

SERVICE HANDBOOK

MULTIFUNCTIONAL DIGITAL SYSTEMS e-Studio520/600/720/850 e-Studio523/603/723/853



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- The official name of Windows 95 is Microsoft Windows 95 Operating System.
- The official name of Windows 98 is Microsoft Windows 98 Operating System.
- The official name of Windows Me is Microsoft Windows Millennium Edition Operating System.
- The official name of Windows 2000 is Microsoft Windows 2000 Operating System.
- The official name of Windows XP is Microsoft Windows XP Operating System.
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GENERAL PRECAUTIONS REGARDING THE SERVICE FOR e-STUDIO520/523/600/603/720/723/850/853

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 move it by the casters while lifting the stoppers.

The equipment is quite heavy and weighs approximately 210 kg (463 lb), therefore pay full attention when handling it.

- Be sure not to hold the movable parts or units (e.g. the RADF) when transporting the equipment.
- Be sure to use a dedicated outlet with AC 115 V / 16 A, 127 V / 16 A, 220 V or 220-240 V / 9 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 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, IH control circuit, 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, batteries, 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.

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 des gebrauchten Batterien und IC-RAMs (inclusive der Lithium-Batterie) nach diesem Handbuch.

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1. SPECIFICATIONS/ACCESSORIES/OPTIONS/ SUPPLIES

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1. SPECIFICATIONS/ACCESSORIES/OPTIONS/SUPPLIES

Specifications 1.1

Destinations (machine versions) of e-STUDIO520/523/600/603/720/723/850/853

The machine versions of e-STUDIO600/720/850 are as follows :

TNA / NAD: North America / Central and South America

TWD: Taiwan

SAD: Saudi Arabia

ASD: Asia / Central and South America / Other

ASU: Asia / Other

ARD: Argentina

AUD / DAU: Australia

MJD / DMJ: Europe

CND: China KRD: Korea

The drawer configuration of each model differs depending on its destination (machine version). ٠

Destination (Machine version)	e-STUDIO520	e-STUDIO600	e-STUDIO720	e-STUDIO850
TNA	Tandem LCF	Tandem LCF	Tandem LCF	-
NAD	4 drawers	4 drawers	4 drawers	4 drawers
TWD	-	4 drawers	4 drawers	Tandem LCF
SAD	-	4 drawers	4 drawers	4 drawers
ASD	-	Tandem LCF	Tandem LCF	Tandem LCF
ASU	-	Tandem LCF	Tandem LCF	Tandem LCF
ARD	-	Tandem LCF	Tandem LCF	Tandem LCF
AUD	Tandem LCF	Tandem LCF	Tandem LCF	Tandem LCF
DAU	4 drawers	4 drawers	4 drawers	-
MJD	Tandem LCF	Tandem LCF	Tandem LCF	Tandem LCF
DMJ	4 drawers	4 drawers	4 drawers	-
CND	-	Tandem LCF	Tandem LCF	Tandem LCF
KRD	-	Tandem LCF	Tandem LCF	Tandem LCF

Destination (Machine version)	e-STUDIO523	e-STUDIO603	e-STUDIO723	e-STUDIO853
TNA	Tandem LCF	Tandem LCF	Tandem LCF	-
NAD	4 drawers	4 drawers	4 drawers	4 drawers
ARD	-	Tandem LCF	Tandem LCF	Tandem LCF
MJD	Tandem LCF	Tandem LCF	Tandem LCF	Tandem LCF
DMJ	4 drawers	4 drawers	4 drawers	-
CND	Tandem LCF	Tandem LCF	Tandem LCF	Tandem LCF

Tandem LCF: This means 2 drawers and a tandem LCF.

In this manual, a standard LCF is called the Tandem LCF (T-LCF), and MP-4004A/L is called the Option LCF (O-LCF).

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Accepted originals.....

Sheet, book and 3-dimensional object. The reversing automatic document feeder (RADF) only accepts paper which are not pasted or stapled. (Single-sided originals: 50 to 127 g/m² / 13 to 34 lb. Bond, Double-sided originals: 50 to 105 g/m² / 13 to 28 lb. Bond) Carbon paper are not acceptable either. Maximum size: A3/LD

• Copy speed (Copies/min.)

e-STUDIO520/523

Paper size		Drawer				Tandem	Bypass	s feed	Ontion
		1st	2nd	3rd (*1)	4th (*1)	LCF(*2)	Size specified	Size not specified	LCF(*3)
A4, B5, A5-R, LT,	Top side discharging	52	52	52	52	52	45	28	52
ST-R	Back side discharging	52	52	52	52	52	45	28	52
A4-R, B5-R, LT-R	Top side discharging	42	42	42	42	-	37	28	-
	Back side discharging	42	42	42	42	-	37	28	-
B4, FOLIO, LG,	Top side discharging	37	37	37	37	-	32	28	-
COMPUTER	Back side discharging	37	37	37	37	-	32	28	-
A3, LD	Top side discharging	33	33	33	33	-	28	28	-
	Back side discharging	31	31	31	31	-	28	28	-

e-STUDIO600/603

Paper size		Drawer				Tandem	Bypas	Ontion	
		1st	2nd	3rd (*1)	4th (*1)	LCF(*2)	Size specified	Size not specified	LCF(*3)
A4, B5, A5-R, LT,	Top side discharging	60	60	60	60	60	46	30	60
ST-R	Back side discharging	60	60	60	60	60	46	30	60
A4-R, B5-R, LT-R	Top side discharging	46	46	46	46	-	38	30	-
	Back side discharging	46	46	46	46	-	38	30	-
B4, FOLIO, LG,	Top side discharging	41	41	41	41	-	34	30	-
COMPUTER	Back side discharging	38	38	38	38	-	34	30	-
A3, LD	Top side discharging	36	36	36	36	-	30	30	-
	Back side discharging	32	32	32	32	-	30	30	-

e-STUDIO720/723

Paper size		Drawer				Tandem	Bypas	Ontion	
		1st	2nd	3rd (*1)	4th (*1)	LCF(*2)	Size specified	Size not specified	LCF(*3)
A4, B5, A5-R, LT,	Top side discharging	72	72	72	72	72	46	30	72
ST-R	Back side discharging	72	72	72	72	72	46	30	72
A4-R, B5-R, LT-R	Top side discharging	52	52	52	52	-	38	30	-
	Back side discharging	50	50	50	50	-	38	30	-
B4, FOLIO, LG,	Top side discharging	44	44	44	44	-	34	30	-
COMPUTER	Back side discharging	41	41	41	41	-	34	30	-
A3, LD	Top side discharging	37	37	37	37	-	30	30	-
	Back side discharging	34	34	34	34	-	30	30	-

e-STUDIO850/853

Paper size		Drawer				Tandem	Bypass	Ontion	
		1st	2nd	3rd (*1)	4th (*1)	LCF(*2)	Size specified	Size not specified	LCF(*3)
A4, B5, A5-R, LT,	Top side discharging	85	85	85	85	85	50	34	85
ST-R	Back side discharging	85	85	85	85	85	50	34	85
A4-R, B5-R, LT-R	Top side discharging	61	61	61	61	-	42	34	-
	Back side discharging	56	56	56	56	-	42	34	-
B4, FOLIO, LG,	Top side discharging	52	52	52	52	-	38	34	-
COMPUTER	Back side discharging	45	45	45	45	-	38	34	-
A3, LD	Top side discharging	43	43	43	43	-	34	34	-
	Back side discharging	37	37	37	37	-	34	34	-

*1 : The 3rd drawer and 4th drawer are standard equipments for NAD, SAD, DAU, DMJ and TWD (e-STUDIO600/720) versions.

*2 : The Tandem LCF is a standard equipment for TNA, ASD, ASU, ARD, AUD, MJD, CND, KRD and TWD (e-STUDIO850) versions. Only A4/LT can be used for the Tandem LCF.

*3 : Only A4, B5 and LT can be used for the Option LCF.

- * Each copy speed has been measured in the Continuous Copy Mode, using single-sided originals placed on the original glass manually.
- * Accuracy: Within ±2 sheets (Bypass feed) / Within ±1 sheet (Other paper sources)
- * A hyphen ("-") indicates that the combination is invalid for the subject paper source.
- * Values may vary depending on its use condition and environment.
- * When the RADF is used, each copy speed per minute of e-STUDIO520/523/600/603/720/723/850/ 853 has reached 52/60/72/85 sheets. These copy speeds can be realized only in the following conditions.
 - Original: A4/LT / 1 sheet

- Copy mode: A4/LT / Plain paper / Automatic Paper Selection OFF / Automatic Copy Density -OFF
- Number of copy set: 52 or more / 60 or more / 72 or more / 85 or more
- Reproduction ratio: 100%

Copy speed for thick paper (Copies/min.) Thick 1 (Paper weight: From over 80 g/m² (21.3 lb. Bond) to 105 g/m² (28 lb. Bond)) Paper source: Drawers / Tandem LCF / Option LCF

		e-STUDIO 520/523	e-STUDIO 600/603	e-STUDIO 720/723	e-STUDIO 850/853
A4, B5, A5-R, LT, ST-R	Top side discharging	52	60	72	85
	Back side discharging	52	60	72	85
A4-R, B5-R, LT-R	Top side discharging	42	46	52	61
	Back side discharging	42	46	50	56
B4, FOLIO, LG,	Top side discharging	37	41	44	52
COMPUTER	Back side discharging	37	38	41	45
A3, LD	Top side discharging	33	36	37	43
	Back side discharging	31	32	34	37

* Tandem LCF - A4/LT only / Option LCF -A4/B5/LT only

* Tolerance: Within -0.5 from +1

Thick 1 (Paper weight: From over 80 g/m² (21.3 lb. Bond) to 105 g/m² (28 lb. Bond)) Paper source: Bypass feed

		e-ST 520	e-STUDIO 520/523		e-STUDIO 600/603		e-STUDIO 720/723		e-STUDIO 850/853	
Size sp	pecified	Yes	No	Yes	No	Yes	No	Yes	No	
A4, B5, A5-R, LT, ST-R	Top side discharging	45	28	46	30	46	30	50	34	
	Back side discharging	45	28	46	30	46	30	50	34	
A4-R, B5-R, LT-R	Top side discharging	37	28	38	30	38	30	42	34	
	Back side discharging	37	28	38	30	38	30	42	34	
B4, FOLIO, LG,	Top side discharging	32	28	34	30	34	30	38	34	
COMPUTER	Back side discharging	32	28	34	30	34	30	38	34	
A3, LD	Top side discharging	28	28	30	30	30	30	34	34	
	Back side discharging	28	28	30	30	30	30	34	34	

* Tolerance: Within -0.5 from +1

Thick 2 (Paper weight: From over 105 g/m² (28 lb. Bond) to 163 g/m² (90 lb. Index)) Paper source: Drawers / Tandem LCF / Option LCF

		e-STUDIO 520/523	e-STUDIO 600/603	e-STUDIO 720/723	e-STUDIO 850/853
A4, B5, A5-R, LT, ST-R	Top side discharging	52	60	72	85
	Back side discharging	52	60	72	85
A4-R, B5-R, LT-R	Top side discharging	42	46	52	61
	Back side discharging	42	46	50	56
B4, FOLIO, LG, COMPUTER	Top side discharging	37	41	44	52
	Back side discharging	37	38	41	45
A3, LD	Top side discharging	33	36	37	43
	Back side discharging	31	32	34	37

Tandem LCF - A4/LT only / Option LCF -A4/B5/LT only Tolerance: Within -0.5 from +1 *

*

Thick 2 (Paper weight: From over 105 g/m² (28 lb. Bond) to 163 g/m² (90 lb. Index)) Paper source: Bypass feed

•	51	e-STUDIO 520/523		e-STUDIO 600/603		e-STUDIO 720/723		e-STUDIO 850/853	
Size sp	pecified	Yes	No	Yes	No	Yes	No	Yes	No
A4, B5, A5-R, LT, ST-R	Top side discharging	45	28	46	30	46	30	50	34
	Back side discharging	45	28	46	30	46	30	50	34
A4-R, B5-R, LT-R	Top side discharging	37	28	38	30	38	30	42	34
	Back side discharging	37	28	38	30	38	30	42	34
B4, FOLIO, LG, COMPUTER	Top side discharging	32	28	34	30	34	30	38	34
	Back side discharging	32	28	34	30	34	30	38	34
A3, LD	Top side discharging	28	28	30	30	30	30	34	34
	Back side discharging	28	28	30	30	30	30	34	34

* Tolerance: Within -0.5 from +1

1

Thick 3 (Paper weight: From over 163 g/m² (90 lb. Bond) to 209 g/m² (115.7 lb. Index)) Paper source: Drawers / Tandem LCF / Option LCF

		e-STUDIO 520/523	e-STUDIO 600/603	e-STUDIO 720/723	e-STUDIO 850/853
A4, B5, A5-R, LT, ST-R	Top side discharging	52	60	65	72
	Back side discharging	52	60	65	72
A4-R, B5-R, LT-R	Top side discharging	42	46	80	52
	Back side discharging	42	46	48	50
B4, FOLIO, LG, COMPUTER	Top side discharging	37	41	43	44
	Back side discharging	37	38	40	41
A3, LD	Top side discharging	33	36	37	37
	Back side discharging	31	32	34	34

* Tandem LCF - A4/LT only / Option LCF -A4/B5/LT only

* Tolerance: Within -0.5 from +1

Thick 3 (Paper weight: From over 163 g/m² (90 lb. Bond) to 209 g/m² (115.7 lb. Index)) Paper source: Bypass feed

		e-STUDIO 520/523		e-STUDIO 600/603		e-STUDIO 720/723		e-STUDIO 850/853	
Size sp	pecified	Yes	No	Yes	No	Yes	No	Yes	No
A4, B5, A5-R, LT, ST-R	Top side discharging	45	28	46	30	46	30	46	30
	Back side discharging	45	28	46	30	46	30	46	30
A4-R, B5-R, LT-R	Top side discharging	37	28	38	30	38	30	38	30
	Back side discharging	37	28	38	30	38	30	38	30
B4, FOLIO, LG,	Top side discharging	32	28	34	30	34	30	34	30
COMPUTER	Back side discharging	32	28	34	30	34	30	34	30
A3, LD	Top side discharging	28	28	30	30	30	30	30	30
	Back side discharging	28	28	30	30	30	30	30	30

* Tolerance: Within -0.5 from +1

System copy speed

		Sec.						
Copy mode		e-STUDIO 520/523	e-STUDIO 600/603	e-STUDIO 720/723	e-STUDIO 850/853			
Single-sided originals	1 set	20.17	18.11	17.20	14.89			
↓	3 sets	43.13	38.30	32.95	29.86			
Single-sided copies	5 sets	65.20	57.72	49.56	43.93			
Single-sided originals	1 set	23.79	21.83	20.56	18.63			
↓	3 sets	46.44	41.78	37.03	32.59			
Double-sided copies	5 sets	69.30	62.37	54.52	46.65			
Double-sided originals	1 set	41.18	35.57	35.14	33.96			
↓	3 sets	87.04	75.26	68.23	61.79			
Double-sided copies	5 sets	132.36	114.96	101.34	89.88			
Double-sided originals	1 set	37.00	31.28	30.88	30.54			
↓	3 sets	82.38	70.87	63.86	58.79			
Single-sided copies	5 sets	128.19	110.63	97.23	86.92			

* The system copy speed, including scanning time, is available when 10 sheets of A4/LT size original are set on RADF and one of the copy modes in the above table is selected. The period of time from pressing [START] to the paper exit completely out of the equipment based on the actually measured value.

- * 1st drawer is selected and copying is at the sort mode.
- * Finisher, hole punch unit and inserter are installed.
- * Automatic copy density, APS/AMS are turned off.

Copy paper

	Drawer	Duplex copy	Tandem LCF	Bypass copy	Remarks
Size	A3 to A5-R, LD to FOLIO, COMPU ⁻ 8.5"x8.5", 8K, 16	o ST-R, IER, 13"LG, K, 16K-R	A4, LT	A3 to A5-R, LD to ST-R, FOLIO, COMPUTER, 13"LG, 8.5"x8.5", 8K, 16K, 16K-R (Non-standard or user-speci- fied sizes can be set.)	
Weight	64 to 209g/m ² (1	7 lb. Bond to	115.7 lb. In	dex)	
Special paper	Tab paper (2nd drawer is recommended)	-		Tracing paper (75g/m² only), Labels, OHP film, Tab paper,	These special papers recom- mended by Toshiba Tec

First copy timee-STUDIO520/523/600/603/720/723: Approx. 4.0 sec. or less
 e-STUDIO850/853: Approx. 3.5 sec. or less
 (A4/LT, 1st drawer, 100%, original placed manually, Top side discharge)

 Warming-up timee-STUDIO520/523: Approx. 130 sec. e-STUDIO600/603: Approx. 130 sec. (Approx. 160 sec : TWD) e-STUDIO720/723: Approx. 130 sec. (Approx. 160 sec : TWD) e-STUDIO850/853: Approx. 130 sec. (temperature: 20°C or over, rated voltage / rating current)

• Multiple copying Up to 9999 copies; Key in set numbers

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 x 600 dpi Printing: Equivalent to 2400 dpi x 600 dpi Gradation: 256 steps

- Eliminated portionLeading edges: 3.0±2.0 mm, Side/trailing edges: 2.0±2.0 mm (copy) Leading / trailing edges: 5.0±2.0 mm, Side edges: 5.0±2.0 mm (print)
- Paper feeding Drawers:

- Drawer: Stack height 55 mm, equivalent to 500 sheets; 80 g/m² (22 lb. Bond)
- Tandem LCF: Stack height 137 mm x 2, equivalent to 2500 sheets; 80 g/m² (22 lb. Bond)

Bypass feeding: Bypass tray Stack height 11 mm: equivalent to 100 sheets; 80 g/m² (22 lb. Bond) Option LCF: MP-4004 Stack height 428 mm: equivalent to 4000 sheets; 80 g/m² (22 lb. Bond)

- · Capacity of originals in the reversing automatic document feeder
-A3 to A5-R, LD to ST-R:
 - Stack height 16 mm or less / 100 sheets; 80 g/m² (22lb. Bond)
- Automatic duplexer Stackless, Switchback type

 Toner supplyAutomatic toner density detection/supply Toner cartridge replacing method (There is a recycle toner supplying mechanism.)

- Density controlAutomatic density mode and manual density mode selectable in 11 steps
- Weight.....Approximately 210 kg (463 lb.): NAD, TWD, SAD, DAU, DMJ Approximately 204 kg (450 lb.): TNA, ASD, ASU, ARD, AUD, MJD, CND, KRD
- Power requirements.....AC 115 V / 16 A, 127 V / 16 A, 220 V or 220-240 V / 9 A (50/60 Hz)
 * The acceptable value of each voltage is ±10%
- Power consumption2.0 kW or less
 - * The electric power is supplied to the options through the equipment.
 - * 1.5 kW or less: TWD version of e-STUDIO520/600/720 only



Fig. 1-1

1.2 Accessories

Unpacking/setup instruction	1 pc.
Operator's manual	1 pc. (not available for MJD, DMJ, ASU, KRD)
CD-ROM	4 pcs
Drum	1 pc.
Toner bag (Installed inside of the equipment)	1 pc.
Operator's manual pocket	1 pc.
Original feeding tray spacer	1 pc.
Tab paper end guide	1 pc.
Cleaning cloth	1 pc.
Cloth case	1 pc.
Power cable	1 pc. (for TWD, ASD, ASU, ARD, AUD, DAU, MJD, DMJ, CND, KRD)
Setup report	1 set (for TNA, NAD, ASU, MJD, KRD)
Customer satisfaction card	1 pc. (for ASU, MJD, DMJ, KRD)
Approval sheet	1 pc. (for CND)
Envelope	1 pc. (for CND)
Packing list	1 pc. (for CND)
Label	2 pc. (for MJD)

1.3 Options

Large Capacity Feeder (LCF)	MP-4004L/A
Finisher	MJ-1027
Saddle stitch finisher	MJ-1028
Saddle stitch finisher (100 sheets stapling)	MJ-1029
Staple cartridge	STAPLE-700 (for MJ-1027/1028) STAPLE-1700 (for MJ-1029) STAPLE-1800 (for MJ-1029) STAPLE-1900 (for MJ-1029) STAPLE-600 (for saddle stitch)
Finisher guide rail	KN-1017
Hole punch unit	MJ-6003N/E/F/S
Inserter	MJ-7001
Damp heater	MF-6000U/E
Fax board	GD-1170NA/EU/AU
Printer kit	GM-1050/1051
Printer/Scanner kit	GM-2040/2041
Scanner kit	GM-4010
Printer ELK	GM-1110
Printer/Scanner ELK	GM-2110
Scanner ELK	GM-4110
Memory	GC-1230
Wireless LAN adapter	GN-1040/1041
Bluetooth module	GN-2010
Antenna	GN-3010
Scrambler board	GP-1040
Data overwrite kit	GP-1060
PCI slot	GO-1050
Parallel interface kit	GF-1140

- * The finisher (MJ-1027/1028) is necessary for the installation of the hole punch unit (MJ-6003N/E/F/S) and the inserter (MJ-7001).
- * The PCI slot (GO-1050) is necessary for the installation of the scrambler board (GP-1040), the parallel interface kit (GF-1140) and the fax board (GD-1170NA/EU/AU).
- * The antenna (GN-3010) is necessary to enable the wireless LAN module (GN-1040/1041) and the bluetooth module (GN-2010).
- * Up to 2 antennas (GN-3010) can be connected to the wireless LAN module (GN-1040/1041).
- * When the wireless LAN module (GN-1040/1041) and the bluetooth module (GN-2010) are installed together, only 1 antenna (GN-3010) can be connected to each.
- STAPLE-1700 (100 sheets stapling): 3 cases of 5000 staples in a package STAPLE-1800 (50 sheets stapling): 3 cases of 5000 staples and one exclusive cartridge in a package
 - STAPLE-1900 (50 sheets stapling): 3 cases of 5000 staples in a package
- * The Printer kit (GM-1050) or Printer/Scanner kit (GM-2040) does not have a function for printing an XPS file.
- * To enable an XPS file to be printed by the Printer kit (GM-1051) or Printer/Scanner kit (GM-2041), the Memory (GC-1230) is required to be installed.
- * To enable an XPS file to be printed by the Printer ELK (GM-1110) or Printer/Scanner ELK (GM-2110), the Memory (GC-1230) is required to be installed.

1.4 Supplies

Drum	OD-6510
Developer	D-6000
Toner	e-STUDIO520/600/720/850: PS-ZT6000D (for other) PS-ZT6000E (for MJD, DMJ) PS-ZT6000 (for TNA, NAD) e-STUDIO523/603/723/853: PS-ZT6000D (for CND) PS-ZT7200 (for TNA, NAD, ARD) PS-ZT7200E (for MJD, DMJ)
Toner bag	PS-TB6510E (for MJD, DMJ) PS-TB6510 (for other)





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	Paper not reaching fuser transport sensor: Paper which has passed the fuser unit does not reach the fuser transport sensor.	Ch.5.1.1
E020		Paper stopping at fuser transport sensor: The trail- ing edge of paper does not pass the fuser transport sensor after its leading edge has reached the fuser transport sensor.	Ch.5.1.1
E030	Other paper jam	Power-ON jam: Paper is remaining on the paper transport path of the equipment when the power is turned ON.	Ch.5.1.1
E061		Incorrect paper size setting for 1st drawer: The size of paper in the 1st drawer differs from size setting of the equipment.	Ch.5.1.1
E062		Incorrect paper size setting for 2nd drawer: The size of paper in the 2nd drawer differs from size set- ting of the equipment.	Ch.5.1.1
E063		Incorrect paper size setting for 3rd drawer: The size of paper in the 3rd drawer differs from size setting of the equipment.	Ch.5.1.1
E064		Incorrect paper size setting for 4th drawer: The size of paper in the 4th drawer differs from size setting of the equipment.	Ch.5.1.1
E065		Incorrect paper size setting for bypass tray: The size of paper in the bypass tray differs from size setting of the equipment.	Ch.5.1.1
E090		Image data delay jam: Image data to be printed cannot be prepared.	Ch.5.1.1
E110	Paper misfeeding	Transport jam during duplex printing (paper not reaching registration sensor): Paper which passed the reverse transport section does not reach the registration sensor during duplex printing.	Ch.5.1.2
E120		Bypass misfeeding (paper not reaching registration sensor): Paper fed out of the bypass tray does not reach the registration sensor.	Ch.5.1.2
E130		1st drawer misfeeding (paper not reaching 1st drawer feed sensor): Paper does not reach the 1st drawer feed sensor during the feeding at the 1st drawer.	Ch.5.1.2
E140		2nd drawer misfeeding (paper not reaching 2nd drawer feed sensor): Paper does not reach the 2nd drawer feed sensor during the feeding at the 2nd drawer.	Ch.5.1.2

Error code	Classification	Contents	Troubleshooting
E150	Paper misfeeding	3rd drawer misfeeding (paper not reaching 3rd drawer / Tandem LCF feed sensor): Paper does not reach the 3rd drawer / Tandem LCF feed sensor during the feeding at the 3rd drawer.	Ch.5.1.2
E160		4th drawer misfeeding (paper not reaching 4th drawer feed sensor): Paper does not reach the 4th drawer feed sensor during the feeding at the 4th drawer.	Ch.5.1.2
E180		Option LCF misfeeding (paper not reaching Option LCF feed sensor): Paper does not reach the Option LCF feed sensor during the feeding at the Option LCF.	Ch.5.1.2
E190		Tandem LCF misfeeding (paper not reaching 3rd drawer / Tandem LCF feed sensor): Paper does not reach the 3rd drawer / Tandem LCF feed sensor during the feeding at the Tandem LCF.	Ch.5.1.2
E200	Paper transport jam	1st drawer transport jam (paper not reaching regis- tration sensor): Paper which has passed the 1st drawer transport sensor does not reach the regis- tration sensor during the feeding at the 1st drawer.	Ch.5.1.1
E201		1st drawer transport jam (paper not reaching inter- mediate transport sensor): Paper which has passed the 1st drawer transport sensor does not reach the intermediate transport sensor during the feeding at the 1st drawer.	Ch.5.1.1
E210		2nd drawer transport jam (paper not reaching regis- tration sensor): Paper which has passed the 1st drawer transport sensor does not reach the regis- tration sensor during the feeding at the 2nd drawer.	Ch.5.1.1
E211		2nd drawer transport jam (paper not reaching inter- mediate transport sensor): Paper which has passed the 1st drawer transport sensor does not reach the intermediate transport sensor during the feeding at the 2nd drawer.	Ch.5.1.1
E220		2nd drawer transport jam (paper not reaching 1st drawer transport sensor): Paper which has passed the 2nd drawer transport sensor does not reach the 1st drawer transport sensor during the feeding at the 2nd drawer.	Ch.5.1.1
E230		1st drawer transport jam (paper not reaching 1st drawer transport sensor): Paper which has passed the 1st drawer feed sensor does not reach the 1st drawer transport sensor during the feeding at the 1st drawer.	Ch.5.1.1
E240		2nd drawer transport jam (paper not reaching 2nd drawer transport sensor): Paper which has passed the 2nd drawer feed sensor does not reach the 2nd drawer transport sensor during the feeding at the 2nd drawer.	Ch.5.1.1
E250		Option LCF transport jam (paper not reaching Option LCF transport sensor): Paper does not reach the Option LCF transport sensor during the feeding at the Option LCF.	Ch.5.1.1
E260		Option LCF transport jam (paper not reaching regis- tration sensor): Paper which has passed the 1st drawer transport sensor does not reach the regis- tration sensor during the feeding at the Option LCF.	Ch.5.1.1

Error code	Classification	Contents	Troubleshooting
E261	Paper transport jam	Option LCF transport jam (paper not reaching inter- mediate transport sensor): Paper which has passed the 1st drawer transport sensor does not reach the intermediate transport sensor during the feeding at the Option LCF.	Ch.5.1.1
E2A1		Transport jam during duplex printing (paper not reaching intermediate transport sensor): Paper which has passed the reverse section and horizon- tal transport section does not reach the intermedi- ate transport sensor during duplex printing.	Ch.5.1.1
E300		3rd drawer transport jam (paper not reaching regis- tration sensor): Paper which has passed the 1st drawer transport sensor does not reach the regis- tration sensor during the feeding at the 3rd drawer.	Ch.5.1.1
E301		3rd drawer transport jam (paper not reaching inter- mediate transport sensor): Paper which has passed the 1st drawer transport sensor does not reach the intermediate transport sensor during the feeding at the 3rd drawer.	Ch.5.1.1
E310	-	3rd drawer transport jam (paper not reaching 1st drawer transport sensor): Paper which has passed the 2nd transport sensor does not reach the 1st drawer transport sensor during the feeding at the 3rd drawer.	Ch.5.1.1
E320		3rd drawer transport jam (paper not reaching 2nd drawer transport sensor): Paper which has passed the 3rd drawer / Tandem LCF transport sensor does not reach the 2nd drawer transport sensor during the feeding at the 3rd drawer.	Ch.5.1.1
E330		4th drawer transport jam (paper not reaching regis- tration sensor): Paper which has passed the 1st drawer transport sensor does not reach the regis- tration sensor during the feeding at the 4th drawer.	Ch.5.1.1
E331		4th drawer transport jam (paper not reaching inter- mediate transport sensor): Paper which has passed the 1st drawer transport sensor does not reach the intermediate transport sensor during the feeding at the 4th drawer.	Ch.5.1.1
E340		4th drawer transport jam (paper not reaching 1st transport sensor): Paper which has passed the 2nd drawer transport sensor does not reach the 1st drawer transport sensor during the feeding at the 4th drawer.	Ch.5.1.1
E350		4th drawer transport jam (paper not reaching 2nd drawer transport sensor): Paper which has passed the 3rd drawer / Tandem LCF transport sensor does not reach the 2nd drawer transport sensor during the feeding at the 4th drawer.	Ch.5.1.1
E360		4th drawer transport jam (paper not reaching 3rd drawer / Tandem LCF transport sensor): Paper which has passed the 4th drawer transport sensor does not reach the 3rd drawer / Tandem LCF trans- port sensor during the feeding at the 4th drawer.	Ch.5.1.1
E370		3rd drawer transport jam (paper not reaching 3rd drawer / Tandem LCF transport sensor): Paper which has passed the 3rd drawer / Tandem LCF feed sensor does not reach the 3rd drawer / Tan- dem LCF transport sensor during the feeding at the 3rd drawer.	Ch.5.1.1

Error code	Classification	Contents	Troubleshooting
E380	Paper transport jam	4th drawer transport jam (paper not reaching 4th drawer transport sensor): Paper which passed the 4th drawer feed sensor does not reach the 4th drawer transport sensor during the feeding at the 4th drawer.	Ch.5.1.1
E3C0		Tandem LCF transport jam (paper not reaching reg- istration sensor): Paper which has passed the 1st transport sensor does not reach the registration sensor during the feeding at the Tandem LCF.	Ch.5.1.1
E3C1		Tandem LCF transport jam (paper not reaching intermediate transport sensor): Paper which has passed the 1st transport sensor does not reach the intermediate transport sensor during the feeding at the Tandem LCF.	Ch.5.1.1
E3D0		Tandem LCF transport jam (paper not reaching 1st drawer transport sensor): Paper which has passed the 2nd drawer transport sensor does not reach the 1st drawer transport sensor during the feeding at the Tandem LCF.	Ch.5.1.1
E3E0		Tandem LCF transport jam (paper not reaching 2nd transport sensor): Paper which has passed the 3rd drawer / Tandem LCF transport sensor does not reach the 2nd drawer transport sensor during the feeding at the Tandem LCF.	Ch.5.1.1
E3F0		Tandem LCF transport jam (paper not reaching 3rd drawer / Tandem LCF transport sensor): Paper which has passed the 3rd drawer / Tandem LCF feed sensor does not reach the 3rd drawer / Tandem LCF transport sensor during the feeding at the Tandem LCF.	Ch.5.1.1
E410	Cover open jam	Front cover open jam: The front cover has opened during printing.	Ch.5.1.3
E440		Right lower cover (feed cover) open jam: The feed cover has opened during printing.	Ch.5.1.3
E450		Option LCF side cover open jam: The side cover of the Option LCF has opened during printing.	Ch.5.1.3
E460		Right center cover (bypass feed unit cover) open jam: The bypass feed unit cover has opened during printing.	Ch.5.1.3
E470		Left lower cover (exit cover) open jam: The exit cover has opened during printing.	Ch.5.1.3

Error code	Classification	Contents	Troubleshooting
E510	Paper transport jam (Exit/Reverse section or other sections)	Transport jam during duplex printing (paper not reaching reverse sensor-2): Paper which has passed the reverse sensor-1 does not reach the reverse sensor-2 during duplex printing.	Ch.5.1.1
E511		Transport jam during duplex printing (paper not reaching horizontal transport sensor-1): Paper which has passed the reverse sensor-2 does not reach the horizontal transport sensor-1 during duplex printing.	Ch.5.1.1
E512		Transport jam during duplex printing (paper not reaching horizontal transport sensor-2): Paper which has passed the horizontal transport sensor-1 does not reach the horizontal transport sensor-2 during duplex printing.	Ch.5.1.1
E540		Transport jam during duplex printing (paper not reaching horizontal transport sensor-3): Paper which has passed the horizontal transport sensor-2 does not reach the horizontal transport sensor-3 during duplex printing.	Ch.5.1.1
E550		Paper remaining jam at paper transport path: Paper is remaining on the paper transport path when the printing has finished. (Jam caused by a multiple paper feeding)	Ch.5.1.1
E570		Transport jam during duplex printing (paper not reaching reverse sensor-1): Paper which has passed the fuser unit transport sensor does not reach the reverse sensor-1 during duplex printing.	Ch.5.1.1
E580		Paper stopping at reverse section: The trailing edge of paper does not pass the reverse sensor-1 or reverse sensor-2 after its leading edge has reached the reverse sensor-1 or reverse sensor-2.	Ch.5.1.1
E590		Paper stopping at exit section: The trailing edge of paper does not pass the exit sensor after its leading edge has reached the exit sensor.	Ch.5.1.1
E5A0		Paper not reaching exit sensor: The leading edge of paper does not reach the exit sensor.	Ch.5.1.1
E711	RADF jam	Original not reaching original length detection sen- sor: An original fed out of the original feeding tray does not reach the original length detection sensor.	Ch.5.1.4
E712	-	Original not reaching registration sensor: An origi- nal fed out of the original feeding tray does not reach the original registration sensor.	Ch.5.1.4
E713		Original stopping at original length detection sen- sor: The trailing edge of the original does not pass the original length detection sensor after its leading edge has reached the original length detection sen- sor.	Ch.5.1.4
E714		Feed signal reception jam: The feed signal is received while no original is placed on the original feeding tray.	Ch.5.1.4
E715		Tray lifting movement time-out: The lifting tray does not reach the lifting tray upper limit detection sen- sor.	Ch.5.1.4
E716		Tray lowering movement time-out: The lifting tray does not reach the lifting tray lower limit detection sensor.	Ch.5.1.4

Error code	Classification	Contents	Troubleshooting
E721	RADF jam	Original not reaching read sensor: An original which has passed the original registration sensor (while its front side is being scanned) or the reverse sensor (while its back side is being scanned) does not reach the read sensor.	Ch.5.1.4
E722		Original not reaching large original exit sensor (dur- ing scanning): An original which has passed the read sensor does not reach the large original exit sensor when this original is transported from the scanning section to the exit section.	Ch.5.1.4
E723		Original not reaching small original reverse sensor (during scanning): An original which has passed the read sensor does not reach the small original reverse sensor when this original is transported from the scanning section to the reverse section.	Ch.5.1.4
E724		Original stopping at registration sensor: The trailing edge of the original does not pass the registration sensor after its leading edge has reached the regis- tration sensor.	Ch.5.1.4
E725		Original stopping at read sensor: The trailing edge of the original does not pass the read sensor after its leading edge has reached the read sensor.	Ch.5.1.4
E726		Transport/exit signal reception jam: The RADF has received the transport/exit signal from the equipment while no original is at the exposure waiting position.	Ch.5.1.4
E728		Original not reaching small original exit sensor (dur- ing scanning): An original which has passed the read sensor does not reach the small original exit sensor when this original is transported from the scanning section to the exit section.	Ch.5.1.4
E731		Original stopping at large original exit sensor: The trailing edge of the original does not pass the large original exit sensor after its leading edge has reached the large original exit sensor.	Ch.5.1.4
E732		Original stopping at small original exit sensor: The trailing edge of the original does not pass the small original exit sensor after its leading edge has reached the small original exit sensor.	Ch.5.1.4
E733		Original not reaching large original exit sensor (exit section)	Ch.5.1.4
E741		Original stopping at small original reverse sensor: The trailing edge of the original does not pass the small original reverse sensor after its leading edge has reached the small original reverse sensor.	Ch.5.1.4
E742		Original not reaching small original reverse sensor (during reverse feeding): The leading edge of the original does not reach the small original reverse sensor when this original is fed out of the reverse section.	Ch.5.1.4
E743		Original not reaching small original exit sensor (dur- ing reverse feeding): An original which has passed the small original reverse sensor does not reach the small original exit sensor when this original is exited out of the reverse section.	Ch.5.1.4
E751		Original stopping at original intermediate transport sensor: The trailing edge of the original does not pass the original intermediate transport sensor after its leading edge has reached the original intermedi- ate transport sensor.	Ch.5.1.4

Error code	Classification	Contents	Troubleshooting
E752	RADF jam	Original not reaching original intermediate transport sensor: The leading edge of the original which has passed the read sensor does not reach the original intermediate transport sensor.	Ch.5.1.4
E761		Original remaining at original length detection sensor	Ch.5.1.4
E762		Original remaining at original registration sensor	Ch.5.1.4
E763		Original remaining at original width detection sen- sor	Ch.5.1.4
E764		Original remaining at read sensor	Ch.5.1.4
E765		Original remaining at original intermediate transport sensor	Ch.5.1.4
E766		Original remaining at small original reverse sensor	Ch.5.1.4
E767		Original remaining at small original exit sensor	Ch.5.1.4
E768		Original remaining at large original exit sensor	Ch.5.1.4
E800	_	24 VDC supply off jam: A job is started or continued while 24 VDC supply is shut off.	Ch.5.1.4
E860		Jam access cover open jam: The jam access cover has opened during the operation of the RADF.	Ch.5.1.4
E870		RADF open jam: The RADF has opened during the operation of the RADF.	Ch.5.1.4
E9F0	Finisher jam (Puncher section)	Hole punch jam: Hole punching is not performed properly.	Ch.5.1.5 [1]
EA10	Finisher jam (Finisher section)	Paper transport delay jam: Paper which has passed the exit sensor does not reach the inlet sensor.	Ch.5.1.5 [2]
EA20		Paper transport stop jam: Paper which has reached the inlet sensor does not pass the inlet sensor.	Ch.5.1.5 [2]
EA30		Power-ON jam: Paper is remaining at the inlet sensor when the power is turned ON.	Ch.5.1.5 [2]
EA40		Door open jam: The upper cover or the front cover of the Finisher has opened, or the upper door or the front door of the Hole Punch Unit has opened dur- ing printing.	Ch.5.1.5 [2]
EA50		Stapling jam: Stapling is not performed properly.	Ch.5.1.5 [2]
EA60		Early arrival jam: The inlet sensor detects paper earlier than the specified timing.	Ch.5.1.5 [2]
EA80	Finisher jam (Saddle Stitcher sec- tion)	Stapling jam: Stapling is not performed properly.	Ch.5.1.5 [3]
EA90		Door open jam: The delivery cover or the inlet cover has opened during printing.	Ch.5.1.5 [3]
EAA0		Power-ON jam: Paper is remaining at the No. 1 paper sensor, No. 2 paper sensor, No. 3 paper sen- sor, vertical path paper sensor or delivery sensor when the power is turned ON.	Ch.5.1.5 [3]
EAB0		Paper transport stop jam: Paper which has passed the inlet sensor does not reach or pass the No. 1 paper sensor, No. 2 paper sensor, No. 3 paper sen- sor or delivery sensor.	Ch.5.1.5 [3]
EAC0		Transport delay jam: Paper which has reached the inlet sensor does not pass the inlet sensor.	Ch.5.1.5 [3]
EAD0	Other paper jam	Print end command time-out jam: The printing has not finished normally due to the communication error between the SYS board and LGC board at the end of the printing.	Ch.5.1.5 [5]

Error code	Classification	Contents	Troubleshooting
EAE0	Finisher jam	Receiving period time-out jam: The printing cannot be finished normally due to the communication error between the equipment and the Finisher when the paper is transported from the equipment to the Finisher.	Ch.5.1.5 [5]
EB30		Ready period time-out jam: The equipment judges that the paper transport to the Finisher is disabled due to the communication error between the equip- ment and the Finisher at the start of the printing.	Ch.5.1.5 [5]
EB50	Paper transport jam	Paper remaining on the transport path: The multiple feeding of the preceding paper caused the misfeed- ing of the upcoming paper.	Ch.5.1.1
EB60		Paper remaining on the transport path: The multiple feeding of the preceding paper caused the misfeed- ing of the upcoming paper (= redetection after no jam is detected at [EB50]).	Ch.5.1.1
EC00	Finisher jam (Inserter section)	Inserter feeding delay jam	Ch.5.1.5 [4]
EC10	-	Inserter feeding stop jam	Ch.5.1.5 [4]
EC20		Inserter reverse path delay jam-1	Ch.5.1.5 [4]
EC30		Inserter reverse path stop jam-1	Ch.5.1.5 [4]
EC40		Inserter reverse path delay jam-2	Ch.5.1.5 [4]
EC50		Inserter reverse path stop jam-2	Ch.5.1.5 [4]
EC60		Inserter transport delay jam-1	Ch.5.1.5 [4]
EC70		Inserter transport stop jam-1	Ch.5.1.5 [4]
EC80		Inserter transport delay jam-2	Ch.5.1.5 [4]
EC90		Inserter transport stop jam-2	Ch.5.1.5 [4]
ECA0		Paper remaining in Inserter Unit at power-ON	Ch.5.1.5 [4]
ECB0]	Incorrect setting of paper size for Inserter Unit	Ch.5.1.5 [4]
ECC0]	Inserter Unit misfeeding	Ch.5.1.5 [4]
ECD0]	Inserter Unit door open jam	Ch.5.1.5 [4]

