  • Adjustment is complete if LED601 and LED602 on the punch controller PC board blinks alternately.
(5) Press SW602 or SW603 on the punch controller PC board to end the adjustment mode and set all bits of SW601 to OFF.
(6) Turn OFF the power.

3.19.6 Registering the number of punch holes (Puncher unit)

This operation registers which puncher unit is attached to the IC on the punch driver PC board so that the puncher unit can be identified by the finisher. For this reason, this operation must be performed when the punch driver PC board has been replaced.

(1) Check that the power is OFF and then remove the rear cover of the puncher.
(2) Set SW601 on the punch controller PC board as shown below.
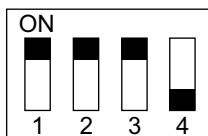
Fig. 3-92

(3) Turn ON the power.
(4) Press SW602 on the punch controller PC board to select the number of punch holes.
   - The items in the following table are displayed repeatedly from top to bottom each time SW602 is pressed.

Number of punch holes	LED601/LED602
2 hole (E)	Blinks 1 times per cycle
2/3 hole (N)	Blinks 2 times per cycle
4 hole (F)	Blinks 3 times per cycle
4 hole (S)	Blinks 4 times per cycle

(5) Press SW603 on the punch controller PC board. The number of punch holes is registered to the punch controller PC board each time the switch is pressed.
   - Registration is complete if LED601 and LED602 on the punch controller PC board blinks alternately.
(6) Press SW602 or SW603 on the punch controller PC board to end the adjustment mode and set all bits of SW601 to OFF.
(7) Turn OFF the power.

4. PREVENTIVE MAINTENANCE (PM)

4.1 PM Support Mode

4.1.1 General description

The timing for the parts replacement usually depends on the number of print / develop pages after they were replaced before. However, the life span of them changes depending on the general use of users and the environment in which the equipment is placed. Therefore, it is necessary to consider not only the number of print / develop pages but also the drive counts when deciding the timing for the parts replacement in order to utilize the parts and materials effectively.

This equipment has the PM support mode, which makes it possible to see the general use of each part (the number of print / develop pages and drive counts) and replacement record and to do a counter clearing operation more efficiently when replacing.

The replacement record can be printed out in the list printing mode (9S-103).

4.1.2 Operational flow and operational screen

[1] Operational flow
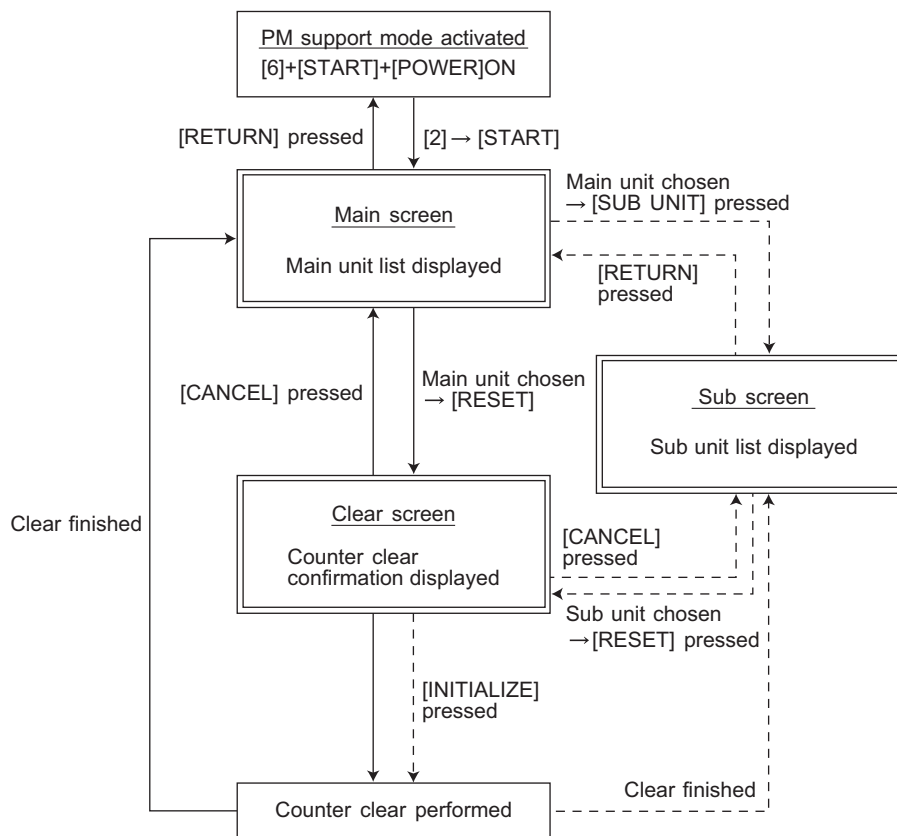
Fig. 4-1

* The screen goes back to the main screen when the counter clear is performed or the [CANCEL] button is pressed after moving from the main screen, while it goes back to the sub screen after moving from the sub screen.

[2] Operational screen

1) Main screen

MAIN UNIT	OUTPUT PAGES(k)	PM OUTPUT PAGES(k)	DRIVE COUNTS(k)	PM DRIVE COUNTS(k)
DEVELOPER	0.0k	70k	0.0k	130k
1st TRANSFER	–	–	–	–
TRANSFER BELT CLEANER	0.0k	140k	0.0k	260k
2nd TRANSFER	0.0k	350k	0.0k	650k
FUSER	–	–	–	–

Screen title: 100% 2 / CHECK SUBUNIT / ✳ EXCHANGE

Buttons: RETURN, RESET, SUB UNIT, Next, Prev
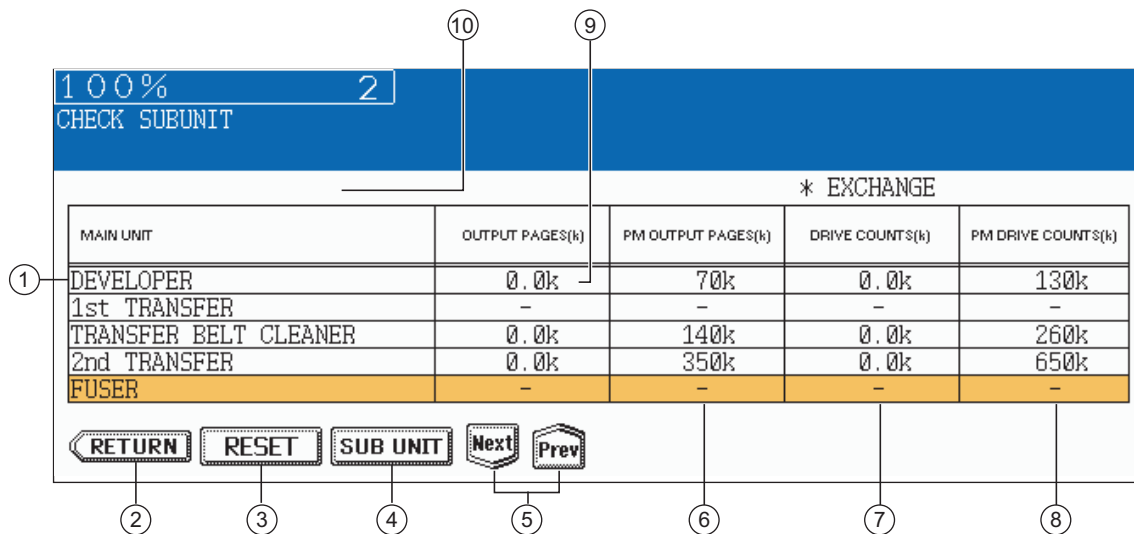
① Displaying of the main unit name

② Back to the PM support mode activation screen

③ Moving to the clear screen to clear the selected unit counters ⑨ and ⑦, including all sub unit (parts) counters belonging to that unit When the unit is not selected, all counters are cleared.

④ Moving to the sub screen of the selected unit

⑤ Moving to the next/previous page

⑥ Displaying of the standard number of print / develop pages to replace the unit parts

⑦ Displaying of the present drive counts
"*" is displayed next to the present number when the number of drive counts has exceeded its PM standard number.

⑧ Displaying of the standard number of drive counts to replace the unit parts

⑨ Displaying of the present number of print / develop pages
When there are differences among the sub units (parts), "_" is displayed and "CHECK SUB-UNIT" is displayed at the top
"*" is displayed next to the present number when the number of print / develop pages has exceeded its PM standard number.

⑩ Displaying of the number of print / develop pages (Page/D. cnt), drive counts (Cnt.) and previous replacement date (Chg.) for a chosen unit
When the replacement date for the sub unit is different, press the [SUB UNIT] button to move to the sub screen and see each information, otherwise information is not displayed

Notes:
1. "—" is always displayed at the drive counts section for the reversing automatic document feeder (RADF) and feed unit.
2. "—" is displayed at the numeric section for the paper source which is not installed since the paper source is different depending on the structure of options.

2) Sub screen

① Displaying of the sub unit (parts) name

② Back to the main screen

③ Moving to the clear screen to clear the selected unit (parts) counters

④ Displaying of the present number of print / develop pages
"*" is displayed next to the present number when the number of print / develop pages has exceeded its PM standard number.

⑤ Displaying of the standard number of print / develop pages to replace the sub unit (parts)

⑥ Displaying of the present drive counts
"*" is displayed next to the present number when the number of drive counts has exceeded its PM standard number.

⑦ Displaying of the standard number of drive counts to replace the sub unit (parts)

⑧ Displaying of the number of print / develop pages and drive counts and previous replacement date for a chosen sub unit

3) Clear screen

```
┌────────────────────────────────────────────────────────────────┐
│ 1 0 0 %          2                                             │
│                                                                │
├────────────────────────────────────────────────────────────────┤
│ Page/D.Cnt.      0 Cnt.      0 Chg0000/00/00      * EXCHANGE    │
│  COUNTER RESET      FUSER BELT                                  │
│                                                                │
│       ┌─────────┐   ┌───────────┐                              │
│       │ CANCEL  │   │ INITIALIZE │                             │
│       └─────────┘   └───────────┘                              │
│            │             │                                     │
│           ①             ②                                     │
└────────────────────────────────────────────────────────────────┘
```
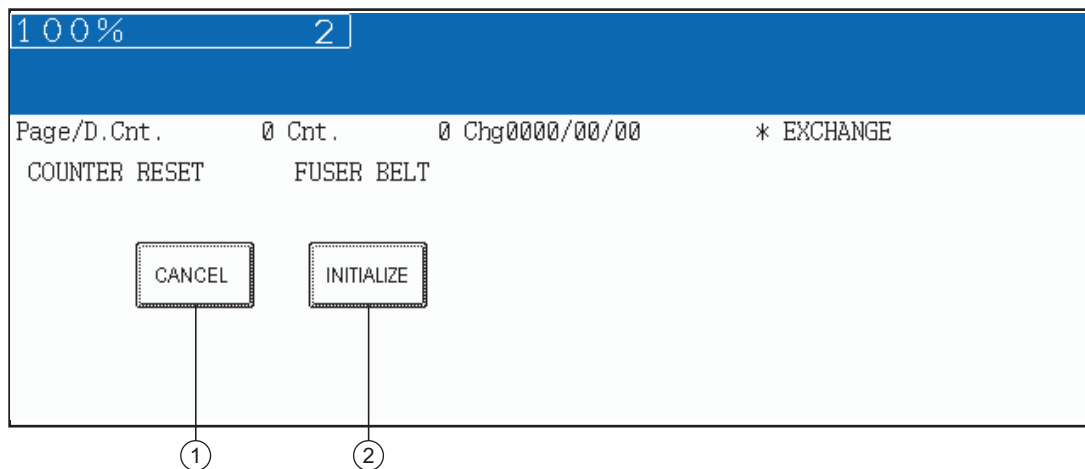
① When the [CANCEL] button is pressed, the counter is not cleared and the display returns to the main or sub screen.

② When the [INITIALIZE] button is pressed, "Present number of print / develop pages" and Present driving counts" are cleared and "Previous replacement date" is updated.

[3] Access tree

Note:
The name inside [ ] is displayed on the LCD screen.

Main screen	Sub-screen
Process unit (K) [CLEANER/DRUM/CHARGER (K)]	Drum [DRUM (K)] Drum cleaning blade [DRUM BLADE (K)] Main charger grid [GRID (K)] Needle electrode [MAIN CHARGER NEEDLE (K)] Main charger cleaner [CHARGER CLEANING PAD (K)]
Process unit (Y) [CLEANER/DRUM/CHARGER (Y)]	Drum [DRUM (Y)] Drum cleaning blade [DRUM BLADE (Y)] Main charger grid [GRID (Y)] Needle electrode [MAIN CHARGER NEEDLE (Y)] Main charger cleaner [CHARGER CLEANING PAD (Y)]
Process unit (M) [CLEANER/DRUM/CHARGER (M)]	Drum [DRUM (M)] Drum cleaning blade [DRUM BLADE (M)] Main charger grid [GRID (M)] Needle electrode [MAIN CHARGER NEEDLE (M)] Main charger cleaner [CHARGER CLEANING PAD (M)]
Process unit (C) [CLEANER/DRUM/CHARGER (C)]	Drum [DRUM (C)] Drum cleaning blade [DRUM BLADE (C)] Main charger grid [GRID (C)] Needle electrode [MAIN CHARGER NEEDLE (C)] Main charger cleaner [CHARGER CLEANING PAD (C)]
Ozone filter-1 [OZONE FILTER (REAR)]	-----
Ozone filter-2 [OZONE FILTER (TRAY BACK)]	-----
Developer [DEVELOPER]	Developer material K [BLACK DEVELOPER] Developer material Y [YELLOW DEVELOPER] Developer material M [MAGENTA DEVELOPER] Developer material C [CYAN DEVELOPER]
Transfer belt cleaning mylar [TBU CLEANING PAD]	2nd transfer facing roller cleaning mylar [CLEANING PAD (FACING ROLLER)] Drive roller cleaning mylar [CLEANING PAD (DRIVE ROLLER)]
Transfer belt cleaning unit [TRANSFER BELT CLEANER]	Transfer belt cleaning blade [BELT BLADE]
2nd transfer unit [2nd TRANSFER]	2nd transfer roller [2nd TRANSFER ROLLER]
Fuser unit [FUSER]	Fuser belt [FUSER BELT] Press roller [PRESS ROLLER] Fuser roller [FUSER ROLLER] Separation finger [PRESS ROLLER FINGER] Fuser belt guide [FUSER BELT GUIDE] Pressure roller cleaning pad [Press roller cleaning pad]
1st drawer [1st CST.]	Pickup roller [PICK UP ROLLER (1st CST.)] Feed roller [FEED ROLLER (1st CST.)] Separation roller [SEP ROLLER (1st CST.)]
2nd drawer [2nd CST.]	Pickup roller [PICK UP ROLLER (2nd CST.) Feed roller [FEED ROLLER (2nd CST.)] Separation roller [SEP ROLLER (2nd CST.)]

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Main screen	Sub-screen
Bypass unit [SFB]	Pickup roller [PICK UP ROLLER (SFB)] Feed roller [FEED ROLLER (SFB)] Separation roller [SEP ROLLER (SFB)]
RADF [RADF]	Pickup roller [PICK UP ROLLER (RADF)] Feed roller [FEED ROLLER (RADF)] Separation roller [SEP ROLLER (RADF)]
LCF [LCF]	Pickup roller [PICK UP ROLLER (LCF)] Feed roller [FEED ROLLER (LCF)] Separation roller [SEP ROLLER (LCF)]
PFP upper drawer [3rd CST.]	Pickup roller [PICK UP ROLLER (3rd CST.)] Feed roller [FEED ROLLER (3rd CST.)] Separation roller [SEP ROLLER (3rd CST.)]
PFP lower drawer [4th CST.]	Pickup roller [PICK UP ROLLER (4th CST.)] Feed roller [FEED ROLLER (4th CST.)] Separation roller [SEP ROLLER (4th CST.)]

Note:

When the counter value of any of the pickup roller, feed roller and separation roller in each unit is reset, the value of the feeding retry counter is also reset simultaneously. When the [RESET] button is pressed after selecting the feed unit in the Main Screen, the value of the feeding retry counter is also reset simultaneously.

The feeding retry counter:
- 1st drawer   Reset the feeding retry counter (08-1390)
- 2nd drawer   Reset the feeding retry counter (08-1391)
- PFP upper drawer Reset the feeding retry counter (08-1392)
- PFP lower drawer Reset the feeding retry counter (08-1393)
- Bypass unit   Reset the feeding retry counter (08-1394)
- LCF   Reset the feeding retry counter (08-1395)

4.1.3 Work flow of parts replacement

The timing for the parts replacement usually depends on the number of print / develop pages after they were replaced before. However, its drive counts is also to be considered when replacing the parts. Even if the number of print / develop pages has reached the level of replacement, for instance, the part may still be usable with its drive counts not reaching the specified drive counts. On the other hand, the part may need replacement even if the number of print / develop pages has not reached the level of replacement with its driving time exceeding the specified drive counts. The life span of some parts such as feed roller is heavily dependent on the number of output pages rather than the drive counts.
The following work flow diagram shows how to judge the timing of replacement with the number of print / develop pages.

Example 1:
When the number of print / develop pages has reached the specified level
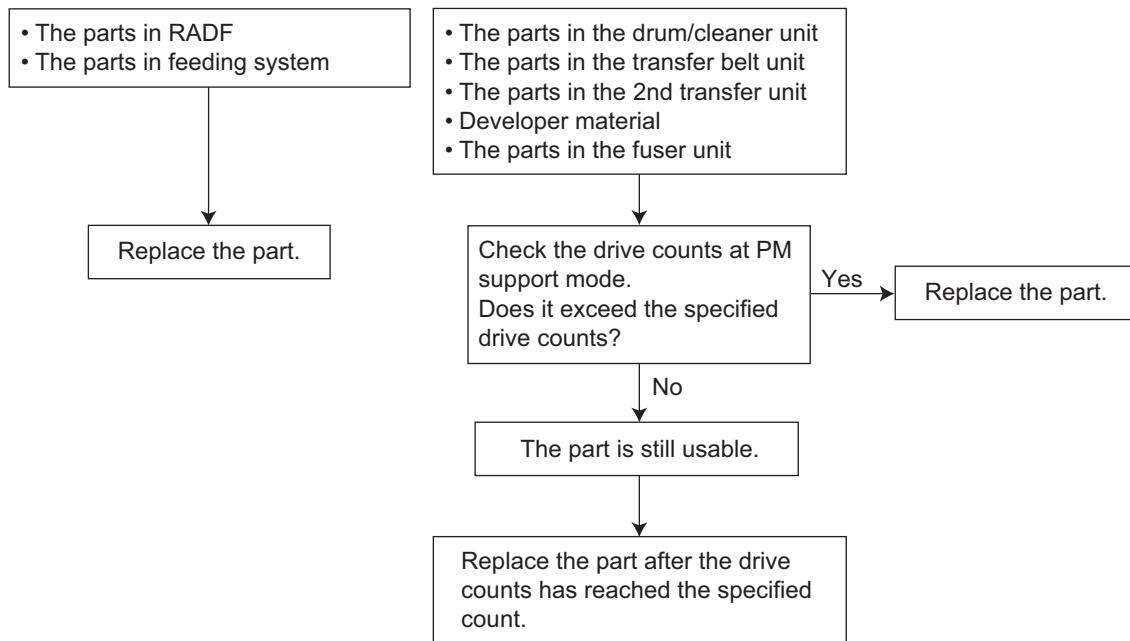
Fig. 4-2

Example 2:
When the image failure occurred before the number of print / develop pages has reached the specified level
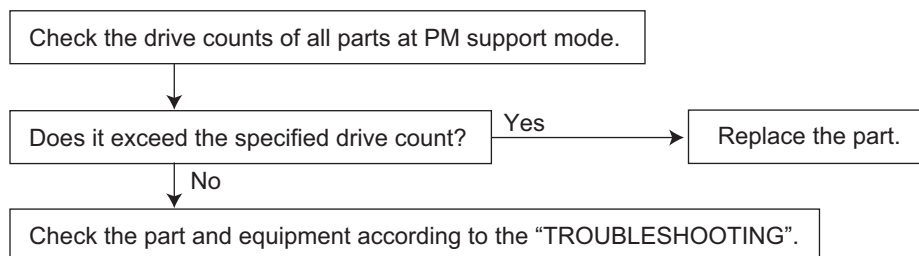
Fig. 4-3

4.2   General Descriptions for PM Procedure

(1)   Preparation
- •   Ask the user about the current conditions of the equipment and note them down.
- •   Before starting maintenance, make some sample copies and store them.
- •   See the replacement record and check the parts to be replaced in the PM support mode (6S-2) or list printing mode (9S-103).

        6S-2   : [6] + [START] + [POWER] ON → [2] → [START]
        9S-103   : [9] + [START] + [POWER] ON → [103] → [START]

PM SUPPORT CODE LIST

MM-DD-YY HH:MM

UNIT	OUTPUT PAGES/ DEVELOP COUNTS	PM OUTPUT PAGE/ DEVELOP COUNTS	DRIVE COUNTS	PM DRIVE COUNTS
DRUM(K)	342	70000	4377	130000
DRUM BLADE(K)	342	70000	4377	130000
DRUM BRUSH(K)	342	70000	4377	130000
GRID(K)	342	70000	4377	130000
MAIN CHARGER NEEDLE(K)	342	70000	4377	130000
CHARGER CLEANING PAD(K)	177	70000	3681	130000

- •   Turn OFF the power and make sure to unplug the equipment.

(2)   Perform a preventive maintenance using the following checklist and illustrations. Refer to the Service Manual if necessary.

(3)   Plug in the equipment after the maintenance has been finished. Then turn ON the power and make some copies to confirm that the equipment is working properly.

4.3 Operational Items in Overhauling

Overhaul each equipment with the following timing.

e-STUDIO2500c: When the number of output pages has reached 560,000 or 2.5 years have passed from the start of use (Whichever is earlier.)

e-STUDIO3500c: When the number of output pages has reached 700,000 or 2.5 years have passed from the start of use (Whichever is earlier.)

e-STUDIO3510c: When the number of output pages has reached 700,000 or 2.5 years have passed from the start of use (Whichever is earlier.)

(1) Replace all the supplies.
(2) Check the components in the drive section (gears, pulleys, timing belts, etc.). Replace them with new ones if they are damaged.
(3) Check all the adhesives such as tape and Mylar if they are damaged or have become unstuck. Replace them with new ones if necessary.
(4) Check the performance of all the switches and sensors. Replace them with new ones if necessary.
(5) Clean inside the equipment thoroughly.

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4.4 Preventive Maintenance Checklist

Symbols/value used in the checklist

Cleaning	Lubrication/Coating	Replacement	Operation check
A: Clean with alcohol B: Clean with soft pad, cloth or vacuum cleaner	L: Launa 40 SI: Silicon oil W1: White grease (Molykote X5-6020) W2: White grease (Molykote HP-300) AV: Alvania No.2 FL: Floil (GE-334C)	Value: Replacement cycle R: Replace if deformed or damaged	O: After cleaning or replacement, confirm there is no problem.

[Preventive Maintenance Checklist]

Notes:

1. Perform cleaning and lubricating in the following timing. Lubricate the replacement parts according to the replacement cycle.

Model name	Black	Full color
e-STUDIO2500c	every 70,000 sheets	every 50,000 sheets
e-STUDIO3500c	every 70,000 sheets	every 70,000 sheets
e-STUDIO3510c	every 70,000 sheets	every 70,000 sheets

2. The value under "Replacement" indicates the number of output pages in either the black or the full color mode. The value in parentheses indicates the one in the full color mode in e-STUDIO2500c.
3. The replacement cycle of the parts in the feeding section equals to the number of sheets fed from each paper source.
4. Be careful not to put oil on the rollers, belts and belt pulleys when lubricating.
5. Parts list <P-I> represents the page item in "e-STUDIO2500c/3500c/3510c Service Parts List".

A. Scanner

	Items to check	Cleaning	Lubrication/ Coating	Replacement (x 1,000 sheets)	Operation check	Parts list <P-I>	Remarks
A1	Original glass	B or A				28-1	*a1
A2	ADF original glass	B				28-2	*a2
A3	Mirror-1	B					
A4	Mirror-2	B					
A5	Mirror-3	B					
A6	Reflector	B					
A7	Lens	B				12-10	
A8	Exposure lamp			R	O	26-6	
A9	Automatic original detection sensor	B			O	12-12	
A10	Slide sheet (front and rear)	B or A		R			

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B. Laser unit

	Items to check	Cleaning	Lubrication/ Coating	Replacement (x 1,000 sheets)	Operation check	Parts list <P-I>	Remarks
B1	LSU slit glass	B					

C. Feed unit

	Items to check	Cleaning	Lubrication/ Coating	Replacement (x 1,000 sheets)	Operation check	Parts list <P-I>	Remarks
C1	Pickup roller			80		20-20	
C2	Feed roller			80		20-24	
C3	Separation roller		AV, W2	80		20-5	*c1
C4	Transport roller	A		R			
C5	Paper guide	B					
C6	Drive gear (tooth face and shaft)		W1				*c2
C7	GCB bushing bearing		L				
C8	One side of the plastic bushing to which the shaft is inserted		W1				
C9	Registration roller (metal)	A		R		25-19	
C10	Middle guide	A				25-2	*c3

D. Automatic duplexing unit

	Items to check	Cleaning	Lubrication/ Coating	Replacement (x 1,000 sheets)	Operation check	Parts list <P-I>	Remarks
D1	Transport roller (upper, middle and lower)	A		R		47-2, 7, 38	
D2	One side of the GCB bushing to which the shaft is inserted		L				
D3	One side of the plastic bushing to which the shaft is inserted		W1				
D4	Paper guide	B				47-4	

E. Bypass feed unit

	Items to check	Cleaning	Lubrication/ Coating	Replacement (x 1,000 sheets)	Operation check	Parts list <P-I>	Remarks
E1	Pickup roller			80		24-26	
E2	Feed roller			80		24-37	
E3	Separation roller		AV, W2	80		23-1	*e1
E4	Bypass tray	B					
E5	Drive gear (shaft)		W1				
E6	GCB bushing bearing		L				
E7	Transport roller	A		R		24-4, 40	

F. Main charger

	Items to check	Clean ing	Lubrication/ Coating	Replacement (x 1,000 sheets)	Replacement (x 1,000 drive counts)	Operation check	Parts list \<P-I\>	Remarks
F1	Main charger case	B						*f1
F2	Needle electrode			70(50)	140	O	40-6	
F3	Contact point of terminals	B					40-2, 3	
F4	Main charger grid			70(50)	140		40-14	
F5	Main charger cleaner			70(50)	140		40-15	

G. Drum/Cleaner unit, Cleaner related section

	Items to check	Clean ing	Lubrication/ Coating	Replacement (x 1,000 sheets)	Replacement (x 1,000 drive counts)	Operation check	Parts list \<P-I\>	Remarks
G1	Whole cleaner unit	B						
G2	Drum			70(50)	140		103-1	*g1
G3	Drum cleaning blade			70(50)	140		39-16	*g2
G4	Pad	B		R	R		39-19, 20	*g3
G5	Recovery blade	B					39-21	*g4
G6	Drum thermistor	B					38-33	
G7	Discharge LED	B					36-19	
G8	Ozone filter-1			70(50)	140		1-13	
G9	Ozone filter-2			280(200)	560		7-2	

Note:
Check the color deviation after replacing G2 and G5.

H. Developer unit (K, Y, M, and C)

	Items to check	Clean ing	Lubrication/ Coating	Replacement		Operation check	Parts list \<P-I\>	Remarks
				(x 1,000 sheets)	(x 1,000 drive counts)			
H1	Whole developer unit	B						*h4
H2	Developer unit drive section		W1					
H3	Developer material			70(50)	105		103-2	*h1
H4	Front shield	B		R	R		38-29	
H5	Side shield	B		R	R		38-27, 28	
H6	Oil seal (Developer sleeve)		AV	R	R		38-2	*h2
H7	Oil seal (Rear side)			R	R		38-3	
H8	Oil seal (Front side)			R	R		38-13	
H9	Auto-toner sensor	B					38-31	*h3
H10	Developer filter			70(50)	105			
H11	Developer unit upper cover	B						

I. Toner bag

	Items to check	Cleaning	Lubrication/ Coating	Replacement (x 1,000 sheets)	Operation check	Parts list \<P-I\>	Remarks
I1	Toner bag			56(Black) 12(Full Color)		103-4	
I2	Toner bag full detection sensor	B				42-104	

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J. Transfer belt unit / Transfer belt cleaning unit

	Items to check	Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list \<P-I\>	Remarks
				(x 1,000 sheets)	(x 1,000 drive counts)			
J1	Transfer belt	A		R	R		33-1	*j1
J2	1st transfer roller			R	R		33-9	
J3	Drive roller	A		R	R		33-5	*j2
J4	Drive roller cleaning mylar			280(200)	560		34-26	
J5	2nd transfer facing roller	A		R	R		33-10	*j2,*j3
J6	2nd transfer facing roller cleaning mylar			280(200)	560		31-14	
J7	Tension roller	A		R	R		33-8	*j2
J8	Idling roller	A		R	R		33-7	*j2
J9	Transfer belt cleaning blade			280(200)	560		35-4	
J10	Recovery plate	B		R	R		35-3, 15	*j4
J11	Blade seal			280(200)	-		35-8, 11	

K. Image quality control unit

	Items to check	Cleaning	Lubrication/ Coating	Replacement (x 1,000 sheets)	Operation check	Parts list \<P-I\>	Remarks
K1	Image quality sensor	A		R		27-5	*k1
K2	Sensor shutter	B		R		27-2	*k1
K3	Image position aligning sensor (Front/Rear)	A				27-4	*k1

L. 2nd transfer roller unit

	Items to check	Cleaning	Lubrication/ Coating	Replacement		Operation check	Parts list \<P-I\>	Remarks
				(x 1,000 sheets)	(x 1,000 drive counts)			
L1	2nd transfer roller			280(200)	560		13-10	
L2	Registration roller (rubber)	A		R	R		14-1	
L3	Paper clinging detection sensor	B					13-108	*l1
L4	2nd transfer roller paper guide	A						
L5	Ribs of transfer guide	B						

Note:
Check the color deviation after replacing L1.

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M. Fuser unit

	Items to check	Clean ing	Lubrication/ Coating	Replacement		Opera- tion check	Parts list <P-I>	Rema rks
				(x 1,000 sheets)	(x 1,000 drive counts)			
M1	Pressure roller			140(100)	280		44-1	
M2	Pressure roller sepa- ration finger			140(100)	280		44-18	*m1
M3	Pressure roller ther- mistor (center/rear)	A		R	R		44-14	*m2
M4	Fuser belt			140(100)	280		43-3	
M5	Heat roller			R	R		43-10	
M6	Fuser roller			140(100)	280		43-4	
M7	Fuser belt guide			140(100)	280		43-12	
M8	Fuser belt front ther- mistor	A		R	R		43-21	
M9	Fuser belt thermo- stat (center/rear)	A		R	R		43-19, 20	
M10	Separation plate	A					43-2	
M11	Entry guide	A					44-27, 28	
M12	Fuser unit gear		W2				44-30	*m3
M13	Pressure roller clean- ing pad			140(100)	280		44-37	
M14	Pressure roller ther- mostat	A		R	R		44-13	
M15	Fuser belt thermo- piles (center/rear)	A		R	R		46-4	*m4

Note:
> When any or all of M4, M5 and M6 is replaced or taken off from the fuser unit, perform adjust-
> ment for the separation plate gap. (Refer to 📖 P. 3-79 "3.16 Adjustment of the Separation Plate
> Gap (Fuser unit)")

N. Exit unit

	Items to check	Cleaning	Lubrication/ Coating	Replacement (x 1,000 sheets)	Operation check	Parts list <P-I>	Remarks
N1	Upper exit roller	A				46-21	
N2	Lower exit roller		W2			46-30	*n1

O. RADF (MR-3018)

	Items to check	Cleaning	Lubrication/ Coating	Replacement (x 1,000 sheets)	Operation check	Parts list <P-I>	Remarks
O1	Pickup roller	A		120		5-1	
O2	Separation roller	A		120		4-10	
O3	Feed roller	A		120		5-1	
O4	Registration roller	A					
O5	Intermediate transfer roller	A					
O6	Front read roller	A					
O7	Platen roller	A					
O8	Rear read roller	A					
O9	Reverse registration roller	A					
O10	Exit/reverse roller	A					
O11	Platen sheet	B or A					

P. PFP (KD-1018)

	Items to check	Cleaning	Lubrication/ Coating	Replacement (x 1,000 sheets)	Operation check	Parts list <P-I>	Remarks
P1	Pickup roller (upper/lower)	A		80		5-29	
P2	Feed roller (upper/lower)	A		80		5-26	
P3	Separation roller (upper/lower)	A	AV, W2	80		5-12	*p1
P4	Drive gear (tooth face)		W1				

Q. LCF (KD-1019)

	Items to check	Cleaning	Lubrication/ Coating	Replacement (x 1,000 sheets)	Operation check	Parts list <P-I>	Remarks
Q1	Pickup roller	A		160		4-30	
Q2	Feed roller	A		160		4-28	
Q3	Separation roller	A		160		5-12	
Q4	Drive gear (tooth face)		W1				

Fig. 4-4 Front side-1

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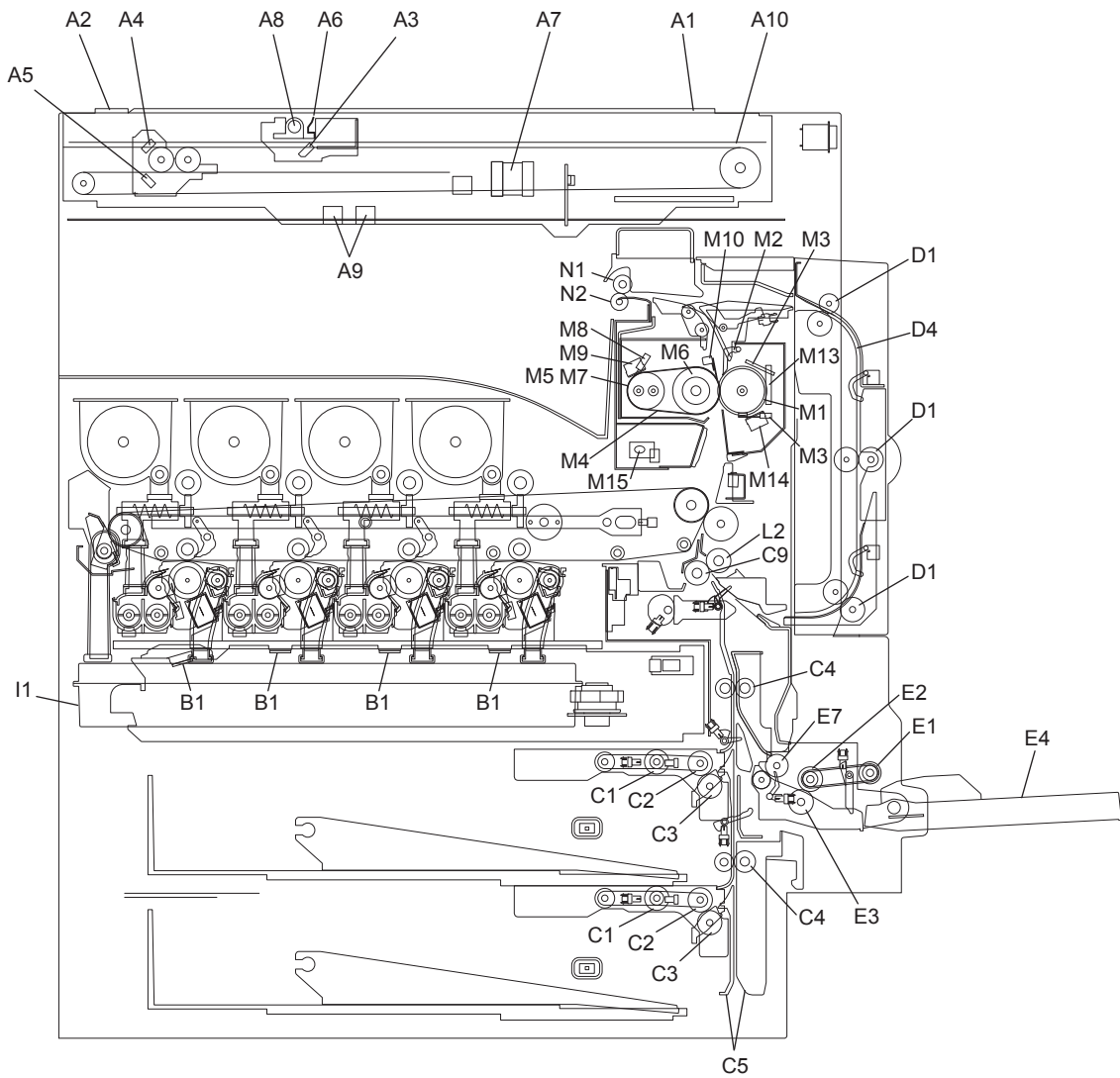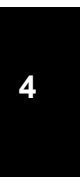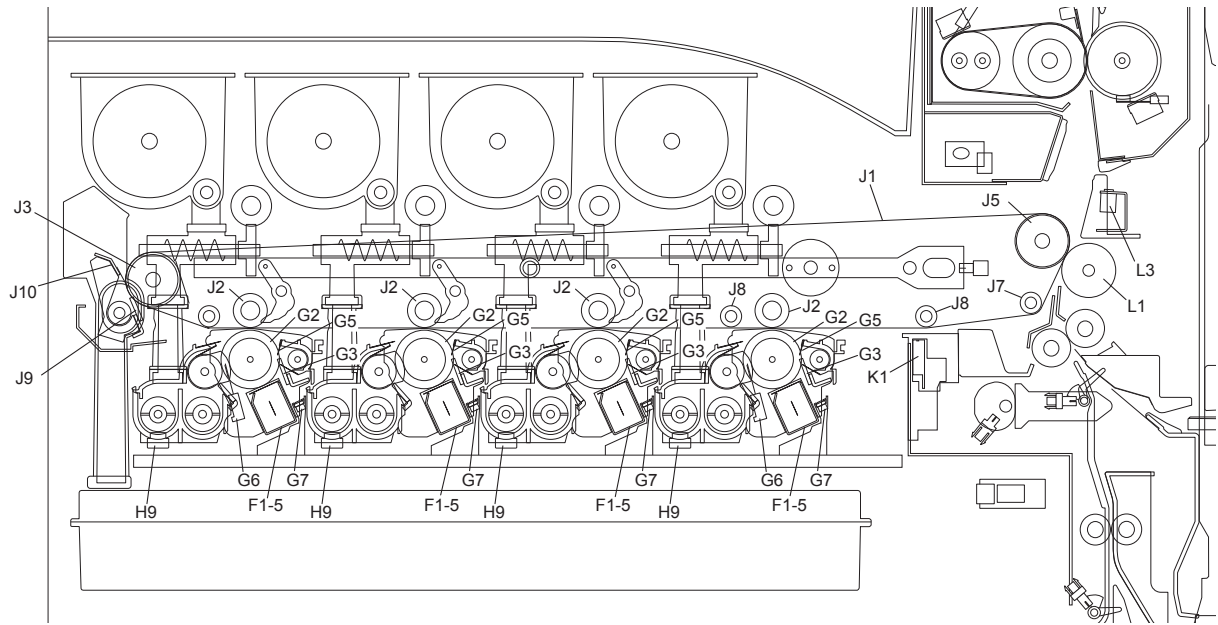
Fig. 4-5 Front side-2
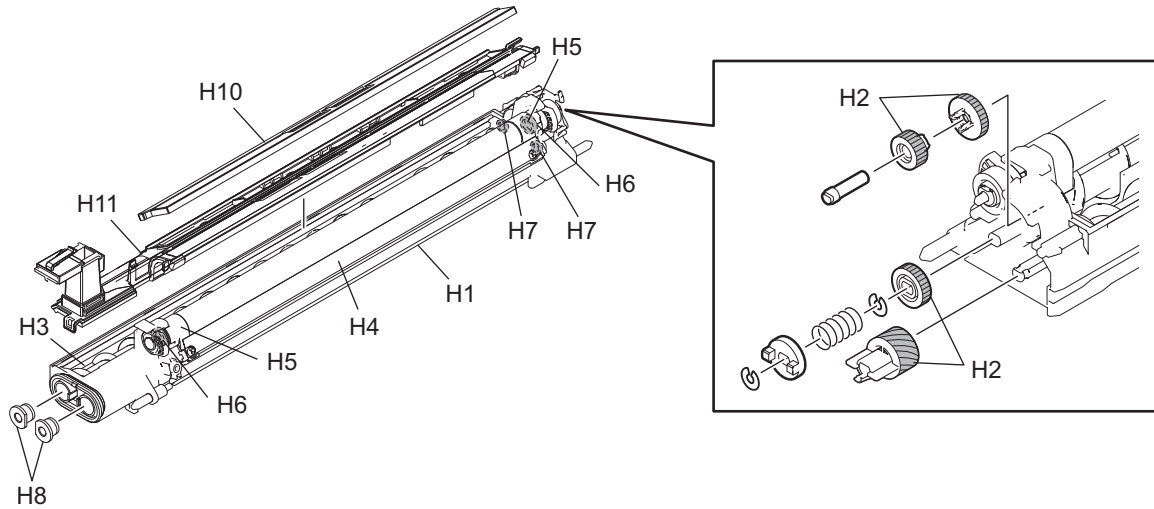
Fig. 4-6 Developer
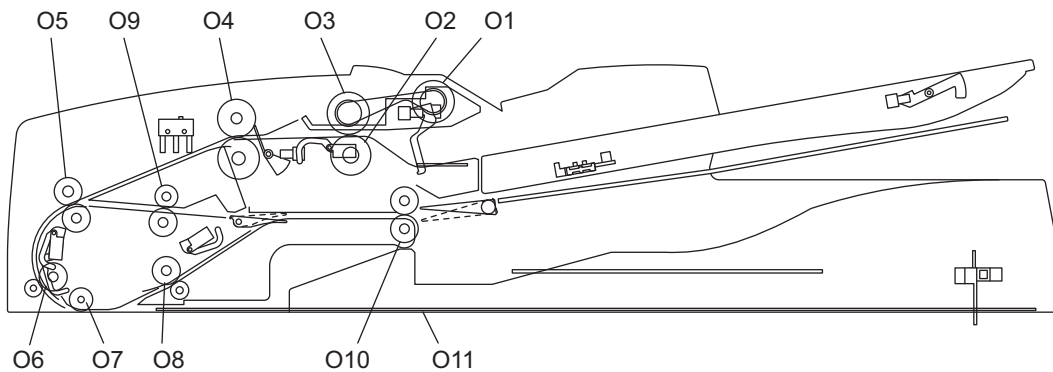
Fig. 4-7
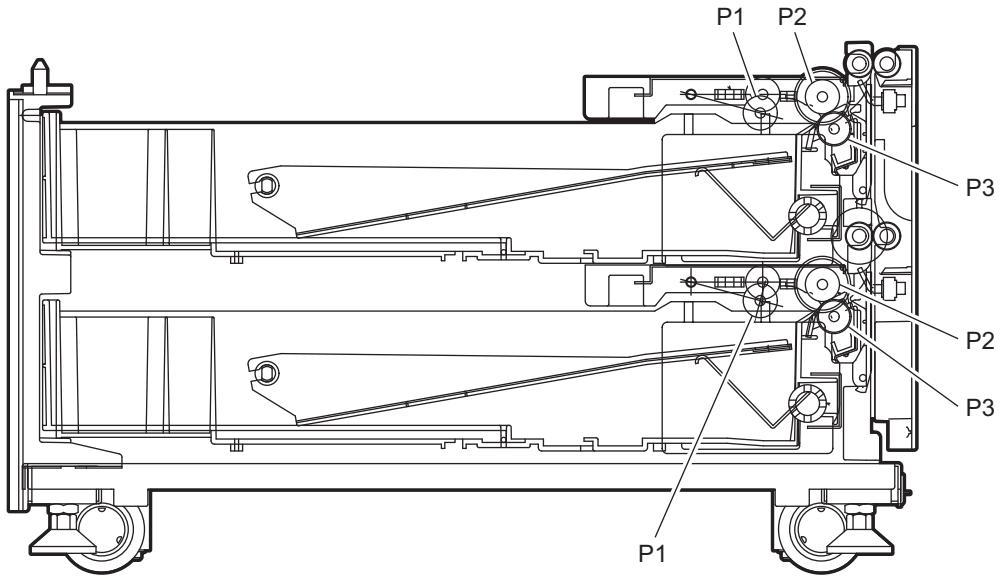
Fig. 4-8 Paper Feed Pedestal (PFP)

Fig. 4-9 Large Capacity Feeder (LCF)

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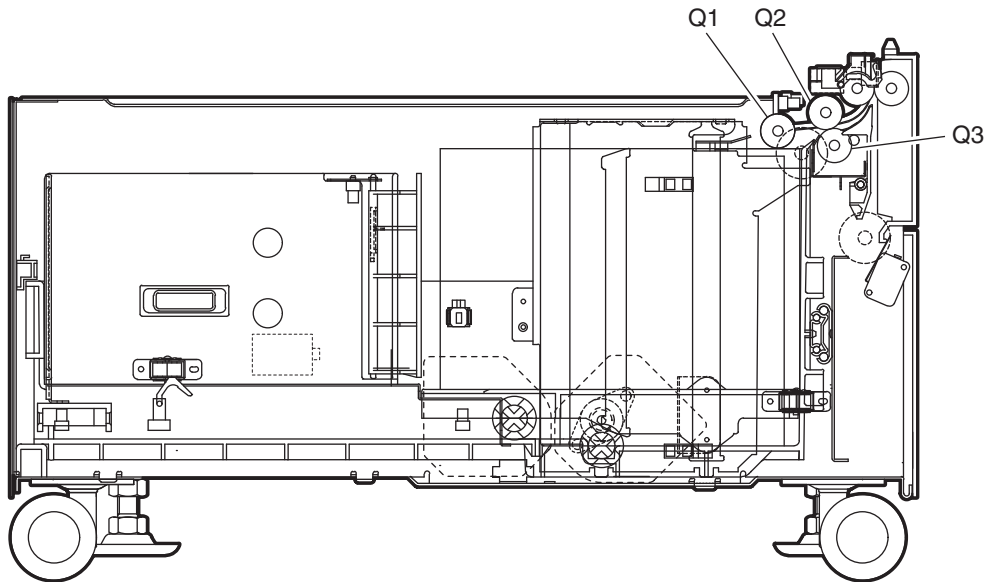
Remarks "*" in the Preventive Maintenance Check List

* a1.   Original glass, ADF original glass
         Clean both sides of the original glass and ADF original. Make sure that there is no dust on the mirrors-1, -2, -3 and lens after cleaning. Then install the original glass and ADF original glass.

   Note:
      Make sure that there is no fingerprints or oil staining on part of the original glass on where the original scale is mounted since the shading correction plate is located below the scale to be scanned.

* c1, p1.   Separation roller (Feed unit, PFP)
           Apply an even coat of grease (Alvania No.2) to all round the inside of the spring.
           When replacing the separation roller, apply adequate amount of white grease (Molykote HP-300) on the places of the holder shown in the figure (4 places).

   Note:
      Make sure that the grease does not adhere to the roller surface. Wipe it off with alcohol if adhered.

Apply grease on the inner surface
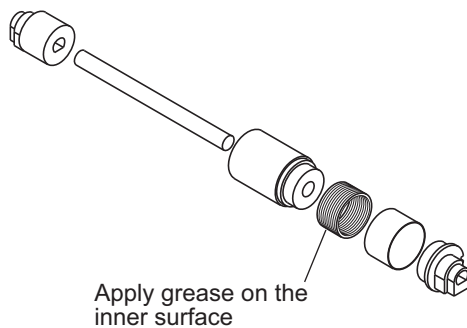
Fig. 4-10
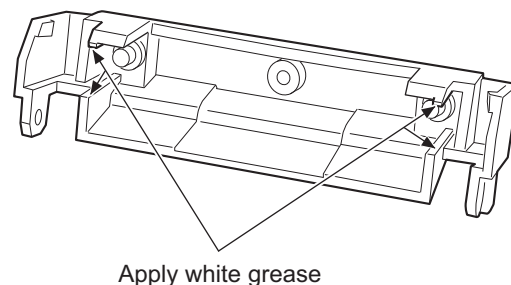
Apply white grease

Fig. 4-11

* c2.   Drive gears in the paper feeding section (teeth of gears and shafts)
         Apply some white grease (Molykote X5-6020) to the teeth of gears and shafts of the drive gears.

   Note:
      Make sure that oil is not running over or scattered around as the gear is rotated coming into the clutch after applying molykote to the gear which is located near the clutch. The quantity of molykote should be smaller than that to be applied to the other parts.

* c3. Middle guide

Open the 2nd transfer unit, and then open the middle guide by holding its knob to clean the entire surface of the Mylar with alcohol.

Note:

Do not hold the middle guide itself when opening and closing it.
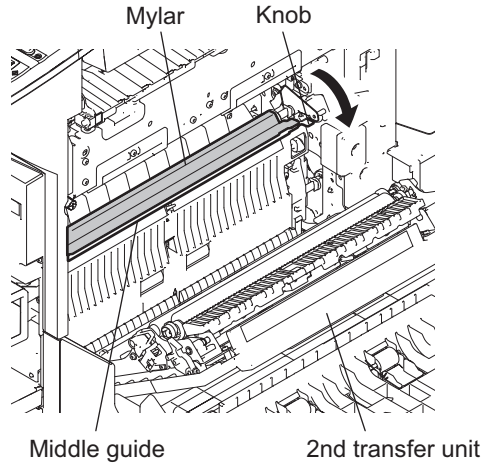
Fig. 4-12

* e1. Separation roller (SFB)

Apply an even coat of grease (Alvania No.2) to all round the inside of the spring. When replacing the separation roller, apply adequate amount of white grease (Molykote HP-300) on the places of the holder shown in the figure (4 places).

Note:

Make sure that the grease does not adhere to the roller surface. Wipe it off with alcohol if adhered.

Apply grease on the inner surface

Fig. 4-13

Apply white grease
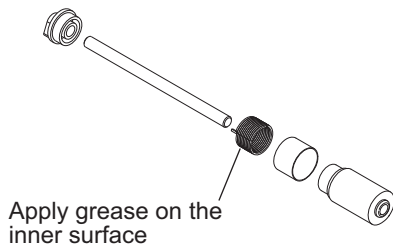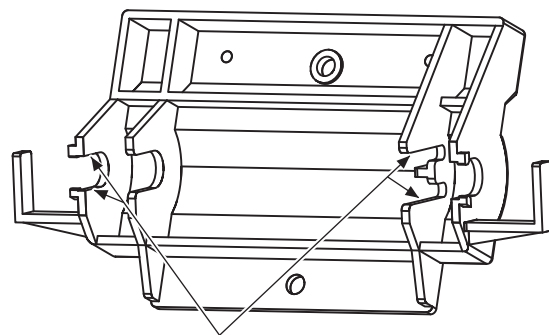
Fig. 4-14

* f1. Main charger case

Clean the main charger case with a cloth soaked in water and squeezed tightly, and then wipe them with a dry cloth.

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* g1. Drum
Do not apply "patting powder" to the surface of the drum when replacing it. For handling the drum, refer to 📖 P. 4-32 "4.8.2 Checking and cleaning of photoconductive drum".

* g2. Drum cleaning blade
Since the edge of the blade is vulnerable and can be easily damaged by factors such as the adherence of paper dust. Replace the cleaning blade with new ones if poor images are copied due to the damaged blade regardless of the number of output pages which have been made.

* g3. Recovery blade
Clean the surface of the recovery blade with a soft pad or cloth, if dirt cannot be removed with a vacuum cleaner. If the edge of recovery blade is damaged, replace the blade regardless of the number of output pages.

Note:
Never use water or alcohol for cleaning the transfer belt recovery blade.

* g4. Felt
When replacing the drum cleaning unit, check that there is no gap between the blade and felt on both ends. If there is, or when the felts put pressure to the cleaning blade, reattach the felts on the position shown in the figure (by slightly pushing them to the direction of the arrows).
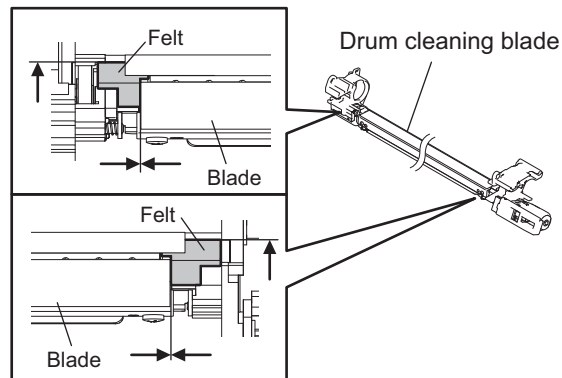
Fig. 4-15

* h1. Developer material
After replacing the developer material, be sure to perform the auto-toner adjustment and then image quality control initialization (📖 P. 3-2 "3.2 Adjustment of the Auto-Toner Sensor").

* h2. Oil seal
  Developer sleeve   2 pc.

During replacement, coat the oil seal with grease (Alvania No.2) following the procedure below. Also, when the developer sleeve or mixer is disassembled, clean the shaft and oil seal before coating the oil seal with grease.

(1) Push in a new oil seal parallel to the mounting hole section of the developer frame.
    * Pay attention to the direction in which the oil seal is attached. (See figure on right.)
(2) Apply an even coat of grease to the inside of the oil seal.
    • Amount: About two small drops
(3) Wipe off any grease exuded from the inside.
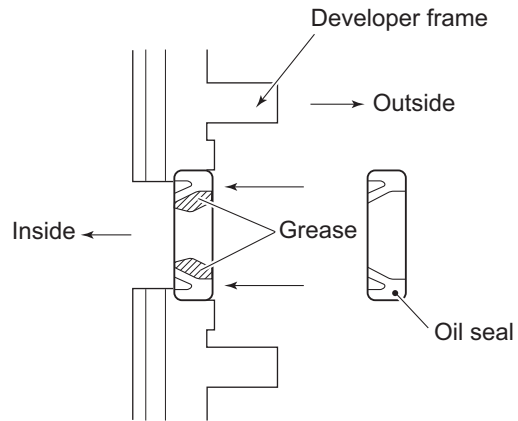
Fig. 4-16

* h3. Auto-toner sensor
  Clean the surface of the auto-toner sensor with a cotton swab or soft cloth with sufficient alcohol filled in.

* h4. Developer unit
  1) Cleaning
     Clean the doctor blade so as to prevent developer material from adhering to it when the drum is being replaced.
     Space the front shield from the developer sleeve and then insert a doctor blade cleaning jig into the doctor sleeve gap. Then clean the doctor blade by running the jig for 3 times to and fro along with the edge of the blade.

Fig. 4-17

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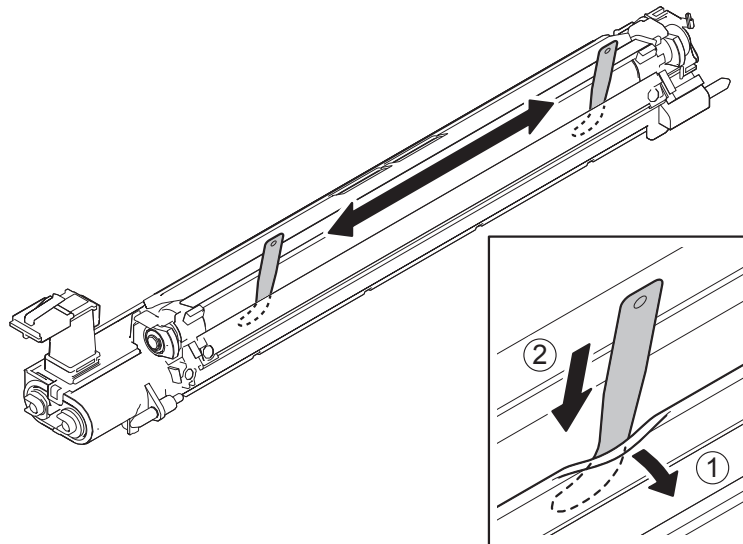
2) Removal of foreign matter in the developer unit
   (1) Take off the process unit (EPU).
   (2) Space the front shield.
   (3) Insert the cleaning jig all the way in the developer unit at a position approx. 30 mm away from the white streak.
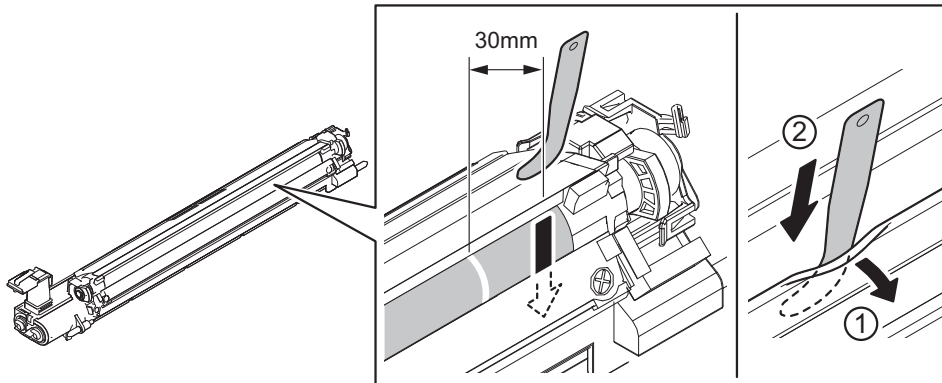
Fig. 4-18

(4) Slide the cleaning jig to where the white streak appears.
(5) Pull out the cleaning jig while manually turning the gear to rotate the developer sleeve.
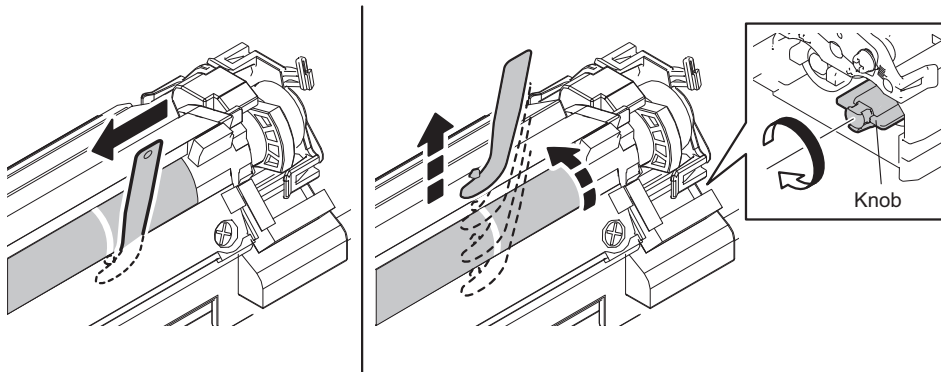
Fig. 4-19

Tip:
If foreign matter is not removed by the above procedure, take off the developer unit, discharge the developer material on to a sheet of clean paper and then remove any foreign matter found. If you cannot find any foreign matter, exchange the developer material.

3) Removal of foreign matter on the developer sleeve
   (1) Apply a sheet of paper to the developer sleeve.
   (2) Scrape off foreign matter and developer material on the developer sleeve using the jig.

Foreign matter
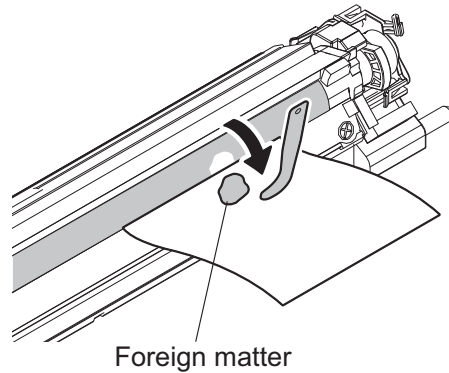
Fig. 4-20

* j1.   Transfer belt
         Fully clean up the toner and such adhering to the roller with alcohol, and then wipe it with a dry cloth until no trace remains. Take care not to have the transfer belt surface being damaged or dented. Replace the transfer belt with a new one regardless of the number of output pages, if any crack or major scar is found.

* j2.   Drive roller, 2nd transfer facing roller, tension roller, idling roller
         Fully clean up the toner and such adhering to the roller with alcohol when the transfer belt cleaning blade is replaced, since an image failure may occur if there is any dirt remaining on the roller. Also, remove dust and toner scattering adhering to the inside of the transfer belt unit in order to keep rollers clean.

* j3.   2nd Transfer Facing Roller
         Apply Floil (GE-334C) all around the shaft of the 2nd transfer facing roller, which contacts the grounding plate inside the 2nd transfer facing roller rear holder.

2nd transfer facing roller rear holder

2nd transfer facing roller

Apply Floil (GE-334C) all around the shaft

Fig. 4-21

e-STUDIO2500c/3500c/3510c
PREVENTIVE MAINTENANCE (PM)
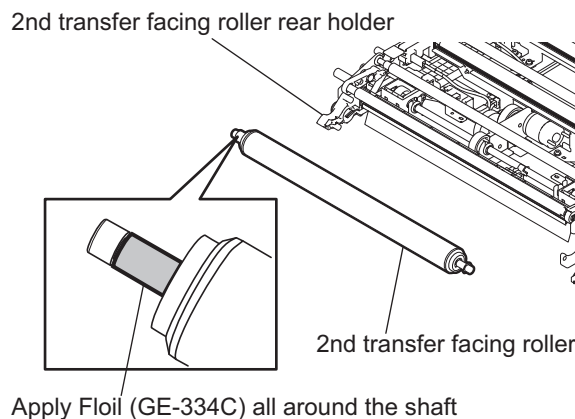
* j4. Recovery blade
Clean the surface of the recovery blade with a soft pad or cloth, if dirt cannot be removed with a vacuum cleaner. If the edge of recovery blade is damaged, replace the blade regardless of the number of output pages.

Note:
Never use water or alcohol for cleaning the transfer belt recovery blade.

* k1. Image quality sensor, sensor shutter and image position aligning sensor (Front/Rear)
Clean the image quality sensor, image position aligning sensor (Front/Rear) and the sensor shutter when replacing the transfer belt cleaning blade and the blade seal, or the transfer belt itself.

* l1. Paper clinging detection sensor
Open the 2nd transfer unit and clean the paper clinging detection sensor with a cotton swab.

Note:
Be sure to clean the entire surface of the sensor.

Paper clinging detection sensor

2nd transfer unit
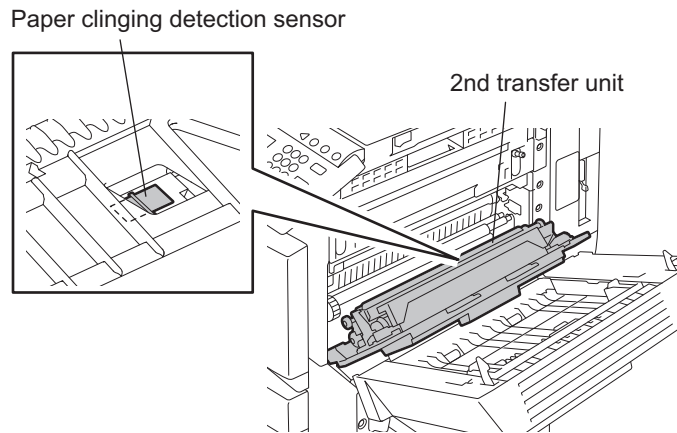
Fig. 4-22

* m1. Separation finger
The paper jam may be caused if the tip of the finger is damaged or deformed. If there is any problem with it, replace the finger with a new one regardless of the number of output pages which have been made. Do not damage the tip of the finger during the cleaning. The finger may be damaged if the toner adhering to the tip of it is scraped off forcibly. Replace the finger if the toner is sticking to it heavily.

* m2. Thermistor
Clean the thermistor with alcohol if the toner or dirt is sticking to it when the fuser roller is replaced. Do not deform or damage the thermistor during the cleaning. Replace the thermistor with a new one if it is damaged or deformed regardless of degree.

* m3. Fuser unit gear
Wipe off any old grease, and then apply 3 to 4 rice-sized grains of white grease (Molykote HP-300) onto the gear teeth.

* m4.　　Fuser belt thermopiles (center/rear)
Remove the thermopiles. Use a cloth with a small amount of alcohol to clean them. Be sure not to touch the lens of the thermopiles.
Clean the equipment according to the following timing.
e-STUDIO2500c : every 100,000 sheets
e-STUDIO3500c/3510c : every 140,000 sheets

* n1.　　Exit roller (lower)
Wipe off any old grease, and then apply 0.5 to 1 rice-sized grains of white grease (Molykote HP-300) onto the inside of the roller and both end faces of the shaft hole.

Lower exit roller

4

e-STUDIO2500c/3500c/3510c
PREVENTIVE MAINTENANCE (PM)
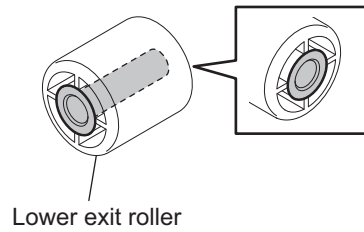
4.5 PM KIT

KIT name	Component	Part name	Qty.
DEV-KIT-FC35K	Drum cleaning blade	BL-FC28D	1
	Main charger grid	GRID-CHARGR-MAIN-380	1
	Needle electrode	ELCTRD-CHARGR-MAIN-380	1
	Main charger cleaner	FILM-CLNR-CHARGR-380	2
	Developer material	D-FC35K	1
	Developer filter	ASYS-DUCT-DEV-COV	1
	Ozone filter 1	FLTR-OZN-F380	1
	Slit glass cleaning pad	ASYS-CLNR-GLASS	1
DEV-KIT-FC35CLR	Drum cleaning blade	BL-FC28D	3
	Main charger grid	GRID-CHARGR-MAIN-380	3
	Needle electrode	ELCTRD-CHARGR-MAIN-380	3
	Main charger cleaner	FILM-CLNR-CHARGR-380	6
	Developer material (Y)	D-FC35Y	1
	Developer material (M)	D-FC35M	1
	Developer material (C)	D-FC35C	1
	Developer filter	ASY-DUCT-DEV-COV	3
TBU-KIT-FC35	Transfer belt cleaning blade	BL-FC35TR	1
	2nd transfer roller	CR-FC35TR2	1
	Blade seal (front side)	SEAL-BLADE-CLN-TBU-F	1
	Blade-seal (rear side)	SEAL-BLADE-CLN-TBU-R	1
	2nd transfer facing roller cleaning mylar	MYLAR-CLN-TR2-WP	1
	Drive roller cleaning mylar	MYLAR-CLN-BELT	1
	Ozone filter 2	FLTR-OZ-50-TNR-EX-380	1
FR-KIT-FC35	Fuser belt	BT-FC35-FU	1
	Fuser roller	FR-FC35-U	1
	Press roller	HR-FC35-L	1
	Separation finger	SCRAPR-FUS-350	5
	Fuser belt guide	COLLAR-HR-T1	2
	Pressure roller cleaning pad	ASYS-FELT-PR	1
ROL-KIT-16CST	Pick up roller	ROLLER-PICK-AT	1
	Feed roller	K-ROLL-FEED	1
	Separation roller	K-ROLL-SPT	1
ROL-KIT-1010	Pick up roller	ROL-PICK-UP	1
	Feed roller	ROL-PAPER-FED-F	1
	Separation roller	ROL-PAPER-FED-S	1
DF-KIT-3018	Pick up roller	ASYS-ROL-FEED	1
	Feed roller	ASYS-ROL-FEED	1
	Separation roller	ASYS-ROL-RET	1

4.6 Maintenance Part List

The parts used for the maintenance of this equipment are as follows.

No.	Item	Purpose	Parts list <P-I>*1
1	Cleaning brush	Cleaning inside of the equipment	101-2
2	Doctor blade cleaning jig	Cleaning the doctor blade	101-3
3	Wire holder jig	Fixing the wire at the assembly of the carriage wire	101-4
4	Developer material nozzle	Pouring the developer material (attached to the developer bottle)	101-5
5	Doctor-sleeve jig*2	Measuring the gap between the development sleeve and the doctor blade	101-6
6	Belt tension jig	Adjusting the belt tension at the installation of the scan motor	101-7
7	Separation plate gap jig*2	Measuring the gap between the separation plate and the fuser belt	101-8
8	Drum bag	Storing the drum	101-10
9	Download jig (DLM board)	Updating the scanner/options ROM	102-1
10	ROM	Installing the DLM board	102-10
11	Download jig-2 (6 Flash ROMs)	Updating the system/engine/scanner ROM	102-2
12	Download jig-1 (2 Flash ROMs)	Updating engine ROM	102-3
13	ROM writer adapter (For 1881)	Writing the data of PWA-DWNLD-350-JIG2	102-4
14	ROM writer adapter (For 1931)	Writing the data of PWA-DWNLD-350-JIG2	102-5
15	Harness jig	Updating the converter PC board	102-7

*1:   Part list <P-I> represents the page item in "e-STUDIO2500c/3500c/3510c Service Parts List".

*2:   This part has been newly added in e-STUDIO2500c/3500c/3510c, others are common to those used for other models.
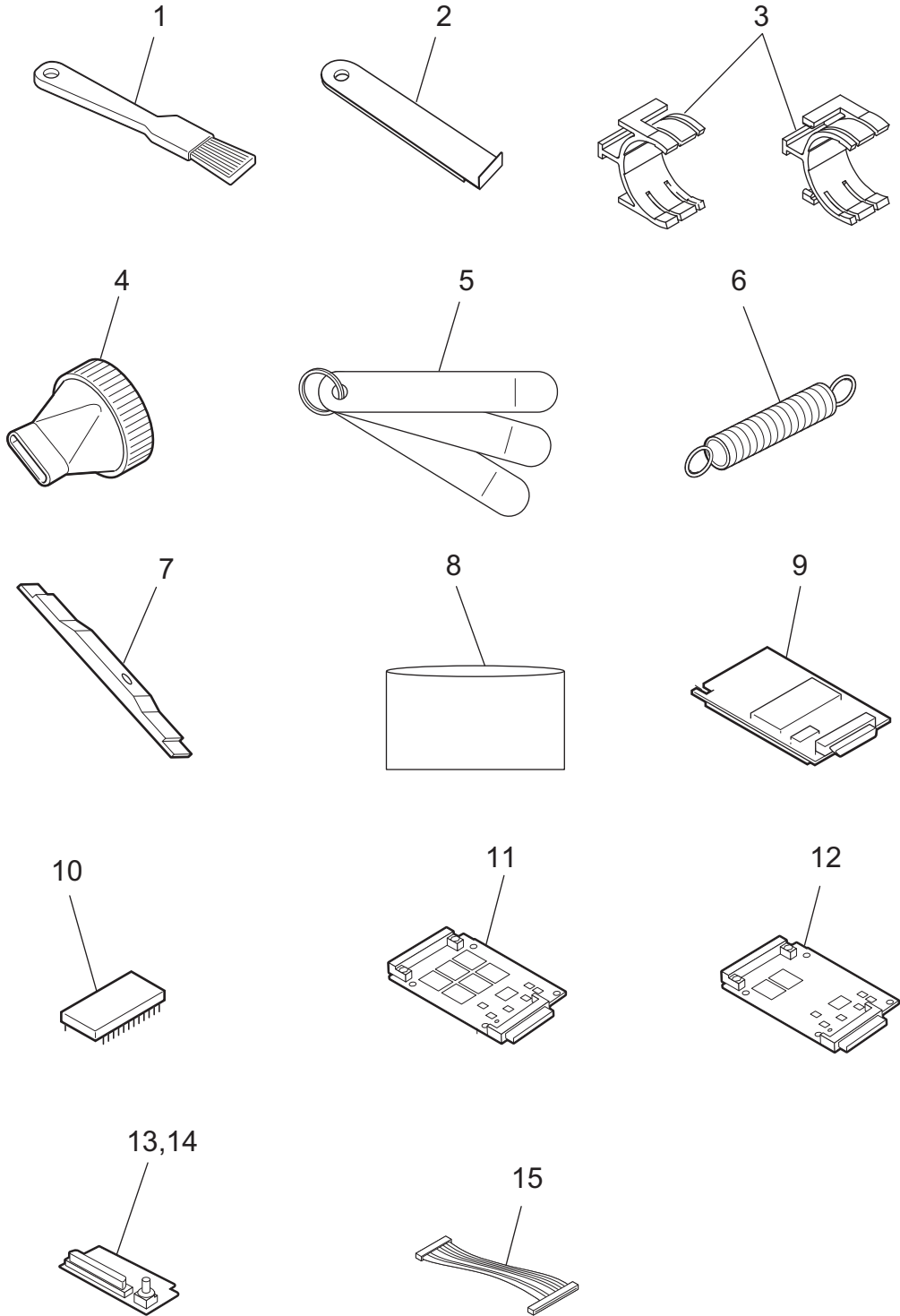
4.7 Grease List

The parts used for the maintenance of this equipment are as follows.

Symbol	Grease name	Volume	Container	Parts list <P-I>*
L	Launa 40	100 cc	Oiler	101-21
W1	White grease (Molykote X5-6020)	100 g	Tube	101-24
W2	White grease (Molykote HP-300)	100 g	Bottle	101-22
W2	White grease (Molykote HP-300)	10 g	Bottle	101-22
AV	Alvania No.2	100 g	Tube	101-23

* : Part list <P-I> represents the page item in "e-STUDIO2500c/3500c/3510c Service Parts List".

4

4.8 Precautions for Storing and Handling Supplies

4.8.1 Precautions for storing TOSHIBA supplies

1) Toner/Developer
   Toner and developer should be stored in a place where the ambient temperature is between 10°C to 35°C (no condensation), and should also be protected against direct sunlight during transportation.

2) Photoconductive drum
   Like the toner and developer, photoconductive drum should be stored in a dark place where the ambient temperature is between 10°C to 35°C (no condensation). Be sure to avoid places where drums may be subjected to high humidity, chemicals and/or their fumes.

3) Drum cleaning blade / Transfer belt cleaning blade
   This item should be stored in a flat place where the ambient temperature is between 10°C to 35°C, and should also be protected against high humidity, chemicals and/or their fumes.

4) Transfer belt / Transfer roller / Fuser belt / Pressure roller
   Avoid places where the rollers may be subjected to high humidity, chemicals and/or their fumes.

5) Paper
   Avoid storing copy paper in places where it may be subjected to high humidity.
   After a package is opened, be sure to place and store it in a storage bag.

4.8.2 Checking and cleaning of photoconductive drum

1) Use of gloves
   If fingerprints or oil adhere to the drum surface, the property of the photosensitive drum may degrade, affecting the quality of the copy image. So, do not touch the drum surface with your bare hands.

2) Do not use "patting powder" (lubricant)
   Since "patting powder" may affect the initial image if it adheres to the OPC surface, do not apply it. The friction between the drum and cleaning blade is sufficiently small without it and no problem would occur even if it is not applied.

3) Handling precautions
   As the photoconductive drum surface is very sensitive, be sure to handle the drum carefully when installing and removing it so as not to damage its surface.
   When the drum has been replaced with a new one, the drum counter for the new drum (K, Y, M, C) must be cleared to 0 (zero). This clearing can be performed in PM support mode.
   - Drum counter
     Drum (K): 08-1150-0, 3, 6, 7
     Drum (Y): 08-1152-0, 3, 6, 7
     Drum (M): 08-1154-0, 3, 6, 7
     Drum (C): 08-1156-0, 3, 6, 7

   Note:
   If paper fibers or dint adhere to the cleaning blade edge, they may reduce the cleaning efficiency and damage the blade and the drum. Be sure to remove any fibers found adhering to the blade.

4) Installation of equipment and storage of drum

Avoid installing the equipment where it may be subjected to high temperature, high humidity, chemicals and/or their fumes.

Do not place the drum in a location where it is exposed to direct sunlight or high intensity light such as near a window. Otherwise the drum will fatigue, and will not produce sufficient image density immediately after being installed in the equipment.

5) Cleaning the drum

At periodic maintenance calls, wipe the entire surface of the drum clean using the designated cleaning cotton. Note that there is no need to clean the surface of the new drum unless there is a problem. Use sufficiently thick cleaning cotton (dry soft pad) so as not to scratch the drum surface inadvertently with your fingertips or nails. Also, remove your rings and wristwatch before starting cleaning work to prevent accidental damage to the drum.

Do not use alcohol, selenium refresher and other organic solvents or silicon oil as they will have an adverse effect on the drum.

6) Scratches on photoconductive drum surface

If the surface is scratched in such a way that the aluminum substrate is exposed, no copy image will be produced on this area. In addition, the cleaning blade will be damaged so replacement with a new drum will be necessary.

7) Collecting used photoconductive drums

Regarding the recovery and disposal of used photoconductive drums, we recommend following the relevant local regulations or rules.

4.8.3 Checking and cleaning of drum cleaning blade and transfer belt cleaning blade

1) Handling precautions

Pay attention to the following points as the cleaning blade life is determined by the condition of its edge:
- Do not allow hard objects to hit or rub against blade edge.
- Do not rub the edge with a cloth or soft pad.
- Do not leave oil (or fingerprints, etc.) on the edge.
- Do not apply solvents such as paint thinner to the blade.
- Do not allow paper fibers or dirt to contact the blade edge.
- Do not place the blade near a heat source.

2) Cleaning procedure

Clean the blade edge with a cloth moistened with water and squeezed lightly.

4.8.4 Handling of transfer belt

1) Do not touch the front and rear surfaces of the transfer belt surface with bare hands.
2) Prevent oil or other foreign matter from adhering to both surfaces of the transfer belt.
3) Do not apply external pressure that might scratch the transfer belt.
4) When replacing the belt and transfer belt cleaning unit, apply patting powder sufficiently and evenly. Otherwise, it may reduce the cleaning efficiency.
5) When replacing the transfer belt, clean the drive roller, 2nd transfer facing roller, and tension roller with a solvent such as alcohol, and then attach the transfer belt.

4.8.5　Checking and cleaning of fuser belt and pressure roller

1) Handling precautions
   Fuser belt
   - Do not touch the fuser belt surface with bare hands.
   - Prevent oil or other foreign matter from staining the fuser belt surface.
   - Do not allow alcohol or any other organic solvent to contact with the fuser belt.
   - Do not apply external pressure that might scratch the fuser belt.

   Pressure roller
   - Do not leave any oil (fingerprints, etc.) on the pressure roller.
   - Be careful not to allow any hard object to hit or rub against the pressure roller, or it may be damaged, possibly resulting in poor cleaning.

2) Checking
   - Check for stain and damage on the fuser belt and pressure roller, and clean if necessary.
   - Check the separation plate and fingers and check for chipped tips.
   - Check the thermistors' contact and non-contact status.
   - Check the fused and fixed condition of the toner.
   - Check the gap between the inlet guide and pressure roller.
   - Check the fuser belt for proper transportation.
   - Check the pressure roller for proper rotation.

3) Cleaning procedure
   When the fuser belt and pressure roller become dirty, they will cause jamming. If this happens, wipe the surface clean with a suitable cloth. For easier cleaning, clean the belt and roller while they are still warm.
   Note:
   　Be careful not to rub the fuser belt and pressure roller surface with your nails or hard objects because it can be easily damaged. Do not use silicone oil on the fuser belt and pressure roller.

4) Checking after the assembly of the fuser belt unit
   After the assembly, rotate the fuser belt for a round to confirm that the belt is neither folded nor scratched.
   A folded or scratched belt may be broken when it is in use.
   Note:
   　Never rotate the fuser belt in the reverse direction as it will cause deformation of the thermistor and discharge brush.

5. TROUBLESHOOTING

When any of the PC boards or the HDD requires replacement, refer to "5.3 Replacement of PC Boards and HDD".

5.1 Diagnosis and Prescription for Each Error Code

5.1.1 Paper transport jam (paper exit section)

[E010] Jam not reaching the exit sensor

Open the jam access cover. Is there any paper on the transport path?

   │   YES → Remove the paper.
   ↓

NO

Is there any paper jammed in the fuser unit?

   │   YES → Remove the paper.
   ↓

NO

Is the exit sensor working? (Perform the input check: 03-[FAX]ON/[1]/[B])

   │   NO → 1) Check if the connector of the exit sensor is disconnected.
   │   2) Check if the connector CN333 on the LGC board is disconnected.
   │   3) Check if the connector pins are disconnected or the harnesses are open circuited.
   │   4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
   │   5) Replace the exit sensor.
   │   6) Replace the LGC board.
   ↓

YES

Check if there is any abnormality on the paper transport path in the fuser unit. Correct it if there is.

[E020] Stop jam at the exit sensor

Open the jam access cover. Is there any paper on the transport path?

   ↓   YES → Remove the paper.

NO

Is the exit sensor working? (Perform the input check: 03-[FAX]ON/[1]/[B])

   │   NO → 1) Check if the connector of the exit sensor is disconnected.
   │   2) Check if the connector CN333 on the LGC board is disconnected.
   │   3) Check if the connector pins are disconnected or the harnesses are open circuited.
   │   4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
   │   5) Replace the exit sensor.
   │   6) Replace the LGC board.
   ↓

YES

Check the exit roller. Replace it if it is worn out.

5.1.2 Paper misfeeding

[E110] ADU misfeeding (paper not reaching the registration sensor)

Open the jam access cover. Is there any paper in front of the registration sensor?

  ↓ YES → Remove the paper.

NO

Is the registration sensor working? (Perform the input check:03-[FAX]OFF/[7]/[F])

  | NO → 1) Check if the connector of the registration sensor is disconnected.
  | 2) Check if the connector CN337 on the LGC board is disconnected.
  | 3) Check if the connector pins are disconnected or the harnesses are open circuited.
  | 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
  | 5) Replace the registration sensor.
  | 6) Replace the LGC board.

↓

YES

Is the ADU clutch working? (Perform the output check: 03-222)

  | NO → 1) Check if the connector of the ADU clutch is disconnected.
  | 2) Check if the connector CN338 on the LGC board is disconnected.
  | 3) Check if the connector pins are disconnected or the harnesses are open circuited.
  | 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
  | 5) Replace the ADU clutch.
  | 6) Replace the LGC board.

↓

YES

Check the rollers in the ADU. Replace them if they are worn out.

[E120] Bypass misfeeding (paper not reaching the bypass feed sensor)

Are the bypass feed clutch and bypass feed sensor working?
(Perform the output check: 03-204 and the input check: 03-[FAX]ON/[4]/[D])

|　　NO → 　1) Check if the connector of the bypass feed clutch is disconnected.
|　　　　　　2) Check if the connector CN347 on the LGC board is disconnected.
|　　　　　　3) Check if the connector pins are disconnected or the harnesses are open
|　　　　　　　　circuited.
|　　　　　　4) Check if the conductor pattern on the LGC board is short circuited or open
|　　　　　　　　circuited.
|　　　　　　5) Replace the bypass feed clutch.
|　　　　　　6) Replace the bypass feed sensor.
|　　　　　　7) Replace the LGC board.
↓

YES

Check the rollers in the ADU. Replace them if they are worn out.

[E130] 1st drawer misfeeding (paper not reaching the 1st drawer feed sensor)

Open the jam access cover. Is there any paper in front of the 1st drawer feed sensor?

↓　　YES → 　Remove the paper.

NO

Is the 1st drawer feed sensor working? (Perform the input check: 03-[FAX]ON/[1]/[G])

|　　NO → 　1) Check if the connector of the 1st drawer feed sensor is disconnected.
|　　　　　　2) Check if the connector CN348 on the LGC board is disconnected.
|　　　　　　3) Check if the connector pins are disconnected or the harnesses are open
|　　　　　　　　circuited.
|　　　　　　4) Check if the conductor pattern on the LGC board is short circuited or open
|　　　　　　　　circuited.
|　　　　　　5) Replace the 1st drawer feed sensor.
|　　　　　　6) Replace the LGC board.
↓

YES

Is the 1st drawer feed clutch working? (Perform the output check: 03-201)

|　　NO → 　1) Check if the connector of the 1st drawer feed clutch is disconnected.
|　　　　　　2) Check if the connector CN348 on the LGC board is disconnected.
|　　　　　　3) Check if the connector pins are disconnected or the harnesses are open
|　　　　　　　　circuited.
|　　　　　　4) Check if the conductor pattern on the LGC board is short circuited or open
|　　　　　　　　circuited.
|　　　　　　5) Replace the 1st drawer feed clutch.
|　　　　　　6) Replace the LGC board.
↓

YES

Check the 1st drawer feed roller, separation roller and pickup roller. Replace them if they are worn out.

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TROUBLESHOOTING

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[E140] 2nd drawer misfeeding (paper not reaching the 2nd drawer feed sensor)

Open the side cover. Is there any paper in front of the 2nd drawer feed sensor?

↓   YES →   Remove the paper.

NO

Is the 2nd drawer feed sensor working? (Perform the input check: 03-[FAX]ON/[1]/[F])

    | NO →   1) Check if the connector of the 2nd drawer feed sensor is disconnected.
    | 2) Check if the connector CN348 on the LGC board is disconnected.
    | 3) Check if the connector pins are disconnected or the harnesses are open
    | circuited.
    | 4) Check if the conductor pattern on the LGC board is short circuited or open
    | circuited.
    | 5) Replace the 2nd drawer feed sensor.
    | 6) Replace the LGC board.
    ↓

YES

Is the 2nd drawer feed clutch working? (Perform the output check: 03-202)

    | NO →   1) Check if the connector of the 2nd drawer feed clutch is disconnected.
    | 2) Check if the connector CN348 on the LGC board is disconnected.
    | 3) Check if the connector pins are disconnected or the harnesses are open
    | circuited.
    | 4) Check if the conductor pattern on the LGC board is short circuited or open
    | circuited.
    | 5) Replace the 2nd drawer feed clutch.
    | 6) Replace the LGC board.
    ↓

YES

Check the 2nd drawer feed roller, separation roller and pickup roller. Replace them if they are worn out.

[E150] PFP upper drawer misfeeding (paper not reaching the PFP upper drawer feed sensor)

Open the PFP side cover. Is there any paper in front of the PFP upper drawer feed sensor?

↓   YES →   Remove the paper.

NO

Is the PFP upper drawer feed sensor working?
(Perform the input check: 03-[FAX]OFF/[2]/[D])

| NO →   1) Check if the connector of the PFP upper drawer feed sensor is discon-
| nected.
| 2) Check if either of the connectors CN241 or CN243 on the PFP board is dis-
| connected.
| 3) Check if the connector CN349 on the LGC board is disconnected.
| 4) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 5) Check if the conductor patterns on the PFP board and LGC board are short
| circuited or open circuited.
| 6) Replace the PFP upper drawer feed sensor.
| 7) Replace the PFP board.
| 8) Replace the LGC board.
|
↓

YES

Is the PFP upper drawer feed clutch working? (Perform the output check: 03-226)

| NO →   1) Check if the connector of the PFP upper drawer feed clutch is discon-
| nected.
| 2) Check if any of the connectors CN241, CN242 and CN244 on the PFP
| board is disconnected.
| 3) Check if the connector CN349 on the LGC board is disconnected.
| 4) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 5) Check if the conductor patterns on the PFP board and LGC board are short
| circuited or open circuited.
| 6) Replace the PFP upper drawer feed clutch.
| 7) Replace the PFP board.
| 8) Replace the LGC board.
|
↓

YES

Check the PFP upper drawer feed roller, separation roller and pickup roller. Replace them if they are worn out.

5

[E160] PFP lower drawer misfeeding (paper not reaching the PFP lower drawer feed sensor)

Open the PFP side cover. Is there any paper in front of the PFP lower drawer feed sensor?

  ↓   YES →   Remove the paper.

NO

Is the PFP lower drawer feed sensor working?
(Perform the input check: 03-[FAX]OFF/[8]/[D])

  | NO →   1) Check if the connector of the PFP lower drawer feed sensor is discon-
  | nected.
  | 2) Check if either of the connectors CN241 or CN243 on the PFP board is dis-
  | connected.
  | 3) Check if the connector CN349 on the LGC board is disconnected.
  | 4) Check if the connector pins are disconnected or the harnesses are open
  | circuited.
  | 5) Check if the conductor patterns on the PFP board and LGC board are short
  | circuited or open circuited.
  | 6) Replace the PFP lower drawer feed sensor.
  | 7) Replace the PFP board.
  | 8) Replace the LGC board.

  ↓

YES

Is the PFP lower drawer feed clutch working? (Perform the output check: 03-228)

  | NO →   1) Check if the connector of the PFP lower drawer feed clutch is discon-
  | nected.
  | 2) Check if any of the connectors CN241, CN242 and CN244 on the PFP
  | board is disconnected.
  | 3) Check if the connector CN349 on the LGC board is disconnected.
  | 4) Check if the connector pins are disconnected or the harnesses are open
  | circuited.
  | 5) Check if the conductor patterns on the PFP board and LGC board are short
  | circuited or open circuited.
  | 6) Replace the PFP lower drawer feed clutch.
  | 7) Replace the PFP board.
  | 8) Replace the LGC board.

  ↓

YES

Check the PFP lower drawer feed roller, separation roller and pickup roller. Replace them if they are worn out.

[E190] LCF misfeeding (paper not reaching the LCF feed sensor)

Open the LCF side cover. Is there any paper in front of the LCF feed sensor?

↓   YES → Remove the paper.

NO

Is the LCF feed sensor working? (Perform the input check: 03-[FAX]OFF/[0]/[G])

     | NO → 1) Check if the connector of the LCF feed sensor is disconnected.
     | 2) Check if either of the connectors CN100 or CN104 on the LCF board is disconnected.
     | 3) Check if the connector CN349 on the LGC board is disconnected.
     | 4) Check if the connector pins are disconnected or the harnesses are open circuited.
     | 5) Check if the conductor patterns on the LCF board and LGC board are short circuited or open circuited.
     | 6) Replace the LCF feed sensor.
     | 7) Replace the LCF board.
     | 8) Replace the LGC board.

    ↓

YES

Is the LCF feed clutch working? (Perform the output check: 03-209)

     | NO → 1) Check if the connector of the LCF feed clutch is disconnected.
     | 2) Check if any of the connectors CN100, CN101 and CN103 on the LCF board is disconnected.
     | 3) Check if the connector CN349 on the LGC board is disconnected.
     | 4) Check if the connector pins are disconnected or the harnesses are open circuited.
     | 5) Check if the conductor patterns on the LCF board and LGC board are short circuited or open circuited.
     | 6) Replace the LCF feed clutch.
     | 7) Replace the LCF board.
     | 8) Replace the LGC board.

    ↓

YES

Check the LCF feed roller, separation roller and pickup roller. Replace them if they are worn out.

5.1.3   Paper transport jam

[E200] 1st drawer transport jam (not reaching the registration sensor)
[E210] 2nd drawer transport jam (not reaching the registration sensor)
[E270] Bypass transport jam (not reaching the registration sensor)
[E300] PFP upper drawer transport jam (not reaching the registration sensor)
[E330] PFP lower drawer transport jam (not reaching the registration sensor)
[E3C0] LCF transport jam (not reaching the registration sensor)

Open the jam access cover. Is there paper in front of the registration sensor?

↓   YES →   Remove the paper.

NO

Is the registration sensor working? (Perform the input check: 03-[FAX]OFF/[7]/[F])

| NO →   1) Check if the connector of the registration sensor is disconnected.
| 2) Check if the connector CN337 on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the LGC board is short circuited or open
| circuited.
| 5) Replace the registration sensor.
| 6) Replace the LGC board.
↓

YES

Are the upper transport clutches (high/low speed) working?
(Perform the output check: 03-229, 231)

| NO →   1) Check if the connectors of the upper transport clutches (high/low speed)
| are disconnected.
| 2) Check if the connector CN348 on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the LGC board is short circuited or open
| circuited.
| 5) Replace the upper transport clutches (high/low speed).
| 6) Replace the LGC board.
↓

YES

1) Check the condition of the feed roller, separation roller and pickup roller of each paper
   source, and replace them if they are worn out.
2) Check the transport roller. Replace it if it is worn out.

[E220] 2nd drawer transport jam (not reaching the 1st drawer feed sensor)
[E310] PFP upper drawer transport jam (not reaching the 1st drawer feed sensor)
[E340] PFP lower drawer transport jam (not reaching the 1st drawer feed sensor)
[E3D0] LCF transport jam (not reaching the 1st drawer feed sensor)

Open the jam access cover. Is there paper in front of the 1st drawer feed sensor?
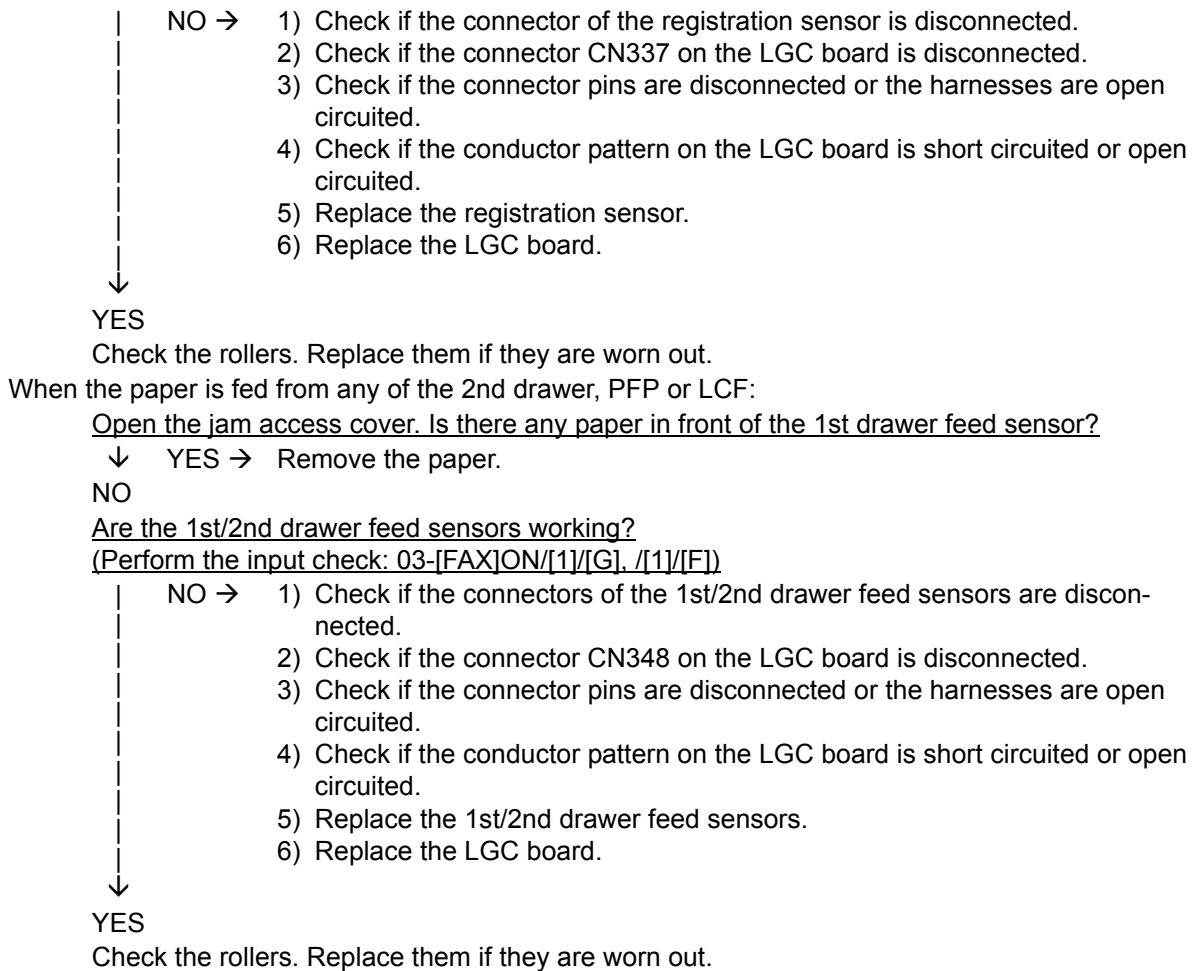
↓   YES →   Remove the paper.

NO

Is the 1st drawer feed sensor working? (Perform the input check: 03-[FAX]ON/[1]/[G])

| NO →   1) Check if the connector of the 1st drawer feed sensor is disconnected.
| 2) Check if the connector CN348 on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the LGC board is short circuited or open
| circuited.
| 5) Replace the 1st drawer feed sensor.
| 6) Replace the LGC board.
↓

YES

Are the lower transport clutches (high/low speed) working?
(Perform the output check: 03-230, 233)

| NO →   1) Check if the connectors of the lower transport clutches (high/low speed) are
| disconnected.
| 2) Check if the connector CN348 on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the LGC board is short circuited or open
| circuited.
| 5) Replace the lower transport clutches (high/low speed).
| 6) Replace the LGC board.
↓

YES

1) Check the condition of the feed roller, separation roller and pickup roller of each paper
   source, and replace them if they are worn out.
2) Check the transport roller. Replace it if it is worn out.

5

[E320] PFP upper drawer transport jam (not reaching the 2nd drawer feed sensor)
[E350] PFP lower drawer transport jam (not reaching the 2nd drawer feed sensor)
[E3E0] LCF transport jam (not reaching the 2nd drawer feed sensor)

Open the side cover. Is there paper in front of the 2nd drawer feed sensor?

↓   YES →   Remove the paper.

NO

Is the 2nd drawer feed sensor working? (Perform the input check: 03-[FAX]ON/[1]/[F])

│   NO →   1) Check if the connector of the 2nd drawer feed sensor is disconnected.
│   2) Check if the connector CN348 on the LGC board is disconnected.
│   3) Check if the connector pins are disconnected or the harnesses are open circuited.
│   4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
│   5) Replace the 2nd drawer feed sensor.
│   6) Replace the LGC board.
↓

YES

Are the lower transport clutches working? (Perform the output check: 03-230, 233)

│   NO →   1) Check if the connectors of the lower transport clutches (high/low speed) are disconnected.
│   2) Check if the connector CN348 on the LGC board is disconnected.
│   3) Check if the connector pins are disconnected or the harnesses are open circuited.
│   4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
│   5) Replace the lower transport clutches (high/low speed).
│   6) Replace the LGC board.
↓

YES

When the paper fed from the PFP:
Is the PFP transport clutch working? (Perform the output check: 03-225)

│   NO →   1) Check if the connector of the PFP transport clutch is disconnected.
│   2) Check if any of the connectors CN241, CN242 and CN244 on the PFP board is disconnected.
│   3) Check if the connector CN349 on the LGC board is disconnected.
│   4) Check if the connector pins are disconnected or the harnesses are open circuited.
│   5) Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
│   6) Replace the PFP transport clutch.
│   7) Replace the PFP board.
│   8) Replace the LGC board.
↓

YES

1) Check the condition of the feed roller, separation roller and pickup roller of each paper source, and replace them if they are worn out.
2) Check the transport roller. Replace it if it is worn out.

[E360] PFP lower drawer transport jam (not reaching the PFP upper drawer feed sensor)

Open the PFP side cover. Is there any paper in front of the PFP upper drawer feed sensor?

↓ YES → Remove the paper.

NO

Is the PFP upper feed sensor working? (Perform the input check: 03-[FAX]OFF/[2]/[D])

NO → 1) Check if the connector of the PFP upper drawer feed sensor is disconnected.
2) Check if either of the connectors CN241 or CN243 on the PFP board is disconnected.
3) Check if the connector CN349 on the LGC board is disconnected.
4) Check if the connector pins are disconnected or the harnesses are open circuited.
5) Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
6) Replace the PFP upper drawer feed sensor.
7) Replace the PFP board.
8) Replace the LGC board.

↓

YES

Is the PFP transport clutch working? (Perform the output check: 03-225)

NO → 1) Check if the connector of the PFP transport clutch is disconnected.
2) Check if any of the connectors CN241, CN242 and CN244 on the PFP board is disconnected.
3) Check if the connector CN349 on the LGC board is disconnected.
4) Check if the connector pins are disconnected or the harnesses are open circuited.
5) Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
6) Replace the PFP transport clutch.
7) Replace the PFP board.
8) Replace the LGC board.

↓

YES

1) Check the condition of the feed roller, separation roller and pickup roller of each paper source, and replace them if they are worn out.
2) Check the PFP transport roller. Replace it if it is worn out.

5

[E510] ADU transport stop jam

Open the ADU. Is there any paper in front of the ADU entrance sensor?

↓ YES → Remove the paper.

NO

Is the ADU entrance sensor working? (Perform the input check: 03-[FAX]ON/[4]/[B])

    | NO → 1) Check if the connector of the ADU entrance sensor is disconnected.
    | 2) Check if either of the connectors CN211 or CN214 on the ADU board is disconnected.
    | 3) Check if the connector CN338 on the LGC board is disconnected.
    | 4) Check if the connector pins are disconnected or the harnesses are open circuited.
    | 5) Check if the conductor patterns on the ADU board and LGC board are short circuited or open circuited.
    | 6) Replace the ADU entrance sensor.
    | 7) Replace the ADU board.
    | 8) Replace the LGC board.

↓

YES

Is the exit motor (rotating in reverse) working? (Perform the output check: 03-121/171)

    | NO → 1) Check if the connector of the exit motor is disconnected.
    | 2) Check if the connector CN332 on the LGC board is disconnected.
    | 3) Check if the connector pins are disconnected or the harnesses are open circuited.
    | 4) Check if the conductor patterns on the LGC board are short circuited or open circuited.
    | 5) Replace the exit motor.
    | 6) Replace the LGC board.

↓

YES

Is the ADU motor working? (Perform the output check: 03-110/160)

    | NO → 1) Check if the connector of the ADU motor is disconnected.
    | 2) Check if any of the connectors CN211, CN212 and CN215 on the ADU board is disconnected.
    | 3) Check if the connector CN338 on the LGC board is disconnected.
    | 4) Check if the connector pins are disconnected or the harnesses are open circuited.
    | 5) Check if the conductor patterns on the ADU board and LGC board are short circuited or open circuited.
    | 6) Replace the ADU motor.
    | 7) Replace the ADU board.
    | 8) Replace the LGC board.

↓

YES

Check the rollers in the ADU, the exit roller and the pressure spring of the equipment. Replace them if they are worn out.

[E520] Stop jam in the ADU

Open the ADU. Is there any paper in front of the ADU exit sensor?

↓   YES →   Remove the paper.

NO

Is the ADU exit sensor working? (Perform the input check: 03-[FAX]ON/[4]/[A])

| NO →   1) Check if the connector of the ADU exit sensor is disconnected.
| 2) Check if either of the connectors CN211 or CN213 on the ADU board is dis-
| connected.
| 3) Check if the connector CN338 on the LGC board is disconnected.
| 4) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 5) Check if the conductor patterns on the ADU board and LGC board are short
| circuited or open circuited.
| 6) Replace the ADU exit sensor.
| 7) Replace the ADU board.
| 8) Replace the LGC board.
|
↓

YES

Is the ADU clutch working? (Perform the output check: 03-222)

| NO →   1) Check if the connector of the ADU clutch is disconnected.
| 2) Check if the connector CN338 on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the LGC board is short circuited or open
| circuited.
| 5) Replace the ADU clutch.
| 6) Replace the LGC board.
|
↓

YES

Check the rollers in the ADU. Replace them if they are worn out.

5

[EB50] Paper remaining on the transport path due to multiple feeding

When the paper is fed from any of the 1st drawer, bypass feed unit or ADU:

Open the jam access cover. Is there any paper in front of the registration sensor?

↓   YES →   Remove the paper.

NO

When the paper is fed from the 1st drawer:

Is the 1st drawer feed sensor working? (Perform the input check: 03-[FAX]ON/[1]/[G])

| NO →   1) Check if the connector of the 1st drawer feed sensor is disconnected.
| 2) Check if the connector CN348 on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the LGC board is short circuited or open
| circuited.
| 5) Replace the 1st drawer feed sensor.
| 6) Replace the LGC board.
↓

YES

When the paper is fed from the bypass feed unit:

Is the bypass feed sensor working? (Perform the input check: 03-[FAX]ON/[4]/[D])

| NO →   1) Check if the connector of the bypass feed sensor is disconnected.
| 2) Check if the connector CN347 on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the LGC board is short circuited or open
| circuited.
| 5) Replace the bypass feed sensor.
| 6) Replace the LGC board.
↓

YES

When the paper is fed from the ADU:

Is the ADU exit sensor working? (Perform the input check: 03-[FAX]ON/[4]/[A])

| NO →   1) Check if the connector of the ADU exit sensor is disconnected.
| 2) Check if either of the connectors CN211 or CN213 on the ADU board is dis-
| connected.
| 3) Check if the connector CN338 on the LGC board is disconnected.
| 4) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 5) Check if the conductor patterns on the ADU board and LGC board are short
| circuited or open circuited.
| 6) Replace the ADU exit sensor.
| 7) Replace the ADU board.
| 8) Replace the LGC board.
↓

YES

Is the registration sensor working? (Perform the input check: 03-[FAX]OFF/[7]/[F])

| NO →   1) Check if the connector of the registration sensor is disconnected.
| 2) Check if the connector CN337 on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the LGC board is short circuited or open
| circuited.
| 5) Replace the registration sensor.
| 6) Replace the LGC board.
↓
YES
Check the rollers. Replace them if they are worn out.
When the paper is fed from any of the 2nd drawer, PFP or LCF:
  Open the jam access cover. Is there any paper in front of the 1st drawer feed sensor?
    ↓   YES →   Remove the paper.
  NO
  Are the 1st/2nd drawer feed sensors working?
  (Perform the input check: 03-[FAX]ON/[1]/[G], /[1]/[F])
| NO →   1) Check if the connectors of the 1st/2nd drawer feed sensors are discon-
| nected.
| 2) Check if the connector CN348 on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the LGC board is short circuited or open
| circuited.
| 5) Replace the 1st/2nd drawer feed sensors.
| 6) Replace the LGC board.
↓
YES
Check the rollers. Replace them if they are worn out.

[EB60] Paper remaining on the transport path due to multiple feeding
  Open the jam access cover. Is there any paper in front of the registration sensor?
    ↓   YES →   Remove the paper.
  NO
  Is the registration sensor working? (Perform the input check: 03-[FAX]OFF/[7]/[F])
| NO →   1) Check if the connector of the registration sensor is disconnected.
| 2) Check if the connector CN337 on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the LGC board is short circuited or open
| circuited.
| 5) Replace the registration sensor.
| 6) Replace the LGC board.
↓
YES
Check the rollers. Replace them if they are worn out.

5.1.4 Other paper jam

[E011] Paper jam caused by clinging to the transfer belt (Paper not reached the paper clinging detection sensor)

Open the jam access cover. Is the paper clinging to the transfer belt?

Is the paper clinging to the transfer belt entering under the receiving tray?

    YES → 1) Remove the paper.
             2) Use the paper within the specification if the thin paper being used is out of specification.

                Notes:
                    1. If the paper is remaining under the receiving tray, a scratched image occurs while printing in the color modes.
                    2. The paper smaller than B5 may easily enter under the receiving tray.

NO

Is the registration motor rotating? (Perform the input check. 03-108/158)

    NO → 1) Check if the connector of the registration motor is disconnected.
             2) Check if the connector CN332 on the LGC board is disconnected.
             3) Check if the connector pins are disconnected or the harnesses are open circuited.
             4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
             5) Replace the registration motor.
             6) Replace the LGC board.

YES

Check the state of the registration roller and replace it if it is deteriorated.

Is the paper clinging detection sensor working? (Perform the input check: 03-[FAX]OFF/[7]/[E])

    NO → 1) Is the detection area of the paper clinging detection sensor dirty?
             2) Check if the connector of the paper clinging detection sensor and joint connectors (3 pcs.) are disconnected.
             3) Check if the connector CN337 of the LGC board is disconnected.
             4) Check if the connector pins are disconnected or the harnesses are open circuited.
             5) Replace the paper clinging detection sensor.
             6) Replace the LGC board.

YES

Use the paper within the specification if the special paper whose reflection rate is lower than the specification is used.

[E030] Power-ON jam

Open the cover of the unit/area whose picture is flashing on the control panel.
Is there any paper on the transport path? (Refer to the following table)

↓   YES →   Remove the paper.

NO

Is the sensor in the jamming area working?
(Perform the input check: Refer to the following table.)

| NO →   1) Check if the connector of the sensor is disconnected.
| 2) Check if any of the connectors on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open circuited.
| 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
| 5) Replace the sensor.
| 6) Replace the LGC board.

↓

NO
Replace the LGC board.

Relation between the jamming area and the corresponding sensors/covers.
(If a jam is occurring in the ADU, LCF or PFP, check the board in each unit.)

Jamming area	Cover	Sensor	Test Mode/Input check
Registration area	Jam access cover	Registration sensor	03-[FAX]OFF/[7]/[F]
		Paper clinging detection sensor	03-[FAX]OFF/[7]/[E]
		1st drawer feed sensor	03-[FAX]ON/[1]/[G]
Exit area	Fuser cover	Exit sensor	03-[FAX]ON/[1]/[B]
ADU	ADU	ADU entrance sensor	03-[FAX]ON/[4]/[B]
		ADU exit sensor	03-[FAX]ON/[4]/[A]
Feeding area (equipment)	Side cover	2nd drawer feed sensor	03-[FAX]ON/[1]/[F]
Bypass unit	Bypass unit	Bypass feed sensor	03-[FAX]ON/[4]/[D]
LCF	LCF side cover	LCF feed sensor	03-[FAX]OFF/[0]/[G]
PFP	PFP side cover	PFP upper drawer feed sensor	03-[FAX]OFF/[2]/[D]
		PFP lower drawer feed sensor	03-[FAX]OFF/[8]/[D]
Bridge unit	Bridge unit	Bridge unit transport sensor-1 (Entrance sensor)	03-[FAX]OFF/[5]/[F]
		Bridge unit transport sensor-2 (Exit sensor)	03-[FAX]OFF/[5]/[D]

[E061] Incorrect paper size setting for 1st drawer
[E062] Incorrect paper size setting for 2nd drawer
[E063] Incorrect paper size setting for PFP upper drawer
[E064] Incorrect paper size setting for PFP lower drawer
[E065] Incorrect paper size setting for bypass tray

If any paper remains in the equipment or drawer, remove it. Match the paper size of the drawer setting and the one in the drawer.

*   Paper size detection is performed at the first sheet of paper when the drawer is opened or closed, or when the power of the equipment is turned ON.

[E090] Image data delay jam

1) Remove the paper remained in front of the registration sensor.
2) Check if the error is cleared by turning the power OFF and then back ON.
3) Check if the connectors connecting the SYS board, IMG board and LGC board are disconnected.
4) Check if the connectors connecting the IMG board and SLG board are disconnected.
5) Check if the connectors of the HDD are disconnected.
6) Replace the HDD, SYS board, IMG board and LGC board.

[E0A0] Image transport ready time-out jam

1) Remove the paper remained in front of the registration sensor.
2) Check if the error is cleared by turning the power OFF and then back ON.
3) Check if the connectors on the LGC board are disconnected.
4) Replace the LGC board.

[E550] Paper remaining on the transport path

Open the cover of the unit/area whose picture is flashing on the control panel.
Is there any paper on the transport path?

↓   YES →   Remove the paper.

NO

Is the sensor in the jamming area working?
(Perform the input check: Refer to the following table)

│   NO →   1) Check if the connector of the sensor is disconnected.
│   2) Check if any of the connectors on the LGC board is disconnected.
│   3) Check if the connector pins are disconnected or the harnesses are open circuited.
│   4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
│   5) Replace the sensor.
│   6) Replace the LGC board.
↓

YES

Replace the LGC board.

Relation between the jamming area and the corresponding sensors/covers
(If a jam is occurring in the ADU, LCF or PFP, check the board in each unit.)

Jamming area	Cover	Sensor	Test Mode/Input check
Registration area	Jam access cover	Registration sensor	03-[FAX]OFF/[7]/[F]
		1st drawer feed sensor	03-[FAX]ON/[1]/[G]
Exit area	Fuser cover	Exit sensor	03-[FAX]ON/[1]/[B]
ADU	ADU	ADU entrance sensor	03-[FAX]ON/[4]/[B]
		ADU exit sensor	03-[FAX]ON/[4]/[A]
Bypass unit	Bypass unit	Bypass feed sensor	03-[FAX]ON/[4]/[D]
Feeding area (equipment)	Side cover	2nd drawer feed sensor	03-[FAX]ON/[1]/[F]
LCF	LCF side cover	LCF feed sensor	03-[FAX]OFF/[0]/[G]
PFP	PFP side cover	PFP upper drawer feed sensor	03-[FAX]OFF/[2]/[D]
		PFP lower drawer feed sensor	03-[FAX]OFF/[8]/[D]
Bridge unit	Bridge unit	Bridge unit transport sensor-1 (Entrance sensor)	03-[FAX]OFF/[5]/[F]
		Bridge unit transport sensor-2 (Exit sensor)	03-[FAX]OFF/[5]/[D]
Finisher	Finisher door	Sensors in the finisher	-

5

5.1.5 Cover open jam

[E400] Jam access cover open

Is the jam access cover open?

↓ YES → Remove paper if there is any, then shut the cover.

NO

Is the voltage of 24V being supplied from the power supply unit?

(Perform the input check: 03-[FAX] ON/[2]/[B])

| NO → 1) Check if the connector for 24V power supply is disconnected.
| 2) Check if the connector CN345 on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open circuited.
| 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
| 5) Check if the fuse (F201, F202, F203, and F204) on the switching power supply has blown.
| 6) Replace the LGC board.
↓   7) Replace the switching power supply.

YES

Is the transfer cover switch working properly?

| NO → 1) Check if the connector for the transfer cover switch is disconnected.
| 2) Check if the connector CN338 on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open circuited.
| 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
| 5) Replace the LGC board.
↓

YES

Replace the LGC board.

[E410] Front cover open jam

Is the front cover open?

↓ YES → Shut the cover.

NO

Is the voltage of 24V being supplied from the power supply unit?

(Perform the input check: 03-[FAX] ON/[2]/[B])

| NO → 1) Check if the connector for 24V power supply is disconnected.
| 2) Check if the connector CN345 on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open circuited.
| 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
| 5) Check if the fuse (F201, F202, F203, and F204) on the switching power supply has blown.
| 6) Replace the LGC board.
↓   7) Replace the switching power supply.

YES

Replace the LGC board.

[E420] PFP side cover open jam

Is the PFP side cover open?

↓   YES →   Remove the paper if there is any, then shut the cover.

NO

Is the PFP side cover opening/closing switch working?
(Perform the input check: 03-[FAX]OFF/[2]/[F])

| NO →   1) Check if the connector of the PFP side cover opening/closing switch is dis-
| connected.
| 2) Check if either of the connectors CN241 or CN243 on the PFP board is dis-
| connected.
| 3) Check if the connector CN349 on the LGC board is disconnected.
| 4) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 5) Check if the conductor patterns on the PFP board and LGC board are short
| circuited or open circuited.
| 6) Replace the PFP side cover opening/closing switch.
| 7) Replace the PFP board.
| 8) Replace the LGC board.
|
↓
YES

1) Replace the PFP board.
2) Replace the LGC board.

[E430] ADU open jam

Is the ADU open?

↓   YES →   Remove the paper if there is any, then shut the ADU.

NO

Is the ADU opening/closing switch working?
(Perform the input check: 03-[FAX]ON/[2]/[C])

| NO →   1) Check if the connector of the ADU opening/closing switch is disconnected.
| 2) Check if either of the connectors CN211 or CN217 on the ADU board is dis-
| connected.
| 3) Check if the connector CN338 on the LGC board is disconnected.
| 4) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 5) Check if the conductor patterns on the ADU board and LGC board are short
| circuited or open circuited.
| 6) Replace the ADU opening/closing switch.
| 7) Replace the ADU board.
| 8) Replace the LGC board.
|
↓
YES

1) Replace the ADU board.
2) Replace the LGC board.

5

[E440] Side cover open jam

Is the side cover open?

↓   YES →   Remove the paper if there is any, then shut the cover.

NO

Is the side door switch working?

(Perform the input check: 03-[FAX]ON/[0]/[B])

| NO →   1) Check if the connector of the side door switch is disconnected.
| 2) Check if the connector CN338 on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the LGC board is short circuited or open
| circuited.
| 5) Replace the side door switch.
| 6) Replace the LGC board.
↓

YES

Replace the LGC board.

[E450] LCF side cover open jam

Is the LCF side cover open?

↓   YES →   Remove the paper if there is any, then shut the cover.

NO

Is the LCF side cover opening/closing switch working?

(Perform the input check: 03-[FAX]OFF/[0]/[D])

| NO →   1) Check if the connector of the LCF side cover opening/closing switch is dis-
| connected.
| 2) Check if either of the connectors CN100 or CN106 on the LCF board is dis-
| connected.
| 3) Check if the connector CN349 on the LGC board is disconnected.
| 4) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 5) Check if the conductor patterns on the LCF board and LGC board are short
| circuited or open circuited.
| 6) Replace the LCF side cover opening/closing switch.
| 7) Replace the LCF board.
| 8) Replace the LGC board.
↓

YES

1) Replace the LCF board.
2) Replace the LGC board.

[E480] Bridge unit open jam

Is the Bridge unit open?

↓   YES →   Remove the paper if there is any, then close the unit.

NO

Is the bridge unit cover opening/closing detection switch working?
(Perform the input check: 03-[FAX]OFF/[5]/[E])

| NO →   1) Check if the connector of the bridge unit cover opening/closing detection
| switch is disconnected.
| 2) Check if the connector CN334 on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the LGC board is short circuited or open
| circuited.
| 5) Replace the bridge unit cover opening/closing detection switch.
| 6) Replace the LGC board.
↓

YES

Replace the LGC board.

5

5.1.6 RADF jam

[E712] Jam not reaching the original registration sensor

Are the pickup roller, feed roller and separation roller stained or worn out?

↓   YES →   Clean the rollers or replace them.

NO

Is the original excessively curled or folded?

↓   YES →   Flatten and set it again.

NO

Is the original registration sensor working?

(Perform the input check: 03-[FAX]ON/[7]/[H])

| NO → 1) Check if the connector of the original registration sensor is disconnected.
| 2) Check if the connector CN74 on the RADF board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the RADF board is short circuited or open
| circuited.
| 5) Replace the original registration sensor.
| 6) Replace the RADF board.
↓

YES

Replace the RADF board.

[E713] Cover open jam in the read ready status

Are the RADF jam access cover or front cover opened in read ready status?

↓   YES →   Close the cover

NO

Is the original excessively curled or folded?

↓   YES →   Flatten and set it again.

NO

Is the RADF jam access cover sensor working?

(Perform the input check: 03-[FAX]ON/[7]/[C])

| NO → 1) Check if the connector of the RADF jam access cover sensor is discon-
| nected.
| 2) Check if the connector CN75 on the RADF board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the RADF board is short circuited or open
| circuited.
| 5) Replace the RADF jam access cover sensor.
↓ 6) Replace the RADF board.

YES

Replace the RADF board.

[E714] Feed signal reception jam

Is the empty sensor working? (Perform the input check: 03-[FAX]ON/[7]/[B])

↓   YES →   Clean the rollers or replace them.

NO

Is the original excessively curled or folded?

↓   YES →   Flatten and set it again.

NO

Are the original length sensor and registration sensor working?
(Perform the input check: 03-[FAX]ON/[8]/[E], [7]/[H])

| NO → 1) Check if the lever of empty sensor is working normally.
| 2) Check if the connector of the empty sensor is disconnected.
| 3) Check if the connector CN75 on the RADF board is disconnected.
| 4) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 5) Check if the conductor pattern on the RADF board is short circuited or open
| circuited.
| 6) Replace the empty sensor.
| 7) Replace the RADF board.
↓

YES
Replace the RADF board.

[E721] Jam not reaching the read sensor

Are the registration roller and read roller stained?

↓   YES →   Clean the rollers.

NO

Is the read sensor working? (Perform the input check: 03-[FAX]ON/[7]/[G])

| NO → 1) Check if the connector of the read sensor are disconnected.
| 2) Check if the connector CN75 on the RADF board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the RADF board is short circuited or open
| circuited.
| 5) Replace the read sensor.
| 6) Replace the RADF board.
↓

YES
Replace the RADF board.

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TROUBLESHOOTING

[E722] Jam not reaching the exit sensor (during scanning)

Is the read roller stained?

↓   YES →   Clean the roller.

NO

Are the exit sensor and reverse sensor working?

(Perform the input check: 03-[FAX]ON/[7]/[E])

  | NO →   1) Check if the connectors of the exit sensor and reverse sensor are discon-
  | nected.
  | 2) Check if the connector CN75 on the RADF board is disconnected.
  | 3) Check if the connector pins are disconnected or the harnesses are open
  | circuited.
  | 4) Check if the conductor pattern on the RADF board is short circuited or open
  | circuited.
  | 5) Replace the exit sensor and reverse sensor.
  | 6) Replace the RADF board.
  ↓

YES

Replace the RADF board.

[E724] Stop jam at the registration sensor

Is the registration roller stained?

↓   YES →   Clean the roller.

NO

Is the registration sensor working? (Perform the input check: 03-[FAX]ON/[7]/[H])

  | NO →   1) Check if the connector of the registration sensor is disconnected.
  | 2) Check if the connector CN74 on the RADF board is disconnected.
  | 3) Check if the connector pins are disconnected or the harnesses are open
  | circuited.
  | 4) Check if the conductor pattern on the RADF board is short circuited or open
  | circuited.
  | 5) Replace the registration sensor.
  | 6) Replace the RADF board.
  ↓

YES

Replace the RADF board.

[E725] Stop jam at the read sensor

Is the read roller stained?

↓   YES →   Clean the roller.

NO

Is the read sensor working? (Perform the input check: 03-[FAX]ON/[7]/[G])

| NO →   1) Check if the connector of the read sensor is disconnected.
| 2) Check if the connector CN75 on the RADF board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the RADF board is short circuited or open
| circuited.
| 5) Replace the read sensor.
| 6) Replace the RADF board.
↓

YES

Replace the RADF board.

[E731] Stop jam at the exit sensor

Is the exit roller stained?

↓   YES →   Clean the roller.

NO

Is the exit sensor working? (Perform the input check: 03-[FAX]ON/[7]/[E])

| NO →   1) Check if the connector of the exit sensor is disconnected.
| 2) Check if the connector CN75 on the RADF board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the RADF board is short circuited or open
| circuited.
| 5) Replace the exit sensor.
| 6) Replace the RADF board.
↓

YES

Replace the RADF board.

[E860] RADF jam access cover open

Is the RADF jam access cover opened?

↓   YES →   Remove the original, if any, and close the jam access cover.

NO

Is the RADF jam access cover switch working? (Perform the input check: 03-[FAX]ON/[7]/[C])

| NO →   1) Check if the connector of the RADF jam access cover switch is discon-
| nected.
| 2) Check if the connector CN72 on the RADF board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the RADF board is short circuited or open
| circuited.
| 5) Replace the RADF jam access cover switch.
↓   6) Replace the RADF board.

YES

Replace the RADF board.

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TROUBLESHOOTING

[E870] RADF open jam

Is the RADF opened?

↓ YES → Remove the original, if any, and close the RADF.

NO

Is the RADF opening/closing sensor adjusted within the specified range?

↓ NO → Adjust the RADF opening/closing sensor.

YES

Is the RADF opening/closing sensor working? (Perform the input check: 03-[FAX]ON/[7]/[D])

| NO → 1) Check if the connector of the RADF opening/closing sensor is discon-
| nected.
| 2) Check if the connector CN75 on the RADF board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Check if the conductor pattern on the RADF board is short circuited or open
| circuited.
| 5) Replace the RADF opening/closing sensor.
| 6) Replace the RADF board.
↓

YES

Replace the RADF board.

5.1.7   Finisher jam

[1]   Jam in bridge unit

[E910] Paper not reaching the bridge unit transport sensor-1
[E920] Paper stopping at the bridge unit transport sensor-1

Is there any paper remaining inside the bridge unit?

↓   YES →   Remove the paper.

NO

Is the bridge unit transport sensor-1(Entrance sensor) working?
(Perform the input check:03-[FAX]OFF/[5]/[F])

| NO →   1) Check if the connector of the bridge unit transport sensor-1(Entrance sen-
| sor) is disconnected.
| 2) Check if the connector J510 of the bridge unit is disconnected.
| 3) Check if the connector CN334 on the LGC board is disconnected.
| 4) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 5) Check if the conductor pattern on the LGC board is short circuited or open
| circuited.
| 6) Replace the bridge unit transport sensor-1(Entrance sensor).
| 7) Replace the LGC board.
↓

YES

Is the bridge unit gate solenoid working? (Perform the output check: 03-232)

| NO →   1) Check if the connector J510 of the bridge unit is disconnected.
| 2) Check if the connector CN334 on the LGC board is disconnected.
| 3) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 4) Replace the bridge unit gate solenoid.
| 5) Replace the LGC board.
↓

YES

Does the transport roller of the bridge unit work when the fuser motor is rotated?
(Perform the output check: 03-113/163)

↓   NO →   Check the drive system of the equipment and bridge unit.

YES

Check if the rollers in the exit roller, the pressure spring and the bridge unit are worn out.

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[E930] Paper not reaching the bridge unit transport sensor-2
[E940] Paper stopping at the bridge unit transport sensor-2

Is there any paper remaining inside the bridge unit?

↓   YES →   Remove the paper.

NO

Is the bridge unit transport sensor-2(Exit sensor) working?
(Perform the input check:03-[FAX]OFF/[5]/[D])

| NO →   1) Check if the connector of the bridge unit transport sensor-2(Exit sensor) is
| disconnected.
| 2) Check if the connector J510 of the bridge unit is disconnected.
| 3) Check if the connector CN334 on the LGC board is disconnected.
| 4) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 5) Check if the conductor pattern on the LGC board is short circuited or open
| circuited.
| 6) Replace the bridge unit transport sensor-2(Exit sensor).
| 7) Replace the LGC board.
↓

YES

Does the transport roller of the bridge unit work when the fuser motor is rotated?
(Perform the output check: 03-113/163)

↓   NO →   Check the drive system of the equipment and bridge unit.

YES

Check if the rollers in the exit roller, the pressure spring and the bridge unit are worn out.

[2] Paper jam in finisher section

[EA10] Paper transport delay jam

MJ-1030

    Is there any paper remaining on the transport path in the finisher or equipment?

      ↓   YES → Remove the paper.

    NO

    Is the connector J708 on the finisher controller PC board disconnected?

    Is the harness connecting the finisher controller PC board and inlet sensor (PI33) open circuited?

      ↓   YES → Connect the connector securely. Replace the harness.

    NO

    Is the inlet sensor working properly? (Check the movement of the actuator.)

      | NO → 1) Connect the connector of the inlet sensor securely.

      | 2) Attach the actuator securely if its shaft is out of place.

      | 3) Replace the inlet sensor.

      ↓

    YES

    Replace the finisher controller PC board.

MJ-1101

    Is there any paper remaining on the transport path in the finisher or equipment?

      ↓   →YES   Remove the paper.

    NO

    Is there a disconnection of the connector, incorrect installation or breakage of the entrance sensor (S1)?

      I   →YES   • Reconnect the connector securely.

      I   • Reinstall the sensor correctly.

      ↓   • Replace the sensor.

    NO

    Is the gap between the flapper and entrance roller shaft other than 0.60±0.20mm when the gate solenoid (SOL2) is pulled?

      ↓   →YES   Adjust the gap.

    NO

    Is the harness between the entrance motor (M1) and the finisher control PC board (CN7) disconnected or open circuited?

    Is the harness between the gate solenoid (SOL2) and the finisher control PC board (CN22) disconnected or open circuited?

      I   →YES   • Reconnect the connector securely.

      ↓   • Replace the harness.

    NO

    Replace the finisher controller PC board.

[EA20] Paper transport stop jam

 MJ-1030

    <u>Is there any paper remaining on the transport path in the finisher or equipment?</u>

    ↓   YES →   Remove the paper.

    NO

    <u>Is any of the connectors (J707, J708 and J722B) on the finisher controller PC board discon-</u>
    <u>nected?</u>
    <u>Is the harness between the finisher controller PC board and each sensor (the inlet sensor</u>
    <u>[PI33], the transport path sensor [PI34], the processing tray sensor [PI38]) open circuited?</u>

    ↓   YES →   Connect the connectors securely. Replace the harnesses.

    NO

    <u>Is each of the sensors (the inlet sensor, the transport path sensor and the processing tray sen-</u>
    <u>sor) working properly? (Check the movement of the actuator.)</u>

    | NO →   1) Connect the connectors of the sensors securely.
    | 2) Attach the actuators securely if their shafts are out of place.
    | 3) Replace the sensors.
    ↓

    YES

    Replace the finisher controller PC board.

 <u>MJ-1101</u>

    <u>Is there any paper remaining on the transport path in the finisher or equipment?</u>

    ↓   →YES   Remove the paper.

    NO

    <u>Is there a disconnection of the connector, incorrect installation or breakage of the transport</u>
    <u>sensor (S2)?</u>

    | →YES • Connect the connector securely.
    | • Reinstall the sensor correctly.
    ↓   • Replace the sensor.

    NO

    Replace the finisher control PC board.

[EA21] Paper size error jam

<u>MJ-1101</u>

<u>Is there any paper remaining on the transport path in the finisher or equipment?</u>

  ↓   →YES   Remove the paper.

NO

<u>Is the paper size used shorter than the size specified in the specifications?</u>

  ↓   →YES   Use the paper size specified in the specifications.

NO

<u>Is there a disconnection of the connector, incorrect installation or breakage of the entrance sensor (S1)?</u>
<u>Is there a disconnection of the connector, incorrect installation or breakage of the transport sensor (S2)?</u>

  I   →YES • Connect the connector securely.
  I   • Reinstall the sensor correctly.
  ↓   • Replace the sensor.

NO

<u>Is the harness between the entrance motor (M1) and the finisher control PC board (CN7) disconnected or open circuited?</u>
<u>Is the harness between the transport sensor (S2) and the finisher control PC board (CN22) disconnected or open circuited?</u>

  I   →YES • Reconnect the connector securely.
  ↓   • Replace the harness.

NO

Replace the finisher control PC board.

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[EA30] Power-ON jam

MJ-1030

Is there any paper remaining on the transport path in the finisher?

↓   YES →   Remove the paper.

NO

Is any of the connectors J707, J708 and J722B on the finisher controller PC board disconnected?

Is the harness between the finisher controller PC board and each sensor (the inlet sensor [PI33], the transport path sensor [PI34], the processing tray sensor [PI38], open circuited?

↓   YES →   Connect the connectors securely. Replace the harnesses.

NO

Is each of the sensors (the inlet sensor, the transport path sensor and the processing tray sensor) working properly? (Check the movement of the actuator.)

| NO →   1) Connect the connectors of the sensors securely.
| 2) Attach the actuators securely if their shafts are out of place.
| 3) Replace the sensors.
↓

YES

Replace the finisher controller PC board.

[EA31] Transport path paper remaining jam

MJ-1101

Is there any paper remaining on the transport path in the finisher or equipment?

↓   →YES   Remove the paper.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the transport sensor (S2)?

I   →YES   •   Connect the connector securely.
I   •   Reinstall the sensor correctly.
↓   •   Replace the sensor.

NO

Is the harness between the transport sensor (S2) and the finisher control PC board (CN22) disconnected or open circuited?

I   →YES   •   Reconnect the connector securely.
↓   •   Replace the harness.

NO

Replace the finisher control PC board.

[EA32] Exit paper remaining jam
MJ-1101

Is there any paper remaining on the transport path in the finisher or equipment?
　↓　→YES　Remove the paper.
NO

Is there a disconnection of the connector, incorrect installation or breakage of the finishing tray paper detection sensor (S12)?
　|　→YES　• Connect the connector securely.
　|　　　　• Reinstall the sensor correctly.
　↓　　　　• Replace the sensor.
NO

Is the harness between the finishing tray paper detection sensor (S12) and the finisher control PC board (CN11) disconnected or open circuited?
　|　→YES　• Reconnect the connector securely.
　↓　　　　• Replace the harness.
NO
Replace the finisher control PC board.

[EA40] Door open jam
MJ-1030

Is there any paper remaining on the transport path in the finisher or equipment?
　↓　YES →　Remove the paper.
NO

Is either of the covers upper or front of the finisher closed?
　↓　NO →　Close the door.
YES

Is any connectors J707 and J708 on the finisher controller PC board disconnected?
Is the harness connecting the finisher controller PC board and upper/front cover opening sensors (PI31 and PI32) open circuited?
　↓　YES →　Connect the connector securely. Replace the harness.
NO

Is the upper/front cover opening sensor working properly?
　|　NO →　1) Connect the connector of the upper/front cover opening sensor securely.
　|　　　　2) Replace the upper/front cover opening sensor.
　↓
YES

Is the connector J719 on the finisher controller PC board disconnected?
Is the harness connecting the finisher controller PC board and front cover switch (MS31) open circuited?
　|　YES →　Connect the connector securely. Replace the harness.
　↓
NO

Is the front cover switch working properly?
　|　NO →　1) Connect the connector of the front cover switch securely.
　|　　　　2) Replace the front cover switch.
　↓
YES

Is the connector J5 on the punch controller PC board disconnected?
Is the harness connecting the punch controller PC board and upper door switch (MSW61) open circuited?
Is the harness connecting the punch controller PC board and front door switch (MSW62) open circuited?

   | YES →   Connect the connector securely. Replace the harness.
   ↓

NO

Are the upper and front door switches working properly?

   | NO →   1) Connect the connectors of the upper and front door switches securely.
   | 2) Replace the upper/front door switches.
   ↓

YES

Replace the finisher controller PC board.

MJ-1101

Is the front cover or stationary tray cover opened?

   | →YES   • Close the front cover.
   ↓   • Close the stationary tray cover.

NO

Is there any breakage of the front cover hook which switches the front cover switch (SW1) to ON?

   ↓   →YES   Replace the handle cover.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the front cover switch (SW1)?
Is there an incorrect installation or breakage of the stationary tray cover opening/closing switch (SW2)?

   | →YES   • Connect the connector securely.
   | • Reinstall the sensor correctly.
   ↓   • Replace the sensor.

NO

Is the harness between the front cover switch (SW1) / stationary tray opening/closing switch (SW2) and the finisher control PC board (CN16) disconnected or open circuited?

   | →YES   • Reconnect the connector securely.
   ↓   • Replace the harness.

NO

Replace the finisher control PC board.

[EA50] Stapling jam
MJ-1030

Is there any paper remaining on the transport path in the finisher or equipment or on the stapling tray?
   ↓   YES →   Remove the paper.
NO

Is the jam cleared by taking off the staple cartridge from the finisher and removing the staple sheet slid from the staple case?
   ↓   YES →   End.
NO

Is the connector J721B on the finisher controller PC board disconnected?
Is the harness connecting the finisher controller PC board and staple home position sensor (PI40) open circuited?
   ↓   YES →   Connect the connector securely. Replace the harness.
NO

Is the staple home position sensor working properly?
   | NO →   1) Connect the connector of the staple home position sensor securely.
   | 2) Replace the staple home position sensor.
   ↓
YES

Replace the finisher controller PC board.

MJ-1101

Is there any paper remaining on the transport path in the finisher or equipment, or on the finishing tray?
   ↓   →YES   Remove the paper.
NO

Is the jam cleared by taking off the staple cartridge from the finisher and removing the staple sheet slid from the staple case?
   ↓   →YES   End.
NO

Is there any mechanical problem when the actuator of the stapler interference sensor (S11) is moved?
   ↓   →YES   Reinsert the clip which fixes the actuator from the side of it.
NO

Is the harness between the stapler and the finisher control PC board (CN2) disconnected or open circuited?
   I   →YES   • Reconnect the connector securely.
   ↓   • Replace the harness.
NO

Are the harnesses in the stapler disconnected or open circuited?
   I   →YES   • Reconnect the connector securely.
   ↓   • Replace the harness.
NO

Replace the finisher control PC board.

[EA60] Early arrival jam

MJ-1030

Is there any paper remaining on the transport path in the finisher or equipment?

↓   YES →   Remove the paper.

NO

Is the connector J708 on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and inlet sensor (PI33) open circuited?

↓   YES →   Connect the connector securely. Replace the harness.

NO

Is the inlet sensor working properly? (Check the movement of the actuator.)

| NO →   1) Connect the connector of the inlet sensor securely.
| 2) Attach the actuator securely if its shaft is out of place.
| 3) Replace the inlet sensor.
↓

YES

Replace the finisher controller PC board.

MJ-1101

Is there any paper remaining on the transport path in the finisher or equipment?

↓   →YES   Remove the paper.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the entrance sensor (S1)?

I   →YES   •   Connect the connector securely.
I   •   Reinstall the sensor correctly.
↓   •   Replace the sensor.

NO

Is the harness between the entrance sensor (S1) and the finisher control PC board (CN7) disconnected or open circuited?

I   →YES   •   Reconnect the connector securely.
↓   •   Replace the harness.

NO

Replace the finisher control PC board.

[EA70] Stack exit belt home position error

MJ-1101

Is there a disconnection of the connector, incorrect installation or breakage of the stack exit belt home position sensor (S9)?

   I   →YES •   Connect the connector securely.

   I   •   Reinstall the sensor correctly.

  ↓   •   Replace the sensor.

NO

Is the harness between the stack exit belt home position sensor (S9) and the finisher control PC board (CN11) disconnected or open circuited?

   I   →YES •   Reconnect the connector securely.

  ↓   •   Replace the harness.

NO

Is the harness between the stack transport motor (M5) and the finisher control PC board (CN10) disconnected or open circuited?

   I   →YES •   Reconnect the connector securely.

  ↓   •   Replace the harness.

NO

Replace the finisher control PC board.

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TROUBLESHOOTING

[3] Paper jam in saddle stitcher section

[EA80] Stapling jam
MJ-1030

Is there any paper remaining on the transport path or the stapling tray in the finisher, saddle stitcher section or equipment?
↓ YES → Remove the paper.
NO

Is the jam cleared by taking off the staple cartridge from the finisher and removing the staples stuck in the stapling unit?
↓ YES → End.
NO

Is the connector J8 on the saddle stitcher controller PC board disconnected?
Is the harness connecting the saddle stitcher controller PC board and stitcher home position switch (rear: SW5, front: SW7 open circuited?
↓ YES → Connect the connector securely. Replace the harness.
NO

Are the stitcher home position switches working properly?
│   NO → 1) Connect the connectors of the stitcher home position switches securely.
│   2) Replace the stitcher home position switches.
↓
YES

Replace the saddle stitcher controller PC board.

[EA90] Door open jam
MJ-1030

Is there any paper remaining on the transport path in the finisher, saddle stitcher section or equipment?
↓ YES → Remove the paper.
NO

Is the saddle stitcher door closed?
↓ NO →   Close the door.
YES

Is either of the connectors J10 or J11 on saddle stitcher controller PC board disconnected?
Are the harnesses between the saddle stitcher controller PC board and cover opening sensors (delivery cover sensor [PI3], inlet cover sensor [PI9]) open circuited?
↓ YES → Connect the connector securely. Replace the harness.
NO

Is each of the sensors (delivery cover sensor, inlet cover sensor) working properly?
│   NO → 1) Connect the connectors of the each sensor securely.
│   2) Replace the sensors.
↓
YES

Replace the finisher controller PC board.

[EAA0] Power-ON jam
MJ-1030

    <u>Is there any paper remaining on the transport path in the finisher or saddle stitcher section?</u>
    ↓   YES →   Remove the paper.
    NO

    <u>Is any of the connectors J9, J10 and J13 on the saddle stitcher controller PC board disconnected?</u>
    <u>Is the harness between the saddle stitcher controller PC board and each sensor (No.1 paper sensor [PI18], No.2 paper sensor [PI19], No.3 paper sensor [PI20], the vertical path paper sensor [PI17] and the delivery sensor[PI11]) open circuited?</u>
    ↓   YES →   Connect the connectors securely. Replace the harnesses.
    NO

    <u>Is each of the sensors (No.1 paper sensor, No.2 paper sensor, No.3 paper sensor, the vertical path paper sensor, and the delivery sensor) working properly? (Check the movement of the actuator.)</u>
    | NO →   1) Connect the connectors of the sensors securely.
    | 2) Attach the actuators securely if their shafts are out of place.
    | 3) Replace the sensors.
    ↓
    YES
    Replace the saddle stitcher controller PC board.

[EAB0] Paper transport stop jam
MJ-1030

    <u>Is there any paper remaining on the transport path in the finisher, saddle stitcher section or equipment?</u>
    ↓   YES →   Remove the paper.
    NO

    <u>Is the connector J708 on finisher controller PC board disconnected?</u>
    <u>Is the harness between the finisher controller PC board and inlet sensor [PI33] open circuited?</u>
    <u>Is either of the connectors J9 or J10 on the saddle stitcher controller PC board disconnected?</u>
    <u>Is the harness between the saddle stitcher controller PC board and each sensor (No.1 paper sensor [PI18], No.2 paper sensor [PI19], No.3 paper sensor [PI20] and the delivery sensor [PI11]) open circuited?</u>
    ↓   YES →   Connect the connectors securely. Replace the harnesses.
    NO

    <u>Is each of the sensors (the inlet sensor, No.1 paper sensor, No.2 paper sensor, No.3 paper sensor and the delivery sensor) working properly? (Check the movement of the actuator.)</u>
    | NO →   1) Connect the connectors of the sensors securely.
    | 2) Attach the actuators securely if their shafts are out of place.
    | 3) Replace the sensors.
    ↓
    YES
    Replace the saddle stitcher controller PC board.

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[EAC0] Transport delay jam
 MJ-1030

<u>Is there any paper remaining on the transport path in the finisher, saddle stitcher section or equipment?</u>

↓   YES →   Remove the paper.

NO

<u>Is the connector J708 on the finisher controller PC board disconnected?</u>

<u>Is the harness connecting the finisher controller PC board and inlet sensor (PI33) open circuited?</u>

↓   YES →   Connect the connector securely. Replace the harness.

NO

<u>Is the inlet sensor working properly? (Check the movement of the actuator.)</u>

   | NO →   1) Connect the connector of the sensor securely.

   | 2) Attach the actuator securely if its shaft is out of place.

   | 3) Replace the sensor.

↓

YES

Replace the finisher controller PC board.

[4] Paper jam in puncher unit

[E9F0] Punching jam

MJ-1030

Is there any paper remaining on the transport path in the finisher or equipment?

↓　YES →　Remove the paper.

NO

Is the connector J605A on the punch controller PC board disconnected?

Is the harness connecting the punch controller PC board and punch home position sensor (PI63) open circuited?

↓　YES →　Connect the connector securely. Replace the harness.

NO

Is the punch home position sensor working properly?

｜　NO →　1) Connect the connector of the punch home position sensor securely.

｜　　　　　2) Replace the punch home position sensor.

↓

YES

Replace the punch controller PC board.

MJ-1101 (When MJ-6101 is installed)

Is there any paper remaining on the transport path?

↓　→YES　Remove the paper.

NO

Rotate the punch motor (M3). Does it rotate smoothly?

↓　→NO　Fix the mechanism.

YES

Are the punch home position sensor (S4) and its wiring correct?

↓　→NO　Replace the sensor. Correct the wiring.

YES

Is the wiring between the hole punch control PC board (HP) and punch motor (M3) correct?

↓　→NO　Correct the wiring.

YES

1) Replace the punch motor (M3).

2) Replace the hole punch control PC board (HP).

5

[5] Other paper jam

[EAD0] Print end command time-out jam

    Is the drum motor rotating normally?

      ↓

    NO

    1) Replace the SYS board.

    2) Replace the LGC board.

[EAE0] Receiving time-out jam

    Is the finisher working?

      ↓   YES → Replace the finisher controller PC board.

    NO

    1) Check if the voltage (24V) is being supplied to the finisher.

    2) Check the connection of the LGC board and IPC board.

    3) Check if the harness connecting the IPC board and finisher I/F connector of the equipment side is open circuited.

    4) Check if the harness connecting the I/F connector of the finisher side and finisher controller PC board is open circuited.

    5) Replace the finisher controller PC board.

[EB30] Ready time-out jam

    Is there paper in the equipment?

      ↓   NO → Replace the LGC board.

    YES

    Are the IPC board and LGC board properly connected to each other?

      ↓   NO → Connect them properly.

    YES

    Is the harness securely connected to the IPC board?

      ↓   NO → Connect the harness properly.

    YES

    Is any of the connector pins of the harness connecting the equipment and finisher disconnected or any of those harnesses open circuited?

      ↓   NO → Connect the pin or replace the harness.

    YES

    1) Replace the IPC board.

    2) Replace the LGC board.

    3) Replace the finisher controller PC board.

[ED10] Skew adjustment motor (M1) home position detection abnormality
MJ-1101 (When MJ-6101 is installed)

Is there any paper remaining on the transport path?

↓ →YES Remove the paper.

NO

Rotate the skew adjustment motor (M1). Does it rotate smoothly?

↓ →NO Fix the mechanism.

YES

Are the skew home position sensor (S2) and its wiring correct?

↓ →NO Replace the sensor. Correct the wiring.

YES

Is the wiring between the hole punch control PC board (HP) and skew adjustment motor (M1) correct?

↓ →NO Correct the wiring.

YES

1) Replace the skew adjustment motor (M1).
2) Replace the hole punch control PC board (HP).

[ED11] Sideways adjustment motor (M2) home position detection error
MJ-1101 (When MJ-6101 is installed)

Is there any paper remaining on the transport path?

↓ →YES Remove the paper.

NO

Rotate the sideways adjustment motor (M2). Does it rotate smoothly?

↓ →NO Fix the mechanism.

YES

Are the sideways deviation home position sensor (S3) and its wiring correct?

↓ →NO Replace the sensor. Correct the wiring.

YES

Is the wiring between the hole punch control PC board (HP) and punch sideways adjustment motor (M2) correct?

↓ →NO Correct the wiring.

YES

1) Replace the sideways adjustment motor (M2).
2) Replace the hole punch control PC board (HP).

5

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[ED12] Shutter home position error

MJ-1101

Is there any mechanical problem when the shutter is opened/closed?

↓ →YES Fix the mechanism.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the shutter opening/closing sensor (S4)?

l →YES • Connect the connector securely.
l   • Reinstall the sensor correctly.
↓   • Replace the sensor.

NO

Is the harness between the shutter opening/closing sensor (S4) and the finisher control PC board (CN13) disconnected or open circuited?

l →YES • Reconnect the connector securely.
↓   • Replace the harness.

NO

Is the harness between the shutter clutch (CLT1) and the finisher control PC board (CN5) disconnected or open circuited?

l →YES • Reconnect the connector securely.
↓   • Replace the harness.

NO

Replace the finisher control PC board.

[ED13] Front alignment plate home position error

MJ-1101

Is there any mechanical problem when the front alignment plate is moved?

↓ →YES Fix the mechanism.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the front alignment plate home position sensor (S7)?

l →YES • Connect the connector securely.
l   • Reinstall the sensor correctly.
↓   • Replace the sensor.

NO

Is the harness between the front alignment plate home position sensor (S7) and the finisher control PC board (CN11) disconnected or open circuited?

l →YES • Reconnect the connector securely.
↓   • Replace the harness.

NO

Is the harness between the front alignment motor (M9) and the finisher control PC board (CN10) disconnected or open circuited?

l →YES • Reconnect the connector securely.
↓   • Replace the harness.

NO

Replace the finisher control PC board.

[ED14] Rear alignment plate home position error
<u>MJ-1101</u>

<u>Is there any mechanical problem when the rear alignment plate is moved?</u>

↓   →YES   Fix the mechanism.

NO

<u>Is there a disconnection of the connector, incorrect installation or breakage of the rear alignment plate home position sensor (S8)?</u>

l   →YES •   Connect the connector securely.
l   •   Reinstall the sensor correctly.
↓   •   Replace the sensor.

NO

<u>Is the harness between the rear alignment plate home position sensor (S8) and the finisher control PC board (CN11) disconnected or open circuited?</u>

l   →YES •   Reconnect the connector securely.
↓   •   Replace the harness.

NO

<u>Is the harness between the rear alignment motor (M10) and the finisher control PC board (CN10) disconnected or open circuited?</u>

l   →YES •   Reconnect the connector securely.
↓   •   Replace the harness.

NO

Replace the finisher control PC board.

[ED15] Paddle home position error
<u>MJ-1101</u>

<u>Is there any mechanical problem when the paddle is rotated?</u>

↓   →YES   Fix the mechanism.

NO

<u>Is there a disconnection of the connector, incorrect installation or breakage of the paddle home position sensor (S3)?</u>

l   →YES •   Connect the connector securely.
l   •   Reinstall the sensor correctly.
↓   •   Replace the sensor.

NO

<u>Is the harness between the paddle home position sensor (S3) and the finisher control PC board (CN5) disconnected or open circuited?</u>

l   →YES •   Reconnect the connector securely.
↓   •   Replace the harness.

NO

<u>Is the harness between the paddle motor (M8) and the finisher control PC board (CN6) disconnected or open circuited?</u>

l   →YES •   Reconnect the connector securely.
↓   •   Replace the harness.

NO

Replace the finisher control PC board.

5

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TROUBLESHOOTING

[ED16] Buffer tray home position error
MJ-1101

Is there any mechanical problem when the buffer tray guide is opened/closed?

↓   →YES   Fix the mechanism.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the buffer tray home position sensor (S5)?

| →YES •   Connect the connector securely.

| •   Reinstall the sensor correctly.

↓   •   Replace the sensor.

NO

Is the harness between the buffer tray home position sensor (S5) and the finisher control PC board (CN18) disconnected or open circuited?

| →YES •   Reconnect the connector securely.

↓   •   Replace the harness.

NO

Is the harness between the buffer tray guide motor (M3) and the finisher control PC board (CN18) disconnected or open circuited?

| →YES •   Reconnect the connector securely.

↓   •   Replace the harness.

NO

Replace the finisher control PC board.

5.1.8 Paper feeding system related service call

[C040] PFP motor abnormality

Is the PFP motor working? (Perform the output check: 03-109/159)

NO → 1) Check if the signal line connector CN503 of the PFP motor is disconnected.
2) Check if the power line connector CN502 of the PFP motor is disconnected.
3) Check if the connector CN246 on the PFP board is disconnected.
4) Check if the signal line connector CN241 on the PFP board is disconnected.
5) Check if the power line connector CN242 on the PFP board is disconnected.
6) Check if the connector CN349 on the LGC board is disconnected.
7) Check if the connector pins are disconnected or the harnesses are open circuited.
8) Check if the conductor patterns on the PFP motor board, PFP board and LGC board are short circuited or open circuited.
9) Replace the PFP motor.
10) Replace the PFP board.
11) Replace the LGC board.

↓

YES

Is the LED on the PFP motor board lit without flashing?

NO → 1) Check if the connector pins are disconnected or the harnesses are open circuited.
2) Check if the conductor patterns on the PFP motor board, PFP board and LGC board are short circuited or open circuited.
3) Replace the PFP motor.
4) Replace the PFP board.
5) Replace the LGC board.

↓

YES

1) Check if the PLL lock signal CN246-8 pin output from the PFP board is always "L" level.
2) Check if the voltage supplied to the microcomputer input terminal IC5-17 pin is always "L" level.
3) Replace the PFP board.
4) Replace the LGC board.

5

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[C130] 1st drawer tray abnormality
[C140] 2nd drawer tray abnormality

<u>Does the tray go up? (Perform the output check: 03-242, 243)</u>

   │   NO →   1) Check if the connector of the tray-up motor is disconnected.
   │   2) Check if the connector CN348 on the LGC board is disconnected.
   │   3) Check if the connector pins are disconnected or the harnesses are open circuited.
   │   4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
   │   5) Replace the tray-up motor.
   ↓   6) Replace the LGC board.

YES

<u>Is the tray-up sensor working? (Perform the input check: 03-[FAX]OFF/[4]/[B], /[4]/[A])</u>

   │   NO →   1) Check if the connector of the sensor is disconnected.
   │   2) Check if the connector CN348 on the LGC board is disconnected.
   │   3) Check if the slit reaches the sensor.
   │   4) Check if the connector pins are disconnected or the harnesses are open circuited.
   │   5) Check if the conductor pattern on the LGC board is short circuited or open circuited.
   │   6) Replace the tray-up sensor.
   ↓   7) Replace the LGC board.

YES

1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
2) Replace the LGC board.

[C150] PFP upper drawer tray abnormality
[C160] PFP lower drawer tray abnormality

Does the tray go up? (Perform the output check: 03-278, 280)

NO → 1) Check if the connector of the tray-up motor is disconnected.
2) Check if any of the connectors CN241, CN242 and CN244 on the PFP board is disconnected.
3) Check if the connector CN349 on the LGC board is disconnected.
4) Check if the connector pins are disconnected or the harnesses are open circuited.
5) Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
6) Replace the tray-up motor.
7) Replace the PFP board.
8) Replace the LGC board.

YES

Is the tray-up sensor working? (Perform the input check: 03-[FAX]OFF/[2]/[H], /[8]/[H])

NO → 1) Check if the connector of the sensor is disconnected.
2) Check if any of the connectors CN241, CN247 and CN248 on the PFP board is disconnected.
3) Check if the connector CN349 on the LGC board is disconnected.
4) Check if the slit reaches the sensor.
5) Check if the connector pins are disconnected or the harnesses are open circuited.
6) Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
7) Replace the tray-up sensor.
8) Replace the PFP board.
9) Replace the LGC board.

YES

1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
2) Replace the LGC board.

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[C180] LCF tray-up motor abnormality

Does the tray move? (Perform the output check: 03-271)

| NO →   1) Check if the connector of the LCF tray-up motor is disconnected.
| 2) Check if any of the connectors CN100, CN101 and CN103 on the LCF
| board is disconnected.
| 3) Check if the connector CN349 on the LGC board is disconnected.
| 4) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 5) Check if the conductor patterns on the LCF board and LGC board are short
| circuited or open circuited.
| 6) Replace the LCF tray-up motor.
| 7) Replace the LCF board.
| 8) Replace the LGC board.
↓

YES

Are the LCF tray-up sensor and LCF tray bottom sensor working?
(Perform the input check: 03-[FAX]OFF/[0]/[F], /[9]/[A])

| NO →   1) Check if the connectors of the sensors are disconnected.
| 2) Check if any of the connectors CN100, CN104 and CN105 on the LCF
| board is disconnected.
| 3) Check if the connector CN349 on the LGC board is disconnected.
| 4) Check if the slit reaches the sensors.
| 5) Check if the connector pins are disconnected or the harnesses are open
| circuited.
| 6) Check if the conductor patterns on the LCF board and LGC board are short
| circuited or open circuited.
| 7) Replace the sensor.
| 8) Replace the LCF board.
| 9) Replace the LGC board.
↓

YES

1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
2) Replace the LGC board.

[C1A0] LCF end fence motor abnormality

Is the LCF end fence motor working? (Perform the output check: 03-207)

NO → 1) Check if the connector of the LCF end fence motor is disconnected.
2) Check if any of the connectors CN100, CN101 and CN103 on the LCF board is disconnected.
3) Check if the connector CN349 on the LGC board is disconnected.
4) Check if the connector pins are disconnected or the harnesses are open circuited.
5) Check if the conductor patterns on the LCF board and LGC board are short circuited or open circuited.
6) Replace the LCF end fence motor.
7) Replace the LCF board.
8) Replace the LGC board.

YES

Are the LCF end fence home/stop position sensors working?
(Perform the input check: 03-[FAX]OFF/[0]/[A], /[0]/[B])

NO → 1) Check if the connectors of the sensors are disconnected.
2) Check if either of the connectors CN100 or CN107 on the LCF board is disconnected.
3) Check if the connector CN349 on the LGC board is disconnected.
4) Check if the slit reaches the sensors.
5) Check if the connector pins are disconnected or the harnesses are open circuited.
6) Check if the conductor patterns on the LCF board and LGC board are short circuited or open circuited.
7) Replace the sensors.
8) Replace the LCF board.
9) Replace the LGC board.

YES

1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
2) Replace the LGC board.

[C1B0] LCF transport motor abnormality

<u>Is the LCF transport motor working? (Perform the output check: 03-122/172)</u>

NO → 1) Check if the connector CN112 of the LCF transport motor is disconnected.
2) Check if the connector CN102 on the LCF board is disconnected.
3) Check if the signal line connector CN100 on the LCF board is disconnected.
4) Check if the power line connector CN101 on the LCF board is disconnected.
5) Check if the connector CN349 on the LGC board is disconnected.
6) Check if the connector pins are disconnected or the harnesses are open circuited.
7) Check if the conductor patterns on the LCF transport motor board, LCF board and LGC board are short circuited or open circuited.
8) Replace the LCF transport motor.
9) Replace the LCF board.
10) Replace the LGC board.

↓

YES

1) Check if the connector pins are disconnected or the harnesses are open circuited.
2) Check if the conductor patterns on the LCF transport motor board, LCF board and LGC board are short circuited or open circuited.
3) Check if the PLL lock signal CN102-3 pin output from the LCF board is always "L" level.
4) Check if the voltage supplied to the microcomputer input terminal IC103-17 pin is always "L" level.
5) Replace the LCF transport motor.
6) Replace the LCF board.
7) Replace the LGC board.

5.1.9 Scanning system related service call

[C260] Peak detection error

<u>Does the exposure lamp light? (Perform the output check: 03-267)</u>

YES → 1) Check if the connectors on the CCD and SLG boards are disconnected.
2) Check if the shading correction plate is dirty.
3) Check if the conductor pattern on the CCD board is short circuited or open circuited.
4) Check if the conductor pattern on the SLG board is short circuited or open circuited.
5) Replace the lens unit.
6) Replace the SLG board.

↓

NO

1) Check if the connectors of the exposure lamp and inverter are disconnected.
2) Check the SLG board if the connector pin CN21 is disconnected or the harness is short circuited or open circuited.
3) Check if the conductor pattern on the SLG board is short circuited or open circuited.
4) Replace the SLG board.
5) Replace the inverter.
6) Replace the exposure lamp.

[C270] Carriage home position sensor not going OFF within a specified time

Remove the original glass and move the carriages to the paper feeding side. Turn ON the power and check the following items.

<u>Are the carriages slightly moved to the feeding direction?/Are the carriages staying at a position other than home position?</u>

↓ YES → Check if the circuits of the SLG board are abnormal.

NO

1) Check if the connector pin is disconnected or the harness is short circuited or open circuited.
2) Check if the conductor pattern on the SLG board is short circuited or open circuited.
3) Replace the SLG board.

[C280] Carriage home position sensor not going ON within a specified time

Remove the original glass and move the carriages to the paper feeding side. Turn ON the power and check the following items.

<u>Do the carriages make a big noise after they arrive at the home position?</u>

YES → The carriage home position sensor is not turned ON.
1) Check if the connector of the sensor is disconnected.
2) Check if the circuits of the SLG board are abnormal.

↓

NO

The carriages are stopped at the home position and do not move.

1) Check if the connector pins are disconnected or the harnesses are short circuited or open circuited.
2) Check if the conductor pattern on the SLG board is short circuited or open circuited.
3) Replace the SLG board.

5.1.10 Fuser unit related service call

> **Note:**
> Be sure to turn OFF the power and unplug the power cable beforehand when checking the power supply unit and fuser unit.
> The fuser unit itself or the part of the unit remains heated and the capacitors are still charged after a while the power cable is unplugged. So make sure the unit is cooled down enough before checking.

[C411/C412] Thermistor/heater lamp abnormality at power-ON
1.Check the power voltage

(1) Check if the power voltage is normal.(Is the voltage during the operation ±10% of the rated voltage?)

2.Check the thermopiles

(1) Check if the fuser belt center and side thermopiles (front, rear) are installed properly.
(2) Check if the harnesses of the fuser belt center and side thermopiles (front, rear) are open circuited.

3. Check the power supply unit and fuser unit

(1) Is the fuser unit installed correctly?
(2) Check if foreign matter or paper in the fuser unit is plugging up the monitoring opening of the thermopile for the fuser belt.
(3) Check if the opening of the thermopile for the fuser belt of the equipment is plugged up.
(4) Check if the heater lamp is broken.
(5) Check if the connector of the heater lamp is disconnected.
(6) Check if the thermostat is blown.
(7) Check if the connectors of the power supply unit are disconnected (power supply unit AC output connector CN409 and LGC I/F connector CN403).
(8) Check if the power supply unit is abnormal.
   • Replace the power supply unit.

4. Check the LGC board

(1) Check if the connectors CN333 and CN345 are disconnected.
(2) Check if the conductor pattern on the LGC board is short circuited or open circuited.
(3) Replace the LGC board.

5. Clear the status counter
After repairing the matter which caused the error [C411/C412], perform the following:

(1) Turn ON the power while [0] and [8] are pressed simultaneously.
(2) Key in "400", then press [START].
(3) Change the current status counter value "1" or "2" to "0", then press [ENTER] or [INTERRUPT] (to cancel [C411/C412]).
(4) Turn the power OFF and then back ON. Make sure that the equipment enters the normal ready state.

[C443/C445/C446/C447/C448/C449] Heater lamp abnormality after abnormality judgment

1,2,3,4. Check the thermopiles, Heater and LGC board

Check the above components following the procedures 1, 2,3 and 4 for [C411/C412].

5. Clear the status counter

Change the current status counter value (08-400) "3", "5", "6", "7", "9", "19", "21", "22", "23", "24", "25", "27", "29", "42", "51", "52", "53", "54", "55", "56", "59", "61", "63", "64", or "65" to "0" for [C44X], taking the same procedure as that for [C41X].

- The status counter value is as follows in the following cases.
  - The error occurred during warming-up: "3", "5", "6", "42", "51", "56", "59", "61", "63", "64", or "65"
  - The error occurred after the equipment has become ready: "7", "52", "53", "54", "55"
  - The temperature detected by the fuser belt center thermopile is 230°C or higher, the temperature detected by the side thermopile is 230°C or higher or the temperature detected by the edge thermopile is 230°C or higher: "9", "19", "21", "22", "23", "25", "27" or "29".
  - The error occurred during printing: "24" or "25"
  - The error occurred during energy saving: "27"
  - A paper jam occurred: "29"

[C448] Status counter "32" : Heater lamp lights continuously for a certain period of time when the pressure roller temperature during ready status is higher than the specified

1. Check the power supply and fuser unit

(1) Check if the fuser unit is installed properly.
(2) Check if foreign matter or paper in the fuser unit is plugging up the monitoring opening of the fuser belt thermopile.
(3) Check if the opening of the fuser belt thermopile of the equipment is plugged up.
(4) Check if the connectors of the power supply are disconnected (power supply unit AC output connector CN409 and LGC Interface connector CN403).
(5) Check if the power supply unit is abnormal.
  * Replace the power supply unit.