2.1.2 Service call

Error code	Classification	Contents	Troubleshooting
C130	Paper feeding sys- tem related ser- vice call	1st drawer tray abnormality: The tray-up motor-1 does not run normally or the 1st drawer tray does not move normally. (Feeding of any other drawer than the 1st drawer is pos- sible.)	Ch.5.1.6
C140		2nd drawer tray abnormality: The tray-up motor-1 does not run normally or the 2nd drawer tray does not move normally. (Feeding of any other drawer than the 2nd drawer is pos- sible.)	Ch.5.1.6
C150		3rd drawer tray abnormality: The tray-up motor-2 does not run normally or the 3rd drawer tray does not move normally. (Feeding of any other drawer than the 3rd drawer is pos- sible.)	Ch.5.1.6
C160		4th drawer tray abnormality: The tray-up motor-2 does not run normally or the 4th drawer tray does not move normally. (Feeding of any other drawer than the 4th drawer is pos- sible.)	Ch.5.1.6
C180		Tandem LCF tray-up motor abnormality: The Tandem LCF tray-up motor does not run normally or the Tandem LCF tray does not move normally. (Feeding of any other drawer than the Tandem LCF is possible.)	Ch.5.1.6
C1A0	-	Tandem LCF end fence motor abnormality: The Tandem LCF end fence motor does not run normally or the Tan- dem LCF end fence does not move normally. (Feeding of any other drawer than the Tandem LCF is possible.)	Ch.5.1.6
C1C0		Option LCF tray-up motor abnormality: The Option LCF tray-up motor does not run normally or the Option LCF tray does not move normally. (Feeding of any other drawer than the Option LCF is pos- sible.)	Ch.5.1.6
C260	Scanning system related service call	Peak detection error: Lighting of the exposure lamp (white reference) is not detected when the power is turned ON.	Ch.5.1.7
C270		Carriage home position sensor not turning OFF within a specified period of time: The carriages do not shift from their home position within a specified period of time.	Ch.5.1.7
C280		Carriage home position sensor not turning ON within a specified period of time: The carriages do not reach their home position within a specified period of time.	Ch.5.1.7
C360	Process related service call	Wire cleaner drive motor abnormality: The wire cleaner drive motor does not run normally or the charger wire cleaner does not move normally.	Ch.5.1.13
C370		Transfer belt cam motor abnormality: The transfer belt cam motor does not run normally when the power is turned ON or the copying is started.	Ch.5.1.13

Error code	Classification	Contents	Troubleshooting
C411	Fuser unit related service call	Thermistor/heater 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.	Ch.5.1.8
C412		Thermistor/heater 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.	Ch.5.1.8
C443		Heater abnormality after abnormality judgment (not reaching to intermediate temperature)	Ch.5.1.8
C445		Heater abnormality after abnormality judgment (pre-run- ning end temperature abnormality)	Ch.5.1.8
C446		Heater abnormality after abnormality judgment (pre-run- ning end temperature abnormality)	Ch.5.1.8
C447		Heater abnormality after abnormality judgment (tempera- ture abnormality at ready status)	Ch.5.1.8
C449		Heater abnormality after abnormality judgment (overheat- ing)	Ch.5.1.8
C465		Pressure roller thermistor abnormality after entering ready status (pre-running end temperature abnormality)	Ch.5.1.8
C466		Pressure roller thermistor abnormality after entering ready status (pre-running end temperature abnormality)	Ch.5.1.8
C467		Pressure roller thermistor abnormality after entering ready status (temperature abnormality at ready status)	Ch.5.1.8
C468		Pressure roller thermistor abnormality after entering ready status (overheating)	Ch.5.1.8
C471		IH power voltage abnormality or IH initial abnormality (IH board initial abnormality)	Ch.5.1.8
C472		IH power voltage abnormality (power supply abnormality)	Ch.5.1.8
C473		IH power voltage abnormality (power voltage upper limit abnormality)	Ch.5.1.8
C474		IH power voltage abnormality (power voltage lower limit abnormality)	Ch.5.1.8
C475		IH power voltage abnormality (power supply abnormality when door is opened)	Ch.5.1.8
C480	1	IH abnormality	Ch.5.1.8
C481	1	IGBT abnormality	Ch.5.1.8
C490		IH control circuit abnormality or IH coil abnormality: The IH control circuit is under abnormal conditions, or the IH coil is broken or has a short-circuit.	Ch.5.1.8
C4A0	1	End of cleaning web	Ch.5.1.8
C4B0	1	Fuser unit counter abnormality	Ch.5.1.8
C550	Optional communi- cation related ser- vice call	RADF interface error: Communication error has occurred between the RADF and the scanner.	Ch.5.1.9
C560	1	Communication error between Engine-CPU and PFC	Ch.5.1.9
C570		Communication error between Engine-CPU and IPC board	Ch.5.1.9
C580		Communication error between IPC board and Finisher	Ch.5.1.9
C590		Communication error between Engine-CPU and Laser- CPU	Ch.5.1.9
Error code	Classification	Contents	Troubleshooting
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C730	RADF related ser- vice call	EEPROM error: EEPROM cannot be initialized normally when the code 05-352 is performed or the data cannot be read out of the EEPROM when the power is turned ON.	Ch.5.1.10
C820		Read sensor adjustment error: The read sensor cannot be adjusted normally when the code 05-356 is performed.	Ch.5.1.10
C830		Original length detection sensor adjustment error: The original length detection sensor cannot be adjusted nor-mally when the code 05-356 is performed.	Ch.5.1.10
C840		Small original reverse sensor adjustment error: The small original reverse sensor cannot be adjusted normally when the code 05-356 is performed.	Ch.5.1.10
C850		Tray lift motor abnormality	Ch.5.1.10
C860		Large original exit sensor adjustment error: The large original exit sensor cannot be adjusted normally when the code 05-356 is performed.	Ch.5.1.10
C870	-	Temperature detection error	Ch.5.1.10
C940	Circuit related ser- vice call	Engine-CPU abnormality	Ch.5.1.13
C970	Process related service call	High-voltage transformer leakage abnormality: The high- voltage leakage of the main charger is detected.	Ch.5.1.13
CA10	Laser optical unit related service call	Polygonal motor abnormality: The polygonal motor does not run normally.	Ch.5.1.11
CA20		H-sync detection error: Laser beam cannot be detected at the SNS board.	Ch.5.1.11
CA30		Secondary scanning coarse adjustment error [e-STUDIO850]	Ch.5.1.11
CA41	-	Window comparator abnormality (error during secondary scanning control) [e-STUDIO850	Ch.5.1.11
CA42	-	Sensor signal busy error (error during secondary scan- ning control) [e-STUDIO850]	Ch.5.1.11
CA43		Comparator abnormality [e-STUDIO850]	Ch.5.1.11
CA44		Beam sensor detection error [e-STUDIO850]	Ch.5.1.11
CA50		Laser power adjustment error [e-STUDIO850]	Ch.5.1.11
CA90	-	Image data transmission error of SYS board: Communi- cation error has occurred between the PLG board and the SYS board.	Ch.5.1.11
CAA0		Secondary scanning fine adjustment error: Secondary scanning control by the galvanometer mirror does not end normally. [e-STUDIO850]	Ch.5.1.11
CAB0		Inter-page correction error of secondary scanning: Inter- page secondary scanning control by the galvanometer mirror does not end normally. [e-STUDIO850]	Ch.5.1.11
CAC0		Primary scanning dot adjustment error: Primary scanning control does not end normally. [e-STUDIO850]	Ch.5.1.11
CAF0		Inter-page correction error of primary scanning: Inter- page primary scanning control does not end normally. [e-STUDIO850]	Ch.5.1.11

Error code	Classification	Contents	Troubleshooting
CB10	Finisher related	Feed motor abnormality: The feed motor does not run	Ch.5.1.12
0000	service call	normally or the stack feed roller does not move normally.	01 5 4 40
CB20		run normally or the delivery roller does not move nor-	Ch.5.1.12
CB30	-	Tray lift motor abnormality	Ch 5 1 12
CB40	-	Alignment motor (rear) abnormality. The alignment motor	Ch 5 1 12
0210		(rear) does not run normally or the alignment plate does not move normally.	0111011112
CB50		Staple motor abnormality: The staple motor does not run normally or the stapler does not move normally.	Ch.5.1.12
CB60		Stapler shift motor abnormality: The stapler shift motor does not run normally or the Staple Unit does not move normally.	Ch.5.1.12
CB70	-	Stack amount detection sensor abnormality	Ch.5.1.12
CB80		 Backup RAM data abnormality: 1) Abnormality of checksum value on the finisher controller PC board is detected when the power is turned ON. 2) Abnormality of checksum value on the punch control- 	Ch.5.1.12
		ler PC board is detected when the power is turned ON.	
CB90		Paper pushing plate motor abnormality: The paper push- ing plate motor does not run normally or the paper push- ing plate does not move normally.	Ch.5.1.12
CBA0		Stitch motor (front) abnormality: The stitch motor (front) does not run normally or the rotational cam does not move normally.	Ch.5.1.12
CBB0		Stitch motor (rear) abnormality: The stitch motor (rear) does not run normally or the rotational cam does not move normally.	Ch.5.1.12
CBC0		Alignment motor abnormality: The alignment motor does not run normally or the alignment plate does not move normally.	Ch.5.1.12
CBD0	-	Guide motor abnormality: The guide motor does not run normally or the guide does not move normally.	Ch.5.1.12
CBE0		Paper folding motor abnormality: The paper folding motor does not run normally or the paper folding roller does not move normally.	Ch.5.1.12
CBF0		Paper positioning plate motor abnormality: The paper positioning plate motor does not run normally or the paper positioning plate does not move normally.	Ch.5.1.12
CC00		Sensor connector abnormality: Disconnection of each connector of the guide home position sensor, paper push- ing plate home position sensor and paper pushing plate leading position sensor is detected.	Ch.5.1.12
CC10	1	Microswitch abnormality: Any of the inlet door switch, delivery door switch and front cover closing detection switch is opened while all the covers are closed.	Ch.5.1.12
CC20		Communication error between Finisher and Saddle Stitch section: Communication error has occurred between the finisher controller PC board and the saddle stitcher controller PC board.	Ch.5.1.12
CC40		Swing motor abnormality: The swing motor does not run normally or the swing unit does not move normally.	Ch.5.1.12

Error code	Classification	Contents	Troubleshooting
CC50	Finisher related service call	Horizontal registration motor abnormality: The horizontal registration motor does not run normally or the puncher does not move normally.	Ch.5.1.12
CC60		Punch motor abnormality: The punch motor does not run normally or the puncher does not move normally.	Ch.5.1.12
CC80		Front alignment motor abnormality: Front alignment motor is not rotating or aligning plate is not moving nor- mally. [MJ-1029]	Ch.5.1.12
CCC1		Communication error between Inserter Unit and Finisher	Ch.5.1.12
CCD1		Inserter EEPROM abnormality	Ch.5.1.12
CCE1	-	Inserter fan motor abnormality	Ch.5.1.12
CD00	Laser optical unit related service call	Laser initialization time-out: Laser control does not end within the initialization period. [e-STUDIO850]	Ch.5.1.11
CD10	Process related service call	Cleaning brush drive motor abnormality: The cleaning brush drive motor does not run normally when the power is turned ON or the copying is started.	Ch.5.1.13
CD20		Used toner transport motor abnormality: The used toner transport motor does not run normally when the power is turned ON or the copying is started.	Ch.5.1.13
CD30		Recycle toner transport motor abnormality: The recycle toner transport motor does not run normally when the power is turned ON or the copying is started.	Ch.5.1.13
CD40		Toner bag full	Ch.5.1.13
CD50	Fuser unit related service call	Web motor signal path abnormality	Ch.5.1.8
CDE0	Finisher related service call	Paddle unit home position error detection: The paddle unit does not leave the home position when the paddle motor has been driven for specified time. [MJ-1029]	Ch.5.1.12
CE50	Image quality con- trol related service call	Temperature/humidity sensor abnormality: The output value of the temperature/humidity sensor is out of the specified range.	Ch.5.1.13
CE90		Drum thermistor abnormality: The output value of the drum thermistor is out of the specified range.	Ch.5.1.13
CF00	Finisher related service call	Belt escape unit home position error detection: The belt escape unit does not leave the home position when the Knurled belt motor has been driven for specified time. [MJ-1029]	Ch.5.1.12
CF10		Undefined error code processing: If the engine of the equipment judges that a code (command) other than the defined error codes is sent from the finisher, it regards this as a CF10 error.	Ch.5.1.12
CF70	Process related service call	New toner transport motor abnormality: The new toner transport motor does not run normally when new toner is supplied.	Ch.5.1.13
CF80		Hopper motor lockup: The hopper motor does not run normally when the power is ON or the copying is started.	Ch.5.1.13
F070	Communication related service call	Communication error between System-CPU and Engine-CPU	Ch.5.1.9
F090	Other service call	SRAM abnormality on SYS board	Ch.5.1.13
F091		FRAM abnormality on SYS board	Ch.5.1.13
F092		SRAM and FRAM abnormality on SYS board	Ch.5.1.13
F100		HDD format error: The HDD cannot be formatted nor- mally.	Ch.5.1.13
F101		HDD unmounted: Connection of the HDD is not detected.	Ch.5.1.13
F102		HDD boot error: HDD does not become ready for booting.	Ch.5.1.13
F103		HDD data transfer time-out: Data reading or writing is not executed in a specified period of time.	Ch.5.1.13

Error code	Classification	Contents	Troubleshooting
F104	Other service call	HDD data error: Abnormality is detected in the data of the HDD.	Ch.5.1.13
F105		Other HDD errors	Ch.5.1.13
F106		Point and Print partition damage	Ch.5.1.13
F107		/BOX partition damage	Ch.5.1.13
F108		/SHA partition damage	Ch.5.1.13
F110	Communication related service call	Communication error between System-CPU and Scan- ner-CPU	Ch.5.1.9
F111		Scanner response abnormality	Ch.5.1.9
F120	Other service call	Database abnormality: Databases do not run normally.	Ch.5.1.13
F130		Invalid MAC address	Ch.5.1.13
F200		Data overwrite kit (GP-1060) is taken off	Ch.5.1.13

2.1.3 Error in Internet FAX / Scanning Function

1) Internet FAX related error

(When GM-1050/4010, GM-1051/4010, GM-2040, GM-2041, GM-1110/4110, or GM-2110 is installed)

Error code	Contents	Troubleshooting
1C10	System access abnormality	Ch.5.1.14 [1]
1C11	Insufficient memory	Ch.5.1.14 [1]
1C12	Message reception error	Ch.5.1.14 [1]
1C13	Message transmission error	Ch.5.1.14 [1]
1C14	Invalid parameter	Ch.5.1.14 [1]
1C15	Exceeding file capacity	Ch.5.1.14 [1]
1C20	System management module access abnormality	Ch.5.1.14 [1]
1C21	Job control module access abnormality	Ch.5.1.14 [1]
1C22	Job control module access abnormality	Ch.5.1.14 [1]
1C30	Directory creation failure	Ch.5.1.14 [1]
1C31	File creation failure	Ch.5.1.14 [1]
1C32	File deletion failure	Ch.5.1.14 [1]
1C33	File access failure	Ch.5.1.14 [1]
1C40	Image conversion abnormality	Ch.5.1.14 [1]
1C60	HDD full failure during processing	Ch.5.1.14 [1]
1C61	Address Book reading failure	Ch.5.1.14 [1]
1C62	Memory acquiring failure	Ch.5.1.14 [1]
1C63	Terminal IP address unset	Ch.5.1.14 [1]
1C64	Terminal mail address unset	Ch.5.1.14 [1]
1C65	SMTP address unset	Ch.5.1.14 [1]
1C66	Server time-out error	Ch.5.1.14 [1]
1C69	SMTP server connection error	Ch.5.1.14 [1]
1C6A	HOST NAME error	Ch.5.1.14 [1]
1C6B	Terminal mail address error	Ch.5.1.14 [1]
1C6C	Destination mail address error	Ch.5.1.14 [1]
1C6D	System error	Ch.5.1.14 [1]
1C70	SMTP client OFF	Ch.5.1.14 [1]
1C71	SMTP authentication error	Ch.5.1.14 [1]
1C72	POP before SMTP error	Ch.5.1.14 [1]
1C80	Internet FAX transmission failure when processing E-mail job received	Ch.5.1.14 [1]
1C81	Onramp Gateway transmission failure	Ch.5.1.14 [1]
1C82	Internet FAX transmission failure when processing FAX job received	Ch.5.1.14 [1]
1CC0	Job canceling	-
1CC1	Power failure	Ch.5.1.14 [1]

2) RFC related error

(When GM-1050/4010, GM-1051/4010, GM-2040, GM-2041, GM-1110/4110, or GM-2110 is installed)

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
2500	Syntax error, command unrecog- nized	HOST NAME error (RFC: 500) Destination mail address error (RFC: 500) Terminal mail address error (RFC: 500)	Ch.5.1.14 [2]
2501	Syntax error in parameters or arguments	HOST NAME error (RFC: 501) Destination mail address error (RFC: 501) Terminal mail address error (RFC: 501)	Ch.5.1.14 [2]
2503	Bad sequence of commands	Destination mail address error (RFC: 503)	Ch.5.1.14 [2]
2504	Command parameter not imple- mented	HOST NAME error (RFC: 504)	Ch.5.1.14 [2]
2550	Mailbox unavailable	Destination mail address error (RFC: 550)	Ch.5.1.14 [2]
2551	User not local	Destination mail address error (RFC: 551)	Ch.5.1.14 [2]
2552	Insufficient system storage	Terminal/Destination mail address error (RFC: 552)	Ch.5.1.14 [2]
2553	Mailbox name not allowed	Destination mail address error (RFC: 553)	Ch.5.1.14 [2]

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
2B10	There was no applicable job.	No applicable job error in job control module	Ch.5.1.14 [3]
2B11	Job status failed.	JOB status abnormality	Ch.5.1.14 [3]
2B20	Failed to access file.	File library function error	Ch.5.1.14 [3]
2B21	Message size exceeded limit or maximum size	Exceeding file capacity	Ch.5.1.14 [3]
2B30	Insufficient disk space.	Insufficient disk space in /BOX partition	Ch.5.1.14 [3]
2B31	Failed to access Electronic Filing.	Status of specified Electronic Filing or folder is undefined or being created/ deleted	Ch.5.1.14 [3]
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.).	Ch.5.1.14 [3]
2B50	Failed to process image.	Image library error	Ch.5.1.14 [3]
2B51	Failed to process print image.	List library error	Ch.5.1.14 [3]
2B60	The folder was renamed. A folder of the same name already existed.	A folder with the same name exists in the box.	-
2B70	The document was renamed. A document of the same name already existed.	A document with the same name exists in the box or folder.	-
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	Ch.5.1.14 [3]
2BA0	Invalid Box password specified.	Invalid Box password	Ch.5.1.14 [3]
2BA1	Incorrect paper size	A Paper size not supported in the Elec- tronic Filing function is being selected.	Ch.5.1.14 [3]
2BB0	Job canceled	Job canceling	-
2BB1	Power failure occurred	Power failure	Ch.5.1.14 [3]
2BC0	System fatal error.	Fatal failure occurred.	Ch.5.1.14 [3]
2BC1	Failed to acquire resource.	System management module resource acquiring failure	Ch.5.1.14 [3]
2BD0	Power failure occurred during e- Filing restoring.	Power failure occurred during restoring of Electronic Filing	Ch.5.1.14 [3]
2BE0	Failed to get machine parameter.	Machine parameter reading failure	Ch.5.1.14 [3]
2BF0	Maximum number of pages has been exceeded (list Maximum)	Exceeding maximum number of pages	Ch.5.1.14 [3]
2BF1	Maximum number of documents has been exceeded (list Maxi- mum)	Exceeding maximum number of docu- ments	Ch.5.1.14 [3]
2BF2	Maximum number of folders has been exceeded (list Maximum)	Exceeding maximum number of folders	Ch.5.1.14 [3]

3) Electronic Filing related error

4) E-mail related error

(When GM-1050/4010, GM-1051/4010, GM-2040, GM-2041, GM-1110/4110, or GM-2110 is installed)

Error oodo	Message displayed in the	Contonto	Troublesheating
Error code	TopAccess screen	Contents	rroubleshooting
2C10	Illegal Job status	System access abnormality	Ch.5.1.14 [4]
2C11	Not enough memory	Insufficient memory	Ch.5.1.14 [4]
2C12	Illegal Job status	Message reception error	Ch.5.1.14 [4]
2C13	Illegal Job status	Message transmission error	Ch.5.1.14 [4]
2C14	Invalid parameter specified	Invalid parameter	Ch.5.1.14 [4]
2C15	Message size exceeded limit or maximum size	Exceeding file capacity	Ch.5.1.14 [4]
2C20	Illegal Job status	System management module access abnormality	Ch.5.1.14 [4]
2C21	Illegal Job status	Job control module access abnormality	Ch.5.1.14 [4]
2C22	Illegal Job status	Job control module access abnormality	Ch.5.1.14 [4]
2C30	Failed to create directory	Directory creation failure	Ch.5.1.14 [4]
2C31	Failed to create file	File creation failure	Ch.5.1.14 [4]
2C32	Failed to delete file	File deletion failure	Ch.5.1.14 [4]
2C33	Failed to create file	File access failure	Ch.5.1.14 [4]
2C40	Failed to convert image file for- mat	Image conversion abnormality	Ch.5.1.14 [4]
2C43	Failed to process your Job. Insuf- ficient disk space.	Encryption error. Failed to create file.	Ch.5.1.14 [4]
2C44	Failed to convert image file for- mat	Encryption PDF enforced mode error	Ch.5.1.14 [4]
2C60	Failed to process your Job. Insuf- ficient disk space.	HDD full failure during processing	Ch.5.1.14 [4]
2C61	Failed to read AddressBook	Address Book reading failure	Ch.5.1.14 [4]
2C62	Not enough memory	Memory acquiring failure	Ch.5.1.14 [4]
2C63	Invalid Domain Address	Terminal IP address unset	Ch.5.1.14 [4]
2C64	Invalid Domain Address	Terminal mail address unset	Ch.5.1.14 [4]
2C65	Failed to connect to SMTP server	SMTP address unset	Ch.5.1.14 [4]
2C66	Failed to connect to SMTP server	Server time-out error	Ch.5.1.14 [4]
2C69	Failed to connect to SMTP server	SMTP server connection error	Ch.5.1.14 [4]
2C6A	Failed to send E-Mail message	HOST NAME error (No RFC error)	Ch.5.1.14 [4]
2C6B	Invalid address specified in From: field	Terminal mail address error	Ch.5.1.14 [4]
2C6C	Invalid address specified in To: field	Destination mail address error (No RFC error)	Ch.5.1.14 [4]
2C6D	NIC system error	System error	Ch.5.1.14 [4]
2C70	SMTP service is not available	SMTP client OFF	Ch.5.1.14 [4]
2C71	Failed SMTP Authentication	SMTP authentication error	Ch.5.1.14 [4]
2C72	POP Before SMTP Authentica- tion Failed	POP before SMTP error	Ch.5.1.14 [4]
2C80	Failed to process received E-mail job	E-mail transmission failure when pro- cessing E-mail job received	Ch.5.1.14 [4]
2C81	Failed to process received Fax job	Process failure of FAX job received	Ch.5.1.14 [4]
2CC0	Job canceled	Job canceling	-
2CC1	Power failure occurred	Power failure	Ch.5.1.14 [4]

5) File sharing related error

(When GM-1050/4010, GM-1051/4010, GM-2040, GM-2041, GM-1110/4110, or GM-2110 is installed)

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
2D10	Illegal Job status	System access abnormality	Ch.5.1.14 [5]
2D11	Not enough memory	Insufficient memory	Ch.5.1.14 [5]
2D12	Illegal Job status	Message reception error	Ch.5.1.14 [5]
2D13	Illegal Job status	Message transmission error	Ch.5.1.14 [5]
2D14	Invalid parameter specified	Invalid parameter	Ch.5.1.14 [5]
2D15	There are too many documents in the folder. Failed in creating new document.	Exceeding document number	Ch.5.1.14 [5]
2D20	Illegal Job status	System management module access abnormality	Ch.5.1.14 [5]
2D21	Illegal Job status	Job control module access abnormality	Ch.5.1.14 [5]
2D22	Illegal Job status	Job control module access abnormality	Ch.5.1.14 [5]
2D30	Failed to create directory	Directory creation failure	Ch.5.1.14 [5]
2D31	Failed to create file	File creation failure	Ch.5.1.14 [5]
2D32	Failed to delete file	File deletion failure	Ch.5.1.14 [5]
2D33	Failed to create file	File access failure	Ch.5.1.14 [5]
2D40	Failed to convert image file for- mat	Image conversion abnormality	Ch.5.1.14 [5]
2D43	Encryption error. Failed to create file.	Encryption error	Ch.5.1.14 [5]
2D44	Creating the image file was not permitted.	Encryption PDF enforced mode error	Ch.5.1.14 [5]
2D60	Failed to copy file	File library access abnormality	Ch.5.1.14 [5]
2D61	Invalid parameter specified	Invalid parameter	Ch.5.1.14 [5]
2D62	Failed to connect to network des- tination. Check destination path	File server connection error	Ch.5.1.14 [5]
2D63	Specified network path is invalid. Check destination path	Invalid network path	Ch.5.1.14 [5]
2D64	Logon to file server failed. Check username and password	Login failure	Ch.5.1.14 [5]
2D65	There are too many documents in the folder. Failed in creating new document.	Exceeding documents in folder: Creating new document is failed.	Ch.5.1.14 [5]
2D66	Failed to process your Job. Insuf- ficient disk space.	HDD full failure during processing	Ch.5.1.14 [5]
2D67	FTP service is not available	FTP service not available	Ch.5.1.14 [5]
2D68	File Sharing service is not avail- able	File sharing service not available	Ch.5.1.14 [5]
2DA0	Expired scan documents deleted from share folder.	Periodical deletion of scanned docu- ments 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 doc- uments 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 doc- uments completed properly.	-

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
2DA5	Received Fax Documents in shared folder deleted upon user's request.	Manual deletion of received FAX docu- ments completed properly.	-
2DA6	Failed to delete file.	File deletion failure	Ch.5.1.14 [5]
2DA7	Failed to acquire resource.	Resource acquiring failure	Ch.5.1.14 [5]
2DA8	The HDD is running out of capac- ity for the shared folder.	Hard disk space in /SHA partition is nearly full (90%).	Ch.5.1.14 [5]
2DC0	Job canceled	Job canceling	-
2DC1	Power failure occurred	Power failure	Ch.5.1.14 [5]

6) E-mail reception related error

(When GM-1050/4010, GM-1051/4010, GM-2040, GM-2041, GM-1110/4110, or GM-2110 is installed)

Error code	Message displayed in the	Contents	Troubleshooting
Lifer code	TopAccess screen	Contents	Troubleshooting
3A10	MIME Error has been detected in the received mail.	E-mail MIME error	Ch.5.1.14 [6]
3A11	MIME Error has been detected in the received mail. This mail has been transferred to the adminis- trator.		Ch.5.1.14 [6]
3A12	MIME Error has been detected in the received mail. This mail could not be transferred to the adminis- trator.		Ch.5.1.14 [6]
3A20	Analyze Error has been detected in the received mail.	E-mail analysis error	Ch.5.1.14 [6]
3A21	Analyze Error has been detected in the received mail. This mail has been transferred to the administrator.		Ch.5.1.14 [6]
3A22	Analyze Error has been detected in the received mail. This mail could not be transferred to the administrator.		Ch.5.1.14 [6]
3A30	Whole partial mails were not reached by timeout.	Partial mail time-out error	Ch.5.1.14 [6]
3A40	Partial Mail Error has been detected in the received mail.	Partial mail related error	Ch.5.1.14 [6]
3A50	HDD Full Error has been occurred in this mail.	Insufficient HDD capacity error	Ch.5.1.14 [6]
3A51	HDD Full Error has been occurred in this mail. This mail has been transferred to the administrator.		Ch.5.1.14 [6]
3A52	HDD Full Error has been occurred in this mail. This mail could not be transferred to the administrator.		Ch.5.1.14 [6]
3A60	HDD Full Warning has been occurred in this mail.	Warning of insufficient HDD capacity	Ch.5.1.14 [6]
3A61	HDD Full Warning has been occurred in this mail. This mail could not be transferred to the administrator.		Ch.5.1.14 [6]
3A62	HDD Full Warning has been occurred in this mail. This mail could not be transferred to the administrator.		Ch.5.1.14 [6]
3A70	Receiving partial mail was aborted since the partial mail set- ting has been changed to Dis- able.	Warning of partial mail interruption	Ch.5.1.14 [6]

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
3A80	Partial mail was received during the partial mail setting is disabled.	Partial mail reception setting OFF	Ch.5.1.14 [6]
3A81	Partial mail was received during the partial mail setting is disabled. This mail has been transferred to the administrator.		Ch.5.1.14 [6]
3A82	Partial mail was received during the partial mail setting is disabled. This mail could not be transferred to the administrator.		Ch.5.1.14 [6]
3B10	Format Error has been detected in the received mail.	E-mail format error	Ch.5.1.14 [6]
3B11	Format Error has been detected in the received mail. This mail has been transferred to the administrator.		Ch.5.1.14 [6]
3B12	Format Error has been detected in the received mail. This mail could not be transferred to the administrator.		Ch.5.1.14 [6]
3B20	Content-Type Error has been detected in the received mail.	Content-Type error	Ch.5.1.14 [6]
3B21	Content-Type Error has been detected in the received mail. This mail has been transferred to the administrator.		Ch.5.1.14 [6]
3B22	Content-Type Error has been detected in the received mail. This mail could not be transferred to the administrator.		Ch.5.1.14 [6]
3B30	Charset Error has been detected in the received mail.	Charset error	Ch.5.1.14 [6]
3B31	Charset Error has been detected in the received mail. This mail has been transferred to the administrator.		Ch.5.1.14 [6]
3B32	Charset Error has been detected in the received mail. This mail could not be transferred to the administrator.		Ch.5.1.14 [6]
3B40	Decode Error has been detected in the received mail.	E-mail decode error	Ch.5.1.14 [6]
3B41	Decode Error has been detected in the received mail. This mail has been transferred to the administrator.		Ch.5.1.14 [6]
3B42	Decode Error has been detected in the received mail. This mail could not be transferred to the administrator.		Ch.5.1.14 [6]

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
3C10	Tiff Analyze Error has been detected in the received mail.	TIFF analysis error	Ch.5.1.14 [6]
3C11	Tiff Analyze Error has been detected in the received mail. This mail has been transferred to the administrator.		Ch.5.1.14 [6]
3C12	Tiff Analyze Error has been detected in the received mail. This mail could not be transferred to the administrator.		Ch.5.1.14 [6]
3C13	Tiff Analyze Error has been detected in the received mail.		Ch.5.1.14 [6]
3C20	Tiff Compression Error has been detected in the received mail.	TIFF compression error	Ch.5.1.14 [6]
3C21	Tiff Compression Error has been detected in the received mail. This mail has been transferred to the administrator.		Ch.5.1.14 [6]
3C22	Tiff Compression Error has been detected in the received mail. This mail could not be transferred to the administrator.		Ch.5.1.14 [6]
3C30	Tiff Resolution Error has been detected in the received mail.	TIFF resolution error	Ch.5.1.14 [6]
3C31	Tiff Resolution Error has been detected in the received mail. This mail has been transferred to the administrator.		Ch.5.1.14 [6]
3C32	Tiff Resolution Error has been detected in the received mail. This mail could not be transferred to the administrator.		Ch.5.1.14 [6]
3C40	Tiff Paper Size Error has been detected in the received mail.	TIFF paper size error	Ch.5.1.14 [6]
3C41	Tiff Paper Size Error has been detected in the received mail. This mail has been transferred to the administrator.		Ch.5.1.14 [6]
3C42	Tiff Paper Size Error has been detected in the received mail. This mail could not be transferred to the administrator.		Ch.5.1.14 [6]
3C50	Offramp Destination Error has been detected in the received mail.	Offramp destination error	Ch.5.1.14 [6]
3C51	Offramp Destination Error has been detected in the received mail. This mail has been trans- ferred to the administrator.		Ch.5.1.14 [6]
3C52	Offramp Destination Error has been detected in the received mail. This mail could not be trans- ferred to the administrator.		Ch.5.1.14 [6]

Error code	Message displayed in the TopAccess screen	Contents	Troubleshooting
3C60	Offramp Security Error has been detected in the received mail.	Offramp security error	Ch.5.1.14 [6]
3C61	Offramp Security Error has been detected in the received mail. This mail has been transferred to the administrator.		Ch.5.1.14 [6]
3C62	Offramp Security Error has been detected in the received mail. This mail could not be transferred to the administrator.		Ch.5.1.14 [6]
3C70	Power Failure has been occurred in E-mail receiving.	Power failure error	Ch.5.1.14 [6]
3D10	SMTP Destination Error has been detected in the received mail. This mail was deleted.	Destination address error	Ch.5.1.14 [6]
3D20	Offramp Destination limitation Error has been detected in the received mail.	Offramp destination limitation error	Ch.5.1.14 [6]
3D30	Fax Board Error has been occurred in the received mail.	FAX board error	Ch.5.1.14 [6]
3E10	POP3 Connection Error has been occurred in the received mail.	POP3 server connection error	Ch.5.1.14 [6]
3E20	POP3 Connection Timeout Error has been occurred in the received mail.	POP3 server connection time-out error	Ch.5.1.14 [6]
3E30	POP3 Login Error has been occurred in the received mail.	POP3 login error	Ch.5.1.14 [6]
3E40	POP3 Login Error occurred in the received mail.	POP3 login method error	Ch.5.1.14 [6]
3F00	File I/O Error has been occurred	File I/O error	Ch.5.1.14 [6]
3F10	in this mail. The mail could not be		Ch.5.1.14 [6]
3F20	ered.		Ch.5.1.14 [6]
3F30]		Ch.5.1.14 [6]
3F40]		Ch.5.1.14 [6]

2.1.4 Printer function error

Following codes are displayed at the end of the user name on the print job log screen (When GM-1050/4010, GM-1051/4010, GM-2040, GM-2041, GM-1110/4110, or GM-2110 is installed)

Error code	Contents	Troubleshooting
4030	No Printer Kit / Printer Kit function disabled: The Printer Kit (GM-1010) or the Printer/Scanner Kit (GM-2010) is not installed. Or network printing of an XPS file is performed without the Expansion Memory (GC-1230), or network printing is performed after the termination of a trial period.	Ch.5.1.14 [6]
4031	HDD full during print: Large quantity image data by private print or invalid network print are saved in HDD.	Ch.5.1.14 [6]
4032	Private-print-only error: Jobs other than Private print jobs cannot be per- formed.	Ch.5.1.14 [6]
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.	Ch.5.1.14 [6]
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.	Ch.5.1.14 [6]
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.	Ch.5.1.14 [6]
4036	User authentication error: The user who intended to print a document is not registered as a user.	Ch.5.1.14 [6]
A221	Print job cancellation: Print job (copy, list print, network print) is deleted from the print job screen.	Ch.5.1.14 [6]
A222	Print job power failure: The power of the equipment is turned OFF during print job (copy, list print, network print).	Ch.5.1.14 [6]
A290	Limit over error: The numbers of output pages have exceeded those speci- fied with both of the department code and the user code at the same time.	Ch.5.1.14 [6]
A291	Limit over error: The number of output pages has exceeded the one speci- fied with the user code.	Ch.5.1.14 [6]
A292	Limit over error: The number of output pages has exceeded the one speci- fied with the department code.	Ch.5.1.14 [6]

<<Error history>>

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

<u>EA10</u>	<u>999999999</u>	<u>05 03 10 17 57 32</u>	<u>064</u>	<u>064</u>	<u>23621000000</u>
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

А	Paper source
	0: Not selected 1: Bypass feed 2: Tandem LCF 3: 1st drawer 4: 2nd drawer 5: 3rd drawer 6: 4th drawer 7: Option LCF 8: Inserter
В	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: Unused H: A6-R I: Postcard J: 8.5SQ K: Unused L: Unused M: 8K N: 16K-R O: 16K P: Unused Q: Unused R: Unused S: Unused T: Unused Z: Not selected
С	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
Н	Image shift
	0: Unused 1: Book 2: Left 4: Right
I	Editing
	0: Unused 1: Masking 2: Trimming 3: Mirror image 4: Negative/Positive Reversal
J	Edge erase/Dual-page
	0: Unused 1: Edge erase 2: Dual-page 3: Edge erase & Dual-page
К	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
0	Mode
	0: Unused 1: Unused 2: Black 3: Unused 4: Unused 5: Gray scale

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 MOD
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	-

Notes:

- 1. To enter the desired mode, turn ON the power while two digital keys designated to each mode (e.g. [0] and [5]) are pressed simultaneously.
- 2. When the optional FAX unit is installed, Faxes received automatically during the self-diagnosis mode may not be printed out. Be sure to disconnect the modular code from the line connectors (LINE1, LINE2) of the equipment before starting the self-diagnosis mode. Also, be sure to finish the self-diagnosis mode by turning the power OFF and back ON before connecting the modular code.

To exit from Self-diagnosis modes:

Shut down the equipment by pressing the [ENERGY SAVER] button for a few seconds except for the control panel check mode and the firmware update mode.

<Operation procedure>

• Control panel check mode (01):



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 P.2-29 "2.2.1 Input check (Test mode 03)" and P.2-36 "2.2.2 Output check (test mode 03)".
- Test print mode (04): Refer to 📖 P.2-40 "2.2.3 Test print mode (test mode 04)".
- Adjustment mode (05): Refer to 🛄 P.2-41 "2.2.4 Adjustment mode (05)".
- Setting mode (08): Refer to 🛄 P.2-74 "2.2.5 Setting mode (08)".
- List print mode (9S): The procedure varies depending on the code.

[9][START] [POWER]	$ (Code) \longrightarrow [START] \longrightarrow [Digital keys] \longrightarrow [START] \longrightarrow [Digital keys] \longrightarrow [START] \longrightarrow [Digital keys] \longrightarrow [START] \longrightarrow [POWER] OFF/ON $ $ (Key in the first 102: Setting mode (08) (code to be printed) (code to be printed) (code to be printed) $
	→ (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):



• Firmware update mode (89): Refer to "6. FIRMWARE UPDATING".



Fig. 2-1

*1 Turn OFF the power after using the self-diagnosis modes, 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>



Note:

Initialization is performed before the equipment enters the test mode.

100% TEST MODE	2		
A			
B			
C G			
DH			

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.