2. Check the LGC board

(1) Check if the connector CN333 is disconnected.
(2) Check if the conductor pattern on the LGC board is short circuited or open circuited.
(3) Replace the LGC board.

3. Clear the status counter

After repairing the matter which caused the error [C448], perform the following:

(1) Turn the power ON while [0] and [8] are pressed simultaneously.
(2) Key in "400", then press the [START] button.
(3) Change the displayed current status counter value "32" to "0", then press [ENTER] or [INTERRUPT] (to cancel C448).
(4) Turn the power OFF and then back ON. Make sure that the equipment enters the normal status.

[C465/C466/C467/C468] Pressure roller thermistor abnormality after entering ready status

1. Check the pressure roller thermistor

   (1) Check if the connector is disconnected.
   (2) Check if the pressure roller center thermistor is installed properly.
   (3) Check if the pressure roller rear thermistor is in contact with the surface of the pressure roller properly.
   (4) Check if the harnesses of the pressure roller center and rear thermistors are open circuited.

2. Check the power supply unit and fuser unit

   (1) Check if the fuser unit is installed properly.
   (2) Check if the heater lamp is open circuited. (Check if the heater lamp has electric continuity.)
   (3) Check if the connector of the heater lamp is disconnected.
   (4) Check if the thermistor is open circuited.
   (5) Check if the connectors of the power supply (power supply AC output connector CN409, LGCI/F connector CN403) are disconnected.
   (6) Check if the power supply unit is broken.
        *   Replace the power supply unit if it is broken.

3. Check the LGC board

   (1) Check if the connector CN333/CN345 is disconnected.
   (2) Check if the conductor pattern on the board is short circuited or open circuited.
   (3) Replace the LGC board.

4. Clear the status counter
Change the current status counter value (08-400) "5", "6", "8", "18", "20", "26", "28", "33" or "34" to "0"
*   The status counter value is set as follows in the following cases.
•   The error occurred during warming-up: "5" or "6"
•   The error occurred after the equipment has become ready: "33"
•   Regardless of the equipment's status (i.e. during warming-up or in ready status), when the temperature detected by the pressure roller thermistor is 210°C or higher: "8", "18", "20", "26" or "28".
•   The error occurred during printing: "34"

[C4C0] Fuser unit fuse abnormality (shielding disabled)

1. Check the fuser unit

  (1) Check if the fuser unit is installed properly.
  (2) Check if the harness of the fuse in the fuser unit is caught.
  (3) Replace the fuse.

2. Check the LGC board

  (1) Check if the connector CN333 is disconnected.
  (2) Check if the conductor pattern on the LGC board is open circuited or short circuited.
  (3) Replace the LGC board.

3. Cancel the service call

After repairing the matter which caused the error [C4C0], turn the power OFF and then back ON to cancel the service call. However, the counter value will be stored until it is written over by the value of the other service call.

[C4D0] Fuser belt thermopile abnormality

1. Check the thermopile

  (1) Check if the connector of the thermopile is disconnected.
  (2) Check if the harnesses of the fuser belt center thermopile and the fuser belt side thermopile are open circuited.
  (3) Replace the thermopile.

2. Check the LGC board

  (1) Check if the connector CN333 is disconnected.
  (2) Check if the conductor pattern on the LGC board is open circuited or short circuited.
  (3) Replace the LGC board.

3. Cancel the service call

After repairing the matter which caused the error [C4D0], turn the power OFF and then back ON to cancel the service call. However, the counter value will be stored until it is written over by the value of the other service call.

5

5.1.11 Communication related service call

[C550] RADF I/F error

(1) Check if the harness connecting the RADF board and SLG board is disconnected or open circuited.
(2) Check if the conductor pattern on the RADF board is short circuited or open circuited.
(3) Check if the conductor pattern on the SLG board is short circuited or open circuited.
(4) Replace the RADF board.
(5) Replace the SLG board.

[C570] Communication error between Engine-CPU and IPC board

(1) Check if the LGC board and IPC board are connected properly.
(2) Check if the conductor pattern on the IPC board is short circuited or open circuited.
(3) Check if the conductor pattern on the LGC board is short circuited or open circuited.
(4) Replace the IPC board.
(5) Replace the LGC board.

[C580] Communication error between IPC board and finisher

(1) Confirm the setting of 08 Code 1912.
(2) Check if the specified finisher is attached.
(3) Check if the harness connecting the IPC board and the finisher controller PC board is disconnected or open circuited.
(4) Check if the conductor pattern on the IPC board is short circuited or open circuited.
(5) Check if the conductor pattern on the finisher controller PC board is short circuited or open circuited.
(6) Replace the IPC board.
(7) Replace the finisher controller PC board.

[F070] Communication error between System-CPU and Engine-CPU

(1) Check the version of the system ROM on the SYS board.
(2) Check the version of the engine ROM on the LGC board.
(3) Check if the connector CN423 on the IMG board and the connector CN354 on the LGC board are completely inserted.
(4) Check if the connector pin between the IMG board (connector CN423) and the LGC board (connector CN354) is disconnected.
(5) Check if the connector CN422 on the IMG board and the connector CN127 on the SYS board are completely inserted.
(6) Check if the connector pin between the IMG board (connector CN422) and the SYS board (connector CN127) is disconnected.
(7) Check if the conductor patterns on the IMG board, LGC board and SYS board are short circuited or open circuited.
(8) Replace the LGC board if no problem is found in steps from (1) to (7) above.
(9) If the problem is not corrected with the replacement of the LGC board, reinstall the removed LGC board and replace the SYS board.
(10) If the problem is still not corrected with the replacement of the SYS board, reinstall the removed SYS board and replace the IMG board.

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[F110] Communication error between System-CPU and Scanner-CPU
[F111] Scanner response abnormality

(1) Check if the harness connecting the IMG board and SLG board is disconnected or open circuited.
(2) Check the version of the system ROM on the SYS board.
(3) Check the version of the scanner ROM version on the SLG board.
(4) Replace the SYS board.
(5) Replace the SLG board.

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5.1.12 RADF related service call

No service call for the RADF (MR-3018).

5.1.13 Circuit related service call

[C900] Connection error between the SYS board and the LGC board

(1) Check if the connector CN423 on the IMG board and the connector CN354 on the LGC board are completely inserted.
(2) Check if the connector pin between the IMG board (connector CN423) and the LGC board (connector CN354) is disconnected.
(3) Check if the connector CN422 on the IMG board and the connector CN127 on the SYS board are completely inserted.
(4) Check if the connector pin between the IMG board (connector CN422) and the SYS board (connector CN127) is disconnected.
(5) Check if the conductor patterns on the IMG board, LGC board and SYS board are short circuited or open circuited.
(6) Replace the LGC board if no problem is found in steps from (1) to (5) above.
(7) If the problem is not corrected with the replacement of the LGC board, reinstall the removed LGC board and replace the IMG board.
(8) If the problem is still not corrected with the replacement of the IMG board, reinstall the removed IMG board and replace the SYS board.

[C940] Engine-CPU abnormality

Does service call still occur even after turning OFF the main switch then back ON?
↓   NO →   Leave it for a while and see how.
YES
1) Check if the conductor pattern between the Engine-CPU and FROM, SRAM is short circuited or open circuited.
2) Replace the LGC board if it frequently occurs.

[C950] LGC board abnormality, ID abnormality
[C961] Connection error on the IMG board, ID abnormality

(1) Check if the connector CN344 on the LGC board is completely inserted or not disconnected.
(2) Check if the connector CN423 on the IMG board and the connector CN354 on the LGC board are completely inserted.
(3) Check if the connector pin between the IMG board (connector CN423) and the LGC board (connector CN354) is disconnected.
(4) Check if the conductor patterns on the IMG board and the LGC board are short circuited or open circuited.
(5) Replace the LGC board if no problem is found in steps from (1) to (4) above.
(6) If the problem is not corrected with the replacement of the LGC board, reinstall the removed LGC board and replace the IMG board.
(7) If the problem is still not corrected with the replacement of the IMG board, reinstall the removed IMG board and replace the NVRAM on the LGC board.
(8) If the problem is still not corrected with the replacement of the NVRAM on the LGC board, reinstall the removed NVRAM and ask a specialist for a repair. (Abnormal ID)

[C9E0] Connection error between the SLG board and the SYS board

(1) Check if the connector CN18 on the SLG board is completely inserted or not disconnected.
(2) Check if the connector CN421 on the IMG board is completely inserted or not disconnected.
(3) Check if the connector pin between the SLG board (connector CN18) and the IMG board (connector CN421) is disconnected, or the harness connecting these boards is short circuited or open circuited.
(4) Check if the connector CN422 on the IMG board and the connector CN127 on the SYS board are completely inserted.
(5) Check if the connector pin between the IMG board (connector CN422) and the SYS board (connector CN127) is disconnected.
(6) Check if the conductor patterns on the SLG board, IMG board and SYS board are short circuited or open circuited.
(7) Replace the SLG board if no problem is found in steps from (1) to (6) above.
(8) If the problem is not corrected with the replacement of the SLG board, reinstall the removed SLG board and replace the IMG board.
(9) If the problem is still not corrected with the replacement of the IMG board, reinstall the removed IMG board and replace the SYS board.

[F090] SRAM abnormality on the SYS board

(1) Turn the power OFF and start up the Setting Mode (08).
(2) When the message "SRAM ERROR DOES IT INITIALIZE?" is displayed on the LCD, press the [INITIALIZE] button. (SRAM is cleared.)
(3) Turn the power OFF and then back ON. If the error is not recovered, replace the SYS board.

[F091] NVRAM abnormality on the SYS board

(1) Turn the power OFF and start up with the Setting Mode (08).
(2) When "NVRAM ERROR DOES IT INITIALIZE" is displayed on the LCD, check the destination and then press the [START] button. If the destination is not correct, key in the correct one and then press the [START] button.
(3) After the confirmation message is displayed, press the [INTERRUPT] button.
(4) Perform the panel calibration (08-692).
(5) Perform the initialization at the software version upgrade (08-947).
(6) Perform the counter copying (08-257 Sub-code: 1).
(7) Initialize the NIC information (08-693).
(8) Enter the serial number (08-995). The serial number on the label attached to the rear cover of the equipment.
(9) Turn the power OFF and then start up with the Adjustment mode (05).
(10) Perform "Data transfer of characteristic value of scanner" (05-364).
(11) Perform "Automatic gamma adjustment" <PPC> (05-1642). (using [4][FAX] test pattern)
(12) Perform "Automatic gamma adjustment" <PRT> (05-1008). (using [70][FAX] test pattern)
(13) Turn the power OFF and then back ON. If the error is not recovered, replace the NVRAM on the SYS board.

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[F092] SRAM/NVRAM abnormality on the SYS board

(1) Turn the power OFF and start up with the Setting Mode (08).
(2) When "NVRAM/SRAM ERROR DOES IT INITIALIZE" is displayed on the LCD, check the destination and then press the [START] button. If the destination is not correct, key in the correct one and then press the [START] button.
(3) After the confirmation message is displayed, press the [INTERRUPT] button.
(4) Perform the panel calibration (08-692).
(5) Perform the initialization at the software version upgrade (08-947).
(6) Perform the counter copying (08-257 Sub-code: 1).
(7) Initialize the NIC information (08-693).
(8) Enter the serial number (08-995). The serial number on the label attached to the rear cover of the equipment.
(9) Turn the power OFF and then start up with the Adjustment mode (05).
(10) Perform "Data transfer of characteristic value of scanner" (05-364).
(11) Perform "Automatic gamma adjustment" <PPC> (05-1642). (using [4][FAX] test pattern)
(12) Perform "Automatic gamma adjustment" <PRT> (05-1008). (using [70][FAX] test pattern)
(13) Turn the power OFF and then back ON. If the error is not recovered, replace the NVRAM on the SYS board.

[F350] SLG board abnormality

(1) Check if the conductor pattern on the SLG board is short circuited or open circuited.
(2) If there is no problem found in the check (1) above, check the combination of the firmware version of the system ROM, engine ROM and scanner ROM. Reinstall the scanner ROM firmware.
(3) If an error occurs after step (2) above has been performed, replace the SLG board.

5.1.14 Laser optical unit related service call

[CA10] Polygonal motor abnormality

Is the polygonal motor rotating?

NO → <e-STUDIO2500c/3500c>
1) Check if the connector of the polygonal motor is disconnected.
2) Check if the relay connector J506 is disconnected.
3) Check if the connector CN343 on the LGC board is disconnected.
4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
5) Replace the LGC board.
6) Replace the laser optical unit.

<e-STUDIO3510c>
1) Check if the connector on the POL board is disconnected.
2) Check if the connectors on the both edges of the HRNS-POL-DRV-382 are disconnected.
3) Check if the relay connector J506 is disconnected.
4) Check if the connector CN343 on the LGC board is disconnected.
5) Check if the conductor pattern on the POL board is short circuited or open circuited.
6) Replace the POL board.
7) Check if the conductor pattern on the LGC board is short circuited or open circuited.
8) Replace the LGC board.
9) Replace the laser optical unit.

YES

Is the printed image distorted?

YES → <e-STUDIO2500c/3500c>
1) Check if the connector CN343 on the LGC board is almost disconnected.
2) Check if the relay connector J506 is almost disconnected.
3) Check if the harness is almost open circuited or the connector pin is almost disconnected.
4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
5) Check if the laser unit cooling fan is stopped.
6) Check if the suction area of the laser unit cooling fan is plugged up.
7) Replace the laser optical unit.
8) Replace the LGC board.

<e-STUDIO3510c>
1) Check if the connector CN343 on the LGC board is almost disconnected.
2) Check if the relay connector J506 is almost disconnected.
3) Check if the connectors on the both edges of the HRNS-POL-DRV-382 are almost disconnected.
4) Check if the harness is almost open circuited or the connector pin is almost disconnected.
5) Check if the conductor pattern on the POL board is short circuited or open circuited.
6) Check if the conductor pattern on the LGC board is short circuited or open circuited.
7) Check if the laser unit cooling fan is stopped.
8) Check if the suction area of the laser unit cooling fan is plugged up.
9) Replace the laser optical unit.
10) Replace the LGC board.

NO

5

1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
2) Check if the units with high-voltage (developer unit, transfer belt unit, 2nd transfer roller unit) are securely grounded.
3) Check if the bias supply joints of the units with high-voltage are securely connected or they are not stained.
4) Check if the plate in the paper transport system is securely grounded.
5) Check if the equipment is grounded.
6) Check if the laser unit cooling fan is stopped.
7) Check if the suction area of the laser unit cooling fan is plugged up.
8) Replace the laser optical unit.
9) Replace the LGC board.

[CA20] H-Sync detection error

Is the harness between the LGC board (CN356) and the LDR board open circuited, broken or disconnected?
Are the relay connectors (J504 and J505) disconnected or almost disconnected? (Are they locked with the latches?)
Is the harness between the LGC board (CN355) and the SNS board open circuited, broken or disconnected?
Are the relay connectors (J502 and J503) disconnected or almost disconnected? (Are they locked with the latches?)

| YES → 1) Reconnect the harness.
| 2) Replace the laser optical unit.
↓   3) Replace the LGC board.

NO

Is the pin CN403-21 on the power supply unit +5V?

| NO →   1) Check if there is any abnormality in the harness (e.g.: if it is caught)
| between the power supply unit and the LGC board.
↓   2) Replace the power supply unit.

YES

Is the pin CN345-21 on the LGC board +5V?

| NO →   1) Check if the harness between the power supply unit and the LGC board is
| open circuited, broken or disconnected.
↓   2) Replace the LGC board.

YES

1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
2) Check if the units with high-voltage (developer unit, transfer belt unit, 2nd transfer roller unit) are securely grounded.
3) Check if the bias supply joints of the units with high-voltage are securely connected or they are not stained.
4) Check if the plate in the paper transport system is securely grounded.
5) Check if the equipment is grounded.
6) Check if the laser unit cooling fan is stopped.
7) Check if the suction area of the laser unit cooling fan is plugged up.
8) Replace the laser optical unit.
9) Replace the LGC board.

[CF90] Laser optical unit shutter abnormality

Take off the developer unit so that the laser shutter can be seen.
Clean around the laser shutter if the toner or developer material is spilled over.

Is there any abnormality such as warp on the main charger cleaner rod?
   | YES →   Replace the main charger cleaner rod.
↓
NO

Does the harness of EPU (Auto toner sensor) contact with the shutter?
   | YES →   Correct the wiring.
↓
NO

Is the shutter motor working? (Perform the output check: 03-417)
   | NO →   1) Check if the connector of the exit shutter motor is disconnected.
   | 2) Check if the connector CN360 on the LGC board is disconnected.
   | 3) Check if the connector pins are disconnected or the harnesses are open circuited.
   | 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
   | 5) Replace the shutter motor.
↓   6) Replace the LGC board.
YES

Is the laser shutter working?
   | NO →   1) Check and correct the mechanism of the laser shutter.
↓   2) Check if the shutter plate is assembled correctly.
YES

Is the shutter motor assembled correctly?
   | NO →   1) Check if the positioning of the gear and the rack is correct.
   | 2) Check if the distance between the gear and the rack is proper.
   | 3) Check if the worm gear and the drive gear are engaging properly.
↓   4) Check if grease is applied to the worm gear and the drive gear.
YES

Is the laser shutter able to be opened/closed repeatedly?
   | NO →   1) Check if the connector of the shutter status detection sensor (S20) is disconnected.
   | 2) Check if the connector CN360 on the LGC board is disconnected.
   | 3) Check if the connector pins are disconnected or the harnesses are open circuited.
   | 4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
   | 5) Replace the shutter status detection sensor.
↓   6) Replace the LGC board.
YES

Check if the conductor pattern on the LGC board is short circuited or open circuited.
Replace the LGC board.

5.1.15 Finisher related service call

[CB00] Finisher not connected

MJ-1101

1) Check if the MJ-1101 is set as the specified finisher on the equipment.
2) Check if the harness connecting the converter PC board and the finisher controller PC board is disconnected or open circuited.
3) Check if the conductor pattern on the converter PC board is open circuited or short circuited.
4) Check if the conductor pattern on the finisher controller PC board is open circuited or short circuited.
5) Replace the converter PC board.
6) Replace the finisher control PC board.

[CB01] Finisher communication error

MJ-1101

1) Check if the MJ-1101 is set as the specified finisher on the equipment.
2) Check if the harness connecting the converter PC board and the finisher controller PC board is disconnected or open circuited.
3) Check if the conductor pattern on the converter PC board is open circuited or short circuited.
4) Check if the conductor pattern on the finisher controller PC board is open circuited or short circuited.
5) Replace the converter PC board.
6) Replace the finisher control PC board.

[CB10] Entrance motor abnormality

MJ-1101

Is there any mechanical problem when the entrance roller is rotated?

↓ →YES   Fix the mechanism.

NO

Is the harness between the entrance motor (M1) and the finisher control PC board (CN7) disconnected or open circuited?

I →YES   • Reconnect the connector securely.

↓   • Replace the harness.

NO

1) Replace the entrance motor (M1).
2) Replace the finisher control PC board.

[CB11] Buffer tray guide motor abnormality
* You receive a [CB11] error when the [ED16] error occurs three times in succession.
MJ-1101

Is there any mechanical problem when the buffer tray guide is opened/closed while the buffer roller is lifted up?
↓ →YES   Fix the mechanism.

NO

Is the harness between the buffer tray guide motor (M3) and the finisher control PC board (CN18) disconnected or open circuited?
| →YES   •   Reconnect the connector securely.
↓   •   Replace the harness.

NO

1) Replace the buffer tray guide motor (M3).
2) Replace the finisher control PC board.

[CB12] Buffer roller drive motor abnormality
MJ-1101

Is there any mechanical problem when the buffer roller is rotated?
↓ →YES   Fix the drive mechanism.

NO

Is the harness between the buffer roller drive motor (M6) and the finisher control PC board (CN18) disconnected or open circuited?
| →YES   •   Reconnect the connector securely.
↓   •   Replace the harness.

NO

1) Replace the buffer roller drive motor (M6).
2) Replace the finisher control PC board.

[CB30] Tray 1/2 shift motor abnormality
MJ-1030

Are the tray 1 shift area sensors 1-3 and tray 2 shift area sensors 1-3 normal?
↓   NO →   Replace the tray 1/2 shift area sensor boards.
YES

Are the wirings between the finisher controller PC board and the tray 1/2 shift motors (M37/M38) correct?
↓   NO →   Correct the wirings.
YES

Is there any problem with the tray lift mechanism?
↓   NO →   Fix the lift mechanism.
YES

1) Replace the tray 1/2 shift motors.
2) Replace the finisher controller PC board.

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[CB30] Movable tray shift motor abnormality
MJ-1101

Is there any mechanical problem when the movable tray is moved?

↓   →YES   Fix the mechanism.

NO

Is the harness between the movable tray shift motor (M7) and the finisher control PC board (CN8) disconnected or open circuited?

  I   →YES   •   Reconnect the connector securely.

↓   •   Replace the harness.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the movable tray position A, B, and C sensors (S13, S14, and S15)?

  I   →YES   •   Replace the harness.

↓   •   Reinstall the sensor correctly.

              •   Replace the sensor.

NO

1) Replace the movable tray shift motor (M7).
2) Replace the finisher control PC board.

[CB31] Movable tray paper-full detection error
MJ-1101

Is there any mechanical problem when the actuator of the movable tray paper-full detection sensor (S17) is moved?

↓   →YES   Fix the mechanism.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the movable tray paper-full detection sensor (S17)?

  I   →YES   •   Connect the connector securely.

  I   •   Reinstall the sensor correctly.

↓   •   Replace the sensor.

NO

Is the harness between the movable tray paper-full detection sensor (S17) and the finisher control PC board (CN13) disconnected or open circuited?

  I   →YES   •   Reconnect the connector securely.

↓   •   Replace the harness.

NO

Replace the finisher control PC board.

[CB40] Rear aligning plate motor abnormality
MJ-1030

Is the rear aligning plate home position sensor (PI37) normal?

↓   NO →   Correct the wiring.

YES

Is there any mechanical problem with the path of aligning plate?

↓   NO →   Fix the mechanism.

YES

1) Replace the rear aligning plate motor.
2) Replace the finisher controller PC board.

[CB40] Front alignment motor abnormality
* You receive a [CB40] error when the [ED13] error occurs three times in succession.
MJ-1101

Is there any mechanical problem when the front alignment plate is moved?
↓   →YES   Fix the mechanism.

NO

Is the harness between the front alignment motor (M9) and the finisher control PC board (CN10) disconnected or open circuited?
I   →YES   • Reconnect the connector securely.
↓   • Replace the harness.

NO

Replace the front alignment motor (M9).

[CB50] Staple motor abnormality
MJ-1030

Is the wiring between the stapler and finisher controller PC board correct?
↓   NO →   Correct the wiring.

YES

1) Replace the stapler.
2) Replace the finisher controller PC board.

[CB50] Stapler home position error
* You receive a [CB50] error when the [EA50] error occurs three times in succession.
MJ-1101

Is the harness between the stapler and the finisher control PC board (CN2) disconnected or open circuited?
I   →YES   • Reconnect the connector securely.
↓   • Replace the harness.

NO

Are the harnesses in the stapler disconnected or open circuited?
I   →YES   • Reconnect the connector securely.
↓   • Replace the harness.

NO

Replace the finisher control PC board.

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[CB51] Stapler shift home position error

MJ-1101

Is there any mechanical problem when the stapler is moved?

↓ →YES   Fix the mechanism.

NO

Is there a disconnection of the connector, incorrect installation or breakage of the stapler unit home position sensor (S10)?

I   →YES   •   Connect the connector securely.
I   •   Reinstall the sensor correctly.
↓   •   Replace the sensor.

NO

Is the harness between the stapler unit home position sensor (S10) and the finisher control PC board (CN1) disconnected or open circuited?

I   →YES   •   Reconnect the connector securely.
↓   •   Replace the harness.

NO

Is the harness between the stapler unit shift motor (M4) and the finisher control PC board (CN5) disconnected or open circuited?

I   →YES   •   Reconnect the connector securely.
↓   •   Replace the harness.

NO

Replace the finisher control PC board.

[CB60] Stapler unit shift motor abnormality

MJ-1030

Is the stapler shift home position sensor (PI40) working normally?

↓   NO →   Replace the sensor.

YES

Is the wiring between the finisher controller PC board and the stapler shift motor (M35) correct?

↓   NO →   Correct the wiring.

YES

Is there any mechanical problem with the stapler stand motion path?

↓   YES→   Fix the lift mechanism.

NO

1) Replace the stapler shift motor.
2) Replace the finisher controller PC board.

MJ-1101

Is there any mechanical problem when the stapler is moved?

↓   →YES   Fix the mechanism.

NO

Is the harness between the stapler unit shift motor (M4) and the finisher control PC board (CN5) disconnected or open circuited?

I   →YES   •   Reconnect the connector securely.
↓   •   Replace the harness.

NO

1) Replace the stapler unit shift motor (M4).
2) Replace the finisher control PC board.

[CB80] Backup RAM data abnormality
MJ-1030

Is the problem solved by turning the power of the equipment OFF and ON?

↓   YES→   End.

NO

1) Replace the finisher controller PC board.
2) Replace the punch controller PC board.

[CB80] RAM abnormality
MJ-1101

Is the error recovered when the power of the equipment is turned OFF and then back ON?

↓   →YES   End.

NO

Replace the finisher control PC board.

[CB81] Flash ROM abnormality
MJ-1101

Is the error recovered when the power of the equipment is turned OFF and then back ON?

↓   →YES   End.

NO

1) Check if the conductor pattern on the finisher controller PC board is open circuited or short circuited.
2) Replace the finisher control PC board.

[CB90] Paper pushing plate motor abnormality
MJ-1030

Are the paper pushing plate home position sensor (PI14), paper pushing plate top position sensor (PI15) and paper pushing plate motor clock sensor (PI1) working normally?

↓   NO →   Replace the sensor.

YES

Is the paper pushing plate drive mechanism normal?

↓   NO →   Fix the mechanism.

YES

1) Replace the paper pushing plate motor (M8).
2) Replace the saddle stitcher controller PC board.

[CBA0] Stitch motor (front) abnormality
[CBB0] Stitch motor (rear) abnormality
MJ-1030

Are the front and rear stitchers and their stands installed properly?

↓   NO →   Install them properly.

YES

Are the stitcher home position switches (SW7/SW5) and stitcher motors (M7/M6) on the front and rear stitchers working normally?

↓   NO →   Replace the front or rear stitcher.

YES

Replace the saddle stitcher controller PC board.

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[CBC0] Alignment motor abnormality
MJ-1030

> Is the alignment plate home position sensor (PI5) working normally?
> ↓ NO → Replace the sensor.
> YES
> Is the alignment plate drive mechanism normal?
> ↓ NO → Fix the mechanism.
> YES
> 1) Replace the alignment motor (M5).
> 2) Replace the saddle stitcher controller PC board.

[CBD0] Guide motor abnormality
MJ-1030

> Is the guide home position sensor (PI13) working normally?
> ↓ NO → Replace the sensor.
> YES
> Is the guide plate drive mechanism normal?
> ↓ NO → Fix the mechanism.
> YES
> 1) Replacing the guide motor (M3).
> 2) Replace the saddle stitcher controller PC board.

[CBE0] Paper folding motor abnormality
MJ-1030

> Are the paper folding motor clock sensor (PI4) and paper folding home position sensor (PI21) working normally?
> ↓ NO → Replace the sensors.
> YES
> Is the paper folding roller drive mechanism normal?
> ↓ NO → Fix the mechanism.
> YES
> 1) Replacing the paper folding motor (M2).
> 2) Replace the saddle stitcher controller PC board.

[CBF0] Paper positioning plate motor abnormality
MJ-1030

> Is the paper positioning plate home position sensor (PI7) working normally?
> ↓ NO → Replace the sensor.
> YES
> Is the paper positioning plate drive mechanism normal?
> ↓ NO → Fix the mechanism.
> YES
> 1) Replacing the paper positioning plate motor (M4).
> 2) Replace the saddle stitcher controller PC board.

[CC00] Sensor connector abnormality
MJ-1030

Are the guide home position sensor (PI13), paper pushing plate home position sensor (PI14) and paper pushing plate top position sensor (PI15) connected to the saddle stitcher controller PC board?

↓ NO → Connect them to the board.

YES

Is the wiring between the sensors and the saddle stitcher correct?

↓ NO → Correct the wiring.

Is 5V DC being supplied from the connector pins J9-7, -10 and -13 on the saddle stitcher controller PC board?

↓ NO → Replace the saddle stitcher controller PC board.

YES

Are the connector pins J9-8, -11 and -14 on the saddle stitcher controller PC board correctly connected to the ground?

↓ NO → Replace the saddle stitcher controller PC board.

YES

End.

[CC10] Microswitch abnormality
MJ-1030

Are the front cover switch (MS31), inlet door switch (SW1) and delivery door switch (SW3) normal?

↓ NO → Replace the switches.

YES

Measure the voltage between J704-1 (+) and J704-2 (-) on the finisher controller PC board. Is it 24V?

↓ NO → Replace the finisher controller PC board.

Is the wiring between J704 on the finisher controller PC board and J1 on the saddle stitcher controller PC board correct?

↓ NO → Correct the wiring.

YES

Replace the saddle stitcher controller PC board.

[CC20] Communication error between finisher and saddle stitcher
MJ-1030

Is the problem solved by turning OFF and ON the power switch of the equipment?

↓ YES → End.

NO

Is the wiring between the finisher controller PC board and the saddle stitcher controller PC board connected?

↓ NO → Connect the wiring.

YES

1) Replace the finisher controller PC board.
2) Replace the saddle stitcher controller PC board.

[CC30] Stack transport motor abnormality
 * You receive a [CC30] error when the [EA70] error occurs three times in succession.
  MJ-1101

    Is there any mechanical problem when the stack transport belt is moved?

    ↓   →YES   Fix the mechanism.

    NO

    Is the harness between the stack transport motor (M5) and the finisher control PC board (CN10) disconnected or open circuited?

    I   →YES • Reconnect the connector securely.

    ↓   • Replace the harness.

    NO

    1) Replace the stack transport motor (M5).
    2) Replace the finisher control PC board.

[CC31] Transport motor abnormality
 * You receive a [CC31] error when the [ED12] error occurs three times in succession.
  MJ-1101

    Is there any mechanical problem when the stack transport roller -1 and -2 are rotated?

    ↓   →YES   Fix the mechanism.

    NO

    Is the harness between the transport motor (M2) and the finisher control PC board (CN5) disconnected or open circuited?

    I   →YES • Reconnect the connector securely.

    ↓   • Replace the harness.

    NO

    1) Replace the transport motor (M2).
    2) Replace the finisher control PC board.

[CC40] Swing motor abnormality
  MJ-1030

    Is the swing unit home position sensor (PI35) normal?

    ↓   NO →   Replace the sensor.

    YES

    Is the wiring between the finisher controller PC board and the swing motor (M36) correct?

    ↓   NO →   Correct the wiring.

    YES

    Is the swing mechanism normal?

    ↓   NO →   Fix the mechanism.

    YES

    1) Replace the swing motor.
    2) Replace the finisher controller PC board.

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[CC41] Paper holder cam home position abnormality
MJ-1101

Is there any mechanical problem when the paper holder cam is rotated?

↓   →YES   Fix the mechanism.

NO

Is the harness between the paper holder home position sensor (S6) and the finisher control PC board (CN17) disconnected or open circuited?

| →YES   • Reconnect the connector securely.

↓   • Replace the harness.

NO

1) Replace the paper holder home position sensor (S6).
2) Replace the finisher control PC board.

[CC50] Horizontal registration motor abnormality
MJ-1030 (when MJ-6004 is installed)

Is the horizontal registration home position sensor (PI61) working normally?

↓   NO →   Replace the sensor.

YES

Is the wiring between the horizontal registration home position sensor and finisher controller PC board correct?

↓   NO →   Correct the wiring.

YES

Is the horizontal registration mechanism normal?

↓   NO →   Fix the mechanism.

YES

1) Replace the horizontal registration motor (M62).
2) Replace the punch controller PC board.
3) Replace the finisher controller PC board.

[CC51] Sideways adjustment motor (M2) abnormality
 * The [CC51] error will be displays when the [ED11] error occurs three times in succession or during the initial operation.
MJ-1101 (When MJ-6101 is installed)

Is there any paper remaining on the transport path?

↓   →YES   Remove the paper.

 NO

Rotate the sideways adjustment motor (M2). Does it rotate smoothly?

↓   →NO   Fix the mechanism.

YES

Are the sideways deviation home position sensor (S3) and its wiring correct?

↓   →NO   Replace the sensor. Correct the wiring.

YES

Is the wiring between the hole punch control PC board (HP) and sideways adjustment motor (M2) correct?

↓   →NO   Correct the wiring.

YES

1) Replace the punch sideways adjustment motor (M2).
2) Replace the hole punch control PC board (HP).

[CC52] Skew adjustment motor (M1) abnormality
* The [CC52] error will be displays when the [ED10] error occurs three times in succession or during the initial operation.
MJ-1101 (When MJ-6101 is installed)

    Is there any paper remaining on the transport path?
     ↓   →YES   Remove the paper.
   NO

    Rotate the skew adjustment motor (M1). Does it rotate smoothly?
     ↓   →NO   Fix the mechanism.
   YES

    Are the skew home position sensor (S2) and its wiring correct?
     ↓   →NO   Replace the sensor. Correct the wiring.
   YES

    Is the wiring between the hole punch control PC board (HP) and skew adjustment motor (M1) correct?
     ↓   →NO   Correct the wiring.
   YES

1) Replace the skew adjustment motor (M1).
2) Replace the hole punch control PC board (HP).

[CC60] Punch motor abnormality
MJ-1030 (when MJ-6004 is installed)

    Are the punch home position sensor (PI63) and punch motor clock sensor (PI62) working normally?
     ↓   NO →   Replace the sensors.
   YES

    Is the wiring between the sensors and finisher controller PC board correct?
     ↓   NO →   Correct the wiring.
   YES

    Is the punching mechanism normal?
     ↓   NO →   Fix the mechanism.
   YES

1) Replace the punch motor (M61).
2) Replace the punch controller PC board.
3) Replace the finisher controller PC board.

[CC61] Punch motor (M3) home position detection error
* The [CC61] error will be displays when the [E9F0] error occurs three times in succession or during the initial operation.
MJ-1101 (When MJ-6101 is installed)

Is there any paper remaining on the transport path?

↓   →YES   Remove the paper.

 NO

Rotate the punch motor (M3). Does it rotate smoothly?

↓   →NO   Fix the mechanism.

YES

Are the punch home position sensor (S4) and its wiring correct?

↓   →NO   Replace the sensor. Correct the wiring.

YES

Is the wiring between the hole punch control PC board (HP) and punch motor (M3) correct?

↓   →NO   Correct the wiring.

YES

1) Replace the punch motor (M3).
2) Replace the hole punch control PC board (HP).

[CC71] Punch ROM checksum error
MJ-1101 (When MJ-6101 is installed)

Is the conductor pattern on the hole punch control PC board (HP) open circuited or short circuited?

↓   →YES   Replace the hole punch control PC board (HP).

 NO

Replace the finisher control PC board.

[CC72] Punch RAM read/write error
MJ-1101 (When MJ-6101 is installed)

Is the conductor pattern on the hole punch control PC board (HP) open circuited or short circuited?

↓   →YES   Replace the hole punch control PC board (HP).

 NO

Replace the finisher control PC board.

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[CC80] Front jogging motor abnormality/Front aligning plate motor abnormality
 MJ-1030 (Front aligning plate motor abnormality)

        Is the front aligning plate home position sensor (PI36) normal?
        ↓   NO →   Replace the sensor.
        YES
        Is the wiring between the finisher controller PC board and the front aligning plate motor (M33)
        correct?
        ↓   NO →   Correct the wiring.
        YES
        Is there any mechanical problem with the path of aligning plate?
        ↓   NO →   Fix the mechanism.
        YES

        1) Replace the front aligning plate motor.
        2) Replace the finisher controller PC board.

[CC80] Rear alignment motor abnormality
 * You receive a [CC80] error when the [ED14] error occurs three times in succession.
 MJ-1101

        Is there any mechanical problem when the rear alignment plate is moved?
        ↓   →YES   Fix the mechanism.
        NO
        Is the harness between the rear alignment motor (M10) and the finisher control PC board
        (CN10) disconnected or open circuited?
        I   →YES   •   Reconnect the connector securely.
        ↓   •   Replace the harness.
        NO
        1) Replace the rear alignment motor (M10).
        2) Replace the finisher control PC board.

[CCD0] Stack ejection motor abnormality
 MJ-1030

        Is the shutter home position sensor (PI45) normal?
        ↓   NO →   Replace the sensor.
        YES
        Are the wirings between the finisher controller PC board and the stack ejection motor (M32)/
        shutter clutch (CL31) correct?
        ↓   NO →   Correct the wirings.
        YES
        Is there any problem with the shutter mechanism?
        ↓   YES→   Fix the shutter mechanism.
        NO
        1) Replace the stack ejection motor and shutter clutch.
        2) Replace the finisher controller PC board.

[CCE0] Rear end assist motor abnormality
MJ-1030

Is the rear end assist guide home position sensor (PI39) normal?

↓   NO →   Replace the sensor.

YES

Is the wiring between the finisher controller PC board and the rear end assist motor (M39) correct?

↓   NO →   Correct the wiring.

YES

Is there any problem with the rear end assist mechanism?

↓   YES→   Fix the rear end assist mechanism.

NO

1) Replace the rear end assist motor.
2) Replace the finisher controller PC board.

[CCF0] Gear change motor abnormality
MJ-1030

Is the gear change home position sensor (PI49) normal?

↓   NO →   Replace the sensor.

YES

Is the wiring between the finisher controller PC board and the gear change motor (M40) correct?

↓   NO →   Correct the wiring.

YES

Is there any problem with the gear change mechanism?

↓   YES→   Fix the gear change mechanism.

NO

1) Replace the gear change motor.
2) Replace the finisher controller PC board.

[CDE0] Paddle motor abnormality
* You receive a [CDE0] error when the [ED15] error occurs three times in succession or during the initial operation.

MJ-1101

Is there any mechanical problem with the paddle is rotated?

↓   →YES   Fix the mechanism.

NO

Is the harness between the paddle motor (M8) and the finisher control PC board (CN6) disconnected or open circuited?

| →YES   •   Reconnect the connector securely.

↓   •   Replace the harness.

NO

1) Replace the paddle motor (M8).
2) Replace the finisher control PC board.

[CE00] Communication error between finisher and puncher unit

MJ-1030 (When MJ-6004 is installed)

       Is the problem solved by turning OFF and ON the power of the equipment?

       ↓   YES→   End.

       NO

       Is the wiring between the finisher controller PC board and punch controller PC board correct?

       ↓   NO →   Correct the wiring.

       YES

       1) Replace the finisher controller PC board.

       2) Replace the punch controller PC board.

[CE00] Punch communication error

MJ-1101 (When MJ-6101 is installed)

       Is the harness between the hole punch control PC board (HP) and the finisher control PC board disconnected or open circuited?

       ↓   →YES   Replace the harness. Correct the wiring.

       NO

       Is the conductor pattern on the hole punch control PC board (HP) open circuited or short circuited?

       ↓   →YES   Replace the hole punch control PC board (HP).

       NO

       Replace the finisher control PC board.

[CF10] Communication module SRAM reading failure

MJ-1101

       1) Is the error recovered when the power of the equipment is turned OFF and then back ON?

       2) Check if the MJ-1101 is set as the specified finisher on the equipment.

       3) Check if the harness connecting the converter PC board and the finisher controller PC board is disconnected or open circuited.

       4) Check if the conductor pattern on the converter PC board is open circuited or short circuited.

       5) Check if the conductor pattern on the finisher controller PC board is open circuited or short circuited.

       6) Replace the converter PC board.

       7) Replace the finisher control PC board.

MJ-1101 (When MJ-6101 is installed)

       1) Is the error recovered when the power of the equipment is turned OFF and then back ON?

       2) Check if the MJ-1101 is set as the specified finisher on the equipment.

       3) Check if the harness connecting the converter PC board and the finisher controller PC board is disconnected or open circuited.

       4) Check if the harness connecting the hole punch control PC board and the finisher control PC board is disconnected or open circuited.

       5) Check if the conductor pattern on the converter PC board is open circuited or short circuited.

       6) Check if the conductor pattern on the finisher controller PC board is open circuited or short circuited.

       7) Check if the conductor pattern on the hole punch control PC board is open circuited or short circuited.

       8) Replace the converter PC board.

       9) Replace the finisher control PC board.

       10)Replace the hole punch control PC board.

5.1.16 Image control related service call

(1) Based on the procedure of [CE10], [CE20] and [CE40] described below, check the status and take appropriate actions. And then perform the forced performing of image quality closed-loop control according to the following procedure.

    1.   While pressing [0] and [5] simultaneously, turn ON the power.

    2.   Key in [396], and then press the [START] button. Confirm that the image quality control has finished normally.

(2) After confirming the items in (1), clear the abnormal detection counter of image quality control.

    1.   While pressing [0] and [8] simultaneously, turn ON the power.

    2.   Key in [573], and then press the [START] button.

    3.   Rewrite the displayed status counter from "1" - "16" to "0", and then press the [ENTER] or [INTERRUPT] button.

    4.   Key in [574], and then press the [START] button.

    5.   Rewrite the displayed status counter from "1" - "16" to "0", and then press the [ENTER] or [INTERRUPT] button.

    6.   Key in [575], and then press the [START] button.

    7.   Rewrite the displayed status counter from "1" - "16" to "0", and then press the [ENTER] or [INTERRUPT] button.

    8.   Key in [576], and then press the [START] button.

    9.   Rewrite the displayed status counter from "1" - "16" to "0", and then press the [ENTER] or [INTERRUPT] button.

    10.   Turn the power OFF and then back ON. Make sure that the equipment enters the normal ready state.

[CA00] Image position alignment abnormality

<Color toner low density>

When you check the printing status to find out that the color printing ratio is less than 5%, color toner low density might be the cause.
    Turn the code 08-2692 "Prevention of color toner low density / ON/OFF setting" to ON, and then set number of sheets to be judged at the code 08-2693 "Prevention of color toner low density / Judged number of sheets setting".

If the color printing ratio is 5% or more, check the following.

< Invalidating image position alignment control >

(1) Turn the power ON while [0] and [8] are pressed simultaneously.
(2) Key in "4546", then press the [START] button. (08-4546: Position adjustment control / Mode setting)
(3) Set the value to "0" (not performed automatically).
(4) Turn the power OFF.

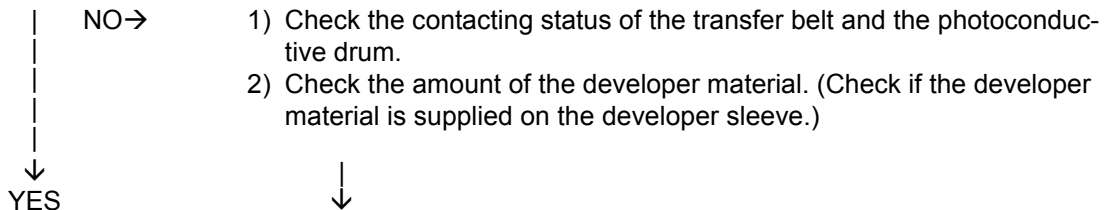*WWW.SERVICE-MANUAL.NET*

< Checking the abnormal status on image position alignment >

(5) Turn the power ON while [0] and [5] are pressed simultaneously.
(6) Key in "4720", then press the [START] button. (05-4720: Displaying the cause of image position alignment detection error)
(7) Check the displayed value.

When the error [CA00] occurs, the value between 1 and 255 is displayed. (0: Normal completion)
(The statues of total 8 sections (4 colors on the front and rear sides) are displayed.)

1 : Y on the rear side detection abnormality (*1)	-> Go to (23)
2 : Y on the front side detection abnormality (*1)	-> Go to (23)
3 : Y on the front and rear sides detection abnormality	-> Go to (23)
4 : M on the rear side detection abnormality (*1)	-> Go to (23)
8 : M on the front side detection abnormality (*1)	-> Go to (23)
12 : M on the front and rear sides detection abnormality	-> Go to (23)
16 : C on the rear side detection abnormality (*1)	-> Go to (23)
32 : C on the front side detection abnormality (*1)	-> Go to (23)
48 : C on the front and rear sides detection abnormality	-> Go to (23)
64 : K on the rear side detection abnormality (*1)	-> Go to (23)
85 : All colors on the rear side detection abnormality	-> Go to (8)
128: K on the front side detection abnormality (*1)	-> Go to (23)
170: All colors on the front side detection abnormality	-> Go to (8)
192: K on the front and rear sides detection abnormality	-> Go to (23)
255: All colors on the front and rear sides detection abnormality	-> Go to (8)
Other than the above: Multiple colors detection abnormality	-> (*2), Go to (23)

(*2) The adjustment value is the sum of (*1), which, as in the example below, specifies the cause of the detection abnormality.
(E.g. 1) 05-4720 --- in case of 72
   72 = 64 + 8
   -> K on the rear side / M on the front side detection abnormality
(E.g. 2) 05-4720 --- in case of 146
   146 = 128 + 18 = 128 + 16 + 2
   -> K on the front side / C on the rear side / Y on the front side detection abnormality

< Checking the status of the image position aligning sensor >
Check if the light emitting area of the image position aligning sensor emits LEDs and if the reflected lights on the transfer belt surface are detected by the light receiving area of the image position aligning sensor.

(8) Turn the power ON while [0] and [3] are pressed simultaneously.
(9) Press the [START] button.
(10) Check how items [G] and [H] are displayed while [7] is pressed.
(11) Press the [CLEAR] button.
(12) Key in "125", then press the [START] button. (03-125: Sensor shutter is opened)
(13) Key in "126", then press the [START] button. (03-126: Image position aligning sensor / LED ON)
(14) Press the [START] button.
(15) Check how items [G] and [H] are displayed while [7] is pressed.

(16) Compare them with the statues of [G] and [H] displayed in step 10.

Both [G] and [H] are changed	-	The image position aligning sensors on both sides are operating normally.
[G] remains same	-	The image position aligning sensor on the rear side is not operating normally.
[H] remains same	-	The image position aligning sensor on the front side is not operating normally.
Both [G] and [H] remain same	-	The image position aligning sensors on both sides are not operating normally.

(17) Press the [CLEAR] button.
(18) Key in "176", then press the [START] button. (03-176: Image position aligning sensor / LED OFF)
(19) Key in "175", then press the [START] button. (03-175: Sensor shutter closed)
(20) Turn the power OFF.
(21) If the image position aligning sensors on both sides are operating normally, proceed to step (23). In other cases, proceed to step (22).
(22) Check the following items if the image position aligning sensors are not operating normally:

Is the connector CN337 on the LGC board disconnected?
Is the connector of the image position aligning sensor disconnected?
Is the harness between the LGC board and the image position aligning sensor broken?
Is the light emitting or receiving area of the image position aligning sensor stained with toner?
Are the sensor shutter and the image quality sensor opening or closing normally? Or are they damaged?
Is the light emitting area of the image position aligning sensor emitting LEDs?

        < Checking procedure for the sensor shutter opening/closing status >
        1) Take off the transfer belt unit so that the sensor unit can be seen.
        2) Turn the power ON while [0] and [3] are pressed simultaneously.
        3) The shutter should be opened when "125" is keyed in. It should be closed when "175" is keyed in.

        < Checking procedure for the LED emission of the image position aligning sensor >
        1) Key in "125" to open the sensor shutter.
        2) The light emitting area of the sensor should emit LEDs when "126" is keyed in.

    Abnormal→ 1) Reconnect the connector.
              2) Replace the harness.
              3) Clean the light emitting and receiving areas of the image position aligning sensor.
              4) If the sensor shutter is damaged, replace it. If the sensor shutter solenoid is not operating normally, replace the solenoid.
                  ↓
            Proceed to step (8).

Normal (Proceed to step (23).)

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< Checking with test pattern >

(23) Turn the power ON while [0] and [4] are pressed simultaneously.
(24) Key in "220", then press the [START] button.
(25) Select "C", "M", "Y" or "K", then press the [START] button.
(26) Press the [CLEAR] button after one sheet of test pattern has been exited.
(27) Check if the printed image of the test pattern in each color contains difference in density on its front, center and rear sides, or if there is any image trouble in a whole image.

Is the test pattern printed in blank?
| Check if the laser shutter is operating normally.
| < Checking procedure for the laser shutter opening/closing status >
| 1) Take off the developer unit so that the laser shutter can be seen.
| *   Clean around the laser shutter if the toner or developer material is spilled over.
| 2) Turn the power ON while [0] and [3] are pressed simultaneously.
| 3) Key in "417". (03-417: Laser shutter opening/closing status)
| 4) Press the [START] button repeatedly to open and close the shutter alternatively.
|
| Abnormal→   If the laser shutter is not opening or closing normally, check the shutter and correct it if necessary.
|
| ↓
| Proceed to step (23).
↓
Normal
Is the image of the test pattern printed normally without any difference in density on its front and rear sides?
| NO→   1) Check the contacting status of the transfer belt and the photoconductive drum.
| 2) Check the amount of the developer material. (Check if the developer material is supplied on the developer sleeve.)
|
↓   ↓
YES
Is the image printed normally without yellow, magenta, cyan or black streaks in the secondary scanning direction?
| NO→   Check if the main charger wire corresponding to the color of the streaks is stained.
↓   ↓
YES
Is the image printed normally without white streaks in the secondary scanning direction?
| NO→   Check if the slit glass of the laser optical unit is stained.
↓   ↓
YES
Is a certain color in the printed image turned to black solid?

Abnormal→	• Abnormality in the main high-voltage transformer corresponding to the color or abnormality in the laser optical unit.
	• Replace one of 4 main high-voltage transformers which possibly contains abnormality, and also the one possibly normal. Then print the same test pattern.
	• If the color which turned into black solid changes along with the replacement of the main high-voltage transformer, this main high-voltage transformer is defined as abnormal.
	• If the color which turned into black solid does not change, check if the harness between the LGC board and the main high-voltage transformer is broken or if the power is sufficiently supplied to the main charger (breaking of the high-voltage harness or connection defect). If no problem is found, check the laser optical unit.

↓

Normal ↓

If the density level is low on both front and rear sides, is the image printed normally in cases other than noted above?

NO→	Check the following items:
	1) Check if the photoconductive drum and the transfer belt are rotating. If not, correct their mechanism.
	2) Check if there are abnormal stain, large breaking or scratches on the transfer belt surface.
	3) Check if the connector of the transfer transformer is disconnected.
	4) Check if the high-voltage harnesses of the main high-voltage transformer and the transfer transformer are disconnected.
	5) Check if the harness between the LGC board and the transfer transformer is broken.
	6) Check if the high-voltage joints of the transfer belt unit are securely contacted or if they are not stained.
	7) Check if the high-voltage harness is broken.
	8) Check if the connector of the main high-voltage transformer is disconnected.
	9) Check if the harness between the LGC board and the main high-voltage transformer is broken.
	10) Replace the transfer transformer.
	11) Replace the main high-voltage transformer.

↓

YES

(Proceed to step (28).)

↓

Proceed to step (23).

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< Checking with the enforced image position adjustment >

(28) Turn the power ON while [0] and [5] are pressed simultaneously.
(29) Key in "4719", then press the [START] button. (05-4719: Enforced position adjustment)
   Does the error [CA00] occur during the position adjustment control?
   │   YES→   Proceed to step (5).
   ↓
   NO (Proceed to step (30).)

< Validating the image position alignment control >
Check the operation and correct if necessary. Then be sure to perform the following:

(30) Turn the power ON while [0] and [8] are pressed simultaneously.
(31) Key in "4546", then press the [START] button. (08-4546: Position adjustment control / Mode setting)
(32) Set the value to "5" (performed automatically).
(33) Turn the power OFF.

<Checking the image position aligning sensor>

(34) Clean the image position aligning sensor (S16/S17).

<Checking the power supply>

(35) Check if any of the springs for supplying power to the transfer belt unit is deformed. Replace the spring if it is deformed.

[CE10] Image quality sensor abnormality (OFF level)
   Is the connector of the image quality sensor, or the connector CN337 on the LGC board disconnected?
   Is the harness between the LGC board and the image quality sensor, or the harness between the LGC board and the switching power supply open circuited?
   ↓   YES→   Connect the connector securely. Replace the harness.
   NO
   Is the output voltage from the 12V-power supply normal?
   ↓   NO →   Check the power supply system and replace the switching power supply.
   YES
   1) Replace the image quality sensor.
   2) Replace the LGC board.

[CE20] Image quality sensor abnormality

<u>Is the transfer belt or the transfer belt unit securely installed?</u>
<u>Are there any abnormal stains (cleaning defects), large scratches or breaking on the transfer belt surface?</u>
<u>Are the drum and the transfer belt rotating?</u>

     NO→   <Checking procedure>

1) Check if the transfer belt unit is securely installed. Correct it if not.
2) Check if any toner image remains on the transfer belt surface.
   If any, check the installation status of the TBU cleaner unit. If there is any abnormality, correct it, and clean the transfer belt.
3) Check if the drum and the transfer belt are properly operated.
   (ON: 03-101 / OFF: 03-151)
   If they are not rotating normally, check if their drive gears are damaged or if they contact the equipment. Correct it if needed.
   ↓
   Proceed to step (6). (to step (1) for the second time)

YES

<u>Is the sensor shutter of the image quality sensor opening or closing normally? Or is it damaged?</u>
<u>Is the sensor surface of the image quality sensor stained with toner? If so, has it been cleaned?</u>

     NO→   <Checking procedure>

1) Take off the transfer belt unit so that you can see the sensor unit.
2) Check if the sensor shutter is opening or closing normally.
   (Opening: 03-125 / Closing: 03-175)
   If the sensor shutter is not opening or closing, check if it is damaged or there is any abnormality in the sensor shutter solenoid.
   Check the connector and the harness between the sensor shutter solenoid and the LGC board. (LGC CN337-8pin, 9pin)
3) Slide the sensor shutter so that the sensor surface can be seen.
4) Clean the sensor surface with a cotton swab or a soft cloth.
5) Clean the area around the sensor (e.g.: sensor shutter) if it is stained, so that the sensor surface does not become dirty.
   ↓
   Proceed to step (6). (to step (1) for the second time)

YES

<u>Is the connector of the image quality sensor securely connected?</u>
<u>Is the connector CN337 on the LGC board securely connected?</u>
<u>Is the harness between the LGC board and the image quality sensor disconnected?</u>

     NO→   <Checking procedure>

- Reconnect the connector.
- Replace the harness.
   ↓
   Proceed to step (6). (to step (1) for the second time)

YES

<u>Is +12V power supply voltage normally supplied to the image quality sensor?</u>
<u>Is +12V voltage normally output by the CN345-9pin on the LGC board?</u>

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| NO →   <Checking procedure>
| 1) Check if +12V voltage is output by the switching power supply (PS-ACC CN403-9pin).
| 2) Check if +12V voltage is output by the CN345-9pin on the LGC board.
| Check if the supply harness between the switching power supply and the LGC board is open circuited, damaged or disconnected.
| ↓
↓   Proceed to step (6). (to step (1) for the second time)
   YES

(1) Set the values of "Image quality closed-loop control / Contrast voltage (08-556)" and "Image quality closed-loop control / Laser power (08-557)" to "0" (Invalid).
     ↓

(2) Perform "Enforced performing of image quality open-loop control (05-394)".
     ↓

(3) Output the image quality control test pattern (04-270) more than one time and the list print ([9][START]) in the adjustment mode (05), and then check if the image is normal.
| Normal   Abnormal
| Abnormal image:
| Blank print, Solid print, White banding, Color banding, White spots, Poor transfer, Uneven image density, Faded image (low density), Uneven light distribution, Blotched image.
| *   Blank print: including when one of the YMCK colors is not printed.
| ↓
| Correct the abnormal image.
| ↓
↓   Proceed to step (5).

(4) Replace the image quality sensor or the LGC board.
     ↓

(5) Set the values of "Image quality closed-loop control / Contrast voltage (08-556)" and "Image quality closed-loop control / Laser power (08-557)" to "1" (Valid).
     ↓

(6) Perform "Automatic initialization of image quality control (05-396)" and make sure it is completed normally. (Error [CE10], [CE20] and [CE40] do not appear.) Then perform "Automatic gamma adjustment" (Chapter 3.7.1 and 3.8.1).
              | When an error occurs:
              ↓
         Check and correct it accordingly.

(7) Reset all of the values in the codes "Abnormality detection count (Y/M/C/K) Display/0 clearing (08-573 to 08-576)".

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[CE40] Image quality control test pattern abnormality
<Color toner low density>

When you check the printing status to find out that the color printing ratio is less than 5%, color toner low density might be the cause.

Turn the code 08-2692 "Prevention of color toner low density / ON/OFF setting" to ON, and then set number of sheets to be judged at the code 08-2693 "Prevention of color toner low density / Judged number of sheets setting".

If the color printing ratio is 5% or more, check the following.

(1) <u>Use "Image quality control abnormal detection counter Y to K display/0 clearing (08-573 to 576)" to check the abnormal occurring condition for each color.</u>

(2) <u>Check "Output value display of image quality sensor / Low-density pattern (05-391-0 to 3)" to check if the low-density pattern abnormality occurs for each color. The values under 180 for Y, M and C, and under 20 for K are defined as low-density pattern abnormality.</u>

| 180 or above (Y, M and C) | Under 180 (Y, M and C) |
| 20 or above (K) | Under 20 (K) |

Low-density pattern abnormality
Check the transfer belt. If the cleaning is poor, check the installation status of the transfer belt cleaner unit and correct it if necessary.

↓

To (9)
(If you have already performed this checking cycle once, proceed to step (4).)
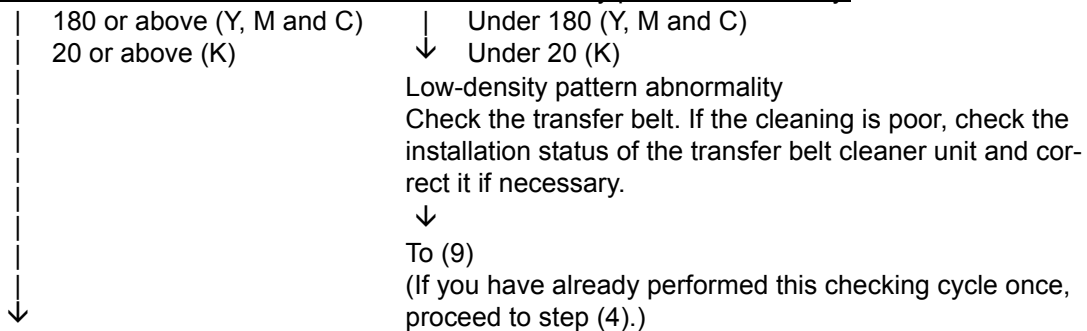
(3) <u>Check "Output value display of image quality sensor / High-density pattern (05-390-0 to 3)" to check if the high-density pattern abnormality occurs for each color and identify the color which pattern is abnormal. If the value is 628 or above, it is defined as high-density pattern abnormality.</u>

| Under 628 (Y, M, C and K) | 628 or above (Y, M, C and K) |

High-density pattern abnormality
• Check if the laser shutter is working properly.
   <Procedure>
   1) Take off the developer unit so that the laser shutter can be easily seen.
   * Clean around the laser shutter if the developer has been spilled over.
   2) While pressing the digital keys [0] and [3] simultaneously, turn the power ON.
   3) Key in "417".
   4) Press the [START] button repeatedly to open and close the shutter alternatively.
      - If the laser shutter does not open/close, check the shutter and correct it if necessary.
• Check if the developer unit has been installed properly.
1) Visually check the installation status of the developer unit, and correct it if there is any abnormality.

↓

To (9)
(If you have already performed this checking cycle once, proceed to step (4).)

(4) Set the values of "Image quality closed-loop control / Contrast voltage (08-556)" and "Image quality closed-loop control / Laser power (08-557)" to "0" (Invalid).

(5) Perform "Enforced performing of image quality open-loop control (05-394)".

(6) Output the image quality control test pattern (04-270) more than one time and the list print ([9][START]) in the adjustment mode (05), and check the patch of the color identified in step (1) to see if the image is abnormal.

```
|   Normal              Abnormal
|                       Abnormal image:
|                       Blank print, Solid print, White banding, Color banding, White spots,
|                       Poor transfer, Uneven image density, Faded image (low density),
|                       Uneven light distribution, Blotched image.
|                       *   Blank print: including when one of the YMCK colors is not printed.
|                                   ↓
|                       Correct the abnormal image.
|                                   ↓
↓                       Proceed to step (8).
```
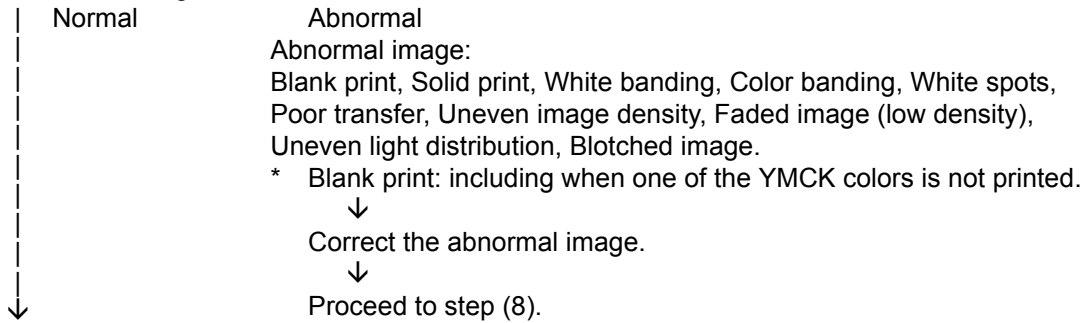
(7) Replace the image quality sensor or LGC board.

(8) Set the values of "Image quality closed-loop control / Contrast voltage (08-556)" and "Image quality closed-loop control / Laser power (08-557)" to "1" (Valid).

(9) Perform "Automatic initialization of image quality control (05-396)" and make sure it is completed normally. (Error [CE40] does not appear.) Then perform "Automatic gamma adjustment" (Chapter 3.7.1 and 3.8.1).

```
|                       |   When an error occurs:
|                                   ↓
↓                       Check and correct it accordingly.
```
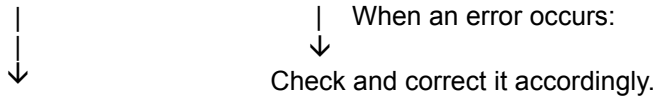
(10) Clear all "Image quality control abnormal detection counter Y to K display/0 clearing (08-573 to 576)".

(11) Check if any of the springs for supplying power to the transfer belt unit is deformed. Replace the spring if it is deformed.

[CE50] Temperature/humidity sensor abnormality

Is the connector CN342 on the LGC board or the connector of the temperature/humidity sensor disconnected?
Is the harness between the LGC board and the temperature/humidity sensor disconnected?
   ↓   YES→   Connect the connector securely. Replace the harness.
NO
1) Replace the temperature/humidity sensor.
2) Replace the LGC board.

[CE60] Drum thermistor Y abnormal
[CE90] Drum thermistor K abnormal

Is the harness between the LGC board and the drawer connector for developer unit disconnected?

Is the harness inside of the developer unit and the harness of the drum thermistor Y or K disconnected?

Is the connector CN341 on the LGC board, or the connector of the drum thermistor Y or K disconnected?

  ↓ YES→   Reconnect the connector. Replace the harness.

NO

1) Replace the drum thermistor Y or K.
2) Replace the LGC board.

[CE70] Drum drive switching abnormality

Is the drum switching motor (M11) operating properly? (Perform the output check: 03-240)

  | NO→   1) Check if the connector of the motor and joint connectors are disconnected.
  | 2) Check if the drum switching detection sensor (S19) is coming off its installation position.
  | 3) Check if the connector (CN339) on the LGC board is disconnected.
  | 4) Check if the LGC board is short circuited or open circuited.
  | 5) Check if the connector pins are disconnected or the harnesses are open circuited.
  | 6) Replace the drum switching motor.
  ↓   7) Replace the LGC board.

YES

Is the drum switching detection sensor (S19) working? (Perform the input check: 03-[FAX]ON/[0]/[E]…Highlighted in the color mode)

  | NO→   1) Check if the connector of the drum switching detection sensor and joint connectors are disconnected.
  | 2) Check if there is any foreign matter such as grease in the detection area of the drum switching detection sensor.
  | 3) Check if the connector (CN339) on the LGC board is disconnected.
  | 4) Check if the LGC board is short circuited or open circuited.
  | 5) Check if the connector pins are disconnected or the harnesses are open circuited.
  | 6) Replace the drum switching sensor.
  ↓   7) Replace the LGC board.

YES

Is the drum switching motor assembled in the drum drive unit able to be rotated smoothly by hand?

  | NO→   1) While reinstalling the drum switching motor, push it so that its gear will slightly move away from the engaging gear.
  | 2) Check the bracket in which the drum switching motor is installed. If it is deformed, replace it.
  ↓

YES

Is the drum switching guide able to be moved smoothly by hand after the drum switching motor has been removed?

  | NO→   Check if the slide area (guide, plate) of the drum switching guide is deformed or any foreign matter is attached to it. (Replace it if there is.)
  ↓

1) Check if the LGC board is short circuited or open circuited.
2) Replace the LGC board.

5.1.17   Copy process related service call

[C370] Transfer belt motor abnormality

(1)   Check if the connector of the transfer belt unit is not disconnected.
(2)   Is the transport belt unit working normally?
(3)   Check if the connector of the transfer belt motor is not disconnected.
(4)   Check if the connector CN341 on the LGC board is disconnected.
(5)   Check if the fuse on the switching power supply has blown.
(6)   Check if the transfer belt release detection sensor is working properly.
(7)   Replace the transfer belt motor.
(8)   Replace the LGC board.

[C380] Auto-toner error (K)
[C390] Auto-toner error (C)
[C3A0] Auto-toner error (M)
[C3B0] Auto-toner error (Y)

<Color toner low density>

When you check the printing status to find out that the color printing ratio is less than 5%, color toner low density might be the cause.
   Turn the code 08-2692 "Prevention of color toner low density / ON/OFF setting" to ON, and then set number of sheets to be judged at the code 08-2693 "Prevention of color toner low density / Judged number of sheets setting".

If the color printing ratio is 5% or more, check the following.

   <ins>Is the harness between the LGC board and the developer unit drawer connector open-circuited?</ins>
   <ins>Is any harness inside the developer unit or the auto-toner sensor harness open-circuited?</ins>
   <ins>Is the auto-toner sensor connector or the connector CN341 on the LGC board disconnected?</ins>
   │   NO →   Reconnect the connector. Replace the harness.
   ↓
   YES
   1) Replace the auto-toner sensor.
   2) Replace the LGC board.

[C970] High-voltage transformer abnormality

(1)   Is the main charger installed securely?
(2)   Check if the spring of high-voltage supply contact point is deformed.
(3)   Check if the needle electrode is broken or the main charger grid is deformed.
(4)   Check if any foreign matter is on the needle electrode or main charger grid.

[CD70] Used toner bag mixing paddle locked

Do the paddles in the used toner bag rotate? (Actually make them rotate.)

    NO →   1) Replace the used toner bag.

YES

Is the used toner motor rotating? (Perform the output check: 03-414)

    NO →   1) Check if the connector or the relay connector of the used toner motor is disconnected.
              2) Check if there is any damage or abnormality in the gears on the driving cascade of the used toner motor.
              3) Check if the connector CN342 on the LGC board is disconnected.
              4) Check if the connector pin is disconnected or the harness is broken.
              5) Check if the conductor pattern on the LGC board is short circuited or open circuited.
              6) Replace the used toner motor.
              7) Replace the LGC board.

YES

Is the used toner motor lock detection sensor operating normally? (Perform output check: 03-[FAX] ON/[2]/[G])

              To judge it is an error, check if the sensor detects each status of normal display and highlighted display.

    NO →   1) Check if the connector or the relay connector of the used toner motor lock detection sensor is disconnected.
              2) Check if the connector CN342 on the LGC board is disconnected.
              3) Check if the connector pin is disconnected or the harness is broken.
              4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
              5) Replace the used toner motor lock detection sensor.
              6) Replace the LGC board.

YES

1) Check if the conductor pattern on the LGC board is short circuited or open circuited.
2) Replace the LGC board.

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[CEC0] 2nd transfer roller position detection abnormality

Is the 2nd transfer roller contacted and released properly? (Perform the output check: 03-239)

NO → 1) Check if the connectors of the registration motor(M19) are disconnected.
2) Check if the connector CN332 on the LGC board is disconnected.
3) Check if the connector pins are disconnected or the wires of harnesses are open circuited.
4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
5) Replace the registration motor.
6) Replace the LGC board.

↓

YES

Is the 2nd transfer roller position detection sensor(S29) working properly?
(Perform the input check:03-[FAX]ON/[2]/[F])

NO → 1) Check if the connector or joint connectors of the 2nd transfer roller position detection sensor are disconnected.
2) Check if the connector CN337 on the LGC board is disconnected.
3) Check if the connector pins are disconnected or the wires of harnesses are open circuited.
4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
5) Replace the 2nd transfer roller position detection sensor.
6) Replace the LGC board.

↓

YES

1) Check if there is any abnormality with the mechanical section (sensor's actuator, etc.).
2) Check if the conductor pattern on the LGC board is short circuited or open circuited.
3) Replace the LGC board.

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5.1.18 Other service call

[F100] HDD format error

(1) Check if the HDD is mounted.
(2) Check if the specified HDD is mounted.
(3) Check if the connector pins of the HDD are bent.
(4) Check if the connectors CN109, CN130 on the SYS board is disconnected.
(5) Replace the harness.
(6) Format the HDD. (Key in "2" at 08-690.)
(7) Replace the HDD.
(8) Replace the SYS board.

[F101] HDD unmounted
[F102] HDD start error
[F103] HDD transfer time-out
[F104] HDD data error
[F105] HDD other error

(1) Check if the connectors of the HDD are disconnected.
(2) Check if the connector pins are disconnected or the wires of harnesses are open circuited.
(3) Perform the bad sector check (08-694). If the check result is OK, recover the data in the HDD. If the check result is failed, replace the HDD.
(4) Replace the SYS board.

[F106] Point and Print partition damage

(1) Turn the power OFF and start up the Setting Mode (08).
(2) Key in "662" and press the [START] button. (Partition clearing is performed.)
(3) Restart the equipment.
(4) Access TopAccess. Click the [Administration] tab, and then click the Maintenance Menu to open. Then install the "Point and Print" driver.

[F107] / SHR partition damage
Initialize the Electronic Filing using the Setting Mode (08-666).

[F108] /SHA partition damage
Initialize the shared folder using the Setting Mode (08-667).

[F120] Database abnormality

(1) Check that no jobs remain and rebuild the databases. (Perform 08-684.)
(2) If the error is not recovered, initialize the HDD. (Key in "2" at 08-690.)

  Notes:
  •   If you rebuild the databases with a job remaining, delete it after finishing.
  •   When "Rebuilding all databases (08-684)" is performed, all data in the Address Book and Mailbox are deleted. Make sure to back these up in advance of rebuilding and restore the data afterwards.

[F130] Invalid MAC address
Compare the serial number of the equipment with a number displayed in 08-995. If they are different, enter the correct serial number at 08-995.

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[F140] Accelerator ASIC format error

(1) Check if the connector on the SYS board is connected.
(2) Turn the power OFF and then start the setting mode (08).
(3) Key in "9046" and then press the [START] button.
     If "0" is displayed on the control panel, proceed to step (4).
     If "1" is displayed on the control panel, proceed to step (5).
(4) This is an IC26 error on the SYS board. Replace the SYS board.
    This may also be an IC1 error on the JSP board. Perform step (3) again after making replacement.
(5) This is an IC1 error on the JSP board. Replace the JSP board.

[F200] Data overwrite kit (GP-1060) is taken off

Clear the service call "F200". (Key in "0" at 08-633.)
*   When the Data overwrite kit (GP-1060) is taken off from the equipment, the service call "F200" occurs.

5.1.19 Error in Internet FAX / Scanning Function

> **Notes:**
> 1. When initializing the Electronic Filing (Setting Mode (08-666)), all data in the Electronic Filing are erased. Back up the data in the Electronic Filing by using the Electronic Filing Function of TopAccess before the initialization.
> 2. When initializing the shared folder (Setting Mode (08-667)), all data in the shared folder are erased. Back up the data in the shared folder by using Explorer before the initialization.
> 3. When formatting the HDD (Setting Mode (08-690)), all data in the shared folder, Electronic Filing, Address Book, template, etc. are erased. Back up these data before the initialization. Note that some of data cannot be backed up (P. 5-151).

[1] Internet FAX related error
[1C10] System access abnormality
[1C32] File deletion failure
Turn the power OFF and then back ON. Perform the job in error again.
If the error still occurs, first, check if there are no jobs existing and then perform the HDD formatting (08-690).

[1C11] Insufficient memory
When there are running jobs, perform the job in error again after the completion of the running jobs.
If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[1C12] Message reception error
[1C13] Message transmission error
Turn the power OFF and then back ON. Perform the job in error again.

[1C14] Invalid parameter
When a template is used, form the template again.
If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[1C15] Exceeding file capacity

Reset and extend the "Maximum send to E-mail/iFAX size" or reduce the number of pages and perform the job again.

[1C20] System management module access abnormality

[1C21] Job control module access abnormality

[1C22] Job control module access abnormality

Turn the power OFF and then back ON. Perform the job in error again.

Check if there are no other running jobs and perform the HDD formatting (08-690).

If the recovery is still not completed, replace the SYS board.

[1C30] Directory creation failure

[1C31] File creation failure

[1C33] File access failure

Check if the access privilege to the storage directory is writable.

Check if the server or local disk has a sufficient space in disk capacity.

[1C40] Image conversion abnormality

Turn the power OFF and then back ON. Perform the job in error again.

Replace the main memory and perform the job again.

[1C60] HDD full failure during processing

Reduce the number of pages of the job in error and perform the job again.

Check if the server or local disk has a sufficient space in disk capacity.

[1C61] Address Book reading failure

Turn the power OFF and then back ON. Perform the job in error again.

Reset the data in the Address Book and perform the job again.

[1C62] Memory acquiring failure

Check if there is any job being performed and perform the job in error again.

Turn the power OFF and then back ON. Perform the job in error again.

Replace the main memory and perform the job again.

[1C63] Terminal IP address unset

Reset the Terminal IP address.

Turn the power OFF and then back ON. Perform the job in error again.

[1C64] Terminal mail address unset

Reset the Terminal mail address.

Turn the power OFF and then back ON. Perform the job in error again.

[1C65] SMTP address unset

Reset the SMTP address and perform the job.

Turn the power OFF and then back ON. Perform the job in error again.

[1C66] Server time-out error

Check if the SMTP server is operating properly.

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[1C67] NIC time-out error
[1C68] NIC access error
[1C6D] System error
Turn the power OFF and then back ON. Perform the job in error again.
If the error still occurs, replace the SYS board.

[1C69] SMTP server connection error
Reset the login name or password of SMTP server and perform the job again.
Check if the SMTP server is operating properly.

[1C6A] HOST NAME error
Check if there is an illegal character in the device name.
Delete the illegal character and reset the appropriate device name.

[1C6B] Terminal mail address error
Check the SMTP Authentication method.
Check if there is an illegal character in the Terminal mail address.
Set the correct SMTP Authentication method or delete the illegal character and reset the appropriate
Terminal mail address, then perform the job again.

[1C6C] Destination mail address error
Check if there is an illegal character in the Destination mail address.
Delete the illegal character and reset the appropriate Destination mail address, then perform the job
again.

[1C70] SMTP client OFF
Set the SMTP valid and perform the job again.

[1C71] SMTP authentication ERROR
Check that SMTP authentication method, login name and password are correct, then perform authenti-
cation again.

[1C72] POP Before SMTP ERROR
Check that both the POP Before SMTP setting and POP3 setting are correct, then perform authentica-
tion again.

[1C80] Internet FAX transmission failure when processing E-mail job received
Reset the "Received InternetFax Forward".

[1C81] Onramp Gateway transmission failure
Reset the mail box.

[1C82] Internet FAX transmission failure when processing FAX job received
Reset the "Received Fax Forward".

[1CC1] Power failure
Check if the power cable is connected properly and it is inserted securely.
Check if the power voltage is unstable.

[2]   RFC related error

[2500] HOST NAME error (RFC: 500) / Destination mail address error (RFC: 500) / Terminal mail address error (RFC: 500)
[2501] HOST NAME error (RFC: 501) / Destination mail address error (RFC: 501) / Terminal mail address error (RFC: 501)
Check if the Terminal mail address and Destination mail address are correct.
Check if the mail server is operating properly.
Turn the power OFF and then back ON. Perform the job in error again.

[2503] Destination mail address error (RFC: 503)
[2504] HOST NAME error (RFC: 504)
[2551] Destination mail address error (RFC: 551)
Check if the mail server is operating properly.
Turn the power OFF and then back ON. Perform the job in error again.
If the error still occurs, replace the SYS board.

[2550] Destination mail address error (RFC: 550)
Check the state of the mail box in the mail server.

[2552] Terminal/Destination mail address error (RFC: 552)
Confirm the size on the mail server.
Transmit again in text mode or with lower resolution or divide the document and transmit again.
If the error still occurs, turn the power OFF and then back ON. Perform the job in error again.

[2553] Destination mail address error (RFC: 553)
Check if there is an illegal character in the mail box in the mail server.

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[3] Electronic Filing related error

[2B10] No applicable job error in Job control module
[2B11] JOB status abnormality
[2B20] File library function error
[2B30] Insufficient disk space in BOX partition
[2BC0] Fatal failure occurred
[2BC1] System management module resource acquiring failure
Erase some data in the Electronic Filing and perform the job in error again (in case of [2B30]).
Ask the administrator if e-Filing has been disabled. (In case of [2CC1])
Turn the power OFF and then back ON. Perform the job in error again.
Check if there are no other running jobs and perform the HDD formatting (08-690).
If the recovery is still not completed, replace the SYS board.

[2B50] Image library error
[2B90] Insufficient memory capacity
Turn the power OFF and then back ON. Perform the job in error again.
If the error still occurs, replace the main memory.
Perform the job in error again.
Check if there are no other running jobs and initialize the Electronic Filing using the Setting Mode (08-666).

[2B31] Status of specified Electronic Filing or folder is undefined or being created/deleted
Check if the specified Electronic Filing or folder exists. (If no, this error would not occur.)
Delete the specified Electronic Filing or folder.
Perform the job in error again.
If the specified Electronic Filing or folder can not be deleted, initialize the Electronic Filing using the Setting Mode (08-666).

[2B32] Electronic Filing printing failure: Specified document can not be printed because of client's access (being edited, etc.)
Check if the specified document exists. (If no, this error would not occur.)
Delete the specified document.
Perform the job in error again.
If the specified document can not be deleted, initialize the Electronic Filing using the Setting Mode (08-666).

[2B51] List library error
Check if the Function List can be printed out.
If it can be printed out, perform the job in error again.
If it can not be printed out, replace the main memory.
If the recovery is still not completed, perform the HDD formatting (08-690).

[2BA0] Invalid Box password
Check if the password is correct.
Reset the password.
When this error occurs when printing the data in the Electronic Filing, perform the printing with the administrator's password.
If the recovery is still not completed or in case of invalid password for the operation other than printing (opening the file, etc.), initialize the Electronic Filing using the Setting Mode (08-666).

[2BA1] A paper size or a color mode not supported in the Electronic Filing function is being selected.
Check the paper size or color mode.

[2BB1] Power failure
[2BD0] Power failure occurred during restoring of Electronic Filing
Check if the power cable is connected properly and it is inserted securely.
Check if the power voltage is unstable.

[2BE0] Machine parameter reading error
Turn the power OFF and then back ON. Perform the job in error again.

[2BF0] Exceeding maximum number of pages
Reduce the number of inserting pages and perform the job again.

[2BF1] Exceeding maximum number of documents
Backup the documents in the box or folder to PC or delete them.

[2BF2] Exceeding maximum number of folders
Backup the folders in the box or folder to PC or delete them.

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[4] Remote scanning related error

[2A20] System management module resource acquiring failure
Retry the job in error.
If the error still occurs, turn the power OFF and then back ON, then retry the job in error.

[2A40] System error
Turn the power OFF and then back ON, then retry the job in error.

[2A51] Power failure
Check if the power cable is properly connected.
Check if the power supply voltage is inconstant.

[5]   E-mail related error

[2C10] System access abnormality
[2C32] File deletion failure
Turn the power OFF and then back ON. Perform the job in error again.
If the error still occurs, first, check if there are no jobs existing and then perform the HDD formatting (08-690).