		Contents		
Digital	Button	Items to check	Highlighted display	Normal display
key			e.g.	e.g. 🔺
	A	Intermediate transport sensor	No paper	Paper present
	В	-	-	-
	С	1st drawer transport sensor	No paper	Paper present
	D	1st drawer feed sensor	No paper	Paper present
[1]	E	1st drawer tray-up sensor Upper lir		Other than upper limit position
	F	1st drawer bottom sensor	Bottom position	Other than bottom position
	G	1st drawer empty sensor	No paper	Paper present
	Н	1st drawer detection sensor	Drawer present	No drawer
	A	Feed cover sensor	Cover closed	Cover opened
	В	-	-	-
	С	2nd drawer transport sensor	No paper	Paper present
	D	2nd drawer feed sensor	No paper	Paper present
[2]	E	2nd drawer tray-up sensor	Upper limit position	Other than upper limit position
	F	2nd drawer bottom sensor	Bottom position	Other than bottom position
	G	2nd drawer empty sensor	No paper	Paper present
	Н	2nd drawer detection sensor	Drawer present	No drawer
	Α	-	-	-
	В	-	-	-
	С	3rd drawer / Tandem LCF drawer transport sensor	No paper	Paper present
	D	3rd drawer / Tandem LCF drawer feed sensor	No paper	Paper present
[3]	E	3rd drawer / Tandem LCF drawer tray-up sensor	Upper limit position	Other than upper limit position
	F	3rd drawer / Tandem LCF drawer bottom sensor	Bottom position	Other than bottom position
	G	3rd drawer / Tandem LCF drawer empty sensor	No paper	Paper present
	Н	3rd drawer / Tandem LCF detection sensor	Drawer present	No drawer
	Α	-	-	-
	В	-	-	-
	С	4th drawer transport sensor	No paper	Paper present
	D	4th drawer feed sensor	No paper	Paper present
[4]	E	4th drawer tray-up sensor	Upper limit position	Other than upper limit position
	F	4th drawer bottom sensor	Bottom position	Other than bottom position
	G	4th drawer empty sensor	No paper	Paper present
	Н	4th drawer detection sensor	Drawer present	No drawer
	Α	LCF connection	Not connected	Connected
	В	LCF set sensor	Unit opened	Unit closed
	С	-	-	-
	D	LCF feed sensor	No paper	Paper present
[5]	E	LCF tray-up sensor	Upper limit position	Other than upper limit position
	F	LCF bottom sensor	Bottom position	Other than bottom position
	G	LCF empty sensor	No paper	Paper present
	Н	LCF tray sensor	Tray opened	Tray closed

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

			Con	Contents		
Digital	Button	Items to check	Highlighted display	Normal display		
key			e.g.	e.g. 🔺		
	A	Bypass paper size detection sensor-3 (Refer to Table 1)	Bit 1	Bit 0		
	В	Bypass paper size detection sensor-2 (Refer to Table 1)	Bit 1	Bit 0		
	С	Bypass paper size detection sensor-1 (Refer to Table 1)	Bit 1	Bit 0		
[6]	D	Bypass paper size detection sensor-0 (Refer to Table 1)	Bit 1	Bit 0		
	E	-	-	-		
	F	-	-	-		
	G	Bypass feed sensor	No paper	Paper present		
	Н	Bypass feed unit cover sensor	Cover closed	Cover opened		
	Α	Exit cover sensor	Cove opened	Cover closed		
	В	Exit sensor	Paper present	No paper		
	С	Fuser transport sensor	No paper	Paper present		
	D	Reverse sensor-2	No paper	Paper present		
[7]	F	Reverse sensor-1	No naper	Paper present		
	F	-	-	-		
	G			_		
	н		_	_		
	Δ	Tandem I CE connection switch	Connected	Not connected		
			Connected	NOT CONNECTED		
	B C	- Standhy aida mia ataaking aanaar	- Corroct stocking	- Incorroct stocking		
		Standby side ampty sensor	No popor	Deper present		
				raper present		
[8]	E	- Tan dam LOE hattan a sana n	-	-		
[0]	F	Tandem LCF bottom sensor	Bottom position	position		
	G	End fence home position sensor	Home position	Other than home position		
	Н	End fence stop position sensor	Stop position	Other than stop position		
	Α	-	-	-		
	В	-	-	-		
	С	-	-	-		
101	D	-	-	-		
[9]	E	Exit/Reverse section connection	Not connected	Connected		
	F	Horizontal transport sensor-1	Paper present	No paper		
	G	Horizontal transport sensor-2	Paper present	No paper		
	Н	Horizontal transport sensor-3	Paper present	No paper		
	Α	-	-	-		
	B	-	-	-		
	C -			_		
		Einisher connection (IPC connection)	Not connected	Connected		
[0]	F	Fuser unit switch	Connected	Not connected		
	F	Web motor connection signal	Not connected	Connected		
				Connected		
	<u></u> Ц	- Dovelopor unit owitch	- Not connected	Connected		
		Developer unit switch	NOT CONNECTED	Connected		

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

	Bypass paper	Paper width size		
3	2	1	0	Faper-wiulii Size
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/LG
1	0	0	1	B5-R

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

			Contents			
Digital	Button	Items to check	Highlighted display	Normal display		
key			e.g.	e.g. 🔺		
	Α	-	-	-		
	В	-	-	-		
	С	Exit sensor	Paper present	No paper		
[1]	D	-	-	-		
[[']	E	Cover interlock switch (front cover (lower))	Cover opened	Cover closed		
	F	Toner bag full detection sensor	Full	Not full		
	G	Fuser exit sensor	No paper	Paper present		
	Н	Front cover switch (front cover (upper))	Cover closed	Cover opened		
	А	-	-	-		
	В	-	-	-		
	С	-	-	-		
	D	Auto-toner sensor	Not connected	Connected		
[2]	E	-	-	-		
	F	Cleaner unit connection	Not connected	Connected		
	G	Wire cleaner position detection switch	Stop position	Other than stop position		
	Н	Exit cover sensor	Cover opened	Cover closed		
	Α	Destination detection-1	Other than SAD	SAD		
	В	Destination detection-2	Other than TWD	TWD		
	С	-	-	-		
[3]	D	Counter connection signal-2	Not connected	Connected		
[3]	E	-	-	-		
	F	Key copy counter connection	Not connected	Connected		
	G	Toner cartridge detection switch	No cartridge	Cartridge present		
	Н	Toner cartridge empty sensor	Toner present	No drawer		
	Α	High-voltage transformer charging error	Cover closed	Error		
	В	Web detection sensor	End of web	Web remaining		
	С	-	-	-		
	D	-	-	-		
[4]	E	Registration sensor	No paper	Paper present		
["]	F	-	-	-		
	G	Transfer belt release detection sensor	Other than release position	Release position		
	Н	Transfer belt contact detection sensor	Other than contact position	Contact position		

	Button		Contents			
Digital		Items to check	Highlighted display	Normal display		
key			e.g.	e.g. 🔺		
	Α	-	-	-		
	В	-	-	-		
	С	-	-	-		
	D	-	-	-		
[5]	E	-	-	-		
	F	RADF connection	Connected	Not connected		
	G	RADF opening/closing switch	RADF opened	RADF closed		
	Н	Carriage home position sensor	Home position	Other than home position		
	Α	-	-	-		
	В	-	-	-		
	С	-	-	-		
[6]	D	Automatic original detection sensor (APS-R)	No original	Original present		
lol	E	Automatic original detection sensor (APS-C)	No original	Original present		
	F	Automatic original detection sensor (APS-3)	No original	Original present		
	G	Automatic original detection sensor (APS-2)	No original	Original present		
	Н	Automatic original detection sensor (APS-1)	No original	Original present		
	Α	Original tray sensor	Original present	No original		
	В	Original empty sensor	Original present	No original		
	С	Jam access cover opening/closing switch	Cover opened	Cover closed		
[7]	D	RADF opening/closing switch	RADF opened	RADF closed		
[/]	E	Large original exit sensor	Original present	No original		
	F	Original intermediate transport sensor	Original present	No original		
	G	Read sensor	Original present	No original		
	Н	Original registration sensor	Original present	No original		
	A	Lifting tray lower limit detection sensor	Lower limit position	Other than lower limit position		
	В	Lifting tray upper limit detection sensor	Upper limit position	Other than upper limit position		
	С	Small original exit sensor	Original present	No original		
[8]	D	Small original reverse sensor	Original present	No original		
	E	Original length detection sensor	Original present	No original		
	F	Original width detection sensor-1	Original present	No original		
	G	Original width detection sensor-2	Original present	No original		
	Н	Original width detection sensor-3	Original present	No original		
	Α	-	-	-		
	В	-	-	-		
	С	-	-	-		
[0]	D	-	-	-		
[9]	E	-	-	-		
	F	-	-	-		
	G	APS operation sensor	APS sensor ON	APS sensor OFF		
	Н	24V power supply (RADF)	Power OFF	Power ON		
	Α	Original tray width sensor (higher bits)	Bit 1	Bit 0		
	В	Original tray width sensor	Bit 1	Bit 0		
	С	Original tray width sensor	Bit 1	Bit 0		
101	D	Original tray width sensor	Bit 1	Bit 0		
[U]	E	Original tray width sensor	Bit 1	Bit 0		
	F	Original tray width sensor	Bit 1	Bit 0		
	G	Original tray width sensor	Bit 1	Bit 0		
	Н	Original tray width sensor (lower bits)	Bit 1	Bit 0		

			Contents			
Digital	Button	Items to check	Highlighted display	Normal display		
key	Datton		e.g.	e.g. 🔺		
[1]	-	Temperature/humidity sensor (displays temper- ature inside of the equipment)	-	Temperature [°C]		
[2]	-	Temperature/humidity sensor (displays humidity inside of the equipment)	-	Humidity [%RH]		
[3]	-	Drum thermistor (displays drum surface temper- ature)	-	Temperature [°C]		
	Α	-	-	-		
[4]	В	-	-	-		
	С	-	-	-		
	D	-	-	-		
	E	-	-	-		
	F	-	-	-		
	G	-	-	-		
	H	-	-	-		
	A			-		
	B			-		
	C			_		
	0	_		_		
[5]	F		_	_		
	F		_	_		
	C C					
	<u></u> Ц	-	-	-		
		-	-	-		
		-	-	-		
	Б	-	-	-		
		-	-	-		
[6]		-	-	-		
	E	-	-	-		
	F	-	-	-		
	G	-	-	-		
	н	-	-	-		
	A	-	-	-		
	В	-	-	-		
	C	-	-	-		
[7]	D	-	-	-		
	E	-	-	-		
	F	-	-	-		
	G	-	-	-		
	Н	-	-	-		
	Α	-	-	-		
	В	-	-	-		
	С	-	-	-		
[0]	D	-	-	-		
[0]	E	-	-	-		
	F	-	-	-		
	G	-	-	-		
	Н	-	-	-		

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

			Contents			
Digital	Button	Items to check	Highlighted display	Normal display		
key			e.g.	e.g. 🔺		
	Α	-	-	-		
	В	-	-	-		
	С	-	-	-		
101	D	-	-	-		
[9]	E	-	-	-		
	F	-	-	-		
	G	-	-	-		
	Н	-	-	-		
	Α	Dongle for Printer/Scanner Kit (GM-2040/2041)	Connectable	Not connectable		
	В	Dongle for Printer Kit (GM-1050/1051)	Connectable	Not connectable		
	С	Dongle for Scanner Kit (GM-4010)	Connectable	Not connectable		
[0]	D	Dongles for other equipments / Other USB devices	Connectable	Not connectable		
[U]	E	Judgement for acceptable USB storage device (*1)	Acceptable	Not acceptable		
	F	-	-	-		
	G	-	-	-		
	Н	-	-	-		

*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.

2.2.2 Output check (test mode 03)



Procedure 4

Code	Function	Code	Function	Procedure
101	Drum motor ON (operational without developer unit)	151	Code No. 101 function OFF	1
102	New toner supply motor ON (operational with developer unit)	152	Code No. 102 function OFF	1
103	Polygonal motor (600 dpi) ON	153	Code No. 103 function OFF	1
108	Registration motor ON	158	Code No. 108 function OFF	1
110	Horizontal transport section driving clutch-1 ON	160	Code No. 110 function OFF	1
111	Drum separation finger solenoid ON	161	Code No. 111 function OFF	1
112	Developer unit motor ON	162	Code No. 112 function OFF	1
113	Fuser motor ON	163	Code No. 113 function OFF	1
114	Transfer belt motor ON	164	Code No. 114 function OFF	1
115	Cleaning brush drive motor ON	165	Code No. 115 function OFF	1
116	Used toner transport motor ON	166	Code No. 116 function OFF	1
118	Laser ON	168	Code No. 118 function OFF	1
120	Exit motor (normal) ON	170	Code No. 120 function OFF	1
121	Exit motor (increased speed) ON	171	Code No. 121 function OFF	1
122	LCF feed motor ON	172	Code No. 122 function OFF	1
123	Hopper motor ON	173	Code No. 123 function OFF	1
124	Web motor ON	174	Code No. 124 function OFF	1
125	Feed motor ON	175	Code No. 125 function OFF	1
126	Reverse motor (normal / forward rotation) ON	176	Code No. 126 function OFF	1
127	Reverse motor (increased speed / forward rotation) ON	177	Code No. 127 function OFF	1
128	Reverse motor (normal / reverse rotation) ON	178	Code No. 128 function OFF	1
129	Reverse motor (increased speed / reverse rotation) ON	179	Code No. 129 function OFF	1
131	Recycle toner transport motor ON	181	Code No. 131 function OFF	1
132	New toner transport motor ON	182	Code No. 132 function OFF	1
133	Transport motor ON (processing speed)	183	Code No. 133 function OFF	1
134	Transport motor ON (feeding speed)	184	Code No. 134 function OFF	1
135	Transport motor ON (ADU feeding speed)	185	Code No. 135 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	Tandem LCF pickup solenoid ON/OFF	3
207	Tandem LCF end fence reciprocating movement	2
208	Tandem LCF end fence motor ON/OFF	3
209	3rd drawer / Tandem LCF feed clutch ON/OFF	3
210	3rd drawer / Tandem LCF transport clutch ON/OFF	3
211	Document feed motor (forward rotation) ON/OFF	3
212	Document feed motor (reverse rotation) ON/OFF	3
213	Read motor (forward rotation) ON/OFF	3
218	Key copy counter count-up	3
220	Horizontal transport section drive clutch-2 ON/OFF	3
221	Horizontal transport section drive clutch-3 ON/OFF	3
225	4th drawer transport clutch ON/OFF	3
226	3rd drawer / Tandem LCF feed clutch ON/OFF	3
228	4th drawer feed clutch ON/OFF	3
229	1st drawer transport clutch ON/OFF	3
230	2nd drawer transport clutch ON/OFF	3
231	3rd drawer / Tandem LCF transport clutch ON/OFF	3
234	Bypass pickup solenoid ON/OFF	3
235	Discharge LED ON/OFF	3
236	Exit section cooling fan (high speed) ON/OFF	3
237	Exit section cooling fan (low speed) ON/OFF	3
240	Developer unit fan ON/OFF	3
243	Wire cleaner drive motor ON	2
244	Transfer belt cam motor up/down	3
245	Transfer belt power supply roller bias TR1 ON/OFF	3
246	Transfer belt power supply roller bias TR2 ON/OFF	3
247	Transfer belt power supply roller bias TR3 ON/OFF	3
248	Developer bias +DC ON/OFF (operational without developer unit)	3
249	Developer bias -DC1 ON/OFF (operational without developer unit)	3
250	Developer bias -DC2 ON/OFF (operational without developer unit)	3
251	Developer bias -DC3 ON/OFF (operational without developer unit)	3
252	Main charger ON/OFF (operational without developer unit)	3
254	Duct in fan ON/OFF	3
255	Transfer belt cleaning brush bias ON/OFF (operational without developer unit)	3
257	Duct out fan (high speed) ON/OFF	3
258	Duct out fan (low speed) ON/OFF	3
259	Fuser cooling fan (high speed) ON/OFF	3
260	Fuser cooling fan (low speed) ON/OFF	3
261	Scan motor ON (automatically stops at limit position; speed can be changed with the [ZOOM] button)	2
264	SLG board cooling fan ON/OFF	3
267	Exposure lamp ON/OFF	3
270	Tandem LCF tray-up motor up/down	2
271	LCF tray motor tray-up	2

Code	Function	Procedure
272	LCF feed clutch ON/OFF	3
273	LCF transport clutch ON/OFF	3
274	Gate solenoid ON/OFF	3
276	Tray-up motor-1 ON (1st drawer tray goes up)	2
278	Tray-up motor-1 ON (2nd drawer tray goes up)	2
279	Tray-up motor-2 ON (3rd drawer tray goes up)	2
280	Tray-up motor-2 ON (4th drawer tray goes up)	2
283	Large original exit roller (forward rotation) ON/OFF	3
284	Large original exit roller (reverse rotation) ON/OFF	3
285	Small original exit roller (forward rotation) ON/OFF	3
286	Small original exit roller (reverse rotation) ON/OFF	3
287	Large original exit solenoid ON/OFF	3
288	Small original exit solenoid ON/OFF	3
289	Large original exit roller release solenoid ON/OFF	3
290	Tray lift motor tray-up/down	3
292	Laser unit cooling fan (high speed) ON/OFF	3
293	Laser unit cooling fan (low speed) ON/OFF	3
295	Power OFF mode	4
450	IH board cooling fan (high speed) ON/OFF	3
451	IH board cooling fan (low speed) ON/OFF	3
452	Reverse section cooling fan-1 (front side) ON/OFF	3
454	Reverse section cooling fan-2 (front side) 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).

<Operation procedure>

$$[0][4] \longrightarrow (Code) \longrightarrow [START] \longrightarrow Operation \longrightarrow [CLEAR] \longrightarrow [POWER] OFF/ON$$

$$(Continuous) (Exit) (Exit)$$

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
111	Primary scanning direction 33 gradation steps	Error diffusion
113	Secondary scanning direction 33 gradation steps	Error diffusion / gamma adjustment pattern
142	Grid pattern	Pattern width: 2 dots, Pitch: 10 mm
182	Secondary scanning direction 33 gradation steps (dither)	Gamma adjustment pattern
184	Secondary scanning direction 33 gradation steps and dither process check pattern	Gamma adjustment check pattern

2.2.4 Adjustment mode (05)

Items in the adjustment mode list in the following pages can be corrected or changed in the 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.

Procedure 1



Procedure 2



Procedure 3



Procedure 4



Procedure 6



* When the automatic adjustment ends abnormally, error message is displayed.

Procedure 7



* When the automatic adjustment ends abnormally, error message is displayed.

Procedure 10



Procedure 17



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	Refer to 3.2.3 Printer related adjustment
3	Grid pattern (Duplex printing)	Refer to 3.2.3 Printer related adjustment
9	Gamma adjustment pattern (dither)	Refer to 3.2.2 Paper alignment at registration roller
10	Gamma adjustment pattern (error diffusion)	Refer to 3.2.2 Paper alignment at registration roller
90	Duplex test copy (single->duplex)	Duplex printing from the specified drawer is per- formed. Any number of originals can be used for this test.
91	Duplex test copy (single->single)	Duplex scanning from the RADF is performed and then single-sided printing from the specified drawer is performed. Any number of originals can be used for this test.
92	Duplex test copy (duplex->duplex)	Duplex scanning from the RADF is performed and then duplex printing from the specified drawer is performed. Any number of originals can be used for this test.

Notes:

- The digit after the hyphen in "Code" of the following table is a sub code.
- In "RAM", the NVRAM or FRAM 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	Classi- fication	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
200	Devel- oper	Automatic adjustment of auto-toner sensor (Fuser heater ON)	ALL	-	-	The adjustment starts approx. 3 minutes after this mode has been selected, and then the value is automatically adjusted. The adjust- ment value is fixed by pressing the [ENTER] button. * This selection is dis- abled when the developer unit is not installed. (Ch.3.1)	17		
201	Devel- oper	Correction of auto-toner sensor (Fuser heater ON)	ALL	128 <0-255>	Μ	The adjustment value of the auto-toner sensor set in the code 05-200 is verified. * This selection is dis- abled when the developer unit is not installed.	3		
205	Devel- oper	Developer bias DC output adjustment	ALL	113 <0-255>	Μ	The developer bias is output. Use this code to verify the output value of the high-voltage trans- former. * The value is output while the developer unit is taken off from the drum. (Ch.3.6)	3		
210	Charger	Main charger grid bias out- put adjustment	ALL	102 <0-255>	Μ	The main charger grid bias is output. Use this code to verify the output value of the high-voltage transformer. * Take off the devel- oper unit to enable this code. (Ch.3.6)	3		

Adjustment mode (05)									
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure	
221	Transfer	Transfer transfe output adjustme	ALL	138 <0-255>	Μ	When the value increases, the transfer transformer output increases. The output value of the transfer belt power supply roller is unmeasurable since its voltage is extremely high. * Make sure to close the front cover when this code is used. Never touch the high- voltage section. * This selection is dis- abled when the developer unit is not installed.	3		
241	Image quality control	Relative humidity display at image quality closed-loop control		ALL	55 <0-99>	М	A relative humidity detected at the image quality closed-loop con- trol is displayed.	2	
242		Drum surface potential sensor control status		ALL	0 <0-2>	M	0: Normal 1: Error (control stopped) 2: Error (sensor abnor- mality)	2	
244	-	Drum surface potential sensor output (Latest value) (Center voltage)		ALL	0 <0-999>	M	The drum surface poten- tial of the main charger center bias measured by the sensor is displayed.	2	
247	Transfer	Temperature/humidity sen- sor Humidity display		ALL	60 <0-100>	M	The humidity of the inside of the equipment is displayed. [Unit: RH%]	2	
248	Image quality control	Latest value of drum tem- perature		ALL	22 <0-100>	М	A drum surface tempera- ture detected at the drum surface potential sensor control is displayed.	2	
249		Drum surface potential sensor / Residual voltage sensor output (Latest value)		ALL	0 <0-999>	М	The measured value of the residual voltage after discharging is displayed.	2	
251-0	Charger	Main charger grid calibra- tion reference	Lower limit	ALL	50 <0-255>	М	The lower limit bit value of the main charger grid control voltage is output.	4	
251-1		value adjust- ment	Upper limit	ALL	207 <0-255>	М	The upper limit bit value of the main charger grid control voltage is output.	4	
253-0	Devel- opment	Developer bias calibra- tion reference	Lower limit	ALL	59 <0-255>	M	The lower limit bit value of the developer bias control voltage is output.	4	
253-1		value adjust- ment	Upper limit	ALL	227 <0-255>	M	The upper limit bit value of the developer bias control voltage is output.	4	

Adjustment mode (05)										
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
260	Image quality control	Contrast voltag control RMS va	e open-loop Ilue display	ALL	250 <0-999>	М	The default value of development contrast potential is displayed.	2		
261		RMS value disp development co age	olay of ontrast volt-	ALL	300 <0-999>	М	The RMS value of devel- opment contrast poten- tial is displayed.	2		
262	Image quality control	Background po value display	tential RMS	ALL	100 <0-999>	М	The RMS value of the background potential is displayed. [Unit: V]	2		
263-0	Image quality control	RMS value display of open-loop control (Laser power initial value)	1st laser	ALL	Refer to contents <0-1500>	М	The RMS value of the laser power calculated in the open-loop control is displayed. [Unit: µW] <default value=""> e-STUDIO520 / e-STUDIO600 / e-STUDIO720: 665 e-STUDIO850: 304</default>	10		
263-1			2nd laser	ALL	304 <0-1500>	М	The RMS value of the laser power calculated in the open-loop control is displayed. [Unit: μW] * Valid only for e-STUDIO850	10		
264-0	Image quality control	Laser power RMS value display	1st laser	ALL	Refer to contents <0-1500>	Μ	The RMS value at the regular operation is dis- played. [Unit: μW] e-STUDIO520/523/600/ 603/720/723: 665 e-STUDIO850/853: 304	10		
264-1			2nd laser	ALL	304 <0-1500>	М	The RMS value at the regular operation is dis- played. [Unit: μW] * Valid only for e-STUDIO850/853	10		
265-0	Image quality control	Number of times of image quality closed-loop control correc-	Develop- ment con- trast voltage correction	ALL	0 <0-99>	М	The number of times of the development con- trast voltage correction performed is displayed.	10		
265-1		tion	Laser power cor- rection	ALL	0 <0-99>	М	The number of times of laser power correction performed is displayed.	10		
268	Image quality control	Drum surface p sensor output (Latest value) (Low voltage)	otential	ALL	0 <0-999>	М	The value of the main charger grid bias mea- sured with the drum sur- face potential sensor is	2		
269		Drum surface p sensor output (Latest value) (High voltage)	otential	ALL	0 <0-999>	M	displayed.	2		
Adjustment mode (05)										
----------------------	-----------------------------	--	----------------------------	---------------	--	-----	---	----------------	--	--
Code	Classi- fication	ltem	IS	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
270	Transfer	Temperature/hu sor Temperatur	umidity sen- re display	ALL	22 <0-100>	М	The temperature of the inside of the equipment is displayed. [Unit: °C]	2		
286-0	Laser	Laser power adjustment	1st laser	ALL	Refer to contents <0-255>	Μ	When the value increases, the laser power output increases. <default value=""> e-STUDIO520/523/600/ 603/720/723: 132 e-STUDIO850/853: 101</default>	14		
286-1			2nd laser	ALL	101 <0-255>	М	When the value increases, the laser power output increases. * Valid only for e-STUDIO850/853	14		
290	Image quality control	Image quality control enforcement Control status display of image quality control		ALL	-	М	Image quality control is performed forcibly when the density correction of the image is required.	6		
291	Image quality control			ALL	0 <0-2,4>	Μ	The control status of image quality control is displayed. 0: Normal 1: Error (control stopped) 2: Error (abnormal pat- tern density) 4: Sensor LED off-level abnormality or sensor LED light amount abnor- mality	2		
292	Image quality control	Image quality sensor output value display	Light source off	ALL	0 <0-1023>	М	The output value of the image quality sensor (while the sensor light source is turned off) is displayed.	2		
293			Drum sur- face	ALL	0 <0-1023>	М	The output value of the image quality sensor of the drum surface (when no test pattern exists) is displayed.	2		
294	Image quality control	Low density pa sor output value	ttern sen- e	ALL	0 <0-1023>	М	The value of the low den- sity pattern detected at the image quality closed- loop control is displayed.	2		
295		High density pattern sen- sor output value		ALL	0 <0-1023>	M	The value of the high density pattern detected at the image quality closed-loop control is displayed.	2		
296	Image quality control	Result display of quality sensor l adjustment	of image ight amount	ALL	0 <0-255>	M	The result of the sensor LED light amount adjust- ment (to use the reflec- tion amount from the drum surface as a refer- ence) is displayed.	2		

	Adjustment mode (05)										
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure			
299	Image quality control	Image quality o control enforce	pen-loop ment	ALL	-	М	When a service call has occurred or a warning message (IQC/SPC) has appeared, "Image quality control enforcement (05- 290)" should be per- formed after the equip- ment is repaired or the cause of the error is evaluated. In case the service call occurred or the warning message (IQC/SPC) appeared again after the perfor- mance of the code 05- 290, a test chart can be printed out by tempo- rarily using this code (05- 299) if an image check is urgently needed.	6			
305	Scanner	Image location adjustment of secondary scanning direction (scanner section)		ALL	140 <92-164>	SYS	When the value increases by "1", the image shifts by approx. 0.143 mm toward the trailing edge of the paper.	1			
306	Scanner	Image location of primary scan tion (scanner sectio	adjustment ining direc- n)	ALL	135 <63-193>	SYS	When the value increases by "1", the image shifts by approx. 0.169 mm toward the front side of the paper.	1			
308	Scanner	Distortion mode	9	ALL	-	-	Moves carriages to the adjusting position. (Ch.3.2.4)	6			
310	Scanner	Shading posi- tion adjust-	Original glass	ALL	0 <0-11>	SYS	0.1433 mm/step	1			
311		ment	RADF	ALL	0 <0-5>	SYS	0.1433 mm/step	1			
340	Scanner	Reproduction ratio adjust- ment of secondary scan- ning direction (scanner section)		ALL	128 <0-255>	SYS	When the value increases by "1", the reproduction ratio in the secondary scanning direction (vertical to paper feeding direction) increases by approx. 0.223%.	1			
352	RADF	EEPROM initia	lization	ALL	-	SYS	EEPROM is initialized.	6			
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	1			
355			for double sided orig- inal	ALL	10 <0-20>	SYS	0.5 mm.	1			

			Adju	stment	mode (05)			
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
356	RADF	Automatic adju RADF sensor	stment of	ALL	-	SYS	Performs the adjustment and initialization when the RADF board or RADF sensor is replaced.	6
357	RADF	Fine adjustmen transport speed	it of RADF	ALL	50 <0-100>	SYS	When the value increases by "1", the reproduction ratio of the secondary scanning direction when using the RADF increases by approx. 0.1%.	1
358	RADF	RADF sideway adjustment	s deviation	ALL	120 <63-193>	SYS	When the value increases by "1", the image of original fed from the RADF shifts toward the rear side of paper by approx. 0.0846 mm.	1
359	Scanner	Carriage position ment during sca RADF	ALL	128 <0-255>	SYS	When the value increases by "1", the car- riage position when using the RADF shifts by approx. 0.1 mm toward the original feeding side.	1	
365	RADF	RADF lead- ing edge posi- tion	for single - sided orig- inal	ALL	50 <0-100>	SYS	When the value increases by "1", the copied image of original	1
366		adjustment	for double sided orig- inal	ALL	50 <0-100>	SYS	fed from the RADF shifts toward the trailing edge of paper by approx. 0.1 mm.	1
367	RADF	RADF original (adjustment (Minimum)	guide width	ALL	-	-	Stores the current width of RADF original guide by keying in this code with the guide set at the minimum width. Perform this adjustment when the RADF board or volume is replaced, or when the code (05-352) is per- formed.	6
368	RADF	RADF original (adjustment (Maximum)	guide width	ALL	-	-	Stores the current width of RADF original guide by keying in this code with the guide set at the maximum width. Per- form this adjustment when the RADF board or volume is replaced, or when the code (05-352) is performed.	6

	Adjustment mode (05)											
Code	Classi- fication	ltem	IS	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure				
401	Laser	Fine adjustmer	t of polygo-	PRT	128	М	When the value	1				
405	-	nal motor rotati (adjustment of scanning direct duction ratio)	(adjustment of primary scanning direction repro- duction ratio) Secondary scanning laser writing start position adjust-		<0-255> 128 <0-255>	M	of "1", the reproduction ratio of the primary scan- ning direction increases as follows: e-STUDIO520/523/600/ 603/720/723: 0.3 mm/step e-STUDIO850/853: 0.1 mm/step	1				
408	Laser	Secondary sca writing start pos ment (All)	nning laser sition adjust-	ALL	40 <0-80>	М	When the value increases by "1", the image shifts approx. 0.4 mm to the trailing edge side of the paper.	1				
409	Drive	Fine adjustmer motor rotation s	nt of drum speed	FAX	128 <0-255>	М		1				
410	Laser	Adjustment of primary scanning laser writing start position.		PPC	128 <0-255>	М	When the value increases by "1", the writ- ing start position shifts to the front side by approx. 0.0423 mm.	1				
411				PRT	128 <0-255>	М		1				
412	Drive	Fine adjustmer tration motor ro speed	it of regis- itation	FAX	128 <0-255>	М		1				
421	Drive	Adjustment of s scanning direct	secondary ion repro-	PPC/ PRT	128 <0-255>	М	When the value increases by "1", the	1				
422		duction ratio (fine adjustmer motor speed)	t of main	FAX	139 <0-255>	М	reproduction ratio of sec- ondary scanning direc- tion increases by approx. 0.04%.	1				
424	Drive	Fine adjustmer motor speed	nt of exit	PPC/ PRT	107 <0-255>	М	When the value increases by "1", the	1				
425				FAX	121 <0-255>	М	rotation becomes faster by approx. 0.05%.	1				
426	Drive	Fine adjustmer fer belt motor re speed	nt of trans- otation	FAX	128 <0-255>	М		1				
427	Drive	Fine adjustmer roller rotation s	nt of fuser peed	FAX	128 <0-255>	М		1				
428	Laser	Secondary scanning	4th drawer	ALL	20 <0-40>	М	When the value increases by "1", the	1				
429		laser writing start position adjustment	Tandem LCF	ALL	20 <0-40>	М	image shifts approx. 0.4 mm to the trailing edge side of the paper.	1				

			Adju	stment	mode (05)			
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
430	Image	Top margin adju (blank area at t edge of the pap	ustment he leading per)	PPC	0 <0-255>	М	When the value increases by "1", the blank area becomes	1
431	Image	Left margin adju (blank area at the paper along the feeding direction	ustment ne left of the e paper n)	PPC	0 <0-255>	М	wider by approx. 0.0423 mm.	1
432	Image	Right margin ac (blank area at t the paper along feeding directio	djustment he right of J the paper n)	PPC	0 <0-255>	М		1
433	Image	Bottom margin (blank area at t edge of the pap	adjustment he trailing per)	PPC	0 <0-255>	М		1
434-0	Image	Bottom margin (blank area at t edge of the pap Reverse side a	adjustment he trailing ber)/ t duplexing	PPC/ PRT	0 <0-255>	М		4
434-1	Image	Left margin adj (blank area at th paper along the feeding directio side at duplexir	ustment ne left of the paper n)/Reverse	PPC/ PRT	0 <0-255>	М		4
435	Image	Top margin adjustment (blank area at the leading edge of the paper)		PRT	24 <0-255>	М		1
436	Image	Left margin adji (blank area at th paper along the feeding directio	ustment ne left of the e paper n)	PRT	0 <0-255>	М		1
437	Image	Right margin ac (blank area at t the paper along feeding directio	djustment he right of J the paper n)	PRT	0 <0-255>	М	-	1
438	Image	Bottom margin (blank area at t edge of the pap	adjustment he trailing per)	PRT	0 <0-255>	М		1
439	Drive	Fine adjustmen motor rotation s	t of feed speed	FAX	128 <0-255>	М		1
440	Laser	Adjustment of secondary	1st drawer	ALL	20 <0-40>	М	When the value increases by "1", the	1
441		scanning laser writing	2nd drawer	ALL	20 <0-40>	М	image shifts toward the trailing edge of the paper	1
442		start position	Bypass feeding	ALL	20 <0-40>	М	by approx. 0.4 mm.	1
443			Option LCF	ALL	20 <0-40>	М	+	1
444			3rd drawer	ALL	20 <0-40>	М	+	1
445			Duplex feeding	ALL	20 <0-40>	М	+	1
446-0	Drive	Fine adjust- ment of drum	Normal speed	PPC	128 <0-255>	М		4
446-1		motor rota- tion speed	Increased speed	PPC	128 <0-255>	М	+	4

Adjustment mode (05)											
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure			
447-0	Drive	Fine adjust- ment of drum	Normal speed	PRT	128 <0-255>	М		4			
447-1		motor rota- tion speed	Increased speed	PRT	128 <0-255>	М	*	4			
448-0	Paper feeding	Paperaligning amount	Long size	ALL	10 <0-63>	М	When the value increases by "1", the	4			
448-1		adjustment at the registra-	Middle size	ALL	10 <0-63>	М	aligning amount increases by approx.	4			
448-2		(3rd drawer /	Short size- 1	ALL	12 <0-63>	М	0.8 mm. <paper length=""></paper>	4			
448-3		(Plain paper)	Short size- 2	ALL	12 <0-63>	М	330 mm or longer	4			
448-4			Postcard	ALL	12 <0-63>	М	220 mm to 329 mm Short size-1:	4			
449-0	Paper feeding	Paperaligning amount	Long size	ALL	12 <0-63>	М	205 mm to 219 mm Short size-2:	4			
449-1		adjustment at the registra-	Middle size	ALL	12 <0-63>	М	160 mm to 204 mm Postcard:	4			
449-2		(4th drawer/	Short size- 1	ALL	12 <0-63>	М	159 mm or shorter	4			
449-3		Plain paper)	Short size- 2	ALL	12 <0-63>	М	-	4			
449-4			Postcard	ALL	12 <0-63>	М	-	4			
450-0	Paper feeding	Paper aligning amount	Long size	ALL	10 <0-63>	М		4			
450-1		adjustment at the registra-	Middle size	ALL	10 <0-63>	М	-	4			
450-2		tion section (1st drawer/	Short size- 1	ALL	12 <0-63>	М	*	4			
450-3			Short size- 2	ALL	12 <0-63>	М	*	4			
450-4			Postcard	ALL	12 <0-63>	М		4			
451-0	Drive	Fine adjust- ment of exit	Normal speed	FAX	128 <0-255>	М		4			
451-1		motor rota- tion speed	Increased speed	FAX	128 <0-255>	М	*	4			
452-0	Paper feeding	Paper aligning amount	Long size	ALL	12 <0-63>	М	When the value increases by "1", the	4			
452-1		adjustment at the registra-	Middle size	ALL	12 <0-63>	М	aligning amount increases by approx.	4			
452-2		(2nd drawer/	Short size- 1	ALL	12 <0-63>	М	<pre>v.o mm. <paper length=""> Long size:</paper></pre>	4			
452-3			Short size- 2	ALL	12 <0-63>	М	330 mm or longer Middle size:	4			
452-4			Postcard	ALL	12 <0-63>	Μ	220 mm to 329 mm Short size-1: 205 mm to 219 mm Short size-2: 160 mm to 204 mm Postcard: 159 mm or shorter	4			

	Adjustment mode (05)											
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure				
453-0	Drive	Fine adjust-	Normal	PPC	128 <0-255>	М		4				
453-1		reverse motor rotation speed	Increased speed	PPC	128 <0-255>	М	-	4				
454-0	Drive	Fine adjust- ment of	Normal speed	PRT	128 <0-255>	М		4				
454-1		reverse motor rotation speed	Increased speed	PRT	128 <0-255>	М	-	4				
455-0	Paper feeding	Paper aligning amount	Long size	ALL	12 <0-63>	М	When the value increases by "1", the	4				
455-1		adjustment at the registra-	Middle size	ALL	12 <0-63>	М	aligning amount increases by approx.	4				
455-2		(Duplex feed-	Short size- 1	ALL	12 <0-63>	М	<pre>> 0.8 mm. <paper length=""> Long size:</paper></pre>	4				
455-3		paper)	Short size- 2	ALL	12 <0-63>	М	330 mm or longer Middle size:	4				
455-4			Postcard	ALL	12 <0-63>	M	220 mm to 329 mm Short size-1: 205 mm to 219 mm Short size-2: 160 mm to 204 mm Postcard: 159 mm or shorter	4				
456-0	Drive	Fine adjust- ment of	Normal speed	FAX	128 <0-255>	М		4				
456-1		reverse motor rotation speed	Increased speed	FAX	128 <0-255>	М	-	4				
457	Paper feeding	Paper aligning adjustment at the tion section (Tandem LCF/F	amount he registra- Plain paper)	ALL	12 <0-63>	M	When the value increases by "1", the aligning amount increases by approx.	1				
458-0	Paper feeding	Paperaligning amount	Long size	ALL	15 <0-63>	М	0.8 mm. <paper length=""></paper>	4				
458-1		adjustment at the registra-	Middle size	ALL	15 <0-63>	М	Long size: 330 mm or longer	4				
458-2	-	1	tion section (Bypass feed-	tion section (Bypass feed- 1	Short size- 1	ALL	15 <0-63>	М	220 mm to 329 mm Short size-1:	4		
458-3		ng/Plain paper)	Short size- 2	ALL	15 <0-63>	М	205 mm to 219 mm Short size-2:	4				
458-4			Postcard	ALL	15 <0-63>	М	160 mm to 204 mm Postcard: 159 mm or shorter	4				

Adjustment mode (05)										
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
460-0	Paper feeding	Paperaligning amount	Long size	ALL	15 <0-63>	М	When the value increases by "1", the	4		
460-1		adjustment at the registra-	Middle size	ALL	15 <0-63>	М	aligning amount increases by approx.	4		
460-2		tion section (Bypass feed-	Short size- 1	ALL	15 <0-63>	М	0.8 mm. <paper length=""></paper>	4		
460-3		paper 1)	Short size- 2	ALL	15 <0-63>	М	330 mm or longer	4		
460-4			Postcard	ALL	15 <0-63>	М	220 mm to 329 mm Short size-1:	4		
461-0	Paper feeding	Paperaligning amount	Long size	ALL	15 <0-63>	М	205 mm to 219 mm Short size-2:	4		
461-1	_	adjustment at the registra-	Middle size	ALL	15 <0-63>	М	160 mm to 204 mm Postcard:	4		
461-2		tion section (Bypass feed-	Short size- 1	ALL	15 <0-63>	М	159 mm or shorter	4		
461-3		paper 2)	Short size- 2	ALL	15 <0-63>	М		4		
461-4			Postcard	ALL	15 <0-63>	М	-	4		
462-0	Paper feeding	Paperaligning amount	Long size	ALL	15 <0-63>	М		4		
462-1		adjustment at the registra-	Middle size	ALL	15 <0-63>	М	-	4		
462-2		tion section (Bypass feed-	Short size- 1	ALL	15 <0-63>	М	-	4		
462-3		paper 3)	Short size- 2	ALL	15 <0-63>	М	-	4		
462-4			Postcard	ALL	15 <0-63>	М	-	4		
463-0	Paper feeding	Paperaligning amount	Long size	ALL	15 <0-63>	М	-	4		
463-1		adjustment at the registra-	Middle size	ALL	15 <0-63>	М	-	4		
463-2		(Bypass feed-	Short size- 1	ALL	15 <0-63>	М	*	4		
463-3			Short size- 2	ALL	15 <0-63>	М	*	4		
463-4			Postcard	ALL	15 <0-63>	М	*	4		
464-0	Drive	Fine adjust- ment of trans-	Normal speed	PPC	128 <0-255>	М		4		
464-1		port motor rotation speed	Drawer feeding speed	PPC	128 <0-255>	М		4		
464-2			ADU feed- ing speed	PPC	128 <0-255>	М		4		
464-3			Option LCF feed- ing speed	PPC	128 <0-255>	М		4		

	Adjustment mode (05)											
Code	Classi- fication	ltem	IS	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure				
466-0	Paper feeding	Paper push- ing amount	Plain paper	ALL	20 <0-63>	М	When the value increases by "1", the	4				
466-1		adjustment	Thick 1	ALL	20 <0-63>	М	drive count of the bypass feed roller (at the start of	4				
466-2			Thick 2	ALL	20 <0-63>	М	the paper transport from the registration section)	4				
466-3			Thick 3	ALL	20 <0-63>	М	- increases approx. 2 ms.	4				
466-4			OHP film	ALL	20 <0-63>	М	-	4				
468-0	Finisher	Fine adjust- ment of bind-	A4-R/LT-R	ALL	0 <-14-14>	М	When the value increases by "1", the	4				
468-1		ing position/ folding posi-	B4/LG	ALL	0 <-14-14>	М	binding/folding position shifts toward the right	4				
468-2		tion	A3/LD	ALL	0 <-14-14>	М	page by 0.25 mm.	4				
469-0	Paper feeding	Paper aligning amount	Long size	ALL	10 <0-63>	М	When the value increases by "1", the	4				
469-1		adjustment at registration section (1st drawer)	Middle size	ALL	10 <0-63>	М	aligning amount increases by approx. 0.8 mm. <paper length=""> Long size:</paper>	4				
469-2			Short size- 1	ALL	12 <0-63>	М		4				
469-3		1)	Short size- 2	ALL	12 <0-63>	М	330 mm or longer	4				
469-4			Postcard	ALL	12 <0-63>	М	220 mm to 329 mm Short size-1:	4				
470-0	Paper feeding	Paperaligning amount	Long size	ALL	12 <0-63>	М	205 mm to 219 mm Short size-2:	4				
470-1		adjustment at the registra-	Middle size	ALL	12 <0-63>	М	160 mm to 204 mm Postcard:	4				
470-2		tion section (2nd drawer/	Short size- 1	ALL	12 <0-63>	М	159 mm or shorter	4				
470-3		тпіск рарегт)	Short size- 2	ALL	12 <0-63>	М	-	4				
470-4			Postcard	ALL	12 <0-63>	М	-	4				
471-0	Paper feeding	Paperaligning amount	Long size	ALL	10 <0-63>	М		4				
471-1		adjustment at the registra-	Middle size	ALL	10 <0-63>	М	1	4				
471-2		tion section (3rd drawer /	Short size- 1	ALL	12 <0-63>	М		4				
471-3	1	Tandem LCF (Thick paper	Short size- 2	ALL	12 <0-63>	М	1	4				
471-4	1	.,	Postcard	ALL	12 <0-63>	М	1	4				

	Adjustment mode (05)											
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure				
472-0	Paper feeding	Paperaligning amount	Long size	ALL	10 <0-63>	М	When the value increases by "1", the	4				
472-1		adjustment at the registra-	Middle size	ALL	10 <0-63>	М	aligning amount increases by approx.	4				
472-2		(4th drawer/ Thick paper 1)	tion section (4th drawer/	(4th drawer/	Short size- 1	ALL	12 <0-63>	М	0.8 mm. <paper length=""></paper>	4		
472-3			Short size- 2	ALL	12 <0-63>	М	330 mm or longer Middle size:	4				
472-4			Postcard	ALL	12 <0-63>	М	220 mm to 329 mm Short size-1:	4				
473-0	Paper feeding	Paperaligning amount	Thick paper 1	ALL	12 <0-63>	М	205 mm to 219 mm Short size-2:	4				
473-1		adjustment at registration	Thick paper 2	ALL	12 <0-63>	М	160 mm to 204 mm Postcard:	4				
473-2		section (3rd drawer / Tandem LCF)	Thick paper 3	ALL	12 <0-63>	М	159 mm or shorter	4				
473-3			OHP film	ALL	12 <0-63>	М		4				
474-0	Paper feeding	Paperaligning amount	Long size	ALL	12 <0-63>	М		4				
474-1		adjustment at the registra-	Middle size	ALL	12 <0-63>	М	-	4				
474-2		tion section (Duplex feed-	Short size- 1	ALL	12 <0-63>	М	-	4				
474-3		paper 1)	Short size- 2	ALL	12 <0-63>	М	-	4				
474-4			Postcard	ALL	12 <0-63>	М	-	4				
475-0	Drive	Fine adjust- ment of trans-	Normal speed	PRT	128 <0-255>	М		4				
475-1		port motor rotation speed	Drawer feeding speed	PRT	128 <0-255>	М		4				
475-2			ADU feed- ing speed	PRT	128 <0-255>	М		4				
475-3			Option LCF feed- ing speed	PRT	128 <0-255>	М		4				

Adjustment mode (05)										
Code	Classi- fication	ltem	s	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
476-0	Paper feeding	Adjustment of remained paper amount (paper	1st drawer	ALL	JPN: 8 UC: 10 Others: 6 <0-31>	М		4		
476-1		remained)	2nd drawer	ALL	JPN: 8 UC: 10 Others: 6 <0-31>	М	-	4		
476-2			3rd drawer	ALL	JPN: 8 UC: 10 Others: 6 <0-31>	М		4		
476-3	-		4th drawer	ALL	JPN: 8 UC: 10 Others: 6 <0-31>	М	-	4		
476-4	-		Option LCF	ALL	14 <0-31>	М	•	4		
476-5			Tandem LCF	ALL	3 <0-31>	М	-	4		
477-0	Paper feeding	Adjustment of remained paper amount (no paper	1st drawer	ALL	JPN: 20 UC: 18 Others:20 <0-31>	М		4		
477-1		remained)	2nd drawer	ALL	JPN: 20 UC: 18 Others:20 <0-31>	М	-	4		
477-2			3rd drawer	ALL	JPN: 20 UC: 18 Others:20 <0-31>	М		4		
477-3	-		4th drawer	ALL	JPN: 20 UC: 18 Others:20 <0-31>	М	-	4		
477-4			Option LCF	ALL	8 <0-31>	М	-	4		
477-5	-		Tandem LCF	ALL	6 <0-31>	М		4		
478-0	Drive	Fine adjust- ment of trans-	Normal speed	FAX	128 <0-255>	М		4		
478-1		port motor rotation speed	Drawer feeding speed	FAX	128 <0-255>	М		4		
478-2			ADU feed- ing speed	FAX	128 <0-255>	М		4		
478-3			Option LCF feed- ing speed	FAX	128 <0-255>	М	+	4		
480	Paper feeding	Adjustment of p ing aligning am	oaper feed- ount	ALL	-	М	The paper feeding align- ing amount is adjusted by pressing buttons on the LCD.	4		
481	Drive	Fine adjustmen motor rotation s	t of drum speed	PPC	128 <0-255>	М		1		

Adjustment mode (05)										
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
482	Drive	Fine adjustmen motor rotation s	t of drum	PRT	128 <0-255>	М		1		
483	Drive	Fine adjustmen tration motor ro speed	t of regis- tation	PPC	128 <0-255>	М		1		
484	Drive	Fine adjustmen tration motor ro speed	t of regis- tation	PRT	128 <0-255>	М		1		
485	Drive	Fine adjustmen roller rotation s	t of fuser peed	PPC	128 <0-255>	М		1		
486	Drive	Fine adjustmen roller rotation s	t of fuser peed	PRT	128 <0-255>	М		1		
487	Drive	Fine adjustmen fer belt motor ro speed	t of trans- otation	PPC	128 <0-255>	М		1		
488	Drive	Fine adjustmen fer belt motor ro speed	t of trans- otational	PRT	128 <0-255>	М	When the value increases by "1", the rotational speed increases for approx. 0.127%.	1		
489	Drive	Fine adjustment of feed motor rotation speed		PPC	128 <0-255>	М		1		
490	Drive	Fine adjustment of feed motor rotation speed		PRT	128 <0-255>	М		1		
493	Drive	Fine adjustmen oper unit motor speed	t of Devel- rotation	PPC	8 <0-15>	М		1		
497-0	Laser	Adjustment of drawer side-	1st drawer	ALL	128 <0-255>	М	When the value increases by "1", the	4		
497-1		ways devia- tion	2nd drawer	ALL	128 <0-255>	М	image shifts toward the front side by 0.0423 mm.	4		
497-2			3rd drawer	ALL	128 <0-255>	М	-	4		
497-3			4th drawer	ALL	128 <0-255>	М	*	4		
497-4			Tandem LCF	ALL	128 <0-255>	М	+	4		
497-5			Bypass feeding	ALL	128 <0-255>	М	+	4		
497-6			Option LCF	ALL	128 <0-255>	М	+	4		
498-0	Laser	Adjustment of primary scan-	Long size	ALL	148 <0-255>	М	When the value increases by "1", the	4		
498-1	1	ning laser writing start position at duplex feed- ing	Short size (A4/LT or smaller)	ALL	148 <0-255>	М	image shifts toward the front side by 0.0423 mm.	4		

Adjustment mode (05)											
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure			
501	Image	Density adjustment Fine adjust- ment of "man-	Photo	PPC	EUR:118 UC:118 JPN:128 <0-255>	SYS	When the value increases, the image at the center step becomes darker.	1			
503		Center value	Text/Photo	PPC	EUR:100 UC:100 JPN:128 <0-255>	SYS	-	1			
504			Text	PPC	EUR:113 UC:113 JPN:119 <0-255>	SYS	-	1			
505	Image	Density adjustment	Text/Photo	PPC	20 <0-255>	SYS	When the value increases, the image of	1			
506		Fine adjust- ment of "man-	Photo	PPC	20 <0-255>	SYS	the "light" steps becomes lighter.	1			
507		ual density"/ Light step value	Text	PPC	20 <0-255>	SYS	-	1			
508	Image	Density adjustment	Text/Photo	PPC	20 <0-255>	SYS	When the value increases, the image of	1			
509		Fine adjust- ment of "man-	Photo	PPC	20 <0-255>	SYS	the "dark" steps becomes darker.	1			
510		ual density"/ Dark step value	Text	PPC	20 <0-255>	SYS	-	1			
512	Image	Density adjustment	Photo	PPC	128 <0-255>	SYS	When the value increases, the image	1			
514		Fine adjust- ment of "auto- matic density"	Text/Photo	PPC	EUR:100 UC:100 JPN:128 <0-255>	SYS	becomes darker.	1			
515			Text	PPC	EUR:113 UC:113 JPN:119 <0-255>	SYS	-	1			
532	Image	Range correc- tion/Back-	Text/Photo	PPC	40 <0-255>	SYS	When the value increases, the back-	1			
533		ground peak adjustment	ground peak adjustment	ground peak j adjustment	Photo	PPC	16 <0-255>	SYS	ground becomes more brightened.	1	
534			Text	PPC	64 <0-255>	SYS		1			

Adjustment mode (05)											
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure			
570	Image	Range correc- tion on origi- nal manually set on the original glass	Text/Photo	PPC	EUR:12 UC:12 JPN: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 den-	1			
571			Photo	PPC	12 <11-14, 21-24, 31-34, 41-44>	SYS	sity". Once they are fixed, the range correc- tion is performed with standard values. The values of the background	1			
572			Text	PPC	22 <11-14, 21-24, 31-34, 41-44>	SYS	the reproduction of the background density and text density respectively. 1: fixed/fixed 2: varied/fixed 3: fixed/varied 4: varied/varied * Background peak/ Text peak	1			
593	Image	Gamma data slope adjust-	Text/Photo	PPC	5 <0-9>	SYS	Select the slope of Gamma curve (The	1			
594	Image	ment	Photo	PPC	5 <0-9>	SYS	larger the value is, the larger the slope	1			
595	Image	-	Text	PPC	5 <0-9>	SYS	becomes.)	1			
596-0	Image	Gamma bal- ance adjust-	Low den- sity	PRT	128 <0-255>	SYS/ RIP		4			
596-1		ment (PS/Photo)	Medium density	PRT	128 <0-255>	SYS/ RIP		4			
596-2			High den- sity	PRT	128 <0-255>	SYS/ RIP		4			
597-0	Image	Gamma bal- ance adjust-	Low den- sity	PRT	128 <0-255>	SYS/ RIP		4			
597-1		ment (PS/Text)	Medium density	PRT	128 <0-255>	SYS/ RIP		4			
597-2			High den- sity	PRT	128 <0-255>	SYS/ RIP		4			
598-0	Image	Gamma bal- ance adjust-	Low den- sitv	PRT	128 <0-255>	SYS/ RIP		4			
598-1		ment (PCL/Photo)	Medium densitv	PRT	128 <0-255>	SYS/ RIP	Ļ	4			
598-2			High den- sitv	PRT	128 <0-255>	SYS/ RIP		4			
599-0	Image	Gamma bal- ance adjust-	Low den-	PRT	128 <0-255>	SYS/ RIP		4			
599-1		ment (PCL/Text)	Medium	PRT	128	SYS/		4			
599-2			High den- sity	PRT	128 <0-255>	SYS/ RIP	1	4			

Adjustment mode (05)										
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
600	Image	Background adjustment	Text/Photo	PPC	JPN: 6 UC: 5 EUR: 6 <1-9>	SYS	When the value decreases, the back- ground becomes darker.	1		
601			Text	PPC	5 <1-9>	SYS	*	1		
602			Photo	PPC	4 <1-9>	SYS	*	1		
620	Image	Sharpness adjustment	Text/Photo	PPC	51 <11-99>	SYS	When the value increases, the image	1		
621-0			Photo (error dif- fusion)	PPC	23 <11-99>	SYS	becomes sharper. When the value decreases, the image becomes softer.	4		
621-1			Photo (Dither)	PPC	13 <11-99>	SYS	the more the moire is	4		
622			Text	PPC	61 <11-99>	SYS	One's place: Fixed value (Leave it at default.) Ten's place: Adjustable from 1 to 9 (The larger the value is, the sharper the image becomes.)	1		
653	Image	Adjustment of smudged/faint text	Text/Photo	PPC	192 <0-255>	SYS	Adjusts the level 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		
654	Image	Adjustment of smudged/faint text	PS	PRT	5 <0-9>	М	Adjustment of the smudged/faint text. With decreasing the value, the faint text is	1		
655			PCL	PRT	5 <0-9>	М	suppressed, and with increasing it, the smudged text is sup- pressed.	1		
663	Image	Dot size adjustment during printing		PRT	255 <0-255>	М	The dot size in the pri- mary scanning direction during printing is adjusted. When the value decreases, the dots become smaller.	1		
664	Image	Upper limit value in toner-	PS	PRT	176 <0-255>	М	When the value decreases, the density of	1		
665		saving period	PCL	PRT	176 <0-255>	М	the printed text becomes lower.	1		

Adjustment mode (05)										
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
693	Image	Range correc- tion on origi- nal set on the RADF	Text/Photo	PPC	EUR:12 UC:12 JPN: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 den-	1		
694			Photo	PPC	12 <11-14, 21-24, 31-34, 41-44>	SYS	sity". Once they are fixed, the range correc- tion is performed with standard values. The values of the back-	1		
695	1		Text	PPC	22 <11-14, 21-24, 31-34, 41-44>	SYS	ground peak and text peak affect the reproduc- tion of the background density and text density respectively. 1: fixed/fixed 2: varied/fixed 3: fixed/varied 4: varied/varied * Background peak/ Text peak	1		
700	Image	Adjustment of binarized threshold (Text)	Center value	FAX	120 <0-255>	SYS	When the value increases, the image at the center step becomes darker.	1		
701			Light step value	FAX	20 <0-255>	SYS	When the value increases, the image of "light" side becomes lighter.	1		
702			Dark step value	FAX	20 <0-255>	SYS	When the value increases, the image of "dark" side becomes darker.	1		
710	Image	Density adjustment Fine adjust-	Photo	FAX	128 <0-255>	SYS	When the value increases, the image at the center step becomes	1		
714		ment of "man- ual density"/ Center value	Text/Photo	FAX	128 <0-255>	SYS	darker.	1		
715	Image	Density adjustment Fine adjust-	Photo	FAX	20 <0-255>	SYS	When the value increases, the image of the "light" steps becomes	1		
719		ment of "man- ual density"/ Light step value	Text/Photo	FAX	20 <0-255>	SYS	lighter.	1		
720	Image	Density adjustment Fine adjust-	Photo	FAX	20 <0-255>	SYS	When the value increases, the image of the "dark" steps	1		
724		ment of "man- ual density"/ Dark step value	Text/Photo	FAX	20 <0-255>	SYS	becomes darker.	1		

Adjustment mode (05)										
Quida	Classi-	14	_	Func-	Default <accept-< th=""><th>D A M</th><th>0 - m to m to</th><th>Proce-</th></accept-<>	D A M	0 - m to m to	Proce-		
Code	fication	Item	S	tion	able	RAM	Contents	dure		
					value>					
725	Image	Density adjustment	Photo	FAX	128 <0-255>	SYS	When the value increases, the image	1		
729		Fine adjust- ment of "auto- matic density"	Text/Photo	FAX	128 <0-255>	SYS	becomes darker.	1		
825	Image	Range correc- tion on origi- nal manually set on the original glass	Text/Photo	SCN	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-	1		
826			Text	SCN	12 <11-14, 21-24, 31-34, 41-44>	SYS	matic density" and ten's place is for "manual den- sity". Once they are fixed, the range correc- tion is performed with	1		
827			Photo	SCN	12 <11-14, 21-24, 31-34, 41-44>	SYS	values of the background peak and text peak affect the reproduction of the background density and	1		
828			Gray scale	SCN	12 <11-14, 21-24, 31-34, 41-44>	SYS	1: fixed/fixed 2: varied/fixed 3: fixed/varied 4: varied/varied * Background peak/ Text peak	1		
830	Image	Range correc- tion on origi- nal set on the RADF	Text/Photo	SCN	12 <11-14, 21-24, 31-34, 41-44>	SYS	Sets whether the value of the background peak and text peak are fixed or not. One's place is an adjustment for "auto-	1		
831			Text	SCN	12 <11-14, 21-24, 31-34, 41-44>	SYS	matic density" and ten's place is for "manual den- sity". Once they are fixed, the range correc- tion is performed with	1		
832			Photo	SCN	12 <11-14, 21-24, 31-34, 41-44>	SYS	standard values. The values of the back- ground peak and text peak affect the reproduc- tion of the background density and text density	1		
833			Gray scale	SCN	12 <11-14, 21-24, 31-34, 41-44>	SYS	respectively. 1: fixed/fixed 2: varied/fixed 3: fixed/varied 4: varied/varied * Background peak/ Text peak	1		
835	Image	Range correc- tion/Back-	Text/Photo	SCN	40 <0-255>	SYS	When the value increases, the back-	1		
836		ground peak adjustment	Text	SCN	48 <0-255>	SYS	ground becomes more brightened.	1		
837			Photo	SCN	16 <0-255>	SYS		1		
838			Gray scale	SCN	16 <0-255>	SYS		1		

Code fication Classi- fication Herre- tion Func- sheet able walue RAM befault able walue Contents Proce- dure 845 Image fine adjustment rent of run- ual density" cleater value Text/Photo adjustment rent of run- ual density" classication SCN 128 vol255> SYS vol255> When the value increases, the image at the context step becomes darker. 1 847 Image value Fine density adjustment fine adjustment fine	Adjustment mode (05)										
Code ficationClassi- ficationtermFactor valueContentsProce- dure845Image 846Density adjustment ment of man- ud density'r Center valueText/PhotoSCN128 sCNSYSWhen the value increases, the image at the center step becomes darker.1847Image adjustment rene density adjustment editionText/PhotoSCN128 sCNSYSWhen the value increases, the image at the set increases, the image at <th></th> <th></th> <th></th> <th></th> <th></th> <th>Default</th> <th></th> <th></th> <th></th>						Default					
Code B45 Image Image A45 Density adjustment Fine adjust- ment of "man- ual density" Center value Text/Photo Text/Photo SCN 128 40-255 SYS SCN When the value mcreases, the image at the center step becomes darker. 1 846 Image A46 Fine adjust- ment of "man- ual density" Center value Text/Photo SCN 128 40-255 SYS SCN When the value the center step becomes darker. 1 847 Fine adjust- ment of "man- ual density" Adjustment Fine adjust- ment of "man- ual density" Alight step value Text/Photo SCN 20 40-255 SYS SCN When the value mcreases, the image of the "dark" steps to co-2555 1 857 Image Value Density adjustment Fine adjust- ment of "man- ual density" Dark step value Text/Photo SCN 20 20 20-2555 SYS SCN When the value mcreases, the image of the "dark" steps to co-2555 1 856 Image Value Density adjustment Fine adjust- ment of "auto- matic density" Text/Photo SCN 20 20-2555 SYS CO-2555 1 8661 Image Adjustment (Text/Photo) SCN 20 20-2555 SYS CO When the value mcreases, the image of the "dark" steps to coreases, the image of the "dark" steps 1 866-0	<u> </u>	Classi-			Func-	<accept-< th=""><th></th><th></th><th>Proce-</th></accept-<>			Proce-		
Induction Image adjustment Fine adjust- ment of 'man- ual density' Center value Text/Photo SCN 128 SYS When the value increases, the image at hecenter step becomes darker. 1 847 Image Fine adjust- ment of 'man- ual density' Center value Text/Photo SCN 128 SYS Image at hecenter step becomes 1 848 Image Fine density adjustment Fine adjust- ment of 'man- ual density'', Uight step value Text/Photo SCN 20 SYS Image at hecenter step becomes 1 853 Image Density adjustment Fine adjust- ment of 'man- ual density'', Uight step value Text/Photo SCN 20 SYS When the value her dark's steps becomes darker. 1 856 Image Density adjustment Fine adjust- ment of 'man- ual density'' value Text/Photo SCN 20 SYS When the value increases, the image of her 'dark's steps becomes darker. 1 866 Image Density adjustment Fine adjust- ment of 'man- ual density'' value SCN 20 SYS When the value increases, the image of her 'dark's steps becomes darker. 1 866-0 Image Sharpness adjustment (Text/ Fine adjust- me	Code	fication	Item	S	tion	able	RAM	Contents	dure		
845 Image adjustment Fine adjust- ment of "man- ual density"/ Center value Text/Photo ist SCN 128 -0-255 SYS When the value increases, the image at the center step becomes darker. 1 847		neation			uon	values			uure		
845 Image adjustment iner adjustment iner adjustment i			D "		0.011	value>	0)/0				
846 adjustment Fine adjustment Text SCN 128 (-0.255) SYS darker. 1 847 Ext SCN 128 (-0.255) SYS the center step becomes the center step becomes (-0.255) 1 848 End ensity/ adjustment Fine adjust- ment of "man- ual density"/ Light step value Fine density adjustment Fine adjust- ment of "man- ual density"/ Light step value Text/Photo SCN 20 SYS When the value increases, the image of the "fine" (-0.255) 1 855 Image Density adjustment Fine adjust- ment of "man- ual density"/ Dark step value Text/Photo SCN 20 SYS When the value increases, the image of the "dark" steps becomes darker. 1 856 Image Density adjustment Fine adjust- ment of "nan- ual density"/ Dark step value Text/Photo SCN 20 SYS When the value increases, the image of the "dark" steps becomes darker. 1 861 Image Density adjustment (Text/Photo) SCN 20 SYS When the value increases, the image of the "dark". 1 862 Image Sharpness adjustment (Text/ SCN 2255 SYS When the value	845	Image	Density	Text/Photo	SCN	128	SYS	When the value	1		
846 Prine adjust- ment of man- ual density" Center value Text SCN 128 (-0.255) SYS (-0.255) the center step becomes (-0.255) 1 847 Image Fine density" Center value Fine density" (Center value 1 1 848 Image Fine density adjustment Fine adjust- ment of man- ual density" Light step value Text SCN 128 (-0.255) SYS When the value increases, the image of the "dipt" steps becomes lighter. 1 853 Image Fine adjust- ment of man- ual density" Light step value Text SCN 20 (-0.255) SYS When the value increases, the image of the "dark" steps becomes darker. 1 855 Image Density adjustment Fine adjust- ment of "auto- matic density" Text/Photo SCN 20 (-0.255) SYS When the value increases, the image of the "dark" steps becomes darker. 1 860 Image Density adjustment Fine adjust- ment of "auto- matic density" Text/Photo SCN 20 (-0.255) SYS 1 866-0 Image Density adjustment (fext/Photo) Text/Photo SCN 128 (-0.255) SYS 1 866-1 <td></td> <td></td> <td>adjustment</td> <td></td> <td></td> <td><0-255></td> <td></td> <td>increases, the image at</td> <td></td>			adjustment			<0-255>		increases, the image at			
B47 ment of "man- ual density" Center value Photo SCN 128 SYS darker. 1 848 Fine density" Center value Fine density " adjustment Fine adjust- ment of "man- ual density", Light step value Text/Photo SCN 20 SYS 1 851 Fine density" adjustment Fine adjust- ment of "man- ual density", Light step value Text Photo SCN 20 SYS 1 853 Image Density adjustment Fine adjust- ment of "man- ual density", Dark step value Text/Photo SCN 20 SYS 1 856 Image Density adjustment Fine adjust- ment of "man- ual density", Dark step value Text/Photo SCN 20 SYS When the value increases, the image of the value schew 1 860 Image Density adjustment Fine adjust- ment of "auto- matic density" Text/Photo SCN 20 SYS When the value increases, the image the ormes darker. 1 861 Image Sharpness adjustment (Text/Photo) SCN 128 SYS When the value increases, the image the value dacreases, the image becomes sharper. When the value dacreases, the image becomes sharper. Tes mailer the value is, the more	846		Fine adjust-	Text	SCN	128	SYS	the center step becomes	1		
847 ual density / Center value Photo SCN 128 (-2.55) SYS (-2.255) 850 Image Fine density adjustment Fine adjust- ment of 'man- ual density / Light step value Fine density adjustment Fine adjust- ment of 'man- ual density / Light step value Text/Photo SCN 20 (-2.255) SYS (-2.255) When the value increases, the image of the 'dark' steps becomes adjust- ment of 'man- ual density / Light step value 1 855 Image Density adjustment Fine adjust- ment of 'man- ual density / Dark step value Text/Photo SCN SCN 20 (-2.255) SYS (-2.255) When the value increases, the image of the 'dark' steps becomes darker. 1 857 Density adjustment Fine adjust- ment of 'auto- matic density' Text/Photo SCN SCN 20 (-2.255) SYS (-2.255) When the value increases, the image becomes darker. 1 861 Image Density adjustment (Text/Photo) SCN 20 (-2.255) SYS (-2.255) When the value increases, the image becomes softer. 1 862 Image Sharpness adjustment (Text/Photo) SCN 128 (-2.255) SYS (-2.255) SYS (-2.255) When the value increases, the image becomes softer. 1 865-1 Image <			ment of "man-			<0-255>		darker.			
	847		ual density"/	Photo	SCN	128	SYS	*	1		
848 Gray scale SCN 128 (-0.255) SYS 1 850 Image adjustment Fine adjust- ment of man- ual density '/ Light step value Fine density adjustment Fine adjust- ment of man- ual density '/ Light step value Text/Photo SCN SCN 20 (-0.255) SYS When the value increases, the image of the "dark" stepseomes ighter. 1 852 Image Density adjustment Fine adjust- ment of man- ual density '/ Dark step value Text/Photo SCN SCN 20 (-0.255) SYS When the value increases, the image of the "dark" steps becomes darker. 1 857 Density adjustment Fine adjust- ment of "auto- matic density" Text/Photo SCN 20 (-0.255) SYS When the value increases, the image of the "dark" steps becomes darker. 1 861 Image Density adjustment (Text/Photo SCN 20 (-0.255) SYS When the value increases, the image becomes darker. 1 862 Image Sharpness adjustment (Text/Photo) SCN 128 (-0.255) SYS When the value increases, the image becomes softer. 1 865-0 Image Sharpness adjustment (Text) 150-200 (0 dpi SCN 128 (-0.255) SYS (terspapid	_		Center value			<0-255>					
010 122 122 123 11 850 Image Bine density adjustment Fine adjust- ment of "man- ual density" Fext/Photo model Fext SCN 20 SYS When the value increases, the image of the "light" steps becomes adjustment Fine adjust- ment of "man- ual density" 1 853 Image Density adjustment Fine adjust- ment of "man- ual density" Text/Photo SCN 20 SYS When the value increases, the image of the "light" steps becomes adjustment Fine adjust- ment of "man- ual density" 1 857 Density adjustment Fine adjust- ment of "auto- matic density" Text/Photo SCN 20 SYS When the value increases, the image of the "dark" steps becomes darker. 1 860 Image Density adjustment Fine adjust- ment of "auto- matic density" Text/Photo SCN 20 SYS When the value increases, the image becomes darker. 1 861 Density adjustment (Text/Photo) Text/Photo SCN SCN 128 SYS When the value increases, the image becomes darker. 1 862-0 Image Sharpness adjustment (Text/Photo) 150-200 SCN 515 SYS 865-1 Image Sharpness adjustment (Text/Phot	848	-		Grav scale	SCN	128	272	-	1		
850 Image adjustment Fine adjust- ment of "man- ual density"/ Light step value Text/Photo SCN SCN 20 -0.255 SYS When the value increases, the image of tight"steps becomes 1 851 Image Density adjustment Fine adjust- ment of "man- ual density"/ Dark step value Text/Photo SCN 20 -0.255 SYS When the value increases, the image of tight"steps becomes 1 856 Image Density adjustment Fine adjust- ment of "man- ual density"/ Dark step value Text/Photo SCN 20 -0.255 SYS When the value increases, the image of tract steps becomes darker. 1 857 Bensity adjustment Fine adjust- ment of "auto- matic density" Text/Photo SCN 20 -0.255 SYS When the value increases, the image of tract steps becomes darker. 1 861 Image Density adjustment Fine adjust- ment of "auto- matic density" Text/Photo SCN 128 -0.255 SYS When the value increases, the image of the cases, the image becomes darker. 1 862- Image Sharpness adjustment (Text/Photo) SCN 128 -0.255 SYS When the value increases, the image becomes softer. 4 865-1 Image S	040			Oray Scale	001	<0.255>	010				
850 Image adjustment Fine adjust- ment of "man- ual density"/ Uight step value Fine adjust- ment of "man- ual density"/ Uight step value Text SCN 20 system (-2,255) System (-2,255) Image (-2,255) Image (-1) Image (-1)<	050	lune e e e	Fire deveite	Taut/Disata	0.01	-0-200-	0.40		4		
851 adjustment ment of 'man- ual density'' Light step value Text SCN 20 volue SYS inderlage of tight step becomes volue 1 852 Image Density adjustment Fine adjust- ment of 'man- ual density'' Dark step value Text/Photo SCN SCN 20 volue SYS When the value increases, the image of the 'dark' steps becomes darker. 1 856 Density adjustment Fine adjust- ment of 'man- ual density' Dark step value Text/Photo SCN SCN 20 volue SYS When the value increases, the image of the 'dark' steps becomes darker. 1 860 Image Density adjustment Fine adjust- ment of 'auto- matic density' Text/Photo SCN SCN 20 volue SYS When the value increases, the image of the 'dark' steps becomes darker. 1 861 Density adjustment (Text/Photo) Text SCN 128 volue SYS When the value increases, the image becomes darker. 1 862 Barpness adjustment (Text/Photo) 150-200 volue SCN 128 volue SYS When the value is, increases, the image becomes softer. 4 865-1 Image Sharpness adjustment (Text/Photo) 150-200 volue SCN	850	image	Fine density	Text/Photo	SCN	20	515	when the value			
851 852 Fine adjust- ment of man- ual density' value Text Fine adjust- value SCN (-2.255) 20 (-2.255) SYS (-2.255) The value (-1) (-1) The value (-2.255) 1 853 Image basis Density adjustment Fine adjust- ment of man- ual density' value Text/Photo (-2.255) SYS (-2.255) When the value increases, the image of the "dark" steps value 1 856 Density adjustment Fine adjust- ment of "man- ual density" Text/Photo (-2.255) SYS (-2.255) When the value increases, the image of the "dark" steps value 1 857 Image value Density adjustment Fine adjust- ment of "auto- matic density" Text/Photo (-2.255) SYS (-2.255) When the value increases, the image becomes darker. 1 861 Image becomes darker. Text/Photo (-2.255) SYS (-2.255) When the value increases, the image becomes darker. 1 861 Image becomes darker. Sharpness adjustment (Text) 150-200 (-2.255) SYS (-2.255) When the value increases, the image becomes sharper. When the value decreases, the image becomes softer. The smaller the value is, the more the walue is, the value decreases, the image becomes softer. The smaller the value is, the more the walue is, the more the walue is, the value decreases, the image becomes softer. The smaller the value is, the walue decreases, the intensity (1-9. Filter		-	adjustment			<0-255>		Increases, the image of			
Bits Image adjustment of manual learsity / Light step value Photo SCN 20 SYS Image construction of the step value 1 853 Image value Density adjustment Fine adjustment of manual density / Dark step value Text /Photo SCN 20 SYS When the value increases, the image of the 'dark' steps becomes darker. 1 856 Image value Density adjustment of manual density / Dark step value Text /Photo SCN 20 SYS When the value increases, the image of the 'dark' steps becomes darker. 1 857 Density adjustment of 'autom adjustment (Text/Photo) SCN 128 SYS When the value increases, the image becomes darker. 1 861 Density adjustment (Text/Photo) SCN 128 SYS Vhen the value increases, the image becomes sharper. When the value increases, the image becomes sharper. When the value increases, the image becomes sharper. 1 865-0 Image Sharpness adjustment (Text/Photo) SCN 51 SYS 4 866-1 Image Sharpness adjustment (Text/Photo) SCN 600 dpi SCN	851		Fine adjust-	Text	SCN	20	SYS	the light steps becomes	1		
852 Ual density value Photo SCN 20 (-255) SYS 853 Image Density adjustment Text/Photo SCN 20 SYS 855 Image Density adjustment Text/Photo SCN 20 SYS 856 Image Density adjustment Text SCN 20 SYS 857 Dark step value Text SCN 20 SYS 858 Density adjustment Text SCN 20 SYS 860 Image Density adjustment Text SCN 20 SYS 861 Density adjustment Text SCN 20 SYS 862 Density adjustment Text SCN 128 SYS 863 Image Sharpness adjustment 150-200 SCN 128 SYS 865-0 Image Sharpness adjustment 150-200 SCN 55 SYS 866-1 Image Sharpness adjustment 150-200 <td></td> <td></td> <td>ment of man-</td> <td></td> <td></td> <td><0-255></td> <td></td> <td>lighter.</td> <td></td>			ment of man-			<0-255>		lighter.			
	852	-	ual density" /	Photo	SCN	20	SYS		1		
853 Value Gray scale SCN 20 SYS 1 855 Image Density adjustment Fine adjust- ment of "man- ual density" Text/Photo SCN 20 SYS When the value increases, the image of the "dark" steps value 1 857 Density adjustment Fine adjust- ment of "man- ual density" Text SCN 20 SYS When the value increases, the image of the "dark" steps value 1 858 Density value Text SCN 20 SYS 1 860 Image Density adjustment Fine adjust- ment of "auto- matic density" Text/Photo SCN 128 SYS When the value increases, the image becomes darker. 1 861 Image Sharpness adjustment (Text/Photo) SCN 128 SYS SYS 1 865-0 Image Sharpness adjustment (Text/Photo) 150-200 SCN 85 SYS SYS 4 866-1 Image Sharpness adjustment (Text) 150-200 SCN 51 SYS SYS 4 866-1 Image			Light step			<0-255>					
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855 Image adjustment Fine adjust, ment of "man- ual density" Dark step value Text/Photo adjustment Fine adjust, ment of "man- ual density" Dark step value Text SCN (-0.255) SYS (-0.255) When the value increases, the image of the "dark" step volue 1 857 Image Density adjustment Fine adjust, ment of "auto- matic density" Text SCN 20 (-0.255) SYS (-0.255) When the value increases, the image becomes darker. 1 861 Image Density adjustment Fine adjust- matic density" Text/Photo adjustment Fine adjust- matic density" SCN 128 (-0.255) SYS (-0.255) When the value increases, the image becomes darker. 1 861 Image Sharpness adjustment (Text/Photo) Text SCN 128 (-0.255) SYS (-0.255) When the value increases, the image becomes sharper. When the value decreases, the image becomes sharper. The subject of the "dark" steps (-0.255) 4 865-1 Image Sharpness adjustment (Text) 150-200 (-00 dpi SCN 51 (-1.99) SYS (-11.99) SYS (-0.255) 4 866-1 Image Sharpness adjustment (Photo) 1	000			Cruy ooulo	0011	<0-255>	010				
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858 Value Gray scale SCN 20 <0-255> SYS When the value increases, the image becomes darker. 1 861 Image adjustment Fine adjust- ment of "auto- matic density" Text/Photo adjustment Fine adjust- ment of "auto- matic density" Text/Photo Text SCN 128 <0-255> SYS co-255> When the value increases, the image becomes darker. 1 861 Image Sharpness adjustment (Text/Photo) Text SCN 128 <0-255> SYS co-255> When the value increases, the image becomes sharper. When the value decreases, the image becomes sharper. When the value decreases, the image becomes sharper. When the value decreases, the image becomes softer. The smaller the value is, the more the moire is suppressed. One's place: Fixed value (Leave it at default.) Ten's place: Sharpness adjustment (Photo) 150-200 SCN SCN 62 SYS coll SYS coll 4 866-0 Image Sharpness adjustment (Photo) 150-200 SON SCN 62 SYS coll SYS coll 4 866-1 Image Sharpness adjustment (Photo) 150-200 SON SCN 62 SYS coll SYS coll 4 866-1 Image Sharpness adjustment (Photo) 150-200 SON SCN 23 SYS coll			Dark step			<0-255>					
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dni <11-99>	868-1	1	(Grav scale)	300-400	SCN	41	SYS	†	4		
				dpi		<11-99>	5.0				

Adjustment mode (05)										
Code	Classi- fication	ltem	s	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
869	Image	Background	Text/Photo	SCN	5	SYS	When the value	1		
870		adjustment	Text	SCN	<1-9> 6	SYS	decreases, the back- ground becomes darker.	1		
871			Photo	SCN	4 <1-9>	SYS		1		
872			Gray scale	SCN	3 <1-9>	SYS		1		
913	Image	Range correc- tion on origi- nal manually set on the original glass	Custom Mode 1	PPC	EUR:12 UC:12 JPN:22 <11-14, 21-24, 31-34, 41-44>	SYS	Set 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 den-	1		
914			Custom Mode 2	PPC	22 <11-14, 21-24, 31-34, 41-44>	SYS	sity". Once they are fixed, the range correc- tion is performed with standard values. The values of the background	1		
915			Custom Mode 3	PPC	12 <11-14, 21-24, 31-34, 41-44>	SYS	peak and text peak affect the reproduction of the background 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 correc- tion on origi- nal set on the RADF	Custom Mode 1	PPC	EUR:12 UC:12 JPN:22 <11-14, 21-24, 31-34, 41-44>	SYS	Set 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 den-	1		
917			Custom Mode 2	PPC	22 <11-14, 21-24, 31-34, 41-44>	SYS	sity". Once they are fixed, the range correc- tion is performed with standard values. The values of the background	1		
918	1		Custom Mode 3	PPC	12 <11-14, 21-24, 31-34, 41-44>	SYS	peak and text peak affect the reproduction of the background density and text density respectively. 1: fixed/fixed 2: varied/fixed 3: fixed/varied 4: varied/varied * Background peak/ Text peak	1		
919	Image	Range correc- tion	Custom Mode 1	PPC	40 <0-255>	SYS	When the value increases. the back-	1		
920		Background peak adjust-	Custom Mode 2	PPC	64 <0-255>	SYS	ground becomes more brightened.	1		
921		ment	Custom Mode 3	PPC	16 <0-255>	SYS		1		

Adjustment mode (05)											
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure			
922	Image	Sharpness adjustment	Custom Mode 1	PPC	51 <11-99>	SYS	When the value increases, the image becomes sharper. When	1			
923			Custom Mode 2	PPC	61 <11-99>	SYS	the value decreases, the image becomes softer. The smaller the value is,	1			
924-0	-	-	Custom Mode 3 (error dif- fusion)	PPC	23 <11-99>	SYS	the more the moire is suppressed. One's place: Fixed value (Leave it at default.)	4			
924-1			Custom Mode 3 (Dither)	PPC	13 <11-99>	SYS	from 1 to 9 (The larger the value is, the sharper the image becomes.)	4			
928	Image	Adjustment of smudged/faint text	Custom Mode 1	PPC	192 <0-255>	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	Custom Mode 1	PPC	128 <0-255>	SYS	When the value increases, the image of	1			
932		Fine adjust- ment of "man-	Custom Mode 2	PPC	128 <0-255>	SYS	the center step becomes darker.	1			
933		Center value	Custom Mode 3	PPC	128 <0-255>	SYS	*	1			
934	Image	Density adjustment	Custom Mode 1	PPC	20 <0-255>	SYS	When the value increases, the image of	1			
935		Fine adjust- ment of "man-	Custom Mode 2	PPC	20 <0-255>	SYS	the "light" step density becomes lighter.	1			
936	-	ual density"/ Light step value	Custom Mode 3	PPC	20 <0-255>	SYS	-	1			
937	Image	Density adjustment	Custom Mode 1	PPC	20 <0-255>	SYS	When the value increases, the image of	1			
938		Fine adjust- ment of "man-	Custom Mode 2	PPC	20 <0-255>	SYS	the "dark" step density becomes darker.	1			
939		ual density"/ Dark step value	Custom Mode 3	PPC	20 <0-255>	SYS		1			
940	Image	Density adjustment	Custom Mode 1	PPC	128 <0-255>	SYS	When the value increases, the image	1			
941		Fine adjust-	Custom Mode 2	PPC	128 <0-255>	SYS	becomes darker.	1			
942		matic density"	Custom Mode 3	PPC	128 <0-255>	SYS	+	1			

Adjustment mode (05)											
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure			
943	Image	Gamma data slope adjust- ment	Custom Mode 1	PPC	5 <0-9>	SYS	Select the slope of Gamma curve (The larger the value is, the larger the slope becomes.)	1			
944			Custom Mode 2	PPC	5 <0-9>	SYS		1			
945			Custom Mode 3	PPC	5 <0-9>	SYS	-	1			
946	Image	Background adjustment	Custom Mode 1	PPC	5 <1-9>	SYS	When the value decreases, the back-	1			
947			Custom Mode 2	PPC	6 <1-9>	SYS	ground becomes darker.	1			
948			Custom Mode 3	PPC	4 <1-9>	SYS		1			
976	Mainte- nance	Equipment num number) entry	ber (serial	ALL	-	SYS	When this adjustment is performed with this code, the setting code (08-995) is also performed auto- matically (10 digits).	1			
4563-0	Paper feeding	Leading edge position	Thick paper 1	ALL	20 <0-40>	M		4			
4563-1		adjustment correction	Thick paper 2	ALL	20 <0-40>	М		4			
4563-2		media type	Thick paper 3	ALL	20 <0-40>	M		4			
4563-3			OHP film	ALL	20 <0-40>	М		4			
4564-0	Paper feeding	Leading edge position	Thick paper 1	ALL	20 <0-40>	M		4			
4564-1		adjustment correction	Thick paper 2	ALL	20 <0-40>	M		4			
4564-2		media type (3rd drawer)	Thick paper 3	ALL	20 <0-40>	M		4			
4564-3		(OHP film	ALL	20 <0-40>	М		4			
4565-0	Paper feeding	Leading edge position	Thick paper 1	ALL	20 <0-40>	М		4			
4565-1		adjustment correction	Thick paper 2	ALL	20 <0-40>	М		4			
4565-2		media type	Thick paper 3	ALL	20 <0-40>	М		4			
4565-3			OHP film	ALL	20 <0-40>	M		4			
4566-0	Paper feeding	Leading edge position	Thick paper 1	ALL	20 <0-40>	M		4			
4566-1		adjustment correction	Thick paper 2	ALL	20 <0-40>	M		4			
4566-2		media type	Thick paper 3	ALL	20 <0-40>	M		4			
4566-3			OHP film	ALL	20 <0-40>	М		4			

Adjustment mode (05)											
Code	Classi- fication	ltem	IS	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure			
4567-0	Paper feeding	Leading edge position	Thick paper 1	ALL	20 <0-40>	М		4			
4567-1		adjustment correction item on each media type	Thick paper 2	ALL	20 <0-40>	М		4			
4567-2			Thick paper 3	ALL	20 <0-40>	М		4			
4567-3		ing)	OHP film	ALL	20 <0-40>	М		4			
4568-0	Paper feeding	Leading edge position	Thick paper 1	ALL	20 <0-40>	М		4			
4568-1		adjustment correction	Thick paper 2	ALL	20 <0-40>	М		4			
4568-2		media type	Thick paper 3	ALL	20 <0-40>	М		4			
4568-3		(ADU)	OHP film	ALL	20 <0-40>	М		4			
4569-0	Paper feeding	Leading edge position	Thick paper 1	ALL	20 <0-40>	М		4			
4569-1		adjustment correction	Thick paper 2	ALL	20 <0-40>	М		4			
4569-2		item on each media type	Thick paper 3	ALL	20 <0-40>	М		4			
4569-3			OHP film	ALL	20 <0-40>	М		4			
4580-0	Paper feeding	Paperaligning amount adjustment at	Short size 1	ALL	15 <0-63>	М	When the value increases by " 1 ", the aligning amount	4			
4580-1		the registra- tion section (Option LCF / Plain paper)	Short size 2	ALL	15 <0-63>	М	increases by approx. 0.8 mm. <paper length=""> Short size 1 :</paper>	4			
4581-0	Paper feeding	Paperaligning amount adjustment at	Short size 1	ALL	15 <0-63>	М	205 mm to 219 mm Short size 2 : 204 mm or shorter	4			
4581-1		the registra- tion section (Option LCF / Thick paper 1)	Short size 2	ALL	15 <0-63>	М		4			