[2C11] Insufficient memory
When there are running jobs, perform the job in error again after the completion of the running jobs.
If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[2C12] Message reception error
[2C13] Message transmission error
Turn the power OFF and then back ON. Perform the job in error again.

[2C14] Invalid parameter
When a template is used, form the template again.
If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[2C15] Exceeding file capacity
Reset and extend the "Maximum send to E-mail/iFAX size" or reduce the number of pages and perform the job again.

[2C20] System management module access abnormality
[2C21] Job control module access abnormality
[2C22] Job control module access abnormality
Turn the power OFF and then back ON. Perform the job in error again.
Check if there are no other running jobs and perform the HDD formatting (08-690).
If the recovery is still not completed, replace the SYS board.

[2C30] Directory creation failure
[2C31] File creation failure
[2C33] File access failure
Check if the access privilege to the storage directory is writable.
Check if the server or local disk has a sufficient space in disk capacity.

[2C40] Image conversion abnormality
[2C62] Memory acquiring failure
Turn the power OFF and then back ON. Perform the job in error again.
Replace the main memory and perform the job again.

[2C43] Encryption error
Turn the power OFF and then back ON. Perform the job in error again.

[2C44] Encryption PDF enforced mode error
Reset the encryption and perform the job in error again.
If an image file not encrypted is created, consult your administrators.

[2C60] HDD full failure during processing
Reduce the number of pages of the job in error and perform the job again.
Check if the server or local disk has a sufficient space in disk capacity.

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[2C61] Address Book reading failure
Turn the power OFF and then back ON. Perform the job in error again.
Reset the data in the Address Book and perform the job again.

[2C63] Terminal IP address unset
Reset the Terminal IP address.
Turn the power OFF and then back ON. Perform the job in error again.

[2C64] Terminal mail address unset
Reset the Terminal mail address.
Turn the power OFF and then back ON. Perform the job in error again.

[2C65] SMTP address unset
Reset the SMTP address and perform the job.
Turn the power OFF and then back ON. Perform the job in error again.

[2C66] Server time-out error
Check if the SMTP server is operating properly.

[2C67] NIC time-out error
[2C68] NIC access error
[2C6D] NIC system error
Turn the power OFF and then back ON. Perform the job in error again.
If the error still occurs, replace the SYS board.

[2C69] SMTP server connection error
Reset the login name and password of SMTP server and perform the job again.
Check if the SMTP server is operating properly.

[2C6A] HOST NAME error (No RFC error)
Check if there is an illegal character in the device name.
Delete the illegal character and reset the appropriate device name.

[2C6B] Terminal mail address error
Check the SMTP Authentication method.
Check if there is an illegal character in the Terminal mail address.
Set the correct SMTP Authentication method or delete the illegal character and reset the appropriate
Terminal mail address, then perform the job again.

[2C6C] Destination mail address error (No RFC error)
Check if there is an illegal character in the Destination mail address.
Delete the illegal character and reset the appropriate Destination mail address, then perform the job
again.

[2C70] SMTP client OFF
Set the SMTP valid and perform the job again.

[2C71] SMTP authentication ERROR
Check that SMTP authentication method, login name and password are correct, then perform authentication again.

[2C72] POP Before SMTP ERROR

Check that both the POP Before SMTP setting and POP3 setting are correct, then perform authentication again.

[2C80] E-mail transmission failure when processing E-mail job received

Reset the "Received InternetFax Forward".

[2C81] Process failure of FAX job received

Reset the setting of the mail box or "Received InternetFax Forward".

[2CC1] Power failure

Check if the power cable is connected properly and it is inserted securely.
Check if the power voltage is unstable.

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[6]   File sharing related error

[2D10] System access abnormality
[2D32] File deletion failure
[2DA6] File deletion failure
[2DA7] Resource acquiring failure
Delete some files in the shared folder by using Explorer because of automatic/manual file deletion fail-
ure (in case of [2DA6])
Turn the power OFF and then back ON. Perform the job in error again.
If the error still occurs, first, check if there are no jobs existing and then perform the HDD formatting (08-
690).

[2D11] Insufficient memory
When there are running jobs, perform the job in error again after the completion of the running jobs.
If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[2D12] Message reception error
[2D13] Message transmission error
Turn the power OFF and then back ON. Perform the job in error again.

[2D14] [2D61] Invalid parameter
When a template is used, form the template again.
If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[2D15] Exceeding the maximum size for file sharing
Divide the file in error into several files and retry. Or retry the job in a single-page format.

[2D20] System management module access abnormality
[2D21] Job control module access abnormality
[2D22] Job control module access abnormality
[2D60] File library access abnormality
Turn the power OFF and then back ON. Perform the job in error again.
Check if there are no other running jobs and perform the HDD formatting (08-690).
If the recovery is still not completed, replace the SYS board.

[2D30] Directory creation failure
[2D31] File creation failure
[2D33] File access failure
Check if the access privilege to the storage directory is writable.
Check if the server disc, local disk or USB storage device has a sufficient space in capacity.

[2D40] Image conversion abnormality
Turn the power OFF and then back ON. Perform the job in error again.
Replace the main memory and perform the job again.
If the error still occurs, first, check if there are no jobs existing and then initialize the shared folder using
the Setting Mode (08-667).

[2D43] Encryption error
Turn the power OFF and then back ON. Perform the job in error again.

[2D44] Encryption PDF enforced mode error
Reset the encryption and perform the job in error again.
If an image file not encrypted is created, consult your administrators.

[2D62] File server connection error

Check the IP address or path of the server.

Check if the server is operating properly.

[2D63] Invalid network path

Check the network path.

If the path is correct, turn the power OFF and then back ON, and perform the job again.

[2D64] Login failure

Reset the login name and password. Perform the job.

Check if the account of the server is properly set up.

[2D65] Exceeding documents in folder: Creating new document is failed

Delete some documents in the folder.

[2D66] Storage capacity full failure during processing

Reduce the number of pages of the job in error or set the resolution mode low, and perform the job again.

Check if the server disc, local disk or USB storage device has a sufficient space in capacity.

[2D67] FTP service not available

Check if the setting of FTP service is valid.

[2D68] File sharing service not available

Check if the setting of SMB is valid.

[2DC1] Power failure

Check if the power cable is connected properly and it is inserted securely.

Check if the power voltage is unstable.

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[7]   E-mail reception related error

[3A10] [3A11] [3A12] E-mail MIME error
The format of the mail is not corresponding to MIME 1.0.
Request the sender to retransmit the mail in the format corresponding to MIME 1.0.

[3A20] [3A21] [3A22] E-mail analysis error
[3B10] [3B11] [3B12] E-mail format error
[3B40] [3B41] [3B42] E-mail decode error
These errors occur when the mail data is damaged from the transmission to the reception of the mail.
Request the sender to retransmit the mail.

[3A30] Partial mail time-out error
The partial mail is not received in a specified period of time.
Request the sender to retransmit the partial mail, or set the time-out period of the partial mail longer.

[3A40] Partial mail related error
The format of the partial mail is not corresponding to this equipment.
Request the sender to remake and retransmit the partial mail in RFC2046 format.

[3A50] [3A51] [3A52] Insufficient HDD capacity error
[3A60] [3A61] [3A62] Warning of insufficient HDD capacity
These errors occur when the HDD capacity is not sufficient for a temporary concentration of the jobs, etc.
Request the sender to retransmit after a certain period of time, or divide the mail into more than one.
Insufficient HDD capacity error also occurs when printing is disabled for no printing paper.
In this case, supply the printing paper.

[3A70] Warning of partial mail interruption
This error occurs when the partial mail reception setting becomes OFF during the partial mail reception.
Reset the partial mail reception setting ON and then request the sender to retransmit the mail.

[3A80] [3A81] [3A82] Partial mail reception setting OFF
Reset the partial mail reception setting ON and then request the sender to retransmit the mail.

[3B20] [3B21] [3B22] Content-Type error
The format of the attached file is not supported by this equipment (TIFF-FX).
Request the sender to retransmit the file in TIFF-FX.

[3B30] [3B31] [3B32] Charset error
These errors occur when the standard of the Charset is other than ISO-8559-1 or ISO-8559-2.
Request the sender to reformat the Charset into either of the standards described above and then retransmit the mail.

[3C10] [3C11] [3C12] [3C13] TIFF analysis error
These errors occur when the mail data is damaged from the transmission to the reception of the mail, or when the format of the attached file is not supported by this equipment (TIFF-FX).
Request the sender to retransmit the mail.

[3C20] [3C21] [3C22] TIFF compression error
The compression method of the TIFF file is not acceptable for this equipment. (Acceptable: MH/MR/MMR/JBIG)
Request the sender to retransmit the file in the acceptable compression method.

[3C30] [3C31] [3C32] TIFF resolution error

The resolution of the TIFF file is not acceptable for this equipment. (Acceptable: 200 x 100, 200 x 200, 200 x 400, 400 x 400, 300 x 300 or equivalent)
Request the sender to retransmit the file in the acceptable resolution.

[3C40] [3C41] [3C42] TIFF paper size error

The paper size of the TIFF file is not acceptable for this equipment. (Acceptable: A4, B4, A3, B5, LT, LG, LD or ST)
Request the sender to retransmit the file in the acceptable paper size.

[3C50] [3C51] [3C52] Offramp destination error

These errors occur when the FAX number of the offramp destination is incorrect.
Request the sender to correct the FAX number of offramp destination and then retransmit the mail.

[3C60] [3C61] [3C62] Offramp security error

These errors occur when the FAX number of the offramp destination is not on the Address Book.
Check if the FAX number of the offramp destination is correctly entered or the number has not been changed.

[3C70] Power failure error

Check if the mail is recovered after turning ON the power again.
Request the sender to retransmit the mail if it is not recovered.

[3D10] Destination address error

Check if the setting of the server or DNS is correct. Correct if any of the setting is incorrect.
When the content of the setting is correct, confirm the sender if the destination is correct.

[3D20] Offramp destination limitation error

Inform the sender that the transfer of the FAX data over 40 is not supported.

[3D30] FAX board error

This error occurs when the FAX board is not installed or the FAX board has an abnormality.
Check if the FAX board is correctly connected.

[3E10] POP3 server connection error

Check if the IP address or domain name of the POP3 server set for this equipment is correct, or check if POP3 server to be connected is operating properly.

[3E20] POP3 server connection time-out error

Check if POP3 server to be connected is operating properly.
Check if the LAN cable is correctly connected.

[3E30] POP3 login error

Check if the POP3 server login name and password set for this equipment are correct.

[3E40] POP3 Login Type ERROR

Check that the login type (Auto, POP3 or APOP) to the POP3 server is correct.

[3F00] [3F10] [3F20] [3F30] [3F40] File I/O error

These errors occur when the mail data is not transferred properly to the HDD.
Request the sender to retransmit the mail.
Replace the HDD if the error still occurs after retransmission.

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5.1.20 Printer function error

[4031] HDD full failure during printing
Reduce the number of pages of the job in error and perform the job again.
Check if the server or local disk has a sufficient space in disk capacity.

[4032] Private-print-only error
Select "Private", and then perform the printing again.

[4033] Printing data storing limitation error
Select "Print", and then perform the printing again.

[4034] e-Filing storing limitation error
Select "Print", and then perform the printing again.

[4035] Local file storing limitation error
Select "Remote" (SMB/FTP) for the destination of the file to save.

[4036] User authentication error
Perform the authentication or register as a user, and then perform the printing again.

[4040] Not being authorized to perform JOB
Confirm the administrator for the JOB authorization.

[4050] Problem in LDAP server connection or LDAP server authorization settings
Confirm the administrator for the LDAP server connection or LDAP server authorization settings.

[4300] Job execution error due to functional restrictions
USB direct printing cannot be performed because the function is restricted by the self-diagnosis. Check the self-diagnosis setting.

[4301] File conversion error
The format of this file (other than PDF and JPEG) is not supported in USB direct printing, or the file is invalid. Check the file.

[4310] Double-sign encoding error
Printing using this function cannot be performed due to a decoding process error which occurs because the PDF file is encrypted incorrectly or encrypted in a language not supported.

[4311] Printing not permitted
This file cannot be printed using this function due to the encrypted PDF file not permitting printing or permitting it only with a low resolution.

[4312] Password mismatching
The entered password is neither matched with a user password nor an owner password. Check the password again.

[A221] Print job cancellation
This message appears when deleting the job on the screen.

[A222] Print job power failure
When there are running jobs, perform the job in error again after the completion of the running jobs.
If the error still occurs, turn the power OFF and then back ON, and perform the job again.

[A290] Limit over error (black)
[A291] Limit over error (black)
[A292] Limit over error (black)
Clear the limit counter (black).

[A2A0] Limit over error (color)
[A2A1] Limit over error (color)
Clear the limit counter (color), or authorize users so that they can perform color printing.

[A2A2] Limit over error (color)
Clear the limit counter (color).

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5.1.21 TopAccess related error

[5110] Toner cartridge detection error

(1) Check if the toner cartridge is installed properly.
(2) Check if the toner cartridge detection sensor operates properly.

[5212] Time for cleaning of the slit glass and main charger

(1) Clean the slit glass and main charger.
(2) If the message is not cleared after the cleaning, check if there is any detection error, breakage or poor connection of the needle electrode cleaner detection sensor.

[5BD0] Power failure during restoration

(1) Check if the power cable is connected properly and is inserted securely.
(2) Check if the power voltage is unstable.
(3) Reattempt the restoration of the database (Address Book, templates, F-code (Mailbox) or user information).

[5C10] FAX Unit attachment error

(1) Check if the FAX Unit is attached.
(2) Check if there is any damage or abnormality on the FAX board.
(3) Check if the connector on the FAX board is connected properly.

[5C11] Network FAX transmission error
The address specified for the network FAX is not registered on the Address Book. Register it.

[5C20] Data import from TopAccess succeeded
Data (Address book, department or user information) have been imported successfully. No trouble-shooting is required.

[5C21] Error in data import from TopAccess
Data import failed because the specified file (Address Book, department or user information) is incorrect or damaged. Check if the file is incorrect or damaged, and then reattempt the import.

[5C22] Error on data import from TopAccess

(1) Data import failed because the specified file (Address Book, department or user information) is incorrect or damaged. Check if the file is incorrect or damaged, and then reattempt the import.
(2) Check that no jobs remain and rebuild the databases (Perform 08-684).
(3) If the error is not recovered, initialize the HDD (Key in "2" at 08-690).

   Notes:
- If you rebuild the databases with a job remaining, delete it after finishing.
- When "Rebuilding all databases (08-684)" is performed, all the data in the Address Book and Mailbox are deleted. If you back up the data in advance, they will be recovered by restoring them after rebuilding the database.

5.2　Troubleshooting for the Image

1)　Color deviation

<Symptoms>
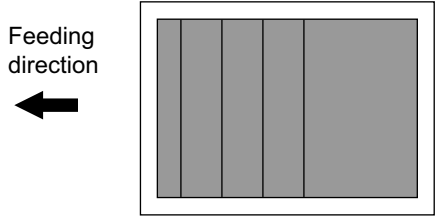
Original mode	Location	Phenomena	
All modes	Color blurred in outline of white text or illustration on a colored background	Color deviation→	
Text Mode Text/Photo Mode	Outline in black text on a colored background	White void→	
Photo Mode Map Mode	Color blurred in outline of line or text	Color deviation→	
		Fig. 5-1	

Cause/Section	Step	Check Item	Measure	Remark
	1	Test printing (A3/LD)	Output the built-in grid pattern	For the following checks
Drum rotation abnormality	2	Check the drum motor operation in the test mode (03) to see if there is any rotation abnormality of the drum.	Replace the drum motor.	
	3	Check the drum motor operation in the test mode (03) to see if there is any rotation abnormality of the drum.	Reconnect the connectors. Replace the harnesses. Replace the LGC board.	
Inadequate drum motor rotation speed	4	Check the value set for main motor rotation speed. (Is the value significantly different from the default value?)	Reset drum motor speed to 128.	
Drum coupling and coupling on the equipment side	5	Loose coupling, damage, deformation	Check if they are installed properly or replace the couplings.	
Transfer belt	6	Deformation or damage of the transfer belt or stains on the transfer belt.	Clean or replace the transfer belt.	
	7	Are the gears on the transfer belt side loosen, damaged or deformed?	Tighten the screws if they loosen, or replace the gears.	
	8	Stain or damage of the drive roller	Clean or replace the drive roller.	
	9	Does the rib of the transfer belt overlap the collar on both edge of the drive roller?	Adjust the position of the transfer belt.	
	10	Is the belt edge damaged or stained?	Clean or replace the transfer belt.	
	11	Peeling of the cleaning blade (Large driving load)	Replace the cleaning blade.	
	12	Is the transfer belt unit installed normally? (Is the unit properly grounded?)	Check and correct the installing.	
Laser optical unit	13	Check the grid pattern. Are the lines of the primary scanning direction warped?	Replace the laser optical unit.	Fθ lens characteristic defect or reflection mirror warp
High-voltage transformer	14	Check the connection of the high-voltage supply terminal of the 1st or 2nd transfer rollers.	Correct or replace the terminal if it is loosened or damaged.	

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2) Uneven pitch and jitter image
<Symptoms>

Original mode	Location	Phenomena	
All modes	Occurs cyclically at right angles to paper feeding direction	Uneven pitch	Feeding direction ← **Fig. 5-2**

Cause/Section	Step	Check Item	Measure	Remark
	1	Test printing (A3/LD)	Output the built-in halftone and grid patterns.	For the following checks
Drum	2	Are there uneven pitches of approx. 94 mm?	Replace the drum.	
	3	Is there any damage on the drum surface?	Clean or replace the drum.	
Drum drive	4	Is there any dent, damage or deformation on the gears of the drum drive unit?	Replace the gears of the drum drive unit.	
Drum rotation abnormality	5	Check the drum motor operation in the test mode (03) to see if there is any rotation abnormality of the drum.	Reconnect the connectors. Replace the harnesses. Replace the LGC board. Replace the drum motor.	
Developer sleeve	6	Are there uneven pitches of approx. 28 mm?	Replace the developer sleeve.	
Inadequate drum motor rotation speed	7	Check the value set for drum motor rotation speed. (Is the value significantly different from the default value?)	Reset drum motor speed to 128.	
Drum coupling	8	Loose coupling, damage, deformation	Replace the couplings.	
Transfer belt	9	Deformation or damage of the transfer belt	Replace the transfer belt.	Check the halftone pattern. (Uneven pitch: approx. 90 mm)
	10	Stain or damage of the drive roller	Clean or replace the drive roller.	Check the halftone pattern. (Uneven pitch: approx. 90 mm)
	11	Large driving load due to the peeling of the cleaning blade	Replace the cleaning blade.	
Transfer belt drive	12	Are there uneven pitches of approx. 1.5 mm?	Adjust the gap between the TBU drive gears. (Ref. Chap. 3.15) Replace the TBU drive gears.	
	13	Is the gap between the TBU drive gears adjusted properly?		
	14	Is there any dent, damage or deformation on the TBU drive gears?		

Cause/Section	Step	Check Item	Measure	Remark
Laser optical unit	15	Check the halftone pattern to see if there are uneven pitches of approx. 0.3 mm, 0.8 mm, 1.1 mm, 1.5 mm each in the whole image.	Replace the laser optical unit.	Check the halftone pattern. (Uneven pitch: approx. 0.3 mm, 0.8 mm, 1.1 mm, 1.5 mm)
Registration guide	16	Do jittery images occur in certain positions on the second and subsequent pages? (One or two streaks on each page.)	Replace the cams of the registration guide.	
	17	Is there any dent, damage, deformation, wear or malfunction on the front and rear side cams of the registration guide?		
Feeding drive	18	Are there uneven pitches of approx. 1.1 mm?	Replace the gears of the feed/transport gear unit and the first drawer transport clutches.	
	19	Is there any dent, damage or deformation on the gear of the feed/transport gear unit and the first drawer transport clutch (CLT1 or CLT2)?		
Fusing drive	20	Are there uneven pitches of approx. 3.1 mm?	Check if the fuser unit is installed correctly. Replace the drive gear of the pressure roller.	
	21	Is the fuser unit properly installed in the equipment?		
	22	Is there any dent, damage or deformation on the drive gears of the pressure roller?		
EPU drive	23	Are there uneven pitches of approx. 0.8 mm or 1.2 mm?	Replace the developer drive unit, developer sleeve and drive gears of the mixer.	
	24	Is there any dent, damage or deformation on the developer drive unit, developer sleeve and drive gears of the mixer?		

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3) Poor image density, color reproduction and gray balance

Check gray balance.　　　　　　　　　　　　　　Check image density.

Check color reproduction.　　　　　　　　　　Check color reproduction.
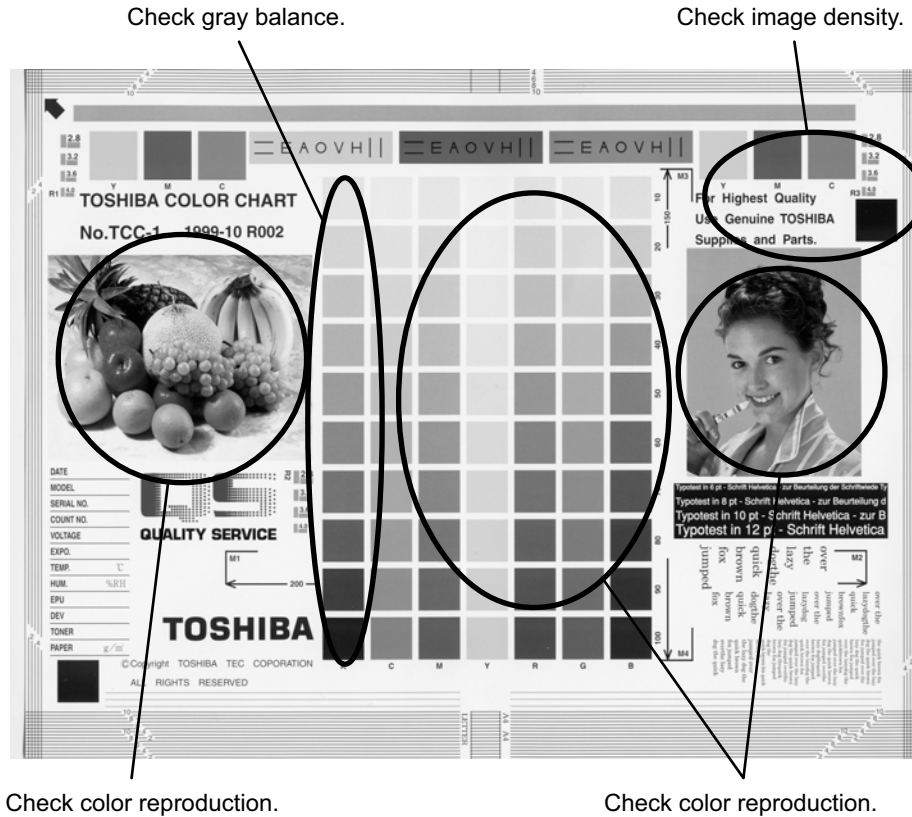
Fig. 5-3

Cause/Section	Step	Check items	Measures	Remarks
Density / Color reproduction / Gray balance	1	Check the image density / color reproduction / gray balance.	Perform the enforced performing of image quality closed-loop control (05-395) and then automatic gamma adjustment.	
Printer density	2	Check the density of printer output image.	Output the test patterns and check them. Color: using 04-231 for each color Black: using 04-113	See step 5 if defect occurs.
Scanner	3	Check if the original glass, mirrors or lens is dirty.	Clean it.	
Parameter adjustment value	4	Check the image processing parameters.	Adjust the color balance (color). Adjust the image density.	
Printer output image abnormal	5	Is there any faded image (low density)?	Perform the troubleshooting procedures against the faded image.	
		Is there any fog in the background?	Perform the troubleshooting procedures against the background fogging.	
		Is there any blotch image?	Perform the troubleshooting procedures against the blotch image.	
		Is there any poor transfer?	Perform the troubleshooting procedures against the poor transfer.	
		Is there any poor cleaning of the transfer belt? (Check inside the equipment.)	Correct the transfer belt area. (Refer to Service Manual)	

4) Background fogging

Fig. 5-4

Cause/Section	Step	Check items	Measures	Remarks
Density repro-duction	1	Check the gradation reproduction.	Perform the forced performing of image quality closed-loop control (05-395) and then automatic gamma adjustment.	
Printer section	2	Check the printer output image.	Output the test patterns and check them. Color: using 04-231 for each color Black: using 04-113	See step 6 if defects occur.
Scanner	3	Check if the original glass, mirrors or lens is dirty.	Clean it.	
Parameter adjustment value	4	Check the image processing parameters.	Check the value of offsetting adjustment for background pro-cessing (color), background adjust-ment (black) and background peak adjustment for range correction (black).	
	5	Adjust the image processing parameters.	While checking the above encircled image, adjust the reproduction level by the offsetting adjustment for background processing (color), background adjustment (black) and background peak adjustment for range correction (black).	
Cover	6	Is the cover installed properly? (Is the drum exposed to the exter-nal light?)	Correct it.	
Auto-toner	7	Is the auto-toner sensor normal?	Check the operation of auto-toner sensor and readjust.	
	8	Is the toner supply operating con-stantly?	Check the motor and circuits.	

Cause/Section	Step	Check items	Measures	Remarks
Main charger output	9	Is the main charger output normal?	Check the circuits.	
Developer bias	10	Is the developer bias proper?	Check the circuits.	
Developer unit	11	Is the contact between the drum and developer material proper?	Check the doctor-to-sleeve gap and pole position.	
Developer material/Toner/Drum	12	Using the specified developer material, toner and drum?	Use the specified developer material, toner and drum.	
	13	Have the developer material and drum reached their PM life?	Replace the developer material and drum.	
	14	Is the storage environment of the toner cartridge 35oC or less without dew?	Use the toner cartridge stored in the environment within specification.	
Drum cleaning blade	15	Is the drum cleaned properly?	Check the drum cleaning blade pressure.	
Transfer belt cleaning blade	16	Is the transfer belt cleaning blade in proper contact with the transfer belt?	Take off the transfer belt and check if the transfer belt cleaning blade pressure spring and pressure hook are installed properly.	
Toner dusting	17	Is the toner accumulated on the seals of the developer unit?	Remove the toner and clean the seals.	

*   If the trouble is not solved at the step 1 and the step 2 or followings (excluding the parameter adjustment) are performed, make sure to perform "Enforced performing of image quality closed-loop control" and then "Automatic gamma adjustment" after taking a measure.

5) Moire/lack of sharpness
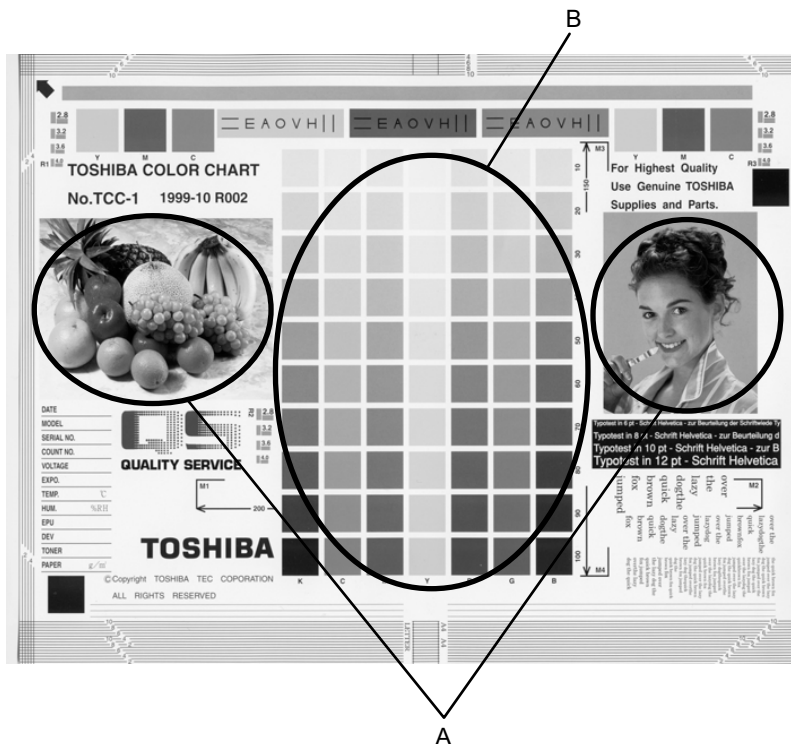
Fig. 5-5

Moire

Cause/Section	Step	Check items	Measures	Remarks
Density repro-duction	1	Check the gradation reproduction.	Perform the forced performing of image quality closed-loop control (05-395) and then automatic gamma adjustment.	
Parameter adjustment value	2	Check the image process-ing parameters.	Check the sharpness adjustment value.	
	3	Adjust the image process-ing parameters.	While checking the above encir-cled images A and B, decrease moire by sharpness adjustment.	
Printer section	4	Check the printer output image.	Output the test patterns and check them. Color: using 04-231 for each color Black: using 04-113	When defects occur, perform the corre-sponding trouble-shooting procedures.

Lack of sharpness

Cause/Section	Step	Check items	Measures	Remarks
Density repro-duction	1	Check the gradation reproduction.	Perform the forced performing of image quality closed-loop control (05-395) and then automatic gamma adjustment.	
Parameter adjustment value	2	Check the image process-ing parameters.	Check the sharpness adjustment value.	
	3	Adjust the image process-ing parameters.	While checking the above encir-cled image A, increase sharpness by sharpness adjustment.	

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*   If the trouble is not solved at the step 1 and the step 2 or followings (excluding the parameter adjustment) are performed, make sure to perform "Enforced performing of image quality closed-loop control" and then "Automatic gamma adjustment" after taking a measure.

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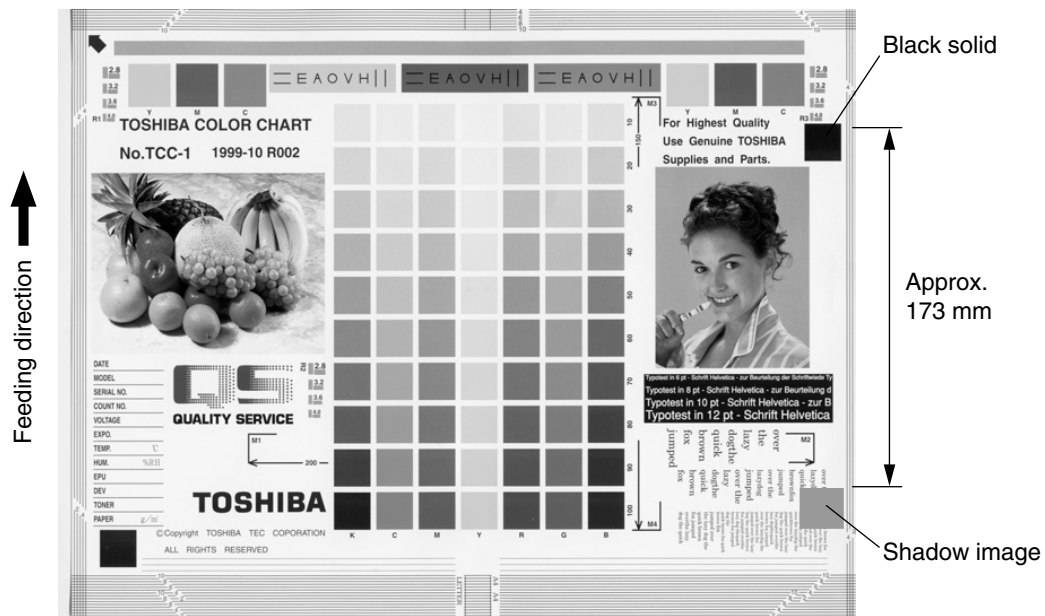
6) Toner offset

Fig. 5-6

Toner offset (Shadow image appears approx. 173 mm behind the high density image.)

Cause/Section	Step	Check items	Measures	Remarks
Fuser unit	1	Is the pressure between the fuser belt and pressure roller proper?	Check the pressure removal parts and pressure mechanism.	
	2	Is there scratch on the fuser belt or pressure roller surface?	Replace the fuser belt or the pressure roller.	
	3	Has the fuser belt or pressure roller reached its PM life?	Replace the fuser belt or the pressure roller.	
	4	Is the fuser roller temperature proper?	Check and correct the control circuit.	
Paper	5	Is the paper type corresponding to its mode?	Use the proper type of paper or select the proper mode.	
	6	Using recommended paper?	Use the recommended paper.	
Developer material	7	Is the specified developer used?	Use the specified developer and toner.	
Scanner	8	Are the mirrors, original glass or lens dirty?	Clean them.	
Image quality control	9	Is the control activated?	Check the image quality control related codes.	
Density	10	Is the density too high?	Perform the forced performing of image quality closed-loop control (05-395) and then automatic gamma adjustment.	
Printer density	11	Check the density of printer output image.	Output the test patterns and check them. Color: using 04-231 for each color Black: using 04-113	When defects occur, perform the corresponding troubleshooting procedures.

7) Blurred image
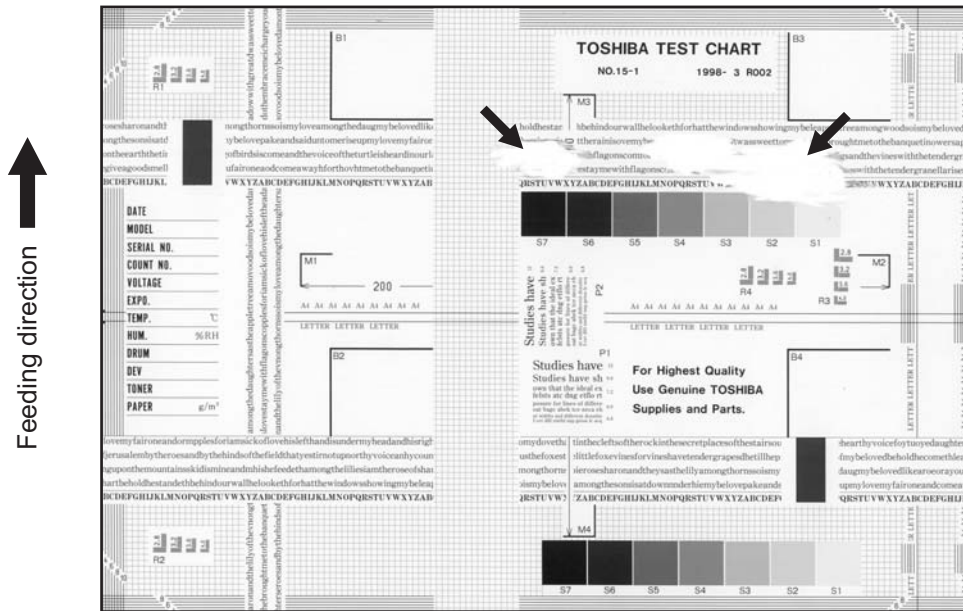
Fig. 5-7

Cause/Section	Step	Check items	Measures
Scanner	1	Is the scanner bedewed?	Clean it.
Drum	2	Is the drum bedewed or dirty?	Wipe the drum with dry cloth. * Be sure never use alcohol or other organic solvents because they have bad effect on the drum.
Ozone exhaust	3	Is the ozone exhaust fan operating properly?	Check the connection of the connector.
	4	Is the ozone filter stained or damaged?	Replace it.

8) Poor fusing
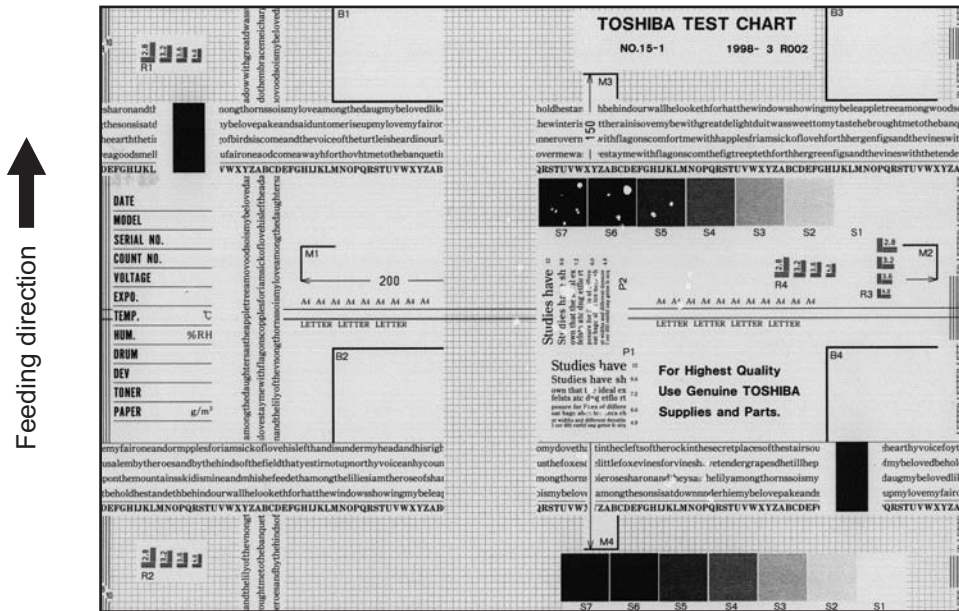
Fig. 5-8

Cause/Section	Step	Check items	Measures
Electric power/ control abnormal	1	Is the connector in proper contact with the equipment?	Correct it.
	2	Is the heater lamp control circuit (switching power supply) working properly?	Replace the switching power supply.
	3	Are the connectors on the LGC board and joint connectors connected properly?	Reconnect them.
	4	Is the LGC board normal?	Replace the LGC board.
	5	Is the harness connected with the LGC board short circuited or open circuited?	Replace the harness.
Pressure between fuser belt and pressure roller improper	6	Are the pressure springs working properly?	Check/adjust the pressure springs.
Fuser roller temperature	7	Is the temperature of fuser roller too low?	Check/correct the setting value of fuser roller temperature. Clean or replace the thermopiles. Check/correct the related circuit.
Developer material and toner	8	Using the specified developer material and toner?	Use the specified developer material and toner.
Paper	9	Is the paper damp?	Change the paper.
	10	Is the paper type corresponding to its mode?	Use the proper type of paper or select the proper mode.
	11	Using the recommended paper?	Use the recommended paper.

9) Blank print

Feeding direction
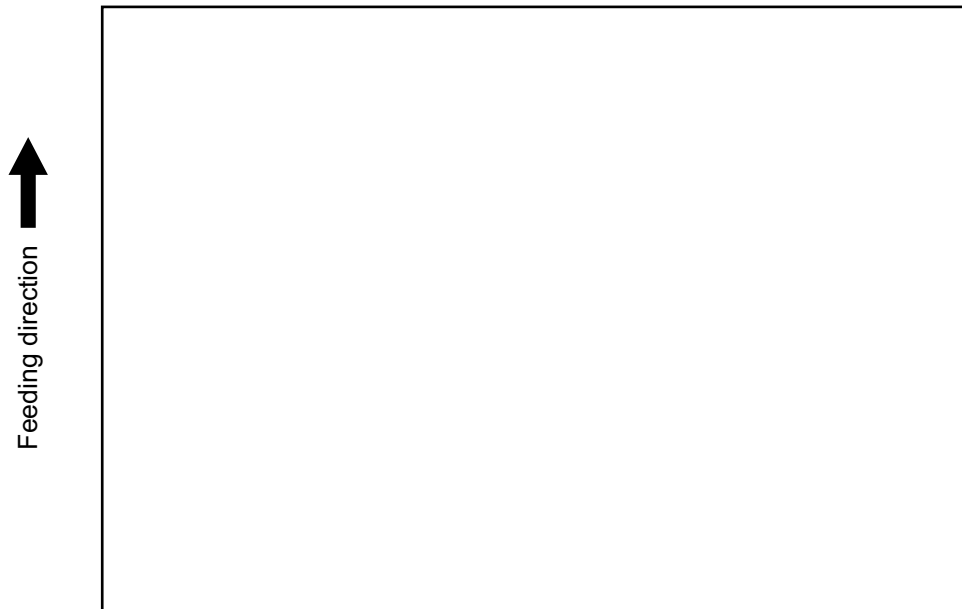
Fig. 5-9

Cause/Section	Step	Check items	Measures
High-voltage transformer (1st/2nd transfer roller and developer bias)	1	Is the high-voltage transformer output defective?	Adjust the output and correct the circuit, or replace the transformer.
	2	Are the connector of the high-voltage harness securely connected? Is the harness open circuited?	Reconnect the harness securely. Replace the high-voltage harness.
Developer unit	3	Is the developer unit installed securely?	Check/correct the developer sleeve coupling engaging.
	4	Do the developer sleeve and mixer rotate?	Check/correct the developer drive system.
	5	Is the developer unit filled up with the developer material?	Check that the charger grid is not dirty. (The developer material may be reduced due to the carrier offset.)
	6	Is the developer material properly transported?	Remove foreign matter from the developer material, if any.
	7	Is there any magnetic brush phase error?	Check the developer pole position.
	8	Is the doctor sleeve gap incorrect?	Adjust the gap with the doctor-sleeve jig.
Drum	9	Is the drum rotating?	Check that the drum shaft is inserted. Check the drum drive system.
	10	Is the drum grounded?	Check the contact of the grounding plate.
Transfer unit	11	Is the transfer belt in proper contact with the drum?	Check if the contact releasing lever is at releasing position. Check the installation of the transfer belt.
	12	Is the transport of the transfer belt normal?	Check the installation of the transfer belt or transport mechanism.
	13	Is the 2nd transfer roller contacted and released properly?	Check the connection of the connector of 2nd transfer roller contact clutch and open circuit of harness.

Cause/Section	Step	Check items	Measures
Switching power supply	14	Is the power supply output (5.1VD) normal?	Replace the switching power supply.
Harnesses for SLG, SYS, LGC and LDR boards	15	Are the connectors securely connected? Is any harness between the boards open circuited?	Reconnect the connectors securely. Replace the harness.
Laser optical unit	16	Was the protection seal of slit removed when replacing the unit?	Remove the protection seal.

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10)Solid print

Feeding direction

Fig. 5-10

Cause/Section	Step	Check items	Measures
Exposure lamp Inverter	1	Does the exposure lamp light?	Check the contact of the inverter connector. If the inverter does not work, replace it. If the lamp does not work, replace it.
Main charger	2	Is the main charger securely installed?	Reinstall it securely.
	3	Does the needle electrode not come off?	Reinstall it securely.
High-voltage transformer (main charger needle electrode/grid bias)	4	Is the high-voltage transformer output defective?	Adjust the output and correct the circuit, or replace the high-voltage transformer.
	5	Are the connector of the high-voltage harness securely connected? Is the harness open circuited?	Reconnect the harness securely. Replace the high-voltage harness.
Harnesses for SLG, SYS, IMG and LGC boards	6	Are the connectors securely connected? Is any harness between the boards open circuited? Is the connector between the SYS and IMG boards not disconnected? Is the connector between the LGC and IMG boards not disconnected?	Reconnect the connectors securely. Replace the harness.
Scanner	7	Is there foreign matter in the optical path?	Remove it.
Bedewing of scanner and drum	8	Is the scanner or the drum bedewed?	Clean the mirrors, lens and drum. Keep the power cord plugged so that the damp heater can work.

11) White banding (in feeding direction)

Fig. 5-11

Cause/Section	Step	Check items	Measures
Scanner	1	Is there foreign matter or dust in the optical path?	Clean the lens and mirrors.
Laser optical unit	2	Is there foreign matter or dust on the slit glass?	Remove any dirt or foreign matters.
Developer unit	3	Is there foreign matter inside the developer unit or on the developer sleeve?	Check if there is a white streak in the developer material on the developer sleeve. Scrape off foreign matter around the white streak using a jig.If there is no white streak, put the sheet of paper with a white banding to the developer sleeve, and scrape off the developer material around the white band to see if there is foreign matter in it. Scrape off foreign matter and developer material on the developer sleeve. 📖 P. 4-13 " H. Developer unit (K, Y, M, and C)"
Drum	4	Is there foreign matter on the drum seal?	Remove foreign matter.
	5	Do any paper fibers or dirt adhere to the developer unit and contact with the drum?	Remove the paper fibers or dirt.
	6	Is there scratch or foreign matter on the drum surface?	Replace the drum.
Main charger grid	7	Is there foreign matter on the charger grid?	Remove foreign matter.
Discharge lamp	8	Has any LED of Discharge lamp gone out?	Replace the Discharge lamp.

Cause/Section	Step	Check items	Measures
Transfer unit	9	Is there scratch or foreign matter on the transfer belt surface?	Replace the transfer belt.
	10	Are the harness or foreign matters in contact with the transfer belt surface?	Correct or remove them.
	11	Is there any scratch or hole on the 1st/2nd transfer roller?	Replace the 1st/2nd transfer roller.
	12	Is there any foreign matter on the 2nd transfer facing roller?	Remove foreign matter or clean the roller.
Transport path	13	Does the toner image touch foreign matter after transfer, before entering the fuser unit?	Remove foreign matter.

12)White banding (at right angles to feeding direction)

Fig. 5-12

Cause/Section	Step	Check items	Measures
Main charger	1	Is there foreign matter on the charger?	Remove foreign matter.
	2	Is the terminal contact poor?	Clean or adjust the terminals.
Drum	3	Is there any abnormalities on the drum surface?	Replace the drum.
	4	Is the drum grounded?	Check the contact of the grounding plate.
Discharge lamp	5	Is the discharge lamp lighting properly?	Replace the discharge lamp or clean terminals.
Developer unit	6	Is the developer sleeve rotating correctly? Is there any abnormalities on the sleeve surface?	Check the developer drive system, or clean the sleeve surface.
	7	Is the connection of developer bias supply terminal normal?	Correct it.
Drive systems	8	Is the drum, scanner or transfer belt jittery?	Check each drive system.
High-voltage transformer (main charger needle electrode/grid, 1st/ 2nd transfer roller and developer bias)	9	Is the high-voltage transformer output defective?	Check/correct any electric leakage and related circuits. If the high-voltage transformer does not work, replace it.

13)Skew (slantwise copying)
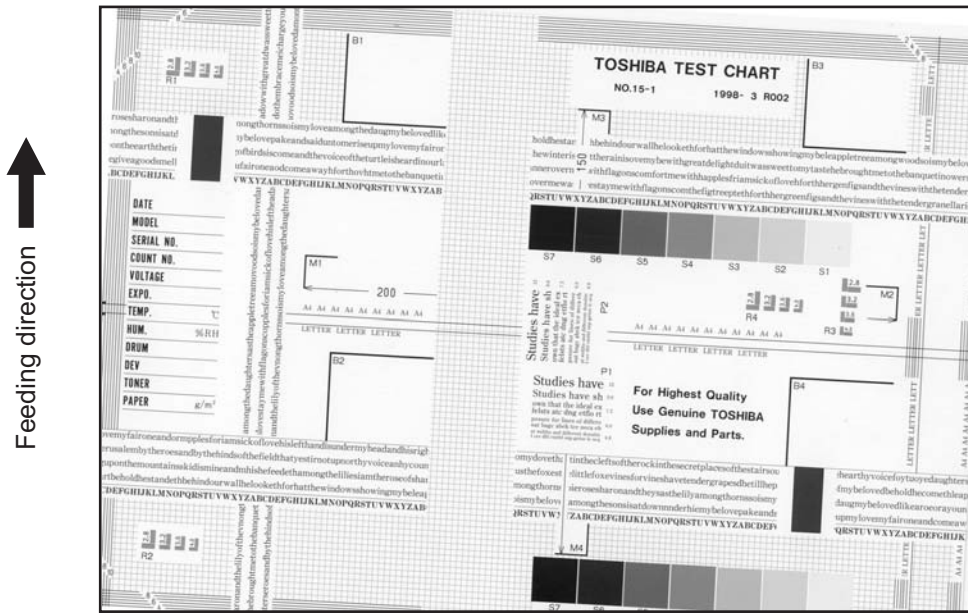
Fig. 5-13

Cause/Section	Step	Check items	Measures
Drawer/LCF	1	Is the drawer or LCF properly installed?	Reinstall the drawer or LCF properly.
	2	Is too much paper loaded in the drawer or LCF?	Reduce paper to 550 sheets or less. (2500 sheets or less/stack for LCF)
	3	Is the paper corner folded?	Change the paper direction and reinsert it.
	4	Are the drawer or LCF side guides properly set?	Adjust the side guides.
Paper feed roller	5	Is the surface of paper feed roller dirty?	Clean the roller surface with alcohol, or replace the roller.
Rollers	6	Is each roller improperly fixed to the shaft?	Check E-rings, pins and clips.
Aligning amount	7	Is the aligning amount proper?	Increase the aligning amount.
Registration roller	8	Is the registration roller spring removed?	Mount the spring correctly. Clean the roller if it is dirty.
Pre-registration guide	9	Is the pre-registration guide improperly installed?	Correct it.
2nd transfer front guide	10	Is the 2nd transfer front guide installed properly?	Correct it.
RADF	11	Is the RADF installed and adjusted properly?	Reinstall and readjust it.
Transfer unit	12	Is the transfer belt unit installed properly?	Correct it.

14)Color banding (in feeding direction)

Fig. 5-14

Cause/Section	Step	Check items	Measures
Scanner	1	Is there foreign matter in the optical path?	Clean the slit, lens and mirrors.
	2	Is there dust or stain on the shading correction plate or ADF original glass?	Clean it.
Main charger	3	Is there foreign matter on the charger grid?	Remove foreign matter.
	4	Is the charger grid dirty or deformed?	Clean or replace the charger grid.
	5	Is there foreign matter on the main charger?	Remove foreign matter.
	6	Is the needle electrode dirty or deformed?	Clean or replace the needle electrode.
	7	Is there foreign matter inside the charger case?	Remove foreign matter.
	8	Is the inner surface of charger case dirty?	Clean inside.
Drum cleaner	9	Is there any foreign matter on the drum cleaning blade edge?	Clean or replace the drum cleaning blade.
	10	Is toner recovery defective?	Clean the toner recovery auger section.
Transfer unit	11	Are the harness or foreign matters in contact with the transfer belt surface?	Correct or remove them.
	12	Is there paper dust on the edge of transfer belt cleaning blade?	Clean or replace the transfer belt cleaning blade.
	13	Is the transfer belt cleaning blade in proper contact with the transfer belt?	Take off the transfer belt and check if the transfer belt cleaning blade pressure spring and the pressure hook are installed properly.
Fuser unit	14	a. Is there dirt or scratches on the fuser belt and pressure roller surface? b. Is the thermistor dirty?	a. Clean or replace them. b. Clean the thermistor.
Drum	15	Are there scratches on the drum surface?	Replace the drum.
Laser optical unit	16	Is there foreign matter or dust on the slit glass?	Remove foreign matter or dust.

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15)Color banding (at right angles to feeding direction)
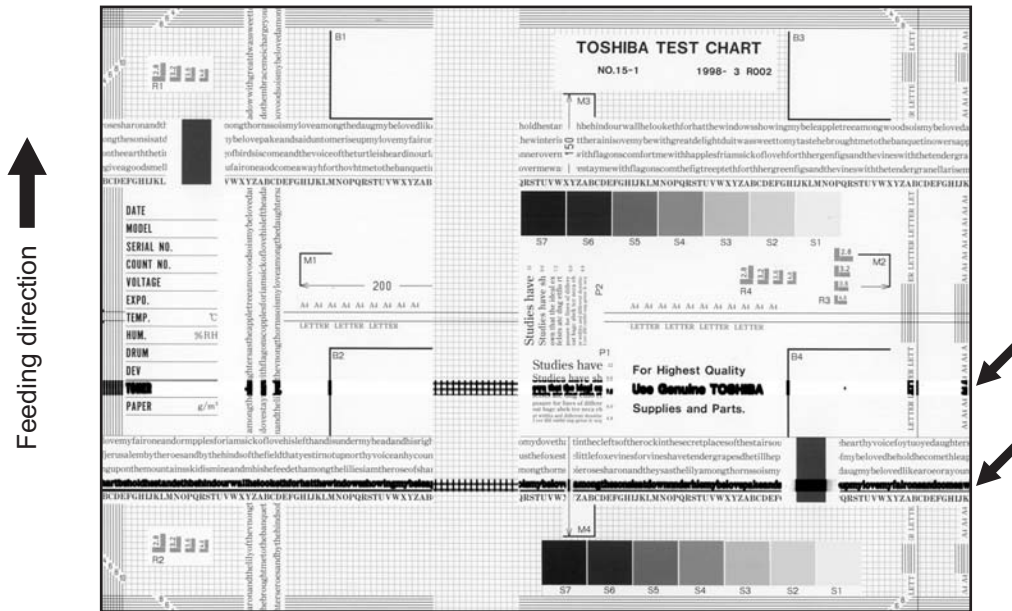
Fig. 5-15

Cause/Section	Step	Check items	Measures
Main charger	1	Is the needle electrode dirty or deformed?	Clean or replace the needle electrode.
Fuser unit	2	Is the fuser belt or pressure roller dirty?	Clean them.
High-voltage transformer (main charger needle electrode/grid and transfer roller bias)	3	Is the high-voltage transformer output defective?	Check the circuit and replace the high-voltage transformer if not working.
	4	Is each joint of high-voltage output loosened? (Check if any electric leakage is causing noise.)	Reconnect each joint.
Drum	5	Is there deep scratch on the drum surface?	Replace the drum, especially if the scratch has reached the aluminum base.
	6	Are there fine scratches on the drum surface (drum pitting)?	Check and correct the contact of cleaning blade and recovery blade.
	7	Is the drum grounded?	Check the contact of the grounding plate.
2nd transfer roller	8	Is the 2nd transfer roller rotating normally?	Clean the roller area or replace the roller.
Scanner	9	Is there foreign matter on the carriage rail?	Remove foreign matter.

16)White spots
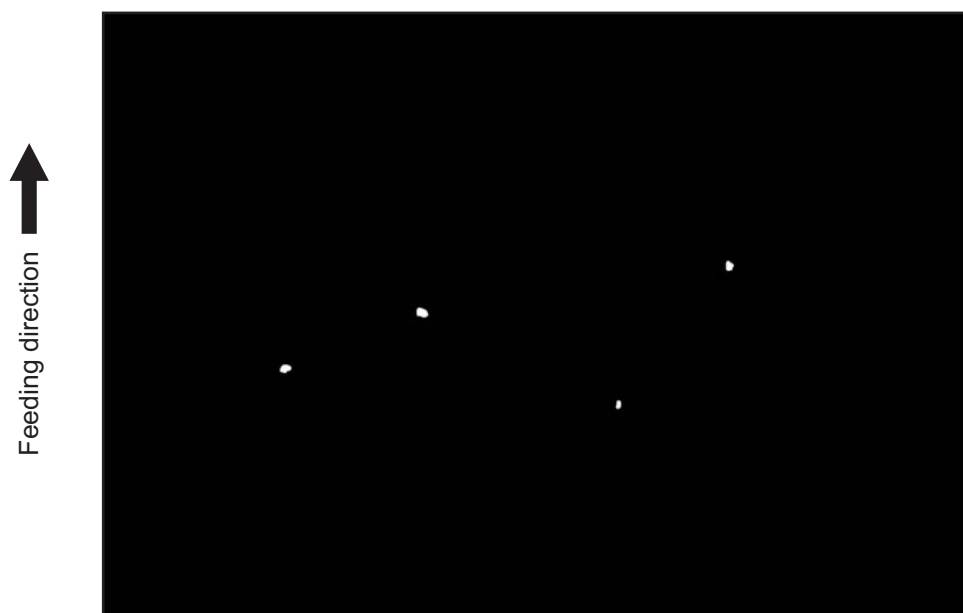
Fig. 5-16

Cause/Section	Step	Check items	Measures
Developer unit/ Toner cartridge	1	Is the toner density of developer material proper?	Check and correct the auto-toner sensor and toner supply operation. Check if the amount of toner is sufficient in the toner cartridge.
	2	Is the doctor-sleeve gap proper?	Adjust the gap.
Developer material/ Toner/Drum	3	Using the specified developer material, toner and drum?	Use the specified developer material, toner and drum.
	4	Have the developer material and drum reached their PM life?	Replace the developer material and drum.
	5	Is the storage environment of the toner cartridge 35oC or less without dew?	Use the toner cartridge stored in the environment within specification.
	6	Is there any dent on the surface of the drum?	Replace the drum.
	7	Is there any film forming on the drum?	Clean or replace the drum.
	8	Is the drum bedewed?	Wipe the drum surface with a piece of dry cloth.
Transfer unit	9	Is there foreign matter on the transfer belt surface?	Remove foreign matter.
	10	Is there foreign matter on the transfer belt 2nd transfer facing roller?	Clean the transfer belt unit.
Main charger	11	Is there foreign matter on the charger?	Remove it.
	12	Is the needle electrode dirty or deformed?	Clean or replace the needle electrode.
High-voltage transformer (main charger needle electrode/grid, developer 1st/2nd transfer roller bias)	13	Is the high-voltage transformer output defective?	Adjust the output.
Paper	14	Is the paper type corresponding to its mode?	Use the proper type of paper or select the proper mode.

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17)Poor transfer
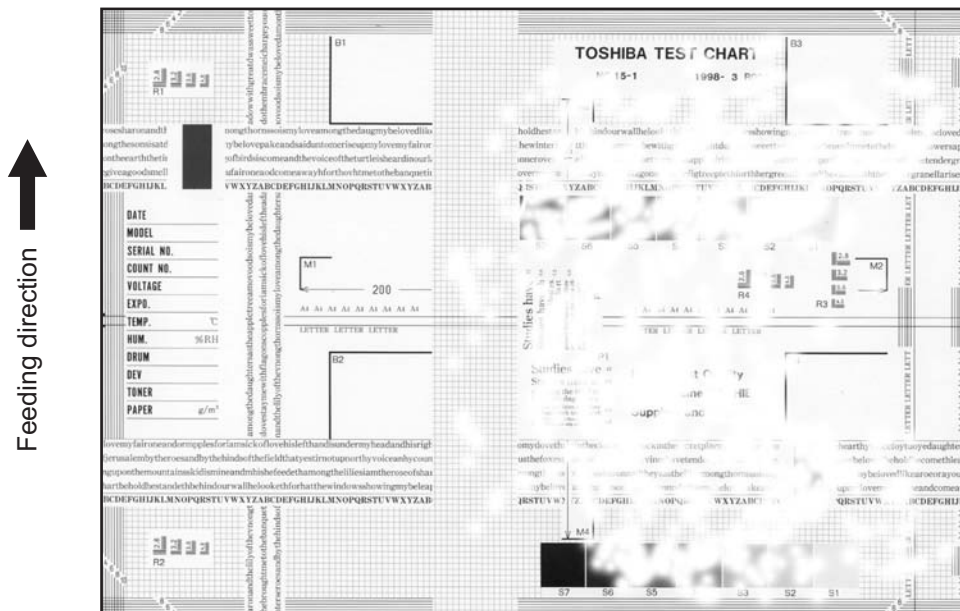
Fig. 5-17

Cause/Section	Step	Check items	Measures
Transfer unit	1	Is the transfer belt or 1st/2nd transfer rollers dirty?	Clean it.
	2	Is the transfer belt in proper contact with the drum?	Correct it.
	3	Is the 2nd transfer roller in proper contact with the transfer belt?	Correct it.
	4	Is there any deformation or abnormalities on the transfer belt?	Replace the belt.
	5	Is the 2nd transfer facing roller dirty?	Clean the roller and replace the cleaning pad.
Paper	6	Is the high-voltage fed to the 2nd transfer roller correctly?	If any contact failure occurs in the feeding area (e.g. the conductive bushing and spring come off), correct it.
	7	Is paper in the drawer or LCF curled?	Reinsert paper with reverse side up or change paper.
	8	Is paper in the drawer or LCF damp?	Change paper. * Avoid storing paper in damp place.
Registration roller	9	Is the registration roller malfunctioning?	Clean the roller, remount the spring, or replace defective motor-related parts.
Aligning amount	10	Is the aligning amount proper?	Inckease the aligning amount
High-voltage transformer (1st/2nd transfer roller bias)	11	Is the high-voltage transformer output defective?	Check the circuit and adjust the transformer output.
	12	Are the high-voltage harness and terminals in proper contact?	Correct them if loosened.

18)Uneven image density (in feeding direction)
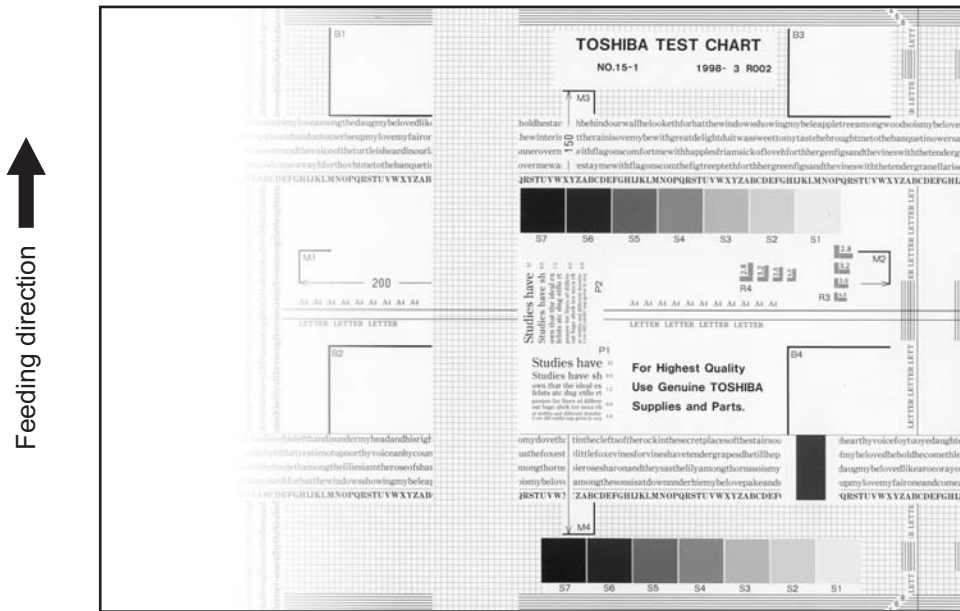
Fig. 5-18

Cause/Section	Step	Check items	Measures
Main charger	1	Is the main charger dirty?	Clean it or replace the needle electrode.
Transfer unit	2	Is the transfer belt or 1st/2nd transfer rollers dirty?	Clean the belt.
	3	Is the transfer belt in proper contact with the drum?	Correct it.
	4	Is 2nd transfer roller in proper contact with the transfer belt? (Is the roller tilted?)	Correct it.
	5	Is there any abnormalities or deformation on the transfer belt?	Replace the transfer belt.
Laser optical unit	6	Is there foreign matter or dust on the slit glass?	Clean the slit glass.
Discharge lamp	7	Is the discharge lamp dirty?	Clean it.
	8	Has any LED of discharge lamp gone out?	Replace it.
Developer unit	9	Is the magnetic brush in proper contact with the drum?	Adjust the doctor sleeve gap.
	10	Is the developer unit pressure spring applying properly?	Check the pressure spring.
	11	Is the transport of developer material poor?	Remove foreign matter if any.
Scanner section	12	a. Is the platen cover or RADF open? b. Is the original glass, mirrors, or lens dirty?	a. Close the platen cover or RADF. b. Clean them.

19)Uneven image density (at right angle to feeding direction)

← Feeding direction
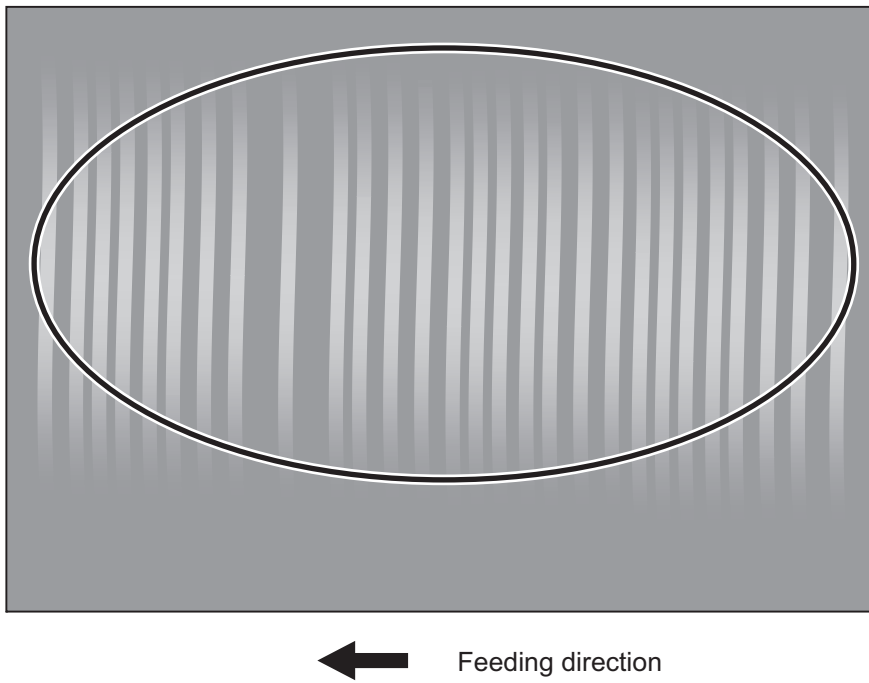
Fig. 5-19

Cause/Section	Step	Check items	Measures
Developer unit	1	Is the magnetic brush in proper contact with the drum?	Adjust the doctor sleeve gap.

20)Faded image (low density)
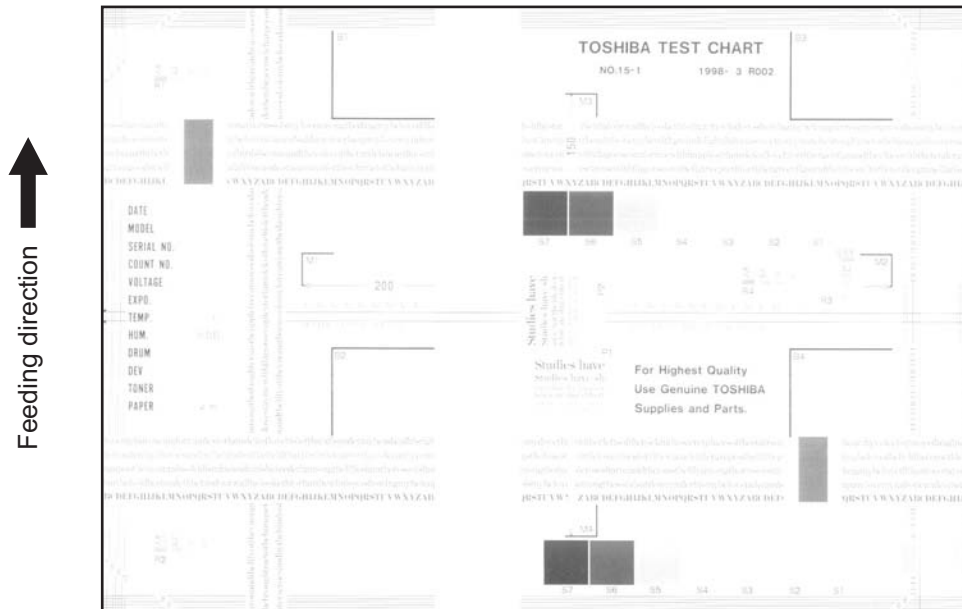
Fig. 5-20

Cause/Section	Step	Check items	Measures
Toner empty Auto-toner circuit	1	Is the "ADD TONER" symbol blinking?	Replace the toner cartridge.
	2	Is there enough toner in the cartridge?	Check the auto-toner circuit function.
	3	Is the toner density of developer material too low?	
Toner motor	4	Is the toner motor malfunctioning?	Check the motor drive circuit.
Toner cartridge	5	Are there any abnormalities in the toner cartridge?	Replace the toner cartridge.
Developer material	6	Has the developer material reached its PM life?	Replace developer material.
Developer unit	7	Is the magnetic brush in proper contact with the drum?	Check the developer unit installation. Check the doctor-sleeve gap and pole position.
Main charger	8	Is the main charger dirty?	Clean it or replace the needle electrode.
Drum	9	Is there film forming on the drum surface?	Clean or replace the drum.
	10	Has the drum reached its PM life?	Replace the drum.
Transfer unit	11	Has the transfer belt, 1st or 2nd transfer roller reached its PM life?	Replace the transfer belt, 1st or 2nd transfer roller.
High-voltage transformer (developer bias)	12	Is the high-voltage transformer output settings improper?	Adjust the high-voltage transformer output.
	13	Are the connector of the high-voltage harness securely connected? Is the harness open circuited?	Reconnect the harness securely. Replace the high-voltage harness.

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21)Image dislocation in feeding direction
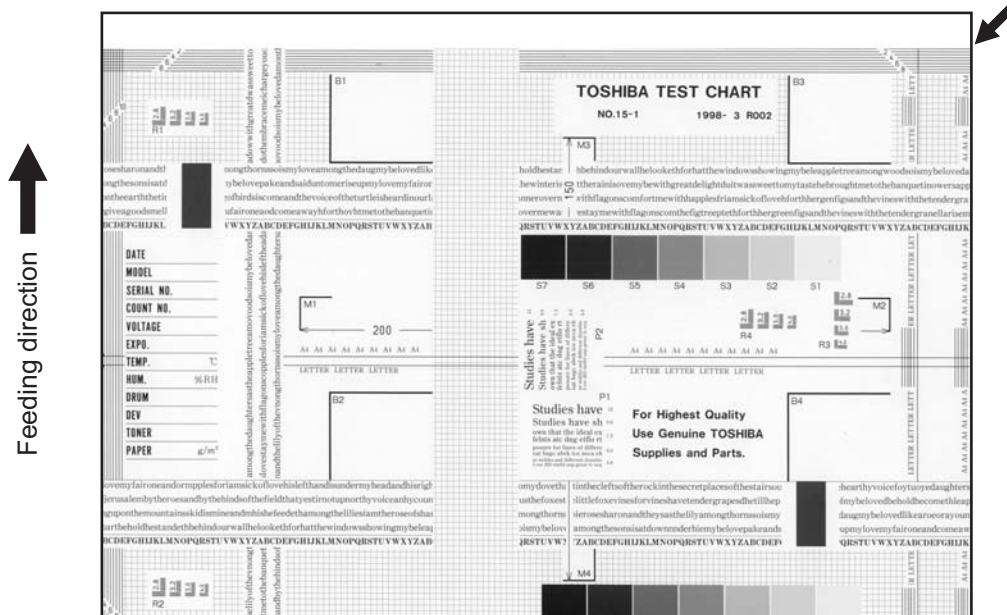
Fig. 5-21

Cause/Section	Step	Check items	Measures
Adjustment error of scanner or printer section	1	Is same dislocation on every copy?	Adjust the scanner/printer using the Adjustment Mode.
Registration roller	2	Is the registration roller dirty, or is the spring removed?	Clean the roller with alcohol. Reinstall the spring.
	3	Is the registration motor malfunctioning?	Adjust or replace the gears, etc. if they are not engaged properly.
	4	Is the registration motor operating normally? (Is the timing of operation delaying?)	Replace the registration motor.
Paper feed clutch, Transport clutch	5	Are the paper feed clutch and transport clutch malfunctioning?	Check the circuit or the clutch and replace them if necessary.
Aligning amount	6	Is the aligning amount proper?	Decrease the aligning amount.
Each roller	7	Are the roller and shaft not fixed securely?	Check the E-ring, pin and clip.
	8	Is the roller surface dirty?	Clean the roller surface with alcohol or replace it.
Pre-registration guide	9	Is the pre-registration guide improperly installed?	Reinstall the guide.

22)Image jittering
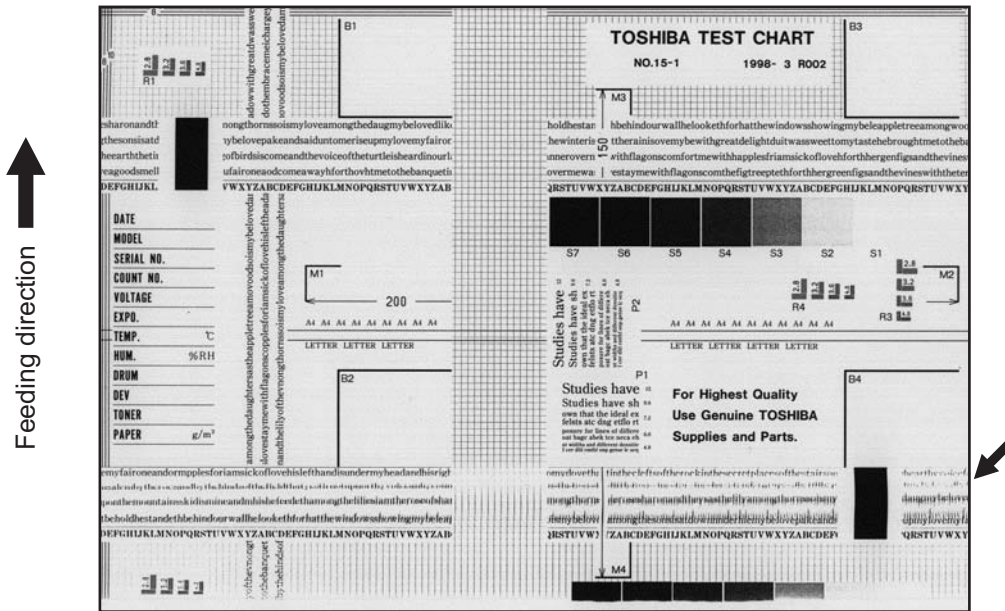
Fig. 5-22

Cause/Section	Step	Check items	Measures
-	1	Is the toner image on the drum proper?	If proper, perform step 1 to 3; otherwise perform step 4 and after.
Registration roller	2	Is the registration roller rotating normally?	Check the registration roller section and its springs.
Transfer unit	3	Is the transfer belt or 2nd transfer roller operating normally?	Check the drive system and replace the transfer belt or 2nd transfer roller if necessary.
Fuser unit	4	Are the fuser roller and pressure roller rotation proper? Is the fuser belt transportation proper?	Check the drive system. Replace the fuser belt, fuser roller and pressure roller if necessary.
Drum	5	Is there large scratch on the drum?	Replace the drum.
Scanner	6	Is the slide sheet defective?	Replace it.
	7	Are there any abnormalities on the carriage feet?	Replace the feet.
	8	Is the tension of timing belt inappropriate?	Correct the tension.
	9	Is the carriage drive system malfunctioning?	Check the carriage drive system.
	10	Are any mirrors loosely installed?	Install them properly.
Drum drive system	11	Is the drum drive system malfunctioning?	Check the drum drive system. Clean or replace the belts, pulleys, bushings if they have dirt or scratches.

23)Poor cleaning

Note:
Poor cleaning may occur in feeding direction.
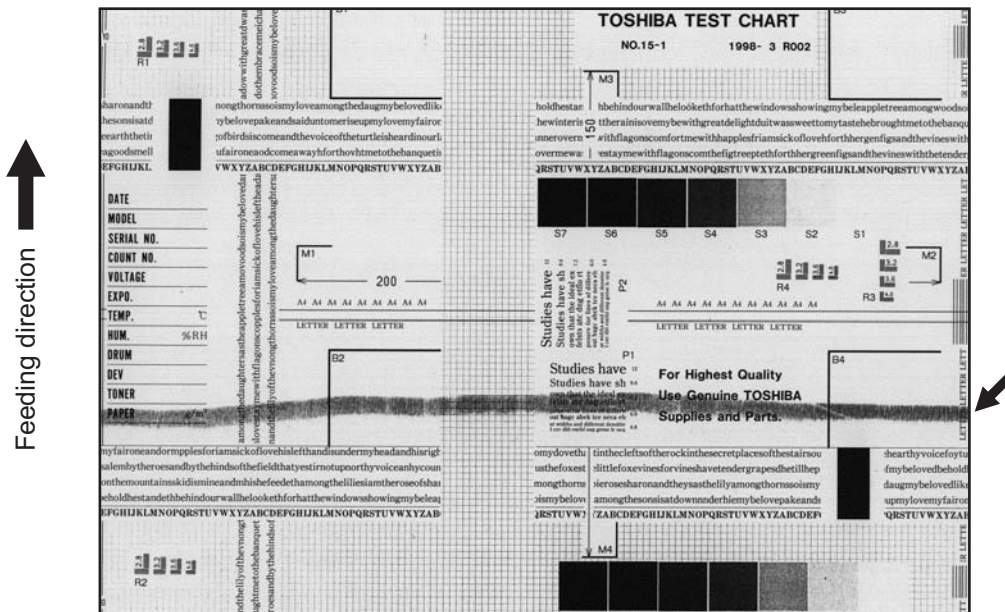
Fig. 5-23

Cause/Section	Step	Check items	Measures
Developer material	1	Is the specified developer material used?	Use the specified developer material and toner.
Drum cleaner	2	Is there dust on the drum cleaning blade edge?	Clean or replace it.
	3	Is the drum cleaning blade peeled?	Replace the blade.
Transfer belt cleaner	4	Is there paper dust on the edge of transfer belt cleaning blade?	Clean or replace it.
	5	Is the transfer belt cleaning blade peeled?	Replace the blade.
	6	Is the transfer belt cleaning blade in proper contact with the transfer belt?	Take off the transfer belt and check if the transfer belt cleaning blade pressure spring and the pressure hook are installed properly.
Toner recovery auger	7	Is the toner recovery defective?	Clean the toner recovery auger. Check the cleaning blade pressure.
Fuser unit	8	Is there any bubble-like defect on the fuser belt (approx. 189 mm pitch on the image)?	Replace the fuser belt. Check and modify the heater lamp control circuit.
	9	Have the fuser belt and pressure roller reached their PM life?	Replace them.
	10	Is the pressure between the fuser belt and pressure roller proper?	Check and adjust the pressure mechanism.
	11	Is the temperature of fuser roller proper?	Check/correct the setting value of fuser roller temperature. Clean or replace the thermistors. Check and correct the circuit.

24)Uneven light distribution

Fig. 5-24

Cause/Section	Step	Check items	Measures
Original glass	1	Is the original glass dirty?	Clean the glass.
Main charger	2	Are the needle electrode, grid and case dirty?	Clean or replace them.
Discharge lamp	3	Is the discharge lamp dirty?	Clean it.
Scanner	4	Are the reflector, exposure lamp, mirrors, lens, etc. dirty?	Clean them.
Exposure lamp	5	Is the exposure lamp tilted?	Adjust the installed position of the lamp.
	6	Is the lamp discolored or degraded?	Replace it.
Process unit	7	Is the laser beam interrupted by a foreign material adhering to the doctor blade area of the developer unit or the charger case of the main charger?	Remove the foreign material.

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25)Blotched image
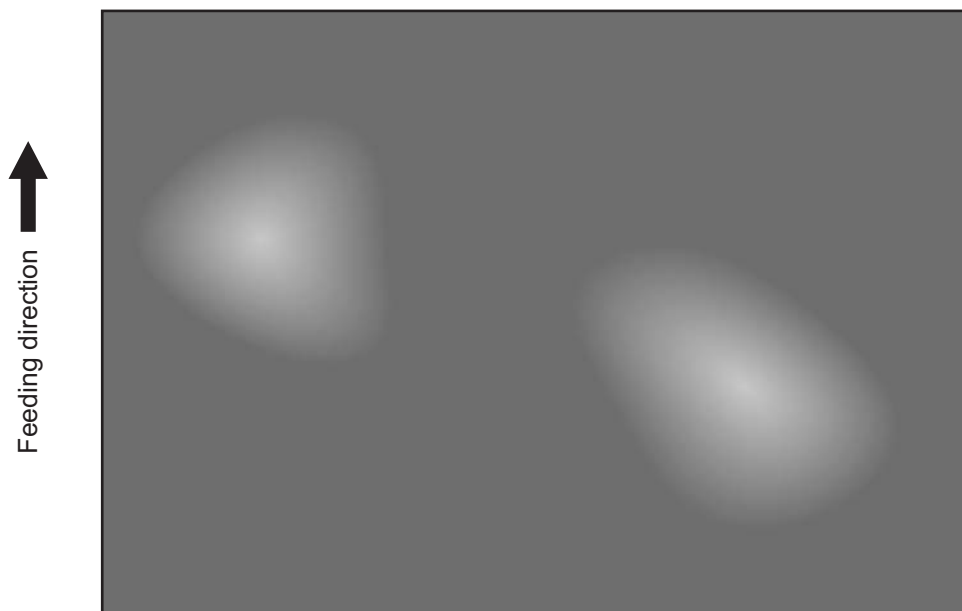
Fig. 5-25

Cause/Section	Step	Check items	Measures
Paper	1	Is the paper type corresponding to its mode?	Check the paper type and mode.
	2	Is paper too dry?	Change paper.
Transfer unit	3	Is the transfer belt in proper contact with the drum?	Correct it.
	4	Is the 2nd transfer roller in proper contact with the transfer belt?	Correct it.
	5	Are there any abnormalities on the transfer belt?	Clean or replace the transfer belt.
High-voltage transformer (1st/2nd transfer roller bias)	6	Is the high-voltage transformer output abnormal?	Adjust the output. Replace the transformer, if necessary.

26)Stain on the paper back side

Printing side of 1st page

The edge of image cut off.