Adjustment mode (05)										
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
4582-0	Paper feeding	Paperaligning amount	Long size	ALL	18 <0-63>	М	When the value increases by " 1 ", the	4		
4582-1	-	adjustment at the registra-	Middle size	ALL	18 <0-63>	М	aligning amount increases by approx.	4		
4582-2	-	tion section (1st drawer /	Short size	ALL	18 <0-63>	М	0.8 mm. <paper length=""></paper>	4		
4582-3		Thick paper 2)	Short size 2	ALL	18 <0-63>	М	Long size : 330 mm or longer	4		
4582-4			Post card	ALL	18 <0-63>	М	220 mm to 329 mm	4		
4583-0	Paper feeding	Paperaligning amount	Long size	ALL	18 <0-63>	М	205 mm to 219 mm Short size 2 :	4		
4583-1		adjustment at the registra-	Middle size	ALL	18 <0-63>	М	160 mm to 204 mm Post Card :	4		
4583-2		tion section (2nd drawer /	Short size 1	ALL	18 <0-63>	М	159 mm tor shorter	4		
4583-3		Thick paper 2)	Short size 2	ALL	18 <0-63>	М	-	4		
4583-4	-		Post card	ALL	18 <0-63>	М	-	4		
4584-0	Paper feeding	Paperaligning amount	Long size	ALL	18 <0-63>	М		4		
4584-1		adjustment at the registra-	Middle size	ALL	18 <0-63>	М	-	4		
4584-2		(3rd drawer /	Short size 1	ALL	18 <0-63>	М	-	4		
4584-3			Short size 2	ALL	18 <0-63>	М	-	4		
4584-4			Post card	ALL	18 <0-63>	М	-	4		
4585-0	Paper feeding	Paperaligning amount	Long size	ALL	18 <0-63>	М		4		
4585-1		adjustment at the registra-	Middle size	ALL	18 <0-63>	М	-	4		
4585-2		tion section (4th drawer /	Short size 1	ALL	18 <0-63>	М	-	4		
4585-3			Short size 2	ALL	18 <0-63>	М	-	4		
4585-4	-		Post card	ALL	18 <0-63>	М	-	4		
4586-0	Paper feeding	Paperaligning amount adjustment at the registra- tion section	Short size 1	ALL	15 <0-63>	М	When the value increases by " 1 ", the aligning amount increases by approx. 0.8 mm.	4		
4586-1		(Option LCF / Thick paper 2)	Short size 2	ALL	15 <0-63>	М	 <paper length=""></paper> Short size 1 : 205 mm to 219 mm Short size 2 : 204 mm or shorter 	4		

Adjustment mode (05)										
Code	Classi- fication	Item	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
4587-0	Paper feeding	Paperaligning amount	Long size	ALL	18 <0-63>	М	When the value increases by " 1 ", the	4		
4587-1		adjustment at the registra-	Middle size	ALL	18 <0-63>	М	aligning amount increases by approx.	4		
4587-2		tion section (ADU / Thick	Short size	ALL	18 <0-63>	М	0.8 mm. <paper length=""></paper>	4		
4587-3		paper 2)	Short size	ALL	18	М	Long size : 330 mm or longer	4		
4587-4			Post card	ALL	18	М	220 mm to 329 mm	4		
4588-0	Paper feeding	Paper aligning amount	Long size	ALL	18	М	205 mm to 219 mm	4		
4588-1		adjustment at the registra-	Middle size	ALL	18 <0-63>	М	160 mm to 204 mm Post Card :	4		
4588-2		tion section (1st drawer /	Short size	ALL	18 <0-63>	М	159 mm tor shorter	4		
4588-3		Thick paper 3)	Short size 2	ALL	18 <0-63>	М	-	4		
4588-4			Post card	ALL	18 <0-63>	М	-	4		
4589-0	Paper feeding	Paperaligning amount	Long size	ALL	18 <0-63>	М	-	4		
4589-1		adjustment at the registra-	Middle size	ALL	18 <0-63>	М		4		
4589-2	-	tion section (2nd drawer /	Short size	ALL	18 <0-63>	М	-	4		
4589-3		Thick paper 3)	Short size 2	ALL	18 <0-63>	М	-	4		
4589-4			Post card	ALL	18 <0-63>	М		4		
4590-0	Paper feeding	Paperaligning amount	Long size	ALL	18 <0-63>	М		4		
4590-1		adjustment at the registra-	Middle size	ALL	18 <0-63>	М	-	4		
4590-2		tion section (3rd drawer /	Short size	ALL	18 <0-63>	М	-	4		
4590-3	-	Thick paper 3)	Short size 2	ALL	18 <0-63>	М	-	4		
4590-4			Post card	ALL	18 <0-63>	М	-	4		
4591-0	Paper feeding	Paperaligning amount	Long size	ALL	18 <0-63>	М		4		
4591-1		adjustment at the registra-	Middle size	ALL	18 <0-63>	М	+	4		
4591-2		tion section (4th drawer /	Short size	ALL	18 <0-63>	М	+	4		
4591-3		i nick paper 3)	Short size 2	ALL	18 <0-63>	М	1	4		
4591-4			Post card	ALL	18 <0-63>	М	1	4		

			Adju	stment	mode (05)			
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
4592-0	Paper feeding	Paper aligning amount adjustment at the registra- tion section	Short size 1	ALL	15 <0-63>	M	When the value increases by " 1 ", the aligning amount increases by approx. 0.8 mm.	4
4592-1		(Option LCF / Thick paper 3)	Short size 2	ALL	15 <0-63>	М	Paper length> Short size 1 : 205 mm to 219 mm Short size 2 : 204 mm or shorter	4

			Adju	stment	mode (05)			
Code	Classi- fication	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
4593-0	Paper feeding	Paperaligning amount	Long size	ALL	18 <0-63>	М	When the value increases by "1", the	4
4593-1	C	adjustment at the registra-	Middle size	ALL	18 <0-63>	М	aligning amount increases by approx.	4
4593-2		tion section (ADU / Thick	Short size	ALL	18 <0-63>	М	0.8 mm. <paper length=""></paper>	4
4593-3		paper 3)	Short size 2	ALL	18 <0-63>	М	Long size : 330 mm or longer	4
4593-4			Post card	ALL	18 <0-63>	М	220 mm to 329 mm	4
4594-0	Paper feeding	Paper aligning amount	Long size	ALL	18 <0-63>	М	205 mm to 219 mm Short size 2 :	4
4594-1	<u> </u>	adjustment at the registra-	Middle size	ALL	18 <0-63>	М	160 mm to 204 mm Post Card :	4
4594-2		tion section (1st drawer /	Short size	ALL	18 <0-63>	М	159 mm tor shorter	4
4594-3		OHP)	Short size 2	ALL	18 <0-63>	М	-	4
4594-4			Post card	ALL	18 <0-63>	М	-	4
4595-0	Paper feeding	Paperaligning amount	Long size	ALL	18 <0-63>	М		4
4595-1	5	adjustment at the registra-	Middle size	ALL	18 <0-63>	М	-	4
4595-2		tion section (2nd drawer /	Short size 1	ALL	18 <0-63>	М	-	4
4595-3		OHP)	Short size 2	ALL	18 <0-63>	М	-	4
4595-4			Post card	ALL	18 <0-63>	М	-	4
4596-0	Paper feeding	Paperaligning amount	Long size	ALL	18 <0-63>	М		4
4596-1		adjustment at the registra-	Middle size	ALL	18 <0-63>	М	-	4
4596-2		tion section (3rd drawer /	Short size	ALL	18 <0-63>	М	-	4
4596-3		OHP)	Short size 2	ALL	18 <0-63>	М	-	4
4596-4			Post card	ALL	18 <0-63>	М	-	4
4597-0	Paper feeding	Paperaligning amount	Long size	ALL	18 <0-63>	М		4
4597-1		adjustment at the registra-	Middle size	ALL	18 <0-63>	М	+	4
4597-2		tion section (4th drawer /	Short size	ALL	18 <0-63>	М	1	4
4597-3		OHP)	Short size 2	ALL	18 <0-63>	М	1	4
4597-4			Post card	ALL	18 <0-63>	М	1	4

			Adju	stment	mode (05)			
Code	Classi- fication	ltem	IS	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
4598-0	Paper feeding	Paper aligning amount adjustment at the registra- tion section	Short size 1	ALL	15 <0-63>	М	When the value increases by " 1 ", the aligning amount increases by approx. 0.8 mm.	4
4598-1		(Option LCF / OHP)	Short size 2	ALL	15 <0-63>	М	<pre><paper length=""> Short size 1 : 205 mm to 219 mm Short size 2 : 204 mm or shorter</paper></pre>	4
4599-0	Paper feeding	Paperaligning amount adjustment at	Long size	ALL	18 <0-63>	М	When the value increases by " 1 ", the aligning amount	4
4599-1		the registra- tion section (ADU / OHP)	Middle size	ALL	18 <0-63>	М	increases by approx. 0.8 mm. <paper length=""></paper>	4
4599-2			Short size 1	ALL	18 <0-63>	М	Long size : 330 mm or longer Middle size :	4
4599-3			Short size 2	ALL	18 <0-63>	М	Short size 1 : 205 mm to 219 mm	4
4599-4			Post card	ALL	18 <0-63>	М	160 mm to 204 mm Post Card : 159 mm tor shorter	4

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.



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

Procedure 5 [CANCEL] -[ENTER] → [START] → ^[Digital key] [POWER] OFF/ON [0][8] [Digital key] or [POWER] (Code) *[HELP] (Exit) [INTERRUPT] Sets or (Stores value in RAM) changes value [CLEAR] (Corrects value) * Press [HELP] to enter "-". Procedure 7 — [CANCEL] —— [ENTER] $[Digital key] \rightarrow [START] \rightarrow [Digital key] \rightarrow [START] \rightarrow [Digital key]$ [0][8] or → (HDD formatting) → [POWER] OFF/ON [POWER] (Code) (Setting) [INTERRUPT] (Exit) (Stores value in RAM) [CLEAR] (Corrects value) Procedure 9 - [CANCEL] -----[ENTER] [Digital key] [POWER] OFF/ON [0][8] → [START] ----- [Select icon] or [POWER] (Code) (Exit) [INTERRUPT] (Stores value in RAM) [CLEAR] (Corrects value) Procedure 10





- *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



Notes:

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

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
200	General	Date and time setting	ALL	- <13 dig- its>	-	Year/month/date/day/ hour/minute/second Example: 03 07 0 13 13 27 48 "Day" - "0" is for "Sunday". Pro- ceeds Monday through Saturday from "1" to "6".	5
201	General	Destination selection	ALL	EUR: 0 UC: 1 JPN: 2 <0-2>	М	0: EUR 1: UC 2: JPN	1
202	User interface	Counter installed externally	ALL	0 <0-3>	М	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	1
203	General	Line adjustment mode	ALL	0 <0-1>	М	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	11 <0, 6-15>	SYS	Timer to automatically switch to the Auto power save 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

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
206	User interface	Auto Shut Off Mode timer setting (Auto Shut Off Mode/Sleep Mode)	ALL	12 <0-20>	SYS	Timer to turn OFF the power or to enter the Sleep Mode automati- cally when the equip- ment has not been used (Refer to 08-601) 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	 Black letter on white background White letter on black background 	1
209	User interface	Default setting of filing for- mat when E-mailing	ALL	0 <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>	М		10
211	Paper feeding	Inserter Unit Reversing operation at back cover insertion	PPC	0 <0-1>	SYS	This setting is whether only the back cover is reversed or no sheets are reversed at the back cover insertion using the Inserter Unit. 0: No sheets reversed 1: Only back cover reversed	1
213	User interface	Display of [REVERSE ORDER] button	ALL	0 <0-1>	SYS	0: Not displayed 1: Displayed	1
214	Paper feeding	Tab paper printing/ Tab width setting (Drawer)	PPC	130 <120- 170>	SYS	The default value of the tab width can be set by increments of 0.1 mm in the Tab Print Mode.	1
215	Paper feeding	Tab paper printing/ Shift width setting (Drawer)	PPC	130 <0-300>	SYS	The default value of the shift width can be set by increments of 0.1 mm in the Tab Print Mode.	1

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
216	Paper feeding	Tab paper print Tab width setting (Bypass feeding)	PPC	130 <100- 200>	SYS		1
217	Paper feeding	Tab paper print Shift width setting (Bypass feeding)	PPC	130 <0-300>	SYS		1
219	User interface	Default setting of filing for- mat when storing files	SCN	0 <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
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
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 PM timing dis- play/ Output pages or drive counts	ALL	0 <0-1>	М	 The PM timing can be displayed in these 2 methods. (Messages will appear on the LCD panel.) 0: PM counter (Number of output pages can be set in 08-251) 1: PM time counter (Drive counts can be set in 08-375) 	1
224	Paper feeding	Paper size for bypass feed	PPC	UNDEF	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	М	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	М	Press the button on the LCD to select the size.	9
227	Paper feeding	Paper size for 3rd drawer	ALL	EUR: A4-R UC: LT-R JPN: A4-R	М	Press the button on the LCD to select the size.	9
228	Paper feeding	Paper size for 4th drawer	ALL	EUR: A4 UC: LG JPN: B4	М	Press the button on the LCD to select the size.	9

Setting mode (08)										
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure			
229	Paper feeding	Paper size (A3) feeding/ widthwise direction	ALL	420/297 <182- 432/140- 297>	М		10			
230	Paper feeding	Paper size (A4-R) feeding/ widthwise direction	ALL	297/210 <182- 432/140- 297>	М		10			
231	Paper feeding	Paper size (A5-R) feeding/ widthwise direction	ALL	210/148 <182- 432/140- 297>	М		10			
232	Paper feeding	Paper size (B4) feeding/ widthwise direction	ALL	364/257 <182- 432/140- 297>	М		10			
233	Paper feeding	Paper size (B5-R) feeding/ widthwise direction	ALL	257/182 <182- 432/140- 297>	М		10			
234	Paper feeding	Paper size (LT-R) feeding/ widthwise direction	ALL	279/216 <182- 432/140- 297>	М		10			
235	Paper feeding	Paper size (LD) feeding/ widthwise direction	ALL	432/279 <182- 432/140- 297>	М		10			
236	Paper feeding	Paper size (LG) feeding/ widthwise direction	ALL	356/216 <182- 432/140- 297>	М		10			
237	Paper feeding	Paper size (ST-R) feeding/ widthwise direction	ALL	216/140 <182- 432/140- 297>	М		10			
238	Paper feeding	Paper size (COMPUTER) feeding/widthwise direction	ALL	356/257 <182- 432/140- 297>	М		10			
239	Paper feeding	Paper size (FOLIO) feed- ing/widthwise direction	ALL	330/210 <182- 432/140- 297>	М		10			
240	Paper feeding	Paper size (13" LG) feed- ing/widthwise direction	ALL	330/216 <182- 432/140- 297>	М		10			
241	Paper feeding	Paper size (8.5"X8.5") feeding/widthwise direction	ALL	216/216 <182- 432/140- 297>	М		10			
242	Paper feeding	Paper size (Non-standard) feeding/widthwise direction	ALL	432/279 <148- 432/105- 297>	SYS		10			

		Set	tting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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>	М		10
245	Paper feeding	Paper size (16K-R) feed- ing/widthwise direction	ALL	270/195 <182- 432/140- 297>	М		10
246	Paper feeding	Paper size (A3 wide) feeding/widthwise direction	ALL	457/305 <182- 457/140- 305>	М		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
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 [Monitor/ Pause] button to enter a hyphen (-).	11
251	Mainte- nance	Setting value of PM counter	ALL	Refer to content <8 digits>	M	<pre><default value=""> e-STUDIO520/523 UC, EUR: 450,000 e-STUDIO600/603 JPN: 0 UC, EUR: 500,000 e-STUDIO720/723 JPN: 0 UC, EUR: 575,000 e-STUDIO850/853 JPN: 0 UC, EUR: 600,000</default></pre>	1
252	Mainte- nance	Current value of PM counter Display/0 clearing	ALL	0 <8 digits>	М	Counts up when the registration sensor is ON.	1
253	Mainte- nance	Error history display	ALL	-	SYS	Displaying of the latest 20 errors data	2

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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 message to use the selected paper size is displayed.) 	1
256	Paper feeding	Paper size setting /Tandem LCF	ALL	EUR: A4 UC: LT JPN: A4	М	Press the button on the LCD to select the size.	9
257	Counter	Counter copy	ALL	- <1-2>	-	 Electrical counter → Backup counter (LGC board→SYS board) Backup counter → Electrical counter (SYS board→LGC board) (P.2-188 "Fig. 2-3") 	-
258	Mainte- nance	FSMS acceptance	ALL	1 <0-2>	SYS	Sets whether the FSMS connection is accepted or not. 0: Prohibited 1: Accepted (USB nor- mal connection) 2: Accepted (USB forcible connection)	1
259	Network	Storage period trial 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	SCN	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
		Set	ting mo	de (08)			
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Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
261	Network	Web Box data retention period	SCN	10 <3 digits>	SYS	When a certain period of time has passed without operation after accessing the Box, the data being registered is automatically reset. This period is set at this code. [Unit: Minute]	1
262	Network	TWAIN data retention period	SCN	10 <3 digits>	SYS	When a certain period of time has passed without operation after accessing TWAIN and File Downloader, the data being registered 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, 0- 9) within 10 digits.	11
264	Network	File retention period	SCN	30 <0-999>	SYS	0: No limits 1 to 999: 1 to 999 days	1
265	Network	Maximum data capacity at E-mailing	SCN	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 Fil- ing	Full guarantee of docu- ments in Electronic Filing when HDD is full	ALL	1 <0-1>	SYS	 Sets the file retention level when editing the files in the Electronic Filing (at CutDoc/Save- Doc command execu- tion). 0: Not full retained 1: Fully retained - Retains the source file until CutDoc/ SaveDoc command is completed. * The file is not deleted even if the HDD has become full during the exe- cution of command when "1" is set. 	1
270	Elec- tronic Fil- ing	Default value for 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

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		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
271	General	Warning notification of the File Share and e-Filing par- titions 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	FAX	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 divide 1: 256 2: 512 3: 1024 4: 2048 (Unit: KB)	1
276	User interface	Default setting for density adjustment	SCN	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
281	User interface	Default setting of resolution	SCN	1 <0-4>	SYS	0: 150 dpi 1: 200 dpi 2: 300 dpi 3: 400dpi 4: 600 dpi	1
283	User interface	Default setting of original mode	SCN	0 <0-3>	SYS	0: Text 1: Text/Photo 2: Photo 3: Gray scale	1
284	User interface	Default setting of scanning mode	SCN	0 <0-2>	SYS	0: Single 1: Book 2: Tablet	1
285	User interface	Default setting of rotation angle of original	SCN	0 <0-3>	SYS	0: 0 degree 1: 90 degrees 2: 180 degrees 3: 270 degrees	1

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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	ALL	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)	PRT	5 <1 -9>	SYS	1: -4 2: -3 3: -2 4: -1 5: 0 6: +1 7: +2 8: +3 9: +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: Tab paper	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
295	Network	Raw printing job (receiving tray)	PRT	0 <0-6>	SYS	0: Inner tray 1: Finisher tray 1 2: Finisher tray 2 3: Not used 4: Not used 5: Not used 6: Exit tray	1

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			Set	ting mo	de (08)			
Code	Classifi- cation	Item	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
296	Network	Raw printing jo (Number of for	b n 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 jo (PCL font pitch	b)	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 jo (PCL font size)	b	PRT	1200 <400- 99975>	SYS	Sets the font size from 4 to 999.75. (A hun- dredfold of the font size is defined as the setting value.)	1
299	Network	Raw printing jo (PCL font num)	b ber)	PRT	0 <0-79>	SYS	Sets the PCL font num- ber.	1
300	User interface	Maximum number of copy volume (MAX9)		PPC	0 <0-3>	SYS	0: 9999 1: 999 2: 99 3: 9	1
302	User interface	Original counte	r display	ALL	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
305-0	Counter	Number of	A3	PPC	0	SYS	Counts the output	4
305-1		output pages	A4		<8 digits>		pages in the copier	
305-2		in copier func-	A5				function for each paper	
305-3		uon	A6				setting for the count	
305-4			B4	_			setting of large-sized	
305-5			B5	-			paper (08-352) and the	
305-6			FOLIO	-			large-sized paper (08-	
305-7			LD	-			353).	
305-8			LG	-				
305-9	-			-				
305-10				-				
305-11	1			-				
305-12			8 5" x 8 5"	-				
305-14			16K	4				
305-15			8K	-				
305-16			Others	1				

			Set	ting mo	de (08)			
					Default			
Code	Classifi-	Itom	e	Func-	<accept-< th=""><th>RAM</th><th>Contents</th><th>Proce-</th></accept-<>	RAM	Contents	Proce-
Code	cation	item	3	tion	able		Contents	dure
					value>			
306-0	Counter	Number of	A3	PRT	0	SYS	Counts the output	4
306-1		output pages	A4		<8 digits>		pages in the printer	
306-2		tion	A5				size according to the	
306-3			A6				setting for the count	
306-4			B4				setting of large-sized	
306-5			B5				paper (08-352) and the	
306-6			FOLIO				definition setting of	
306-7			LD				353)	
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	-		Others					
307-0	Counter	Number of	A3	PRT	0	SYS	Counts the output	4
307-1		at list print	A4		<8 aigits>		mode for each paper	
307-2		mode	A5				size according to the	
307-3			A6				setting for the count	
307-4			B4				setting of large-sized	
307-5			B5				paper (08-352) and the	
307-6			FOLIO				large-sized paper (08-	
307-7			LD				353).	
307-8			LG					
307-9								
307-10			SI					
207 12								
307-12			13 LG 9 5" y 9 5"					
307-13			0.0 X 0.0					
307-14			RK SK					
307 16			Others					
307-10			Others					

			Set	ting mo	de (08)			
					Default			
Code	Classifi-	lterr	ıs	Func-	<accept-< th=""><th>RAM</th><th>Contents</th><th>Proce-</th></accept-<>	RAM	Contents	Proce-
	cation			tion	able			dure
000.0	0			FAX	value>	0)/0		
308-0	Counter	Number of	A3	FAX	U <8 digita>	515	Counts the output	4
308-1		in FAX func-	A4				tion for each paper size	
308-2		tion	A5	-			according to the setting	
308-3			A6				for the count setting of	
308-4			B4				large-sized paper (08-	
308-5			B5				352) and the definition	
308-6			FOLIO				paper (08-353).	
308-7			LD				P-P ().	
308-8			LG					
308-9	-			-				
308-10	-		SI	-				
300-11	-			-				
200-12			13 LG					
200-13			0.0 X 0.0					
300-14								
308-16	-		Others	-				
312-0	Counter	Number of		PPC	0	272	Counts the scanning	4
312-1	Counter	scanning	Δ4		<8 diaits>	010	pages in the copier	т
312-2		pages in	A5		0		function for each paper	
312-3	-	copier func-	A6	-			size according to the	
312-4	-	tion	B4	-			setting for the count	
312-5			B5				paper (08-352) and the	
312-6			FOLIO				definition setting of	
312-7	-		LD	-			large-sized paper (08-	
312-8			LG	-			353).	
312-9			LT	-				
312-10			ST					
312-11			COMP	-				
312-12			13"LG	1				
312-13			8.5" x 8.5"	1				
312-14	1		16K	1				
312-15			8K					
312-16	1		Others	1				

			Set	ting mo	de (08)			
					Default			
Code	Classifi-	ltem	e	Func-	<accept-< th=""><th>RAM</th><th>Contents</th><th>Proce-</th></accept-<>	RAM	Contents	Proce-
oouc	cation	iten		tion	able		Contento	dure
	-				value>			
313-0	Counter	Number of	A3	SCN	0	SYS	Counts the scanning	4
313-1		scanning	A4	-	<8 aigits>		pages in the scanning	
313-2		scanning	A5				size according to the	
313-3		function	A6	-			setting for the count	
313-4			B4				setting of large-sized	
313-5			B5				paper (08-352) and the	
313-6			FOLIO				definition setting of	
313-7			LD				353)	
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					
313-16			Others					
314-0	Counter	Number of	A3	FAX	0	SYS	Counts the scanning	4
314-1		scanning	A4		<8 aigits>		pages in the FAX func-	
314-2		function	A5				according to the setting	
314-3			A6				for the count setting of	
314-4			B4				large-sized paper (08-	
314-5			B5				352) and the definition	
314-6			FOLIO				setting of large-sized	
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					
314-16			Others					

			Set	ting mo	de (08)			
				_	Default			
Code	Classifi-	lton	-	Func-	<accept-< th=""><th>DAM</th><th>Contonto</th><th>Proce-</th></accept-<>	DAM	Contonto	Proce-
Code	cation	item	5	tion	able	KAW	Contents	dure
					value>			
315-0	Counter	Number of	A3	FAX	0	SYS	Counts the transmitted	4
315-1		transmitted	A4		<8 digits>		pages in the FAX func-	
315-2		pages in FAX	A5	-			tion for each paper size	
315-3		function	A6	-			according to the setting	
315-4			B4	-			large-sized paper (08-	
315-5			B5	-			352) and the definition	
315-6			FOLIO	-			setting of large-sized	
315-7				-			paper (08-353).	
315-8				-				
315.0				-				
215 10			CT	-				
215-10			COMP	-				
215-11				-				
315-12			13 LG	÷				
315-13			8.5 X 8.5	-				
315-14			16K	-				
315-15			8K					
315-16	0		Others	= 1)/		01/0		
316-0	Counter	Number of	A3	FAX	0 <9 digita>	SYS	Counts the received	4
316-1		nages in FAX	A4	-	<o uigits=""></o>		tion for each naper size	
316-2		function	A5	-			according to the setting	
316-3			A6	-			for the count setting of	
316-4			B4	-			large-sized paper (08-	
316-5			B5				352) and the definition	
316-6			FOLIO				setting of large-sized	
316-7			LD				paper (00-353).	
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					
316-16			Others					
320-0	Counter	Display of number of output pages in copier func- tion	Large	PPC	0 <8 digits>	SYS	Counts the number of output pages in the Copier Function according to its size (large/small). Large:	14
320-1	Counter	1	Small	PPC	0	SYS	Number of output	14
320-1	Counter		Sinai	110	<8 digits>	515	pages of large-sized paper defined at 08- 353 Small: Number of output	14
320-2	Counter		Total	PPC	0 <8 digits>	SYS	pages other than set as large-sized paper Total: Total number out- put pages of all paper sizes.	14

			Set	ting mo	de (08)			
Code	Classifi- cation	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
321-0	Counter	Display of number of output pages in printer func- tion	Large	PRT	0 <8 digits>	SYS	Counts the number of output pages in the Printer Function according to its size (large/small). Large:	14
321-1	Counter		Small	PRT	0 <8 digits>	SYS	Number of output pages of large-sized paper defined at 08- 353 Small: Number of output	14
321-2	Counter		Total	PRT	0 <8 digits>	SYS	pages other than set as large-sized paper Total: Total number out- put pages of all paper sizes.	14
322-0	Counter	Display of number of output pages at list print mode	Large	PRT	0 <8 digits>	SYS	Counts the number of output pages at the List Print Mode Function according to its size (large/small). Large:	14
322-1	Counter		Small	PRT	0 <8 digits>	SYS	Number of output pages of large-sized paper defined at 08- 353 Small: Number of output	14
322-2	Counter		Total	PRT	0 <8 digits>	SYS	pages other than set as large-sized paper Total: Total number out- put pages of all paper sizes.	14
323-0	Counter	Display of number of output pages in FAX func- tion	Large	PRT	0 <8 digits>	SYS	Counts the number of output pages in the FAX Function according to its size (large/small). Large: Number of output	14
323-1	Counter		Small	PRT	0 <8 digits>	SYS	pages of large-sized paper defined at 08- 353 Small: Number of output pages other than	14
323-2	Counter		Total	PRT	0 <8 digits>	SYS	set as large-sized paper Total: Total number out- put pages of all paper sizes.	14

			Set	tting mo	de (08)			
Code	Classifi- cation	ltem	IS	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
327-0	Counter	Display of number of scanning pages in copier func- tion	Large	PPC	0 <8 digits>	SYS	Counts the number of scanning pages in the Copier Function according to its size (large/small). Large:	14
327-1	Counter		Small	PPC	0 <8 digits>	SYS	Number of output pages of large-sized paper defined at 08- 353 Small: Number of output	14
327-2	Counter		Total	PPC	0 <8 digits>	SYS	pages other than set as large-sized paper Total: Total number out- put pages of all paper sizes.	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	14
328-1	Counter		Small	FAX	0 <8 digits>	SYS	pages of large-sized paper defined at 08- 353 Small: Number of output pages other than	14
328-2	Counter	-	Total	FAX	0 <8 digits>	SYS	set as large-sized paper Total: Total number out- put pages of all paper sizes.	14
329-0	Counter	Display of number of scanning pages in scanning function	Large	SCN	0 <8 digits>	SYS	Counts the number of scanning pages in the Scanning Function according to its size (large/small). Large:	14
329-1	Counter		Small	SCN	0 <8 digits>	SYS	Number of output pages of large-sized paper defined at 08- 353 Small: Number of output	14
329-2	Counter		Total	SCN	0 <8 digits>	SYS	pages other than set as large-sized paper Total: Total number out- put pages of all paper sizes.	14

			Set	tting mo	de (08)			
Code	Classifi- cation	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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	14
330-1	Counter	-	Small	FAX	0 <8 digits>	SYS	pages of large-sized paper defined at 08- 353 Small: Number of output pages other than	14
330-2	Counter		Total	FAX	0 <8 digits>	SYS	paper Total: Total number out- put pages of all paper sizes.	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 recov- ered from the energy saving mode or sleep mode. 0: Copier 1: Fax 2: Scan 3: Box 4: Job Status 5: Template	1
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	14
332-1	Counter	-	Small	FAX	0 <8 digits>	SYS	pages of large-sized paper defined at 08- 353 Small: Number of output pages other than	14
332-2	Counter		Total	FAX	0 <8 digits>	SYS	set as large-sized paper Total: Total number out- put pages of all paper sizes.	14
335-0	Counter	Display of total number	Large	ALL	0 <8 digits>	SYS	Displays the total num- ber of pages in the	14
335-1	Counter	orpages	Small	ALL	0 <8 digits>	SYS	FAX functions.	14
335-2	Counter		Total	ALL	0 <8 digits>	SYS		14

2

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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
344	Counter	Count setting of tab paper (PM)	ALL	1 <0-1>	М	0: Counted as 1 1: Counted as 2	1
346	Counter	Count setting of large-sized paper (PM)	ALL	1 <0-1>	М	0: Counted as 1 1: Counted as 2	1
347	Counter	Definition setting of large- sized paper (PM)	ALL	0 <0-1>	М	0: A3/LD 1: A3/LD/B4/LG/ FOLIO/COMP	1
348	Counter	Count setting of thick paper (PM)	ALL	1 <0-1>	М	0: Counted as 1 1: Counted as 2	1
349	Counter	Count setting of OHP film (PM)	ALL	1 <0-1>	М	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>	М	 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>	М	0: A3/LD 1: A3/LD/B4/LG/ FOLIO/COMP/8K	1
355	Counter	Counter for Option LCF feeding	ALL	0 <8 digits>	М	Counts the number of sheets fed from the Option LCF	2
356	Counter	Counter for 1st drawer feeding	ALL	0 <8 digits>	М	Counts the number of sheets fed from 1st drawer	2
357	Counter	Counter for 2nd drawer feeding	ALL	0 <8 digits>	М	Counts the number of sheets fed from 2nd drawer	2
358	Counter	Counter for bypass feeding	ALL	0 <8 digits>	М	Counts the number of sheets fed from bypass feed	2
359	Counter	Counter for Tandem LCF feeding	ALL	0 <8 digits>	М	Counts the number of sheets fed from Tan- dem LCF	2
360	Counter	Counter for 3rd drawer feeding	ALL	0 <8 digits>	М	Counts the number of sheets fed from 3rd drawer	2
370	Counter	Counter for 4th drawer feeding	ALL	0 <8 digits>	М	Counts the number of sheets fed from 4th drawer	2
372	Counter	Counter for ADU	ALL	0 <8 digits>	М	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

		Set	tting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
375	Mainte- nance	PM time counter setting value display/ 0 clearing	ALL	Refer to contents <8 digits>	М	<pre><default value=""> e-STUDIO520/523 UC, EUR: 495,000 e-STUDIO600/603 JPN: 0 UC, EUR: 495,000 e-STUDIO720/723 JPN: 0 UC, EUR: 495,000 e-STUDIO850/853 JPN: 0 UC, EUR: 410,000</default></pre>	1
376	Mainte- nance	Current value of PM time counter display	ALL	0 <8 digits>	М	The driving period of the drum (when the main motor is ON) is counted in the drive counts.	1
381	Counter	Setting for counter installed externally	ALL	1 <0-7>	М	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
390	Counter	Number of errors in HDD (Copier)	PPC	0 <8 digits>	SYS	The number of error is reset at HDD format- ting.	2
391	Counter	Number of errors in HDD (FAX)	FAX	0 <8 digits>	SYS	The number of error is reset at HDD format- ting.	2
392	Counter	Number of errors in HDD (Scanning)	SCN	0 <8 digits>	SYS	The number of error is reset at HDD format- ting.	2
393	Counter	Number of errors in HDD (Printer)	PRT	0 <8 digits>	SYS	The number of error is reset at HDD format- ting.	2

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
400	Fuser	Fuser unit counter	ALL	0 <0-29>	M	0: No error 1: C411 2: C412 3: C443 4: - 5: C445/465 6: C446/466 7: C447/467 8: C468 9: C449 10: C475 11: C471 12: C472 13: C473 14: C481 15: C480 16: C474 17: C490 18: C468 19: C449 20: C468 21: C449 22: C449 23: C449 24: C447/C467 25: C449 26: C468 27: C449 28: C468 29: C449	1
401	Fuser	Display of remaining por- tion of cleaning web	ALL	0 <0-1>	М	0: Displayed 1: Not displayed	1
402	Fuser	Printing operation setting at the end of cleaning web	ALL	0 <0-1>	М	0: Stop operation 1: Continue operation	1
403	Fuser	Number of sheets to start reeling cleaning web	ALL	7 <0-255>	М	The equipment starts reeling the cleaning web every time the specified number of sheets have been printed. (= Setting value X 1 sheet)	1
404	Fuser	Setting value to display that the cleaning web is almost consumed Setting value to display that the cleaning web is consumed	ALL	Refer to contents <8 digits> Refer to contents <8 digits>	M	<default value=""> e-STUDIO600: 450,000 e-STUDIO720: 525,000 e-STUDIO850: 550,000 (Setting value X 1 sheet) <default value=""> e-STUDIO600: 500,000 e-STUDIO720: 575,000 e-STUDIO850: 600,000</default></default>	1
						sheet)	

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
406	Fuser	Pre-running period end temperature (Pressure roller) (Low temperature)	ALL	8 <0-16>	Μ	0: 100°C 1: 110°C 2: 120°C 3: 125°C 4: 130°C 5: 135°C 6: 140°C 7: 145°C 8: 150°C 9: 155°C 10: 160°C 11: 165°C 12: 170°C 13: 175°C 14: 180°C 15: 185°C 16: 190°C	1
407	Fuser	Pre-running period end temperature (Pressure roller) (Normal temperature / Option installed)	ALL	0 <0-16>	Μ	0: 100°C 1: 110°C 2: 120°C 3: 125°C 4: 130°C 5: 135°C 6: 140°C 7: 145°C 8: 150°C 9: 155°C 10: 160°C 11: 165°C 12: 170°C 13: 175°C 14: 180°C 15: 185°C 16: 190°C	1
408	Fuser	Fuser unit pre-running period end temperature (Pressure roller) (Normal temperature / Option not installed)	ALL	Refer to contents <0-16>	Μ	0: 100°C 1: 110°C 2: 120°C 3: 125°C 4: 130°C 5: 135°C 6: 140°C 7: 145°C 8: 150°C 9: 155°C 10: 160°C 11: 165°C 12: 170°C 13: 175°C 14: 180°C 15: 185°C 16: 190°C <default value=""> e-STUDIO520/523 UC, EUR: 4 e-STUDIO600/603 JPN: 1 UC, EUR: 4 e-STUDIO720/723 JPN: 2 UC, EUR: 4 e-STUDIO850/853 JPN: 2 UC, EUR: 4</default>	1

		Set	ting mo	de (08)			
				Default			
Code	Classifi-	Items	Func-	<accept-< th=""><th>RAM</th><th>Contents</th><th>Proce-</th></accept-<>	RAM	Contents	Proce-
couc	cation	home	tion	able		Contonito	dure
				value>			
409	Fuser	Fuser roller temperature at Energy Saving Mode	ALL	Refer to contents <0-27>	Μ	0: OFF 1: 50°C 2: 55°C 3: 60°C 4: 65°C 5: 70°C 6: 75°C 7: 80°C 8: 85°C 9: 90°C 10: 95°C 11: 100°C 12: 105°C 13: 110°C 14: 115°C 15: 120°C 16: 125°C 17: 130°C 18: 135°C 19: 140°C 20: 145°C 21: 150°C 22: 155°C 23: 160°C 24: 165°C 25: 170°C 26: 175°C 27: 180°C <default value=""> e-STUDIO520/523 UC, EUR: 19 e-STUDIO720/723 JPN: 5 UC, EUR: 22 e-STUDIO850/853 JPN: 22 UC, EUR: 25</default>	1
410	Fuser	Huser roller temperature during printing (Plain paper)	ALL	12 <0-14>	M	U: 140°C 1: 145°C 2: 150°C 3: 155°C 4: 160°C 5: 165°C 6: 170°C 7: 175°C 8: 180°C 9: 185°C 10: 190°C 11: 195°C 12: 200°C 13: 205°C 14: 210°C	1

		Set	ting mo	de (08)			
				Default			
Codo	Classifi-	Itomo	Func-	<accept-< th=""><th>DAM</th><th>Contonto</th><th>Proce-</th></accept-<>	DAM	Contonto	Proce-
Code	cation	items	tion	able	RAIVI	Contents	dure
				value>			
411	Fuser	Fuser roller temperature at ready status	ALL	Refer to contents <0-14>	M	0: 140°C 1: 145°C 2: 150°C 3: 155°C 4: 160°C 5: 165°C 6: 170°C 7: 175°C 8: 180°C 9: 185°C 10: 190°C 11: 195°C 12: 200°C 13: 205°C 14: 210°C <default value=""> e-STUDIO520/523 UC, EUR: 12 e-STUDIO600/603 JPN: 9 UC, EUR: 12 e-STUDIO720/723 IPN: 9 UC, EUR: 12</default>	1
412	Fuser	Fuser roller temperature during printing (Thick paper 3)	ALL	12 <0-14>	M	JPN: 9 UC, EUR: 12 e-STUDIO850/853 JPN: 12 UC, EUR: 12 0: 140°C 1: 145°C 2: 150°C 3: 155°C 4: 160°C 5: 165°C 6: 170°C 7: 175°C 8: 180°C 9: 185°C 10: 190°C 11: 195°C 12: 200°C 13: 205°C 14: 210°C	1
413	Fuser	Fuser roller temperature during printing (Thick paper 1)	ALL	12 <0-14>	Μ	0: 140°C 1: 145°C 2: 150°C 3: 155°C 4: 160°C 5: 165°C 6: 170°C 7: 175°C 8: 180°C 9: 185°C 10: 190°C 11: 195°C 12: 200°C 13: 205°C 14: 210°C	1

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
414	Devel- oper	Toner density life correc- tion switching	ALL	3 <0-7>	M	 Approx. 0.75% lower than current status Approx. 0.50% lower than current status Approx. 0.25% lower than current status Unchanged (Default) Approx. 0.15% higher than current status Approx. 0.25% higher than current status Approx. 0.25% higher than current status Approx. 0.50% higher than current status Approx. 0.75% higher than current status 	1
417	Fuser	Pre-running time for first printing (Thick paper 3)	ALL	0 <0-15>	Μ	0: Invalid 1: 1 sec. 2: 2 sec. 3: 3 sec. 4: 4 sec. 5: 5 sec. 6: 6 sec. 7: 7 sec. 8: 8 sec. 9: 9 sec. 10: 10 sec. 11: 12 sec. 12: 14 sec. 13: 16 sec. 14: 18 sec. 15: 20 sec.	1
418	Charger	Wire cleaning operation cycle setting	ALL	4 <0-6>	М	0: Disabled 1: 500 sheets interval 2: 1,000 sheets interval 3: 1,500 sheets interval 4: 2,000 sheets interval 5: 2,500 sheets interval 6: 3,000 sheets interval	1
433	Fuser	High fusing mode	ALL	0 <0-1>	Μ	The fusing efficiency level goes up during a continuous printing (when Thick 3 is selected). 0: Disabled 1: Enabled	1
437	Fuser	Fuser roller temperature during printing (Thick paper 2)	ALL	12 <0-14>	Μ	0: 140°C 1: 145°C 2: 150°C 3: 155°C 4: 160°C 5: 165°C 6: 170°C 7: 175°C 8: 180°C 9: 185°C 10: 190°C 11: 195°C 12: 200°C 13: 205°C 14: 210°C	1

		Set	tting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
439	Fuser	Pre-running time for first printing (Thick paper 2)	ALL	0 <0-15>	М	0: Invalid 1: 1 sec. 2: 2 sec. 3: 3 sec. 4: 4 sec. 5: 5 sec. 6: 6 sec. 7: 7 sec. 8: 8 sec. 9: 9 sec. 10: 10 sec. 11: 12 sec. 12: 14 sec. 13: 16 sec. 14: 18 sec. 15: 20 sec.	1
440	Fuser	Pre-running time for first printing (Plain paper)	ALL	0 <0-15>	Μ	0: Invalid 1: 1 sec. 2: 2 sec. 3: 3 sec. 4: 4 sec. 5: 5 sec. 6: 6 sec. 7: 7 sec. 8: 8 sec. 9: 9 sec. 10: 10 sec. 11: 12 sec. 12: 14 sec. 13: 16 sec. 14: 18 sec. 15: 20 sec.	1
441	Fuser	Pre-running time for first printing (Thick paper 1)	ALL	0 <0-15>	М	0: Invalid 1: 1 sec. 2: 2 sec. 3: 3 sec. 4: 4 sec. 5: 5 sec. 6: 6 sec. 7: 7 sec. 8: 8 sec. 9: 9 sec. 10: 10 sec. 11: 12 sec. 12: 14 sec. 13: 16 sec. 14: 18 sec. 15: 20 sec.	1
449	Paper feeding	Incorrect paper size jam detection switching	ALL	0 <0-1>	М	0: Enabled 1: Disabled	1
455	Process	Toner supply amount cor- rection/ New toner supply motor control	ALL	0 <0-8>	Μ	The supply amount of new toner to the devel- oper unit (the drive counts of the new toner supply motor) is cor- rected. Smaller-Toner supply amount-Larger $5 \rightarrow 4 \rightarrow 3 \rightarrow 1 \rightarrow 0 \rightarrow 2 \rightarrow 6$ $\rightarrow 7 \rightarrow 8$	1
456	Process	Toner supply amount cor- rection/ Hopper motor con- trol	ALL	0 <0-8>	M	The supply amount of recycle toner to the developer unit (the drive counts of the hop- per motor) is corrected. Smaller-Toner supply amount-Larger $3 \rightarrow 1 \rightarrow 0 \rightarrow 7 \rightarrow 6 \rightarrow 5 \rightarrow 4$ $\rightarrow 8 \rightarrow 2$	1

	Setting mode (08)											
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure					
457	Process	Recycle toner supply con- trol switching	ALL	1 <0-1>	М	This setting is whether the recycle toner is sup- plied or not when the toner cartridge is empty. 0: Supplied 1: Not supplied	1					
460	Fuser	Threshold of low tempera- ture environment control	ALL	7 <0-11>	М	The boundary tempera- ture of the low and nor- mal temperature control can be set. $0: 0^{\circ}C$ 1: $5^{\circ}C$ 2: $9^{\circ}C$ 3: $10^{\circ}C$ 4: $12^{\circ}C$ 5: $14^{\circ}C$ 6: $15^{\circ}C$ 7: $16^{\circ}C$ 8: $17^{\circ}C$ 9: $18^{\circ}C$ 10: $19^{\circ}C$ 11: $20^{\circ}C$	1					

Setting mode (08)								
Code	Classifi- cation	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
462	RADF	Setting for switc operation in mix copying using F	chback ked-size RADF	ALL	0 <0-2>	M	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. 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 transport- ing without scanning in reverse to detect its length. LT series - Judges whether it is LT-R or LG by transport- ing 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. Sets the number of	1
	feeding	number set-	paper		<0-5>		times of the feeding	
463-1		ting (1st drawer)	Others	ALL	5 <0-5>	M	drawer.	4

			Set	tting mo	de (08)			
Code	Classifi- cation	ltem	IS	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
464-0	Paper feeding	Feeding retry number set-	Plain paper	ALL	5 <0-5>	М	Sets the number of times of the feeding	4
464-1		ting (2nd drawer)	Others	ALL	5 <0-5>	М	retry from the 2nd drawer.	4
465-0	Paper feeding	Feeding retry number set-	Plain paper	ALL	5 <0-5>	М	Sets the number of times of the feeding	4
465-1	-	ting (3rd drawer)	Others	ALL	5 <0-5>	М	retry from the 3rd drawer.	4
466-0	Paper feeding	Feeding retry number set-	Plain paper	ALL	5 <0-5>	М	Sets the number of times of the feeding	4
466-1		ting (4th drawer)	Others	ALL	5 <0-5>	М	retry from the 4th drawer.	4
467-0	Paper feeding	Feeding retry number set-	Plain paper	ALL	5 <0-5>	М	Sets the number of times of the feeding	4
467-1	-	ting (bypass feed)	Others	ALL	5 <0-5>	М	retry from the bypass tray.	4
468-0	Paper feeding	Feeding retry number set-	Plain paper	ALL	5 <0-5>	М	Sets the number of times of the feeding	4
468-1	-	ting (Tandem LCF)	Others	ALL	5 <0-5>	М	retry from the Tandem LCF.	4
470	Paper feeding	Paper size (LD wide) feeding/widthwise direction		ALL	457/305 <148- 457/105- 305>	М		10
471	Paper feeding	Paper size (Po feeding/widthw	stcard) ise direction	ALL	148/100 <148- 432/100- 297>	М		10
476	Counter	Counter for use status	ed toner full	ALL	0 <0-3>	М	Counts the number of times the Toner bag full status is detected. (The error [CD40] is dis- played.) * Set this code to "0" when replacing the Toner bag.	1
478	Laser	Judged numbe nal motor rotati (Normal rotatio	r of polygo- on error n)	ALL	0 <0-6>	М	Displays the error [CA10] when the set number of rotation error has been detected. 0: 10 times 1: 6 times 2: 8 times 3: 12 times 4: 14 times 5: 16 times 6: 20 times	1
480	Paper feeding	Default setting source	of paper	PPC	0 <0-6>	М	0: A4/LT 1:Tandem LCF 2: 1st drawer 3: 2nd drawer 4: 3rd drawer 5: 4th drawer 6: Option LCF	1

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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. OFF ON (Changes to the drawer with the same paper direc- tion and size: ex. A4 to A4) 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/hole-punch is specified.) 	1
482	Paper feeding	Feeding retry setting	ALL	0 <0-1>	Μ	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 status of polygonal motor on standby. 0: Rotated (The rotational speed is set at 08-489.) 1: Stopped 	1

2

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
486	Laser	Timing of auto-clearing of polygonal motor pre-run- ning rotation	ALL	0 <0-2>	SYS	This setting to switch the polygonal motor to the standby rotation when a certain period of time has passed from the pre-running. In this code, the period of time to switch the motor sta- tus to the standby rota- tion is set. 0: 15 sec. 1: 30 sec. 2: 45 sec. * This setting is enabled when "0" or "2" is set in 08-483 and also "0" is set in 08-484. The rota- tional status in the ready status can be set in 08-485	1
488	Laser	Setting of polygonal motor type	ALL	2 <2-3>	Μ	The type of the polygo- nal motor is set. 2: 2-clock type 3: 3-clock type * This setting is enabled only for e- STUDIO850.	1
489	Laser	Polygonal motor rotational speed at ready status	ALL	Refer to contents <0-5>	M	<e-studio520 523="" <br="">600/603/720/723> 0: 60,236.22 rpm 1: 44,500 rpm 2: 40,000 rpm 3: 35,000 rpm 4: Unused 5: Unused 5: Unused 2: Unused 3: Unused 4: Unused 5: Unused 4: Unused 5: Unuse 5: Unuse 5: Unuse 5: Unuse 5: Unuse 5: Unuse 5: Un</e-studio520>	1
502	Image	Error diffusion and dither setting at photo mode	PPC	1 <0-1>	SYS	Sets the image repro- duction method at photo mode. 0: Error diffusion 1: Dither	1
503	User interface	Default setting of density adjustment	PPC	0 <0-1>	SYS	0: Automatic 1: Manual (Center)	1

		Set	ting mo	de (08)			
				Default			
Code	Classifi-	Items	Func-	<accept-< th=""><th>RAM</th><th>Contents</th><th>Proce-</th></accept-<>	RAM	Contents	Proce-
0000	cation	Romo	tion	able		Contonic	dure
				value>			
508	Image	Custom Mode setting	PPC	0 <0-3>	SYS	 0: Not used 1: Custom Mode 1 when Text/Photo is set as a base 2: Custom Mode 2 when Text is set as a base 3: Custom Mode 3 when Photo is set as a base 	1
509	Image	Error diffusion and dither setting at a photo mode (Custom Mode)	PPC	1 <0-1>	SYS	Switches the image processing method when Custom Mode 3 is set. 0: Error diffusion 1: Dither	1
526	Fuser	Pre-running time for first printing (OHP film)	ALL	5 <0-15>	М	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: 9 sec. 10: 10 sec. 11: 12 sec. 12: 14 sec. 13: 16 sec. 14: 18 sec. 15: 20 sec.	1
550	Image	Default setting of original mode	PPC	0 <0-10>	SYS	0: Text/Photo 1: Photo 2: Text 3: Custom Mode	1
601	User interface	Setting for the Energy Sav- ing Mode	ALL	0 <0-1>	SYS	0: Auto Shut Off Mode 1: Sleep Mode	1
602	User interface	Screen setting for Auto power Save Mode and Auto Shut OFF Mode	ALL	EUR: 0 UC: 1 JPN: 1 <0-1>	SYS	0: OFF 1: ON	1
603	User interface	Setting for automatic duplexing mode	PPC	0 <0-3>	SYS	 Invalid Single-sided to duplex copying Double-sided to duplex copying User selection 	1
604	User interface	Default setting for APS/ AMS	PPC	0 <0-2>	SYS	 O: 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	 Continuous feeding (by pressing the [START] button) Single feeding (by setting original on the tray) 	1

		Set	tting mo	de (08)	Setting mode (08)								
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure						
610	User interface	Key touch sound of control panel	ALL	1 <0-1>	SYS	0: OFF 1: ON	1						
611	User interface	Book type original priority	PPC	0 <0-1>	SYS	0: Left page to right page1: Right page to left page	1						
612	General	Summer time mode	ALL	0 <0-1>	SYS	0: Not summer time 1: Summer time	1						
613	User interface	Paper size selection for [OTHER] button	PPC	EUR: FOLIO UC: COMP JPN: A5-R	SYS	Press the button on the LCD to select the size.	9						
614	Network	Local I/F time-out period	PRT	6 <1-50>	SYS	Sets the period of time when the job is judged as completed in local I/ F printing (USB or par- allel). 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 mem- ory is properly recog- nized.	2						
617	User interface	Print setting when depart- ment code is not entered	ALL	1 <0-2>	SYS	0: Printed forcibly 1: Print impossible 2: Deleted forcibly	1						
618	User interface	Default setting when mixed size originals are set on RADF	PPC	0 <0-1>	SYS	0: Scanned as all in same size1: Scanned as each original size	1						
619	Paper feeding	Time lag before Auto Job 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 0.5 sec. 	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						

Setting mode (08)								
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure	
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 non-sorting	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 * When this code is set to "0" (Invalid), the user data department man- agement setting (08-1482) will be set to "0" (Invalid).	1	
630	Paper feeding	Paper size for Option LCF	ALL	JPN: A4 UC: LT EUR: A4	М	Press the button on the LCD to select the size.	9	
633	Scram- bler board	Releasing F200 service call	ALL	0 <0-2>	SYS	0: Not used 1: Board installed 2: Service call	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 Other:0 <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	

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		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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
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
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 mag- azine 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	PPC	2 <0-3>	SYS	Sets the page pasted position for "X in 1" to the upper left corner/ center. 0: PPC:Cornering/ PRT:Cornering 1: PPC:Centering/ PRT:Cornering 2: PPC:Cornering/ PRT:Centering 3: PPC:Centering/ PRT:Centering	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 page1: 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

Setting mode (08)									
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
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		
000	interface		PRI	<0-1>	515	U. OFF T. ON	1		
657	User interface	Direction priority for date and time stamp printing	PPC	0 <0-1>	SYS	0: Short edge 1: Long edge	1		
658	User interface User interface	Auto Job Start setting for bypass feed printing Auto Job start setting for bypass feed printing	PRT	0 <0-1> 1 <0-1>	SYS	 Sets whether or not feeding a paper auto- matically into the equip- ment when it is placed on the bypass tray. 0: OFF (Press the [START] button to start feeding.) 1: ON (Automatic feeding) Sets whether or not feeding a paper auto- matically into the equip- ment when it is placed on the bypass tray. 0: OFF (Press the [START] button to start feeding.) 1: ON (Automatic 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		
665	General	M/SYS all clearing	ALL	-	M/ SYS	Initializes all the adjust- ment modes and setting modes.	3		
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		
669	General	System all clearing	ALL	-	SYS	The system FRAM stor- age area is cleared.	3		

		Set	tting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
670	General	HDD diagnostic menu dis- play	ALL	-	SYS	Display the HDD infor- mation (Ch.5.3.5)	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 * Key in the code and press the [INITIAL- IZE] button to per- form the initialization. If the area storing the department man- agement informa- tion is destroyed for some reason, "Enter Department Code" is displayed on the control panel even if the department management func- tion is not set on. In this case, initialize the area with this code. This area is normally initialized at the factory.	3
673	General	Trial period setting	PRT/ SCN	254 <1-60>	SYS	Sets the trial period from 1 to 60 days. This setting is effective only when the default value is "254". Once the default value is set, this value is only used for a reference.	1
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	
679	General	Banner advertising display	ALL	-	SYS	Maximum 27 letters (one-byte character)	11
680	General	Banner advertising display 2	ALL	-	SYS	Maximum 27 letters (one-byte character)	11

Setting mode (08)									
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
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	User 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 printing is short paid with a coin controller, reverse side of the original is not printed and is considered as a defect (printing job may be cleared). To solve this problem, the selection of printing method is enabled with this setting. 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 log.	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>	SYS	2: Normal formatting	7		
691	General	HDD type display	ALL	- <0-2>	SYS	 0: Not formatted 1: Not used 2: Normal format 	7		
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		
695	General	Notifying condition of trial period end	PRT/ SCN	3 <0-59>	SYS	Sets when the end of trial period is notified. 0: On the day it ends 1 to 59: n days before	1		

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			Set	ting mo	de (08)			
Code	Classifi- cation	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
696	Scram- bler board	Installation of s board (Option)	crambler	ALL	0 <0-1>	-	0: Not installed 1: Installed	2
697	Paper feeding	Paper type prio	rity	PPC	1 <1-2>	SYS	Sets the paper type pri- ority during copying. 1: Plain paper 2: Thick paper 1	1
698	Scram- bler board	Entering the ke scrambler boar	y code for d	ALL	-	-	Start up this code and have the user enter the key code. Once the key code has been set, this code can- not be set again on security grounds.	5
699	Scram- bler board	HDD data all cl	earing	ALL	-	-	This setting is enabled only when the Scram- bler Board is installed.	3
701	FAX	Destination set	ting 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-control function	led service	ALL	2 <0-2>	SYS	 Valid (Remote-con- trolled server) Valid (L2) Invalid 	1
703	Mainte- nance	Remote-control HTTP server URL setting	lled service	ALL	-	SYS	Maximum 256 Bytes	11
704-0	User interface	Interruption of stapling oper- ation (no sta- ple)	Copying	ALL	1 <0-1>	SYS	 Continues printing by switching sort setting Interrupts printing 	11
704-1			Printing / BOX print- ing	ALL	1 <0-1>	SYS	 0: Continues printing by switching sort setting 1: Interrupts printing 	4

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
707	Mainte- nance	Remote-controlled service HTTP initially-registered server URL setting	ALL	https:// device.mf p-sup- port.com: 443/ device/fir- streg- ist.ashx	SYS	Maximum 256 letters	4
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 (Remote)	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	 OFF Start Only certification is scanned 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	 OFF Notifies all service calls 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

Setting mode (08)								
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure	
731	Mainte- nance	HTTP proxy panel display	ALL	1 <0-1>	SYS	0: Valid 1: Invalid	1	
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	0 <5 digits>	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	
758	Mainte- nance (Remote)	Information about supplies Part number of toner car- tridge	ALL	-	SYS	Maximum 20 digits	11	
759	Mainte- nance (Remote)	Information about supplies Order quantity of toner car- tridge	ALL	1 <1-99>	SYS		1	
760	Mainte- nance (Remote)	Information about supplies Condition number of toner cartridge	ALL	1 <1-99>	SYS		1	

Setting mode (08)								
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure	
761	Mainte- nance (Remote)	Information about supplies Part number of used toner bag	ALL	-	SYS	Maximum 20 digits	11	
762	Mainte- nance (Remote)	Information about supplies Order quantity of used toner bag	ALL	1 <1-99>	SYS		1	
763	Mainte- nance (Remote)	Information about supplies Condition number of used toner bag	ALL	1 <1-99>	SYS		1	
765	Mainte- nance (Remote)	Automatic ordering sup- plies Display	ALL	EUR: 2 UC: 0 JPN: 2 Other: 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	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	
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 Other: 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	

Setting mode (08)									
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
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 Sunday	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1		
785	Mainte- nance	Remote-controlled service polling day selection Monday	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1		
786	Mainte- nance	Remote-controlled service polling day selection Tuesday	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		
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 Saturday	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1		
794	Mainte- nance	Information of supplies set- ting of toner cartridge	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1		
795	Mainte- nance	Information about supplies Setting of used toner bag	ALL	0 <0-1>	SYS	0: Disabled 1: Enabled	1		
796	Mainte- nance	Remote-controlled service lengthened interval polling (End of month)	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1		
797	Mainte- nance	Firmware download	ALL	0 <0-1>	SYS	0: Accepted 1: Prohibited	1		
798	General	Notifying address of trial period end	PRT/ SCN	3 <0-3>	SYS	Sets where the end of the trial period is to be notified. 0: OFF 1: User 2: Service center 3: User and service center	1		
799	General	Forcible end of trial period	PRT/ SCN	-	SYS	[CANCEL]: Cancel [EXECUTION]: Forc- ible end When the "Forcible end of trial period" is per- formed, "0" is set in the code (08-673) to end up the trial period forcibly.	3		
Setting mode (08)									
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Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
800	Image quality control	Number of times of sensor abnormality/ 0 clearing	ALL	0 <0-16>	M	The number of times the image quality closed-loop control error has occurred is displayed. When the equipment has been repaired and the cause of the error has been evaluated after the appearance of a warn- ing message (IQC), reset the counter to switch off this message.	1		
803	Image quality control	Image quality control / Auto-start print volume setting 1	ALL	20 <0-30>	М	The printing interval to perform the image qual- ity closed-loop control is set. Default: 2000 sheets (Setting value X 100 sheets)	1		
804	Image quality control	Condition setting of image quality control auto-start	ALL	4 <0-24>	М	When the equipment has been left in warm- ing-up for more than the specified period of time, the image quality closed-loop control is performed. This period is set in this code. Default: 4 (Unit: hours)	1		
810	Image quality control	Image quality control / Auto-start print volume setting 2	ALL	50 <1-99>	М	The image quality closed-loop control is performed in a shorter printing interval than the one set in 08-803 only when the equipment has been left inactive for a long time (includ- ing power-OFF). Default: 500 sheets (Setting value X 10 sheets)	1		
830	Transfer	Transfer voltage trans- former DC correction (C)	ALL	Refer to contents <0-255>	M	The output value of the transfer bias at the cen- ter of the paper is cor- rected. <default value=""> e-STUDIO520/523: 105 e-STUDIO600/603: 105 e-STUDIO720/723: 105 e-STUDIO850/853: 139</default>	1		

		Set	tting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
841	Transfer	Transfer timing correction	ALL	1 <0-14>	Μ	 The timing to turn on the transfer bias is corrected. <e-studio600 <="" li=""> e-STUDIO720> 0: Approx. 1.4 mm passed from the reference position 1: Turns on at the reference position (default) 2: Approx. 1.4 mm before the reference position 3: Approx. 2.8 mm before the reference position 4: Approx. 7.1 mm before the reference position <e-studi0850></e-studi0850> 0: Approx. 1.6 mm passed from the reference position 2: Approx. 1.6 mm before the reference position 3: Approx. 1.6 mm before the reference position 3: Approx. 3.3 mm before the reference position 4: Approx. 3.3 mm before the reference position </e-studio600>	1
844	Fuser	Switching timing into low- speed pre-running from start of ready status (Pressure roller)	ALL	1 <0-12>	Μ	0: Switching disabled 1: 5 min. 2: 10 min. 3: 20 min. 4: 30 min. 5: 40 min. 6: 50 min. 7: 60 min. 8: 70 min. 9: 80 min. 10: 90 min. 11: 100 min. 12: 120 min. <default value=""> e-STUDIO520/523 UC, EUR: 10 e-STUDIO600/603 JPN: 6 UC, EUR: 10 e-STUDIO720/723 JPN: 6 UC, EUR: 10 e-STUDIO850/853 JPN: 10 UC, EUR: 10</default>	1

Setting mode (08)								
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure	
845	Fuser	Low-speed pre-running starting temperature dur- ing ready status (Pressure roller) (Option not installed) (When setting 08-844 is enabled)	ALL	Refer to contents <0-16>	M	0: 50°C 1: 55°C 2: 60°C 3: 65°C 4: 70°C 5: 75°C 6: 80°C 7: 85°C 8: 90°C 9: 95°C 10: 100°C 11: 105°C 12: 110°C 13: 115°C 14: 120°C 15: 125°C 16: 130°C <default value=""> e-STUDIO520/523 UC, EUR: 10 e-STUDIO600/603 JPN: 6 UC, EUR: 10 e-STUDIO720/723 JPN: 6 UC, EUR: 10 e-STUDIO850/853 JPN: 10 UC, EUR: 10</default>	1	
846	Fuser	Low-speed pre-running stopping temperature dur- ing ready status (Pressure roller) (Option not installed) (When setting 08-844 is enabled)	ALL	5 <0-9>	М	0: +5°C 1: +10°C 2: +15°C 3: +20°C 4: +25°C 5: +30°C 6: +35°C 7: +40°C 8: +45°C 9: +50°C	1	
847	Fuser	Low-speed pre-running starting temperature dur- ing ready status (Pressure roller) (Option installed) (When setting 08-844 is enabled)	ALL	10 <0-16>	Μ	0: 50°C 1: 55°C 2: 60°C 3: 65°C 4: 70°C 5: 75°C 6: 80°C 7: 85°C 8: 90°C 9: 95°C 10: 100°C 11: 105°C 12: 110°C 13: 115°C 14: 120°C 15: 125°C 16: 130°C	1	
848	Fuser	Low-speed pre-running stopping temperature dur- ing ready status (Pressure roller) (Option installed) (When setting 08-844 is enabled)	ALL	5 <0-9>	М	0: +5°C 1: +10°C 2: +15°C 3: +20°C 4: +25°C 5: +30°C 6: +35°C 7: +40°C 8: +45°C 9: +50°C	1	
855	Fuser	Low-speed pre-running setting at recovery from Energy Saving Mode	ALL	Refer to contents <0-1>	М	0: Performs pre-running 1: No pre-running <default value=""> e-STUDIO520/523 UC, EUR: 0 e-STUDIO600/603 JPN: 1 UC, EUR: 0 e-STUDIO720/723 JPN: 1 UC, EUR: 0 e-STUDIO850/853 JPN: 0 UC, EUR: 0</default>	1	

Setting mode (08)								
Code	Classifi- cation	ltem	IS	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
858	Fuser	Switching printing speed	Plain paper	ALL	0 <0-2>	М	0: Disabled 1: Enabled only for 5	1
859			Thick paper 1	ALL	0 <0-2>	М	minutes after warm- ing-up	1
860			Thick paper 2	ALL	0 <0-2>	М	2: Always enabled	1
861	-		Thick paper 3	ALL	0 <0-2>	М		1
868	Transfer	Transfer transfe correction (H)	ormer DC	ALL	128 <0-255>	М	The output value of the transfer bias at the leading edge of paper is corrected.	1
869	Transfer	Transfer transfe correction (L)	ormer DC	ALL	128 <0-255>	М	The output value of the transfer bias at the trailing edge of paper is corrected.	1
890	Fuser	Low-speed pre starting temper ing ready statu: (Pressure roller (Option not inst	-running ature dur- s r) talled)	ALL	Refer to contents <0-16>	M	0: 50°C 1: 55°C 2: 60°C 3: 65°C 4: 70°C 5: 75°C 6: 80°C 7: 85°C 8: 90°C 9: 95°C 10: 100°C 11: 105°C 12: 110°C 13: 115°C 14: 120°C 15: 125°C 16: 130°C <default value=""> e-STUDIO520/523 UC, EUR: 16 e-STUDIO720/723 JPN: 6 UC, EUR: 16 e-STUDIO850/853 JPN: 10 UC, EUR: 16</default>	1
891	Fuser	Low-speed pre stopping tempe ing ready statu: (Pressure roller (Option not inst	-running erature dur- s r) talled)	ALL	Refer to contents <0-9>	M	0: 5°C 1: 10°C 2: 15°C 3: 20°C 4: 25°C 5: 30°C 6: 35°C 7: 40°C 8: 45°C 9: 50°C <default value=""> e-STUDIO520/523 UC, EUR: 2 e-STUDIO600/603 JPN: 5 UC, EUR: 2 e-STUDIO720/723 JPN: 5 UC, EUR: 2 e-STUDIO850/853 JPN: 2 UC, EUR: 2</default>	

Setting mode (08)									
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
897	Fuser	Low-speed pre-running starting temperature dur- ing ready status (Pressure roller) (When options are installed)	ALL	16 <0-16>	M	0: 50°C 1: 55°C 2: 60°C 3: 65°C 4: 70°C 5: 75°C 6: 80°C 7: 85°C 8: 90°C 9: 95°C 10: 100°C 11: 105°C 12: 110°C 13: 115°C 14: 120°C 15: 125°C 16: 130°C	1		
898	Fuser	Low-speed pre-running stopping temperature dur- ing ready status (Pressure roller) (When options are installed))	ALL	2 <0-9>	М	0: 5°C 1: 10°C 2: 15°C 3: 20°C 4: 25°C 5: 30°C 6: 35°C 7: 40°C 8: 45°C 9: 50°C	1		
900	Version	System firmware ROM ver- sion	ALL	-	-	T390SYXXXX	2		
903	Version	Engine ROM version	ALL	-	-	390M-XXX	2		
904	Version	Laser ROM version	ALL	-	-	390L-XXX	2		
905	Version	Scanner ROM version	ALL	-	-	390S-XXX	2		
906	Version	PFC ROM version	ALL	-	-	390F-XXX	2		
907	Version	RADF ROM version	ALL	-	-	DF-XXXX	2		
908	Version	Finisher ROM version	ALL	-	-	SDL-XX FIN-XX	2		
909	Version	Inserter ROM version	ALL	-	-	INS-XX	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	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		
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		

Setting mode (08)									
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
933	Version	Web data whole version	ALL	-	-	VXXX.XXX X	2		
934	Version	Web UI data in HDD	ALL	-	-	VXXX.XXX X	2		
935	Version	Version: Language 1 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	-	-	T390HDXXXXX	2		
945	Network	Two-way setting of RawPort 9100	ALL	2 <1-2>	UTY	1: Valid 2: Invalid	12		
947	General	Initialization after software version upgrade	ALL	-	-	Perform this code when the software in this equipment has been upgraded.	3		
949	General	Automatic interruption page setting during black printing	ALL	0 <0-100>	SYS	Sets the number of pages to interrupt the printing automatically. 0-100: 0 to 100 pages	1		
950	Elec- tronic Fil- ing	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		
953	User interface	Access code entry for Electronic Filing printing	ALL	0 <0-1>	SYS	0: Renewed automati- cally1: 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	JPN: 0 Other: 1 <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		

Setting mode (08)							
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
976	Elec- tronic Fil- ing	Equipment name setting to a folder when saving files	ALL	0 <0-2>	SYS	Sets whether or not adding the equipment 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 <0-6>	SYS	0: AUTO 1: 1st drawer 2: 2nd drawer 3: 3rd drawer 4: 4th drawer 5: Tandem LCF 6: Option LCF	1
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, Latin 2 8: PC-8 Turkish 9: Windows 3.1 Latin 1 10: Windows 3.1 Latin 1 10: Windows 3.1 Latin 5 12: DeskTop 13: PS Text 14: Ventura International 15: Ventura US 16: Microsoft Publishing 17: Math-8 18: PS Math 19: Ventura Math 20: Pi Font 21: Legal 22: ISO 4: United Kingdom 23: ISO 6: ASCII 24: ISO 11 25: ISO 15: Italian 26: ISO 17 27: ISO 21: German 28: ISO 60: Danish/Norwegian 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

Setting mode (08)									
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
983	User interface	JOB STATUS initial screen setting	ALL	0 <0-1>	SYS	0: Print 1: Private	1		
985	Elec- tronic Fil- ing	Print mode setting of mixed input source of Electronic Filing	ALL	0 <0-1>	SYS	0: Image quality prior- ity mode1: Function priority mode	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 \rightarrow 13"LG 2: FOLIO \rightarrow 13"LG	1		
995	Version	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		
999	Mainte- nance	FSMS total counter	ALL	0 <8 digits>	SYS	Refers to values of total counter	1		
1002	Network	Selection of NIC status information	ALL	1 <1-2>	NIC	 Not printed out when the equipment is restarted Printed out when the equipment 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	Method of IP addressing	ALL	2 <1-3>	NIC	 Unchanging Automatic address- ing (DHCP) No IP address applied to auto- matic addressing (DHCP) 	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		
1009	Network	Subnet mask	ALL	-	NIC	000.000.000.000- 255.255.255.255 (Default value 000.000.000.000)	12		
1010	Network	Gateway	ALL	-	NIC	000.000.000.000- 255.255.255.255 (Default value 000.000.000.000)	12		
1011	Network	Availability of IPX	ALL	1 <1-2>	NIC	1: Available 2: Not available	12		

		Set	ting mo	ode (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1012	Network	Network frame type	ALL	1 <1-5>	NIC	1: Automatic 2: IEEE802.3 3: Ethernet II 4: IEEE802.3SNAP 5: IEEE802.2	12
1013	Network	Availability of NCP Burst	ALL	1 <1-2>	NIC	1: Available 2: Not available	12
1014	Network	Availability of AppleTalk	ALL	1 <1-2>	NIC	 Available Not available 	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	 Available Not available 	12
1017	Network	Availability of DNS	ALL	1 <1-2>	NIC	 Available 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	 Invalid Via DHCP Insecure DDNS Secure DDNS Multi-secure DDNS 	12
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_seri al	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

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	Setting mode (08)									
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure			
1032	Network	Port number to system HTTP server	ALL	8080 <1- 65535>	NIC		1			
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	 Available Not available 	12			
1045	Network	Printing at Offramp	ALL	1 <1-2>	UTY	 Available 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			
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 (Unit: Minute)	ALL	5 <0-4096>	NIC		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			
1057	Network	Login name to FTP server	ALL	-	SYS	Maximum 31 letters	11			
1058	Network	Login password to FTP server	ALL	-	SYS	Maximum 31 letters	11			
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			
1061	Network	Login name to FTP client	ALL	-	SYS	Maximum 31 letters	11			
1062	Network	Login password to FTP cli- ent	ALL	-	SYS	Maximum 31 letters	11			
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			

Setting mode (08)									
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
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		
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		
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		
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_seri al	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	-	NIC	Maximum 127 letters	12		
1085	Network	Installer of IPP printer driver	ALL	-	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		
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		
1092	Network	TCP port number to FTP print server	ALL	21 <1- 65535>	NIC		12		

	Setting mode (08)										
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure				
1093	Network	Login name to Novell print server	ALL	MFP_seri al	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 E- mail	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	 Disable Plain Login Cram-MD5 Digest MD5 Kerberos NTLM 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	Rendezvous setting	ALL	1 <1-2>	NIC	1: Valid 2: Invalid	12				
1104	Network	Link local host name	ALL	MFP_seri al	NIC	Maximum 127 letters The network - related serial number of the equipment appears at "serial"	12				

Setting mode (08)										
				Default						
Codo	Classifi-	Itomo	Func-	<accept-< th=""><th>DAM</th><th>Contonto</th><th>Proce-</th></accept-<>	DAM	Contonto	Proce-			
Code	cation	items	tion	able	RAIW	Contents	dure			
				value>						
1105	Network	Service name setting	ALL	Refer to content	NIC	Maximum 63 letters The network - related	12			
						serial number of the equipment appears at				
						"serial" e-STUDIO520:				
						TOSHIBA e-STUDIO520_serial				
						e-STUDIO523: TOSHIBA				
						e-STUDIO523_serial e-STUDIO600:				
						e-STUDIO600_serial				
						TOSHIBA e-STUDIO603 serial				
						e-STUDIO720: TOSHIBA				
						e-STUDIO720_serial e-STUDIO723:				
						e-STUDIO723_serial				
						E-STUDIO850. TOSHIBA				
						e-STUDIO853: TOSHIBA				
						e-STUDIO853_serial				
1111	Network	POP Before SMTP setting	ALL	2 <1-2>	NIC	0: Enabled 1: Disabled	12			
1112	Network	Host name	ALL	MFP_seri al	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	 Invalid (Not send- ing the mail text) Valid (Sending the mail text) 	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			
		<u> </u>			l	(

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		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1124	Network	Workgroup name	ALL	work- group	UTY	Maximum 15 letters	12
1125	General	Data writing of address book data import (overwrit- ing 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
1128	Network	Netware User Auth Tree Name1	ALL	-	UTY	Maximum 47 letters	12
1129	Network	Netware User Auth Con- text Name1	ALL	-	UTY	Maximum 127 letters	12
1130	User interface	Job Build Function	ALL	1 <0-1>	SYS	Sets the Job Build Function. 0: Invalid 1: Valid	1
1131	User interface	Maximum number of time job build performed	ALL	2000 <5-2000>	SYS	Sets the maximum number of time a job build has been per- formed. 5-2000: 5 to 2000 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
1134	Network	Netware User Auth Tree Name2	ALL	-	UTY	Maximum 47 letters	12
1135	Paper feeding	Default setting of drawers (Printer/BOX)	PRT	6 <1-6>	SYS	1: Tandem LCF 2: 1st drawer 3: 2nd drawer 4: 3rd drawer 5: 4th drawer 6: Option LCF	1
1138	Network	Setting of LDAP searching method	ALL	0 <0-3>	SYS	The method of LDAP searching is set. 0: Partial match 1: Prefix match 2: Backward match 3: Exact match	1
1139	Network	LDAP authentication set- ting	ALL	0 <0-1>	SYS	O: Authentication not performed1: Authentication performed	1
1140	User interface	Restriction on template function by administrator privilege	ALL	0 <0-1>	SYS	 The use of templates can be restricted to the administrator. 0: No restriction 1: Permitted only under administrator's privilege 	1

Setting mode (08)										
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure			
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 2 bytes).	2			
1143	Network	Netware User Auth Con- text Name2	ALL	-	UTY	Maximum 127 letters	12			
1144	Network	Netware User Auth Tree Name3	ALL	-	UTY	Maximum 47 letters	12			
1145	Mainte- nance (Remote)	Counter notification Remote FAX setting	ALL	-	SYS	Maximum 32 digits Enter hyphen with the [MONITOR/PAUSE] button.	11			
1148	Network	Netware User Auth Con- text Name3	ALL	-	UTY	Maximum 127 letters	12			
1149	General	Enhanced bold for PCL6	ALL	0 <0-1>	SYS		1			
1345	Image quality control	Counter for photoconduc- tive drum at drum surface potential sensor control	ALL	0 <8 digits>	М	The drive counts of the photoconductive drum at the drum surface potential sensor control is displayed.	1			
1371	Image quality control	Counter for accumulated number of sheets after image quality control	ALL	0 <0-9999>	М	The total number of out- put pages from the last image quality closed- loop control (excluding the one at "Image qual- ity control enforcement (05-290)") is displayed.	1			
1372	Counter	Heater and energizing time accumulating counter Dis- play/0 clearing	ALL	0 <8 digits>	M	The total period of time the heater control has been performed (when the power is ON) is counted but it is not counted in the Sleep mode. When the counter value of the fuser unit is reset on the main unit screen in the PM Support mode, this counter value is also reset in sync.	1			
1376	Counter	Counter for toner cartridge rotation	ALL	0 <8 digits>	М	The number of the toner cartridge rotation is counted.	1			

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1378	Counter	Counter for period of time fuser unit is at ready tem- perature	ALL	0 <8 digits>	M	The total period of time the heater control has been performed (when the power is in the ready status) is counted. When the counter value of the fuser unit is reset on the main unit screen in the PM Support mode, this counter value is also reset in sync.	1
1380	Counter	Counter for period of time fuser unit is at printing tem- perature	ALL	0 <8 digits>	Μ	The total period of time the heater control has been performed (dur- ing printing) is counted. When the counter value of the fuser unit is reset on the main unit screen in the PM Support mode, this counter value is also reset in sync.	1
1382	Counter	Counter for period of time fuser unit is at energy sav- ing temperature/Counter reset	ALL	0 <8 digits>	М	The total period of time the heater control has been performed (when the equipment is in the Energy Saving mode) is counted. When the counter value of the fuser unit is reset on the main unit screen in the PM Support mode, this counter value is also reset in sync.	1
1385	Image process- ing	Number of output pages (Thick paper 1)	ALL	0 <8 digits>	М	The counter starts counting up when the registration sensor is turned ON in the Thick Paper 1 mode.	1
1386	Image process- ing	Number of output pages (Thick paper 2)	ALL	0 <8 digits>	М	The counter starts counting up when the registration sensor is turned ON in the Thick Paper 2 mode.	1
1387	Image process- ing	Number of output pages (Thick paper 3)	ALL	0 <8 digits>	M	The counter starts counting up when the registration sensor is turned ON in the Thick Paper 3 mode.	1
1388	Image process- ing	Number of output pages (OHP film)	ALL	0 <8 digits>	М	The counter starts counting up when the registration sensor is turned ON in the OHP mode.	1

Setting mode (08)									
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
1390	Paper feeding	Feeding retry counter (1st drawer)	ALL	0 <8 digits>	М	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>	М	Counts the number of times of the feeding retry from the 2nd drawer.	1		
1392	Paper feeding	Feeding retry counter (3rd drawer)	ALL	0 <8 digits>	М	Counts the number of times of the feeding retry from the 3rd drawer.	1		
1393	Paper feeding	Feeding retry counter (4th drawer)	ALL	0 <8 digits>	М	Counts the number of times of the feeding retry from the 4th drawer.	1		
1394	Paper feeding	Feeding retry counter (bypass feed)	ALL	0 <8 digits>	М	Counts the number of times of the feeding retry from the bypass tray.	1		
1395	Paper feeding	Feeding retry counter (Tandem LCF)	ALL	0 <8 digits>	М	Counts the number of times of the feeding retry from the Tandem LCF.	1		
1396	Paper feeding	Feeding retry counter upper limit value (1st drawer)	ALL	0 <8 digits>	М	When the number of feeding retry (08-1390 to 08-1395) exceeds	1		
1397	Paper feeding	Feeding retry counter upper limit value (2nd drawer)	ALL	0 <8 digits>	М	the setting value, the feeding retry will not be performed subse-	1		
1398	Paper feeding	Feeding retry counter upper limit value (3rd drawer)	ALL	0 <8 digits>	М	set as a setting value, however, the feeding	1		
1399	Paper feeding	Feeding retry counter upper limit value (4th drawer)	ALL	0 <8 digits>	М	less of the counter set- ting value.	1		
1400	Paper feeding	Feeding retry counter upper limit value (Bypass feed)	ALL	0 <8 digits>	М		1		
1401	Paper feeding	Feeding retry counter upper limit value (Tandem LCF)	ALL	0 <8 digits>	М		1		
1402	Paper feeding	Feeding retry counter (Option LCF)	ALL	0 <8 digits>	М	Counts the number of times of the feeding retry from the Option LCF.	1		
1403	Paper feeding	Feeding retry counter upper limit value (Option LCF)	ALL	0 <8 digits>	Μ	When the number of feeding retry (08-1402) exceeds the setting value, the feeding retry will not be performed subsequently. In case "0" is set as a setting value, however, the feeding retry continues regardless of the counter setting value.	1		

Setting mode (08)									
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
1410	Counter	Counter for period of toner cartridge rotation time	ALL	0 <8 digits>	М	The period of rotation time of the toner car- tridge is counted. (1 count = 12 ms)	1		
1412	Counter	Counter for tab paper	ALL	0 <8 digits>	М	The counter starts counting up when the registration sensor is turned ON in the Tab Paper mode.	1		
1415	Process	Detection and control of empty status of toner car- tridge	ALL	JPN: 0 Others: 1 <0-1>	М	The detection and con- trol of the empty status of the toner cartridge is switched ON or OFF. 0: OFF 1: ON	1		
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		
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 FRAM data all clearing	ALL	-	-		3		
1428	Data over- write kit	Forcible SRAM backup data all clearing	ALL	-	-		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		

		Set	tting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1431	Network	ACC (AT_CASETTE_CHANGE) for Printer/Box printing	ALL	1 <0-2>	SYS	 ACC prohibited Only in the same paper direction In both same direc- tion and different directions 	1
1432	Network	Mode only for Private Print	ALL	0 <0-1>	SYS	0: Normal mode 1: Mode for Private Print	1
1435	Network	"Disable private and proof print save" function	ALL	0 <0-1>	SYS	 Function OFF (no restriction on data saving or other operations) Function ON (Data saving or other operations are restricted) 	1
1436	Network	"Disable fax save" function	ALL	0 <0-1>	SYS	 Function OFF (no restriction on data saving or other operations) Function ON (Data saving or other operations are restricted 	1
1437	Paper feeding	Hole punch on tab paper	ALL	0 <0-1>	SYS	0: No hole punch 1: Hole punch	1
1438	Paper feeding	Automatic feed setting of tab paper and insertion sheet (Remote)	ALL	1 <0-1>	SYS	0: Disabled 1: Enabled	1
1439	Paper feeding	Automatic feed setting of tab paper and insertion sheet (Local)	ALL	1<0-1>	SYS	0: Disabled 1: Enabled	1
1440	Network	IP Confilct Detect	ALL	1 <1-2>	-	OFF/ON 1: Valid 2: Invalid	12
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

Setting mode (08)									
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
1449	Network	IPP authentication method	ALL	1 <1-4>	-	 Disabled Basic Digest Basic Digest 	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		
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		
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	0 <0-1>	SYS	0: Disabled 1: Enabled	1		
1474	General	User data management limitation Setting by number of print- outs	ALL	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	 No restriction Can be set from both of the Address book and LDAP server Can be set only from the Address book 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: 1 <0-1>	SYS	0: Not displayed 1: Displayed	1		

Setting mode (08)										
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure			
1479	User interface	Default setting of sharp- ness	ALL	5 <1-9>	SYS	1: -4 2: -3 3: -2 4: -1 5: 0 6: +1 7: +2 8: +3 9: +4	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: Invalid 1: Valid * When this code is set to "1" (Valid), the department man- agement setting (08-629) should be "1" (Valid).	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: Disable 1: SMTP authentication 2: LDAP authentication	1			
1485	Network	Setting whether use of Internet FAX is permitted or not when it is given an authentication	ALL	0 <0-1>	SYS	0: Not permitted 1: Permitted	1			
1487	Network	"From" address assign- ment method when it is given an authentication	ALL	0 <0-2>	SYS	 "User name" + @ + "Domain name" LDAP search Use the address registered in "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			
1491	Network	E-mail domain name	ALL		SYS	96+2 (delimiter) charac- ter ASCII sequence only	11			
1492	Paper feeding	Detection method of 13" LG for single-size docu- ment	ALL	0 <0-1>	SYS	0: Disabled 1: Enabled	1			
1493	Network	Role Base Access Func- tion	ALL	0 <0-1> 0 <0-1>	SYS	 Function off (No restriction on data saving and other operations) Function on (Data saving and other operations have some restrictions) Checked at every page printed 	2			
				-0-14		1: Checked at every job printed				