Back side of 2nd page
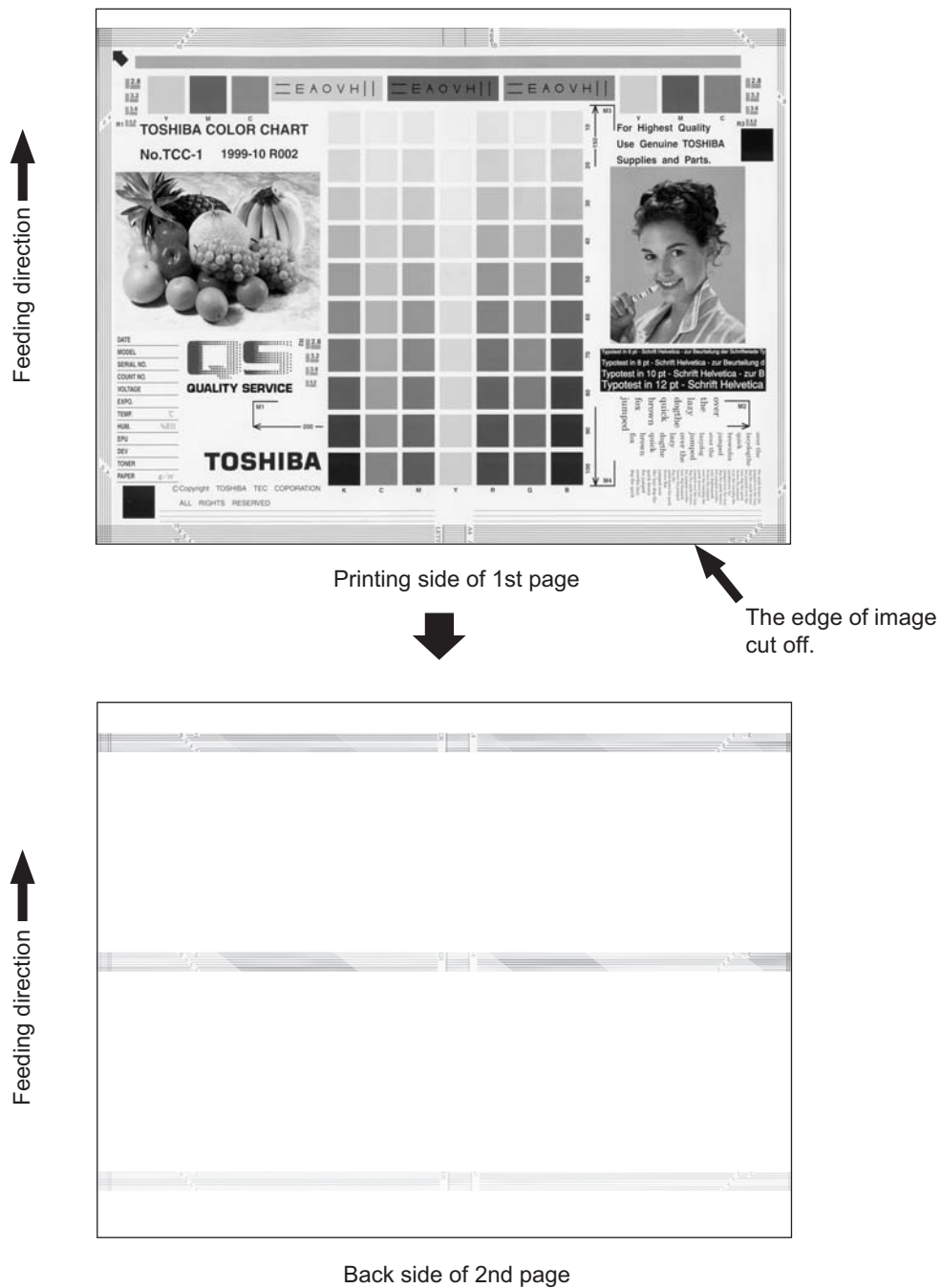
Fig. 5-26

Cause/Section	Step	Check items	Measures
Image adjustment/setting	1	Is the margin adjustment of image correct?	Adjust the margin.
	2	Is the margin adjustment of image correct when the paper size is not selected in bypass feeding?	Adjust the margin.
	3	Is the margin adjustment of image at duplexing correct?	Adjust the margin. (05-434)
	4	Is the image location in primary/secondary scanning direction correct?	Adjust the location.
	5	Is the reproduction ratio of image in primary/secondary scanning direction correct?	Adjust the reproduction ratio.
	6	Is the tab setting correct?	Correct the setting.
Paper feeding / Transport area	7	Does the size of paper in the drawer or LCF correspond to the setting?	Use the appropriate paper size or correct the size setting.
	8	Is the width between the slides in the drawer correct (too wide)?	Correct the position of the slides.
	9	Is the width between the slides of the bypass tray correct (too wide)?	Correct the width.
	10	Is the sideways deviation adjustment for drawers or slides of the bypass tray correct?	Adjust the deviation.
	11	Is the paper aligning amount sufficient?	Adjust the aligning amount.
	12	Are the feed roller and transport roller dirty or worn out?	Clean or replace the rollers.
	13	Does the paper mode correspond to the paper type?	Use the appropriate paper type or paper mode.
	14	Using the recommended paper?	Use the recommended paper.
Transfer unit	15	Is there any stain caused by a poor cleaning, etc. on the transfer belt?	Clean the transfer belt.
	16	Is the transfer belt cleaning blade in proper contact with the transfer belt?	Take off the transfer belt and check if the transfer belt cleaning blade pressure spring and the pressure hook are installed properly.
	17	Is the 2nd transfer roller rotating properly?	Clean the area around the roller. Otherwise replace the roller.
	18	Is there any foreign matter or stain on the 2nd transfer roller?	Clean or replace the roller.
	19	Has the 2nd transfer roller reached to its PM life?	Replace the 2nd transfer roller.
Fuser unit	20	Are the fuser belt and pressure roller dirty?	Clean the fuser belt and pressure roller.
	21	Is the rib of transport guide dirty?	Clean the rib.

27)White void in the halftone
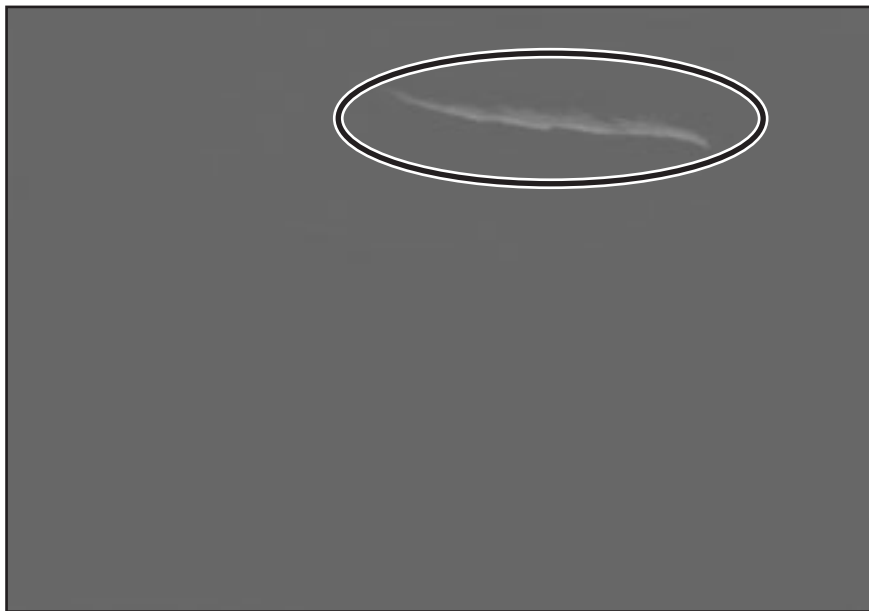
← Feeding direction

Fig. 5-27

Cause/Section	Step	Check items	Measures
Fuser unit	1	Installed position of the fuser unit	Move the fuser unit tilt-adjustment plate up or down. (P. 5-147 "Fig. 5-28")

Fuser unit tilt adjustment plate

Fig. 5-28

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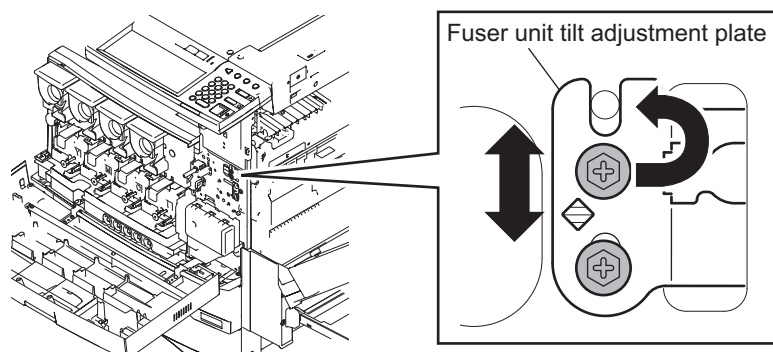
28) Paper wrinkle

There are 2 locations where the paper wrinkle occurs: before the fusing stage and in the fuser unit
See below to determine the case.
    Smooth out the wrinkled paper. When there is no image in the wrinkled area
        →See (1) "Paper wrinkle before fusing".
    Smooth out the wrinkled paper. When there is a copied image in the wrinkled area
        →See (2) "Paper wrinkle in the fuser unit".

(1) Paper wrinkle before fusing
    <u>Is paper properly set?</u>
      │   NO →   Set paper properly.
      ↓
    YES
    <u>Is there any abnormality such as scratch or wear on the transport roller?</u>
      │   YES →   Replace the transport roller.
      ↓
    NO
    <u>Is flexible paper such as recycled paper used?</u>
      │   YES →   Switch to the recycled paper mode.
      │   (Select "RECYCLED PAPER" in MEDIA TYPE.)
      ↓   If the paper wrinkle still appears, proceed to NO.
    NO
    1) Increase the adjustment value for the paper alignment.
       (See 3.6.2 "Paper alignment at the registration roller")
    2) Increase the transport motor speed. (Adjust it at the code 05-489.)

(2) Paper wrinkle in the fuser unit
    <u>Is the paper properly set?</u>
      │   NO →   Set the paper properly.
      ↓
    YES
    <u>Has the paper absorbed moisture?</u>
      │   YES →   Use paper that has not absorbed moisture.
      ↓
    NO
    <u>Is flexible paper such as recycled paper used?</u>
      │   YES →   Switch to the recycled paper mode.
      │   (Select "RECYCLED PAPER" in MEDIA TYPE.)
      ↓   If the paper wrinkle still appears, proceed to NO.
    NO
    1) Adjust the installed position of the fuser unit up or down
       and check if the paper wrinkle disappears. (See (27) "White void in the halftone".)
    2) Adjust the inlet guide of the fuser unit and check if the paper wrinkle disappears. (P. 5-149
       "Fig. 5-29")

Entry guide
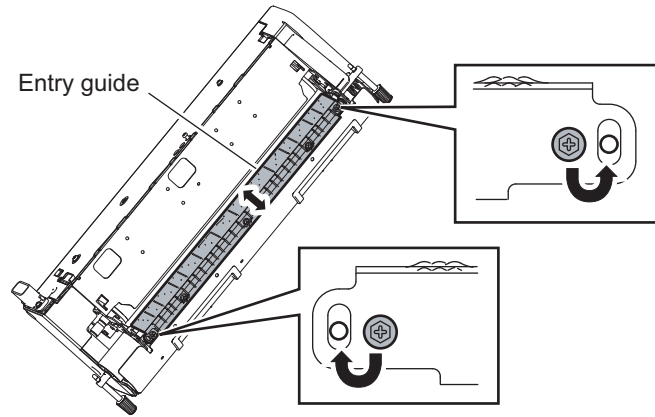
Fig. 5-29

29)Staining at the leading/trailing edge of paper

Staining may occur at the leading/trailing edge of the paper.
If a large amount of printing is carried out, staining may be seen as streaks as shown below.
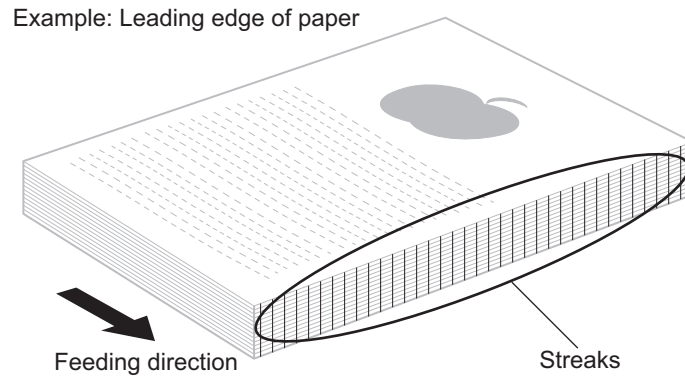
Fig. 5-30

Cause/Section	Step	Check items	Measures
2nd transfer unit	1	Is there any toner adhering to the ribs of the transfer guide?	Clean the ribs of the transfer guide.
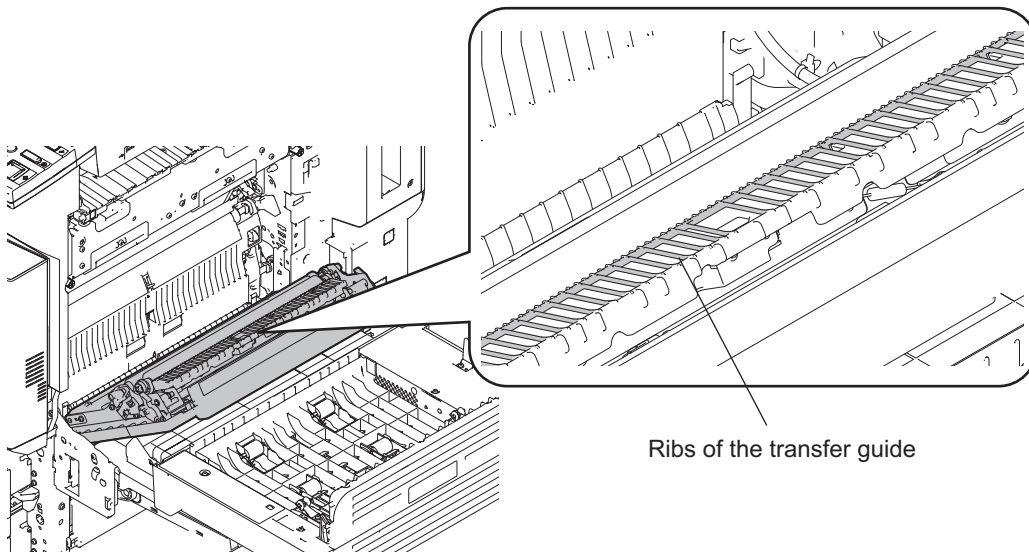
Fig. 5-31

Note:
Clean them with a soft pad, cloth or electric vacuum cleaner.

5.3　Replacement of PC Boards and HDD

<CAUTION IN REPLACING PC BOARDS>
The ID for each equipment is registered on the LGC board, the IMG board, the SYS board and the SLG board. So, if their replacement is required, be sure to replace only one board at a time.

If more than one of the LGC board, the IMG board and the SYS board require replacement, replace them in the following procedure.
1) First, replace one of the board to be replaced.
2) Turn the power ON and confirm that "READY" is displayed.
3) Turn the power OFF.
4) Replace another board that requires replacement.
5) Repeat steps 2 to 4.

The LGC board and IMG board can be replaced without other settings.
When the HDD requires replacement, see "5.3.1 Replacing HDD".
When the SYS board requires replacement, see "5.3.2 Replacing SYS board".
When the SLG board requires replacement, see "5.3.3 Replacing SLG board".
When NVRAM requires replacement, see "5.3.4 Replacing NVRAM (SYS board)" / "5.3.5 Replacing NVRAM (LGC board)".

5.3.1　Replacing HDD

<CAUTION IN REPLACING HDD>
When the HDD is replaced, it is necessary to back up the data in the HDD before replacing and to recover them after replacing.

Notes:
1. To maintain the security, ask users to perform the backup/restore for users' data/information in the HDD. The service technician can perform them only when users permit it.
2. Some data in the HDD cannot be backed up and can be kept only on the paper.
3. When 08-690 is performed, the HDD self-certificate is not available, so the SSL-related setting becomes disabled.

The procedure for replacing the HDD is as follows.

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(1) Ask users to back up the data in the HDD. See the following for the item of data, and the possibility and the measure of the backup.
- Image data in the Electronic Filing
  - Archive them in the "e-Filing" of TopAccess.
    As for the backup in Box data, all data (selectable by the box) can be backed up / restored in one go by using "e-Filing Backup/Restore Utility".
- F-code information, Template registration information, Address book
  - Back them up in the "Administrator" menu of TopAccess.
- Department management data
  - Export them in "Administrator" menu of TopAccess.
- Log data (Print, Scan, FAX (Transmission/Reception))
  - Export them in the "Administrator" menu of TopAccess. (Import cannot be performed.)
- Data in the shared folder (Scanned data, Saved data of copy / FAX transmission)
  - Copy them to the client computer via the network. (The data which have been copied to the client computer cannot be copied to the shared folder.)
- Print waiting data (Copying data and FAX reception data that are waiting to be printed due to the paper run-out and jam, etc.)
  - Finish printing them after the paper supply and the jam release, etc. (The data cannot be kept.)
- Print job (Private print data, Schedule print data)
  - If any jobs are left, print them. (The data cannot be backed up.)
- FAX saved data (Confidential / Bulletin board data)
  - Print them. (The data cannot be backed up.)
- Registration data for FAX transmission (Delayed transmission / Recovery transmission)
  - The data cannot be backed up.

(2) Print out the "FUNCTION LIST FOR MAINTENANCE" (content of Function Mode (13) setting) list.
- Press the [USER FUNCTIONS] button and then the [USER] button.
- Press the [LIST] button.
- Key in [*] [#] [*] [*] [3] [3] and then press the [START] button. The list is outputted.

(3) Print out the "FUNCTION" list.
- Press the [USER FUNCTIONS] button.
- Press the [ADMIN] button, enter the password, and then press the [ENTER] button.
- Press the [LIST/REPORT] button and then the [LIST] button.
- Press the [FUNCTION] button. The list is outputted.

(4) Replace the HDD.

(5) Clear the partitions on the HDD.
1. Turn the power ON while pressing [3] and [CLEAR] button simultaneously.
2. When "Firmware Version Up Mode" appears on the LCD, key in [3] to select " 3: All Partition Delete and Create Loader Partition. " and then press the [START] button.
3. When "Initialize completed." is displayed on the LCD, clearing of the partitions is completed.

(6) Turn the power OFF.

(7) Update the master data using the USB storage device.
See "6.2Firmware Updating with USB Storage Device" for details.

(8) Start up with the Setting Mode (08).

(9) Format the HDD (08-690).
   1. Key in [690] and then press the [START] button.
   2. Press the [ENTER] button on the LCD.
   3. When "REBOOT THE MACHINE" is displayed on the LCD, formatting of the HDD is completed.

(10) Turn the power OFF.

(11) When the Fax Unit (GD-1210) has been installed, perform "Fax Set Up" (1*-100) and "Clearing the image data" (1*-102).
   1. Turn the power ON while pressing [1] and [*] button simultaneously.
   2. Key in [100] and then press the [START] button.
   3. Key in [102] and then press the [START] button.
   4. Turn the power OFF.

(12) Start up with the Setting mode (08).

(13) Check the version of the HDD (08-944).
   1. Key in [944] and then press the [START] button.
   2. Confirm the version displayed on the LCD, and then press the [ENTER] button.

(14) Turn the power OFF.

(15) Ask users to reset the user's setting items and to restore the data/information. See the following for the reset and the restore.
   • Printer driver
     - Upload them in the "Administrator" menu of TopAccess.
   • F-code information, Template registering information, Address book
     - Restore them in the "Administrator" menu of TopAccess
   • Department management data
     - Import them in the "Administrator" menu of TopAccess.
   • Image data in the Electronic Filing
     - Upload them in the "e-Filing" of TopAccess.
   • When the SSL is enabled, perform the setting of the following items again with "Create self-certificate" of TopAccess.
         Country Name
         State or Province Name
         Locality Name
         Organization Name
         Organizational Unit Name
         Common Name
         Email Address
   • When wireless LAN is used, perform the setting again on the LCD panel. (only when security with a certificate is used)
     Also, upload the following certificate file with "Install Certificate for Wireless LAN" of TopAccess.
         CA certificate
         User certificate

(16) Referring to the "FUNCTION LIST FOR MAINTENANCE" list which was printed beforehand, perform the re-setting.
- Print out the "FUNCTION LIST FOR MAINTENANCE" list after the formatting. (Refer to the procedure of (2).)
- While pressing [1] and [3] simultaneously, turn the power ON. (Function Mode)
- Compare the lists which were printed before and after the formatting to check the setting items having the different setting values. Set the value which was set before the formatting.
- Turn the power OFF.

(17) Referring to the "FUNCTION" list which was printed beforehand, perform the re-setting of the default setting of the FAX function.
- Press the [USER FUNCTIONS] button.
- Press the [ADMIN] button, enter the password, and then press the [ENTER] button.
- Press the [FAX] button and then the [TERMINAL ID] button to set each item.
- Press the [INITIAL SETUP] button to set each item.

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5.3.2   Replacing SYS board

<<CAUTION IN REPLACING the SYS board>>
When you replace the SYS board while the data encryption function is enabled, readout of the user data/information stored in the HDD becomes impossible.
Perform the setting according to the following procedure when the SYS board is replaced.

<Setting procedure after replacing the SYS board>

(1)   Install DIMM (main memory, page memory) to the new SYS board (from the old SYS board).

(2)   Install NVRAM to the new SYS board (from the old SYS board).

(3)   Turn the power OFF.

(4)   Update the version of system ROMs (OS data, UI data, System Firmware) with the USB storage device.
   *   See "6.2Firmware Updating with USB Storage Device" for details.

(5)   Start up with the Setting Mode (08).

(6)   Initialize SRAM.
   1. When "SRAM ERROR DOES IT INITIALIZE?" is displayed on the LCD, press the [INTER-RUPT] button.
   *   If SRAM is not cleared, F090 error occurs when starting up.
   Notes:
   •   When SRAM is cleared, following items need to be re-set, so make sure the contents of settings are kept as a record.
        <FAX settings>
        Terminal ID
        Default setting of fax
        <E-mail settings>
        Setting of properties for E-mail message
        <Internet Fax>
        Setting of properties for Internet Fax
   •   When SRAM is cleared, the toner cartridge consumed count of Automatic ordering function of supplies becomes 0, however, it cannot be re-set.

(7)   Enable the HDD encryption function if it has been set (08-9379).
   1. Key in [9379] and then press the [START] button.
   2. Key in [1] or [2] and then press the [ENTER] button.
        1: Encryption valid (Security priority)
        2: Encryption valid (Performance priority)

(8)   Check the versions of each ROM.
   •   System ROM version (08-900)
   •   FROM basic section software version (08-920)
   •   FROM internal program version (08-921)
   •   Version of UI data in FROM displayed at power ON (08-930)

(9)   Perform the initialization at the software version upgrade (08-947).
   1. Key in [947] and then press the [START] button.
   2. Press the [INITIALIZE] button on the LCD.

(10) Initialize the NIC information (08-693).
   1. Key in [693] and then press the [START] button.
   2. Press the [INITIALIZE] button on the LCD.

(11) Format HDD if the HDD encryption function has been set (08-690).
   1. Key in [690] and then press the [START] button.
   2. Press the [ENTER] button on the LCD.
   3. When "REBOOT THE MACHINE" is displayed on the LCD, formatting of the HDD is completed.

(12) Turn the power OFF and then start up with the Adjustment mode (05).

(13) Adjust the image quality control (05-396).
   1. Key in [396] and then press the [START] button.

(14) Perform the enforced position adjustment (05-4719).
   1. Key in [4719] and then press the [START] button.

(15) Perform "Automatic gamma adjustment" <PPC> (05-1642).
   1. Select the A4 (LT) drawer, key in [4], and then press the [FAX] button.
   2. Set the chart, facing down on the glass, in order that the 2 black solid rectangles be placed at the left side.
   3. Key in [1642] and then press the [START] button.
   4. Press the [ENTER] button on the LCD.

(16) Perform "Automatic gamma adjustment" <PRT> (05-1008).
   1. Select the A4 (LT) drawer, key in [70], and then press the [FAX] button.
   2. Set the chart, facing down on the glass, in order that the 2 black solid rectangles be placed at the left side.
   3. Key in [1008] and then press the [START] button.
   4. Press the [ENTER] button on the LCD.

(17) Turn the power OFF.

(18) When the Fax unit (GD-1210) has been installed, perform "Clearing the image data" (1*-102).
   1. Turn the power ON while pressing [1] and [*] simultaneously.
   2. Key in [102] and then press the [START] button.
   3. Turn the power OFF.
   Notes:
   Following image data are deleted when 1*-102 is performed.
   • Images of fax polling transmission
   • Images of fax Mailbox and box information
   • Images of fax transmission
   • Images of fax reception

(19) Turn the power ON.

(20) Set the dial type.
   [USER FUNCTIONS] →[ADMIN] →[FAX] →[INITIAL SETUP]

(21) Set the date and time.
   [USER FUNCTIONS] →[ADMIN] →[GENERAL] →[CLOCK] →[DATE/TIME]

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* When the EFI controller (GA-1210) has been installed, perform the version upgrade according to the following procedure.

(22) Turn OFF the power of the equipment and EFI controller (GA-1210).

(23) Disconnect the interface cable and the network cable (cross cable) with which the equipment and the EFI controller are connected.

(24) Connect the network connector on the LAN side of the EFI controller with a PC for downloading using the network cable (cross cable).

(25) Turn ON the 2 DIP-SWs in the EFI controller.

(26) Turn ON the power of the EFI controller.

(27) Check if "FF" is displayed on the LCD in the EFI controller.

(28) Set the CD-ROM to the download PC.
    1. Set Disk 1.
    2. When the message for replacing the disk is displayed, set Disk 2.
    3. The installation is finished when a message announcing this appears.

(29) Turn OFF the power of the EFI controller.

(30) Turn OFF the 2 DIP-SWs of the EFI controller.

(31) Disconnect the network cable (cross cable) with which the EFI controller and the PC for downloading are connected.

(32) Connect the equipment with the EFI controller using the interface cable and the network cable (cross cable).

(33) Turn ON the power of the equipment and the EFI controller.

(34) Check that "00" is displayed on the LCD of the EFI controller.

(35) Turn the power OFF of the equipment and start the setting mode (08).

(36) Initialize the EFI controller (GA-1210) (08-700).
    1. Key in [700] and then press the [START] button.
    2. Press the [ENTER] button on the LCD.

(37) Turn OFF the power of the equipment.

5.3.3   Replacing SLG board

<CAUTION IN REPLACING SLG BOARD>
When the SLG board has been replaced, "Data transfer of characteristic value of scanner / SYS board →SLG board (05-363)" must be performed.

5.3.4　Replacing NVRAM (SYS board)

When NVRAM has been replaced, be sure to perform the setting according to the following procedure.

<Setting procedure after replacing NVRAM>

(1)　Take off the FAX board if installed.

(2)　Clear the flag.
1. Turn the power ON while pressing [3] and the [CLEAR] button simultaneously.
2. After "Firmware Version Up Mode" is displayed on the LCD, check that " 1: Clear NvRAM flags." is marked and press the [START] button.
If not, key in [1] and then press the [START] button.
3. When "NvRAM flags cleared." is displayed on the LCD, clearing the flag is completed.

(3)　Turn the power OFF and start up with the Setting Mode (08).

(4)　Initialize the NVRAM error.
1. When "NVRAM ERROR DOES IT INITIALIZE" is displayed on the LCD, check the destination and then press the [START] button.
If the destination is not correct, key in the correct one and then press the [START] button.
2. After the confirmation message is displayed, press the [INTERRUPT] button.

(5)　Perform the panel calibration (08-692).
1. Key in [692] and then press the [START] button.
2. Touch the center of "+" mark displayed on the upper left of the LCD.
3. Touch the center of "+" mark displayed on the lower right of the LCD.

(6)　Perform the initialization at the software version upgrade (08-947).
1. Key in [947] and then press the [START] button.
2. Press the [INITIALIZE] button on the LCD.

(7)　Perform the counter copying (08-257 Sub-code: 1).
1. Key in [257] and then press the [START] button.
2. Key in sub code [1] and then press the [START] button.
3. Press the [ENTER] button on the LCD.

(8)　Initialize the NIC information (08-693).
1. Key in [693] and then press the [START] button.
2. Press the [INITIALIZE] button on the LCD.

(9)　Enter the serial number (08-995).
1. Key in [995] and then press the [START] button.
2. Key in the serial number on the label attached to the rear cover of the equipment, and then press the [ENTER] button.

　Note:
The MAC address of the equipment is generated based on this serial number. Entering an incorrect serial number may result in an inability to access the network due to an invalid MAC address.

(10)　Turn the power OFF and then start up with the Adjustment mode (05).

(11)　Perform "Data transfer of characteristic value of scanner" (05-364).
1. Key in [364] and then press the [START] button.

(12) Perform "Automatic gamma adjustment" <PPC> (05-1642).
    1. Select the A4 (LT) drawer, key in [4], and then press the [FAX] button.
    2. Set the chart, facing down on the glass, in order that the 2 black solid rectangles be placed at the left side.
    3. Key in [1642] and then press the [START] button.
    4. Press the [ENTER] button on the LCD.

(13) Perform "Automatic gamma adjustment" <PRT> (05-1008).
    1. Select the A4 (LT) drawer, key in [70], and then press the [FAX] button.
    2. Set the chart, facing down on the glass, in order that the 2 black solid rectangles be placed at the left side.
    3. Key in [1008] and then press the [START] button.
    4. Press the [ENTER] button on the LCD.

(14) Turn the power OFF.

*   If the FAX board has not been installed, the following steps are not necessary.
(15) Install the FAX board taken off in step (1).

(16) Start up with the Setting mode (08).

(17) Set the destination of FAX (08-701).
    1. Key in [701] and then press the [START] button.
    2. Enter the destination and press the [ENTER] button.

(18) Turn the power OFF and then start up with the FAX Clearing Mode (1*).

(19) Perform the FAX Set Up (1*-100).
    1. Key in [100] and then press the [START] button.

(20) Turn the power OFF and then back ON.

(21) Set the dial type according to these buttons: [USER FUNCTIONS] -> [ADMIN] -> [FAX] -> [INITIAL SETUP]

*   When the EFI controller (GA-1210) has been installed, perform the version upgrade according to the following procedure.

(22) Turn OFF the power of the equipment and EFI controller (GA-1210).

(23) Disconnect the interface cable and the network cable (cross cable) with which the equipment and the EFI controller are connected.

(24) Connect the network connector on the LAN side of the EFI controller with a PC for downloading using the network cable (cross cable).

(25) Turn ON the 2 DIP-SWs in the EFI controller.

(26) Turn ON the power of the EFI controller.

(27) Check if "FF" is displayed on the LCD in the EFI controller.

(28) Set the CD-ROM to the download PC.
    1. Set Disk 1.
    2. When the message for replacing the disk is displayed, set Disk 2.
    3. The installation is finished when a message announcing this appears.

(29) Turn OFF the power of the EFI controller.

(30) Turn OFF the 2 DIP-SWs of the EFI controller.

(31) Disconnect the network cable (cross cable) with which the EFI controller and the PC for downloading are connected.

(32) Connect the equipment with the EFI controller using the interface cable and the network cable (cross cable).

(33) Turn ON the power of the equipment and the EFI controller.

(34) Check that "00" is displayed on the LCD of the EFI controller.

(35) Turn the power OFF of the equipment and start the setting mode (08).

(36) Initialize the EFI controller (GA-1210) (08-700).
    1. Key in [700] and then press the [START] button.
    2. Press the [ENTER] button on the LCD.

(37) Turn OFF the power of the equipment.

5.3.5   Replacing NVRAM (LGC board)

Be sure to replace the NVRAM in the correct direction and pay attention that the board does not get damaged.
Also, be sure to perform the setting according to the following procedure.

<Setting procedure after replacing NVRAM>

(1)   Write down the adjustment values of the following (05) code attached to the rear side of the front cover.

	L (0)	H (1)
05/2622		
05/2623		
05/2624		
05/2625		
05/2627		
05/2628		
05/2629		
05/2630		
05/2685		
05/2687		
05/2688		
05/2683		
05/2684		

(2)   Start up with the Adjustment mode (05).

(3)   Enter all the adjustment values written down in step (1).

(4)   Reset the auto toner sensor.
    1. Turn the power OFF.
    2. Replace the developer materials for four colors (YMCK).
    3. Perform automatic adjustment of auto-toner sensor.
       Start up with the Adjustment mode (05), enter [200] and press the [START] button.
  Notes:
  • You can reset the auto-toner sensor by directly entering the adjustment values for (05) 205-0 to 3, (05) 2409-0 to 3 and (05) 2411 with the Adjustment mode data list, which has been printed during normal operation of equipment such as when it is setup, when preventive maintenance (PM) is performed or when developer material is replaced, etc.
  • If you perform automatic adjustment (05-200) of the auto-toner sensor without replacing the developer materials for four colors (YMCK), image quality is not guaranteed.

(5)   Adjust the image quality control (05-396).
    1. Key in [396] and then press the [START] button.

(6)   Perform "Tilt motor initial excitation setting" (05-4721).
    1. Enter [4721] and press the [START] button.

(7)   Perform the enforced position adjustment (05-4719).
    1. Key in [4719] and then press the [START] button.

(8) Perform printer related adjustment and scanner related adjustment.
Perform "3.6.3 Printer related adjustment" and "3.6.4 Scanner related adjustment" (Except for [A]).
   📖 P. 3-16 "3.6.3 Printer related adjustment"
   📖 P. 3-21 "3.6.4 Scanner related adjustment"

(9) Perform "Automatic gamma adjustment" <PPC> (05-1642).
   📖 P. 3-30 "3.7.1 Automatic gamma adjustment"

(10) Perform "Automatic gamma adjustment" <PRT> (05-1008).
   📖 P. 3-45 "3.8.1 Automatic gamma adjustment"

Note:
Usually, it is only necessary to perform automatic gamma adjustment for [Plain paper]; however, if other paper is used, perform automatic gamma adjustment per paper type.

(11) Turn the power OFF and start up with the Setting Mode (08).

(12) Set "Line adjustment mode" to "0: For factory shipment" (08-203).
   1. Enter [203] and press the [START] button.
   2. Enter [0] and press the [ENTER] button.

Note:
Be sure to change the setting of "Line adjustment mode" (08-203) to "0: For factory shipment".
Since "1: For line" is set for "Line adjustment mode" in NVRAM supplied as a service part, number of prints is not counted unless it is changed.

5.3.6   Cautions when Data overwrite kit (GP-1060) is installed

When the Data overwrite kit (GP-1060) is installed, follow the cautions below.

<<Cautions when disposing of the HDD>>
Before disposing of the HDD of the equipment, be sure to perform 08-1426 (forcible HDD data clearing) and confirm that deleting of the HDD data is completed.
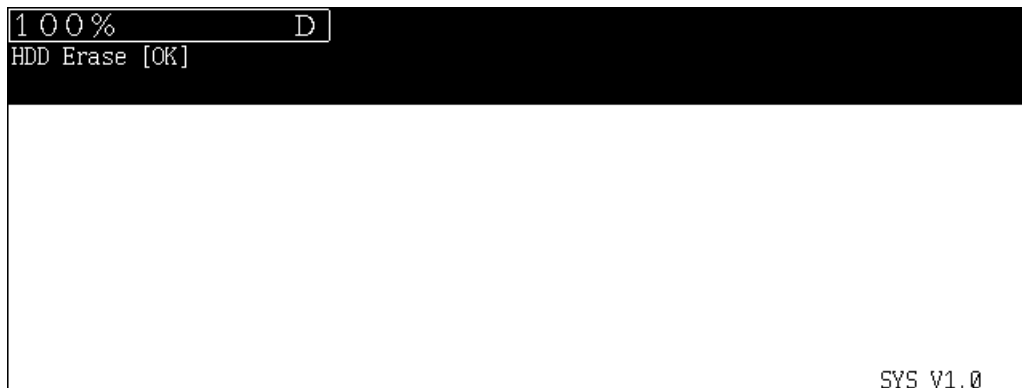
• Check that the percentage is 100% and "HDD Erase [OK]" appears on the upper left of the screen.
• Check that the version (SYS V1.0) is displayed on the lower right of the screen.

<<Caution when disposing of the SYS board>>
Before the SYS board is disposed, the following codes can be performed.
• 08-1427 (Forcible NVRAM data all clearing)
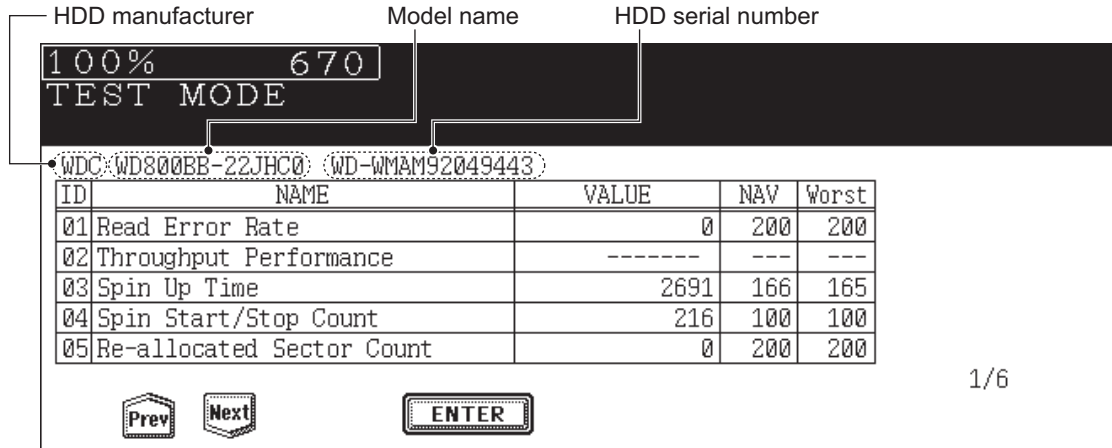• 08-1428 (Forcible SRAM backup data all clearing)
   If these codes are performed, the equipment cannot be started up.

5.3.7　HDD information display

This code displays the HDD operation history, which is recorded in the HDD, on the control panel. HDD failure can be diagnosed or predicted with the information displayed.

1) Display
The following screen is displayed with setting code 08-670.

HDD manufacturer　　　　　Model name　　　　HDD serial number

```
100%      670
TEST MODE


WDC WD800BB-22JHC0  WD-WMAM92049443
ID│         NAME          │ VALUE │ NAV │Worst
01│Read Error Rate        │     0 │ 200 │ 200
02│Throughput Performance │-------│ --- │ ---
03│Spin Up Time           │  2691 │ 166 │ 165
04│Spin Start/Stop Count  │   216 │ 100 │ 100
05│Re-allocated Sector Count│   0 │ 200 │ 200
                                           1/6
   Prev   Next           ENTER
```

- Items supported differ depending on the HDD manufacturer.
- "---" is displayed on the VALUE, NAV and Worst columns if items are not supported.

2) Usage
The combination of the values of ID=05 and c5 is used to diagnose whether or not the HDD has a physical failure when HDD failure is suspected (service call F100-108 or 120 occurred).

Result		Description	Diagnosis
ID	**VALUE**		
05	0	Low possibility of physical failure	HDD replacement is not required.
c5	0		
05	From 1 to 999	Defective sector has been reassigned and HDD is recovered.	HDD replacement is not required.
c5	0		
05	Any value	High possibility of defective sector existence. (There will be a possibility of physical failure depending on the use of HDD.)	HDD replacement is recommended.
c5	1 or more		
05	Either one is at least 1000.	High possibility of physical failure	HDD replacement is recommended.
c5			
05	All values are displayed as "-------".	High possibility of physical failure (A HDD connector, harness or SYS board may be one of the causes.)	HDD replacement is recommended.
c5			

3) ID=05 and c5

ID	Name	Description	Remarks
05	Re-allocated Sector Count	The number of sectors reassigned	This value tends to increase at HDD failure.
c5	Current Pending Sector Count	The number of candidate sectors to be reassigned	This value tends to increase at HDD failure.

4) Description of each ID

ID	Name	Meaning
01	Read Error Rate	This attribute is a measure of the read error rate.
02	Throughput Performance	This attribute is a measure of the throughput performance.
03	Spin Up Time	This attribute is a measure of how quickly the drive is able to spin up from a spun down condition.
04	Spin Start/Stop Count	This attribute is a measure of the total number of spin ups from a spun down condition.
05	Re-allocated Sector Count	This attribute is a measure of the total number of reallocated sectors.
07	Seek Error Rate	This is a measure of the seek error rate.
08	Seek Time Performance	This attribute is a measure of a drive's seek performance during normal online operations.
09	Power-On Hours	This attribute is a measure of the total time (hours or minutes depending on disk manufacturer) the drive has been on.
0a	Spin Retry Count	This attribute is a measure of the total number of spin retries.
0c	Power Cycle Count	This attribute is a measure of the number of times the drive has been turned on.
c0	Power off Retract Count	This attribute is a measure of the total number of emergency unloads.
c1	Load Cycle Count	This attribute is a measure of the total number of load/unloads.
c2	Temperature	This attribute is a measure of the temperature in the HDD.
c3	ECC On the Fly Count	This attribute is a measure of the total number of the ECC On the Fly.
c4	Reallocation Event Count	This attribute is a measure of the total number of the reallocation events.
c5	Current Pending Sector Count	This attribute is a measure of the total number of candidate sectors to be reallocated.
c6	Off-Line Scan Uncorrectable Sector Count	This attribute is a measure of the total number of uncorrectable sectors found during the off-line scan.
c7	Ultra DMA CRC Error Count (Rate)	This attribute is a measure of the total number of errors found in data transfer in the Ultra-DMA mode.
c8	Write Error Rate	This attribute is a measure of the write error rate.

5.4   Other errors

5.4.1   Operation cannot be performed (operation from the control panel is not successful) after installing the option(s) such as Wireless LAN module and/or Parallel board.

Check if the optional board is installed properly.

5.4.2   The connection to the Wireless LAN cannot be made even though it is set to "Enabled".

The connection state and settings of the Wireless LAN can be checked with [USER FUNCTIONS] →
[ADMIN] →[WIRELESS LAN] →[SETTING CHECK].
Confirm the settings with the administrator.
- "NIC INITIALIZING" does not disappear at the time of the power being turned ON and it disappears
  after 6 minutes with the NIC initializing time-out. In this case, the connection to the Wireless LAN did
  not succeed even though "NIC INITIALIZING" disappears.
- The connection to the Wireless LAN cannot be made if the Access Point to be connected is not
  found or security settings are not correct.

5.4.3   "Start page" cannot be printed when the firmware of the equipment or the system software of the EFI controller (GA-1210) is updated after the EFI controller (GA-1210) is installed in the equipment.

When the firmware of the equipment or the system software of the EFI controller is updated, perform
"Initialization of NIC information (08-693)" and "Default setting of the EFI controller (08-700)" if "Start
page" is not printed out after a specified period of time. (In case of the equipment's firmware, wait
approx. 3 minutes and in case of the EFI controller's system software, wait approx. 10 minutes.)
1) Turn OFF the power of the equipment.
2) Confirm that the power of the EFI controller is also turned OFF. (The 7-Segment LED of the EFI
   controller goes off.)
3) Turn ON the power of the equipment while pressing digital keys [0] and [8] simultaneously to
   enter the Setting Mode (08).
4) Confirm that the power of the EFI controller is also turned ON. (The 7-Segment LED of the EFI
   controller is lit.)
5) Key in [693] and press the [START] button (Initialization of NIC information).
6) Key in [700] and press the [START] button (Default setting of the EFI controller).
7) Turn OFF the power of the equipment.
8) Confirm that the power of the EFI controller is also turned OFF.
9) Turn ON the power of the equipment.

5

5.5   AES data Encryption Function Setting (Except for CND)

Important:
This function is not available for the CND model.

5.5.1   Procedure for enabling data encryption function

<< Caution for enabling data encryption function >>
When the HDD data encryption function by the data encryption function is set enabled, data currently stored in the HDD will not be retrieved. Therefore when data encryption function needs to be enabled after the installation of the equipment, it is necessary to back up the data in the HDD before setting this function and then recover them after the setting.

Notes:
1. To ensure security, ask a machine administrator to back up or restore the user's data and information in the HDD. A service technician can back up or restore them only when the machine administrator permits it.
2. Some data in the HDD cannot be backed up and can be left only on printouts.

The procedure for setting the HDD data encryption function by the data encryption function is shown below.
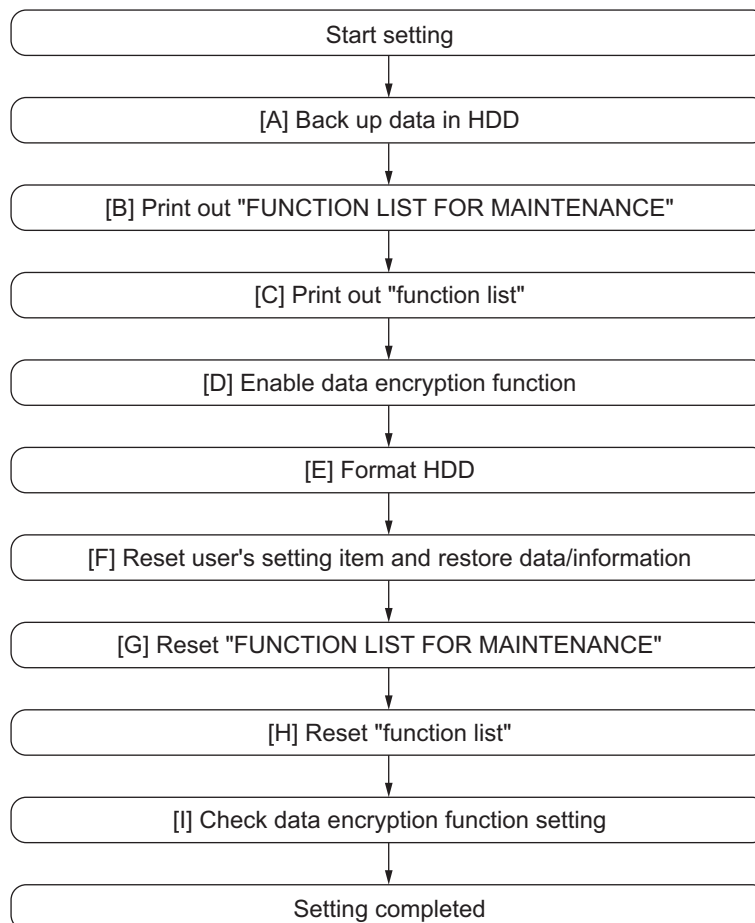
```
┌────────────────────────────────────────┐
│            Start setting               │
└────────────────────────────────────────┘
                    │
┌────────────────────────────────────────┐
│         [A] Back up data in HDD        │
└────────────────────────────────────────┘
                    │
┌────────────────────────────────────────┐
│  [B] Print out "FUNCTION LIST FOR MAINTENANCE" │
└────────────────────────────────────────┘
                    │
┌────────────────────────────────────────┐
│        [C] Print out "function list"   │
└────────────────────────────────────────┘
                    │
┌────────────────────────────────────────┐
│     [D] Enable data encryption function│
└────────────────────────────────────────┘
                    │
┌────────────────────────────────────────┐
│             [E] Format HDD             │
└────────────────────────────────────────┘
                    │
┌────────────────────────────────────────┐
│ [F] Reset user's setting item and restore data/information │
└────────────────────────────────────────┘
                    │
┌────────────────────────────────────────┐
│  [G] Reset "FUNCTION LIST FOR MAINTENANCE" │
└────────────────────────────────────────┘
                    │
┌────────────────────────────────────────┐
│        [H] Reset "function list"       │
└────────────────────────────────────────┘
                    │
┌────────────────────────────────────────┐
│ [I] Check data encryption function setting │
└────────────────────────────────────────┘
                    │
┌────────────────────────────────────────┐
│           Setting completed            │
└────────────────────────────────────────┘
```

Fig. 5-32

[A] Back up data in HDD

Ask the machine administrator to back up the data in the HDD. Refer to the following for the type of data, the possibility and method of backup:

- Image data in the e-Filing
  - Archive them in the "e-Filing" of the TopAccess.
- F-code information, template registration information, address book data
  - Back them up in the "Administrator" menu of the TopAccess.
- Department management data
  - Export them in the "Administrator" menu of the TopAccess.
- Log data (print, scan, FAX (transmission/reception))
  - Export them in the "Administrator" menu of the TopAccess. (They cannot be imported.)
- Data in the shared folder (scanned data, saved data of copy / FAX transmission)
  - Copy them to the client PC via the network. (Data once copied to the client PC cannot be returned to the shared folder.)
- Print-waiting data (copy data and FAX reception data which are waited to be printed due to running out of paper or jams, etc.)
  - Finish printing them after supplying paper or releasing the jam, etc. (The data cannot be left.)
- Print job (private print data, scheduled print data)
  - If any jobs are left, print them. (The data cannot be backed up.)
- Saved FAX data (confidential / bulletin board data)
  - Print them. (The data cannot be backed up.)
- Registered data for FAX transmission (delayed transmission / recovery transmission)
  - The data cannot be backed up.

[B] Print out "FUNCTION LIST FOR MAINTENANCE"

Print it out following the procedure below.

- Print out the "FUNCTION LIST FOR MAINTENANCE".
  [USER FUNCTIONS] → [USER] → [LIST] → [*][#][*][*][3][3] → [START] → The list is printed out.

[C] Print out "function list"

Print it out following the procedure below.

- Print out the "function list".
  [USER FUNCTIONS] → [ADMIN] → Enter the password → [ENTER] → [LIST/REPORT] → [LIST] → [FUNCTION] → The list is printed out.

  Note:
  Explain the procedure to the machine administrator and ask him/her to enter his/her password.

[D] Enable data encryption function

Perform the setting of the data encryption function in the code 08-9379. The setting values are shown below.
- 0: Encryption invalid
- 1: Encryption valid (Security priority)
- 2: Encryption valid (Performance priority)
- If the security is the priority, the processing speed such as for copying and printing may slow down.
- If the performance is the priority, the processing speed does not slow down more than above; however, the security level is lowered.

[E] Format HDD

Recover the HDD to the initial status following the procedure below.

* Format HDD
  Perform it in the setting mode (08-690: 2).
* Initialize the FAX function (When the FAX board (GD-1210, optional) is installed)
  Perform the followings:
  <Procedure>
  1) Turn the power ON while pressing [1] and [*] simultaneously.
  2) Press as follows: [100] → [START] → [INITIALIZE] (Set up the FAX function)
  3) Press as follows: [102] → [START] → [INITIALIZE] (Clear image data)
  4) Turn the power OFF.

[F] Reset user's setting items and restore data/information

Ask the machine administrator to reset the user's setting items and to restore data or information. Refer to the following for the reset and restore:

* Printer driver
  - Upload them in the "Administrator" menu of the TopAccess.
* F-code information, template registration information, address book data
  - Restore them in the "Administrator" menu of the TopAccess.
* Department management data
  - Import them in the "Administrator" menu of the TopAccess.
* Image data in the e-Filing
  - Restore them in the "e-Filing" of the TopAccess.

[G] Reset "FUNCTION LIST FOR MAINTENANCE"

Reset it following the procedure below.
* Reset the items by referring the "FUNCTION LIST FOR MAINTENANCE".
  Print out the "FUNCTION LIST FOR MAINTENANCE".
  (P. 5-167 "[B] Print out "FUNCTION LIST FOR MAINTENANCE"")
  Compare this list and the one printed out at step [B]. If there is any difference in setting, set the values in the list printed out at step [B].
  <Setting procedure>
  1) Turn the power ON while pressing [1] and [3] simultaneously.
  2) Enter the code → [START] → Enter the value of the list printed at [B] → [ENTER]
  3) Turn the power OFF.

[H] Reset "function list"

Reset it following the procedure below.
* Reset the default settings of the FAX functions by referring to the "function list".
  <Setting procedure>
  1) Turn the power ON.
  2) [USER FUNCTIONS] → [ADMIN] → Enter the password → [ENTER] → [FAX]
     → [TERMINAL ID] → Fill in each field → [ENTER] → [INITIAL SETUP]
   → Fill in each field → [ENTER]

  Note:
  Explain the machine administrator about the next operation and ask him/her to enter his/her password.

[I]   Check operation of data encryption function

Check if the data encryption function is in operation.

• Press the [USER FUNCTIONS] button on the control panel. If a key-shaped icon is displayed at the right bottom of the screen, the data encryption function is in operation.
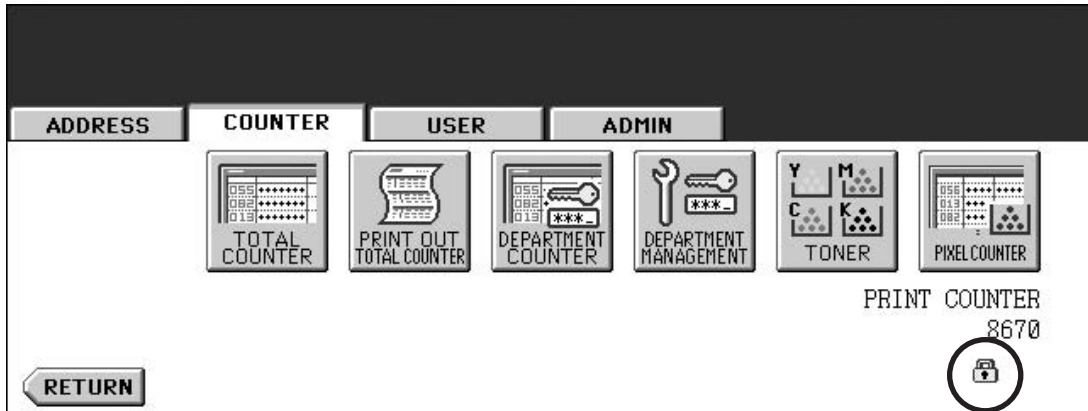
5.5.2   Procedure for disabling data encryption function

The basic procedure is the same as the one for enabling this function. To disable it, set "0 (Invalid)" in the code 08-9379 at step "[D] Enable data encryption function" shown in the figure (📖 P. 5-166 "Fig. 5-32 ").

5.5.3   Procedure for discarding HDD when data encryption function is enabled

Set the data encryption function disabled following the procedure shown in 5.5.2. Then perform the code 08-1426 (Forcible HDD data clearing) to completely erase the data in the HDD.

5

e-STUDIO2500c/3500c/3510c
TROUBLESHOOTING

6. FIRMWARE UPDATING

In this equipment, following firmware is written on the ROM on each board.

Firmware	Stored	Update method
Master data (HDD program data, UI data)	Hard disk	USB Storage Device
System ROM (System firmware, OS data, UI data)	System control PC board (SYS board) * The system firmware is stored into the hard disk from the FROM basic section software version "V1.00/4.30".	USB Storage Device * When replacing the system control PC board (SYS board), update with Download jig.
Engine ROM (Machine firmware)	Logic PC board (LGC board)	USB Storage Device * Update with Download jig also possible.
Scanner ROM (Scanner firmware)	Scanning section control PC board (SLG board)	USB Storage Device * Update with Download jig also possible.
RADF ROM (RADF firmware)	RADF control PC board (MR-3018)	Download jig
Finisher ROM (Finisher firmware)	Finisher control PC board (MJ-1101/ MJ-1030)	Download jig
Finisher ROM (Saddle stitcher firmware)	Finisher control PC board (MJ-1030)	Download jig
Finisher ROM (Converter firmware)	Converter PC board (MJ-1101)	• Download jig • HRNS-CNV-DL-JIG
Hole punch unit ROM (Hole punch unit firmware)	Hole punch control PC board (MJ-6101)	Download jig
FAX ROM (FAX firmware)	FAX board (GD-1210)	Download jig

When you want to update the firmware above or the equipment becomes inoperative status due to some defectives of the firmware, updating the firmware is available by the following actions.

- Updating with the download jig
  📖 P. 6-3 "6.1 Firmware Updating with Download Jig"
- Updating with the USB Storage Device
  📖 P. 6-45 "6.2 Firmware Updating with USB Storage Device"

6

Notes:
- When replacing the system control PC board (SYS board), update with Download jig.
- Before updating the firmware, check the FROM basic section software version (perform the code 08-920).
- For updating with the USB Storage Device; The firmware can be updated to the latest version by storing the update program together with the firmware data file for updating in the USB Storage Device.
- For updating with the download jig; Before the FROM basic section software is updated from "V1.00 / 2.21.1" or earlier version to the latest one, update it to "V1.00 / 4.30" first. Select all of the SYS, OS, UI and HDD when updating "V1.00 / 2.21.1" or earlier versions.
- Written firmware varies depending on the kinds of the boards provided as service parts. For updating, only the minimum firmware is installed on the system control PC board, logic PC board, and scanning section control PC board. No firmware is installed on the FAX board. The latest version of the firmware at the delivery is written on the RADF control PC board and finisher control PC board.
  When any of above boards is replaced with a new one in the field, confirm the other firmware version used with and then update with the suitable version of the firmware.
- The firmware (master data) is not installed on the hard disk provided as a service part. When the hard disk is replaced with a new one, confirm the other firmware version used with and then write the suitable version of the firmware.

6.1 Firmware Updating with Download Jig

In this equipment, it is feasible to update the firmware automatically by connecting the download jig using the dedicated connector and turning ON the equipment.

The download jig consists of the ROM, in which the program is written, and the jig board.

And three types of the download jigs are available for each type of the firmware.

For updating the firmware, in addition to the current ways such as updating each firmware individually, the batch update of the firmware of the equipment is available (except the hard disk and the option).

Firmware	Stored	Download jig	
		Batch update	Individual update
System ROM	System control PC board (SYS board) * The system firmware is stored into the hard disk from the FROM basic section software version "V1.00/4.30".	PWA-DWNLD-350-JIG2 (48 MB) <Two download jigs are needed.>	-
Engine ROM	Logic PC board (LGC board)		K-PWA-DLS-320
Scanner ROM	Scanning section control PC board (SLG board)		K-PWA-DLM-320
RADF ROM	RADF control PC board (MR-3018)	-	K-PWA-DLM-320
Finisher ROM (Finisher firmware)	Finisher control PC board (MJ-1101/MJ-1030)	-	K-PWA-DLM-320
Finisher ROM (Saddle stitcher firmware)	Finisher control PC board (MJ-1030)	-	K-PWA-DLM-320
Finisher ROM (Converter firmware)	Converter PC board (MJ-1101)	-	K-PWA-DLM-320 HRNS-CNV-DL-JIG
Hole punch unit ROM (Hole punch unit firmware)	Hole punch control PC board (MJ-6101)	-	K-PWA-DLM-320
FAX ROM	FAX board (GD-1210)	-	K-PWA-DLM-320

Refer to the following for the details to update with each download jig.
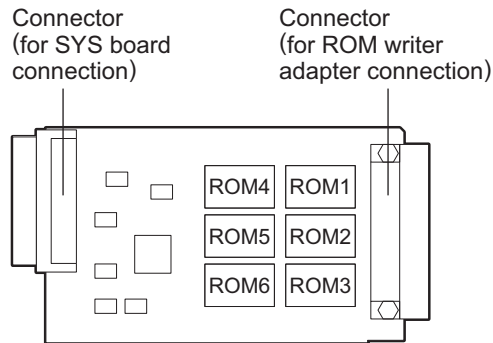
6

PWA-DWNLD-350-JIG2 (48MB)

Fig. 6-1 Jig board: PWA-DWNLD-350-JIG2 (48 MB)

Important:
- To perform update, two download jigs (PWA-DWNLD-350-JIG2) are needed.
- The download jig (PWA-DWNLD-350-JIG) is the jig in which the Flash ROM is mounted on the board directly. Therefore, ROM writer adapter (PWA-DL-ADP-350) is required to write the data to these Flash ROMs. Refer to the following to write the data.
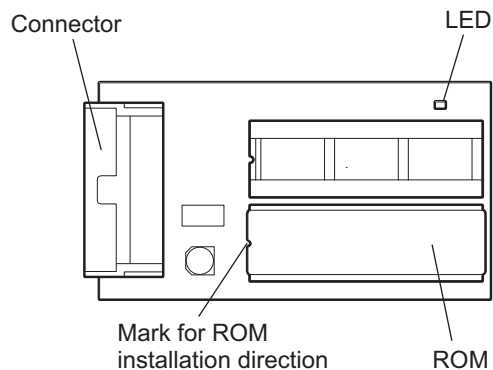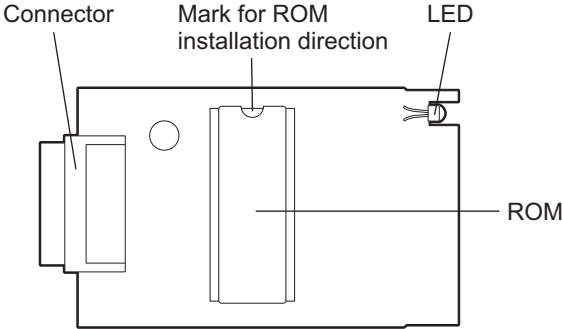 📖 P. 6-22 "6.1.2 Writing the data to the download jig (PWA-DWNLD-350-JIG)"

K-PWA-DLS-320

Fig. 6-2 Jig board: K-PWA-DLS-320

Important:
   Pay attention to the direction of the ROM.

K-PWA-DLM-320

Fig. 6-3 Jig board: K-PWA-DLM-320

Important:
Pay attention to the direction of the ROM.

6.1.1　PWA-DWNLD-350-JIG2 (48 MB)

The firmware of the equipment except for the hard disk and the option can be updated individually or in a batch by using PWA-DWNLD-350-JIG2 (48 MB). Update the ROM data written on each board according to the need such as the case of replacing the system control PC board, logic PC board or scanning section control PC board.

The data to be overwritten by this update are as follows.
<Updating System ROM>
- System firmware (System firmware data, FROM internal program data)
- OS data (FROM basic section software)
- UI data (fixed section data)

<Updating Engine ROM>
Engine ROM data

<Updating Scanner ROM>
Scanner ROM data

[A]　Update procedure

Important:
- Use two "PWA-DWNLD-350-JIG2" for the download jigs.
- Turn OFF the power before installing and removing the download jig.
- Do not turn OFF the power during the update. The data could be damaged and not be operated properly.

(1)　Write the ROM data to be updated to the download jig.
　　　📖 P. 6-22 "6.1.2 Writing the data to the download jig (PWA-DWNLD-350-JIG)"

(2)　Shut down the equipment.
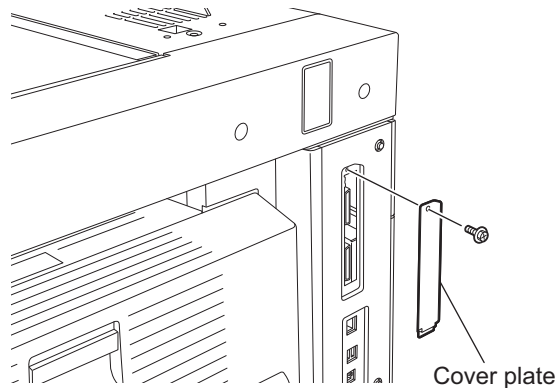
(3)　Take off the cover plate.

Cover plate

Fig. 6-4

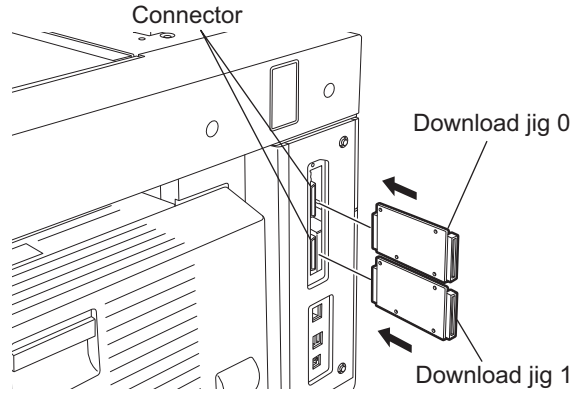(4) Connect the download jig with the jig connector (CN126, CN124) on the SYS board.

Fig. 6-5

Download jig number	Connector name
Download jig 0	CN126
Download jig 1	CN124

(5) Turn ON the power while [8] button and [9] button are pressed simultaneously.
The screen for selecting the items to be updated is displayed. "*" is displayed next to the items to be updated. (All items are selected in the default settings.)

When the FROM basic section software version to be updated is "V1.00 / 2.21.1" or earlier:

```
Download Board Firmware Update Mode      Version in update media
Select Update Item

  *0. OS Update                     OS  Version... Vx.xx/x.xx x
  *1. UI Data Update                UIF Version... Vxxx.xxx x
  *2. System Firmware Update        SYS Version... Vxxx.xxx x
  *3. Engine Firmware Update        ENG Version... xxxxx-xx
  *4. Scanner Firmware Update       SCN Version... xxxxx-xx
```

Fig. 6-6

WWW.SERVICE-MANUAL.NET

When the FROM basic section software version to be updated is "V1.00 / 4.30" or later:

```
Download Board Firmware Update Mode        Version in update media
Select Update Item

  *1. OS UI Update                         OS  Version... Vx.xx/x.xx x
  *2. Engine Firmware Update               UIF Version... Vxxx.xxx x
  *3. Scanner Firmware Update              ENG Version... xxxxx-xx
                                           SCN Version... xxxxx-xx
```

Fig. 6-7

(6)   Select the item with the digital keys.
"*" is displayed next to the selected item. Display or delete the "*" by pressing the number of the item. All items are selected in the default settings.
• Select all items to update the firmware of the equipment in a batch.
• Select items as follows to update it individually.

Types of Firmware	Items <Items vary depending on the FROM basic section software version to be updated.>	
	"V1.00/2.21.1" or earlier:	"V1.00/4.30" or later
System ROM	0. OS Update 1. UI Update 2. System Firmware Update	1. OS UI Update
Engine ROM	3. Engine Firmware Update	2. Engine Firmware Update
Scanner ROM	4. Scanner Firmware Update	3. Scanner Firmware Update

Example: Updating the system ROM
When the FROM basic section software version to be updated is "V1.00 / 2.21.1" or earlier:

```
Download Board Firmware Update Mode        Version in update media
Select Update Item

  *0. OS Update                            OS  Version... Vx.xx/x.xx x
  *1. UI Data Update                       UIF Version... Vxxx.xxx x
  *2. System Firmware Update               SYS Version... Vxxx.xxx x
   3. Engine Firmware Update               ENG Version... xxxxx-xx
   4. Scanner Firmware Update              SCN Version... xxxxx-xx
```

Fig. 6-8

When the FROM basic section software version to be updated is "V1.00 / 4.30" or later:

```
Download Board Firmware Update Mode       Version in update media
Select Update Item

  *1. OS UI Update                        OS  Version... Vx.xx/x.xx x
   2. Engine Firmware Update              UIF Version... Vxxx.xxx x
   3. Scanner Firmware Update             ENG Version... xxxxx-xx
                                          SCN Version... xxxxx-xx
```

Fig. 6-9

(Updating all the items is taken as an example and explained in the following procedures.)

(7)   Press the [START] button.
      Updating starts and the processing status is displayed on the LCD screen.

      When the FROM basic section software version to be updated is "V1.00 / 2.21.1" or earlier:

```
Download Board Firmware Update Mode

Download Board     -> FROM Update Start.  OS Update      .......
  Check Devices    -   Completed
  Update Status    -   Installing
  Data Check       -                      Engine MAIN Update  .. Flash Update
                                          Scanner Firm Update .. Flash Update
```

Fig. 6-10

Status display during update	Status display when update is completed
OS Update	OS Update ....Completed
UI Data Update	UI Data Update ....Completed
SysFirm Update	SysFirm Update ....Completed
Engine MAIN Update ......Flash Update	Engine MAIN Update ......Completed
Scanner Firm Update......Flash Update	Scanner Firm Update......Completed

6

When the FROM basic section software version to be updated is "V1.00 / 4.30" or later:

```
Download Board Firmware Update Mode

Download Board    -> FROM Update Start.  OS UI Update   .......
  Check Devices   -   Completed          Engine MAIN Update .. Flash Update
  Update Status   -   Installing         Scanner Firm Update .. Flash Update
  Data Check      -


Engine Update Status
 xxxx/nnnnn
Scanner Update Status
 xxxx/nnnnn
```

Fig. 6-11

Status display during update	Status display when update is completed
OS UI Update	OS UI Update.................Completed
Engine MAIN Update......Flash Update	Engine MAIN Update..... Completed
Scanner Firm Update..... Flash Update	Scanner Firm Update..... Completed

(8) "Update Completed." is displayed at the bottom of the LCD screen after the updating is completed properly.

When the FROM basic section software version to be updated is "V1.00 / 2.21.1" or earlier:

```
Download Board Firmware Update Mode

                         OS Update       ....... Completed
                         UI Data Update ....... Completed
                         SysFirm Update ....... Completed
                         Engine MAIN Update  .. Completed
                         Scanner Firm Update .. Completed




                         Update Completed.
```

Fig. 6-12

When the FROM basic section software version to be updated is "V1.00 / 4.30" or later:

```
Download Board Firmware Update Mode

                                   OS UI Update   ....... Completed
                                   Engine MAIN Update .. Completed
                                   Scanner Firm Update .. Completed




                                       Update Completed.


```
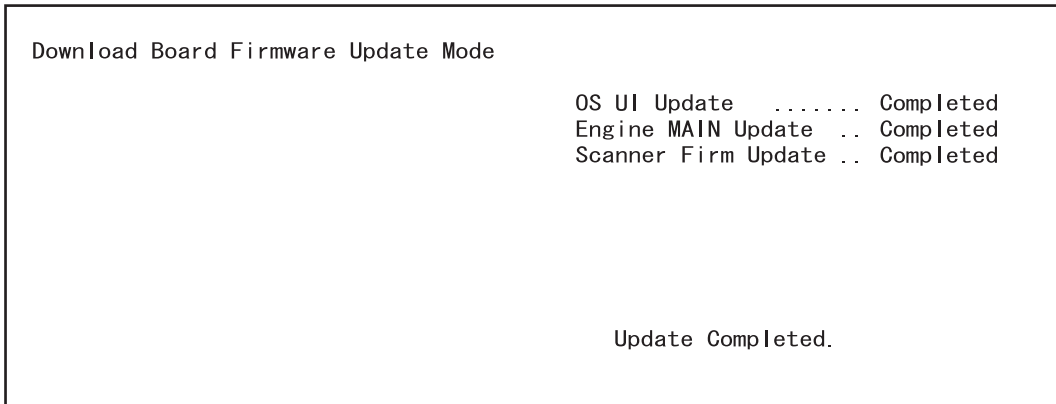
Fig. 6-13

"Update Failed." is displayed at the bottom of the LCD screen when the updating is not completed properly. "Failed" appears next to the failed item on the status display. Turn OFF the power, and then check the following items. After confirming and cleaning the problems, restart updating from the beginning.
•   Is the download jig connected properly?
•   Is the updating data written to the download jig properly?
•   Do the download jig and the equipment operate properly?

When the FROM basic section software version to be updated is "V1.00 / 2.21.1" or earlier:
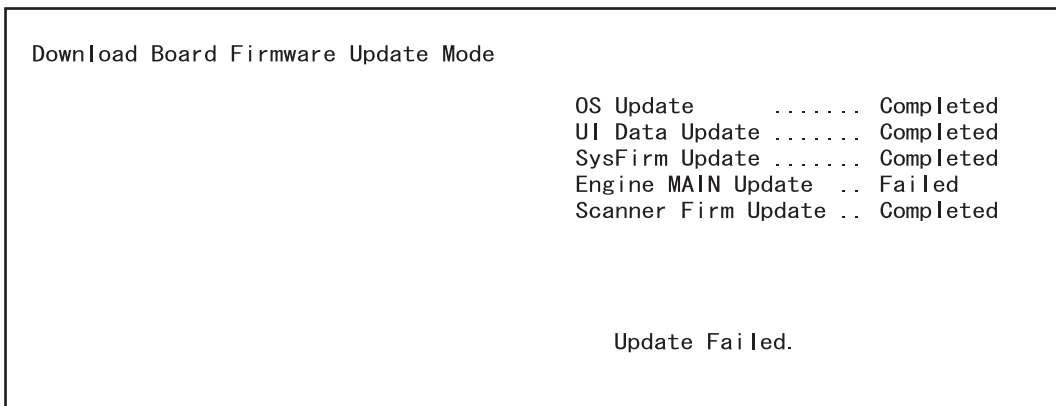
```
Download Board Firmware Update Mode

                                   OS Update      ....... Completed
                                   UI Data Update ...... Completed
                                   SysFirm Update ....... Completed
                                   Engine MAIN Update .. Failed
                                   Scanner Firm Update .. Completed




                                       Update Failed.


```

Fig. 6-14

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When the FROM basic section software version to be updated is "V1.00 / 4.30" or later:

```
Download Board Firmware Update Mode

                              OS UI Update   ....... Completed
                              Engine MAIN Update .. Failed
                              Scanner Firm Update .. Completed




                              Update Failed.
```
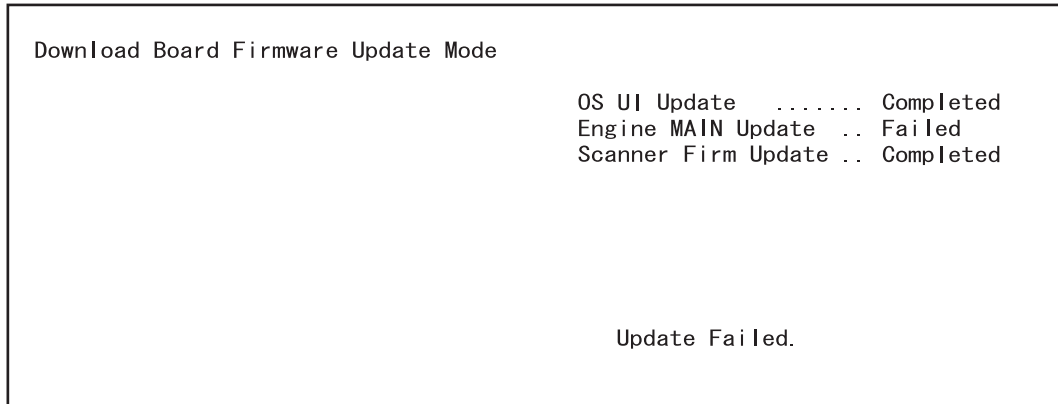
Fig. 6-15

When the FROM basic section software version to be updated is "V1.00 / 6.44" or later:
Only when the engine ROM update fails, an error number appears next to "Failed". The error contents are as follows.

Error number	Error content	
01	Time out	When the download is requested
02	Time out	When the download is written
03	Time out	When the download is finished
04	Reception failed	When the download is requested
05	Deletion error	When the download is written
06	Writing error	When the download is written
07	Checksum error	When the download is finished
08	Reception status code abnormality	When the download is requested
09	Reception status code abnormality	When the download is written
10	Reception status code abnormality	When the download is finished
11	Communication abnormality between Main and PFC	When the download is requested
12	Communication abnormality between Main and PFC	When the download is written
13	Communication abnormality between Main and PFC	When the download is finished
14	Communication abnormality between Main and Laser	When the download is requested
15	Communication abnormality between Main and Laser	When the download is written
16	Communication abnormality between Main and Laser	When the download is finished
00	Other error	-

(9)   Turn OFF the power, remove the download jig and install the cover plate.

(10) Perform the initialization of the updating data.
- Turn ON the power while [0] button and [8] button are pressed simultaneously.
- Key in "947", and then press the [START] button.
- Press the [INITIALIZE] button.

[B] Confirmation of the updated data

After the updating is completed, check each data version in the Setting Mode (08) to confirm that the data was overwritten properly.

<Updating System ROM>
08-900: System ROM version
08-920: FROM basic section software version
08-921: FROM internal program version
08-922: UI data fixed section version

<Updating Engine ROM>
08-903: Engine ROM version

<Updating Scanner ROM>
08-905: Scanner ROM version

[C] Adjustment

Perform the adjustment of the equipment.