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1495	Mainte- nance	Service call checking period setting	ALL	6 <0-12>		 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) 	12
1496	General	Operation setting for User authentication/registration	ALL	1 <0-1>	SYS	 Disables operation setting for User authentication/regis- tration Enables operation setting for User authentication/regis- tration 	1
1497	Network	e-Filing Access Mode (for Client)	ALL	0 <0-2>	SYS	0: Mode 1 1: Mode 2 2: Mode 3	1
1498	FAX	Inbound FAX function (Forwarding by TSI)	FAX	1 <0-1>	SYS	0: OFF (Function disabled) 1: ON (Function enabled)	1
1519	Counter	Counter for drive counts of toner transport motors	ALL	0 <8 digits>	SYS	The period of rotation time of the toner trans- port motor is counted. (1 count = 12 ms)	1
1520	User interface	Number of pages which can be printed when cover is opened during toner car- tridge replacement	ALL	3 <0-7>	SYS	0: 0 1: 100 2: 200 3: 500 4: 1000 5: 1500 6: 2000 7: No limit i99999999) [Unit: Sheets]	1

Setting mode (08)											
Code	Classifi- cation	Item	IS	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure			
1530-0	Counter	Number of output pages	1-UP / Duplex printing	PPC	0 <8 digits>	SYS	Counts the number of output pages.	4			
1530-1			2-UP / Duplex printing	PPC	0 <8 digits>	SYS	Counts the number of output pages using [2IN1] or [MAGAZINE SORT].	4			
1530-2			2-UP / Simplex printing	PPC	0 <8 digits>	SYS	Counts the number of sheets using [2IN1] or [MAGAZINE SORT].	4			
1530-3			4-UP / Duplex printing	PPC	0 <8 digits>	SYS	Counts the number of output pages using [4IN1].	4			
1530-4			4-UP / Simplex printing	PPC	0 <8 digits>	SYS	Counts the number of sheets using [4IN1].	4			
1530-7			1-UP / Simplex printing	PPC	0 <8 digits>	SYS	Counts the number of output pages.	4			
1533-0	Counter	Number of output pages of the printer	1-UP / Duplex printing	PRT	0 <8 digits>	SYS	Counts the number of output pages.	4			
1533-1		or BOX	2-UP / Duplex printing	PRT	0 <8 digits>	SYS	Counts the number of output pages 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	0 <8 digits>	SYS	Counts the number of sheets using [2IN1] or [MAGAZINE SORT].	4			
1533-3			4-UP / Duplex printing	PRT	0 <8 digits>	SYS	Counts the number of output pages using [4IN1].	4			
1533-4			4-UP / Simplex printing	PRT	0 <8 digits>	SYS	Counts the number of sheets using [4IN1].	4			
1533-5			N-UP / Duplex printing	PRT	0 <8 digits>	SYS	Counts the number of output pages using [N IN1].	4			
1533-6			N-UP / Simplex printing	PRT	0 <8 digits>	SYS	Counts the number of sheets using [N IN1].	4			
1533-7			1-UP / Simplex printing	PRT	0 <8 digits>	SYS	Counts the number of output pages.	4			
1535-0	Counter	Number of output pages of the FAX	1-UP / Duplex printing	FAX	0 <8 digits>	SYS	Counts the number of sheets in the default settings.	4			
1535-7		printing (1-UP / Duplex print- ing)	1-UP / Simplex printing	FAX	0 <8 digits>	SYS		4			

Setting mode (08)										
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure			
1660	Wireless LAN	Wireless LAN driver Radio ON/OFF setting	ALL	1 <1-2>	-	1: OFF 2: ON	12			
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			
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			

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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
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>	М	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>	Μ	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

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		Set	tting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1696	Wireless LAN	Wireless LAN supplicant Device file setting for obtaining random number	ALL	/dev/ urandom	-	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
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

		Set	tting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1708	User interface	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
1709	Blue- tooth	Bluetooth Installation status of option	ALL	0 <0-1>	SYS	0: Not installed 1: Installed	1
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 OFF1: Security function ON	1
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
1716	Blue- tooth	Bluetooth HCRP reception time-out period	ALL	6<1-50>	SYS	Setting value ~ 0.5 sec.	1
1717	Blue- tooth	Bluetooth HCRP transmission time- out period	ALL	6<1-50>	SYS	Setting value ~ 0.5 sec.	1
1719	Blue- tooth	Bluetooth BIP Paper 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

		Set	tting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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
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 (Default value: 000.000.000.000)	12

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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- 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
1738	Network	IP address range for IP fil- ter (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 fil- ter (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 HTTP server OFF/ON set- ting	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

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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 2: Invalid 3: Use imported certifi- cate	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 2: Invalid 3: Use imported certifi- cate	12
1749	Network	SSL setting SSL POP3 Client Port	ALL	995 <1- 65535>	-	Port number to POP3 Server	12
1750	Network	SSL setting SSL SMTP Client OFF/ON	ALL	2 <2-6>	-	 Invalid Accept all certificates of SMTP with TLS (STARTTLS) server Accept all certificates of SMTPS (SMTP OverSSL) server Use imported certificates of SMTP with TLS (STARTTLS) server Use imported certificates of SMTP with TLS (STARTTLS) server Use imported certificates of SMTPS (SMTP OverSSL) server 	12
1751	Network	SSL setting SSL SMTP Client Port	ALL	465 <1- 65535>	-	Port number to SMTP Server	12
1755	Network	Enabling server's IP address acquired by DHCP	ALL	2 <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	2 <1-2>	-	NetBIOS over TCP/IP Name Server option (44) = Primary and Sec- ondary Wins NAME 1: Enabled 2: Disabled * This value is used only when DHCP is enabled.	12

		Set	tting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1757	Network	Enabling server's IP address acquired by DHCP	ALL	1 <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	ALL	2 <1-2>	-	SMTP Server Option (69) Simple Mail Server Address 1: Enabled 2: Disabled * This value is used only when DHCP is enabled.	12
1760	Network	Enabling server's IP address acquired by DHCP	ALL	2 <1-2>	-	 POP3 Server Option (70) Post Office Server Address 1: Enabled 2: Disabled * This value is used only when DHCP is enabled. 	12
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	2 <1-2>	SYS	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

		Set	ting mo	de (08)			
				Default			
	Classifi-		Func-	<accept-< th=""><th>B 4 4 4</th><th></th><th>Proce-</th></accept-<>	B 4 4 4		Proce-
Code	cation	Items	tion	able	RAM	Contents	dure
				value>			
1772	General	Card reading device set-	ALL	0	SYS	To enable the e-Bridge	5
		ting		<8 digits>		ID Gate, a card reading	
		0		Ū		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	
						I. N/A	
						- f f. Authentication	
						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-	
						(Card Seriel Num	
						(Calu Selial Nulli-	
						tact IC card	
						0002. Use the Data	
						Area Address Infor-	
						mation of a noncon-	
						tact IC card	

Setting mode (08)									
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
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)	5		
						KP-2005: LLLL : Key information MMMM: Sector number (hexadecimal number)			
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 block num- ber S: 1st area block num- ber S: 1st area beginning byte offset E: 1st area beginning byte offset b: 2nd area beginning byte offset e: 2nd area ending byte offset e: 2nd area ending byte offset e: 2nd area ending byte offset s: 1st area seginning byte offset b: 2nd area ending byte offset ciffset b: 2nd area ending byte offset ciffset b: 1st area seginning byte offset b: 2nd area seginning byte offset ciffset b: 2nd area seginning byte offset ciffset b: 2nd area seginning byte offset ciffset b: 2nd area seginning byte offset ciffset b: 2nd area seginning byte offset cif</rrbsebse </ppqrsstu 	5		

			Set	tting mo	de (08)			
Code	Classifi- cation	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1775	General	Card reader for mation -3	mat infor-	ALL	-	SYS	Security key "KKKKKKKKKKK" (12 digits) <hexadecimal number> in the [Key Information] of the [Sec- tor Number] set in the code 08-1773 should be entered.</hexadecimal 	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
1777	General	Card authentica search index	ation LDAP	ALL	-	SYS	LDAP search index when a noncontact IC card is used is set.	11
1778	General	Hang-up perioc panel at the 3rd administrator's	d of control misentry of password	ALL	1 <0-7>	SYS	 0: No hang-up 1: 0.5 minutes (= 30 seconds) 2: 1 minute 3: 3 minutes 4: 5 minutes 5: 10 minutes 6: 15 minutes 7: 30 minutes 	1
1779	Network	Default data sa tory of "Scan to	ving direc- File"	ALL	0 <0-2>	SYS	0: Local directory 1: REMOTE 1 2: REMOTE 2	1
1781-0	Network	Notification of scan job	When job completed	ALL	0 <0-1>	SYS	Sets the notification method of scan job	4
1781-1	Network		On error	ALL	0 <0-1>	SYS	completion. 0: Invalid 1: Valid	4
1782	Network	File name form as file" and Em sion	at of "Save ail transmis-	ALL	0 <0-6>	SYS	Sets the naming method of the file of "Save as file" and Email transmission. 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]	

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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 of "Save as file" and Email transmission. 0: [YYYY][MM][DD] [HH][mm][SS] 1: [YY][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. O: 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 <4-6>	SYS	Sets the digit of a page number attached on the file. 4-6: 4-6 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
1804	Fuser	Fuser roller temperature during printing (OHP film)	ALL	12 <0-14>	Μ	0: 140°C 1: 145°C 2: 150°C 3: 155°C 4: 160°C 5: 165°C 6: 170°C 7: 175°C 8: 180°C 9: 185°C 10: 190°C 11: 195°C 12: 200°C 13: 205°C 14: 210°C	1
1808	Image quality control	Developer unit prerunning period before image quality closed-loop control	ALL	10 <0-99>	М	Unit: Second	1
1809	Image quality control	Image quality closed-loop control (Contrast voltage)	ALL	0 <0-1>	М	0: Enabled 1: Disabled	1
1810	Image quality control	Image quality closed-loop control (Laser power)	ALL	0 <0-1>	М	0: Enabled 1: Disabled	1

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1811	Image quality control	Image quality open-loop control	ALL	0 <0-1>	М	0: Enabled 1: Disabled	1
1812	Image quality control	Drum surface potential sensor Counter for number of con- trol abnormality	ALL	0 <0-16>	М		1
1813	Image quality control	Drum surface potential sensor Control setting	ALL	0 <0-1>	М	0: Enabled 1: Disabled	1
1814	Image quality control	Maximum number of times of image quality closed- loop control correction (Contrast voltage)	ALL	5 <0-10>	М	The maximum number of correction which the image quality closed- loop control (contrast voltage) can be per- formed is set.	1
1815	Image quality control	Maximum number of times of image quality closed- loop control correction (Laser power)	ALL	4 <0-10>	М	The maximum number of correction which the image quality closed- loop control (laser power) can be per- formed is set.	1
1820	Image quality control	Contrast voltage upper lim- iter	ALL	535 <0-999>	М	The upper limit of the developer contrast volt- age control is set. [Unit: V]	1
1821	Image quality control	Contrast voltage lower lim- iter	ALL	190 <0-999>	М	The lower limit of the developer contrast volt- age control is set. [Unit: V]	1
1824	Image quality control	Exposure amount (laser power) upper limiter setting	ALL	Refer to contents <0-1500>	М	The upper limit of the laser power control is set. [Unit: μW] <default value=""> e-STUDIO520/523: 1020 e-STUDIO600/603: 1020 e-STUDIO720/723: 1020 e-STUDIO850/853: 610</default>	1
1825	Image quality control	Exposure amount (laser power) lower limiter setting	ALL	Refer to contents <0-1500>	М	The lower limit of the laser power control is set. [Unit: µW] <default value=""> e-STUDIO520/523: 600 e-STUDIO600/603: 600 e-STUDIO720/723: 600 e-STUDIO850/853: 270</default>	1
1826	Image quality control	Image quality control auto- start setting (When power is turned ON first in a day)	ALL	0 <0-1>	М	0: Enabled 1: Disabled	1
		Set	ting mo	de (08)			
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Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1827	Image quality control	Image quality control auto- start setting (Specified number of sheets for auto-start have been printed from the start of previous image quality control)	ALL	0 <0-1>	М	0: Enabled 1: Disabled	1
1828	Image quality control	Image quality control auto- start setting (Specified period of time for auto-start has passed)	ALL	0 <0-1>	М	0: Enabled 1: Disabled	1
1829	Image quality control	Image quality control auto- start setting (When recovered from toner-empty status)	ALL	0 <0-1>	М	0: Enabled 1: Disabled	1
1830	Image quality control	Image quality control auto- start setting (Specified number of sheets have been printed from first image quality control start in a day or warming-up recovery)	ALL	0 <0-1>	М	0: Enabled 1: Disabled	1
1831	Image quality control	Condition setting of image quality control auto-start (Fuser unit temperature at power-ON)	ALL	6 <0-20>	Μ	0: 30°C 1: 35°C 2: 40°C 3: 45°C 4: 50°C 5: 55°C 6: 60°C 7: 65°C 8: 70°C 9: 75°C 10: 80°C 11: 85°C 12: 90°C 13: 95°C 14: 100°C 15: 105°C 16: 110°C 17: 115°C 18: 120°C 19: 125°C 20: 130°C	1
1833	Image quality control	Contrast voltage offset cor- rection setting	ALL	Refer to contents <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] <default value=""> e-STUDIO520/523 UC, EUR: 6 e-STUDIO600/603 JPN: 5 UC, EUR: 6 e-STUDIO720/723 JPN: 5 UC, EUR: 6 e-STUDIO850/853 JPN: 5 UC, EUR: 6</default>	1

			Set	tting mo	de (08)			
Code	Classifi- cation	ltem	S	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1834	Image quality control	Background po correction setti	tential offset ng	ALL	5 <0-10>	М	0: -50 1: -40 2: -30 3: -20 4: -10 5:±0 6: +10 7: +20 8: +30 9: +40 10: +50	1
1835	Image quality control	Laser power of tion setting	fset correc-	ALL	Refer to contents <0-10>	М	0: -150 1: -120 2: -90 3: -60 4: -30 5: ±0 6: +30 7: +60 8: +90 9: +120 10: +150 <default value=""> e-STUDIO520/523: 5 e-STUDIO600/603: 5 e-STUDIO720/723: 5 e-STUDIO850/853: 5 (6 for NAD only)</default>	1
1836	Process	Drum pre-runni	ng period	ALL	0 <0-255>	М	0: Disabled 1-255: 1-255 sec.	1
1837	Image quality control	Transfer output control switchin surface potentia	correction g against al	ALL	0 <0-2>	М	0: Control OFF 1: Table 1 applied 2: Table 2 applied	1
1900-0	Paper feeding	Feeding retry counter	Plain paper	ALL	5 <0-5>	М		4
1900-1		(Option LCF)	Others	ALL	5 <0-5>	М		4
1901	Paper feeding	Reversing speeing for thick paper	ed switch- per	ALL	0 <0-1>	М	0: Accelerated 1: Low speed	1
1907	General	IH error data at rence of errors	occur-	ALL	0 <0-7>	М		1
1908	General	Function for Ta Green Mark Pre	iwan's ogram	ALL	0 <0-1>	М	0: Disabled 1: Enabled	1
1909	Paper feeding	Paper feeding t rection setting	iming cor-	ALL	0 <0-3>	М	Setting value X 10msec	1

Setting mode (08)							
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1910	Image quality control	Toner supply opening upward control	ALL	0 <0-2>	M	 O: Always ON Performs the toner supply opening upward control only when the available number of outputs using the remaining toner is between 2,000 and 5,000 sheets. (However, if the value "0" (OFF) is set at 08-1415, the operation will be the same as when the value "2" (Always OFF) is set in this setting.) Always OFF When in the toner empty status, the toner supply opening upward control is always performed regardless of this setting. 	1
1913	General	Page number addition on multipage file names of "File/Email"	ALL	0 <0-1>	SYS		1
1914	General	Maximum number of deci- mals in extension fields	ALL	2 <0-6>	SYS	0: 0 digit 1: 1 digit 2: 2 digits 3: 3 digits 4: 4 digits 5: 5 digits 6: 6 digits	1
1915	Network	Filing size for Network scanning function	ALL	0 <0-1>	SYS	 0: Eliminates 2 mm from circumference (Void: 2 mm) 1: No space eliminated (Void: 0 mm) 	1
1916	General	Default saving/attachment files of "File/Email"	ALL	0 <0-1>	SYS		1
1920	Network	Device domain name of device 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	 Forcible execution Execution impossible (pooled in the invalid queue) Forcible deletion 	1

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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 setting for 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		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
1930	User interface	Key arrangement for lan- guage 2	ALL	1 <0-2>	SYS	 QWERTY layout (for EUR) QWERTZ layout AZERTY layout 	1
1931	User interface	Key arrangement for lan- guage 3	ALL	EUR: 2 UC: 0 JPN: 0 <0-2>	SYS	 QWERTY layout (for EUR) QWERTZ layout 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	 QWERTY layout (for EUR) QWERTZ layout 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	 QWERTY layout (for EUR) QWERTZ layout AZERTY layout 	1
1936	Network	AppleTalk Device Name	ALL	MFP_seri al	UTY	Maximum 32 letters The Network-related serial number of the equipment appears at "Serial".	12

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able</accept- 	RAM	Contents	Proce- dure
	oution		uon	value>			uuro
1937	Network	User name and password at user authentication or "Save as file"	ALL	0 <0-2>	SYS	 User name and password of the device User name and password at the user authentication (Template registra- tion information comes first when a template is retrieved.) User name and password at the user authentication (User information of the authentication comes first when a template is retrieved.) 	1
1938	General	Reformatting process due to a version change of SYS ROM	ALL	2 <0-2>	-	Use this setting to refor- mat the specific parti- tion whose file system has been changed in Ver.2, at the version up/ downgrade of the SYS ROM. No reformatting pro- cess shall be used in any cases other than this version change. 0: Waiting (No refor- matting) 1: dosFs to catFs (Ver- sion upgrade from Ver.1 to Ver.2 or later) 2: catFs to dosFs (Ver- sion downgrade from Ver.2 or later to Ver.1)	7
1940	General	STAGE port number	SCN	20080 <0- 65535>	SYS	Port number used for the remote scanning is	1
1941	Blue- tooth	Bluetooth BIP 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: LetterSquare	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	Device name for device authentication	ALL	-	UTY	Maximum 128 letters	12

		Set	tting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1953	Network	Password for the device name used for device 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 device authentica- tion	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	1 <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
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

Setting mode (08)									
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
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		
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		

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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
3506	General	"Attribute 1" indicated in the LDAP search result	ALL	company	SYS	Attribute name for "Attribute 1" indicated in the LDAP search result list	11
3507	General	"Attribute 2" indicated in the LDAP search result	ALL	depart- ment	SYS	Attribute name for "attribute 2" indicated in the LDAP search result list	11
3722	Network	Device authentication PDC/BDC time-out period (Unit: Seconds)	ALL	60 <1-180>	NIC	Applied to the device authentication	12
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 of device/user authentication	ALL	1 <1-3>	NIC	1: Auto 2: Kerberos 3: NTLMv2	12
3725	Network	IPP max connection	ALL	16 <1-16>	NIC		12

Setting mode (08)								
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure	
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 Time Out	ALL	60 <1-180>	NIC	Use when a timeout occurred at DNS client connection	12	
3737	Network	DDNS Client Time Out	ALL	60 <1-180>	NIC	Use when a timeout occurred at DDNS cli- ent connection	12	
3738	Network	HTTP Client Time Out	ALL	60 <1-180>	NIC	Use when a timeout occurred at HTTP cli- ent connection	12	
3739	Network	FTP Client Time Out (SCAN)	ALL	30 <1-180>	NIC	Use when a timeout occurred at FTP client connection	12	
3740	Network	SNTP Client Time Out	ALL	30 <1-180>	NIC	Use when a timeout occurred at SNTP client connection	12	
3741	Network	SMTP Client Time Out	ALL	30 <1-180>	NIC	Use when a timeout occurred at SMTP client connection	12	
3742	Network	POP3 Client Time Out	ALL	30 <1-180>	NIC	Use when a timeout occurred at POP3 client connection	12	
3743	Network	LDAP Client Time Out	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	General	Secure DDNS Primary Login Name	ALL	- <1-128>	NIC	Login name for login with the Primary DDNS	12	
3746	General	Secure DDNS Primary Login Password	ALL	- <1-128>	NIC	Login password for login with the Primary DDNS	12	
3747	General	Secure DDNS Secondary Login Name	ALL	- <1-128>	NIC	Login name for login with the Secondary DDNS	12	
3748	General	Secure DDNS Secondary Login Password	ALL	- <1-128>	NIC	Login password for login with the Second- ary DDNS	12	

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
3749	General	DPWS Friendly Name	ALL	-	NIC	MFP name indicated in DPWS search result <default value=""> TOSHIBA e-STUDIOxxx [NIC serial number]</default>	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]</default>	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]</default>	12
3752	General	DPWS Printer Information	ALL	-	NIC	Information regarding DPWS printer <default value=""> NULL</default>	12
3753	General	DPWS Scanner Informa- tion	ALL	-	NIC	Information regarding DPWS scanner <default value=""> NULL</default>	12
3754	Network	Switching DPWS Printer setting	ALL	1 <1-3>	NIC	DPWS printer /DPWS secure printer function is switched. 1: Enabled 2: Disabled 3: Security enabled	12
3755	Network	Switching DPWS Scanner setting	ALL	1 <1-2>	NIC	DPWS scanner function is switched. 1: Enabled 2: Disabled	12
3756	Network	Switching DPWS Security setting	ALL	1 <1-2>	NIC	DPWS security func- tion 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	5081 <1- 65535>	NIC	Port number used for DPWS Metadata Exchange	12
3759	Network	DPWS Print Port Number	ALL	5082 <1- 65535>	NIC	Port number used for DPWS Print	12
3760	Network	DPWS Scan Port Number	ALL	5083 <1- 65535>	NIC	Port number used for DPWS Scan	12
3761	Network	DPWS Security Discovery Port Number	ALL	3702 <1- 65535>	NIC	Port number used for DPWS Security Discov- ery	12

Setting mode (08)								
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure	
3762	Network	DPWS Security Metadata Exchange Port Number	ALL	5084 <1- 65535>	NIC	Port number used for DPWS Security Meta- data Exchange	12	
3763	Network	DPWS Security Print Port Number	ALL	5085 <1- 65535>	NIC	Port number used for DPWS Security Print	12	
3764	Network	DPWS Security Scan Port Number	ALL	5086 <1- 65535>	NIC	Port number used for DPWS Security 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	
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	

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		Set	tting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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
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. Either IPv4 only or IPv6	12
3700	Network	IPv6	ALL	<1-2>		together with it is selected to operate Print, Scan and Secu- rity related with DPWS. 1: Multi (IPv4 and IPv6) 2: IPv4	12

	Setting mode (08)							
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure	
3793	Network	Switching LLTD setting	ALL	1 <1-2>	NIC	LLTD function is switched. 1: Enabled 2: Disabled	12	
3794	Network	Switching LLMNR setting	ALL	2 <1-2>	NIC	LLMNR function is switched. 1: Enabled 2: Disabled	12	
3804	Scanner	List Analysis Logic of Scan to File (FTP)	ALL	0 <0-1>	SYS	Acquisition of Contents in Host side is switched by Scan to File (FTP). 0: NLST 1: LIST	1	
3805	Scanner	Department Management setting by Remote Scan	ALL	0 <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	
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	

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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
3817	Scanner	PDF file version setting	ALL	0 <0-1>	SYS	The version of PDF file produced by the Scan function is set. 0: PDF V1.3 1: PDF V1.4	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
3819	General	Network Fax/Internet Fax processing mode (STD)	ALL	2 <0-2>	SYS	The processing mode of the network Fax/ Internet Fax is switched. 0: High speed/Low image quality 1: Standard 2: Low speed/High image quality	1
3820	General	Network Fax/Internet Fax processing mode (FINE)	ALL	0 <0-2>	SYS	The processing mode of the network Fax/ Internet Fax is switched. 0: High speed/Low image quality 1: Standard 2: Low speed/High image quality	1
3821	General	Network Fax/Internet Fax processing mode (S-FINE)	ALL	0 <0-2>	SYS	The processing mode of the network Fax/ Internet Fax is switched. 0: High speed/Low image quality 1: Standard 2: Low speed/High image quality	1

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		Set	ting mo	de (08)			
				Default			
Codo	Classifi-	Itoms	Func-	<accept-< th=""><th>D A M</th><th>Contonte</th><th>Proce-</th></accept-<>	D A M	Contonte	Proce-
Coue	cation	items	tion	able		Contents	dure
				value>			
3822	General	Network Fax/Internet Fax processing mode (U-FINE)	ALL	0 <0-2>	SYS	The processing mode of the network Fax/ Internet Fax is switched. 0: High speed/Low image quality 1: Standard 2: Low speed/High image quality	1
3823	General	Processing mode thresh-	ALL	254	SYS	Image quality adjust-	1
		old for network Fax/Inter- net Fax (STD) [Standard]		<0-255>		ment when "Standard" is set for the Network Fax/Internet Fax pro- cessing mode (STD)	
3824	General	Processing mode thresh- old for network Fax/Inter- net Fax (FINE) [Standard]	ALL	254 <0-255>	SYS	Image quality adjust- ment when "Standard" is set for the Network Fax/Internet Fax pro- cessing mode (FINE)	1
3825	General	Processing mode thresh- old for network Fax/Inter- net Fax (S-FINE) [Standard]	ALL	180 <0-255>	SYS	Image quality adjust- ment when "Standard" is set for the Network Fax/Internet Fax pro- cessing mode (S-FINE)	1
3826	General	Processing mode thresh- old for network Fax/Inter- net Fax (U-FINE) [Standard]	ALL	180 <0-255>	SYS	Image quality adjust- ment when "Standard" is set for the Network Fax/Internet Fax pro- cessing mode (U-FINE)	1
3827	General	Processing mode thresh- old for network Fax/Inter- net Fax (STD) [Low speed/ High image quality]	ALL	200 <0-255>	SYS	Image quality adjust- ment when "Low speed/ High image quality" is set for the Network Fax/ Internet Fax process- ing mode (STD)	1
3828	General	Processing mode thresh- old for network Fax/Inter- net Fax (FINE) [Low speed/High image quality]	ALL	204 <0-255>	SYS	Image quality adjust- ment when "Low speed/ High image quality" is set for the Network Fax/ Internet Fax process- ing mode (FINE)	1
3829	General	Processing mode thresh- old for network Fax/Inter- net Fax (S-FINE) [Low speed/High image quality]	ALL	206 <0-255>	SYS	Image quality adjust- ment when "Low speed/ High image quality" is set for the Network Fax/ Internet Fax process- ing mode (S-FINE)	1
3830	General	Processing mode thresh- old for network Fax/Inter- net Fax (U-FINE) [Low speed/High image quality]	ALL	161 <0-255>	SYS	Image quality adjust- ment when "Low speed/ High image quality" is set for the Network Fax/ Internet Fax process- ing mode (U-FINE)	1
3831	Network	Mode switching for Role Based Access Control function	ALL	0 <0-1>	SYS	 Require eBMUser- Role attribute User available LDAP attribute 	1

		Set	tting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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	1
3834	General	Backup file encryption	ALL	0 <0-1>	SYS	 When the backup file is created from TopAccess, it is encrypted. 0: Enabled (Encryption) 1: Disabled (No encryption) 	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 event-related notification is switched. 0: IP address 1: NetBIOS name/ FGDN	1
3840	General	Electronic License Key Registration	ALL	-	-	Licenses for Electronic License Key are regis- tered.	3
3841	General	Electronic License Key Deletion	ALL	-	-	Registered licenses for Electronic License Key are deleted.	3
3842	General	Electronic License Key Display	ALL	-	-	All licenses stored in the ELK jig are dis- played.	3
3845	Network	SNMP Trap Enterprise OID mode setting	ALL	0 <0-1>	SYS	 Trap Enterprise OID is enabled for existing models. 0: Normal (Not enabling for exist- ing models) 1: Enabled for existing 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
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

		Set	tting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
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
3850	General	Remote Scan User authentication	ALL	0 <0-3>	SYS	User authentication on Remote Scan driver is switched according to the availability of GUI. 0: OFF (No GUI) / OFF (GUI installed) 1: ON (No GUI) / OFF (GUI installed) 2: OFF (No GUI) / ON (GUI installed) 3: ON (No GUI) / ON (GUI installed)	1
3851	User interface	Template display	ALL	0 <0-1>	SYS	The order of displaying templates on the LCD screen is switched. 0: Order of IDs 1: Alphabetical order	1
3852	General	Automatic summer time change	ALL	0 <0-1>	SYS	Automatic summer time change on the day pre- viously set is switched. 0: Disabled 1: Enabled	1
3853	General	Summer time mode Offset value	ALL	0 <0-7>	SYS	Summer time is started as follows when 08- 3852 is enabled. 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 mode Starting month	ALL	0 <1-12>	SYS	The month in which summer time is started is set. 1: January 2: February 3: March 4: April 5: May 6: June 7: July 8: August 9: September 10: October 11: November 12: December	1

Setting mode (08)									
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure		
3855	General	Summer time mode Starting week	ALL	1 <1-5>	SYS	The week in which summer time is started is set. 1: 1st 2: 2nd 3: 3rd 4: 4th 5: Last	1		
3856	General	Summer time mode Starting day	ALL	0 <0-6>	SYS	The day on which sum- mer time is started is set. 0: Sunday 1: Monday 2: Tuesday 3: Wednesday 4: Thursday 5: Friday 6: Saturday	1		
3857	General	Summer time mode Starting time	ALL	0 <00-23>	SYS	The time at which sum- mer time is started is set. 00-23	1		
3858	General	Summer time mode Starting minute	ALL	0 <00-59>	SYS	The minute at which summer time is started is set. 00-59	1		
3859	General	Summer time mode Ending month	ALL	1 <1-12>	SYS	The month in which summer time is ended is set. 1: January 2: February 3: March 4: April 5: May 6: June 7: July 8: August 9: September 10: October 11: November 12: December	1		
3860	General	Summer time mode Ending week	ALL	1 <1-5>	SYS	The week in which summer time is ended is set. 1: 1st 2: 2nd 3: 3rd 4: 4th 5: Last	1		
3861	General	Summer time mode Ending day	ALL	0 <0-6>	SYS	The day on which sum- mer time is ended is set. 0: Sunday 1: Monday 2: Tuesday 3: Wednesday 4: Thursday 5: Friday 6: Saturday	1		

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			Set	ting mo	de (08)			
Code	Classifi- cation	ltem	IS	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
3862	General	Summer time r Ending time	Summer time mode Ending time		0 <00-23>	SYS	The time at which sum- mer time is ended is set. 00-23	1
3863	General	Summer time r Ending minute	node	ALL	0 <00-59>	SYS	The minute at which summer time is ended is set. 00-59	1
3864	Network	Disclosing Teln function	et Server	ALL	0 <0-1>	SYS	Disclosure of Telnet Server function is switched. 0: Not disclosed 1: Disclosed	1
3865	Network	Availability of T	elnet Server	ALL	2 <1-2>	NIC	Availability of Telnet Server is switched. 1: Enabled 2: Disabled	12
3866	Network	Telnet Server TCP port numb	per	ALL	23 <1- 65535>	NIC	A port number for Tel- net Server is set.	12
3867	Network	Telnet Server Server adminis name	trator's user	ALL	Admin <maxi- mum 15 letters></maxi- 	NIC	A user name for the Tel- net Server administra- tor is confirmed.	12
3868	Network	Telnet Server Server adminis password	trator's	ALL	System <maxi- mum 15 letters></maxi- 	NIC	A password for the Tel- net Server administra- tor is set.	12
6810-0	Counter	Number of output pages in black mode	1-UP / Duplex printing	PRT	0 <8 digits>	SYS	Counts the number of output pages.	4
6810-1		/ Large size	2-UP / Duplex printing	PRT	0 <8 digits>	SYS	Counts the number of output pages using [2IN1] or [MAGAZINE SORT].	4
6810-2			2-UP / Simplex printing	PRT	0 <8 digits>	SYS	Counts the number of sheets using [2IN1] or [MAGAZINE SORT].	4
6810-3			4-UP / Duplex printing	PRT	0 <8 digits>	SYS	Counts the number of output pages using [4IN1].	4
6810-4			4-UP / Simplex printing	PRT	0 <8 digits>	SYS	Counts the number of sheets using [4IN1].	4
6810-7			1-UP / Simplex printing	PRT	0 <8 digits>	SYS	Counts the number of output pages.	4

			Set	ting mo	de (08)			
Code	Classifi- cation	lterr	IS	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
6813-0	Counter	Number of output pages of the printer	1-UP / Duplex printing	PRT	0 <8 digits>	SYS	Counts the number of output pages.	4
6813-1		or BOX / Large	2-UP / Duplex printing	PRT	0 <8 digits>	SYS	Counts the number of output pages using [2IN1] or [MAGAZINE SORT].	4
6813-2			2-UP / Simplex printing	PRT	0 <8 digits>	SYS	Counts the number of sheets using [2IN1] or [MAGAZINE SORT].	4
6813-3			4-UP / Duplex printing	PRT	0 <8 digits>	SYS	Counts the number of output pages using [4IN1].	4
6813-4			4-UP / Simplex printing	PRT	0 <8 digits>	SYS	Counts the number of sheets using [4IN1].	4
6813-5			N-UP / Duplex printing	PRT	0 <8 digits>	SYS	Counts the number of output pages using [N IN1].	4
6813-6	-		N-UP / Simplex printing	PRT	0 <8 digits>	SYS	Counts the number of sheets using [N IN1].	4
6813-7			1-UP / Simplex printing	PRT	0 <8 digits>	SYS	Counts the number of sheets output pages.	4
6815-0	Counter	Number of output pages of the FAX	1-UP / Simplex printing	FAX	0 <8 digits>	SYS	Counts the number of output pages in the default settings.	4
6815-7		printing / Large	1-UP / Duplex printing	FAX	0 <8 digits>	SYS		4
9117	Network	Raw printing jo (Blank page wi printed)	b Il not be	PRT	0 <0-1>	SYS	0: OFF 1: ON	1
9359	User interface	Printing resumer releasing	e after jam	ALL	0 <0-1>	SYS	0: Auto resume 1: Resume by users	1
9394	Network	Single-page op ing File and se	tion for stor- nding Email	ALL	0 <0-1>	SYS	0: Sets 1 page as 1 file1: Makes a file based on the original	1
9629	Network	Attribute name Role Based Ac	for LDAP cess	ALL	eBMUser R <->	SYS		11
9739	Mainte- nance	Remote service Toner-end notif	e fication	ALL	0 <0-2>	SYS	 RDMS toner empty notified immediately RDMS toner empty notified once a day RDMS toner empty not notified 	1
9819	General	STAGE SSL		ALL	1 <0-1>	SYS	 When remote scanning is performed, the SSL communication is carried out. 0: Disabled 1: Enabled (SSL communication) 	1

Setting mode (08)								
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure	
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	
9828	General	Remote scanning mode	ALL	0 <0-1>	SYS	0: Batch 1: Sequential	1	
9829	General	Department management limitation setting	ALL	0 <0-1>	SYS	Decide the default limi- tation setting when the new department code is created. 0: No limit 1: Limited	1	
9847	Finisher	Hole punching setting	ALL	0 <0-1>	SYS	0: Invalid 1: Valid	1	
9880	Mainte- nance	Total counter transmission date setting(2)	ALL	0 <0-31>	SYS	0 to 31	1	
9881	General	Day of total counter data transmission	ALL	0 <0-127>	-	1 byte 00000000(0)- 0111111(127) From the 2nd bit - Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday	1	
9882	General	Display mode of the used capacity on the e-Filing administrator page	ALL	1 <0-1>	SYS	0: All files search mode1: Performance priority mode	1	
9885	General	New/Old FROM identifica- tion	ALL	- <-1-1>	-	0: Old FROM 1: New FROM -1: Error	2	
9886	Scanner	Decimal point indication for Enhanced Scan Template	SCN	EUR: 0 UC: 1 JPN: 1 <0-1>	SYS	0: Comma 1: Period	1	
9888	Scanner	Permission setting for changing the scan parame- ter when recalling an extension	SCN	0 <0-1>	SYS	0: Prohibited 1: Accepted	1	
9889	General	Acceptance of data cloning using USB storage device	ALL	1 <0-1>	SYS	Acceptance of the usage of the USB data cloning tool 0: Accepted 1: Not accepted	2	
9891	User interface	Warning message on the touch panel when PM (Periodic Maintenance) time has come	ALL	1 <0-1>	SYS	 No warning notifica- tion Warning notification 	1	
9946	General	E-mail transmission retry number	ALL	3 <0-14>	SYS	The number of times of E-mail communication retry for Scan to E-mail and Internet Fax is set.	1	
9947	General	E-mail transmission retry interval	ALL	1 <0-15>	SYS	When E-mail transmis- sion retry for Scan to E- mail and Internet Fax is performed, the interval is set. 0 min - 15 min	1	

	Setting mode (08)										
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure				
9960	Mainte- nance	Displaying equipment information	ALL	0 <0-2>	SYS	Equipment information stored in NVRAM is dis- played. 0: Unset 1: e-STUDIO520/600/ 720/850 2: e-STUDIO523/603/ 723/853	2				

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

		Set	ting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1500	Pixel counter	Standard paper size setting	ALL	EUR: 0 UC: 1 JPN: 0	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 (Output pages)	ALL	400 <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 count)	ALL	17550 <0- 60000>	SYS	Sets the pixel count to determine the toner empty status. 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
1514	Pixel counter	Toner cartridge reference cleared date	ALL	-	SYS	Displays the date on which 08-1503 was per- formed.	2
1518	Pixel counter	Toner cartridge reference count started date	ALL	-	SYS	Displays the date on which 08-1503 was per- formed.	2

		Set	tting mo	de (08)			
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1548	Pixel counter	Number of output pages (Service technician refer- ence)	PPC	<8 digits>	SYS	Counts the number of output pages con- verted to the standard paper size in the copy function and service technician reference. [Unit. page]	2
1550	Pixel counter	Number of output pages (Service technician refer- ence)	PRT	<8 digits>	SYS	Counts the number of output pages con- verted to the standard paper size in the printer function and service technician reference. [Unit. page]	2
1551	Pixel counter	Number of output pages (Service technician refer- ence)	FAX	<8 digits>	SYS	Counts the number of output pages con- verted to the standard paper size in the FAX function and service technician reference. [Unit. page]	2
1553	Pixel counter	Number of output pages (Toner cartridge reference)	PPC	<8 digits>	SYS	Counts the number of output pages con- verted to the standard paper size in the copy function and toner car- tridge reference. [Unit. page]	2
1555	Pixel counter	Number of output pages (Toner cartridge reference)	PRT	<8 digits>	SYS	Counts the number of output pages con- verted to the standard paper size in the printer function and toner car- tridge reference. [Unit. page]	2
1556	Pixel counter	Number of output pages (Toner cartridge reference)	FAX	<8 digits>	SYS	Counts the number of output pages con- verted to the standard paper size in the FAX function and toner car- tridge reference. [Unit. page]	2
1566	Pixel counter	Toner cartridge replace- ment counter	ALL	<3 digits>	SYS	Counts the number of time of the toner car- tridge replacement.	2
1592	Pixel counter	Average pixel count (Service technician refer- ence)	PPC	0 <0- 10000>	SYS	Displays the average pixel count in the copy function and service technician reference. [Unit: 0.01%]	2
1593	Pixel counter	Average pixel count (Service technician refer- ence)	PRT	0 <0- 10000>	SYS	Displays the average pixel count in the printer function and service technician reference. [Unit: 0.01%]	2

Setting mode (08)							
Code	Classifi- cation	Items	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1594	Pixel counter	Average pixel count (Service technician refer- ence)	FAX	0 <0- 10000>	SYS	Displays the average pixel count in the FAX function and service technician reference. [Unit: 0.01%]	2
1595	Pixel counter	Average pixel count (Service technician refer- ence)	PPC/ PRT/ FAX	0 <0- 10000>	SYS	Displays the average pixel count in the copy/ printer/FAX function and service technician reference. [Unit: 0.01%]	2
1606	Pixel counter	Latest pixel count (Service technician refer- ence)	PPC	0 <0- 10000>	SYS	Displays the latest pixel count in the copy func- tion and service techni- cian reference. [Unit: 0.01%]	2
1607	Pixel counter	Latest pixel count (Service technician refer- ence)	PRT	0 <0- 10000>	SYS	Displays the latest pixel count in the printer function and service technician reference. [Unit: 0.01%]	2
1608	Pixel counter	Latest pixel count (Service technician refer- ence)	FAX	0 <0- 10000>	SYS	Displays the latest pixel count in the FAX func- tion and service techni- cian reference. [Unit: 0.01%]	2
1613	Pixel counter	Average pixel count (Toner cartridge reference)	PPC	0 <0- 10000>	SYS	Displays the average pixel count in the copy function and toner car- tridge reference. [Unit: 0.01%]	2
1619	Pixel counter	Average pixel count (Toner cartridge reference)	PRT	0 <0- 10000>	SYS	Displays the average pixel count in the printer function, and toner car- tridge reference. [Unit: 0.01%]	2
1624	Pixel counter	Average pixel count (Toner cartridge reference)	PPC/ PRT/ FAX	0 <0- 10000>	SYS	Displays the average pixel count in the copy/ printer/FAX function and toner cartridge ref- erence. [Unit: 0.01%]	2
1625	Pixel counter	Average pixel count (Toner cartridge reference)	FAX	0 <0- 10000>	SYS	Displays the average pixel count in the FAX function and toner car- tridge reference. [Unit: 0.01%]	2
1634	Pixel counter	Latest pixel count (Toner cartridge reference)	FAX	0 <0- 10000>	SYS	Displays the latest pixel count in the FAX func- tion and toner cartridge reference. [Unit: 0.01%]	2
1639	Pixel counter	Latest pixel count (Toner cartridge reference)	PPC	0 <0- 10000>	SYS	Displays the latest pixel count in the copy func- tion and toner cartridge reference. [Unit: 0.01%]	2

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Setting mode (08)								
Code	Classifi- cation	lten	าร	Func- tion	Default <accept- able value></accept- 	RAM	Contents	Proce- dure
1640	Pixel counter	Latest pixel co (Toner cartridg	unt e reference)	PRT	0 <0- 10000>	SYS	Displays the latest pixel count in the printer function and toner car- tridge reference. [Unit: 0.01%]	2
1649-0	Pixel	Pixel count	0-5%	PPC	<8 digits>	SYS	The pixel count data	14
1649-1	counter	distribution	5.1-10%	PPC	<8 digits>	SYS	are divided into 10	14
1649-2			10.1-15%	PPC	<8 digits>	SYS	output pages in each	14
1649-3			15.1-20%	PPC	<8 digits>	SYS	range is displayed. In	14
1649-4			20.1-25%	PPC	<8 digits>	SYS	this code, the distribu-	14
1649-5			25.1-30%	PPC	<8 digits>	SYS	tions in the copy func-	14
1649-6			30.1-40%	PPC	<8 digits>	SYS	tion are displayed.	14
1649-7			40.1-60%	PPC	<8 digits>	SYS	[Unit: page]	14
1649-8			60.1-80%	PPC	<8 digits>	SYS		14
1649-9			80.1- 100%	PPC	<8 digits>	SYS		14
1650-0	Pixel	Pixel count	0-5%	PRT	<8 digits>	SYS	The pixel count data	14
1650-1	counter	distribution	5.1-10%	PRT	<8 digits>	SYS	are divided into 10	14
1650-2			10.1-15%	PRT	<8 digits>	SYS	ranges. The number of	14
1650-3			15.1-20%	PRT	<8 digits>	SYS	range is displayed. In	14
1650-4			20.1-25%	PRT	<8 digits>	SYS	this code, the distribu-	14
1650-5			25.1-30%	PRT	<8 digits>	SYS	tions in the printer func-	14
1650-6			30.1-40%	PRT	<8 digits>	SYS	tion are displayed.	14
1650-7			40.1-60%	PRT	<8 digits>	SYS	[Unit: page]	14
1650-8			60.1-80%	PRT	<8 digits>	SYS		14
1650-9			80.1- 100%	PRT	<8 digits>	SYS		14
1651-0	Pixel	Pixel count	0-5%	FAX	<8 digits>	SYS	The pixel count data	14
1651-1	counter	distribution	5.1-10%	FAX	<8 digits>	SYS	are divided into 10	14
1651-2			10.1-15%	FAX	<8 digits>	SYS	ranges. The number of	14
1651-3			15.1-20%	FAX	<8 digits>	SYS	range is displayed. In	14
1651-4			20.1-25%	FAX	<8 digits>	SYS	this code, the distribu-	14
1651-5	1		25.1-30%	FAX	<8 digits>	SYS	tions in the FAX func-	14
1651-6	1		30.1-40%	FAX	<8 digits>	SYS	tion are displayed.	14
1651-7			40.1-60%	FAX	<8 digits>	SYS	[Unit: page]	14
1651-8			60.1-80%	FAX	<8 digits>	SYS		14
1651-9			80.1- 100%	FAX	<8 digits>	SYS		14

<<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).
 - For the cleaning web, this means the total feeding amount for controlling the cleaning web.
 - (1 count = 1 mm).
- 8: Number of times replaced
 - Counts up when clearing the counter of each unit in the PM Support Mode Screen.