- Performing Image Quality Control (05-396):
  📖 P. 3-4 "3.3 Performing Image Quality Control (IQC)"

- Adjustment of Color Registration Control (05-4719):
  📖 P. 3-6 "3.4 Adjustment of Color Registration Control"

- Automatic gamma adjustment <PPC> (05-1642) (using [4][FAX] test pattern):
  📖 P. 3-30 "3.7.1 Automatic gamma adjustment"

- Automatic gamma adjustment < PRT > (05-1008) (using [70][FAX] test pattern):
  📖 P. 3-45 "3.8.1 Automatic gamma adjustment"

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[D] Display during the update (When the FROM basic section software version to be updated is "V1.00 / 2.21.1" or earlier)

Update is performed in parallel as shown in the transition diagram below.

```
                    ┌──────────────────────────────┐
                    │ Item Selection Screen for Update │
                    └──────────────────────────────┘
      ┌──────────────────────┼──────────────────────┐
      │                      │                      │
 ┌ ─ ─ ─ ─ ─ ─ ─ ┐   ┌ ─ ─ ─ ─ ─ ─ ─ ┐   ┌ ─ ─ ─ ─ ─ ─ ─ ┐
    [System ROM]        [Engine ROM]        [Scanner ROM]
 │                 │ │                 │ │                 │
    ┌──────────┐        ┌─────────────┐     ┌─────────────┐
 │  │0. OS Update│ │   │3. Engine    │  │ │4. Scanner   │  │
    └──────────┘     │   Firmware     │    │  Firmware    │
 │        │        │ │   Update       │  │ │  Update      │  │
    ┌──────────────┐   └─────────────┘     └─────────────┘
 │  │1. UI Data    │ │                 │ │                 │
    │   Update     │
 │  └──────────────┘ │                 │ └ ─ ─ ─ ─ ─ ─ ─ ┘
    ┌──────────────┐
 │  │2. System     │ │                 │
    │   Firmware   │
 │  │   Update     │ │                 │
    └──────────────┘
 └ ─ ─ ─ ─ ─ ─ ─ ┘ └ ─ ─ ─ ─ ─ ─ ─ ┘
      └──────────────────────┼──────────────────────┘
                    ┌──────────────────────┐
                    │   Update Completed    │
                    └──────────────────────┘
```
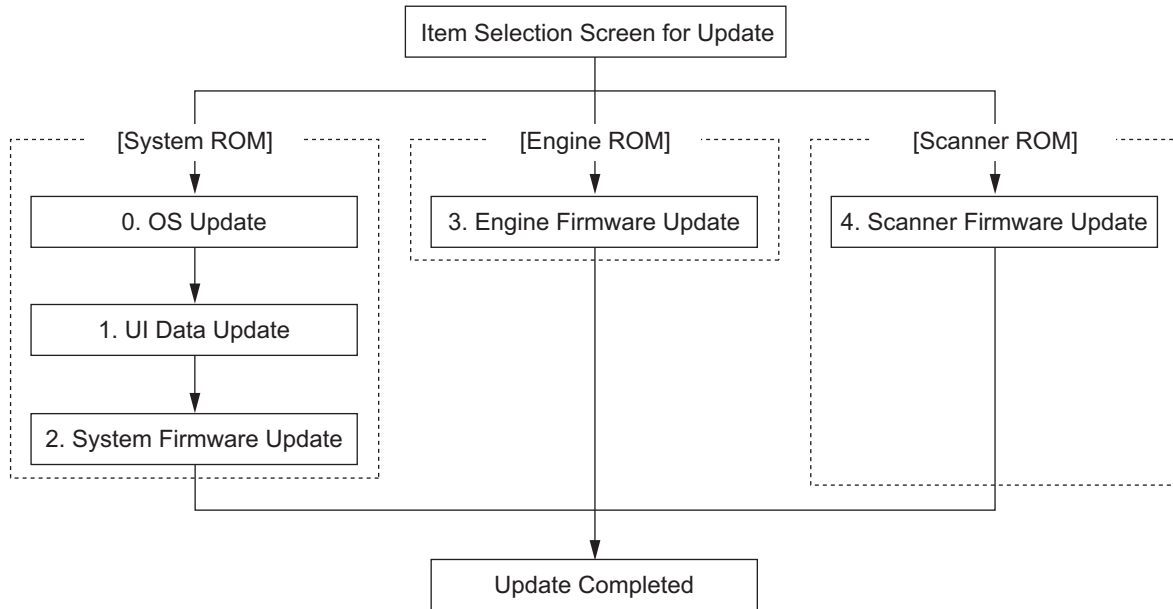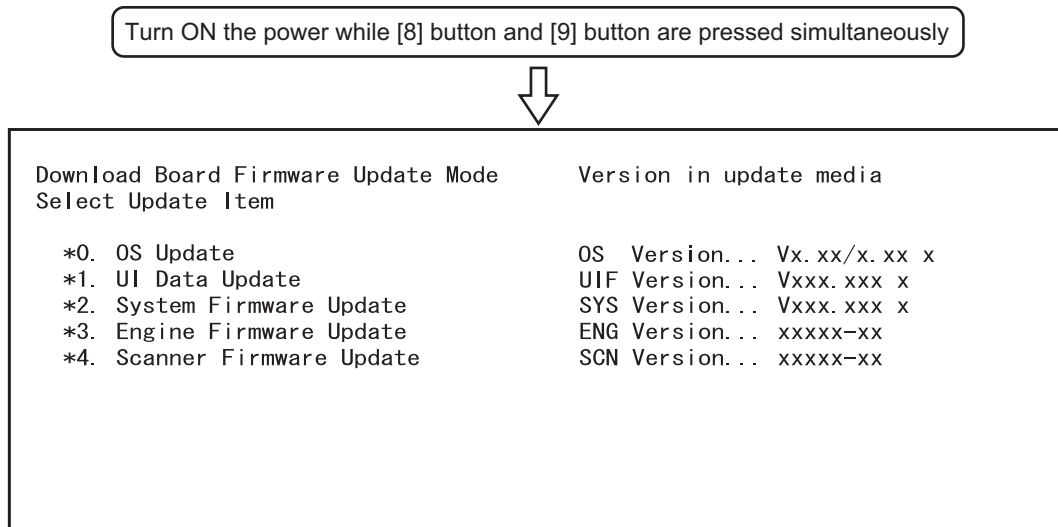
Fig. 6-16

Below is an example of the changes of the LCD screen during update.
Note that the screen order may be different from the actual one, because a parallel update is performed in the process.

```
┌──────────────────────────────────────────────────────────────────────┐
│ Turn ON the power while [8] button and [9] button are pressed simultaneously │
└──────────────────────────────────────────────────────────────────────┘
```

⇩

```
┌────────────────────────────────────────────────────────────────┐
│                                                                │
│  Download Board Firmware Update Mode      Version in update media │
│  Select Update Item                                            │
│                                                                │
│   *0. OS Update                  OS  Version... Vx.xx/x.xx x    │
│   *1. UI Data Update             UIF Version... Vxxx.xxx x      │
│   *2. System Firmware Update     SYS Version... Vxxx.xxx x      │
│   *3. Engine Firmware Update     ENG Version... xxxxx-xx        │
│   *4. Scanner Firmware Update    SCN Version... xxxxx-xx        │
│                                                                │
│                                                                │
└────────────────────────────────────────────────────────────────┘
```

⇩ Select items to be updated and press the [START] button to start updating the [System ROM], [Engine ROM] and [Scanner ROM] in parallel.

```
Download Board Firmware Update Mode

Download Board    -> FROM Update Start.   OS Update        .......
 Check Devices    -   Completed
 Update Status    -   Installing
 Data Check       -                       Engine MAIN Update  .. Flash Update
                                          Scanner Firm Update .. Flash Update


Engine Update Status
 xxxx/nnnnn
Scanner Update Status
 xxxx/nnnnn
```

⬇ When the [System ROM]-[OS Update] has been updated, "OS Update…Completed" is displayed and the [UI Update] update will start.

```
Download Board Firmware Update Mode

Download Board    -> FROM Update Start.  ┌OS Update        .......  Completed┐
 Check Devices    -   Completed           UI Data Update .......
 Update Status    -   Installing
 Data Check       -                       Engine MAIN Update  .. Flash Update
                                          Scanner Firm Update .. Flash Update


Engine Update Status
 xxxx/nnnnn
Scanner Update Status
 xxxx/nnnnn
```

6

⬇ When the [System ROM]-[UI Update] has been updated, "UI Data Update…Completed" is displayed and the [System Firmware Update] update will start.

```
Download Board Firmware Update Mode

Download Board    -> FROM Update Start.   OS Update        .......  Completed
 Check Devices    -   Completed          ┌UI Data Update .......  Completed┐
 Update Status    -   Installing          SysFirm Update .......
 Data Check       -                       Engine MAIN Update  .. Flash Update
                                          Scanner Firm Update .. Flash Update


Engine Update Status
 xxxx/nnnnn
Scanner Update Status
 xxxx/nnnnn
```

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When the [Engine ROM] has been updated, "Engine MAIN Update..Flash Update" is changed to "Engine MAIN Update..Completed".

```
Download Board Firmware Update Mode

Download Board    -> FROM Update Start.   OS Update        ....... Completed
 Check Devices    -   Completed           UI Data Update ....... Completed
 Update Status    -   Installing          SysFirm Update .......
 Data Check       -                       ┌─────────────────────────────┐
                                          │ Engine MAIN Update  .. Completed │
                                          └─────────────────────────────┘
                                           Scanner Firm Update .. Flash Update




 Scanner Update Status
  xxxx/nnnnn
```

When the [System ROM]-[System Firmware Update] has been updated, "SysFirm Update…Completed" is displayed.

```
Download Board Firmware Update Mode

                                     OS Update        ....... Completed
                                     UI Data Update ....... Completed
                                    ┌──────────────────────────────┐
                                    │ SysFirm Update ....... Completed │
                                    └──────────────────────────────┘
                                     Engine MAIN Update  .. Completed
                                     Scanner Firm Update .. Flash Update




 Scanner Update Status
  xxxx/nnnnn
```
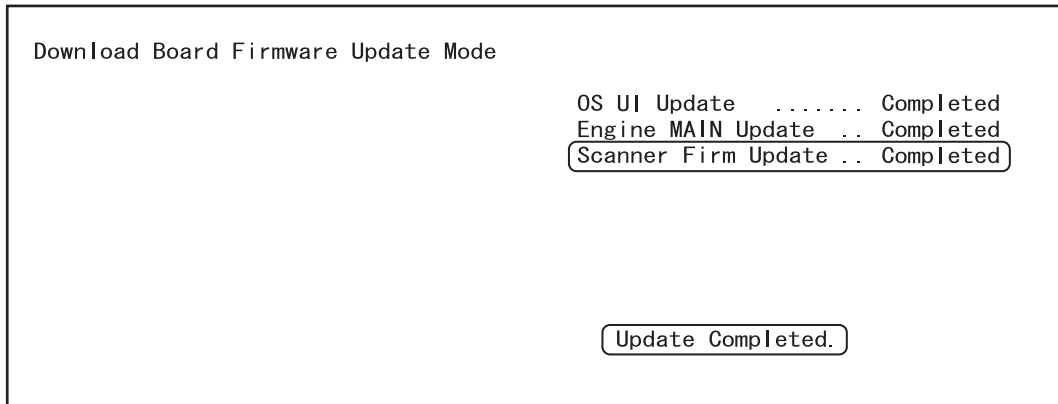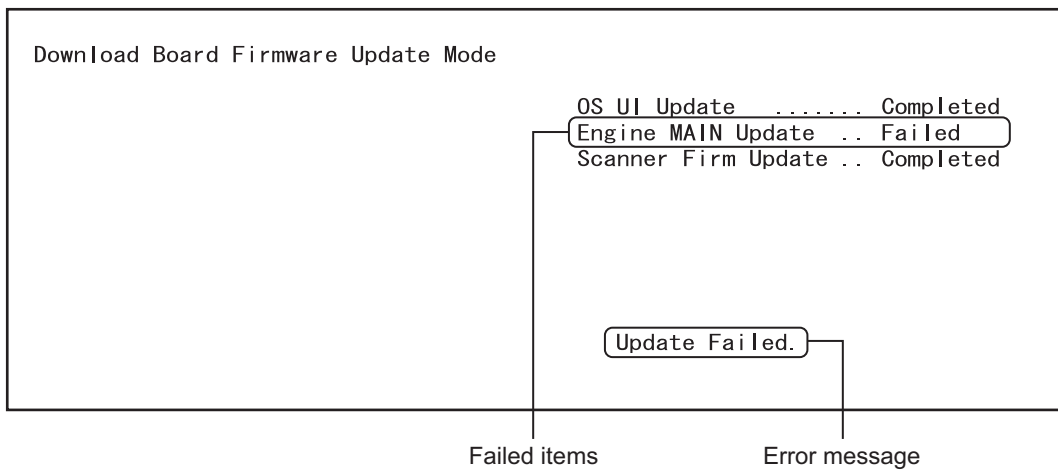
When the [Scanner ROM] has been updated, "Scanner Firm Update..Flash Update" is changed to "Scanner Firm Update..Completed".

When all data has been updated, "Update Completed" is displayed.

```
Download Board Firmware Update Mode

                                    OS Update        ....... Completed
                                    UI Data Update ....... Completed
                                    SysFirm Update ....... Completed
                                    Engine MAIN Update  .. Completed
                                    [Scanner Firm Update .. Completed]



                                    [Update Completed.]
```

* "Update Failed." is displayed at the bottom of the LCD screen when the updating is not completed properly. "Failed" appears next to the failed item on the status display.

```
Download Board Firmware Update Mode

                                    OS Update        ....... Completed
                                    UI Data Update ....... Completed
                                    SysFirm Update ....... Completed
                                    Engine MAIN Update  .. Failed
                                    [Scanner Firm Update .. Completed]



                                    [Update Failed.]
```

Failed items   Error message

6

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[E] Display during the update (When the FROM basic section software version to be updated is "V1.00 / 4.30" or later)

Update is performed in parallel as shown in the transition diagram below.

```
                    ┌─────────────────────────────────┐
                    │  Item Selection Screen for Update │
                    └─────────────────────────────────┘
                                    │
        ┌───────────────────────────┼───────────────────────────┐
        │                           │                           │
   [System ROM]                [Engine ROM]                [Scanner ROM]
        │                           │                           │
   ┌──────────────┐         ┌──────────────────────┐     ┌──────────────────────┐
   │ 1. OS UI Update │       │ 2. Engine Firmware Update │  │ 3. Scanner Firmware Update │
   └──────────────┘         └──────────────────────┘     └──────────────────────┘
        │                           │                           │
        └───────────────────────────┼───────────────────────────┘
                                    │
                    ┌─────────────────────────────────┐
                    │        Update Completed          │
                    └─────────────────────────────────┘
```

Below is an example of the changes of the LCD screen during update.

```
┌──────────────────────────────────────────────────────────────────────────┐
│ Turn ON the power while [8] button and [9] button are pressed simultaneously │
└──────────────────────────────────────────────────────────────────────────┘
```

⇩

```
Download Board Firmware Update Mode      Version in update media
Select Update Item

  *1. OS UI Update                       OS  Version... Vx.xx/x.xx x
  *2. Engine Firmware Update             UIF Version... Vxxx.xxx x
  *3. Scanner Firmware Update            ENG Version... xxxxx-xx
                                         SCN Version... xxxxx-xx
```

⇩ Select items to be updated and press the [START] button.

```
Download Board Firmware Update Mode

Download Board    -> FROM Update Start.  OS UI Update   .......
 Check Devices    -   Completed          Engine MAIN Update .. Flash Update
 Update Status    -   Installing         Scanner Firm Update .. Flash Update
 Data Check       -



Engine Update Status
 xxxx/nnnnn
Scanner Update Status
 xxxx/nnnnn
```

⇩ When the [System ROM]-[OS Update] has been updated, "OS UI Update…Completed" is displayed.

```
Download Board Firmware Update Mode

Download Board    -> FROM Update Start.  ┌OS UI Update   .......  Completed┐
 Check Devices    -   Completed          │Engine MAIN Update  .. Flash Update
 Update Status    -   Installing         Scanner Firm Update .. Flash Update
 Data Check       -



Engine Update Status
 xxxx/nnnnn
Scanner Update Status
 xxxx/nnnnn
```

⇩ When the [Engine ROM] has been updated, "Engine MAIN Update..Flash Update" is changed to "Engine MAIN Update.. Completed".

```
Download Board Firmware Update Mode

Download Board    -> FROM Update Start.  OS UI Update   .......  Completed
 Check Devices    -   Completed          ┌Engine MAIN Update  .. Completed┐
 Update Status    -   Installing         Scanner Firm Update .. Flash Update
 Data Check       -




Scanner Update Status
 xxxx/nnnnn
```

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When the [Scanner ROM] has been updated, "Scanner Firm Update..Flash Update" is changed to "Scanner Firm Update.. Completed".

When all data has been updated, "Update Completed" is displayed.

```
Download Board Firmware Update Mode

                              OS UI Update   ....... Completed
                              Engine MAIN Update  .. Completed
                             [Scanner Firm Update .. Completed]



                             [ Update Completed. ]

```

* "Update Failed." is displayed at the bottom of the LCD screen when the updating is not completed properly. "Failed" appears next to the failed item on the status display.

```
Download Board Firmware Update Mode

                              OS UI Update   ....... Completed
                             [Engine MAIN Update  .. Failed    ]
                              Scanner Firm Update .. Completed



                             [ Update Failed. ]

```

Failed items   Error message

When the FROM basic section software version to be updated is "V1.00 / 6.44" or later:
Only when the engine ROM update fails, an error number appears next to "Failed". The error contents are as follows.

Error number	Error content	
01	Time out	When the download is requested
02	Time out	When the download is written
03	Time out	When the download is finished
04	Reception failed	When the download is requested
05	Deletion error	When the download is written
06	Writing error	When the download is written
07	Checksum error	When the download is finished
08	Reception status code abnormality	When the download is requested
09	Reception status code abnormality	When the download is written
10	Reception status code abnormality	When the download is finished
11	Communication abnormality between Main and PFC	When the download is requested
12	Communication abnormality between Main and PFC	When the download is written
13	Communication abnormality between Main and PFC	When the download is finished
14	Communication abnormality between Main and Laser	When the download is requested
15	Communication abnormality between Main and Laser	When the download is written
16	Communication abnormality between Main and Laser	When the download is finished
00	Other error	-

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6.1.2 Writing the data to the download jig (PWA-DWNLD-350-JIG)

The download jig (PWA-DWNLD-350-JIG) is the jig in which the Flash ROM is mounted on the board directly. The ROM writer adapter (PWA-DL-ADP-350) is required to write data to these Flash ROMs. Connect the download jig with the ROM writer via ROM writer adapter to write data. For the procedure to write data, refer to the download procedure, instruction manual of each ROM writer, or others.
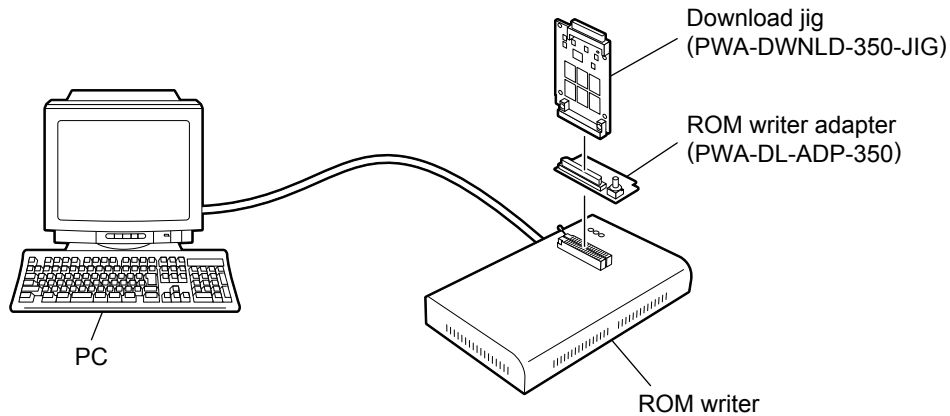
Fig. 6-17

Note:

There are two types of the ROM writer adapter. Use the proper one according to the ROM writer to be used. Applicable type of the adapter for the ROM writer can be confirmed by the model name indicated on the board. Confirm that the adapter is available for the ROM writer to be used before connecting them. If an unapplied adapter is connected, the application of the ROM writer judges it as an error and writing the data cannot be implemented. Applicable combinations of the ROM writer and adapter are as follows.

ROM writer	ROM writer adapter
Minato Electronics MODEL 1881XP/1881UXP (or equivalent)	PWA-DL-ADP-350-1881 (model 1881)
Minato Electronics MODEL 1893/1895/1931/1940 (or equivalent)	PWA-DL-ADP-350-1931 (model 1931)
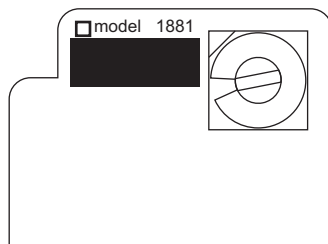
[PWA-DL-ADP-350-1881]

Fig. 6-18 PWA-DL-ADP-350-1881
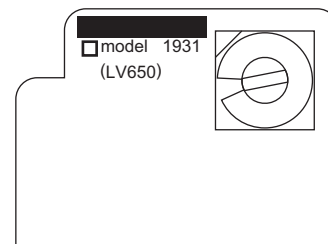
[PWA-DL-ADP-350-1931]

Fig. 6-19 PWA-DL-ADP-350-1931

- Precaution when writing the data
  - Consider two download jigs (PWA-DWNLD-350-JIG2) as "Download jig 0" and "Down load jig 1" and do not mix them up when writing.
  - Set the writing voltage (VID) to 3.3 V.
  - When writing the data, set the address from 0 to 3FFFFF. The data may not be written correctly if it is not set.
  - The Flash ROM in which the data will be written, on the download jig is selected by switching the rotary switch on the adapter. Be sure to switch the rotary switch on the adapter depending on the data (file) to be written.

Important:
When an error such as "Over current detects" appears while the data are being written to the download jig and the writing cannot be finished, set the writing voltage (VID) to 12 V and then write them.

Rotary Switch	File Name		Flash ROM
	Download jig 0	Download jig 1	
1	jigu0-1.bin	jigu0-0.bin	ROM1
2	jigu1-1.bin	jigu1-0.bin	ROM2
3	jigu2-1.bin	jigu2-0.bin	ROM3
4	N/A	N/A	ROM4
5	N/A	N/A	ROM5
6	N/A	N/A	ROM6

Note:
Be sure not to confuse different ROM Versions since the file name is identical although the ROM version is different.

6

6.1.3   K-PWA-DLS-320

The firmware of the equipment (engine ROM) can be updated individually by using K-PWA-DLS-320. Update the ROM data written on each board according to the need such as the case of replacing the board.

The data to be overwritten by this update are as follows.
<Updating Engine ROM>
Engine ROM data

[A]   Update Procedure

Since the procedure differs depending on the data, see the each procedure below.

Important:
- Turn OFF the power before installing or removing the download jig.
- Do not turn OFF the power during the update. The data could be damaged and not be operated properly.

<Updating Engine ROM>

(1)   Install the ROM to the download jig.
Make sure the direction is correct (📖 P. 6-4 " K-PWA-DLS-320").

(2)   Shut down the equipment.

(3)   Take off the rear cover.

Rear cover
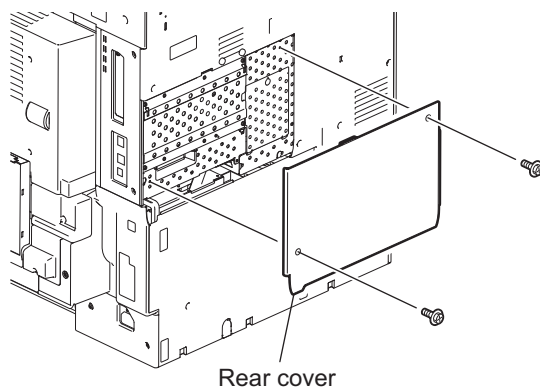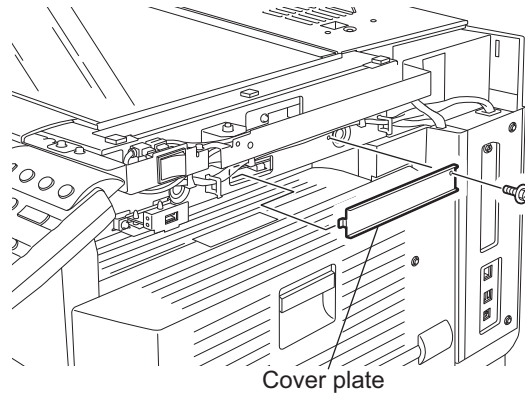
Fig. 6-20

(4) Remove the cover plate.

Cover plate
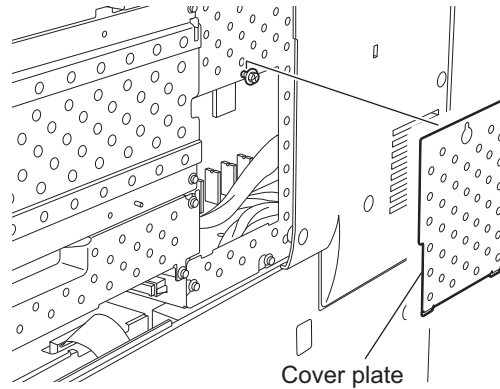
Fig. 6-21

(5) Connect the download jig with the jig connector (CN352) on the logic PC board (LGC board).
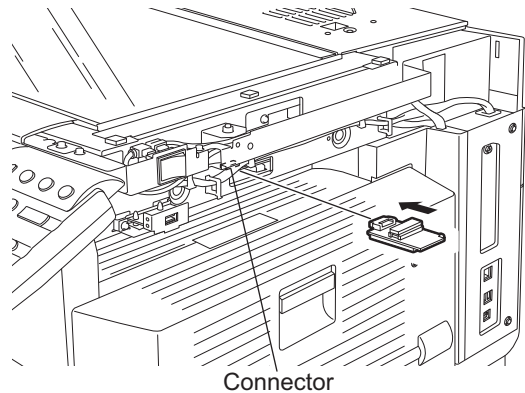

Connector
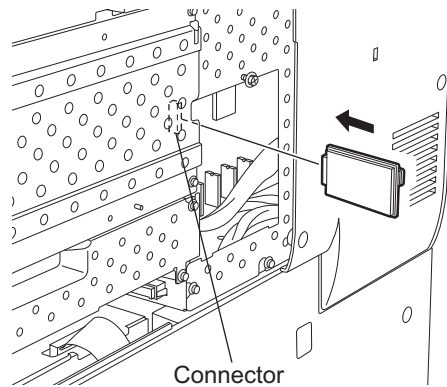
Fig. 6-22

(6) Open the front cover.

(7) Turn ON the power while [0] button and [8] button are pressed simultaneously.
     Updating starts automatically and the LED on the download jig lights.

(8) When the update is completed properly, the LED on the download jig blinks. The LED starts
     blinking in approx. 20 sec. since the update starts. It is assumed that the update is failed if it does
     not start blinking even though 1 min. has passed. In this case, turn OFF the power and check the
     following items. Then, clear the problem and restart updating from the beginning.
     · Is the download jig connected properly?
     · Is the ROM installed to the download jig properly?
     · Is the updating data written on the ROM of the download jig properly?
     · Do the download jig and the equipment operate properly?

(9) Turn OFF the power, remove the download jig and install the cover plate and the rear cover.

(10) Close the front cover.

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[B]   Confirmation of the updated date

After the updating is completed, check each data version in Setting Mode (08) to confirm that the date was overwritten properly.

<Updating Engine ROM>
08-903: Engine ROM version

6.1.4　K-PWA-DLM-320

The firmware of the equipment (scanner ROM) and the option (RADF ROM, Finisher ROM, FAX ROM) can be updated individually by using K-PWA-DLM-320. Update the ROM data written on each board according to the need such as the case of replacing the board.

The data to be overwritten by this update are as follows.
<Updating Scanner ROM>
Scanner ROM data

<Updating RADF ROM>
RADF ROM data

<Updating Finisher ROM>
• Finisher firmware
• Saddle stitcher firmware
• Converter firmware
• Hole punch unit firmware

<Updating FAX ROM>
FAX ROM data

[A]　Update Procedure

Since the procedure differs depending on the data, see the each procedure below.
　　Important:
　　　• Turn OFF the power before installing or removing the download jig.
　　　• Do not turn OFF the power during the update. The data could be damaged and not be operated properly.

<Updating Scanner ROM>

(1)　Install the ROM to the download jig.
　　　Make sure the direction is correct (📖 P. 6-5 " K-PWA-DLM-320").

(2)　Shut down the equipment.

(3)　Take off the right upper cover.

Right upper cover
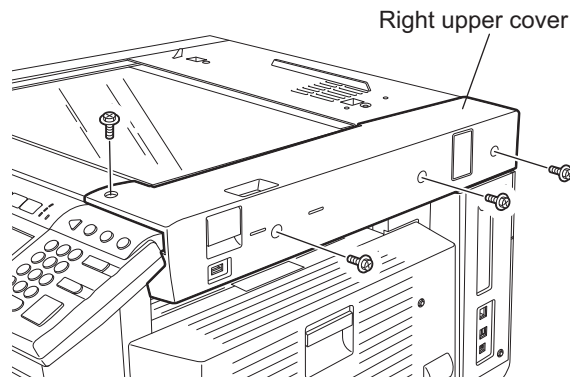
Fig. 6-23

(4) Remove the cover plate.

Cover plate

Fig. 6-24

(5) Connect the download jig with the jig connector (CN16) on the scanning section control PC board (SLG board).
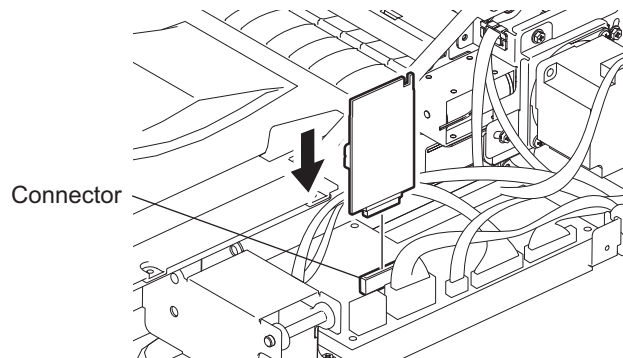

Connector

Fig. 6-25

(6) Turn ON the power while [0] button and [8] button are pressed simultaneously.
Updating starts automatically and the LED on the download jig lights.

(7) After the update is completed properly, the LED on the download jig blinks. The LED starts blinking in approx. 20 sec. since the update starts. It is assumed that the update is failed if it does not start blinking even though 1 min. has passed. In this case, turn OFF the power and check the following items. Then, clear the problem and restart updating from the beginning.
   • Is the download jig connected properly?
   • Is the ROM installed to the download jig properly?
   • Is the updating data written on the ROM of the download jig properly?
   • Do the download jig and the equipment operate properly?

(8) Turn OFF the power, remove the download jig and install the cover plate and the right upper cover.

<Updating RADF ROM>

(1) Install the ROM to the download jig.
    Make sure the direction is correct (📖 P. 6-5 " K-PWA-DLM-320").

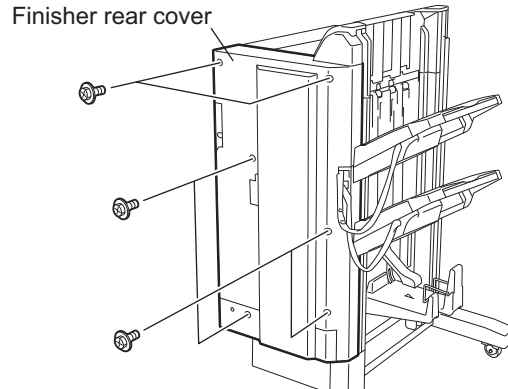(2) Shut down the equipment.

(3) Take off the RADF rear cover.

RADF rear cover
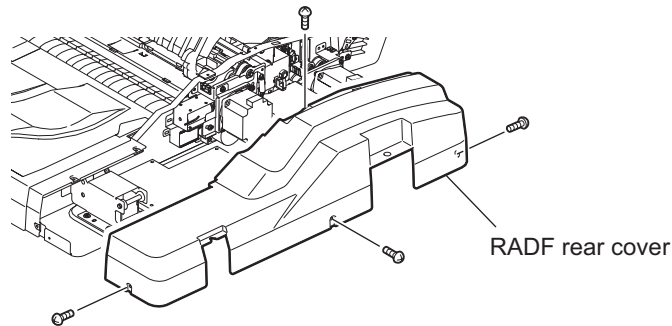
Fig. 6-26

(4) Connect the download jig with the jig connector (CN81) on the RADF control PC board.

Connector

Fig. 6-27

(5) Turn ON the power while [0] button and [8] button are pressed simultaneously.
    Updating starts automatically and the LED on the download jig lights.

(6) After the update is completed properly, the LED on the download jig blinks slowly (at an interval of approx. 0.8 sec.). The LED starts blinking in approx. 15 sec. since the update starts. It is assumed that the update is failed if it does not start blinking even though 1 min. has passed or the LED blinks fast (at an interval of approx. 0.1 sec.). In this case, turn OFF the power and check the following items. Then, clear the problem and restart updating from the beginning.
    • Is the download jig connected properly?
    • Is the ROM installed to the download jig properly?
    • Is the updating data written on the ROM of the download jig properly?
    • Do the download jig and the equipment operate properly?

(7) Turn OFF the power, remove the download jig and install the RADF rear cover.

<Updating Finisher ROM (MJ-1030)>

Finisher firmware and saddle stitcher firmware are written on the finisher ROM. These two kinds of firmware can be updated individually by installing the download jig to the finisher control PC board.

(1) Install the ROM to the download jig.
Make sure the direction is correct.
📖 P. 6-5 " K-PWA-DLM-320"

(2) Shut down the equipment.

(3) Take off the finisher rear cover.

Finisher rear cover

Fig. 6-28

* Connect the finisher interface cable with the equipment after removing the finisher rear cover.

(4) Connect the download jig with the jig connector on the finisher control PC board.

Connector
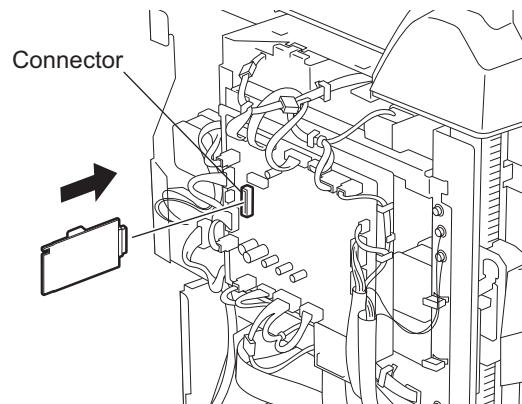
Fig. 6-29

(5) Change the setting of the DIP switch on the finisher control PC board.
     Change the setting of the DIP switch as follows according to the firmware to be updated.

Note:
   Record the current settings of the DIP switch before changing them. After the updating is completed, return the DIP switch to the status as record.
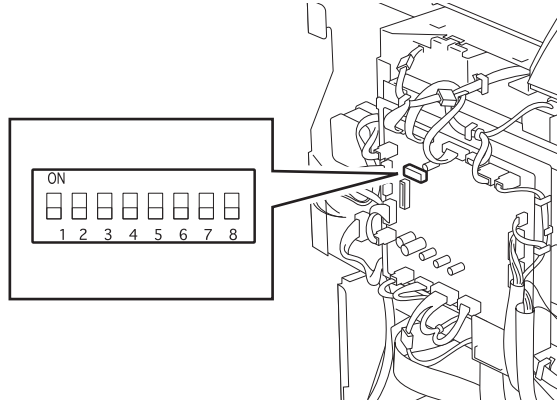
Fig. 6-30

<Updating Finisher Firmware>
Change all the setting of the DIP switch (1-8) to OFF.

<Updating Saddle Stitcher Firmware>
Change the setting of the DIP switch 1-6 to OFF and 7-8 to ON.

6

(6) Turn ON the power while [0] button and [8] button are pressed simultaneously.
Updating starts automatically and the LED on the download jig lights.

Tip:
The processing status can be confirmed by the lighting of the LED (LED 101-103) on the finisher control board.
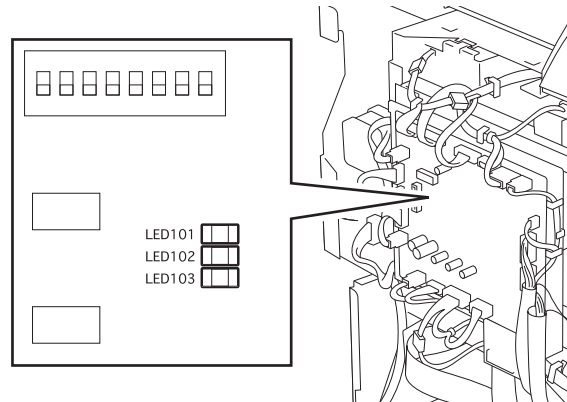
Fig. 6-31

Processing status	LED		
	LED103	LED102	LED101
0% or above	OFF	OFF	ON
15% or above	OFF	ON	OFF
30% or above	OFF	ON	ON
45% or above	ON	OFF	OFF
60% or above	ON	OFF	ON
75% or above	ON	ON	OFF
90% or above	ON	ON	ON

(7) After the update is completed properly, the LED on the download jig blinks slowly (at interval of 0.8 sec). The LED starts blinking in approx. 30 sec. (finisher section) or 2 min. 30 sec. (saddle stitcher section) since the update starts. It is assumed that the update is failed if it does not start blinking even though 1 min. has passed (finisher section) or 3 min. (saddle stitcher section), or LED flashes fast (at interval of 0.1 sec.). In this case, turn OFF the power and check the following items. Then, clear the problem and restart updating from the beginning.
- Is the download jig connected properly?
- Is the ROM installed to the download jig properly?
- Is the updating data written on the ROM of the download jig properly?
- Do the download jig and the equipment operate properly?
- Is the DIP switch on the finisher control PC board set properly according to the download section (finisher or saddle stitcher)?

(8) Turn OFF the power, remove the download jig and return the DIP switch to the status before updating.

(9) Install the finisher rear cover.

<Updating Finisher ROM (MJ-1101)>

(1) Attach the ROM to the download jig
Make sure that the ROM and its direction are correct.
📖 P. 6-5 " K-PWA-DLM-320"

(2) Turn OFF the power of the equipment.
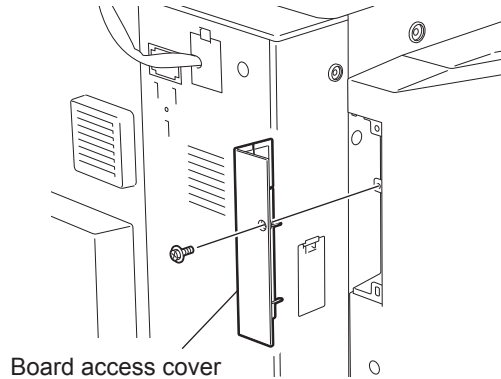
(3) Remove 1 screw and take off the board access cover.

Board access cover

Fig. 6-32

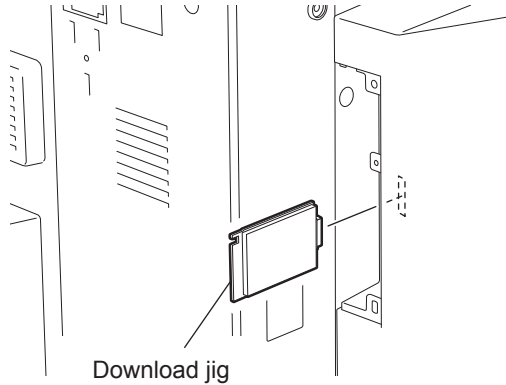(4) Connect the download jig with the jig connector (CN9) on the Finisher control board.

Download jig

Fig. 6-33

(5) Turn ON the power while pressing [0] and [8] simultaneously.
Updating starts and the LED on the download jig lights

(6) When the update completes normally, the LED on the download jig starts blinking.

The LED on the download jig starts blinking in approx. 12 seconds after the update started.
It is assumed that the update is failed if the LED does not start blinking even after 20 seconds have elapsed.
In this case, turn the power OFF and check the following items.
Then, clear the problem and restart updating from the beginning.
- • Is the downloading jig connected properly?
- • Is the ROM attached to the downloading jig properly?
- • Has the update data been written correctly to the ROM on the jig?
- • Is the download jig or the equipment damaged?

(7) Turn the power OFF and remove the download jig.

(8) Install the board access cover.

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<Updating Converter ROM (MJ-1101)>

Important:
- The harness jig for board connection (HRNS-CNV-DL-JIG) is required for updating the firmware of the converter PC board of the finisher (MJ-1101) as well as the download jig (K-PWA-DLM-320).
- Be sure to connect the equipment and finisher (MJ-1101) before updating the converter firmware.
- Be sure to shut down the equipment before installing and removing the download jig.
- Do not shut down the equipment during the update. The data could be damaged and not be operated properly.

(1) Install the ROM to the download jig (K-PWA-DLM-320).
    Make sure the direction is correct.

(2) Shut down the equipment.
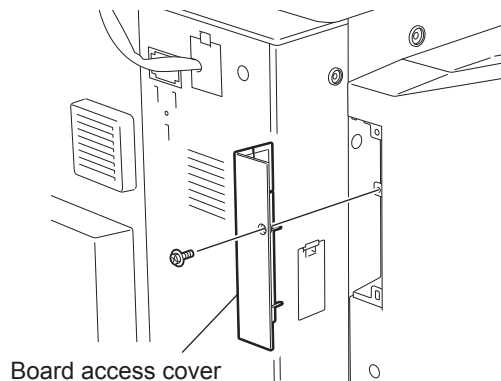
(3) Take off the finisher board access cover.

Board access cover

Fig. 6-34

(4) Take off the rear cover-1 of the equipment.

Rear cover-1

Fig. 6-35

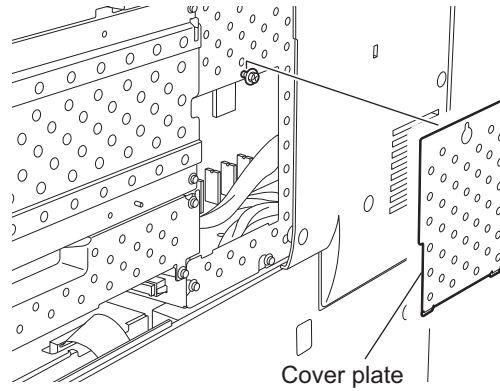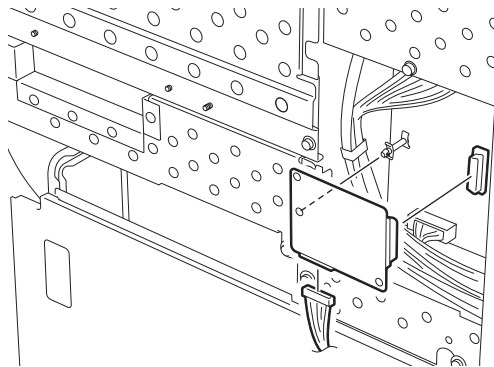e-STUDIO2500c/3500c/3510c
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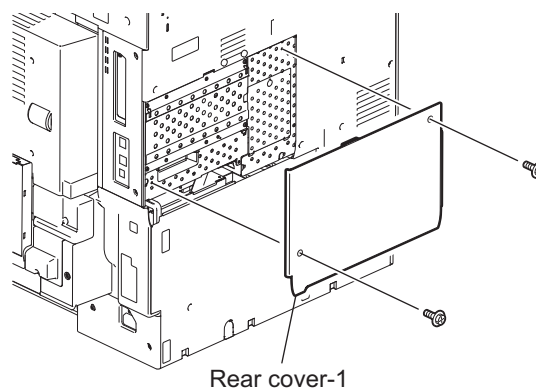
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(5)   Remove the cover plate.

Cover plate
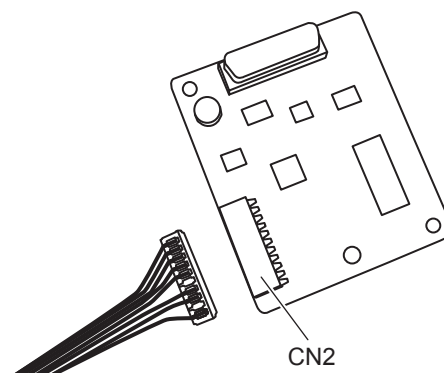
Fig. 6-36

(6)   Take off the converter PC board from the logic PC board (LGC board).

Fig. 6-37

(7)   Connect the 10-pin side of the harness jig for board connection to the connector (CN2) of the
       converter PC board.

CN2

Fig. 6-38

(8) Connect the 15-pin side of the harness jig for board connection to the connector (CN15) of the finisher control PC board.
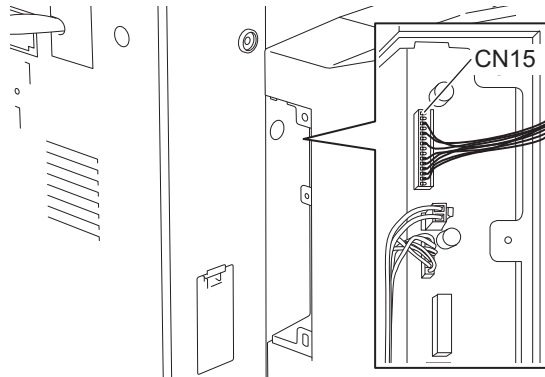

Fig. 6-39

Notes:
- Be sure to release the connection cable from the connector (CN15) of the finisher control PC board when the hole punch unit (MJ-6101) has been installed.
- Be careful not to short-circuit any part of the converter PC board.

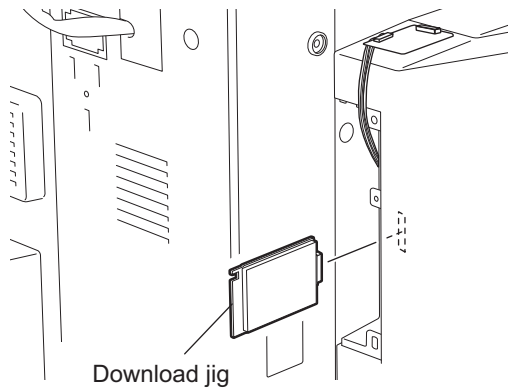(9) Connect the download jig with the jig connector (CN9) on the Finisher control board.

Download jig

Fig. 6-40

(10) Turn ON the power while [0] button and [8] button are pressed simultaneously.
Updating starts and the LED on the download jig lights.

(11) When the update completes normally, the LED on the download jig starts blinking.

The LED on the download jig starts blinking approx. 20 seconds after the update started. It is assumed that the update has failed if the LED does not start blinking even after 30 seconds have elapsed. In this case, shut down the equipment and check the following items. Then clear the problems and restart updating from the beginning.
- Is the downloading jig connected properly?
- Is the ROM attached to the downloading jig properly?
- Have the update data been written correctly to the ROM on the jig?
- Is the download jig or the equipment damaged?
- Is the harness jig for board connection connected to connector (CN2) of the converter PC board and the connector (CN15) of the finisher control PC board correctly?

(12) Shut down the equipment.

(13) Remove the download jig and the harness jig for board connection from the finisher control PC board.
   Note:
   Be sure to secure the connection cable in the connector (CN15) of the finisher control PC board when the hole punch unit (MJ-6101) has been installed.

(14) Install the board access cover.

(15) Remove the harness jig for board connection from the converter PC board.

(16) Install the converter PC board in the equipment.

(17) Install the cover plate and the rear cover-1.

<Updating Hole punch unit ROM (MJ-6101)>

1. Checking the hole punch position
Follow the procedure below to check the stopping position of the paper transport during the punching operation before updating the firmware, as the value for the position is defaulted when the firmware is updated.

(1) Turn the power of the equipment OFF.

(2) Remove the finisher board access cover and change the setting of the DIP-SW1 (SW1) on the finisher control PC board as shown in the figure below.
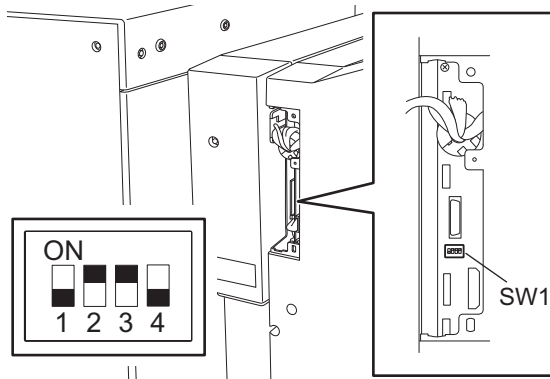
Fig. 6-41

(3) The LED1 on the finisher control panel starts blinking as you turn the power of the equipment ON while pressing [0] and [8] simultaneously. Count the number of times the LED1 blinks. When the number of blinks is "6", this indicates that the value for the stopping position is defaulted. If the number is other than "6", record the number of blinks, because it will be needed to reset the value after the firmware is updated.

(4) Return the DIP-SW1 to the status before checking.

2. Firmware update
Update the firmware using the download jig (K-PWA-DLM-320).

(1) Attach the ROM to the download jig.
Make sure that the ROM and its direction are correct.
📖 P. 6-5 " K-PWA-DLM-320"

(2) Turn OFF the power of the equipment.

(3) Remove 1 screw and take off the finisher board access cover.

Board access cover
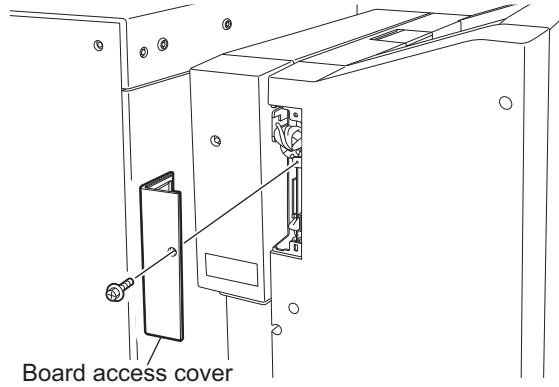
Fig. 6-42

(4) Release the latches and take off the rear lower cover of the hole punch unit.

Rear lower cover
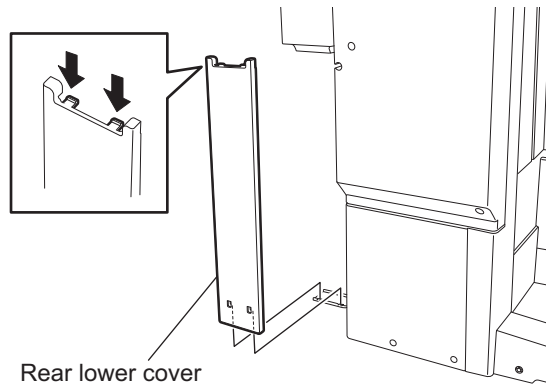
Fig. 6-43

(5) Remove 3 screws and take off the rear cover of the hole punch unit.

Rear cover
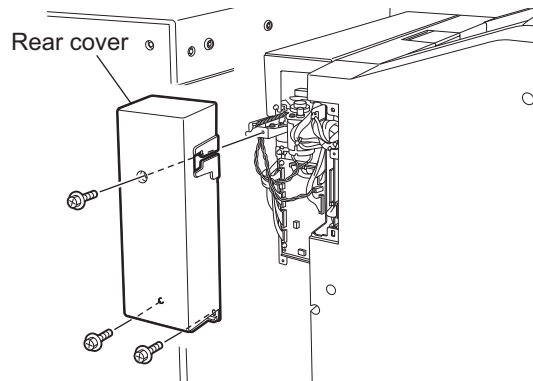
Fig. 6-44

(6)   Connect the download jig with the jig connector (CN9) on the finisher control PC board.
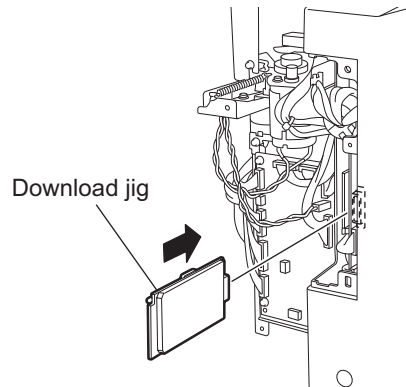
Fig. 6-45

(7)   Set the DIP-SW4 on the hole punch control PC board to ON.
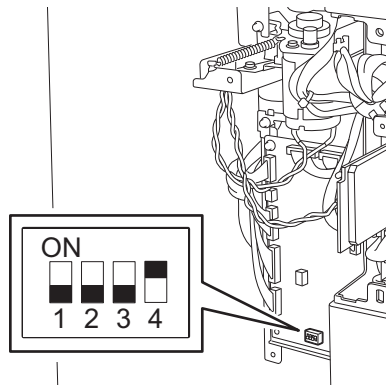
Fig. 6-46

(8)   Turn the power ON while pressing [0] and [8] simultaneously. Updating starts and the LED on the download jig lights.

(9)   When the update is completed normally, the LED on the download jig starts blinking. The LED on the download jig starts blinking in approx. 20 seconds after the update started. It is assumed that the update is failed if the LED does not start blinking even after 30 seconds have elapsed.
In this case, turn the power OFF and check the following items. Then, clear the problem and restart updating from the beginning.
   •   Is the downloading jig connected properly?
   •   Is the ROM attached to the downloading jig properly?
   •   Is the DIP-SW4 on the hole punch control PC board set properly?
   •   Has the update data been written correctly to the ROM on the jig?
   •   Is the download jig or the equipment damaged?
   •   Is the connector (CN12) on the finisher control PC board connected properly?
   •   Are the connector (CN15) on the finisher control PC board and the connector (CN1) on the hole punch control PC board connected properly?

(10) Turn the power OFF and remove the download jig.

(11) Set the DIP-SW4 on the hole punch control PC board to OFF.

Note:
When the number of blinks is other than "6" (which indicates that the adjustment value is "0") at the section "1. Checking the hole punch position", follow the steps of "5.1 Stopping Position Adjustment" in the MJ-6101 Service Manual to adjust the value to the one that has been set before the update.

(12) Change the settings of the DIP-SW1 and -SW2 on the hole punch control PC board according to the model as shown in the figure below.
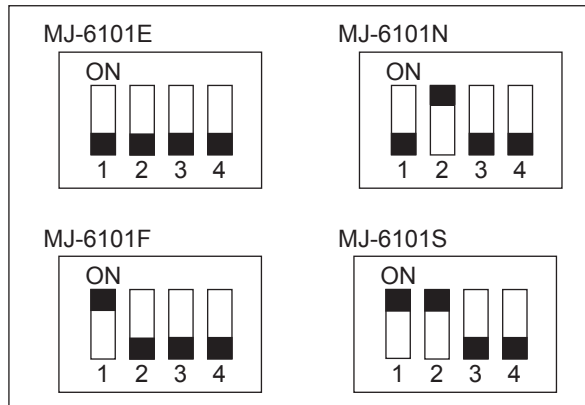
Fig. 6-47

(13) Install the rear cover of the hole punch unit.

(14) Install the rear lower cover of the hole punch unit.

(15) Install the finisher board access cover.

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<Updating FAX ROM>

Important:
- Before updating the FAX ROM, make sure to print out the current Function list for maintenance, Function list (ADMIN), Phone book number information and Group number information. In case the updating is failed and the registered information of the users is lost for some reason, re-register the user information referring to the lists and recover it.
- Confirm the following items before turning OFF the power of the equipment. Turning OFF the power may clear the data below.
    - Confirm that the "MEMORY RX" LED is OFF and there are no memory reception data.
    - Print the "Mailbox/Relay box report" and then confirm that there are no F code data.
    - Press the [JOB STATUS] button to display the screen and then confirm that there are no memory transmission data.

(1) Install the ROM to the download jig. Make sure the direction is correct (📖 P. 6-5 " K-PWA-DLM-320").

(2) Shut down the equipment.

(3) Remove the cover plate.

Cover plate
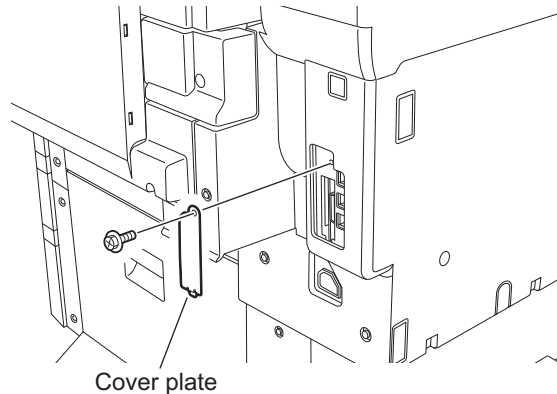
Fig. 6-48

(4) Connect the download jig with the jig connector on the FAX board.
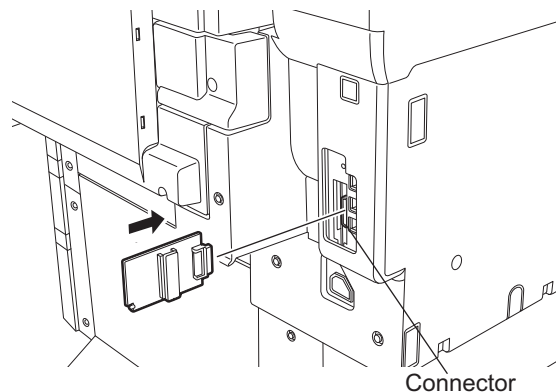
Connector

Fig. 6-49

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(5) Turn ON the power while [0] button and [8] button are pressed simultaneously.
Updating starts automatically and the LED on the download jig lights.

(6) After the update is completed properly, the LED on the download jig blinks. The LED starts blinking in approx. 30 sec. since the update starts. It is assumed that the update is failed if it does not start blinking even though 1 min. has passed. In this case, turn OFF the power and check the following items. Then, clear the problem and restart updating from the beginning.
- Is the download jig connected properly?
- Is the ROM installed to the download jig properly?
- Is the updating data written on the ROM of the download jig properly?
- Do the download jig and the equipment operate properly?

(7) Turn OFF the power, remove the download jig and install the cover plate.

(8) In the FAX Clearing Mode, perform the "FAX Set Up".
- Confirm the destination setting is correct in the Setting Mode (08).
  08-201: Destination setting of the equipment
  08-701: Destination setting of the FAX machine
- Turn ON the power while [1] button and [*] button are pressed simultaneously.
- Key in "100".
- Press the [START] button.

Notes:
If the equipment does not work properly after the operation (8), follow the procedure below and then perform the "Clearing the image data" in the FAX Clearing Mode to erase the image data in the memory.
- Confirm the destination setting is correct in the Setting Mode (08).
  08-201: Destination setting of the equipment
  08-701: Destination setting of the FAX machine
- Turn ON the power while [1] button and [*] button are pressed simultaneously.
- Key in "102".
- Press the [START] button.

[B]   Confirmation of the updated data

After the updating is completed, check each data version in Setting Mode (08) to confirm that the data was overwritten properly.

<Updating Scanner ROM>
08-905: Scanner ROM version

<Updating RADF ROM>
08-907: RADF ROM version

<Updating Finisher ROM>
08-908: Finisher ROM version
08-911: Hole punch unit ROM version (MJ-6101 only)
08-9945: Converter board ROM version

<Updating FAX ROM>
08-915: FAX ROM version

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6.2 Firmware Updating with USB Storage Device

In this equipment, it is feasible to update the firmware by connecting the USB storage device on which the firmware data is written to the USB connector mounted on the system control PC board and turning ON the power.

The type of firmware to be updated can be selected on the LCD screen in this method. This allows to update only the necessary firmware individually or to update all firmware in a batch.

The type of firmware which can be updated with this method are as follows in the table below.

Firmware	Stored	Model specific folder name	Data file name
Master data	Hard disk	2500C_3510C	1, 2, 3 ... n * The file name should be consecutive numbers from 1 to "n" without file extension. The capacity of each file is approx. 8 MB. However, the file capacity of "n" (last number) may be less than 8 MB.
System ROM	System control PC board (SYS board) * The system firmware is stored into the hard disk from the FROM basic section software version "V1.00/4.30".		firmImage0.bin, firmImage1.bin
Engine ROM	Logic PC board (LGC board)		firmImage2.bin
Scanner ROM	Scanning section control PC board (SLG board)		

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Important:
- Only the USB storage device which meets the following conditions should be used for updating. Be careful since updating with any device other than the above is never guaranteed.
  - A combination USB storage device with a flash memory (to be connected directly to the USB port) and its capacity is between 64 MB to 512 MB (or 1 GB).
  - Operation of the USB storage device used for updating has been confirmed at the input check of this equipment (Test mode 03).
    (📖 P. 2-28 "2.2.1 Input check (Test mode 03)")
  - A USB storage device which is complied with the following standards regulated by USB-IF (USB Implementers Forum)

    Class number: 8 (=08h) (Mass-storage class)

    Sub-class number: 6 (=06h) (SCSI transfer command set)

    Protocol number: 80 (=50h) (Bulk-Only)
  - * Most common USB storage devices are complied with the specification above and can be used for updating. However, the operation in all the Multi Functional Digital Color Systems and Multi Functional Digital Systems is not necessarily guaranteed since the most of these devices are developed based on the use in PC environment (Windows or Macintosh). Therefore, confirm thoroughly that the device is operational in the equipment for which the updating will be performed when purchasing the device.

- The data file for updating is stored in the model specific folder.
  Never change the model specific folder name since it is used for discriminating the data file when the updating data files for multiple models are stored in the USB storage device.

- Store the model specific folder in the root directory of the USB storage device.

- Storing the data file directly in the root directory is possible when the updating data files for one specific model is stored in the USB storage device.
  However, if the model specific folder for the same model as that of the data file stored in the root directory already exists, the model specific folder will have the priority.

- The USB storage device complied with USB1.1 and USB2.0 can be used for updating. However, the update is performed in the speed of USB1.1 when the device complied with USB2.0 is used.

- Do not update the firmware by any storage device other than a flash memory (such as a USB connection type memory card reader, CD/DVD drive or hard disk) since it is never guaranteed.

Update program

The firmware can be updated to the latest version without considering the current one by storing the update program together with the firmware data file for updating in the USB Storage Device.

Name	File name	Stored
Tool object for updating	mentusb.o	root
Update program	dlFirmWare_2500C_3510C	[2500C_3510C] folder (Model specific folder)
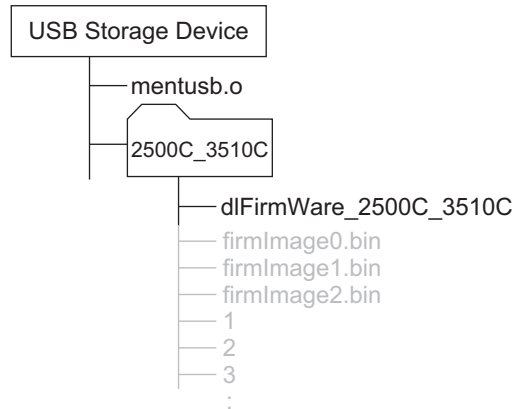
Fig. 6-50

Important:
- The "mentusb.o" file stored in the root of the USB storage device is a common file in e-STUDIO850 Series, e-STUDIO451c Series, e-STUDIO452 Series and e-STUDIO282 Series. To save the firmware of more than one model into one USB storage device, one "mentusb.o" file stored in the root of USB storage device is sufficient.
- Be careful not to mix up the "mentusb.o" file because there is a file whose name is the same in the localization tool.

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[A] Update procedure

Important:
- The file system of USB storage device should be formatted in FAT format. Be careful since the devices formatted in FAT32 or NTFS format will not be operated. The file system can be confirmed on the properties in applications such as Explorer of Windows.
- Do not turn OFF the power during the update. The data could be damaged and not to be operated properly.

(1) Connect the USB storage device to the PC and write the model specific folder in which the data file is stored.
- Confirm the model specific folder name and data file name before writing the data (📖 P. 6-45 "6.2 Firmware Updating with USB Storage Device").
- The file system of USB storage device should be formatted in FAT format.
- Windows 95 and NT do not support USB. Be careful since the data can not be written on the devices in the PCs with these operating systems.

(2) Shut down the equipment.

(3) Connect the USB storage device to the USB connector (host) on the right upper cover.
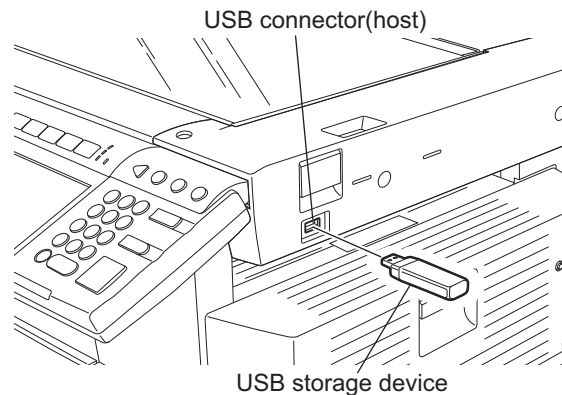
Fig. 6-51

Note:
The equipment has 3 USB connectors (host): 1 is located under the power switch and 2 located right rear side of the equipment. When updating, connect the USB storage device to either of 3 USB connectors (host). Updating cannot be performed with multiple USB storage devices connected simultaneously.

(4) Turn ON the power while [4] button and [9] button are pressed simultaneously.
     When the update program is used, the following screen appears.

```
Download USB Maintenance Module
```
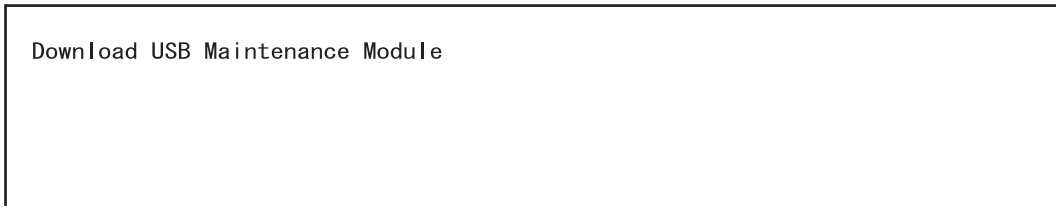
Fig. 6-52

After the update program is finished being loaded, the following screen appears.

```
                                          dlFirmWare Version VX.XX
Download Storage Update Mode
Please wait... now Initialization
```

Fig. 6-53

Note:
  If the "dlFirmWare_2500C_3510C" file of the update program is not stored in the USB storage device though "mentusb.o" file exists, or the loading of the update program fails, the following screen appears. In this case, check if the update program is correctly stored and repeat step (4) and after.

```
Error loadModule
```

Fig. 6-54

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(5) Check the items to be updated.

The screen for selecting the items to be updated is displayed after 3 minutes. "*" is displayed next to the items to be updated. (When the FROM basic section software version of the equipment is "V1.00 / 2.21.1" or earlier: All items other than "0. OS Update" are selected in the default settings. When the FROM basic section software version of the equipment is "V1.00 / 4.30" or later: All items are selected in the default settings.)

When the FROM basic section software version of the equipment is "V1.00 / 2.21.1" or earlier:

```
Download Storage Firmware Update Mode    Version in update media
Select Update Item

  0. OS Update
 *1. HDD Update
 *2. UI Data Update                UIF Version... Vxxx.xxx.x
 *3. System Firmware Update        SYS Version... Vxxx.xxx x
 *4. Engine Firmware Update        ENG Version... xxxxx-xx
 *5. Scanner Firmware Update       SCN Version... xxxxx-xx
```
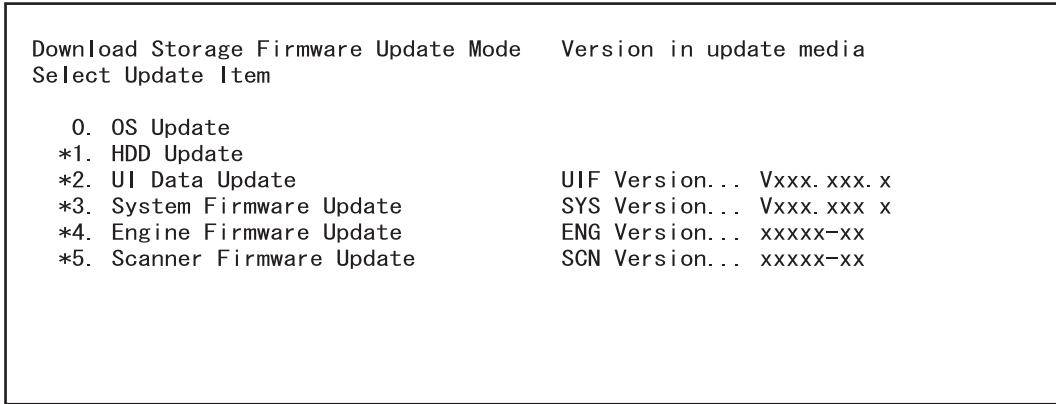
Fig. 6-55

Note:

The display of items on this screen varies depending on the types of data written on the USB storage device. Each item is displayed only when each data file is written on the USB storage device in the following conditions.

Item	Condition
0. OS Update	firmImage0.bin is written.
1. HDD Update	All master data files (1, 2, 3 ... n) are written.
2. UI Data Update	firmImage0.bin is written.
3. System Firmware Update	firmImage0.bin and firmImage1.bin are written.
4. Engine Firmware Update	firmImage2.bin is written.
5. Scanner Firmware Update	firmImage2.bin is written.

When the FROM basic section software version of the equipment is "V1.00 / 4.30" or later:

```
Download Storage Firmware Update Mode   Version in update media
Select Update Item

  *1. OS UI Update                      UIF Version... Vxxx.xxx.x
  *2. HDD SYS Update                    SYS Version... Vxxx.xxx x
  *3. Engine Firmware Update            ENG Version... xxxxx-xx
  *4. Scanner Firmware Update           SCN Version... xxxxx-xx
```

Fig. 6-56

Note:

The display of items on this screen varies depending on the types of data written on the USB storage device. Each item is displayed only when each data file is written on the USB storage device in the following conditions.

Item	Condition
1. OS UI Update	firmImage0.bin, firmImage1.bin are written.
2. HDD SYS Update	All master data files (1, 2, 3 ... n) are written.
3. Engine Firmware Update	firmImage2.bin is written.
4. Scanner Firmware Update	firmImage2.bin is written.

If the USB storage device is not recognized properly, the following message is displayed. In this case, disconnect the USB storage device and connect it again within 3 minutes, or turn OFF the power of the equipment and connect the device properly. Then repeat the procedure from (4).

```
Please Set Correct USB Storage Device
```

Fig. 6-57

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If the updating data file does not exist or a data file for other model is stored, the following message is displayed. In this case, turn OFF the power of the equipment and confirm if the data file stored in the USB storage device is correct. Then repeat the procedure from (4).

Note:
"If you still want to continue, Please Push Start Key" will not be displayed if the FROM basic section software version of the equipment is "V1.00 / 4.30" or later.

```
              -----WARNING: ROMDATA MISMATCH!!----
                 ROMDATA Version is V***.*** *
              Please REBOOT to use Correct ROMDATA




              If you still want to continue, Please Push Start Key
```
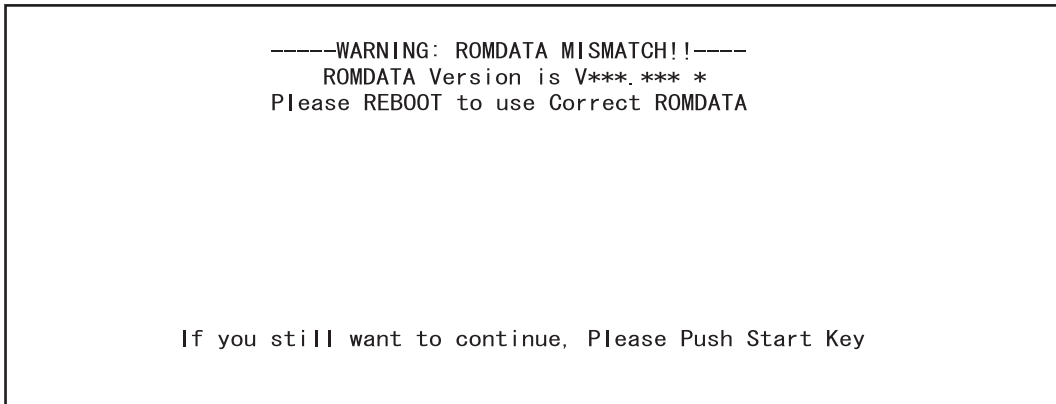
Fig. 6-58

If an attempt to update the FROM basic section software "V1.00 / 2.21.1" or earlier version to the latest firmware version without the update program, the following screen appears. In this case, store "mentusb.o" and "dlFirmWare_2500C_3510C", which are the files for update program, in the specified folder and repeat step (4) and after.
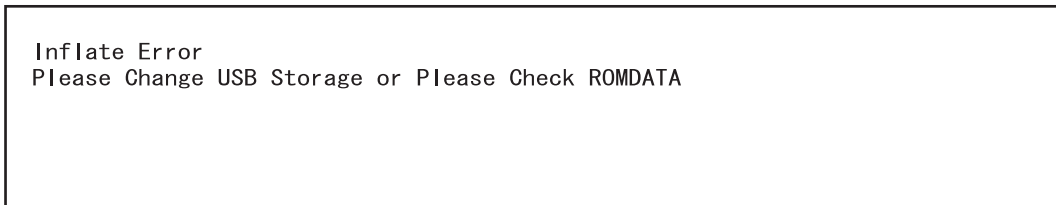
```
  Inflate Error
  Please Change USB Storage or Please Check ROMDATA
```

Fig. 6-59

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(6) Select the item with the digital keys.

"*" is displayed next to the selected item. Display or delete the "*" by pressing the number of the item. All items are selected in the default settings.

- Select all items to update the firmware of the equipment in a batch.
- Select items as follows to update individually.

Types of Firmware	Items <Items vary depending on the FROM basic section software version of the equipment>	
	"V1.00/2.21.1" or earlier	"V1.00/4.30" or later
System ROM (OS data)	0. OS Update	1. OS UI Update
System ROM (UI data)	2. UI Data Update	
Master data	1. HDD Update	2. HDD SYS Update
System ROM (System firmware)	3. System Firmware Update	
Engine ROM	4. Engine Firmware Update	3. Engine Firmware Update
Scanner ROM	5. Scanner Firmware Update	4. Scanner Firmware Update

Example: Updating the master data and system ROM

When the FROM basic section software version of the equipment is "V1.00 / 2.21.1" or earlier:

```
Download Storage Firmware Update Mode    Version in update media
Select Update Item

  *0. OS Update
  *1. HDD Update
  *2. UI Data Update             UIF Version... Vxxx.xxx.x
  *3. System Firmware Update     SYS Version... Vxxx.xxx x
   4. Engine Firmware Update     ENG Version... xxxxx-xx
   5. Scanner Firmware Update    SCN Version... xxxxx-xx
```

Fig. 6-60

When the FROM basic section software version of the equipment is "V1.00 / 4.30" or later:

```
Download Storage Firmware Update Mode    Version in update media
Select Update Item

  *1. OS UI Update               UIF Version... Vxxx.xxx.x
  *2. HDD SYS Update             SYS Version... Vxxx.xxx x
   3. Engine Firmware Update     ENG Version... xxxxx-xx
   4. Scanner Firmware Update    SCN Version... xxxxx-xx
```

Fig. 6-61

(Updating all the items is taken as an example and explained in the following procedures.)

6

(7) Press the [START] button.
Updating starts and the processing status is displayed on the LCD screen.

When the FROM basic section software version of the equipment is "V1.00 / 2.21.1" or earlier:

```
Download Storage Firmware Update Mode

Download Board    -> FROM Update Start.  OS Update       .......
 Check Devices    -   Completed          HD Data Update .......
 Update Status    -   Installing
 Data Check -
                                          Engine MAIN Update  .. Flash Update
                                          Scanner Firm Update .. Flash Update
```

Fig. 6-62

Status display during update	Status display when update is completed
OS Update	OS Update .... Completed
HD Data Update	HD Data Update .... Completed
UI Data Update	UI Data Update ....Completed
SysFirm Update	SysFirm Update ....Completed
Engine MAIN Update .....Flash Update	Engine MAIN Update .... Completed
Scanner Firm Update.....Flash Update	Scanner Firm Update..... Completed

When the FROM basic section software version of the equipment is "V1.00 / 4.30" or later:

```
Download Storage Firmware Update Mode

Download Board    -> FROM Update Start.  OS UI Update   .......
 Check Devices    -   Completed          HDD SYS Update .......
 Update Status    -   Installing         Engine MAIN Update  .. Flash Update
 Data Check       -                      Scanner Firm Update .. Flash Update

 Download Storage -> HDD copying
                 1/n
Engine Update Status
 xxxx/nnnnn
Scanner Update Status
 xxxx/nnnnn
```

Fig. 6-63

Status display during update	Status display when update is completed
OS UI Update.......	OS UI Update...................... Completed
HDD SYS Update.......	HDD SYS Update .... Completed
Engine MAIN Update .....Flash Update	Engine MAIN Update........... Completed
Scanner Firm Update.....Flash Update	Scanner Firm Update ....Completed

(8) "Update Completed." is displayed at the bottom of the LCD screen after the updating is completed properly.

When the FROM basic section software version of the equipment is "V1.00 / 2.21.1" or earlier:

```
Download Storage Firmware Update Mode

                              OS Update      ....... Completed
                              HD Data Update ....... Completed
                              UI Data Update ....... Completed
                              SysFirm Update ....... Completed
                              Engine MAIN Update .. Completed
                              Scanner Firm Update .. Completed



                                  Update Completed.
```
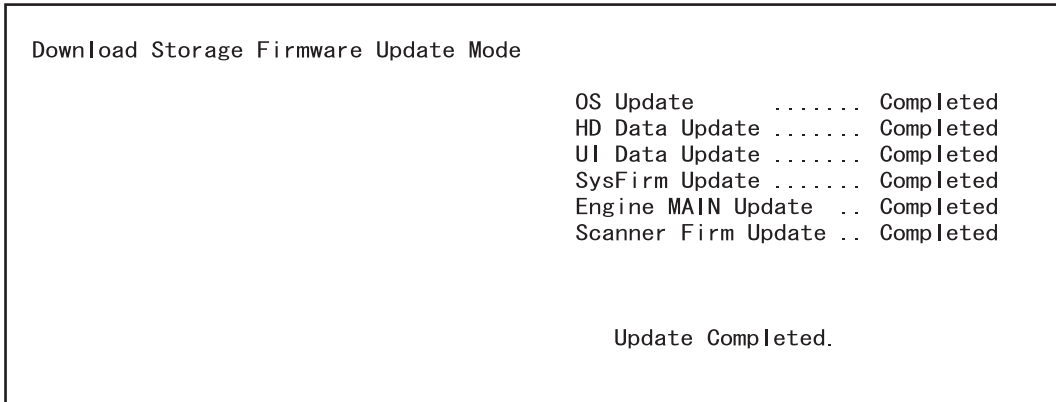
Fig. 6-64

When the FROM basic section software version of the equipment is "V1.00 / 4.30" or later:
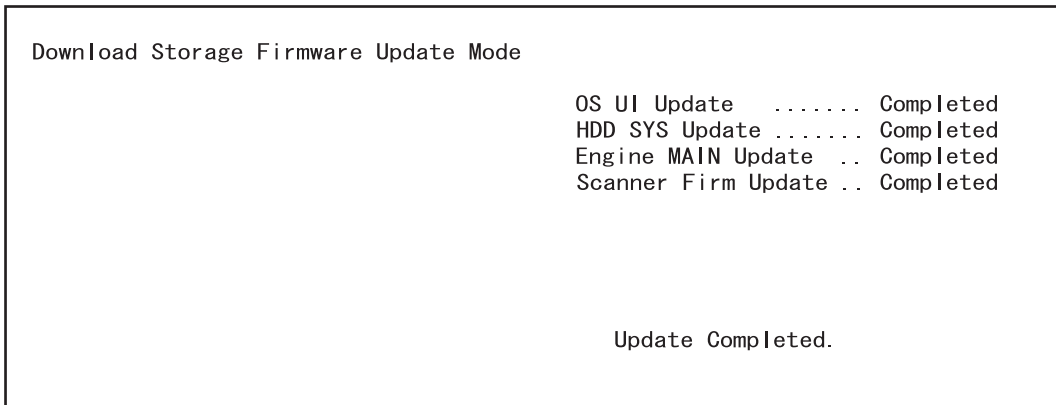
```
Download Storage Firmware Update Mode

                              OS UI Update   ....... Completed
                              HDD SYS Update ....... Completed
                              Engine MAIN Update .. Completed
                              Scanner Firm Update .. Completed



                                  Update Completed.
```

Fig. 6-65

6

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"Update Failed." is displayed at the bottom of the LCD screen when the updating is not completed properly. "Failed" appears next to the failed item on the status display. Turn OFF the power, and then check the following items. After confirming and clearing the problems, restart updating from the beginning.

- Does the USB storage device meet the conditions to be used for updating (📖 P. 6-45 "6.2 Firmware Updating with USB Storage Device")?
- Is the data file written properly on the USB storage device?
- Is the USB storage device installed properly?
- Do the USB storage device and equipment operate properly?

When the FROM basic section software version of the equipment is "V1.00 / 2.21.1" or earlier:

```
Download Storage Firmware Update Mode

                            OS Update      ....... Completed
                            HD Data Update ....... Completed
                            UI Data Update ....... Completed
                            SysFirm Update ....... Completed
                            Engine MAIN Update  .. Failed
                            Scanner Firm Update .. Completed



                            Update Failed.
```

Fig. 6-66

When the FROM basic section software version of the equipment is "V1.00 / 4.30" or later:

```
Download Storage Firmware Update Mode

                            OS UI Update   ....... Completed
                            HDD SYS Update ....... Completed
                            Engine MAIN Update  .. Failed
                            Scanner Firm Update .. Completed



                            Update Failed.
```
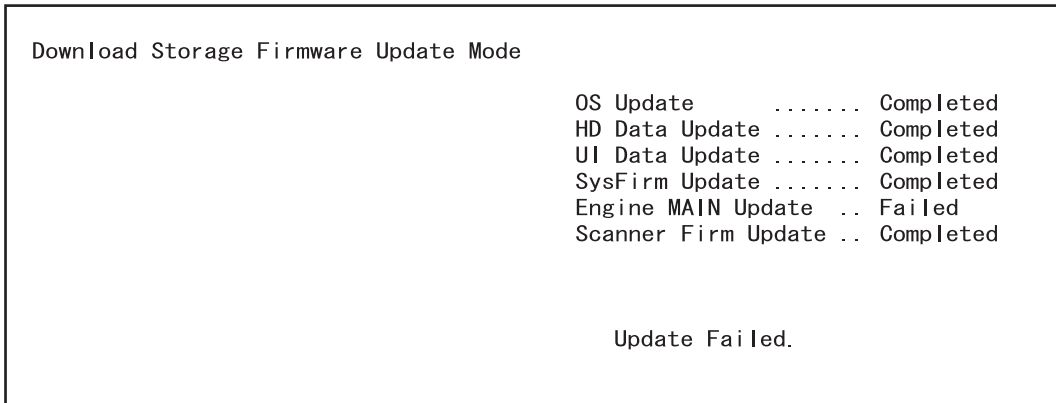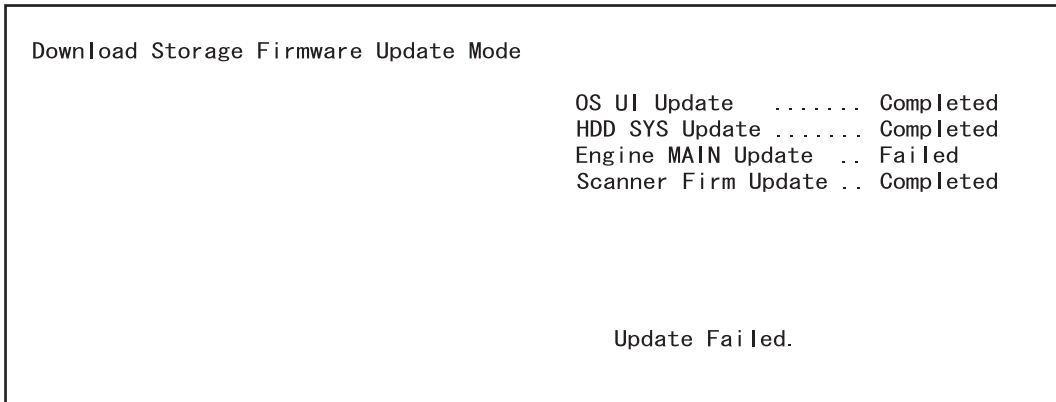
Fig. 6-67

When the FROM basic section software version of the equipment is "V1.00 / 6.44" or later:
Only when the engine ROM update fails, an error number appears next to "Failed". The error contents are as follows.

Error number	Error content	
01	Time out	When the download is requested
02	Time out	When the download is written
03	Time out	When the download is finished
04	Reception failed	When the download is requested
05	Deletion error	When the download is written
06	Writing error	When the download is written
07	Checksum error	When the download is finished
08	Reception status code abnormality	When the download is requested
09	Reception status code abnormality	When the download is written
10	Reception status code abnormality	When the download is finished
11	Communication abnormality between Main and PFC	When the download is requested
12	Communication abnormality between Main and PFC	When the download is written
13	Communication abnormality between Main and PFC	When the download is finished
14	Communication abnormality between Main and Laser	When the download is requested
15	Communication abnormality between Main and Laser	When the download is written
16	Communication abnormality between Main and Laser	When the download is finished
00	Other error	-

(9) Turn OFF the power, remove the USB storage device.

(10) Perform the initialization of the updating data.
- Turn ON the power while [0] button and [8] button are pressed simultaneously.
- Key in "947", and then press the [START] button.
- Press the [INITIALIZE] button.

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[B] Confirmation of the updated data

After the updating is completed, check each data version in the Setting Mode (08) to confirm that the data was overwritten properly.

<Updating Master data>
08-924: Version of UI data language 1 in HDD
08-925: Version of UI data language 2 in HDD
08-926: Version of UI data language 3 in HDD
08-927: Version of UI data language 4 in HDD
08-928: Version of UI data language 5 in HDD
08-929: Version of UI data language 6 in HDD
08-931: Version of UI data language 7 in HDD
08-933: HDD unit data version
08-934: Version of Web UI data language 1 in HDD
08-935: Version of Web UI data language 2 in HDD
08-936: Version of Web UI data language 3 in HDD
08-937: Version of Web UI data language 4 in HDD
08-938: Version of Web UI data language 5 in HDD
08-939: Version of Web UI data language 6 in HDD
08-923: UI data common section version
08-930: Version of UI data in FROM displayed at power ON

<Updating System ROM>
08-900: System ROM version
08-920: FROM basic section software version
08-921: FROM internal program version
08-922: UI data fixed section version

<Updating Engine ROM>
08-903: Engine ROM version

<Updating Scanner ROM>
08-905: Scanner ROM version

[C] Adjustment

Perform the adjustment of the equipment.

- Performing Image Quality Control (05-396):
  📖 P. 3-4 "3.3 Performing Image Quality Control (IQC)"

- Adjustment of Color Registration Control (05-4719):
  📖 P. 3-6 "3.4 Adjustment of Color Registration Control"

- Automatic gamma adjustment <PPC> (05-1642) (using [4][FAX] test pattern):
  📖 P. 3-30 "3.7.1 Automatic gamma adjustment"

- Automatic gamma adjustment < PRT > (05-1008) (using [70][FAX] test pattern):
  📖 P. 3-45 "3.8.1 Automatic gamma adjustment"

[D] Display during the update (When the FROM basic section software version of the equipment is "V1.00 / 2.21.1" or earlier)

Update is performed in parallel as shown in the transition diagram below.

Fig. 6-68

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Below is an example of the changes of the LCD screen during update.
Note that the screen order may be different from the actual one, because a parallel update is performed in the process.

> Turn ON the power while [4] button and [9] button are pressed simultaneously

⇩ The initial screen is displayed and the recognition of the USB storage device connected to the equipment is started.

```
Download Storage Update Mode
Please wait ... now Initialization
```

⇩ When the device is recognized properly, the screen for selecting update items is displayed.

```
Download Storage Firmware Update Mode    Version in update media
Select Update Item

  0. OS Update
 *1. HDD Update
 *2. UI Data Update                UIF Version... Vxxx.xxx.x
 *3. System Firmware Update         SYS Version... Vxxx.xxx x
 *4. Engine Firmware Update         ENG Version... xxxxx-xx
 *5. Scanner Firmware Update        SCN Version... xxxxx-xx
```

⇩ Select items to be updated and press the [START] button to start updating the [System ROM], [Master Data], [Engine ROM] and [Scanner ROM] in parallel.

```
Download Storage Firmware Update Mode

Download Board    -> FROM Update Start.   OS Update        .......
 Check Devices    -   Completed           HD Data Update .......
 Update Status    -   Installing
 Data Check       -
                                          Engine MAIN Update  .. Flash Update
 Download Storage -> HDD copying          Scanner Firm Update .. Flash Update
                        1/n
Engine Update Status
 xxxx/nnnnn
Scanner Update Status
 xxxx/nnnnn
```

When the [System ROM]-[OS Update] has been updated, "OS Update…Completed" is displayed and the [UI Update] update will start.

```
Download Storage Firmware Update Mode

Download Board    -> FROM Update Start.  [OS Update        .......   Completed]
 Check Devices    -   Completed           HD Data Update .......
 Update Status    -   Installing          UI Data Update .......
 Data Check       -
                                          Engine MAIN Update  .. Flash Update
 Download Storage -> HDD copying          Scanner Firm Update .. Flash Update
                        1/n
Engine Update Status
 xxxx/nnnnn
Scanner Update Status
 xxxx/nnnnn
```

When the [System ROM]-[UI Update] has been updated, "UI Data Update…Completed" is displayed and the [System Firmware Update] update will start.

```
Download Storage Firmware Update Mode

Download Board    -> FROM Update Start.   OS Update        .......   Completed
 Check Devices    -   Completed           HD Data Update .......
 Update Status    -   Installing         [UI Data Update .......   Completed]
 Data Check       -                       SysFirm Update .......
                                          Engine MAIN Update  .. Flash Update
 Download Storage -> HDD copying          Scanner Firm Update .. Flash Update
                        1/n
Engine Update Status
 xxxx/nnnnn
Scanner Update Status
 xxxx/nnnnn
```

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When the [Engine ROM] has been updated, "Engine MAIN Update..Flash Update" is changed to "Engine MAIN Update..Completed".

```
Download Storage Firmware Update Mode

Download Storage  -> FROM Update Start.   OS Update       ....... Completed
 Check Devices     -   Completed          HD Data Update .......
 Update Status     -   Installing         UI Data Update ....... Completed
 Data Check        -                      SysFirm Update .......
                                         ┌Engine MAIN Update  .. Completed┐
 Download Storage -> HDD copying          Scanner Firm Update .. Flash Update
                     1/n xxx/ yyy
                     2/n xxx/ yyy

Scanner Update Status
 xxxx/nnnnn
```

When the [System ROM]-[System Firmware Update] has been updated, "SysFirm Update…Completed" is displayed.

```
Download Storage Firmware Update Mode

                                         OS Update       ....... Completed
                                         HD Data Update .......
                                         UI Data Update ....... Completed
                                        ┌SysFirm Update ....... Completed┐
 Download Storage -> HDD copying         Engine MAIN Update  .. Completed
                     1/n xxx/ yyy        Scanner Firm Update .. Flash Update
                     2/n xxx/ yyy
                     3/n
Scanner Update Status
 xxxx/nnnnn
```

File name of ─────────── master data

Total files

Copies

When the [Master Data] has been updated, "HD Data Update…Completed" is displayed.

```
Download Storage Firmware Update Mode

                                  OS Update      ....... Completed
                                 [HD Data Update ....... Completed]
                                  UI Data Update ....... Completed
                                  SysFirm Update ....... Completed
                                  Engine MAIN Update  .. Completed
                                  Scanner Firm Update .. Flash Update


Scanner Update Status
 xxxx/nnnnn
```

When the [Scanner ROM] has been updated, "Scanner Firm Update..Flash Update" is changed to "Scanner Firm Update..Completed".

When all data has been updated, "Update Completed" is displayed.

```
Download Storage Firmware Update Mode

                                  OS Update      ....... Completed
                                  HD Data Update ....... Completed
                                  UI Data Update ....... Completed
                                  SysFirm Update ....... Completed
                                  Engine MAIN Update  .. Completed
                                 [Scanner Firm Update .. Completed]



                                 [Update Completed.]
```

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* If the USB storage device is not recognized properly, the following message is displayed and the update is interrupted.

```
Please Set Correct USB Storage Device
```

* "Update Failed." is displayed at the bottom of the LCD screen when the updating is not completed properly. "Failed" appears next to the failed item on the status display.

```
Download Storage Firmware Update Mode

                              OS Update      ....... Completed
                              HD Data Update ....... Completed
                              UI Data Update ....... Completed
                              SysFirm Update ....... Completed
                              Engine MAIN Update .. Failed
                              Scanner Firm Update .. Completed


                              Update Failed.
```

Failed items   Error message

[E] Display during the update (When the FROM basic section software version of the equipment is "V1.00 / 4.30" or later)

Update is performed in parallel as shown in the transition diagram below.

```
                    ┌─────────────────────────────┐
                    │ Item Selection Screen for Update │
                    └─────────────────────────────┘
         ┌──────────────┬──────────────┬──────────────┐
    [System ROM]    [Master data]   [Engine ROM]   [Scanner ROM]
    ┌──────────┐   ┌──────────┐   ┌──────────┐   ┌──────────┐
    │ 1. OS UI │   │ 2. HDD   │   │ 3. Engine │   │ 4. Scanner │
    │  Update  │   │ SYS Update│   │ Firmware │   │ Firmware │
    │          │   │          │   │  Update  │   │  Update  │
    └──────────┘   └──────────┘   └──────────┘   └──────────┘
         └──────────────┴──────────────┴──────────────┘
                    ┌─────────────────┐
                    │ Update Completed │
                    └─────────────────┘
```

Below is an example of the changes of the LCD screen during update.

┌───┐
│ Turn ON the power while [4] button and [9] button are pressed simultaneously │
└───┘

⇩ The initial screen is displayed and the recognition of the USB storage device connected to the equipment is started.

```
Download Storage Update Mode
Please wait ... now Initialization
```

⇩ When the device is recognized properly, the screen for selecting update items is displayed.

6

```
Download Storage Firmware Update Mode    Version in update media
Select Update Item

   *1. OS UI Update                 UIF Version... Vxxx.xxx.x
   *2. HDD SYS Update               SYS Version... Vxxx.xxx x
   *3. Engine Firmware Update       ENG Version... xxxxx-xx
   *4. Scanner Firmware Update      SCN Version... xxxxx-xx
```

⇩ Select items to be updated and press the [START] button.

```
Download Storage Firmware Update Mode

Download Board      -> FROM Update Start.  OS UI Update    .......
 Check Devices    -    Completed           HDD SYS Update .......
 Update Status    -    Installing          Engine MAIN Update  .. Flash Update
 Data Check       -                        Scanner Firm Update .. Flash Update

 Download Storage -> HDD copying
                      1/n
Engine Update Status
 xxxx/nnnnn
Scanner Update Status
 xxxx/nnnnn
```

⇩ When the [OS data] / [UI data] has been updated, "OS UI Update…Completed" is displayed.

```
Download Storage Firmware Update Mode

Download Board      -> FROM Update Start.  [OS UI Update    ....... Completed]
 Check Devices    -    Completed           HDD SYS Update .......
 Update Status    -    Installing          Engine MAIN Update  .. Flash Update
 Data Check       -                        Scanner Firm Update .. Flash Update

 Download Storage -> HDD copying
                      1/n
Engine Update Status
 xxxx/nnnnn
Scanner Update Status
 xxxx/nnnnn
```

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When the [Engine ROM] has been updated, "Engine MAIN Update..Flash Update" is changed to "Engine MAIN Update.. Completed".
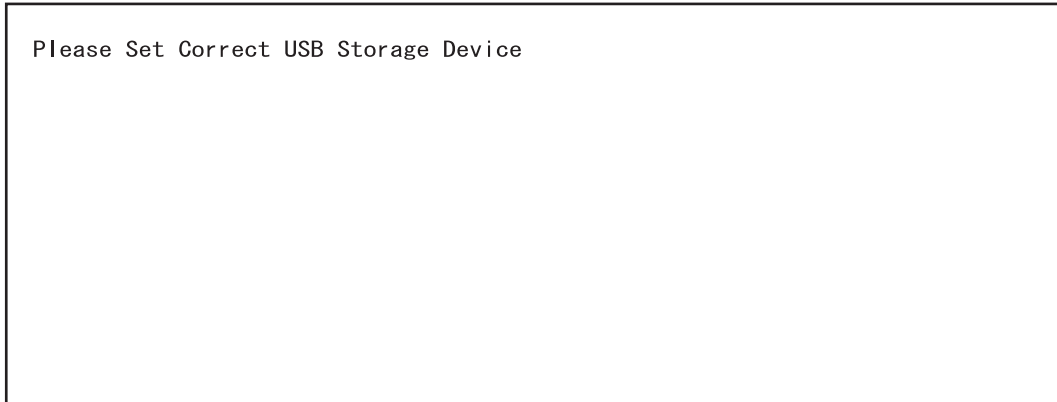
```
Download Storage Firmware Update Mode

                                   OS UI Update   ....... Completed
                                   HDD SYS Update .......
                                  (Engine MAIN Update  .. Completed)
                                   Scanner Firm Update .. Flash Update

 Download Storage -> HDD copying
                      1/n xxx/ yyy
                      2/n xxx/ yyy
                      3/n
Scanner Update Status
 xxxx/nnnnn
```
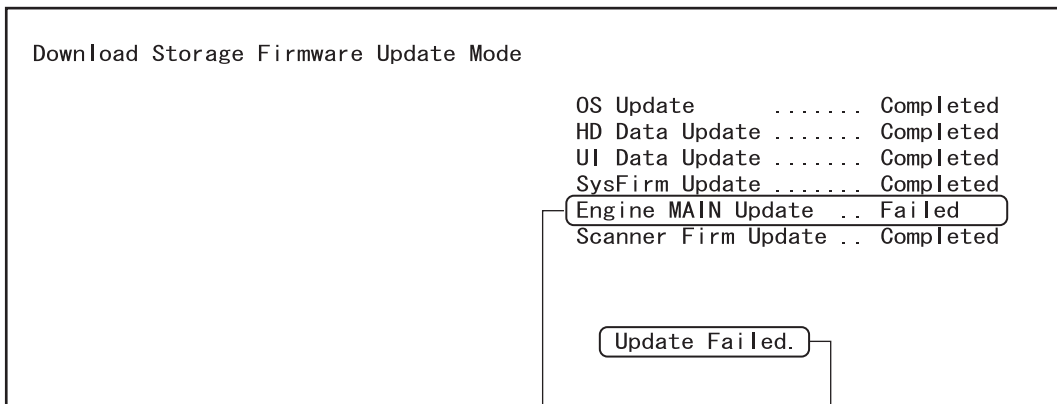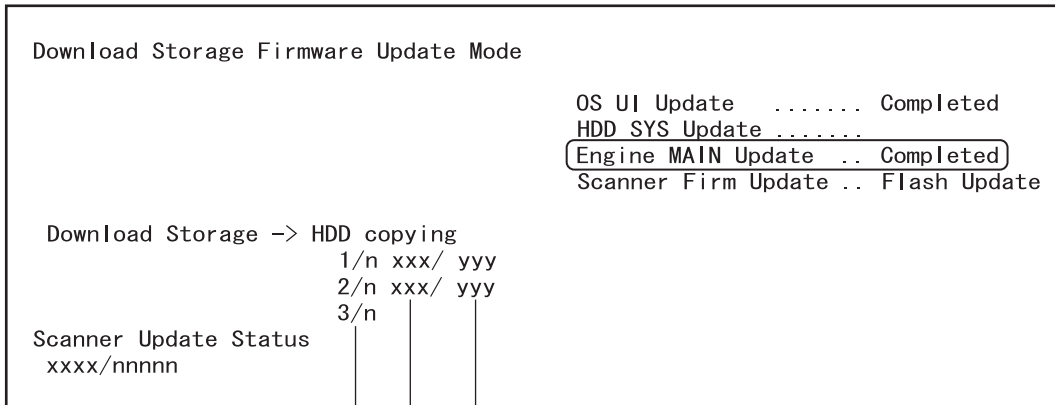
File name of master data — Total files
Copies

When the [Master Data] / [System firmware] has been updated, "HDD SYS Update… Completed" is displayed.

```
Download Storage Firmware Update Mode

                                   OS UI Update   ....... Completed
                                  (HDD SYS Update ....... Completed)
                                   Engine MAIN Update  .. Completed
                                   Scanner Firm Update .. Flash Update




Scanner Update Status
 xxxx/nnnnn
```

6

When the [Scanner ROM] has been updated, "Scanner Firm Update..Flash Update" is changed to "Scanner Firm Update.. Completed".

When all data has been updated, "Update Completed" is displayed.
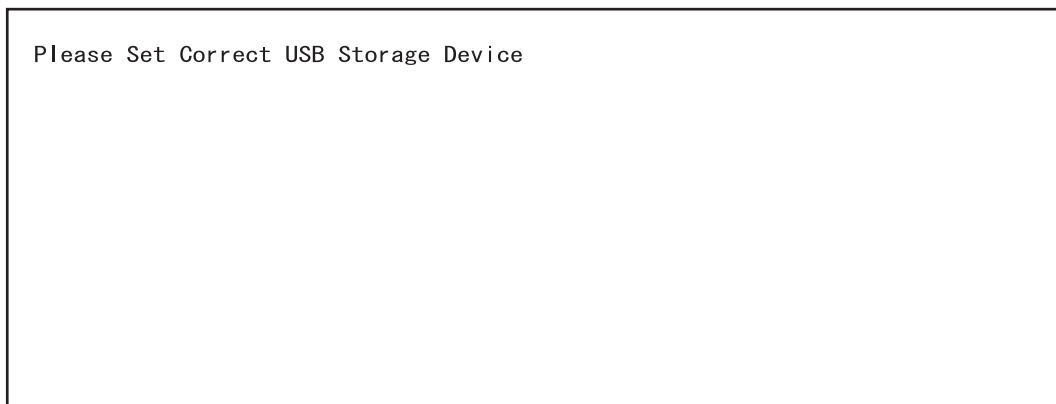
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```
Download Storage Firmware Update Mode

                                    OS UI Update   ....... Completed
                                    HDD SYS Update ....... Completed
                                    Engine MAIN Update .. Completed
                                    Scanner Firm Update .. Completed




                                        Update Completed.
```

* If the USB storage device is not recognized properly, the following message is displayed and the update is interrupted.

```
Please Set Correct USB Storage Device
```

* "Update Failed." is displayed at the bottom of the LCD screen when the updating is not completed properly. "Failed" appears next to the failed item on the status display.

```
Download Storage Firmware Update Mode

                                    OS UI Update   ....... Completed
                                    HDD SYS Update ....... Completed
                                    Engine MAIN Update .. Failed
                                    Scanner Firm Update .. Completed




                                        Update Failed.
```

Failed items   Error message

When the FROM basic section software version of the equipment is "V1.00 / 6.44" or later:
Only when the engine ROM update fails, an error number appears next to "Failed". The error contents
are as follows.

Error number	Error content	
01	Time out	When the download is requested
02	Time out	When the download is written
03	Time out	When the download is finished
04	Reception failed	When the download is requested
05	Deletion error	When the download is written
06	Writing error	When the download is written
07	Checksum error	When the download is finished
08	Reception status code abnormality	When the download is requested
09	Reception status code abnormality	When the download is written
10	Reception status code abnormality	When the download is finished
11	Communication abnormality between Main and PFC	When the download is requested
12	Communication abnormality between Main and PFC	When the download is written
13	Communication abnormality between Main and PFC	When the download is finished
14	Communication abnormality between Main and Laser	When the download is requested
15	Communication abnormality between Main and Laser	When the download is written
16	Communication abnormality between Main and Laser	When the download is finished
00	Other error	-

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6.3   When Firmware Updating Fails

When the power is turned OFF during the firmware updating or the equipment cannot be started after updating for some reason, perform the firmware update following the procedure below.

[A]   Procedure

(1)   Update "System ROM", "Engine ROM" and "Scanner ROM" using the download jigs.
Before updating them, write the data of "System ROM", "Engine ROM" and "Scanner ROM" to be updated to the download jigs.

See the updating procedure below for details.
📖 P. 6-6 "6.1.1 PWA-DWNLD-350-JIG2 (48 MB)"

(2)   Update "Master data" using the UBS storage device.
Before updating it, write the data file of "Master data" to the USB storage device. If any of the data files of "System ROM", "Engine ROM" and "Scanner ROM" other than "Master data" has been written to the USB storage device, specify only "Master data" on the select screen displayed during updating. (Enter "*" only to "1. HDD Update".)

See the updating procedure below for details.
📖 P. 6-45 "6.2 Firmware Updating with USB Storage Device"

Important:
If the equipment cannot be started even though updating has been performed in the above procedure, replace "SYS board" and "NVRAM".

6.4   Appendix

[A]   Assist Mode

This equipment has the Assist Mode to enable the following functions.

(1)   NVRAM flag clearing ("Clear NvRAM flags.")
Even if the firmware downloading has been completed normally, the Recovery Mode may accidentally start up when the power is turned ON again. In this case, clear the NVRAM flags used in the download process with this function. (Normally, the flags are automatically cleared in the download process.)
Also in the case the Recovery Mode accidentally starts up after the replacement of NVRAM on the SYS board, the flags are cleared with this function.

(2)   Data storage partition formatting ("Format Loader Partition.")
When a defection occurs on the UI data, etc. which are stored in the HDD, the partition with the stored UI data, etc. is formatted with this function. (Do not use this function since it is not normally necessary.)

(3)   HDD partition creation ("All Partition Delete and Create Loader Partition.")
When the HDD is replaced or UI data, etc. are downloaded using the USB storage, it is necessary to format a partition in the HDD before downloading. In this case, the partition is created in the HDD with this function.
   Notes:
   1.   When downloading with a download jig, it is not necessary to format a partition in advance.
   2.   Perform the HDD partition formatting only when a new HDD is installed since all data in the current HDD are erased by this operation.

[B]   Operating Procedure of Assist Mode

(1)   Turn ON the power while [3] button and [CLEAR] button are pressed simultaneously.
   •   The following screen is displayed.

```
Firmware Version Up Mode

Select Number(1-3) and Press START key.

> 1 : Clear NvRAM flags.
  2 : Format Loader partition.
  3 : All Partition Delete and Create Loader Partition.
```
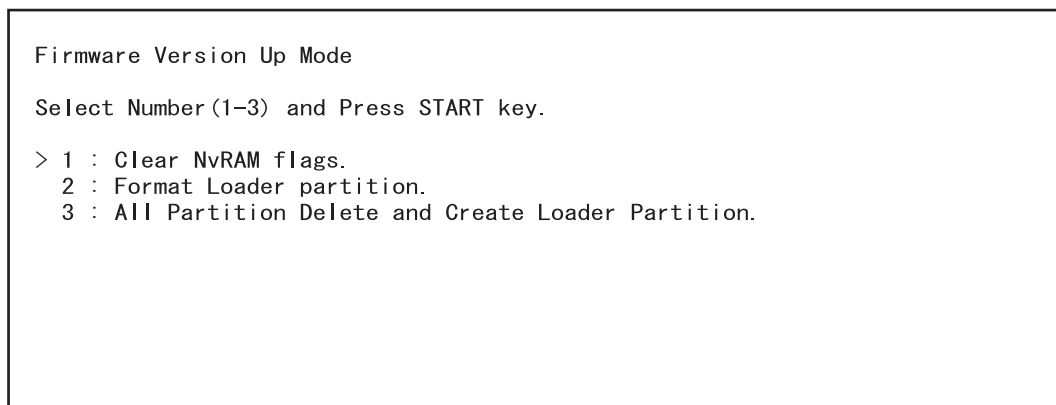
Fig. 6-69

(2)   Select the item with the digital keys and press the [START] button.

7. POWER SUPPLY UNIT

7.1 Output Channel

The following are 3 output channels for the main switch line.

1) +3.3 V

+3.3VA:	CN402 Pins 9 and 10	
	Output to the SYS board	
+3.3VA:	CN405 Pin 1	
	Output to the IMG board	
+3.3VB:	CN402 Pin 13	
	Output to the SYS board	
+3.3VB:	CN403 Pins 1 and 2	
	Output to the LGC board	
+3.3VB:	CN404 Pin 3	
	Output to the SLG board	
+3.3VB:	CN405 Pins 2, 3 and 4	
	Output to the IMG board	

2) +5.1 V

+5.1VA:	CN402 Pins 19, 20, 21and 22	
	Output to the SYS board	
+5.1VB:	CN402 Pin 17	
	Output to the SYS board	
+5.1VB:	CN403 Pin 7	
	Output to the LGC board, PFP/LCF (via LGC board), Bridge unit (via LGC board)	
+5.1VB:	CN404 Pins 1 and 2	
	Output to the SLG board, RADF	
+5.1VB:	CN406 Pin 4	
	Output to the finisher	
+5.1VB:	CN412 Pin 1	
	Output to the FIL board	

3) +12 V

+12VA:	CN402 Pin 5	
	Output to the SYS board	
+12VB:	CN402 Pin 3	
	Output to the SYS board	
+12VB:	CN403 Pin 9	
	Output to the LGC board	
+12VB:	CN408 Pin 1	
	Output to the FAX unit	

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The following are 2 output channels for the cover switch line.

1) +5.1 V
　　　　+5.1VD:　　CN403 Pin 21
　　　　　　　　　　Output to the LGC board

2) +24 V
　　　　+24VD:　　CN410 Pin 1
　　　　　　　　　　Output to the switching regulator cooling fan-1
　　　　+24VD:　　CN411 Pin 1
　　　　　　　　　　Output to the switching regulator cooling fan-2
　　　　+24VD1:　 CN403 Pins 19 and 20
　　　　　　　　　　Output to the LGC board, PFP/LCF (via LGC board)
　　　　+24VD2:　 CN403 Pins 17 and 18
　　　　　　　　　　Output to the LGC board
　　　　+24VD3:　 CN403 Pins 13 and 15
　　　　　　　　　　Output to the LGC board, high-voltage transformer (via LGC board), bridge unit
　　　　　　　　　　(via LGC board)
　　　　+24VD4:　 CN404 Pins 11, 12, 13 and 14
　　　　　　　　　　Output to the SLG board, RADF
　　　　+24VD4:　 CN406 Pin 2
　　　　　　　　　　Output to the Finisher

Output voltage by the type of connector

Main switch line

Connector	Destination	Voltage
CN402	For the SYS board	+3.3VA, +3.3VB, +5.1VA, +5.1VB, +12VA, +12VB
CN403	For the LGC board, PFP/LCF (via LGC board), bridge unit (via LGC board)	+3.3VB, +5.1VB, +12VB
CN404	For the SLG board, RADF	+3.3VB, +5.1VB
CN405	For the IMG board	+3.3VA, +3.3VB
CN406	For the finisher	+5.1VB
CN408	For the FAX unit	+12VB
CN412	For the FIL board	+5.1VB

Cover switch line

Connector	Destination	Voltage
CN403	For the LGC board, PFP/LCF (via LGC board), high-voltage transformer (via LGC board), bridge unit (via LGC board)	+5.1VD, +24VD1, +24VD2, +24VD3
CN404	For the SLG board, RADF	+24VD4
CN406	For the finisher	+24VD4
CN410	For the switching regulator cooling fan-1	+24VD
CN411	For the switching regulator cooling fan-2	+24VD

7.2 Fuse

When the power supply secondary fuse is blown out, confirm that there is no abnormality with each part using the following table.

Voltage	Board/Unit	Part		Fuse type
+24VD1	LGC board	Developer motor	M9	F201: 6.3 A (Semi time-lag)
		Polygonal motor	M13	
		Mirror motor-M	M14	
		Mirror motor-C	M15	
		Mirror motor-K	M16	
		Fuser motor	M17	
		Feed/transport motor	M20	
		ADU motor	M22	
	PFP/LCF			
+24VD2	LGC board	Transfer belt motor	M7	F202: 6.3 A (Semi time-lag)
		Drum motor	M10	
		Exit motor	M18	
		Registration motor	M19	
		ADU clutch	CLT7	
+24VD3	LGC board	Toner motor-Y	M2	F203: 6.3 A (Semi time-lag)
		Toner motor-M	M3	
		Toner motor-C	M4	
		Toner motor-K	M5	
		Used toner motor	M6	
		Shutter motor	M12	
		Internal cooling fan	M23	
		Ozone exhaust fan	M24	
		Fuser/exit section cooling fan	M25	
		Laser unit cooling fan	M29	
		Auto-toner sensor-Y	S22	
		Auto toner sensor-M	S23	
		Auto toner sensor-C	S24	
		Auto toner sensor-K	S25	
		Main switch	SW1	
		1st drawer transport clutch (Low speed)	CLT1	
		1st drawer transport clutch (High speed)	CLT2	
		1st drawer feed clutch	CLT3	
		2nd drawer transport clutch (Low speed)	CLT4	
		2nd drawer transport clutch (High speed)	CLT5	
		2nd drawer feed clutch	CLT6	
		Bypass feed clutch	CLT8	
		Bypass pickup solenoid	SOL1	
		Discharge LED-Y	ERS-Y	
		Discharge LED-M	ERS-M	
		Discharge LED-C	ERS-C	
		Discharge LED-K	ERS-K	
		High-voltage transformer	HVT	
	Bridge unit			
	Key copy counter, copy key card, coin controller			
+24VD4	SLG board	Scan motor	M1	F204: 6.3 A (Semi time-lag)
		Lamp inverter board	INV	
	RADF			
	Finisher			

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e-STUDIO2500c/3500c/3510c
POWER SUPPLY UNIT
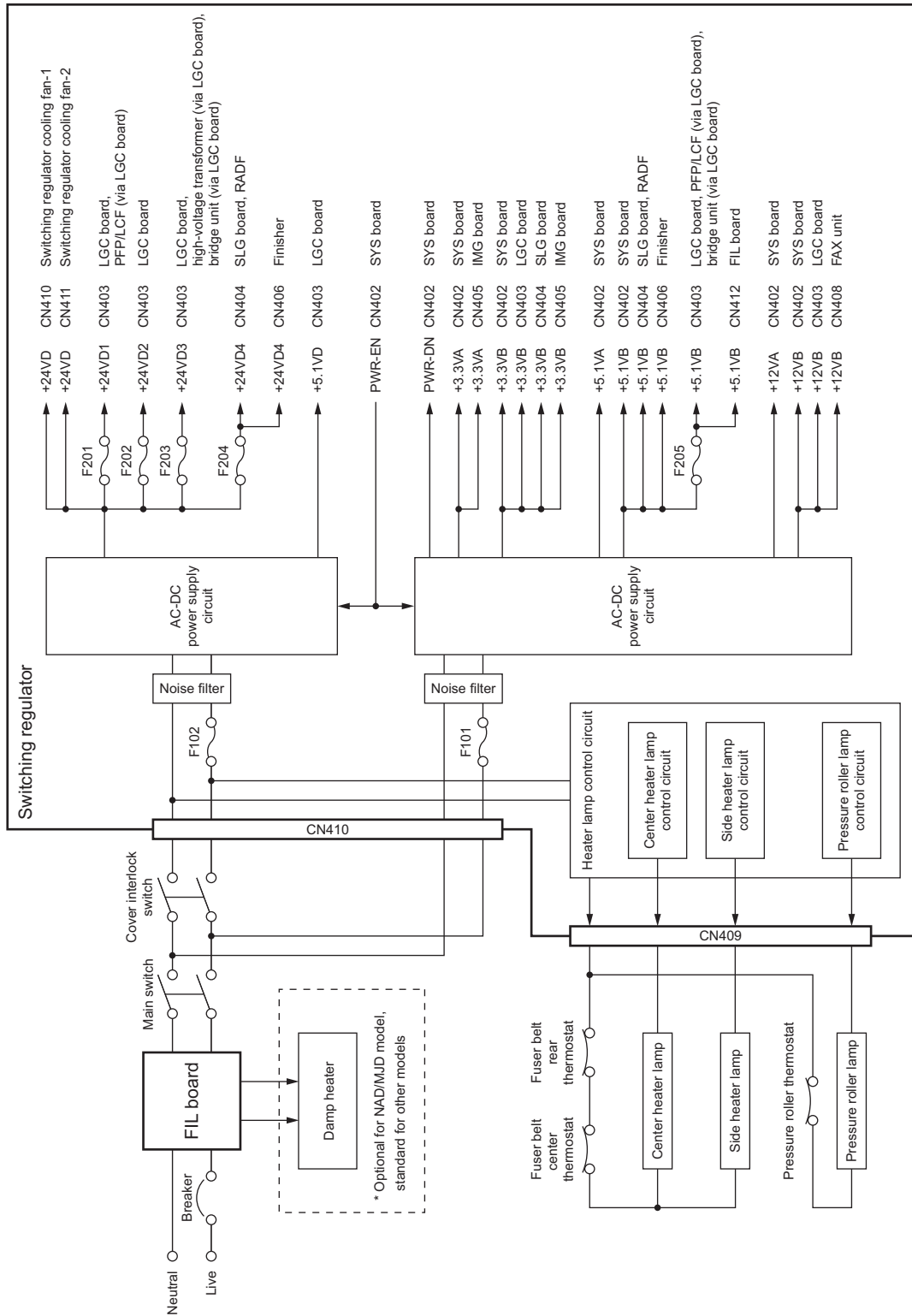
7.3   Configuration of Power Supply Unit

Fig. 7-1

8. REMOTE SERVICE

There are following functions as Remote Service.

(1) Auto Supply Order
    Automatically orders the toner and used toner container by FAX or E-mail.

(2) Service Notification
    Notifies the status of the equipment to the service technician by E-mail or FAX.

8.1 Auto Supply Order

8.1.1 Outline

Automatically orders the toner and used toner container.

(1) Placing an Order
    There are two ways to place an order.

    • FAX
      Installation of the FAX board is required.
      If the FAX board has not been installed, it is regarded as OFF setting.
    • E-mail (E-mail body + TIFF image)

(2) Order Intervals
    When the toner empty occurs, the number of occurrences is counted. And when it reaches the specified number for CONDITION, the order is placed automatically.
    With regard to the used toner container, it is done according to the number of the used toner container full detection.
    The number of the CONDITION can be set respectively for the toner and used toner container.

(3) If Order Failure Occurs
    If some problems occur and the order cannot be placed after registering an order as a job, refer to the standard countermeasure for the FAX/E-mail transmission failure.

8.1.2 Setting Item

To enable Auto Supply Order, the following settings are required.
> **Note:**
> When selecting E-mail to place an order, it is required that sending and receiving E-mails are available. Confirm the details to the administrator.

(1) Self-diagnosis (08) Setting
    As the default setting, the Auto Supply Order setting screen is not displayed on the touch panel.
    To display it, switching the Valid/Invalid setting (08-765) is required.
    　　0: Valid (FAX/Internet FAX)
    　　1: Valid (FAX/Internet FAX/HTTP)*
    　　2: Invalid (Default)
    When changing the setting value from "2" (default) to "0", the Auto Supply Order setting screen is displayed. (* HTTP has not been supported yet.)

8

(2) Touch Panel Setting
Each item is set from the Auto Supply Order screen on the touch panel.

Entering the password and customer information is required because the setting is made from the ADMIN screen. Setting it with the administrator is a must.

- Basic setting
  [ADMIN] > [SERVICE] > [SUPPLY ORDER SETUP] > [ORDER INFORMATION]

AUTO SUPPLY ORDER	Ordered by: [FAX], [MAIL], [HTTP] (*1)
FAX NUMBER	FAX number of supplier (*2)
E-MAIL	E-mail address of supplier (*3)
CUSTOMER	Customer information
NAME	
TEL NUMBER	
E-MAIL	
ADDRESS	
SUPPLIER	Supplier information
NAME	
ADDRESS	
SERVICE TECNICIAN	Service technician information
NUMBER	
NAME	
TEL NUMBER	
E-MAIL	

*1 HTTP has not been supported yet.
*2 Even when "FAX" is selected, the order is not placed without entering the FAX number.
*3 Even when "MAIL" is selected, the order is not placed without entering the E-mail address.

- Detailed setting for the order
  [ADMIN] > [SERVICE] > [SUPPLY ORDER SETUP] > [TONER ORDERING]

***** TONER ORDER	Order information (TONER /USED TONER CONTAINER)
PART NUMBER	Part number to be ordered
CONDITIOIN	The number of conditions (*)
QUANTITY	The quantity to be ordered
AUTO ORDER	ON/OFF setting of order for each part

* The order is placed when the number of replacement reaches the number specified for the CONDITION.

- FAX number of this equipment (common information)
  [ADMIN] > [FAX] > [TERMINAL ID]

ID NAME	ID name of this equipment
FAX NUMBER	FAX number of this equipment

- E-mail information of this equipment (common information)
  [ADMIN] > [E-MAIL]

FROM ADDRESS	E-mail address of this equipment (*)
FROM NAME	E-mail username of this equipment

* When sending an E-mail, validity of the address is checked. If the address is invalid, it is not sent.

(3) Output of setting list of the Auto Supply Order Keying in the following buttons and keys prints the setting list.
[USER FUNCTIONS] [USER] [LISTS] [*] [#] [*] [*] [3] [8] [START]

8.1.3　Setting procedure

(1)　Start up the self-diagnosis setting mode 08-765, and then change the setting value to "0".

(2)　Turn the power OFF, and then ON.

(3)　Press the [USER FUNCTIONS] button to enter the user function screen.

(4)　Press the [ADMIN] button.
- When the Administrator Password has been set, ADMINISTRATOR PASSWORD screen is displayed.

Fig. 8-1

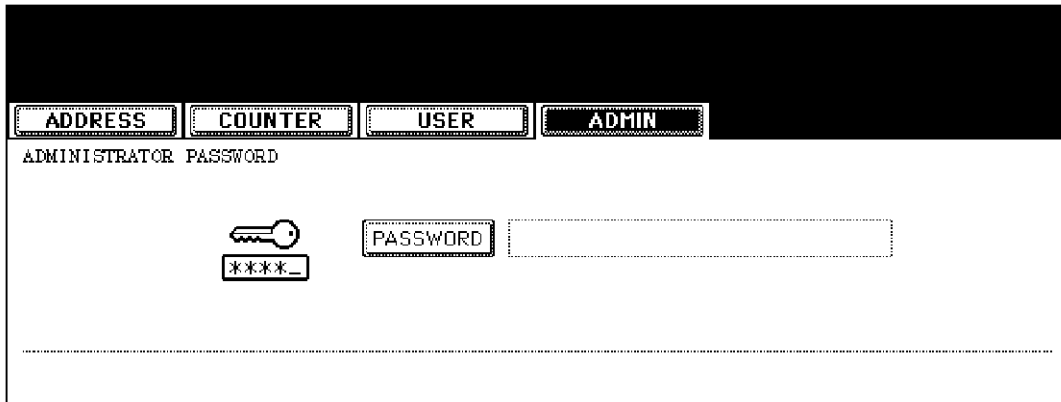(5)　Press the [PASSWORD] button and the screen is switched to a full keyboard.　Then key in the Administrator Password and press the [ENTER] button.
- *　Confirm the password to the administrator.
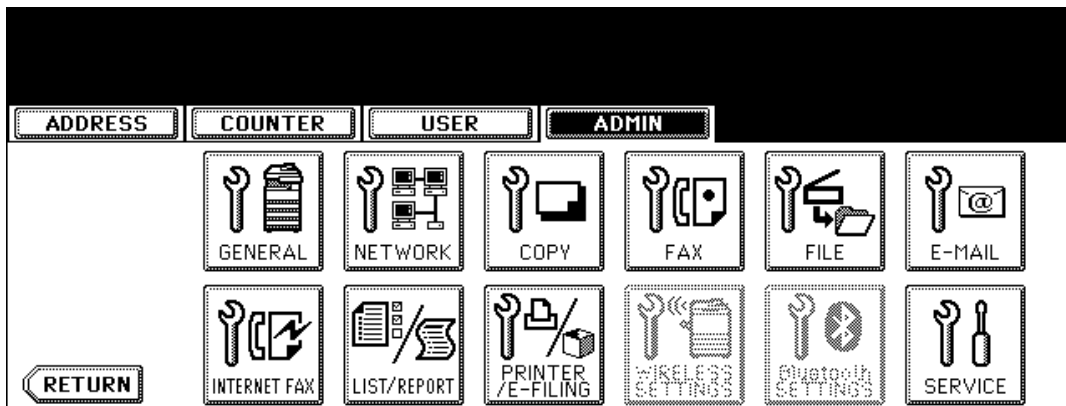
Fig. 8-2

(6)　Press the [SERVICE] button in the ADMIN screen.

(7) The SERVICE screen is displayed.
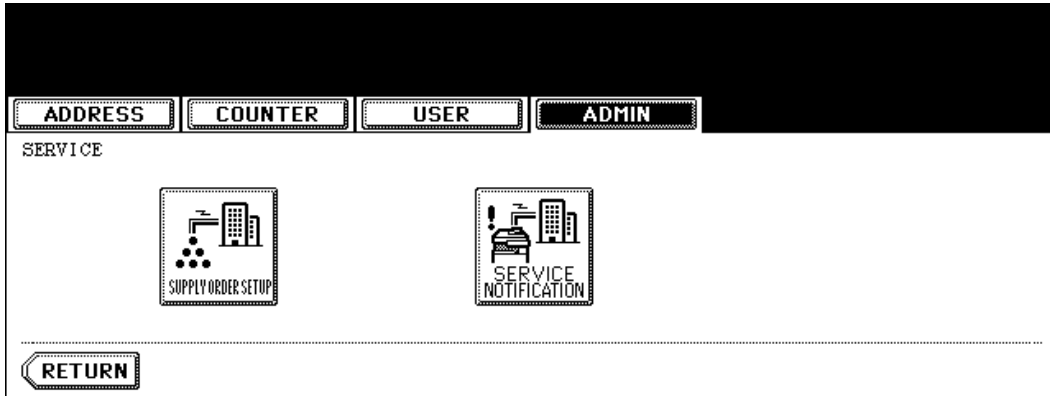
Fig. 8-3

(8) Press the [SUPPLY ORDER SETUP] button.
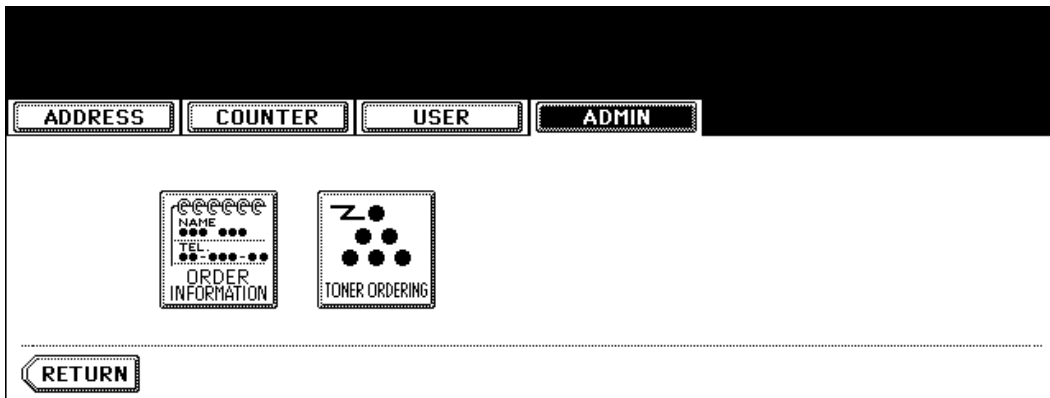
Fig. 8-4

(9) Press the [ORDER INFORMATION] button.

(10) The ORDER INFORMATION screen is displayed.

Fig. 8-5

(11) Press the buttons on the screen of ORDER INFORMATION to set the required item.

[FAX]/[MAIL]/[OFF]   Select the [FAX] or the [MAIL] button for the transmitting way of order.
(HTTP has not been supported yet.)
[OFF]: Turn off the AUTO SUPPLY ORDER function.

[FAX NUMBER]   Input the FAX number of supplier.
(To transmit by FAX, the order cannot be placed automatically if you do not input the number.)

[E-MAIL]   Input the E-mail address of supplier.
(To transmit by E-mail, the order cannot be placed automatically if you do not input the address.)

(12) Press the [NEXT] button.
(Press the [ENTER] button to register, and then the screen returns to the (7) SERVICE screen.
Press the [CANCEL] button to cancel this register, and then the screen returns to the (7) SERVICE screen.)

(13) The CUSTOMER/SUPPLIER screen is displayed.

Fig. 8-6

(14) Press the buttons of the screen of CUSTOMER/SUPPLIER to set the required item.

CUSTOMER

[NAME]	Input the name of customer.
[TEL NUMBER]	Input the telephone number of customer.
[E-MAIL]	Input the E-mail address of customer.
[ADDRESS]	Input the address of customer.

SUPPLIER

[NAME]	Input the name of supplier.
[ADDRESS]	Input the address of supplier.

(15) Press the [NEXT] button.

(16) The SERVICE TECHNICIAN/ RESULT PRINTING screen is displayed.

Fig. 8-7

(17) Press a button on the screen of SERVICE TECHNICIAN/ RESULT PRINTING to set the required item.

SERVICE TECHNICIAN

[NUMBER]	Input the number of SERVICE TECHNICIAN.
[NAME]	Input the name of SERVICE TECHNICIAN.
[TEL NUMBER]	Input the telephone number of SERVICE TECHNICIAN.
[E-MAIL]	Input the E-mail address of SERVICE TECHNICIAN.
[DESCRIPTION]	Input the remarks if you want to register.

RESULT PRINTING

[OFF] / [ALWAYS] / [ON ERROR]
Whichever you press, the result list is printed.

(18) Press the [ENTER] button to register and complete the order information setting.

(19) The SERVICE screen is returned.
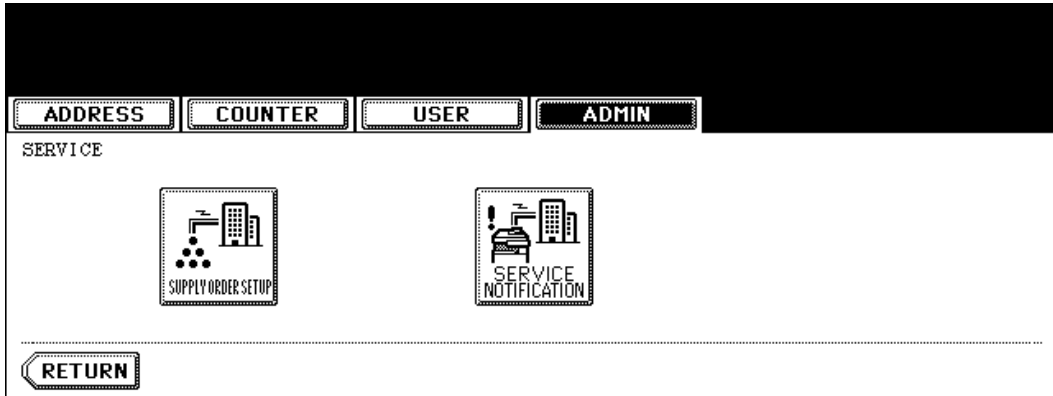
Fig. 8-8

(20) Press the [SUPPLY ORDER SETUP] button.
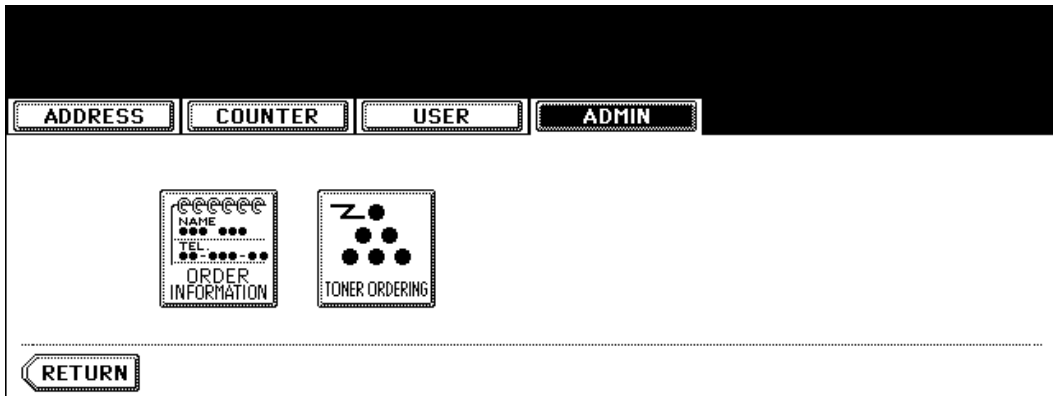
Fig. 8-9

(21) Press the [TONER ORDERING] button.

(22) The TONER ORDERING screen is displayed.

Fig. 8-10

e-STUDIO2500c/3500c/3510c
REMOTE SERVICE
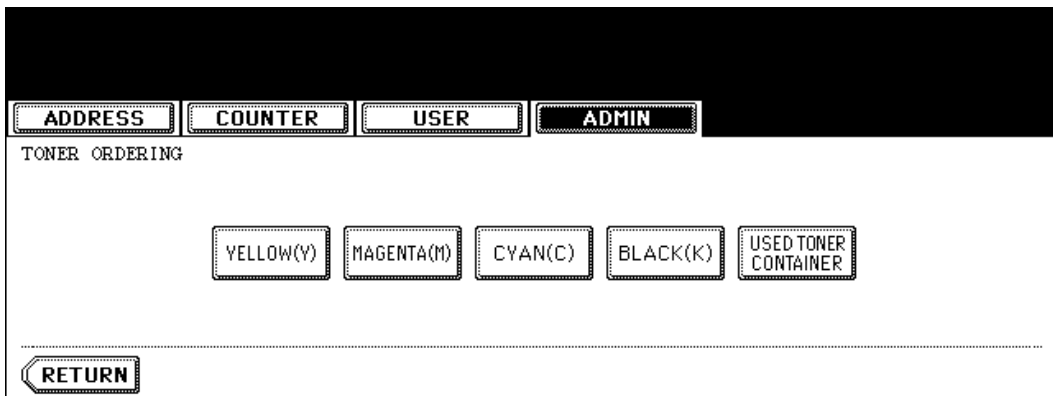
(23) Press the [YELLOW(Y)] button. (Select the part to be ordered.)

Fig. 8-11

(24) Input the order information of TONER.
    [PART NUMBER]   Toner number
    [CONDITION]   The order is placed when the number of toner empty reaches the number specified for the CONDITION.
    [QUANTITY]   Quantity to be ordered

AUTO ORDER
    [ON]/[OFF]   Allows you to select whether each part to be ordered is placed automatically or not.

(25) Press the [ENTER] button to register the setting of toner order.

(26) The TONER ORDERING screen is displayed.

Fig. 8-12

(27) Press the [MAGENTA(M)] / [CYAN(C)] / [BLACK(K)] / [USED TONER CONTAINER] button, and then input the order information in the same way.

Fig. 8-13

(28) Press the [ENTER] button to register the order information.

(29) The screen returns to the TONER ORDERING.

(30) Press the [USER FUNCTION] button to be switched from the ADMIN screen on touch panel and returned to the BASIC screen, so that the setting of Auto Supply Order is finished.

Note:
Auto Supply Order setting is also available from the following setting mode (08).

Items	08 code	Contents
The transmitting way of order [FAX]/[MAIL] /[OFF]	732	0: Ordered by FAX 1: Ordered by E-mail 2: Ordered by HTTP 3: OFF
SUPPLIER [FAX NUMBER]	733	Maximum 32 digits
SUPPLIER [E-MAIL]	734	Maximum 192 letters
CUSTOMER [NAME]	738	Maximum 50 letters
CUSTOMER [TEL NUMBER]	739	Maximum 32 digits
CUSTOMER [E-MAIL]	740	Maximum 192 letters
CUSTOMER [ADDRESS]	741	Maximum 100 letters
SUPPLIER [NAME]	746	Maximum 50 letters
SUPPLIER [ADDRESS]	747	Maximum 100 letters
SERVICE TECHNICIAN [NUMBER]	742	Maximum 5 digits
SERVICE TECHNICIAN [NAME]	743	Maximum 50 letters
SERVICE TECHNICIAN [TEL NUMBER]	744	Maximum 32 digits

Items	08 code	Contents
SERVICE TECHNICIAN [E-MAIL]	745	Maximum 192 letters
Remarks [DESCRIPTION]	748	Maximum 128 letters
RESULT PRINTING [OFF] / [ALWAYS] / [ON ERROR]	764	0: OFF 1: Always 2: ON Error
YELLOW(Y) TONER [PART NUMBER]	755	Maximum 20 digits
YELLOW(Y) TONER [CONDITION]	757	1-99
YELLOW(Y) TONER [QUANTITY]	756	1-99
MAGENTA(M) TONER [PART NUMBER]	752	Maximum 20 digits
MAGENTA(M) TONER [CONDITION]	754	1-99
MAGENTA(M) TONER [QUANTITY]	753	1-99
CYAN(C) TONER [PART NUMBER]	749	Maximum 20 digits
CYAN(C) TONER [CONDITION]	751	1-99
CYAN(C) TONER [QUANTITY]	750	1-99
BLACK(K) TONER [PART NUMBER]	758	Maximum 20 digits
BLACK(K) TONER [CONDITION]	760	1-99
BLACK(K) TONER [QUANTITY]	759	1-99
USED TONER CONTAINER [PART NUMBER]	761	Maximum 20 digits
USED TONER CONTAINER [CONDITION]	763	1-99
USED TONER CONTAINER [QUANTITY]	762	1-99

8.1.4 Order Sheet Format

The sample of order sheet is as follows.

(1) FAX (This format is the same as that of TIFF image attached E-mail.)
*1 Part not to be ordered is not output. (Less space between the lines)

```
DATE & TIME                       :99-99-'99 99:99
CUSTOMER NUMBER                   :XXX
CUSTOMER NAME                    :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
CUSTOMER ADDRESS                 :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
CUSTOMER TEL NUMBER              :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
CUSTOMER E-MAIL ADDRESS          :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SERVICE TECHNICIAN TEL NUMBER    :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SERVICE TECHNICIAN E-MAIL        :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SUPPLIER NAME                    :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SUPPLIER ADDRESS                 :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

                                  PART NUMBER        QUANTITY
TONER CARTRIDGE
   CYAN                          : XXXXXXXXXXXX          99  ⎫
   MAGENTA                       : XXXXXXXXXXXX          99  ⎬
   YELLOW                        : XXXXXXXXXXXX          99  ⎬ (*1)
   BLACK                         : XXXXXXXXXXXX          99  ⎬
USED TONER CONTAINER             : XXXXXXXXXXXX          99  ⎭

DESCRIPTION AREA   ............................................
...........................................................

DEVICE DESCRIPTION               :XXXXXXXXXXXXXXXXXXXXXXX
SERIAL NUMBER                    :XXXXXXXXXXXXXXXXXXXXXXX
DEVICE FAX NUMBER                :XXXXXXXXXXXXXXXXXXXXXXX
DEVICE E-MAIL ADDRESS            :XXXXXXXXXXXXXXXXXXXXXXX

                TOTAL          BLACK          TWIN COLOR      FULL COLOR
PRINT COUNTER   999999999      999999999      999999999       999999999
SCAN COUNTER    999999999      999999999      999999999       999999999
```

Fig. 8-14

8

(2) E-MAIL (TIFF image attached with the E-mail is the same format with that of the FAX order sheet.)
SUBJECT: SUPPLY ORDER REQUEST
*1 Part not to be ordered is not output. (Less space between the lines)

```
Date&Time: '06-04-14 00:17
Customer Number: S01 MachineName: TOSHIBA e-STUDIO3500c
SerialNumber: 1234567890
Device FAX Number:
Device Email: aaa@linux.nam1.local
OrderInformation:
YELLOW PartNumber: YELLOW-03 Quantity:17  } (*1)
CounterInformation:
PrintCounter(Small) FullColor: 0 TwinColor: 0 Black: 141
PrintCounter(Large) FullColor: 0 TwinColor: 0 Black: 0
ScanCounter FullColor: 0 TwinColor: 0 Black: 7
```

Fig. 8-15

(3) Result list
*1 Part not to be ordered is not output. (Less space between the lines)

```
                          ORDER XXXXXXXXX
DATE & TIME               :99-99-'99 99:99
CUSTOMER NUMBER           :XXX
CUSTOMER NAME             :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
CUSTOMER ADDRESS          :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
CUSTOMER TEL NUMBER       :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
CUSTOMER E-MAIL ADDRESS   :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SERVICE TECHNICIAN
TEL NUMBER                :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SERVICE TECHNICIAN E-MAIL :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SUPPLIER NAME             :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
SUPPLIER ADDRESS          :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

                          PART NUMBER        QUANTITY
TONER CARTRIDGE
   CYAN                   : XXXXXXXXXXXX         99 ⎫
   MAGENTA                : XXXXXXXXXXXX         99 ⎬
   YELLOW                 : XXXXXXXXXXXX         99 ⎬ (*1)
   BLACK                  : XXXXXXXXXXXX         99 ⎭
   USED TONER CONTAINER   : XXXXXXXXXXXX         99 ⎭

DESCRIPTION AREA   ...........................................
................................................................

DEVICE DESCRIPTION        :XXXXXXXXXXXXXXXXXXXXX
SERIAL NUMBER             :XXXXXXXXXXXXXXXXXXXXX
DEVICE FAX NUMBER         :XXXXXXXXXXXXXXXXXXXXX
DEVICE E-MAIL ADDRESS     :XXXXXXXXXXXXXXXXXXXXX

                 TOTAL        BLACK        TWIN COLOR    FULL COLOR
PRINT COUNTER    999999999    999999999    999999999     999999999
SCAN COUNTER     999999999    999999999    999999999     999999999
```

Fig. 8-16

8.2 Service Notification

8.2.1 Outline

This function automatically notifies the status of the equipment to the service technician by E-mail or FAX. The following three are the items to be notified.

- Total Counter Transmit
  When this function is effective, it notifies each counter information periodically (on the set date and time every month).

- Service Call Transmit (E-mail only)
  When this function is effective, it notifies the corresponding error code and such at a service call error.

- PM Counter Transmit
  When this function is effective, it notifies that the PM timing has come when the present PM sheet counter has reached to its setting value, or the present PM driving counter has reached to its setting value.

8.2.2 Setting

Note:
When using this function, it is required that sending and receiving E-mails or FAXes are available. Confirm the details to the administrator.

[1] Preparation
The screen to set this function is not displayed at the default setting.
Set this screen to be displayed with the following code (08).

08-774   Setting of notification display
          0: Invalid (Default)
          1: Valid

8

[2] Setting procedure

(1) Press the [USER FUNCTIONS] button and select the [ADMIN] button. Then enter the password and press the [ENTER] button.
   • Confirm the password to the administrator.
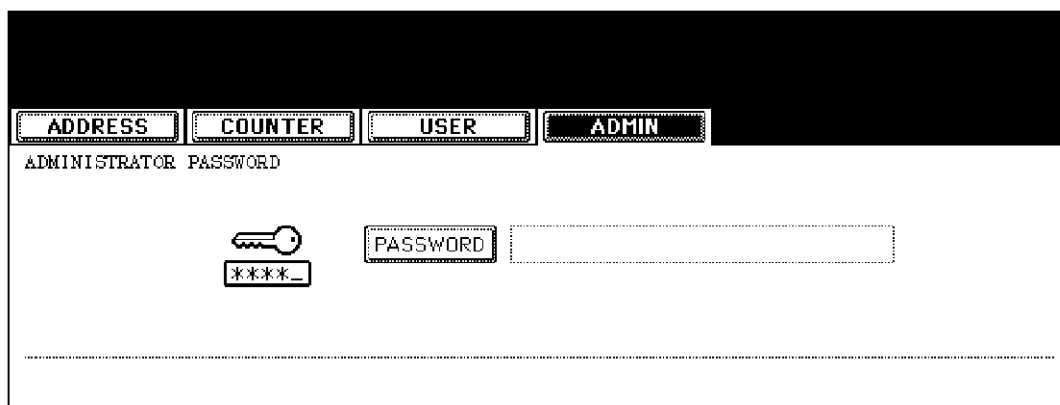
Fig. 8-17

(2) Press the [SERVICE] button.
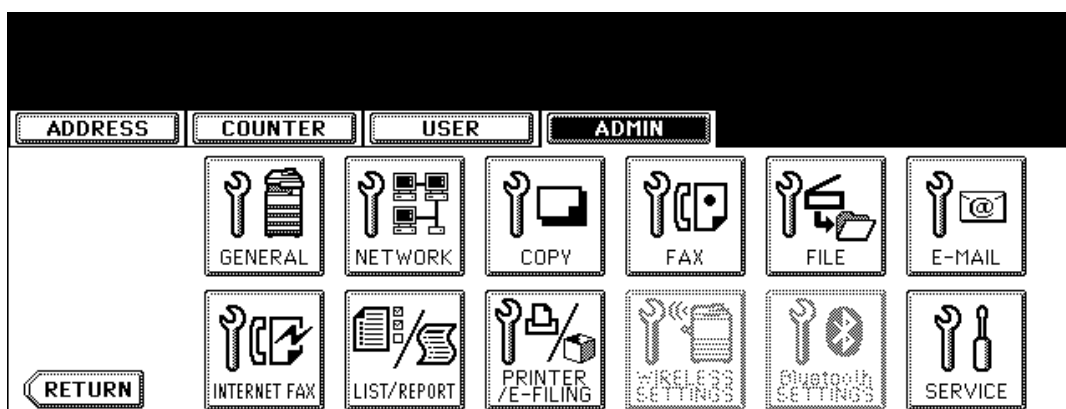
Fig. 8-18

(3) Press the [SERVICE NOTIFICATION] button.
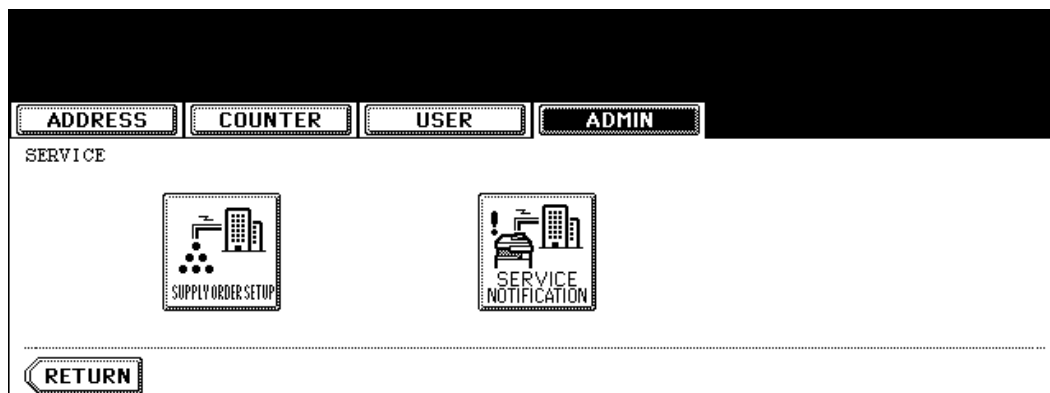
Fig. 8-19

(4) Press the [E-MAIL] or [FAX] button in "SERVICE NOTIFICATION".
- When the [OFF] button is pressed, all functions related Service Notification become ineffective.
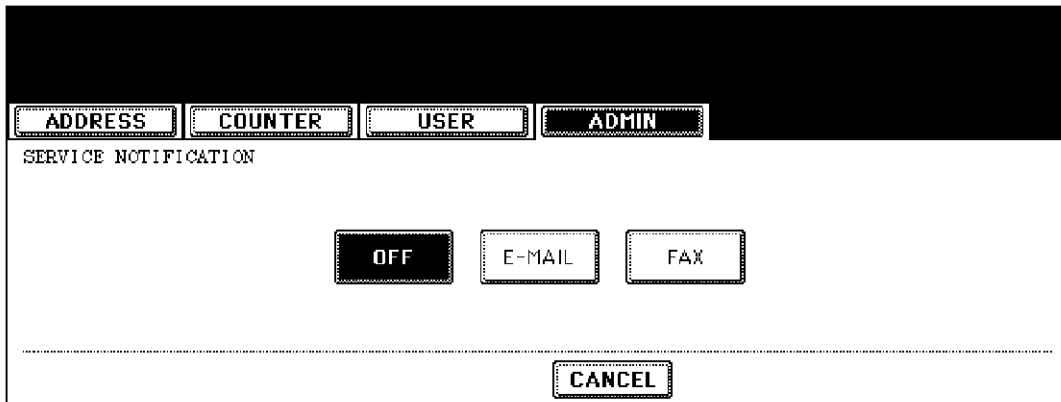
Fig. 8-20

(5) Enter the E-mail address or FAX number of the destination.
- When pressing the [E-MAIL] button, the screen is switched to a full keyboard. Then enter the E-mail addresses and press the [ENTER] button. (Maximum 3 addresses can be set.)
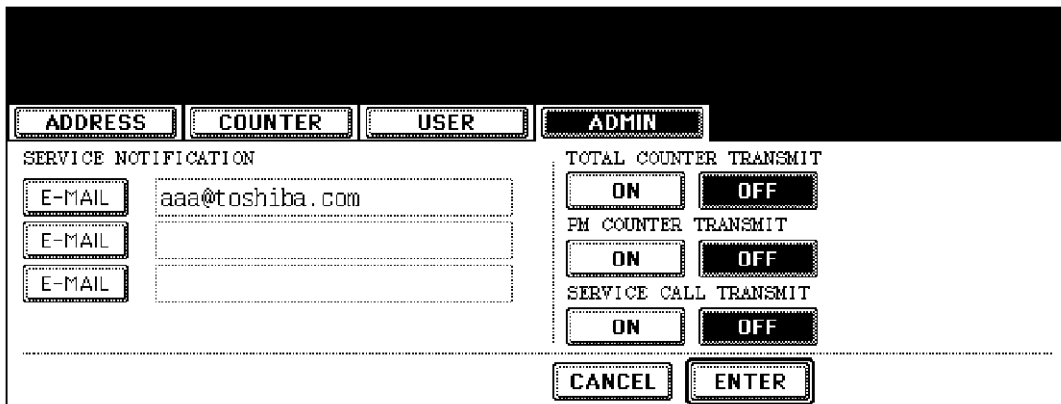
Fig. 8-21

- Press the [FAX NUMBER] button, key in the FAX number and then press the [ENTER] button.

Fig. 8-22

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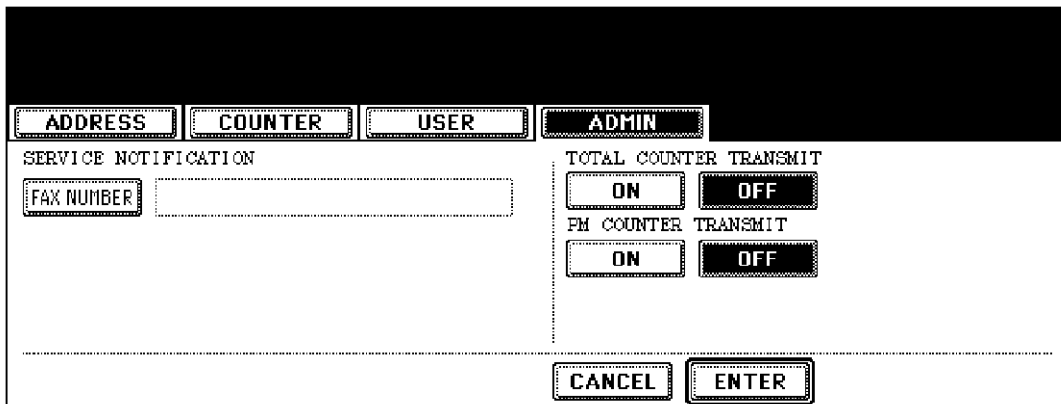
(6) Press the [ON] button to notify or the [OFF] button not to notify each item for E-mail and FAX. When Total Count Transmit is set to ON, the screen to set the notification date is displayed. Then set the notification date with the following procedure.

Fig. 8-23

Set the date and time of the Total Counter.
The following 3 items can be specified for the date setting, and more than one day of the week also can be selected.
- Day of the week (More than one day can be selected.)
- Notify Date 1
- Notify Date 2

You can send the Total Counter immediately without the above settings by pressing the [SEND NOW] button.

- **Day of the week ([Sunday] to [Saturday] buttons)**
  Pressing the buttons ([Sunday] to [Saturday]) of the desired day makes transmission on every specified day. More than one day can be selected.
  * This does not affect the settings of "Notify Date 1" and "Notify Date 2".

- **Notify Date 1 and Notify Date 2 ([DATE] button)**
  Pressing the [DATE] button sets up to 2 dates on which you wand to send data.
  * This is not affected by the specified day of the week.
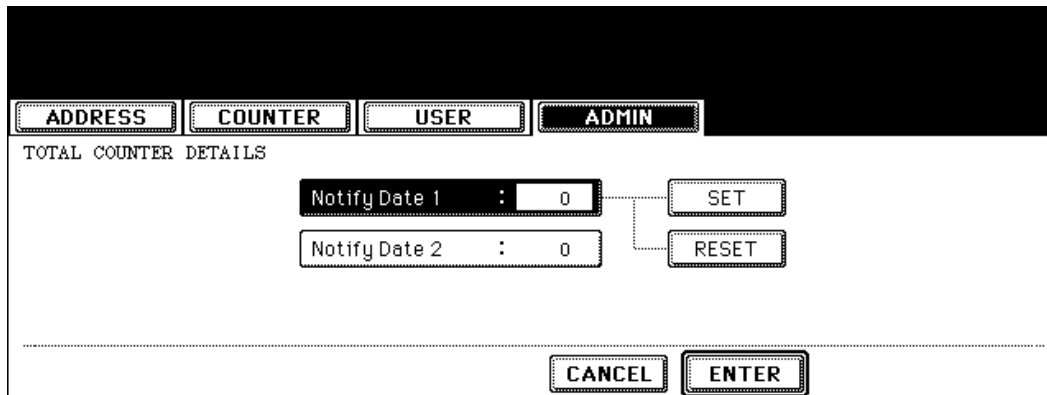
Fig. 8-24

Key in the date (acceptable values: 0-31) in "Notify Date 1" or "Notify Date 2" and press the [SET] button.
([SET] button not pressed: Correct the value after pressing the [CLEAR] button.
[SET] button already pressed: Correct the value after pressing the [RESET] button to move the cursor back to the digit to be rectified.)

- **Time setting ([CHANGE] button)**
  Pressing the [CHANGE] button sets the time at which you wand to send data.
  This is the time when data are sent with "Day of the week", "Notify Date 1" and "Notify Date 2".
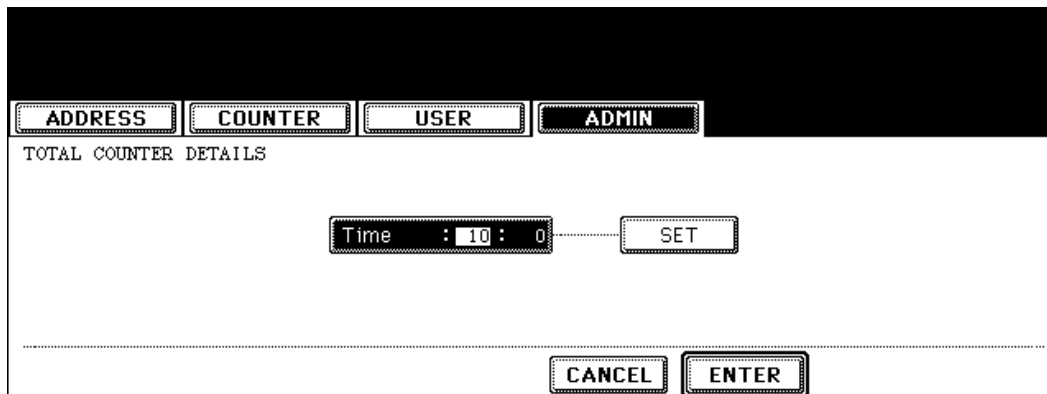
Fig. 8-25

Key in the time (acceptable values: 00:00-23:59) in "Time".
Key in the time in the hour column of "Time", press the [SET] button, key in the time in the minute column of "Time" and press the [SET] button.
([SET] button not pressed: Correct the value after pressing the [CLEAR] button.
[SET] button already pressed: Correct the value after pressing the [RESET] button to move the cursor back to the digit to be rectified.)

After all the settings are completed, press the [ENTER] button. The display returns to the screen in step (5).

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(7)   Press the [ENTER] button. The setting completes.

Note:
   Service Notification setting is also available from the following setting mode (08).

Items	08 code	Contents
Service Notification setting	767	0: OFF (Invalid) 1:E-mail 2:FAX
E-mail address 1	768	Maximum 192 letters
E-mail address 2	777	Maximum 192 letters
E-mail address 3	778	Maximum 192 letters
FAX number	1145	Maximum 32 digits
Total Counter Transmit setting	769	0: OFF (Invalid) 1: ON (Valid)
Total counter transmission date setting	770	0 to 31
Total counter transmission date setting(2)	9880	0 to 31
Day of total counter data transmission	9881	1 byte 00000000(0)-01111111(127) From the 2nd bit - Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday
Total counter transmission interval setting (Hour/Hour/Minute/Minute)	776	00:00-23:59
Service Call Transmit setting	775	0: OFF (Invalid) 1: ON (Valid)
PM Counter Transmit setting	771	0: OFF (Invalid) 1: ON (Valid)

8.2.3   Items to be notified

The items to be notified are shown below.

1) Total Counter Transmit / PM Counter Transmit by E-mail (XML file attached to E-mail has also the same format.)
   Subject: Counter Notification
   (In case of the PM Counter Transmit, it is shown as "Periodical Maintenance Notification".)

```
①——— Date           : 10/26/2006 12:34
②——— Machine Model : TOSHIBA e-STUDIO3500c
③——— SerialNumber   : 1234567890
④——— Total Counter  : 00004787
⑤——— Supplier:
          Name        : SUPPLIER_NAME
          Tel Number  : 1122334455
          E-Mail      : Supplier_emailaddress@cccc.xxx
          Address     : SUPPLIER_ADDRESS
⑥——— Customer:
          Name        : CUSTOMER_NAME
          Tel Number  : 1234567890
          E-Mail      : customer_emailaddress@dddd.xxx
          Address     : CUSTOMER_ADDRESS
⑦——— Service Technician:
          Number      : svc12
          Name        : SERVICE_TECHNICIAN_NAME
          Tel Number  : 0987654321
          E-Mail      : svc@toshibatec.co.jp

       ChargeCounterFormat:
⑧———      LargeSizeChargeCount              1
⑨———      LargeSizeChargePaperDefinition    1

       PMCounterFormat:
⑩———      LargeSizePMCount                  1
⑪———      LargeSizePMPaperDefinition  0

       Charge Counter:
                           Large      Small
           <Print Counter>
           Full Color -------------------------------
⑫———         Copy        00000000  00000000
⑬———         Print       00000000  00000000
           Twin Color ------------------------------
⑭———         Copy        00000000  00000000
           Black  ------------------------------------
⑮———         Copy        00000000  00000000
⑯———         Print       00000000  00000000
⑰———         List        00000000  00000000
⑱———         FAX         00000000  00000000

           <Scan Counter>
           Full Color -------------------------------
⑲———         Copy Scan   00000000  00000000
⑳———         Net Scan    00000000  00000000
           Twin Color ------------------------------
㉑———         Copy Scan   00000000  00000000
           Black  ------------------------------------
㉒———         Copy Scan   00000000  00000000
㉓———         FAX Scan    00000000  00000000
㉔———         Net Scan    00000000  00000000

           <FAX Counter>
㉕———      Transmit       00000000  00000000
㉖———      Receive        00000000  00000000

       Periodical Maintenance Counter:
㉗———      Set PM          00150000
㉘———      Current PM      00004787
㉙———      Set PMTime      00000000
㉚———      CurrentPMTime   00000000

㉛——— Printer Error History:
          Date        Time       ErrorCode
          ---------------------------------------------
          04/13/2006  16:44      F110  ┐
          04/12/2006  22:28      F110  │
          04/12/2006  22:23      F110  ├ (*1)
          03/15/2006  22:23      F110  │
          02/25/2006  11:12      F110  ┘
```

Fig. 8-26

1. Date

2. Machine model name

3. Serial number

4. Total counter value

5. Supplier information

6. Customer information

7. Service technician information

8. Count setting of large-sized paper (Fee charging system counter)

9. Definition setting of large-sized paper (Fee charging system counter)

10. Count setting of large-sized paper (PM)

11. Definition setting of large-sized paper (PM)

12. Number of output pages in the Copier Function (FULL COLOR)

13. Number of output pages in the Printer Function (FULL COLOR)

14. Number of output pages in the Copier Function (TWIN COLOR)

15. Number of output pages in the Copier Function (BLACK)

16. Number of output pages in the Printer Function (BLACK)

17. Number of output pages at the List Print Mode (BLACK)

18. Number of output pages in the FAX Function (BLACK)

19. Number of scanning pages in the Copier Function (FULL COLOR)

20. Number of scanning pages in the Network Scanning Function (FULL COLOR)

21. Number of scanning pages in the Copier Function (TWIN COLOR)

22. Number of scanning pages in the Copier Function (BLACK)

23. Number of scanning pages in the FAX Function (BLACK)

24. Number of scanning pages in the Network Scanning Function (BLACK)

25. Number of transmitted pages in the FAX Function (BLACK)

26. Number of received pages in the FAX Function (BLACK)

27. PM sheet counter setting value

28. PM sheet counter present value

29. PM driving counter setting value

30. PM driving counter present value

31. History of error

*1 The latest 20 errors are displayed.

2) Total Counter Transmit / PM Counter Transmit by FAX
   *1 In case of the PM Counter Transmit, the title is replaced to "PERIODICAL MAINTENANCE NOTIFICATION".

Sheet 1

COUNTER NOTIFICATION (*1)

① DATE   : 06/04/14 13:47
② MACHINE MODEL   : TOSHIBA e-STUDIO3500c
③ SERIAL NUMBER   : 1234567890
④ TOTAL COUNTER   : 00004787

   CUSTOMER NAME   : CUSTOMER_NAME
   CUSTOMER ADDRESS   : CUSTOMER_ADDRESS
⑤ CUSTOMER TEL NUMBER   : 1234567890
   CUSTOMER E-MAIL ADDRESS   : customer_emailaddress@dddd.xxx
   SERVICE TECHNICIAN NUMBER   : svc12
   SERVICE TECHNICIAN NAME   : SERVICE_TECHNICIAN_NAME
⑥ SERVICE TECHNICIAN TEL NUMBER : 0987654321
   SERVICE TECHNICIAN E-MAIL   : svc@toshibatec.co.jp
   SUPPLIER NAME   : SUPPLIER_NAME
   SUPPLIER ADDRESS   : SUPPLIER_ADDRESS
⑦ SUPPLIER FAX NUMBER   : 5544332211
   SUPPLIER E-MAIL   : supplier_emailaddress@ccccc.xxx

Sheet 2

COUNTER NOTIFICATION (*1)

CHARGE COUNTER FORMAT   PM COUNTER FORMAT

⑧ LARGE SIZE CHARGE COUNT   : 1   LARGE SIZE PM COUNT   : 1
⑨ LARGE SIZE CHARGE PAPER DEFINITION : 1   LARGE SIZE PM PAPER DEFINITION   : 0

CHARGE COUNTER   ⑩⑪

PRINT COUNTER   SCAN COUNTER
FULL COLOR	LARGE	SMALL		FULL COLOR	LARGE	SMALL
⑫ COPY	00000000	00000000	⑳ COPY SCAN	00000000	00000000
⑬ PRINT	00000000	00000000	㉑ NET SCAN	00000000	00000000
TWIN/MONO COLOR	LARGE	SMALL	TWIN/MONO COLOR	LARGE	SMALL
⑭ COPY	00000000	00000000	㉒ COPY SCAN	00000000	00000000
⑮ PRINT	00000000	00000000	㉓ NET SCAN	00000000	00000000
BLACK	LARGE	SMALL	BLACK	LARGE	SMALL
⑯ COPY	00000000	00000000	㉔ COPY SCAN	00000000	00000000
⑰ PRINT	00000000	00000000	㉕ FAX SCAN	00000000	00000000
⑱ LIST	00000000	00000000	㉖ NET SCAN	00000000	00000000
⑲ FAX	00000000	00000000			

FAX COUNTER   PERIODICAL MAINTENANCE COUNTER
	LARGE	SMALL		
㉗ TRANSMIT	00000000	00000000	㉙ SET PM	: 00000000
㉘ RECEIVE	00000000	00000000	㉚ CURRENT PM	: 00000000
			㉛ SET PM TIME	: 00000000
			㉜ CURRENT PM TIME	: 00000000

㉝ PRINTER ERROR HISTORY

DATE	TIME	ERROR CODE	DATE	TIME	ERROR CODE
06/04/13	16:44	F110			
06/04/12	22:28	F110			
06/04/12	22:23	F110 (*2)			
06/03/15	22:23	F110			
06/02/25	11:12	F110			

Fig. 8-27

①	Date
②	Machine model name
③	Serial number
④	Total counter value
⑤	Customer information
⑥	Service technician information
⑦	Supplier information
⑧	Count setting of large-sized paper (Fee charging system counter)
⑨	Definition setting of large-sized paper (Fee charging system counter)
⑩	Count setting of large-sized paper (PM)
⑪	Definition setting of large-sized paper (PM)
⑫	Number of output pages in the Copier Function (FULL COLOR)
⑬	Number of output pages in the Printer Function (FULL COLOR)
⑭	Number of output pages in the Copier Function (TWIN COLOR)
⑮	Number of output pages in the Printer Function (TWIN COLOR)
⑯	Number of output pages in the Copier Function (BLACK)
⑰	Number of output pages in the Printer Function (BLACK)
⑱	Number of output pages at the List Print Mode (BLACK)
⑲	Number of output pages in the FAX Function (BLACK)
⑳	Number of scanning pages in the Copier Function (FULL COLOR)
㉑	Number of scanning pages in the Network Scanning Function (FULL COLOR)
㉒	Number of scanning pages in the Copier Function (TWIN COLOR)
㉓	Number of scanning pages in the Network Scanning Function (TWIN COLOR)
㉔	Number of scanning pages in the Copier Function (BLACK)
㉕	Number of scanning pages in the FAX Function (BLACK)
㉖	Number of scanning pages in the Network Scanning Function (BLACK)
㉗	Number of transmitted pages in the FAX Function (BLACK)
㉘	Number of received pages in the FAX Function (BLACK)
㉙	PM sheet counter setting value
㉚	PM sheet counter present value
㉛	PM driving counter setting value
㉜	PM driving counter present value
㉝	History of error

*2 The latest 20 errors are displayed.

3) Service Call Transmit
   Subject: Service Call Notification

① Date: 04/14/2006 13:47

Machine Name: e-STUDIO3500c   SerialNumber:1234567890
② ③

④ Function: Printer
⑤ Severity: Error
⑥ ErrorCode: XXXX
⑦ Message:
   XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

⑧ Supplier:
   Name   : SUPPLIER_NAME
   Tel Number : 1122334455
   E-Mail   : supplier_emailaddress@cccc.xxx
   Address   : SUPPLIER_ADDRESS

⑨ Customer:
   Name   : CUSTOMER_NAME
   Tel Number : 1234567890
   E-Mail   : customer_emailaddress@dddd.xxx
   Address   : CUSTOMER_ADDRESS

⑩ Service Technician:
   Number   : svc12
   Name   : SERVICE_TECHNICIAN_NAME
   Tel Number : 0987654321
   E-Mail   : svc@toshibatec.co.jp

⑪ Printer Error History:

   Date   Time   ErrorCode

   04/13/2006   16:44   F110
   04/12/2006   22:28   F110
   04/12/2006   22:23   F110   (*1)
   03/15/2006   22:23   F110
   02/25/2006   11:12   F110

Fig. 8-28

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① Date (When an error occurs)

② Machine model name

③ Serial number

④ Function: Fixed at "Printer"

⑤ Severity: Fixed at "Error"

⑥ Error code

⑦ Error message: The content of error is displayed.

⑧ Supplier information

⑨ Customer information

⑩ Service technician information

⑪ History of error

*1 The latest 20 errors are displayed.

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9. DATA CLONING with USB STORAGE DEVICE

In this equipment, the user data, setting items and SRAM data can be backed up / restored by turning the power ON after connecting the USB storage device on which the data cloning programs have been written to the USB connector mounted on the SYS board.

The type of data to be backed up/restored can be selected on the LCD screen in this method.

This allows you to back up/restore only the necessary data individually or to back up/restore all data in a batch.

Programs necessary for data cloning with this method differ depending of the system ROM versions on the equipment as follows.

System ROM version	Storage location	Program file name
T380SY0*050 to T380SY0*060	Root directory	rootusb, clone_25_3510c
T380SY0*200 to T380SY0*210[*1]	Root directory	rootusb, clone_25_3510c.002
T380SY0*310	Root directory	rootusb, clone_25_3510c.003

*1: T380SY0*210, except the EFI model

Important:
- Be sure to check the "Status display of the USB data cloning permission (08-9889)" before data cloning. When the value of 08-9889 is "1 (Prohibited)", data cloning cannot be performed. Contact and ask the administrator to change the setting on the [Data Cloning Function] in TopAccess.
- It is assumed that data cloning is to be performed when equipment is installed or options are installed. If the address book has been registered, do not perform restore. Registered / set data are lost.
- The USB storage device for the data cloning must meet the following conditions. A data cloning operation with any devices other than the following will not be guaranteed.
  - A combination USB storage device with a flash memory (to be connected directly to the USB port) and its capacity is between 128 MB and 512 MB (or 1 GB).
  - A device compliant with the following specifications established by USB-IF (USB Implementers Forum)
    Class number: 8 (=08h)   (Mass storage class)
    Sub-Class number: 6 (=06h)   (SCSI transfer command set)
    Protocol number: 80 (=50h)   (Bulk-only)

  - * Most of the common USB storage devices are compliant with the above specifications and are therefore applicable to this data cloning. However, most of these devices were originally developed to be used in an environment for PCs (e.g. Windows or Macintosh) and thus operations exclusively with this equipment have not been fully guaranteed. Therefore, the user must thoroughly check in advance whether there will be any problem in operating with this equipment when adopting one of these devices.

- The USB storage devices compliant with both USB 1.1 and USB 2.0 can be used for this data cloning. However, the operating speed when using a device compliant with USB 2.0 is equivalent to the one with a device compliant with USB 1.1.
- Data cloning with any storage devices other than a flash memory (e.g. USB-connectable memory card reader, CD/DVD drive, hard disk) will never be guaranteed. Therefore never use them for this operation.
- Be sure to unplug the LAN cable and Fax line before data are backed up / restored. Also, do not use the RADF and open the cover, drawer, etc. during the data cloning.
- Data can be backed up / restored only for the same model and version. If the version is different, update the firmware and back up / restore data in the same version.
- Restore data to equipment which has the same options as when the data are backed up.
- If "Department management" or "User management information" is restored, the counter values are copied as well, so clear all of them. However, the total counter is not copied.
- Delete the backed up data in the USB storage device after the data cloning.

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DATA CLONING with USB STORAGE DEVICE

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[A] Data cloning procedure (Backup)

Important:
- The file system for the USB storage device should be in the FAT format. Note that any device formatted in FAT32 or NTFS will not be operated. Its file system can be confirmed by opening the properties of the device from Windows Explorer.
- Never turn the power of the equipment OFF during data cloning, or the data could be damaged and the operation not carried out properly.
- Be sure to perform the backup/restore of the SRAM data in the same equipment and the same ROM version. If not, a problem such as duplication of the serial number occurs.

(1) Connect the USB storage device to the PC and delete all data in the USB storage device.
- The file system for the USB storage device should be in the FAT format.
- Windows95 and NT do not support USB. The data cannot be written into the device with the PC in which these OS are installed.

(2) Write the program file.
- Write the data cloning program into the root directory.

(3) Shut down the equipment.

(4) Connect the USB storage device to the USB connector (host) on the SYS board.
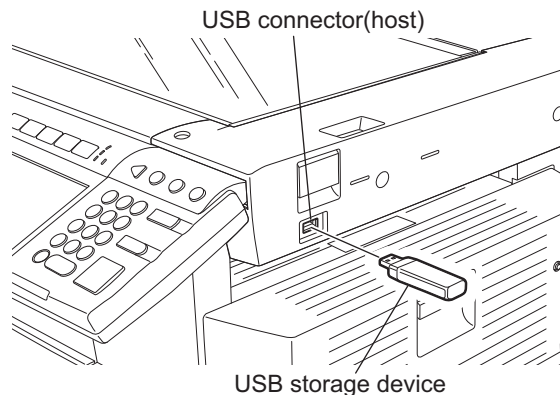

Fig. 9-1

Note:
The equipment has 3 USB connectors (host): 1 is located under the power switch and 2 located right rear side of the equipment. When cloning data, connect the USB storage device to either of 3 USB connectors (host). Data cloning cannot be performed with multiple USB storage devices connected simultaneously.

(5)   Turn the power ON while pressing the [5] and [9] button simultaneously.
The screen to select the backup/restore items is displayed.

```
Select No.                   rootusb              version X.XX
                             clone_xx_xxxxx_xxx   version X.XX


   1: User Data Back Up
   2: User Data Restore
   3: Setting Back Up
   4: Setting Restore
   5: SRAM Data Back Up
   6: SRAM Data Restore
```

Fig. 9-2

Note:
When "Disable" is set for the [Data Cloning Function] in TopAccess, the following screen is displayed. Contact and ask the administrator to change the setting on TopAccess.

```
The cloning tool cannot be started for permission.
Please ask your customer administrator to set the cloning
permission of the TopAccess setting.
```
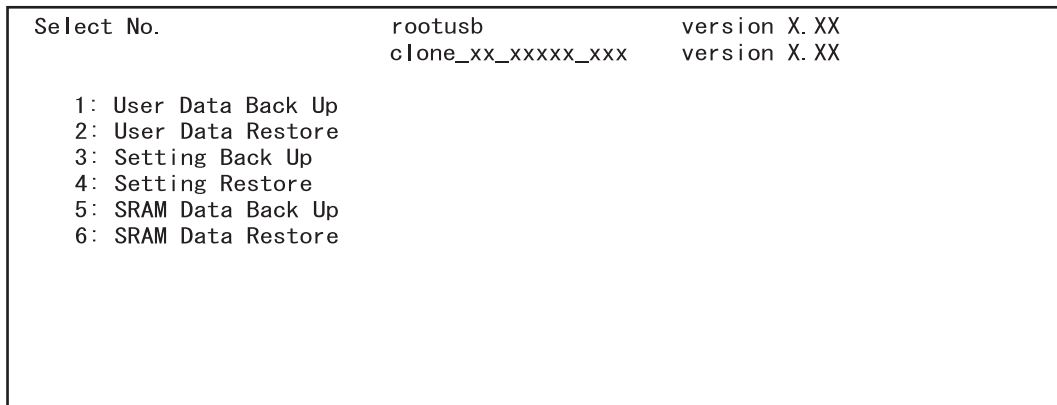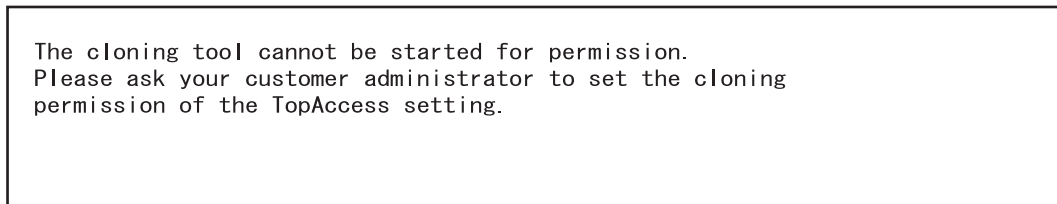
Fig. 9-3

(6)   Select the items to be performed with the digital keys.
  •   In case of backup, select one of the following items.
      <Backing up User data>
          Select "1: User Data Back Up".
      <Backing up Setting item>
          Select "3: Setting Back Up".
      <Backing up SRAM data>
          Select "5: SRAM Data Back Up".
Note:
After the item is selected with the digital keys, displaying the next menu may take a long time.

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DATA CLONING with USB STORAGE DEVICE

(7) Press the [1] button.
The screen to select the user data backup item is displayed. In this screen, the items to be backed up are shown after the mark "*". (The items "4", "5" and "6" are selected in the screen by default.)

```
User Data Backup

  1: Address Book
  2: Mail Box
  3: Template
 *4: Combined
 *5: Department Code
 *6: User Info
```
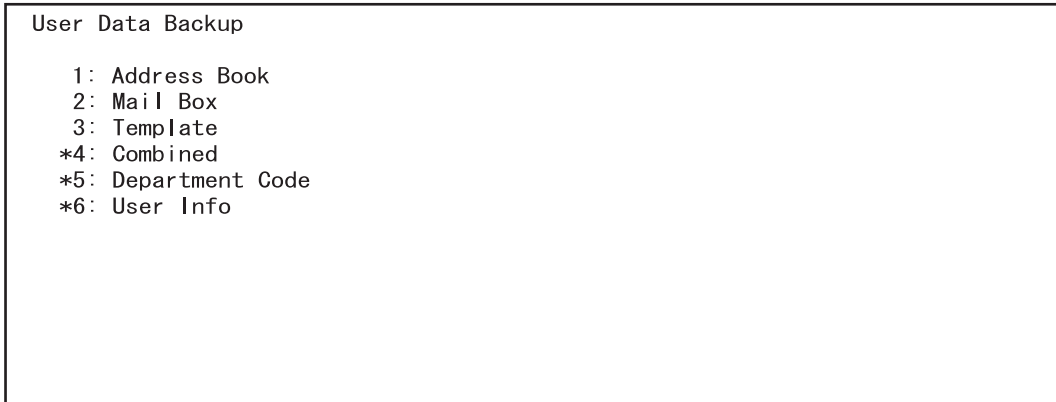
Fig. 9-4

(8) Select the items to be backed up with the digital keys.
The mark "*" is shown on the selected item. The mark "*" can be deleted or added each time the corresponding digital key is pressed.
- To back up the data in a batch, select "4", "5" or "6". (Selecting "4" performs "1", "2" and "3" together.)
- To back up the data individually, select the following items.
  \<Backing up Address book\>
     Select "1: Address Book" only.
  \<Backing up Mail box\>
     Select "2: Mail Box" only.
  \<Backing up Template\>
     Select "3: Template" only.
  \<Backing up 1: Address Book, 2: Mail Box and 3: Template in a batch\>
     Select "4: Combined" only.
  \<Backing up Department management\>
     Select "5: Department Code" only.
  \<Backing up User management information\>
     Select "6: User Info" only.

  E.g.:
  In case of backing up the department management and user management information

```
User Data Backup

  1: Address Book
  2: Mail Box
  3: Template
  4: Combined
 *5: Department Code
 *6: User Info
```

Fig. 9-5

(The following screens are given as an example of when all items are backed up.)

(9) Press the [Start] button.
The backup starts and the backing up status is displayed on the LCD screen.

```
User Data Backup

  1: Address Book
  2: Mail Box
  3: Template
 *4: Combined                    .........Completed
 *5: Department Code             .........
 *6: User Info
```
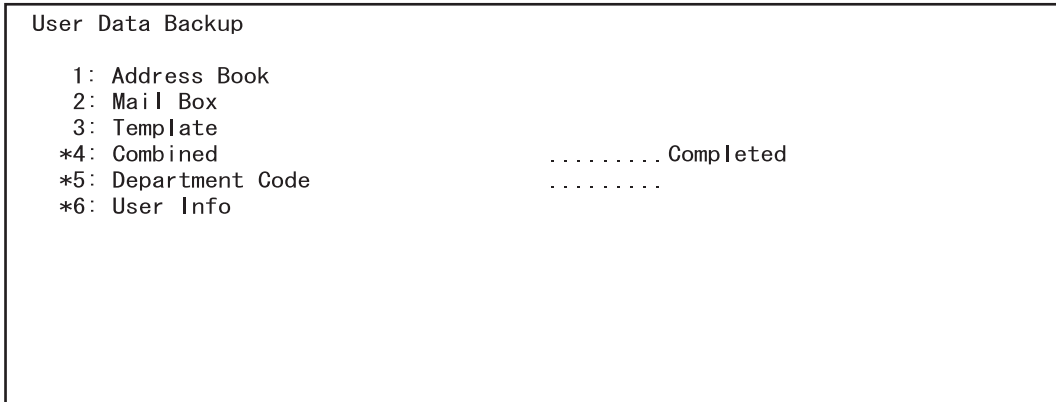
Fig. 9-6

(10) "Back Up Completed" is displayed on the LCD screen when the backup has been properly completed.

```
User Data Backup                    Back Up Completed

  1: Address Book
  2: Mail Box
  3: Template
 *4: Combined                    .........Completed
 *5: Department Code             .........Completed
 *6: User Info                   .........Completed
```

Fig. 9-7

(11) Turn the power OFF and remove the USB storage device.

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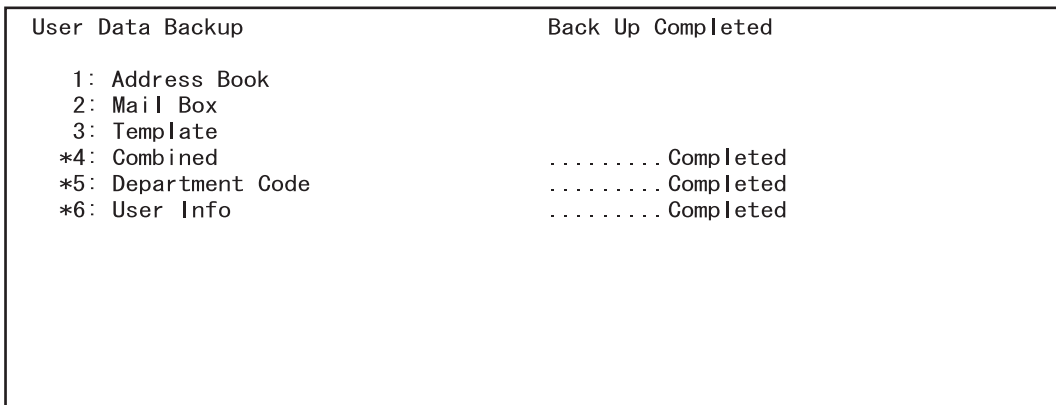
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DATA CLONING with USB STORAGE DEVICE

<Setting Backup>

(12) Connect the USB storage device to the USB connector (host) on the SYS board.

(13) Turn the power ON while pressing the [5] and [9] button simultaneously.
The screen to select the backup/restore items is displayed.

```
Select No.              rootusb              version X.XX
                        clone_xx_xxxxx_xxx   version X.XX


   1: User Data Back Up
   2: User Data Restore
   3: Setting Back Up
   4: Setting Restore
   5: SRAM Data Back Up
   6: SRAM Data Restore
```

Fig. 9-8

Notes:
- After the item is selected with the digital keys, displaying the next menu may take a long time.
- When "Disable" is set for the [Data Cloning Function] in TopAccess, the following screen is displayed. Contact and ask the administrator to change the setting on TopAccess.

```
The cloning tool cannot be started for permission.
Please ask your customer administrator to set the cloning
permission of the TopAccess setting.
```
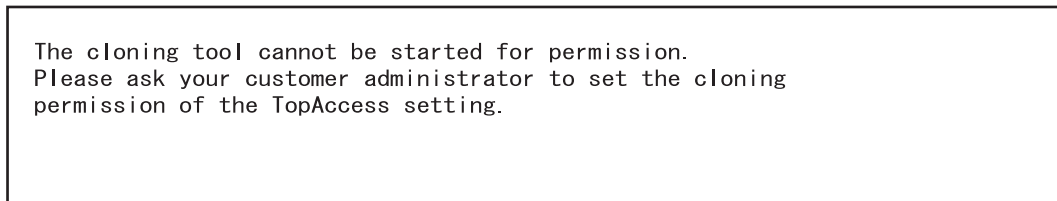
Fig. 9-9

(14) Press the [3] button.
The screen to select the setting backup item is displayed. In this screen, the items to be backed up are shown after the mark "*". (No items are selected in the screen by default.)

```
Setting Back Up

AdminSetting
   1: Network/Print Service
   2: SaveAsFile/Email/InternetFAX
   3: Notification
   4: Directory Service
Setting for Option
   5: FAX Kit
   6: WirelessLAN/Bluetooth Kit
```

Fig. 9-10

(15) Select the items to be backed up with the digital keys.
The mark "*" is shown on the selected item. The mark "*" can be deleted or added each time the corresponding digital key is pressed.
- To back up the data individually, select the following items.
    <Backing up TopAccess: Network/Print Service>
        Select "1: Network/Print Service" only.
    <Backing up TopAccess: SaveAsFile/Email/InternetFAX>
        Select "2: SaveAsFile/Email/InternetFAX" only.
    <Backing up TopAccess: Notification >
        Select "3: Notification" only.
    <Backing up TopAccess: Directory Service>
        Select "4: Directory Service" only.
    <Backing up Option: Fax setting>
        Select "5: FAX Kit" only.
    <Backing up Option: WirelessLAN/Bluetooth setting>
        Select "6: WirelessLAN/Bluetooth Kit" only.

(The following screens are given as an example of when all TopAccess items are backed up.)

(16) Press the [Start] button.
The backup starts and the backing up status is displayed on the LCD screen.

```
Setting Back Up

AdminSetting
  *1: Network/Print Service          .........Completed
  *2: SaveAsFile/Email/InternetFAX   .........
  *3: Notification
  *4: Directory Service
Setting for Option
   5: FAX Kit
   6: WirelessLAN/Bluetooth Kit
```
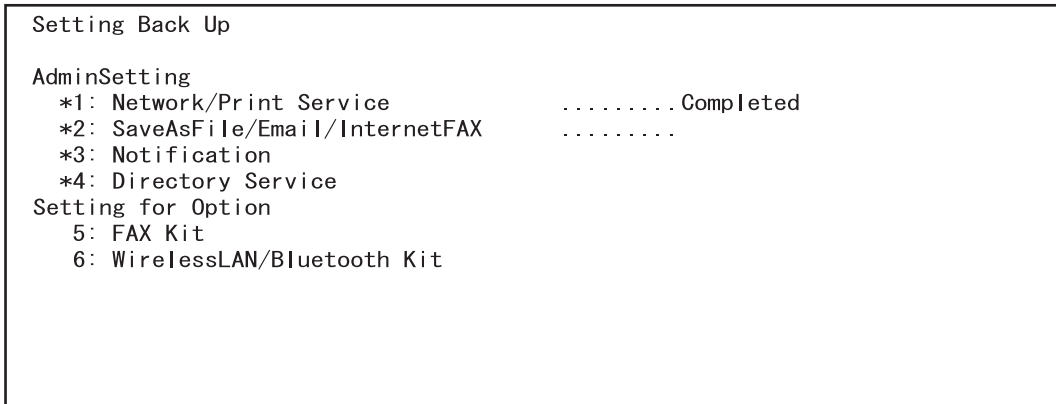
Fig. 9-11

(17) "Back Up Completed" is displayed on the LCD screen when the backup has been properly completed.

```
Setting Back Up                    Back Up Completed

AdminSetting
  *1: Network/Print Service          .........Completed
  *2: SaveAsFile/Email/InternetFAX   .........Completed
  *3: Notification                   .........Completed
  *4: Directory Service              .........Completed
Setting for Option
   5: FAX Kit
   6: WirelessLAN/Bluetooth Kit
```

Fig. 9-12

(18) Turn the power OFF and remove the USB storage device.

<SRAM Data Backup>

(19) Connect the USB storage device to the USB connector (host) on the SYS board.

(20) Turn the power ON while pressing the [5] and [9] button simultaneously.
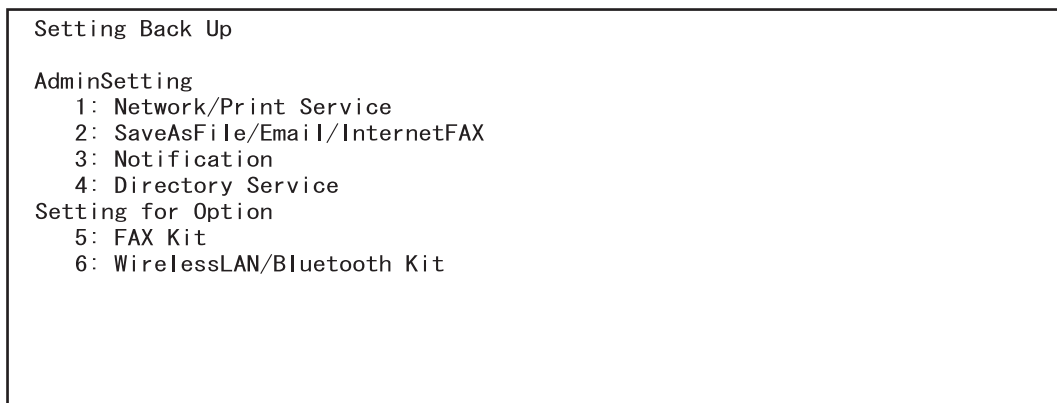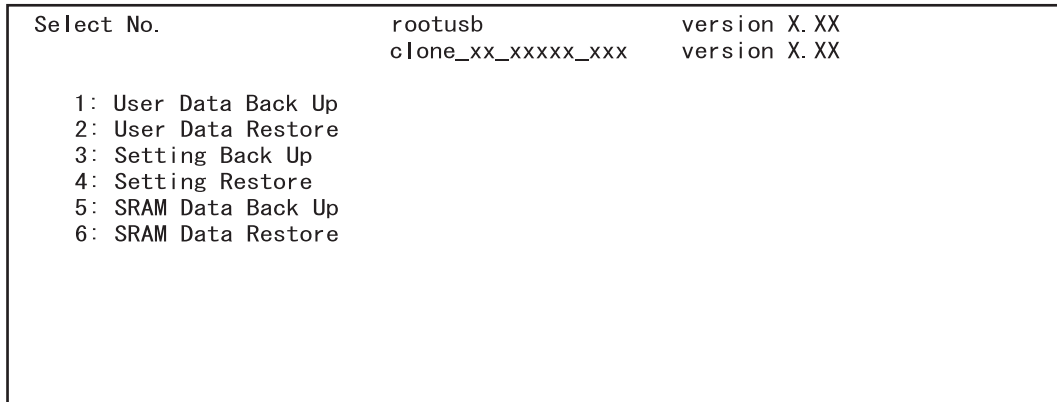The screen to select the backup/restore items is displayed.

```
Select No.              rootusb              version X.XX
                        clone_xx_xxxxx_xxx   version X.XX

    1: User Data Back Up
    2: User Data Restore
    3: Setting Back Up
    4: Setting Restore
    5: SRAM Data Back Up
    6: SRAM Data Restore
```
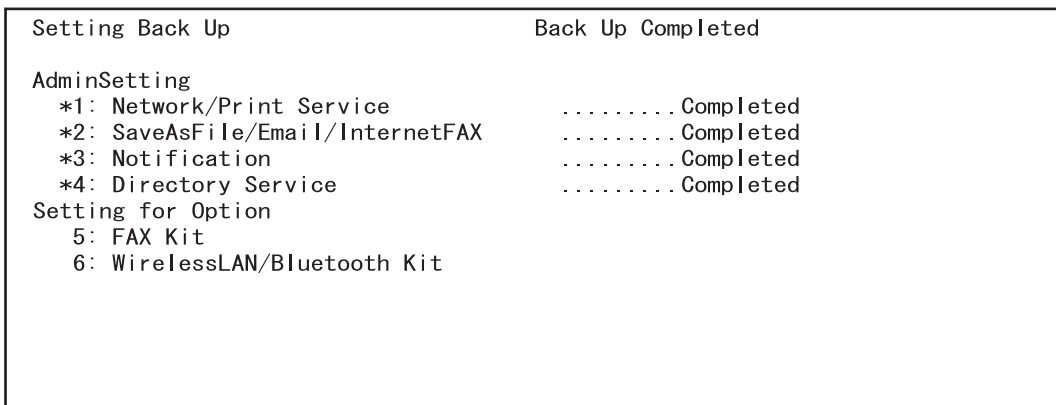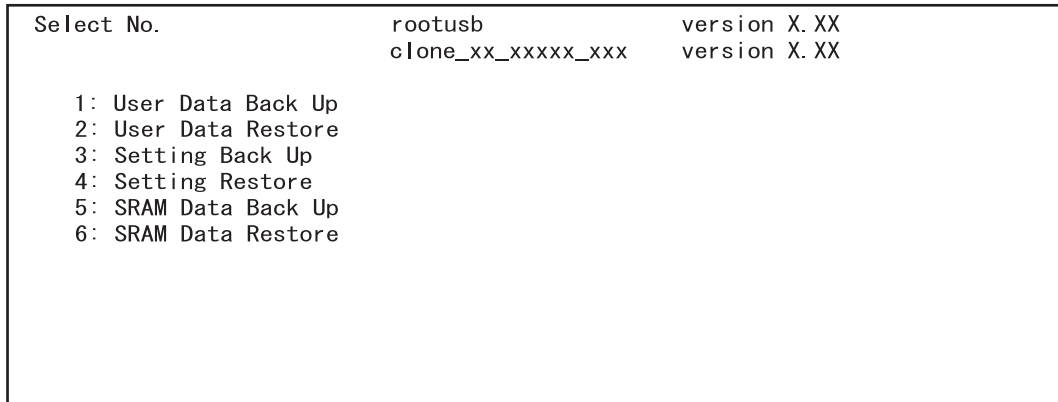
Fig. 9-13

Notes:
• After the item is selected with the digital keys, displaying the next menu may take a long time.
• When "Disable" is set for the [Data Cloning Function] in TopAccess, the following screen is displayed. Contact and ask the administrator to change the setting on TopAccess.

```
The cloning tool cannot be started for permission.
Please ask your customer administrator to set the cloning
permission of the TopAccess setting.
```

Fig. 9-14

(21) Press the [5] button.
The screen to select the SRAM data backup item is displayed. In this screen, the item to be backed up is shown after the mark "*". (The item is not selected in the screen by default.)

```
SRAM Data Back Up

    1. SRAM
```

Fig. 9-15

(22) Select the item to be backed up with the digital keys.
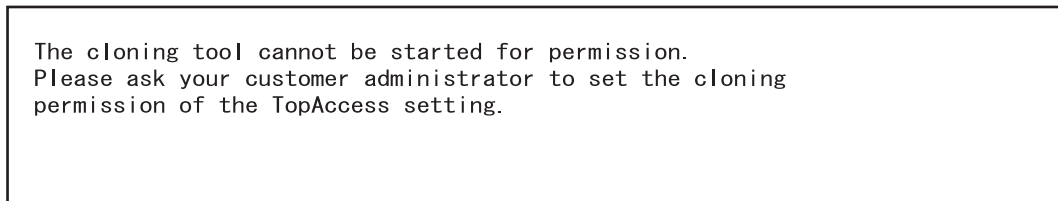The mark "*" is shown on the selected item. The mark "*" can be deleted or added each time the corresponding digital key is pressed.
- To back up the data individually, select the following item.
    <Backing up SRAM Data>
        Select "1. SRAM".

Note:
Be sure to perform the backup/restore of the SRAM data in the same equipment and the same ROM version.

(The following screens are given as an example of when SRAM data are backed up.)

(23) Press the [Start] button.
The backup starts and the backing up status is displayed on the LCD screen.

```
SRAM Data Back Up

 *1. SRAM                                .........


```

Fig. 9-16

(24) "Back Up Completed" is displayed on the LCD screen when the backup has been properly completed.

```
SRAM Data Back Up              Back Up Completed

 *1. SRAM                       .........Completed


```
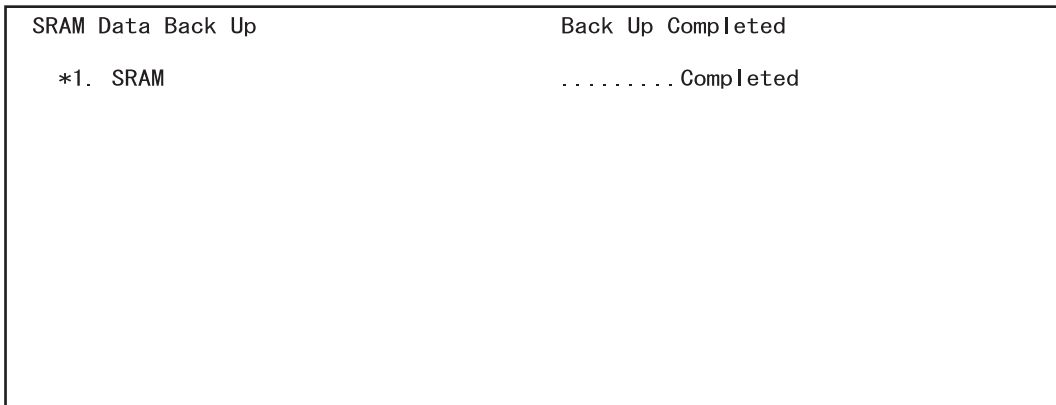
Fig. 9-17

(25) Turn the power OFF and remove the USB storage device.

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DATA CLONING with USB STORAGE DEVICE

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[B] Data cloning procedure (Restore)

Important:
- The file system for the USB storage device should be in the FAT format. Note that any device formatted in FAT32 or NTFS will not be operated. Its file system can be confirmed by opening the properties of the device from Windows Explorer.
- Never turn the power of the equipment OFF during data cloning, or the data could be damaged and the operation not carried out properly.
- Be sure to perform the backup/restore of the SRAM data in the same equipment and the same ROM version. If not, a problem such as duplication of the serial number occurs.

(1) Shut down the equipment.

(2) Connect the USB storage device to the USB connector (host) on the SYS board.

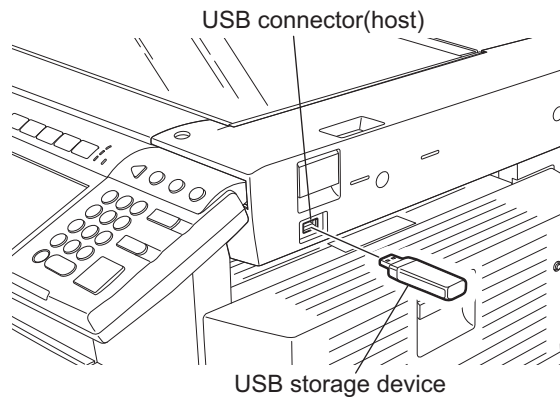USB connector(host)

USB storage device

Fig. 9-18

Note:
The equipment has 3 USB connectors (host): 1 is located under the power switch and 2 located right rear side of the equipment. When cloning data, connect the USB storage device to either of 3 USB connectors (host). Data cloning cannot be performed with multiple USB storage devices connected simultaneously.

(3) Turn the power ON while pressing the [5] and [9] button simultaneously.
The screen to select the backup/restore items is displayed.

```
Select No.                 rootusb              version X.XX
                           clone_xx_xxxxx_xxx   version X.XX


    1: User Data Back Up
    2: User Data Restore
    3: Setting Back Up
    4: Setting Restore
    5: SRAM Data Back Up
    6: SRAM Data Restore
```
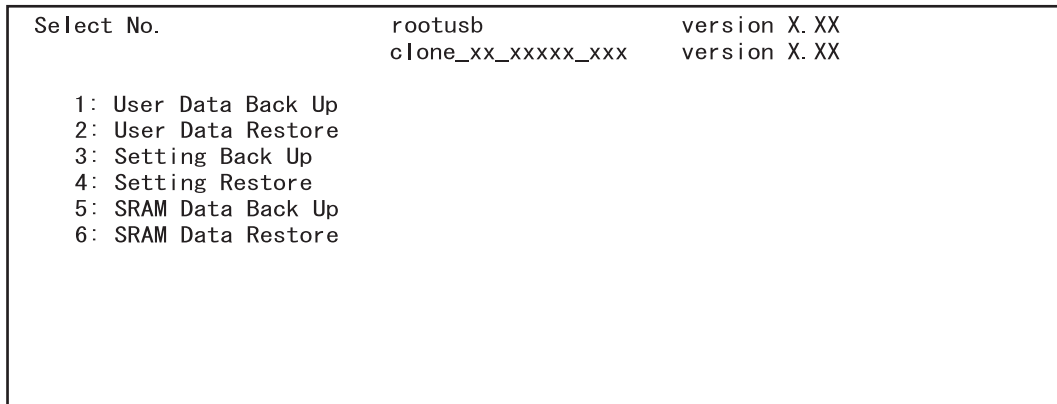
Fig. 9-19

Note:
When "Disable" is set for the [Data Cloning Function] in TopAccess, the following screen is displayed. Contact and ask the administrator to change the setting on TopAccess.

```
The cloning tool cannot be started for permission.
Please ask your customer administrator to set the cloning
permission of the TopAccess setting.
```
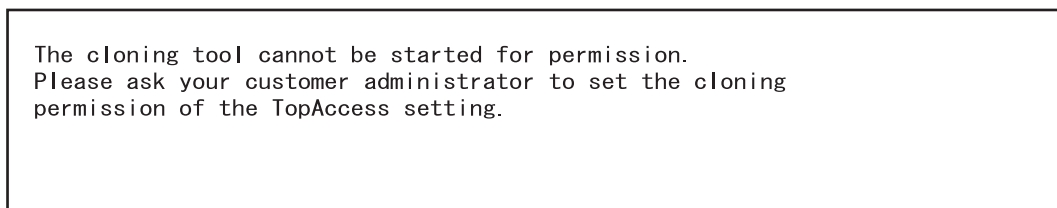
Fig. 9-20

(4) Select the items to be performed with the digital keys.
- In case of restore, select the following items.
  <Restoring User data>
    Select "2: User Data Restore".
  <Restoring Setting item>
    Select "4: Setting Restore".
  <Restoring SRAM data>
    Select "6: SRAM Data Restore".

Note:
After the item is selected with the digital keys, displaying the next menu may take a long time.

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(5) Press the [2] button.
The screen to select the user data restore item is displayed. In this screen, the items to be restored are shown after the mark "*". (The items "4", "5" and "6" are selected in the screen by default.)

```
User Data Restore

  1: Address Book
  2: Mail Box
  3: Template
 *4: Combined
 *5: Department Code
 *6: User Info
```
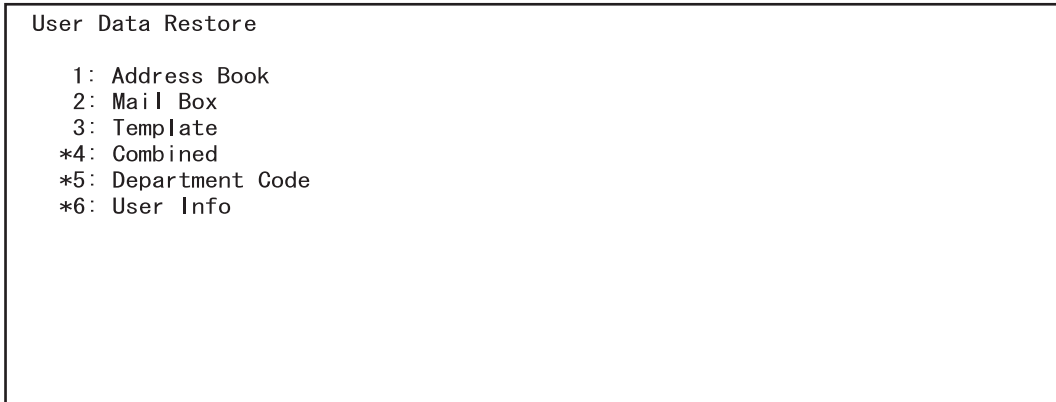
Fig. 9-21

(6) Select the items to be restored with the digital keys.
The mark "*" is shown on the selected item. The mark "*" can be deleted or added each time the corresponding digital key is pressed.
- To restore the data in a batch, select "4", "5" or "6". (Selecting "4" performs "1", "2" and "3" together.)
- To restore the data individually, select the following items.
  Be sure to select the same item as the one backed up individually.
  <Restoring Address book>
      Select "1: Address Book" only.
  <Restoring Mail box>
      Select "2: Mail Box" only.
  <Restoring Template>
      Select "3: Template" only.
  <Restoring 1: Address Book, 2: Mail Box and 3: Template in a batch>
      Select "4: Combined" only.
  <Restoring Department management>
      Select "5: Department Code" only.
  <Restoring User management information>
      Select "6: User Info" only.

  E.g.:
  In case of restoring the department management and user management information

```
User Data Restore

  1: Address Book
  2: Mail Box
  3: Template
  4: Combined
 *5: Department Code
 *6: User Info
```

Fig. 9-22

(The following screens are given as an example of when all items are restored.)
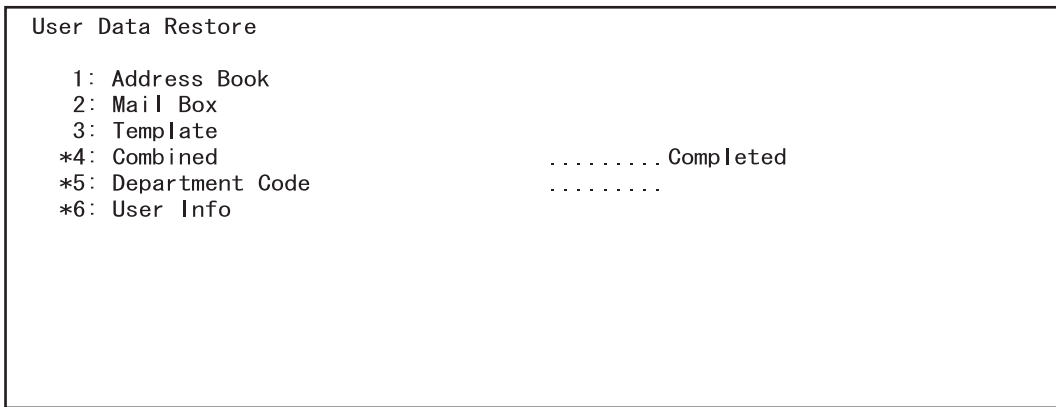
(7) Press the [Start] button.
The restore starts and the restoring status is displayed on the LCD screen.

```
User Data Restore

   1: Address Book
   2: Mail Box
   3: Template
  *4: Combined                      .........Completed
  *5: Department Code               .........
  *6: User Info
```

Fig. 9-23

(8) "Restore Completed" is displayed on the LCD screen when the restore has been properly completed.

```
User Data Restore                  Restore Completed

   1: Address Book
   2: Mail Box
   3: Template
  *4: Combined                      .........Completed
  *5: Department Code               .........Completed
  *6: User Info                     .........Completed
```
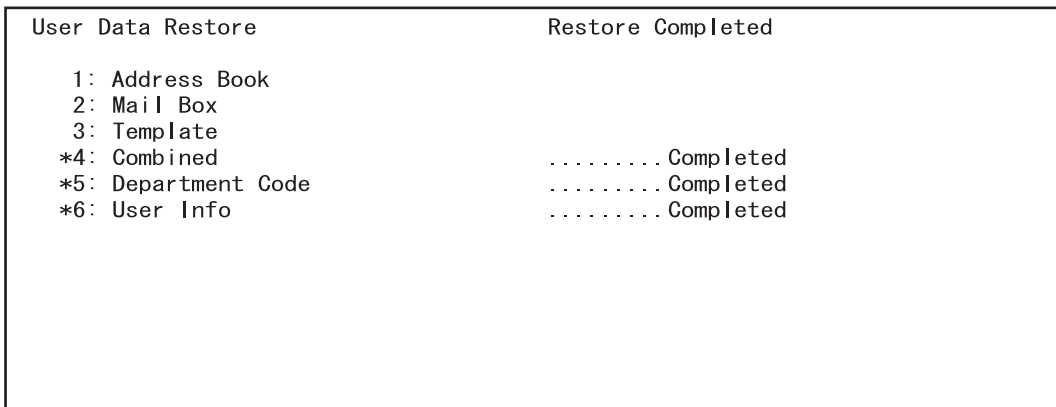
Fig. 9-24

(9) Turn the power OFF and remove the USB storage device.

(10) Clear the counter (in case of restoring "Department Code" and "User Info").
Since the counter values are also copied, clear all of them. However, the total counter is not copied.
<Procedure>
Press the buttons as follows: [USER FUNCTION] →[ADMIN] →Enter the password →
[COUNTER] →[DEPARTMENT SETTING] →Enter the password →[RESET ALL COUNTERS]
*   Enable the department management when the [RESET ALL COUNTERS] button is set to be disabled.

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DATA CLONING with USB STORAGE DEVICE

<Setting Restore>

(11) Connect the USB storage device to the USB connector (host) on the SYS board.

(12) Turn the power ON while pressing the [5] and [9] button simultaneously.
The screen to select the backup/restore items is displayed.

```
Select No.              rootusb              version X.XX
                        clone_xx_xxxxx_xxx   version X.XX


    1: User Data Back Up
    2: User Data Restore
    3: Setting Back Up
    4: Setting Restore
    5: SRAM Data Back Up
    6: SRAM Data Restore
```

Fig. 9-25

Notes:
- After the item is selected with the digital keys, displaying the next menu may take a long time.
- When "Disable" is set for the [Data Cloning Function] in TopAccess, the following screen is displayed. Contact and ask the administrator to change the setting on TopAccess.

```
The cloning tool cannot be started for permission.
Please ask your customer administrator to set the cloning
permission of the TopAccess setting.
```

Fig. 9-26

(13) Press the [4] button.
The screen to select the setting restore item is displayed. In this screen, the items to be restored are shown after the mark "*". (No items are selected in the screen by default.)

```
Setting Restore

 AdminSetting
    1: Network/Print Service
    2: SaveAsFile/Email/InternetFAX
    3: Notification
    4: Directory Service
 Setting for Option
    5: FAX Kit
    6: WirelessLAN/Bluetooth Kit
```

Fig. 9-27

(14) Select the items to be restored with the digital keys.
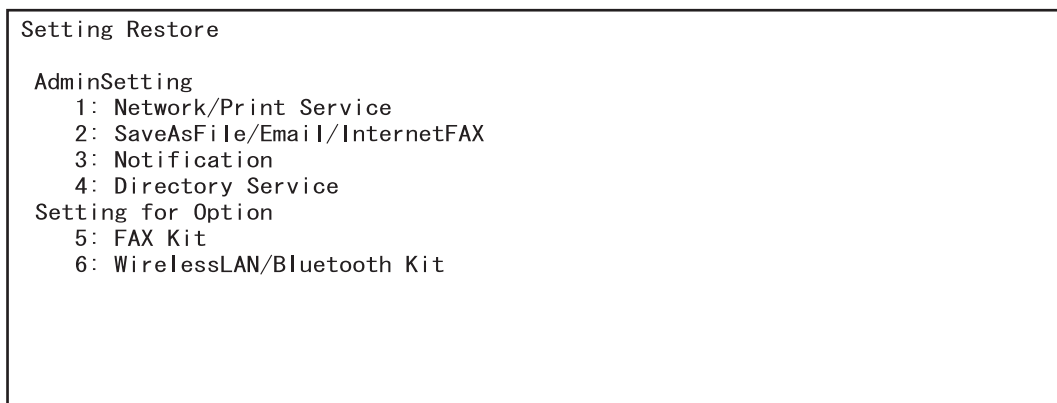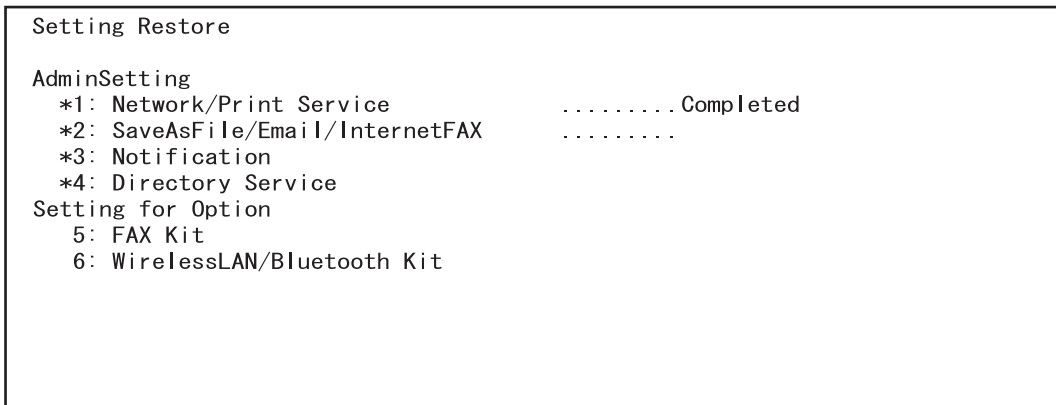The mark "*" is shown on the selected item. The mark "*" can be deleted or added each time the corresponding digital key is pressed.
  • To restore the data individually, select the following items.
    <Restoring TopAccess: Network/Print Service>
        Select "1: Network/Print Service" only.
    <Restoring TopAccess: SaveAsFile/Email/InternetFAX>
        Select "2: SaveAsFile/Email/InternetFAX" only.
    <Restoring TopAccess: Notification >
        Select "3: Notification" only.
    <Restoring TopAccess: Directory Service>
        Select "4: Directory Service" only.
    <Restoring Option: Fax setting>
        Select "5: FAX Kit" only.
    <Restoring Option: WirelessLAN/Bluetooth setting>
        Select "6: WirelessLAN/Bluetooth Kit" only.

Note:
Be sure to restore the same option items in the same condition as when the option items were backed up.

(The following screens are given as an example of when all TopAccess items are restored.)

(15) Press the [Start] button.
The restore starts and the restoring status is displayed on the LCD screen.

```
Setting Restore

AdminSetting
  *1: Network/Print Service          .........Completed
  *2: SaveAsFile/Email/InternetFAX   .........
  *3: Notification
  *4: Directory Service
Setting for Option
   5: FAX Kit
   6: WirelessLAN/Bluetooth Kit
```

Fig. 9-28

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DATA CLONING with USB STORAGE DEVICE

9

(16) "Restore Completed" is displayed on the LCD screen when the restore has been properly completed.

```
Setting Restore                    Restore Completed

AdminSetting
  *1: Network/Print Service        .........Completed
  *2: SaveAsFile/Email/InternetFAX .........Completed
  *3: Notification                 .........Completed
  *4: Directory Service            .........Completed
Setting for Option
   5: FAX Kit
   6: WirelessLAN/Bluetooth Kit
```

Fig. 9-29

(17) Turn the power OFF and remove the USB storage device.

<SRAM Data Restore>

(18) Connect the USB storage device to the USB connector (host) on the SYS board.

(19) Turn the power ON while pressing the [5] and [9] button simultaneously.
The screen to select the backup/restore items is displayed.

```
Select No.                    rootusb              version X.XX
                              clone_xx_xxxxx_xxx   version X.XX

    1: User Data Back Up
    2: User Data Restore
    3: Setting Back Up
    4: Setting Restore
    5: SRAM Data Back Up
    6: SRAM Data Restore
```
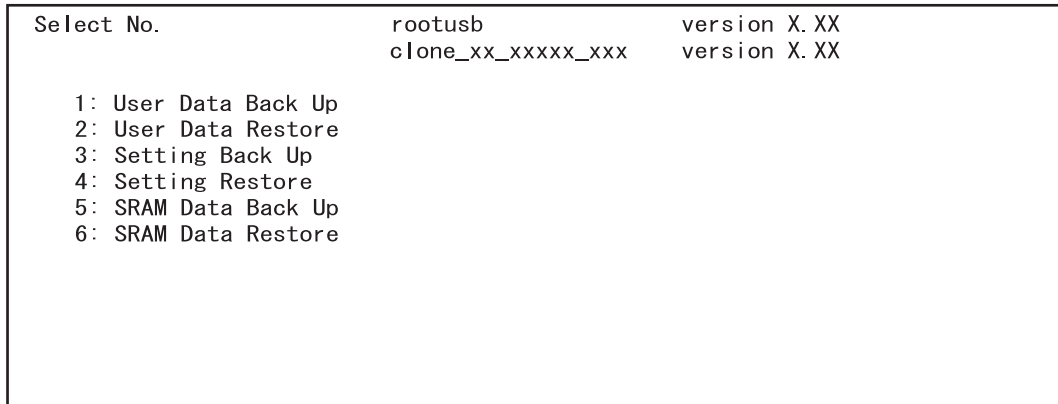
Fig. 9-30

Notes:
- After the item is selected with the digital keys, displaying the next menu may take a long time.
- When "Disable" is set for the [Data Cloning Function] in TopAccess, the following screen is displayed. Contact and ask the administrator to change the setting on TopAccess.

```
The cloning tool cannot be started for permission.
Please ask your customer administrator to set the cloning
permission of the TopAccess setting.
```

Fig. 9-31

(20) Press the [6] button.
The screen to select the SRAM data restore item is displayed. In this screen, the item to be restored is shown after the mark "*". (The item is not selected in the screen by default.)

```
SRAM Data Restore

    1. SRAM
```

Fig. 9-32

9

e-STUDIO2500c/3500c/3510c
DATA CLONING with USB STORAGE DEVICE

07/06

(21) Select the item to be restored with the digital keys.
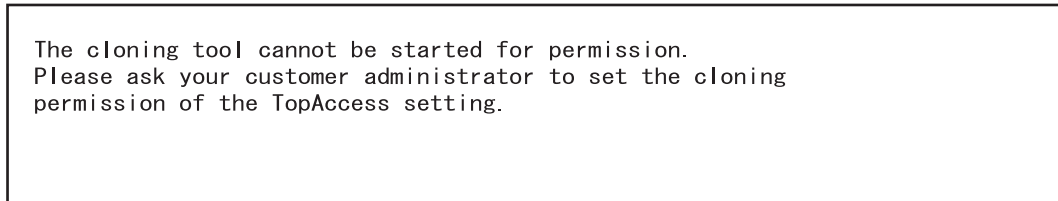The mark "*" is shown on the selected item. The mark "*" can be deleted or added each time the corresponding digital key is pressed.
- To restore the data individually, select the following item.
  <Restoring SRAM Data>
    Select "1. SRAM".

Note:
Be sure to perform the backup/restore of the SRAM data in the same equipment and the same ROM version.

(The following screens are given as an example of when SRAM data are restored.)

(22) Press the [Start] button.
The restore starts and the restoring status is displayed on the LCD screen.

```
SRAM Data Restore

 *1.  SRAM                                .........
```
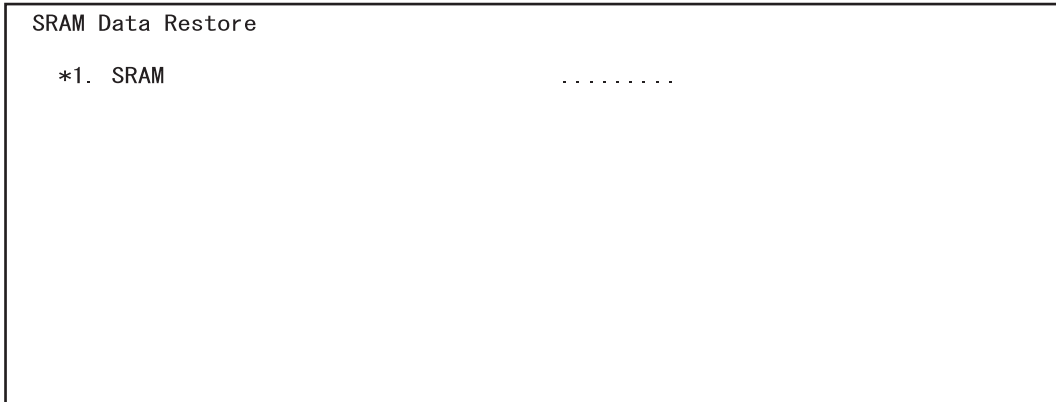
Fig. 9-33

(23) "Restore Completed" is displayed on the LCD screen when the restore has been properly completed.

```
SRAM Data Restore                  Restore Completed

 *1.  SRAM                          .........Completed
```
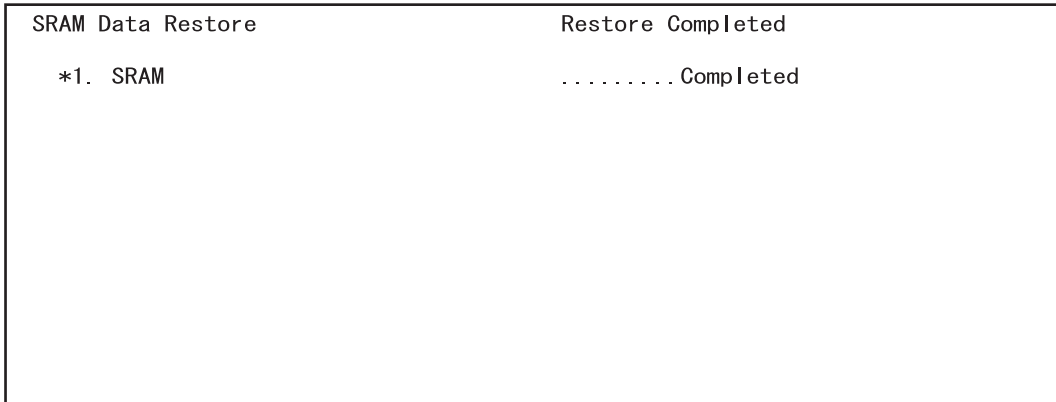
Fig. 9-34

(24) Turn the power OFF and remove the USB storage device.

[C] Confirmation of the error

"Back Up ERROR X" (X: Error number) is displayed at the top of the LCD screen when the data have not been properly backed up / restored. In this case, turn the power OFF and then check the following items. After confirming and solving the problem, back up / restore the data again from the beginning.

- Does the USB storage device meet the conditions being used for this cloning?
- Is the updated program file written on the USB storage device properly?
- Is the USB storage device installed properly?
- Is the USB storage device or the equipment damaged?

```
User Data Backup                    Back Up ERROR X

  1: Address Book
  2: Mail Box
  3: Template
 *4: Combined                       .........ERROR
 *5: Department Code
 *6: User Info
```
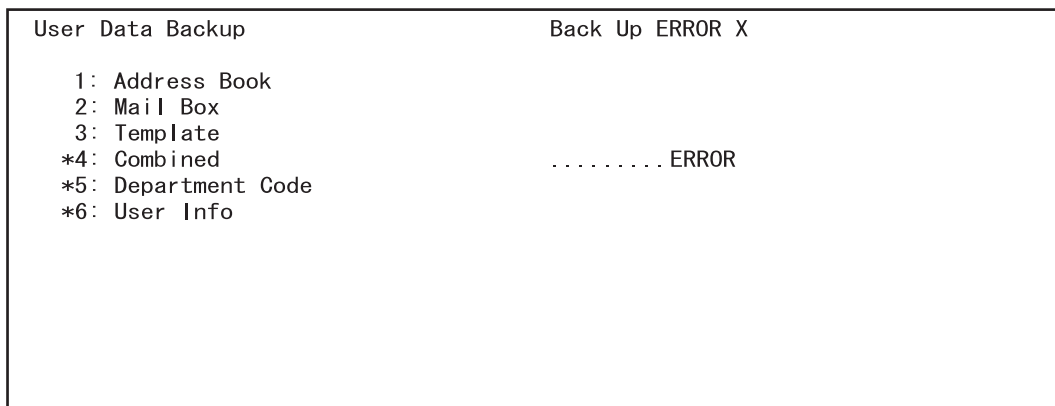
Fig. 9-35

Error number	Error content
ERROR 1	Copy error
ERROR 2	I/F error
ERROR 3	USB memory full error
ERROR 4	Working folder error
ERROR 5	File not found error
ERROR 6	Security error
ERROR 7	Checksum error
ERROR 8	Model check error
ERROR 9	Version check error
ERROR 10	Destination check error
ERROR 11	Serial number check error

9

e-STUDIO2500c/3500c/3510c
DATA CLONING with USB STORAGE DEVICE

WWW.SERVICE-MANUAL.NET

[D] Backup file

Backed up data files are encrypted.

<User data file>

The folder "user_data" is created in the root directory and the following files are stored in it.

Data item	File name
Address book	BACKUP_ADDR.sct
Mailbox	BACKUP_MBOX.sct
Template	BACKUP_TEMP.sct
Back up the Address book, Mailbox and Template in a batch	BACKUP_ALL.sct
Department management information	BACKUP_Department.sct
User management information	BACKUP_User.sct

<Setting data file>

The folder "setting_data" is created in the root directory and the following files are stored in it.

Data item	File name
Network / Print service	network.sct
SaveAsFile / Email / InternetFAX	scan.sct
Notification setting	notice.sct
Directory Service	ldap.sct
FAX setting	fax.sct
Wireless LAN setting / Bluetooth setting	wl.sct, bl.sct

<SRAM data file>

The folder "sram_data" is created in the root directory and the following file is stored in it.

Data item	File name
SRAM	sram.sct

*   In addition to the backed up data, the following files are created in each folder.

Back up item	File name
User data	user_data.txt
Setting item data	setting_data.txt
SRAM data	sram_data.txt

<Contents of file>


```
Version: VTD08.100 J
Serial Number: 0123456789
Date: MON SEP 26 18:34:40 2005
```

- File format (user_data.txt, setting_data.txt, sram_data.txt: all in common)
    Line 1: Version
    Line 2: Serial number
    Line 3: Date

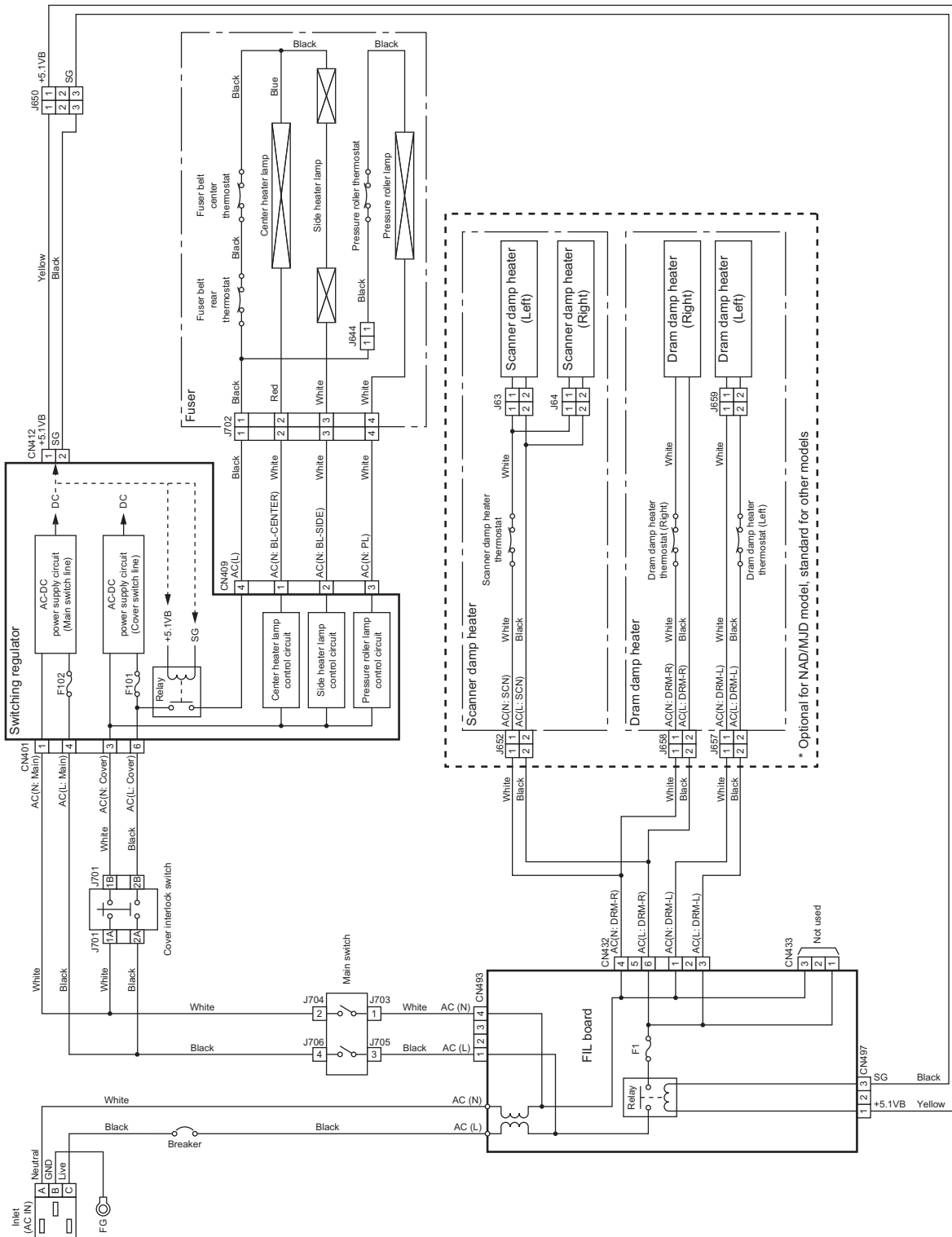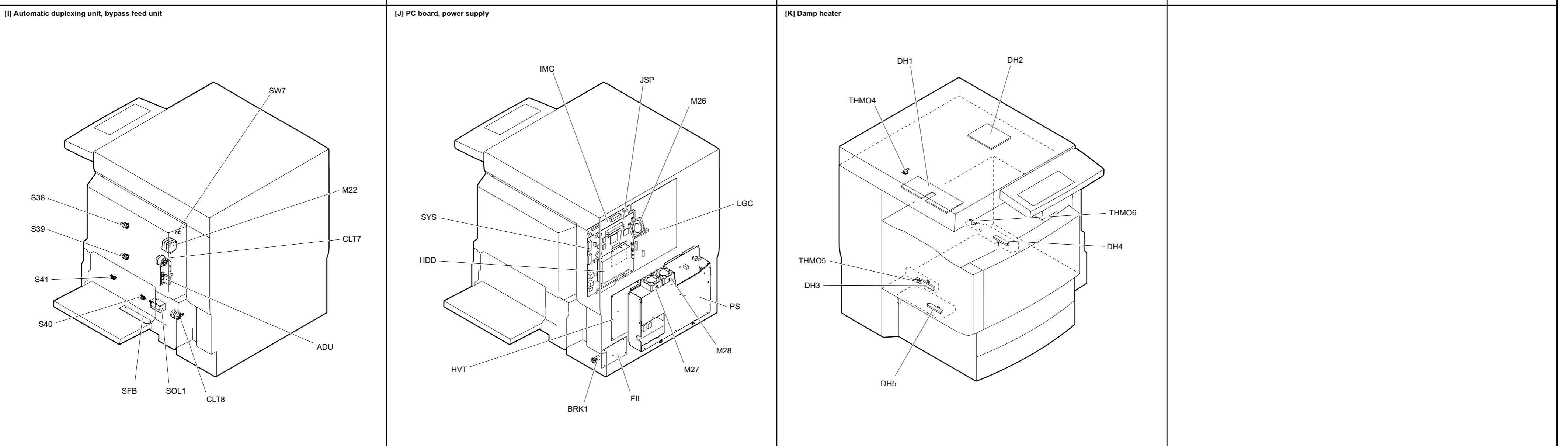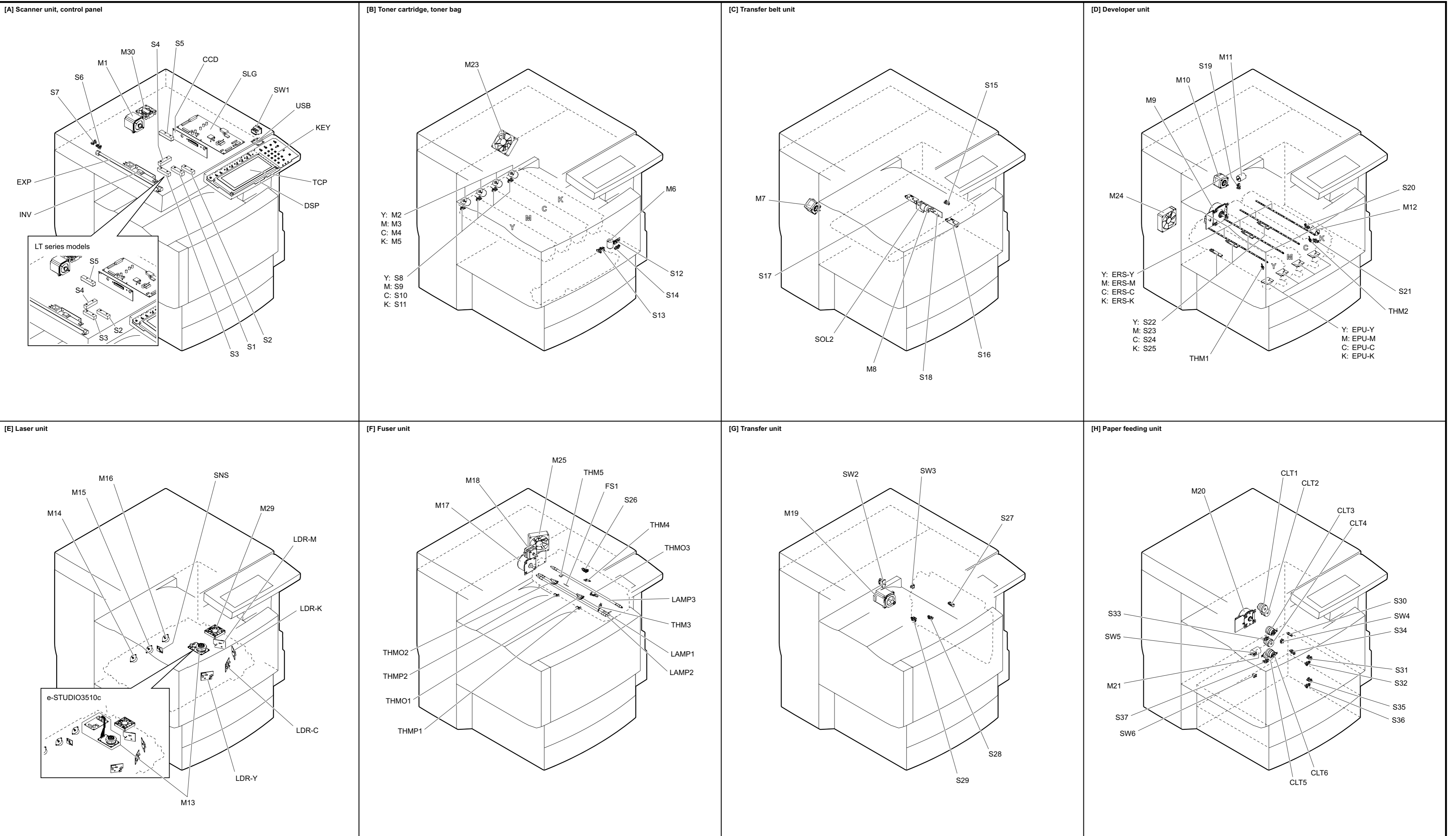# 10. WIRE HARNESS CONNECTION DIAGRAMS

10.1 AC Wire Harness

Fig. 10-1

e-STUDIO2500c/3500c/3510c
WIRE HARNESS CONNECTION DIAGRAMS

[A] Scanner unit, control panel | [B] Toner cartridge, toner bag | [C] Transfer belt unit | [D] Developer unit | [E] Laser unit | [F] Fuser unit | [G] Transfer unit | [H] Paper feeding unit | [I] Automatic duplexing unit, bypass feed unit | [J] PC board, power supply | [K] Damp heater

Motors

Symbol	Name	Figure	Wire harness location
M1	SCAN-MOT / Scan motor	[A]	4-H
M2	TNR-MOT-Y / Toner motor-Y	[B]	6-A
M3	TNR-MOT-M / Toner motor-M	[B]	6-B
M4	TNR-MOT-C / Toner motor-C	[B]	6-B
M5	TNR-MOT-K / Toner motor-K	[B]	6-B
M6	USD-TNR-MOT / Used toner motor	[B]	7-D
M7	TBU-MOT / Transfer belt motor	[C]	7-C
M8	TR1-CAM-MOT / 1st transfer roller cam motor	[C]	7-C
M9	DEV-MOT / Developer unit motor	[D]	7-E
M10	DRM-MOT / Drum motor	[D]	6-C
M11	DRM-SW-MOT / Drum switching motor	[D]	7-E
M12	SHUT-MOT / Shutter motor	[D]	5-A
M13	POL-MOT / Polygonal motor	[E]	5-C / 5-D
M14	MIR-MOT-M / Mirror motor-M	[E]	5-C
M15	MIR-MOT-C / Mirror motor-C	[E]	5-C
M16	MIR-MOT-K / Mirror motor-K	[E]	5-D
M17	FUS-MOT / Fuser motor	[F]	6-E
M18	EXIT-MOT / Exit motor	[F]	6-C
M19	RGST-MOT / Registration motor	[G]	7-E
M20	FEED/TRNS-MOT / Feed/transport motor	[H]	7-E
M21	CST-TRY-MOT / Tray-up motor	[H]	8-E
M22	ADU-MOT / ADU motor	[I]	8-A
M23	INTRNL-FAN-MOT / Internal cooling fan	[B]	6-A
M24	OZN-FAN-MOT / Ozone exhaust fan	[D]	7-C
M25	FUSE/EXIT-FAN-MOT / Fuser/exit section cooling fan	[F]	6-E
M26	SYS-FAN-MOT / SYS board cooling fan	[J]	2-G
M27	PS-FAN-MOT-1 / Switching regulator cooling fan-1	[J]	5-F
M28	PS-FAN-MOT-2 / Switching regulator cooling fan-2	[J]	5-F
M29	LSU-FAN-MOT / Laser unit cooling fan	[E]	7-D
M30	SCAN-FAN-MOT / Scanner unit cooling fan	[A]	3-E

Sensors and Switches

Symbol	Name	Figure	Wire harness location
S1-5	APS1-3, APS-C, APS-R / Automatic original detection sensor / * S1: only for A4 series models	[A]	3-F / 3-E
S6	HOME-SNR / Carriage home position sensor	[A]	3-E
S7	PLTN-SNR / Platen sensor	[A]	3-E
S8	TNR-SNR-Y / Toner cartridge detection sensor-Y	[B]	6-B
S9	TNR-SNR-M / Toner cartridge detection sensor-M	[B]	6-B
S10	TNR-SNR-C / Toner cartridge detection sensor-C	[B]	6-B
S11	TNR-SNR-K / Toner cartridge detection sensor-K	[B]	6-B
S12	TEMP/HUMI-SNR / Temperature/humidity sensor	[B]	7-D
S13	USD-TNR-FLL-SNR / Toner bag full detection sensor	[B]	7-D
S14	USD-TNR-LCK-SNR / Used toner motor lock detection sensor	[B]	7-D
S15	TR1-SNR / 1st transfer roller status detection sensor	[C]	7-D
S16	IMG-POS-SNR-F / Image position aligning sensor (Front)	[C]	7-B
S17	IMG-POS-SNR-R / Image position aligning sensor (Rear)	[C]	7-B
S18	TNR-LVL-SNR / Image quality sensor	[C]	7-B
S19	DRM-SW-SNR / Drum switching detection sensor	[D]	7-E
S20	SHUT-SNR / Shutter status detection sensor	[D]	5-B
S21	CH-CLN-SNR / Needle electrode cleaner detection sensor	[D]	5-B
S22	ATTNR-SNR-Y / Auto-toner sensor-Y	[D]	6-G
S23	ATTNR-SNR-M / Auto-toner sensor-M	[D]	6-G
S24	ATTNR-SNR-C / Auto-toner sensor-C	[D]	6-F
S25	ATTNR-SNR-K / Auto-toner sensor-K	[D]	6-H
S26	EXIT-SNR / Exit sensor	[F]	6-D
S27	CLNG-SNR / Paper clinging detection sensor	[G]	7-B
S28	RGST-SNR / Registration sensor	[G]	7-C
S29	TR2-SNR / 2nd transfer roller position detection sensor	[G]	7-B
S30	CST1-FEED-SNR / 1st drawer feed sensor	[H]	7-C
S31	CST1-TRY-SNR / 1st drawer tray-up sensor	[H]	8-C
S32	CST1-EMP-SNR / 1st drawer empty sensor	[H]	8-C
S33	CST1-NEMP-SNR / 1st drawer paper stock sensor	[H]	8-D
S34	CST2-FEED-SNR / 2nd drawer feed sensor	[H]	8-E
S35	CST2-TRY-SNR / 2nd drawer tray-up sensor	[H]	8-D
S36	CST2-EMP-SNR / 2nd drawer empty sensor	[H]	8-D
S37	CST2-NEMP-SNR / 2nd drawer paper stock sensor	[H]	8-E
S38	ADU-U-SNR / ADU entrance sensor	[I]	8-A
S39	ADU-L-SNR / ADU exit sensor	[I]	8-A
S40	SFB-SNR / Bypass paper sensor	[I]	8-B
S41	SFB-FEED-SNR / Bypass feed sensor	[I]	8-C

PC boards

Symbol	Name	Figure	Wire harness location
SW1	MAIN-SW / Main switch	[A]	7-C
SW2	COV-INTLCK-SW / Cover interlock switch	[G]	AC Wire Harness
SW3	TR-COV-SW / Transfer cover switch	[G]	8-B
SW4	SIDE-COV-SW / Side cover switch	[H]	8-E
SW5	CST1-SW / 1st drawer detection switch	[H]	8-D
SW6	CST2-SW / 2nd drawer detection switch	[H]	8-D
SW7	ADU-SET-SW / ADU opening/closing switch	[I]	8-D

Electromagnetic spring clutches

Symbol	Name	Figure	Wire harness location
CLT1	CST1-TR-H-CLT / 1st drawer transport clutch (High speed)	[H]	7-C
CLT2	CST1-TR-L-CLT / 1st drawer transport clutch (Low speed)	[H]	7-C
CLT3	CST1-FEED-CLT / 1st drawer feed clutch	[H]	8-C
CLT4	CST2-TR-L-CLT / 2nd drawer transport clutch (Low speed)	[H]	8-D
CLT5	CST2-TR-H-CLT / 2nd drawer transport clutch (High speed)	[H]	8-D
CLT6	CST2-FEED-CLT / 2nd drawer feed clutch	[H]	8-E
CLT7	ADU-CLT / ADU clutch	[I]	8-B
CLT8	SFB-FEED-CLT / Bypass feed clutch	[I]	8-B

Solenoids

Symbol	Name	Figure	Wire harness location
SOL1	SFB-SOL / Bypass pickup solenoid	[I]	8-C
SOL2	SNR-SHUT-SOL / Sensor shutter solenoid	[C]	7-B

PC boards

Symbol	Name	Figure	Wire harness location
CCD	PWA-F-CCD / CCD driving PC board (CCD board)	[A]	4-F
SLG	PWA-F-SLG / Scanning section control PC board (SLG board)	[A]	4-G
DSP	PWA-F-DSP / Display PC board (DSP board)	[A]	1-B
KEY	PWA-F-KEY / Key PC board (KEY board)	[A]	1-B
USB	PWA-F-USB / USB PC board (USB board)	[A]	2-F
EPU-Y	PWA-F-EPU-Y / EPU PC board-Y (EPU-Y board)	[D]	7-G
EPU-M	PWA-F-EPU-M / EPU PC board-M (EPU-M board)	[D]	7-G
EPU-C	PWA-F-EPU-C / EPU PC board-C (EPU-C board)	[D]	7-F
EPU-K	PWA-F-EPU-K / EPU PC board-K (EPU-K board)	[D]	7-H
LDR-Y	PWA-F-LDR-Y / Laser driving PC board-Y (LDR-Y board)	[E]	5-F
LDR-M	PWA-F-LDR-M / Laser driving PC board-M (LDR-M board)	[E]	5-D
LDR-C	PWA-F-LDR-C / Laser driving PC board-C (LDR-C board)	[E]	5-E
LDR-K	PWA-F-LDR-K / Laser driving PC board-K (LDR-K board)	[E]	5-E
SNS	PWA-F-SNS / H-sync detection PC board (SNS board)	[E]	5-D
ADU	PWA-F-ADU / ADU control PC board (ADU board)	[I]	8-A
SFB	PWA-F-SFB / Paper width detection PC board (SFB board)	[I]	8-A
SYS	PWA-F-SYS / System control PC board (SYS board)	[J]	3-A
JSP	PWA-F-JSP / CODEC PC board (JSP board)	[J]	2-B
LGC	PWA-F-LGC / Logic PC board (LGC board)	[J]	6-A
IMG	PWA-F-IMG / Image processing PC board (IMG board)	[J]	4-D
FIL	PWA-F-FIL / Filter PC board (FIL board)	[J]	3-G

Lamps and heaters

Symbol	Name	Figure	Wire harness location
EXP	LP-EXPO / Exposure lamp	[A]	3-H
ERS-Y	LP-ERS-Y / Discharge LED-Y	[D]	5-B
ERS-M	LP-ERS-M / Discharge LED-M	[D]	5-B
ERS-C	LP-ERS-C / Discharge LED-C	[D]	5-B
ERS-K	LP-ERS-K / Discharge LED-K	[D]	5-B
LAMP1	LP-HTR-C / Center heater lamp	[F]	AC Wire Harness
LAMP2	LP-HTR-S / Side heater lamp	[F]	AC Wire Harness
LAMP3	LP-PR / Pressure roller lamp	[F]	AC Wire Harness
DH1	SCN-DH-L / Scanner damp heater (Left)	[K]	AC Wire Harness
DH2	SCN-DH-R / Scanner damp heater (Right)	[K]	AC Wire Harness
DH3	DRM-DH-L / Drum damp heater (Left)	[K]	AC Wire Harness
DH4	DRM-DH-R / Drum damp heater (Right)	[K]	AC Wire Harness
DH5	CST-DH-R / Drawer damp heater / * Only for JPD models	[K]	AC Wire Harness

Thermistors and thermostats

Symbol	Name	Figure	Wire harness location
THM1	THM5-DRM-Y / Drum thermistor-Y	[D]	6-H
THM2	THMS-DRM-K / Drum thermistor-K	[D]	6-H
THM3	THM5-FBLT-F / Fuser belt front thermistor	[F]	6-D / AC Wire harness
THM4	THMS-PR-C / Pressure roller center thermistor	[F]	6-D / AC Wire harness
THM5	THMS-PR-R / Pressure roller rear thermistor	[F]	AC Wire harness
THMP1	THMP-FBLT-C / Fuser belt center thermopile	[F]	6-D / AC Wire harness
THMP2	THMP-FBLT-R / Fuser belt rear thermopile	[F]	6-E / AC Wire harness
THMO1	THERMO-FBLT-C / Fuser belt center thermostat	[F]	AC Wire Harness
THMO2	THERMO-FBLT-S / Fuser belt rear thermostat (Left)	[F]	AC Wire Harness
THMO3	THERMO-PR / Pressure roller thermostat	[F]	AC Wire Harness
THMO4	THERMO-SCN-DH / Scanner damp heater thermostat	[K]	AC Wire Harness
THMO5	THERMO-DRM-DH-L / Drum damp heater thermostat (Left)	[K]	AC Wire Harness
THMO6	THERMO-DRM-DH-R / Drum damp heater thermostat (Right)	[K]	AC Wire Harness

Transformer

Symbol	Name	Figure	Wire harness location
HVT	PS-HVT / High-voltage transformer	[J]	8-G

Others

Symbol	Name	Figure	Wire harness location
INV	INV / Lamp inverter board	[A]	3-H
TCP	TCP / Touch panel	[A]	1-A
FS1	FUSE-FUS / Fuser unit fuse	[F]	6-D
HDD	HDD / Hard disk	[J]	3-E
PS	PS-ACC / Switching regulator	[J]	4-H
BRK	BRK / Breaker	[J]	AC Wire harness

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