Notes:

- Barring the exceptions, sub-code 3 is equivalent to sub-code 7.
- Barring the exceptions, 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".

(Exceptions: 08-1228, 08-1252)

Items	PM management set- ting <procedure 4=""> *Indicated in 8 digits</procedure>	Date of previous replacement <procedure 2=""></procedure>	Remarks
Photoconductive drum	1150-0 to 8	1151	<default 1150<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0/0 Sub-code 1: 450,000/500,000 575,000/600,000 Sub-code 4: 495,000/495,000/ 495,000/410,000</default>
Drum cleaning blade	1158-0 to 8	1159	<pre><default (e-studio520="" (e-studio523="" 1158="" 600="" 603="" 720="" 723="" 850)="" 853)="" code="" of="" or="" value=""> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0/ Sub-code 1: 450,000/500,000 575,000/600,000 Sub-code 4: 495,000/495,000/ 495,000/410,000</default></pre>
Drum cleaning brush	1166-0 to 8	1167	<pre><default (e-studio520="" (e-studio523="" 1166="" 600="" 603="" 720="" 723="" 850)="" 853)="" code="" of="" or="" value=""> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/00 Sub-code 1: 450,000/500,000/ 575,000/600,000 Sub-code 4: 495,000/495,000/ 495,000/410,000</default></pre>
Drum separation finger	1172-0 to 8	1173	<default 1172<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0/0 Sub-code 1: 450,000/500,000/ 575,000/600,000 Sub-code 4: 495,000/495,000/ 495,000/410,000</default>
Main charger grid	1174-0 to 8	1175	<pre><default (e-studio520="" (e-studio523="" 1174="" 600="" 603="" 720="" 723="" 850)="" 853)="" code="" of="" or="" value=""> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/00 Sub-code 1: 450,000/500,000/ 575,000/600,000 Sub-code 4: 495,000/495,000/ 495,000/410,000</default></pre>
Main charger wire	1182-0 to 8	1183	<default 1182<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/00 Sub-code 1: 450,000/500,000/ 575,000/600,000 Sub-code 4: 495,000/495,000/ 495,000/410,000</default>
Main charger wire clean- ing pad	1190-0 to 8	1191	<pre><default (e-studio520="" (e-studio523="" 1190="" 600="" 603="" 720="" 723="" 850)="" 853)="" code="" of="" or="" value=""> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0/0 Sub-code 1: 450,000/500,000/ 575,000/600,000 Sub-code 4: 495,000/495,000/ 495,000/410,000</default></pre>

Items	PM management set- ting <procedure 4=""> *Indicated in 8 digits</procedure>	Date of previous replacement <procedure 2=""></procedure>	Remarks
Ozone filter	1198-0 to 8	1199	<default 1198<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0/0 Sub-code 1: 450,000/500,000/ 575,000/600,000 Sub-code 4: 495,000/495,000/ 495,000/410,000</default>
Developer material	1200-0 to 8	1201	<default 1200<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/00 Sub-code 1: 450,000/500,000/ 575,000/600,000 Sub-code 4: 400,000/400,000/ 400,000/330,000</default>
Toner filter	1208-0 to 8	1209	<pre><default (e-studio520="" (e-studio523="" 1208="" 600="" 603="" 720="" 723="" 850)="" 853)="" code="" of="" or="" value=""> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/00 Sub-code 1: 450,000/500,000/ 575,000/600,000 Sub-code 4: 400,000/400,000/ 400,000/330,000</default></pre>
Used toner bag	1212-0 to 5, 8	1213	<default 1212<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 3, 5, 8: 0/0/0/0 Sub-code 1: 900,000/1,000,000/ 1,150,000/1,200,000 Sub-code 4: 990,000/990,000/ 990,000/820,000</default>
Transfer belt	1228-0 to 8	1229	<default 1228<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/00 Sub-code 1: 450,000/500,000/ 575,000/600,000 Sub-code 4: 495,000/495,000/ 495,000/410,000</default>
Transfer belt cleaning blade	1232-0 to 5, 8	1233	<default 1232<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 3, 5, 8: 0/0/0/0 Sub-code 1: 450,000/500,000/ 575,000/600,000 Sub-code 4: 495,000/495,000/ 495,000/410,000</default>
Transfer belt cleaning brush	1234-0 to 5, 8	1235	<default 1234<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 3, 5, 8: 0/0/0/0 Sub-code 1: 450,000/500,000/ 575,000/600,000 Sub-code 4: 495,000/495,000/ 495,000/410,000</default>

ltems	PM management set- ting <procedure 4=""> *Indicated in 8 digits</procedure>	Date of previous replacement <procedure 2=""></procedure>	Remarks
Fuser roller	1246-0 to 8	1247	<default 1246<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0/0 Sub-code 1: 450,000/500,000/ 575,000/600,000 Sub-code 4: 470,000/470,000/ 470,000/390,000</default>
Pressure roller	1250-0 to 8	1251	<default 1250<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0/0 Sub-code 1: 450,000/500,000/ 575,000/600,000 Sub-code 4: 470,000/470,000/ 470,000/390,000</default>
Cleaning web	1252-0 to 8	1253	<pre><default (e-studio520="" (e-studio523="" 1252="" 600="" 603="" 720="" 723="" 850)="" 853)="" code="" of="" or="" value=""> Sub-codes 0, 2, 3, 5, 6, 8: 0/0/0/0 Sub-code 1: 450,000/500,000/ 575,000/600,000 Sub-code 4: 470,000/470,000/ 470,000/390,000 Sub-code 7: 1/1/1/1</default></pre>
Cleaning web roller	1254-0 to 8	1255	<default 1254<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0/0 Sub-code 1: 450,000/500,000/ 575,000/600,000 Sub-code 4: 470,000/470,000/ 470,000/390,000</default>
Fuser roller separation fin- ger	1268-0 to 8	1269	<pre><default (e-studi0520="" (e-studi0523="" 1268="" 600="" 603="" 720="" 723="" 850)="" 853)="" code="" of="" or="" value=""> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0/0 Sub-code 1: 450,000/500,000/ 575,000/600,000 Sub-code 4: 470,000/470,000/ 470,000/390,000</default></pre>
Pickup belt (RADF)	1282-0,1,2,8	1283	<pre><default (e-studio520="" (e-studio523="" 1282="" 600="" 603="" 720="" 723="" 850)="" 853)="" code="" of="" or="" value=""> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 50,000/50,000/50,000/ 50,000</default></pre>
Feed roller (RADF)	1284-0,1,2,8	1285	<default 1284<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 120,000/120,000/ 120,000/120,000</default>
Separation roller (RADF)	1286-0,1,2,8	1287	<default 1286<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 50,000/50,000/50,000/ 50,000</default>

Items	PM management set- ting <procedure 4=""> *Indicated in 8 digits</procedure>	Date of previous replacement <procedure 2=""></procedure>	Remarks
Pickup roller (Tandem LCF)	1288-0,1,2,8	1289	<default 1288<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 400,000/400,000/ 400,000/400,000</default>
Pickup roller (1st drawer)	1290-0,1,2,8	1291	<default 1290<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 200,000/200,000/ 200,000/200,000</default>
Pickup roller (2nd drawer)	1292-0,1,2,8	1293	<pre><default (e-studi0520="" (e-studi0523="" 1292="" 600="" 603="" 720="" 723="" 850)="" 853)="" code="" of="" or="" value=""> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 200,000/200,000/ 200,000/200,000</default></pre>
Pickup roller (Option LCF)	1294-0,1,2,8	1295	<default 1294<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 500,000/500,000/ 500,000/500,000</default>
Feed roller (Tandem LCF)	1296-0,1,2,8	1297	<default 1296<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 400,000/400,000/ 400,000/400,000</default>
Feed roller (1st drawer)	1298-0,1,2,8	1299	<default 1298<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 200,000/200,000/ 200,000/200,000</default>
Feed roller (2nd drawer)	1300-0,1,2,8	1301	<default 1300<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 200,000/200,000/ 200,000/200,000</default>
Feed roller (Option LCF)	1302-0,1,2,8	1303	<default 1302<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 500,000/500,000/ 500,000/500,000</default>
Separation roller (Tandem LCF)	1304-0,1,2,8	1305	<default 1304<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 400,000/400,000/ 400,000/400,000</default>

Items	PM management set- ting <procedure 4=""> *Indicated in 8 digits</procedure>	Date of previous replacement <procedure 2=""></procedure>	Remarks
Separation roller (1st drawer)	1306-0,1,2,8	1307	<default 1306<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 200,000/200,000/ 200,000/200,000</default>
Separation roller (2nd drawer)	1308-0,1,2,8	1309	<default 1308<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 200,000/200,000/ 200,000/200,000</default>
Separation roller (Option LCF)	1310-0,1,2,8	1311	<default 1310<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 500,000/500,000/ 500,000/500,000</default>
Separation roller (3rd drawer)	1312-0,1,2,8	1313	<default 1312<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 200,000/200,000/ 200,000/200,000</default>
Separation roller (4th drawer)	1314-0,1,2,8	1315	<default 1314<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 200,000/200,000/ 200,000/200,000</default>
Separation roller (Bypass feed)	1316-0,1,2,8	1317	<pre><default (e-studio520="" (e-studio523="" 1316="" 600="" 603="" 720="" 723="" 850)="" 853)="" code="" of="" or="" value=""> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 100,000/100,000/ 100,000/100,000</default></pre>
Feed roller (3rd drawer)	1320-0,1,2,8	1321	<default 1320<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 200,000/200,000/ 200,000/200,000</default>
Feed roller (4th drawer)	1322-0,1,2,8	1323	<default 1322<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 200,000/200,000/ 200,000/200,000</default>
Feed roller (Bypass feed)	1324-0,1,2,8	1325	<default 1324<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 100,000/100,000/ 100,000/100,000</default>

Items	PM management set- ting <procedure 4=""> *Indicated in 8 digits</procedure>	Date of previous replacement <procedure 2=""></procedure>	Remarks
Pickup roller (3rd drawer)	1328-0,1,2,8	1329	<default 1328<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 200,000/200,000/ 200,000/200,000</default>
Pickup roller (4th drawer)	1330-0,1,2,8	1331	<pre><default (e-studio520="" (e-studio523="" 1330="" 600="" 603="" 720="" 723="" 850)="" 853)="" code="" of="" or="" value=""> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 200,000/200,000/ 200,000/200,000</default></pre>
Pickup roller (Bypass feed)	1332-0,1,2,8	1333	<default 1332<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 8: 0/0/0/0 Sub-code 1: 100,000/100,000/ 100,000/100,000</default>
Web roller one-way clutch	1338-0 to 8	1339	<default 1338<br="" code="" of="" value="">(e-STUDIO520/600/720/850) or (e-STUDIO523/603/723/853)> Sub-codes 0, 2, 3, 5, 6, 7, 8: 0/0/0/0 Sub-code 1: 450,000/500,000/ 575,000/600,000 Sub-code 4: 470,000/470,000/ 470,000/390,000</default>

<< 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 displayed).

Note:

Before performing the following operations, note the current counter values.

0% 257	
SYSTEM MODE	
99999999 99999999	

Fig. 2-3

- (3) Key in the value "1" or "2" with the digital key 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] button is not pressed. (The value on the left of the "%" is reset to "0" by pressing the [CLEAR] button.)

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

<u>1%</u> 2 SYSTEM MOD 9999999999>9	57] E 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.

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.

The general relations between the 4 factors mentioned in the previous page and toner consumption per output page in the Copier Function are as follows:



Fig. 2-6 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.) \rightarrow Pixel count: 100%, Print count: 5

Printing 5 pages on A4/LT size with blank copy (Laser never emits.) \rightarrow 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.) \rightarrow 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 \rightarrow Pixel count: 5%, Print count: 4

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

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

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. 2

- Type of calculated data

Since this is multifunctional, the data of pixel count is calculated for each function. 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
Copier function	0	0
Printer function	0	0
FAX function	0	0
Total	0	0

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. 2-7 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 following screen is displayed when the toner cartridge reference is selected in the setting mode (08-1505).

	2004.07.11 12:36			36
	USER	ADMIN		
TONER CARTRIDGE				
	Сору	Printer	Fax	Total
Print Count [LT/A4]	180	61	0	241
Average Pixel Count [%]	2. 76	2.80	0.00	2.76
Latest Pixel Count [%]	3.08	1.10	0.00	1.10
	•			
RETURN				

Fig. 2-8 Information screen of toner cartridge reference

The following screen is displayed when the service technician reference is selected in the setting mode (08-1505).

	2004.07.11 12:36			36
	USER	ADMIN		
SERVICE				
	Сору	Printer	Fax	Total
Print Count [LT/A4]	180	61	0	241
Average Pixel Count [%]	2. 76	2.80	0.00	2.76
Latest Pixel Count [%]	3.08	1.10	0.00	1.10
	•			
KEIURN				

Fig. 2-9 Information screen of service technician reference

- 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.





P	IXEL COUNTI	ER CODE LIST					
2	004.7.11 09:5	5					
s	ERVICEMAN						
No 0 1 2	DATE 20040711 20040711 20040711	Print Count [LT/A4] Average Pixel Count [%] Latest Pixel Count [%]	PPC 12345 12345 12345	PRN 23456 23456 23456	FAX 12345 12345 12345	TOTAL 45678 45678 45678	

Fig. 2-11 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.2-74 "2.2.5 Setting mode (08)".

Print count, pixel count

		Toner cartridge reference	Service technician reference
Copier function	Print count (page)	1553	1548
	Average pixel count (%)	1613	1592
	Latest pixel count (%)	1639	1606
Printer function	Print count (page)	1555	1550
	Average pixel count (%)	1619	1593
	Latest pixel count (%)	1640	1607
FAX function	Print count (page)	1556	1551
	Average pixel count (%)	1625	1594
	Latest pixel count (%)	1634	1608
Total	Average pixel count (%)	1624	1595

Table 2-202 Pixel count code table

Pixel count distribution

	Pixel count distribution (page)
Copier function	1649
Printer function	1650
FAX function	1651

Table 2-203 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% 1.51 - 10% 2.101 - 15% 3.151 - 20% 4.201 - 25%

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. (08-1566)

Toner cartridge reference count started date The toner cartridge reference count started date is displayed. (08-1518)

Service technician reference cleared date The service technician reference cleared date is displayed.(08-1510) 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.

Classification	Adjustment Mode (05)	Setting Mode (08)
User interface	[Position] 305, 306 [Carriage position] 359	[AMS] 605 [X in 1] 650 [Indicator] 671 [Edit copying] 645, 646 [Sound] 610, 969, 970 [Counter] 202 [Cascade] 652, 653 [Screen] 207, 602 [Administrator] 263 [Feeding setting] 658, 659 [Original counter] 302 [Original direction] 628 [Book duplexing] 611 [Language] 220 [Copy volume] 300 [Energy saving] 601 [Default setting] 276, 281, 283, 284, 285, 286, 289, 331, 503, 603, 604, 607, 618, 642, 1479 [Offsetting between jobs] 682 [Security level] 1708 [Sorting] 627, 641, 649 [Timer] 204, 205, 206 [Template] 1140, 3851 [Image shift] 636, 1429, 1430 [Tray reset] 648 [Blank copying prevention] 625 [Date] 640 [Annotation] 651, 657 [Display] 213, 342, 613, 1478 [Job Build] 1130, 1131 [File] 209, 219 [Department management] 617, 620, 621, 622, 623, 624, 629 [Box printing] 953, 954 [JOB STATUS] 983 [Keyboard layout] 1929, 1930, 1931, 1932, 1933, 1934, 1935 [Ja
	[Carriage position] 359 [Shading position] 310, 311 [Distortion] 308 [Reproduction ratio] 340	LEnnanced templatej 9886, 9888
FAX		[Function] 1498, 1926, 3847, 3848, 3849 [Destination] 701 [Default setting] 274, 275 [Priority drawer] 689

2.2.7 Classification List of Adjustment Mode (05) / Setting Mode (08)

Classification	Adjustment Mode (05)	Setting Mode (08)
Image	[Binarization] 700, 701, 702 [Image density] 501, 503, 504, 505, 506, 507, 508, 509, 510, 512, 514, 515, 710, 714, 715, 719, 720, 724, 725, 729, 845, 846, 847, 848, 850, 851, 852, 853, 855, 856, 857, 858, 860, 861, 862, 863, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942 [Pixel size] 663 [Gamma balance] 596-0 to 2, 597-0 to 2, 598-0 to 2, 599-0 to 2 [Gamma adjustment] 593, 594, 595, 943, 944, 945 [Background processing] 600, 601, 602, 869, 870, 871, 872, 946, 947, 948 [Sharpness] 620, 621-0 to 1, 622, 865-0 to 2, 866-0 to 2, 867-0 to 2, 868-0 to 1, 922, 923, 924-0 to 1 [Smudged/Faint text] 653, 654, 655, 928 [Toner saving] 664, 665 [Margin] 430, 431, 432, 433, 434-0 to 1, 435, 436, 437, 438 [Range correction] 532, 533, 534, 570, 571, 572, 693, 694, 695, 825, 826, 827, 828, 830, 831, 832, 833, 835, 836, 837, 838, 913, 914, 915, 916, 917, 918, 919, 920, 921	[Custom Mode] 508, 509 [Error diffusion / Dither] 502 [Default setting] 550
Image control	[Image quality control] 241, 242, 244, 247, 248, 249, 260, 261, 262, 263-0 to 1, 264-0 to 1, 265-0 to 1, 268, 269, 270, 290, 291, 292, 293, 294, 295, 296, 299	[Image quality control autostart] 1826, 1827, 1828, 1829, 1830, 1831 [Image quality open-loop control] 1811 [Image quality closed-loop control] 1809, 1810, 1814, 1815 [Contrast voltage] 1820, 1821, 1833 [Developer unit prerunning period] 1808 [Condition setting] 804 [Counter for accumulated number] 1371 [0 clearing] 800 [Transfer output correction] 1837 [Toner control] 1910 [Drum surface potential sensor] 1812, 1813, 1345 [Background potential offset correction] 1834 [Auto-start print volume setting] 803, 810 [Laser power offset correction] 1835 [Exposure amount (laser power)] 1824, 1825
Drive system	[Motor speed] 409, 412, 421, 422, 424, 425, 426, 427, 439, 446-0 to 1, 447-0 to 1, 451-0 to 1, 453-0 to 1, 454-0 to 1, 456-0 to 1, 464-0 to 3, 475-0 to 3, 478-0 to 3, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 493	

2

Classification	Adjustment Mode (05)	Setting Mode (08)
Feeding sys- tem	[Paper pushing amount] 466-0 to 4 [Aligning amount] 448-0 to 4, 449-0 to 4, 450-0 to 4, 452-0 to 4, 455-0 to 4, 457, 458-0 to 4, 460-0 to 4, 461-0 to 4, 462-0 to 4, 463-0 to 4, 469-0 to 4, 470-0 to 4, 471-0 to 4, 472-0 to 4, 473-0 to 3, 474-0 to 4, 480, 4563-0 to 3, 4564-0 to 3, 4565-0 to 3, 4566-0 to 3, 4567-0 to 3, 4568-0 to 3, 4569-0 to 3, 4580-0 to 1, 4581-0 to 1, 4582-0 to 4, 4583-0 to 4, 4584-0 to 4, 4585-0 to 4, 4586-0 to 1, 4587-0 to 4, 4591-0 to 4, 4592-0 to 1, 4593-0 to 4, 4594-0 to 4, 4598-0 to 1, 4599-0 to 4, [Paper remained] 476-0 to 5, 477-0 to 5	[Reversing speed (Thick paper)]1901 [Inserter] 211 [Feeding] 254, 619 [Paper feeding timing] 1909 [Paper source] 480, 481, 1135, 1431 [Detection] 449, 1492 [Setting] 988 [Tab paper] 214, 215, 216, 217, 1437, 1438, 1439 [Paper size] 224, 225, 226, 227, 228, 243, 247, 248, 249, 256, 630 [Paper type] 697 [Paper dimension] 210, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 244, 245, 246, 470, 471 [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, 1402, 1403, 1900-0 to 1
Laser	[Write start] 408, 410, 411, 428, 429, 440, 441, 442, 443, 444, 445, 498-0 to 1 [Polygonal motor] 401, 405 [Sideways deviation] 497-0 to 6 [Laser power] 286-0 to 1	[Polygonal motor] 478, 483, 484, 485, 486, 488, 489
Main charger	[Grid] 210, 251-0 to 1	[Cleaning] 418
Developer	[Auto-toner] 200, 201 [Developer bias] 205, 253-0 to 1	[Auto-toner] 414
Transfer	[Transfer transformer] 221	[Transfer timing] 841 [Transformer DC] 830, 868, 869
Fuser		[Temperature] 406, 407, 408, 409, 410, 411, 412, 413, 437, 890, 891, 897, 898, 1804 [Cleaning web] 401, 402, 403, 404, 405 [High fusing mode] 433 [Threshold] 460 [Status counter] 400 [Printing speed] 858, 859, 860, 861 [Pre-running] 417, 439, 440, 441, 526, 844, 845, 846, 847, 848, 855
Image pro- cessing		[Detection and control] 1415 [Drum pre-running period] 1836 [Toner supply amount correction] 455, 456, 457 [Counter] 1385, 1386, 1387, 1388
RADF	[Aligning amount] 354, 355 [Transporting] 357, 358, 365, 366 [Sensor/EEPROM] 352, 356, 367, 368	[Switchback] 462
Finisher	[Binding/Folding position] 468-0 to 2	[Stapling] 704-0 to 1 [Hole punching] 9847

Classification	Adjustment Mode (05)	Setting Mode (08)
Network		[AppleTalk] 1014, 1015, 1936, 3729, 3730
		[BDC] 1122
		[Bindery] 1026
		[Community] 1065, 1066
		[DDNS] 1020, 3737, 3745, 3746, 3747, 3746 [DHCP] 1755, 1756, 1757, 1750, 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, 3756, 3757, 3758, 3759, 3760, 3761,
		3/62, $3/63$, $3/64$, $3/65$, $3/66$, $3/85$
		[L-mail] 203, 1097, 1098, 1478, 1477, 1489, 1491 3837 9946 9947
		[File] 1779, 1782, 1783, 1784, 1785, 1786.
		9394
		[FTP] 1055, 1057, 1058, 1059, 1060, 1061,
		1062, 1089, 1090, 1091, 1092, 3739
		[HTTP] 1030, 1031, 1032, 3738
		[IP CONTINCI] 1440 [ID Filter] 1720, 1721, 1722, 1723, 1724, 1725
		1726 1727 1728 1729 1730 1731 1732
		1733, 1734, 1735, 1736, 1737, 1738, 1739
		[IP address] 1006, 1007, 1008, 1009, 1010,
		1767, 1768, 3769
		[IPP] 1078, 1079, 1080, 1081, 1082, 1083,
		1084, 1085, 1086, 1087, 1088, 1447, 1448,
		1449, 1450, 1451, 3725, 3720 [IPv6] 3767, 3768, 3770, 3775, 3776, 3777
		[IPX] 1011, 1099
		[LDAP] 1016, 1138, 1139, 1923, 1924, 3506,
		3507, 3727, 3728, 3743, 9629
		[LLTD] 3793
		[LLMNR] 3794
		[LPD] 1075, 1076, 1077 [MAC address] 1141
		[MIB] 1063
		[NCP] 1013
		[NDS] 1027
		[NetBios] 1023
		[Netware] 1128, 1129, 1134, 1143, 1144, 1148
		[NIC] 1002 [Novell] 1093_1094
		[PCL setting] 973
		[PDC] 1121
		[POP3] 1046, 1047, 1048, 1049, 1050, 1051,
		1052, 3742, 3744
		[Raw/TCP] 1073, 1074, 3731, 3732 [RawPort] 045
		[Raw printing] 290 291 292 293 294 295
		296, 297, 298, 299, 978, 979, 9117
		[Rendezvous] 1103, 1104, 1105
		[Role Base Access] 1493, 1928, 3831
		[Samba] 1464, 3783, 3833
		[SearchKoot] 1095 [SMB] 1117 1050 1051
		[SMTP] 1022, 1037, 1038, 1039, 1040, 1041
		1042, 1100, 1101, 1102, 1111, 3741
		[SNTP] 1441, 1442, 1444, 1445, 1446, 3740,
		3845
		[Telnet] 3864, 3865, 3866, 3867, 3868

Classification	Adjustment Mode (05)	Setting Mode (08)
Network		[SSL] 1740, 1741, 1742, 1743, 1744, 1745, 1746, 1747, 1748, 1749, 1750, 1751, 9819, 9822 [TRAP] 1069, 1070 [WINS] 1024, 1025 [InternetFAX] 266, 1114, 3812, 3819, 3820, 3821, 3822, 3823, 3824, 3825, 3826, 3827, 3828, 3829, 3830 [Offramp] 1043, 1044, 1045 [Function] 1432, 1435, 1436 [Automatic transferring] 660, 661 [Initialization] 1119 [Scan job] 1781-0 to 1, 1915, 1940, 3804, 3815, 3816, 3817, 3818 [Speed setting] 1003 [Direct SMTP] 3810, 3811 [Data retention period] 259, 260, 261, 262, 264 [Domain] 1113, 1123 [Authentication] 1484, 1485, 1487, 1920, 1921, 1922, 1925, 1937, 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 3722, 3723, 3724 [e-Filing Access Mode] 1497 [Print queue] 1096 [Prefix] 3771 [Frame type] 1012 [Host name] 1112 [Local I/F] 614 [Workgroup namel 1124]
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] 1660, 1661, 1662, 1663, 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1677, 1678
Bluetooth		[Data encryption] 1715 [Installation status] 1709 [Setting] 1710, 1711, 1712, 1713, 1714 [Time-out] 1716, 1717 [BIP] 1719, 1941

Classification	Adjustment Mode (05)	Setting Mode (08)
Counter		[HDD] 390, 391, 392, 393 [n-UP printing] 1530-0 to 7, 1533-0 to 7, 1535-0 to 7, 6810-0 to 7, 6813-0 to 7, 6815-0 to 7, [Counter copy] 257 [External counter] 381, 1126 [Paper source] 355, 356, 357, 358, 359, 360, 370, 372, 374 [Paper size] 305-0 to 16, 306-0 to 16, 307-0 to 16, 308-0 to 16, 312-0 to 16, 313-0 to 16, 314-0 to 16, 315-0 to 16, 316-0 to 16 [Tab paper] 1412 [Double count] 344, 346, 347, 348, 349, 352, 353 [Counter for period of time fuser unit] 1378, 1380, 1382 [Heater and energizing time accumulating] 1372 [Toner cartridge rotation] 1376, 1410 [Toner transport motors] 1519 [Used toner full status] 476 [Large/Small size] 320-0 to 2, 321-0 to 2, 322-0 to 2, 323-0 to 2, 327-0 to 2, 335-0 to 2
Version		[HDD] 944 [ROM] 900, 903, 904, 905, 906, 907, 908, 909, 915 [System] 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 933, 934, 935, 936, 937, 938, 939
Maintenance	[Equipment number] 976	[FSMS] 258, 999 [HTTP] 726, 727, 728, 729, 730, 731 [PM counter] 251, 252, 375, 376 [Error history] 253 [Equipment number] 995 [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, 794, 795, 796, 1145, 1495, 9739, 9880, 9881 [Supply order] 732, 733, 734, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 758, 759, 760, 761, 762, 763, 765 [Downloading] 797 [Telephone] 250 [Panel calibration] 692 [PM timing display/Output pages] 223 [Equipment information] 9960
Scrambler board		[HDD]699 [Key code] 698 [Installation] 696
Electronic Fil- ing		[Setting] 267, 270, 950, 976, 985
Data overwrite kit		[FRAM] 1427 [HDD] 1422, 1424, 1426 [SRAM] 1428 [Releasing F200] 633

Classification	Adjustment Mode (05)	Setting Mode (08)
General		[HDD] 271, 670, 690, 691, 694
		[NIC] 693
		[PCL] 1149
		[SYS ROM] 1938
		[IAI partition] 1118
		[Address book] 1125
		[Data encryption] 3834
		[Card roader] 1772, 1772, 1774, 1775
		[Calu leadel] 1772, 1773, 1774, 1775
		[Authinistrator's password] 1776
		[Clearing] 665, 660
		[Summer time] 3852 3853 3854 3855 3856
		3857 3858 3859 3860 3861 3862 3863
		[Destination] 201
		[Trial period] 673, 695, 798, 799
		[Setting] 949, 975, 986, 1132, 1470, 1471.
		1494, 9829
		[Software version upgrade] 947
		[Taiwan's Green Mark Program] 1908
		[Data cloning] 9889
		[Databases] 684, 685, 686
		[Electronic key] 3840, 3841, 3842
		[Partition] 662, 666, 667
		[Banner] 678, 679, 680
		[Date/Time] 200, 638
		[File] 288
		[Department management] 672
		BANNER MESSAGE button 681
		[Memory] 615
		[USer data management] 1472, 1473, 1474,
		[Line] 203
		[Dupley printing] 683
		[File/Fmail] 1913_1916
		[Extension fields] 1914
		[KS/KSSM setting] 1961
		[KS] 1960, 1963, 1964, 1965, 1966, 1967.
		1968, 1970, 1971, 1972, 1973, 1974, 1975.
		1976, 1977, 1978, 1979, 1980
		[KSSM] 1984, 1985, 1986, 1987, 1988, 1989,
		1990, 1991, 1992, 1993, 1994
		[Remote scanning] 3850, 9828
		[Filing box] 9882
		[FROM] 9885

3. ADJUSTMENT

When the power should be turned OFF, be sure to shut down the equipment by pressing the [ENERGY SAVER] button for a few seconds.

3.1 Adjustment of Auto-Toner Sensor

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

Note:

Check if the cleaning blade is pressed against the drum before performing this adjustment.

<Procedure> (Adjustment Mode (05-200))

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





(3) Key in code [200] and press the [START] button. The display changes as follows.





Notes:

- A indicates the controlled value of the auto-toner sensor output.
- B indicates the output voltage of the auto-toner sensor (2.30 V in the above case). The drum, developer unit, etc. are in operation.
- C indicates the latest adjustment value.

3

(4) After about two minutes and 30 seconds, the value B automatically starts changing.

230%	200	<u>A3</u>
TEST MODE	WAIT	
128		128



(5) After a short time, the value B becomes stable and the display changes as follows.





(6) Press the [ENTER] or [INTERRUPT] button. The drum, developer unit, etc. are stopped and the following is displayed.

The drum, developer unit, etc. are stopped and the following is displayed.





(7) Standard of adjustment value range

Humidity(%)	Adjustment reference voltages(V)
0 to 29.9	2.46
30.0 to 44.9	2.48
45.0 to 59.9	2.50
60.0 to 74.9	2.64
75.0 to 100	2.78

- (8) Key in code [290] and press the [START] button. When the message "WAIT" goes off, turn the power OFF by shutdown.
- (9) Install the toner cartridge.

3.2 Image Dimensional Adjustment

3.2.1 General description

There are several adjustment items in the image dimensional adjustment, as listed below. When adjusting these items, the following adjustment order should strictly be observed.

		Code in mode 05	
1	Paper alignment a	448, 449, 450, 452, 455, 457, 458, 460, 461, 462, 463, 469, 470, 471, 472, 473, 474, 480	
2	Printer related adjustment	 (a) Reproduction ratio of primary scanning direction (Fine adjustment of polygonal motor rotation speed) 	401
		(b) Primary scanning data laser writing start position	411
		 (c) Reproduction ratio of secondary scanning direction (Fine adjustment of transfer belt motor rotation speed) 	488
		(d) Secondary scanning data laser writing start posi- tion	408, 428, 429, 440, 441, 442, 443, 444, 445
		(e) Primary scanning data laser writing start position at duplexing	498
3 Scanner related		(a) Image distortion	_
	adjustment	(b) Reproduction ratio of primary scanning direction	405
		(c) Image location of primary scanning direction	306
		(d) Reproduction ratio of secondary scanning direc- tion	340
		(e) Image location of secondary scanning direction	305
		(f) Top margin	430
		(g) Right margin	432
		(h) 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. 3-6

3.2.2 Paper alignment at the registration roller

• 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.

<u>100%</u> Test Mo	<u>480</u> lt DE
CST1 CST2 CST3	Tandem LCF Option LCF SFB ADII

Fig. 3-7

(2) Select the paper size.

<u>100%</u> Test Mo	<u>480</u> lt DE
CST1 330mm- 220mm-329mm	-159mm
205mm-219mm 160mm-204mm	
CANCEL	ENTER

Fig. 3-8

(3) Select the media type.

100% 480 LT TEST MODE	
CST1 330mm- Normal OHP Thick1	
Thick2 Thick3	

Fig. 3-9

(4) Key in the adjustment value.

100% 480 LT
TEST MODE
10 10
CST1 330mm- Normal
Norma I OHP
Thick1
Thick2
Thick3

Fig. 3-10

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

• Adjustment by direct code entry

As for the codes shown in the table below, the paper alignment at the registration roller can be adjusted by a direct entry with the digital keys.

(For codes not shown in this table, perform the adjustment with the touch panel.)

Paper type	Weight	1st drawer	2nd drawer	3rd drawer	4th drawer	Tandem LCF	Duplexing (ADU)	Option LCF	Bypass feed(SFB)
Plain paper	64-80 g/m ² 17-20 lb.	450 (*1)	452 (*1)	448 (*1)	449 (*1)	457	455 (*1)	-	458 (*1)
Thick paper 1	81-105g/m ² 21-28 lb.	469 (*1)	470 (*1)	471 (*1)	472 (*1)	473-0	474 (*1)	-	460 (*1)
Thick paper 2	106-163g/m ² 29-43 lb.	-	-	-	-	473-1	-	-	461 (*1)
Thick paper 3	164-209g/m ² 44-55 lb.	-	-	-	-	473-2	-	-	462 (*1)
OHP	-	-	-	-	-	473-3	-	-	463 (*2)

Sub-code

(*1) 0: Long size 1: Middle size 2: Short size1 3: Short size 4: Post card

(*2) 0: Long size of OHP film 1: Middle size of OHP film 2: Short size1 of OHP film

3: Short size 2 of OHT film 4: Post card size of OHP film

Notes:

- Long size: 330 mm or longer (13.0 inches or longer) Middle size: 220-239 mm (8.7-12.9 inches) Short size1: 205-219 mm (8.1-8.6 inches) Short size2: 160-204 mm (6.3-8.0 inches) Post card: 159 mm or shorter (6.2 inches or shorter)
- 2. The adjustment of "Post card" is for Japan only.

<Procedure>

(1) Perform the test print according to the following procedure.



Fig. 3-11

(3) Perform the same procedure for all paper sources.

Note:

When paper thinner than specified is used, paper jams may occur frequently at the registration section. In this case, it is advisable to change (or reduce) the aligning amount.

However, if the aligning amount is reduced too much, this may cause the shift of leading edge position. So, when adjusting the aligning amount, try to choose the appropriate amount while confirming the leading edge position is not shifted.

* As a tentative countermeasure, the service life of the feed roller can be extended by increasing the aligning amount.

3.2.3 Printer related adjustment

The printer related adjustment is performed by using the printed out grid pattern.



Fig. 3-12 Grid pattern

	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))"
В	52 ± 0.5mm	Refer to "[B] Primary scanning data laser writing start position (Printer)"
С	200 ± 0.5mm	Refer to "[C] Reproduction ratio of secondary scanning direction (Fine adjustment of transfer belt motor rotation speed (Copier/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"

3

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

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON. \rightarrow (Adjustment Mode)
- (2) Press [1] → [FAX]. (A grid pattern with 10 mm squares is printed out. Use A3/LD in the 2nd/4th drawer.
- (3) Check the grid pattern on the test chart printed out and 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.
 - (Adjustment Mode) \rightarrow (Key in code [401]) \rightarrow [START]
 - \rightarrow (Key in a value (acceptable values: 0 to 255))
 - → [ENTER] or [INTERRUPT] (Stored in memory)
 - \rightarrow "100% A" is displayed
 - → Press [1] → [FAX] → (A grid pattern is printed out.)
 - The larger the adjustment value is, the longer the distance A becomes.
 (e-STUDIO 520/523/600/603/720/723: 0.3 mm/step, e-STUDIO 850/853: 0.1 mm/step)

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

- (1) While pressing [0] and [5] simultaneously, turn the power ON. \rightarrow (Adjustment Mode)
- (2) Press [1] → [FAX]. (A grid pattern with 10 mm squares is printed out. Use A3/LD in the 2nd/4th drawer.
- (3) Check the grid pattern on the test chart printed out and 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.

(Adjustment Mode) \rightarrow (Key in the code [411]) \rightarrow [START]

- \rightarrow (Key in a value (acceptable values: 0 to 255))
- → [ENTER] or [INTERRUPT] (Stored in memory)
- \rightarrow "100% A" is displayed
- \rightarrow Press [1] \rightarrow [FAX] \rightarrow (A grid pattern is printed out.)
- * The larger the adjustment value is, the longer the distance B becomes (approx. 0.05 mm/ step).
- (6) After the adjustment for the code 411 is completed, apply the same adjustment value for the code 410.

(Adjustment Mode) \rightarrow (Key in the code [410]) \rightarrow [START]

- \rightarrow (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.

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

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON. \rightarrow (Adjustment mode)
- (2) Press [1] → [FAX]. (A grid pattern with 10 mm squares is printed out. Use A3/LD in the 2nd/4th drawer.
- (3) Check the grid pattern on the test chart printed out and measure the distance C from the 6th line at the leading edge of the paper to the 26th 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.

 $(Adjustment Mode) \rightarrow (Key in code [488]) \rightarrow [START]$

- \rightarrow (Key in a value (acceptable values: 0 to 255))
- \rightarrow [ENTER] or [INTERRUPT] (Stored in memory)
- \rightarrow "100% Å" is displayed
- → Press [1] → [FAX] → (A grid pattern is printed out.)
- * The larger the adjustment value is, the longer the distance C becomes (approx. 0.2 mm/step).

[D] Secondary scanning data laser writing start position

This adjustment has to be performed for each paper source. (If there is no paper source, skip this step.) The following table shows the order of the paper source to be adjusted, code, paper size and acceptable values.

* Image location of all paper sources can be adjusted in the Adjustment mode (05-408)

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/LT	0 to 40	
3	3rd drawer	444	A4/LT	0 to 40	
4	4th drawer	428	A4/LD	0 to 40	
5	LCF	443	A4/LT	0 to 40	
6	Bypass feed	442	A3/LD	0 to 40	
7	Duplexing	445	A3/LD	0 to 40	Paper fed from the 2nd/4th drawer
-	All	408	-	0 to 80	

For 4 drawers

For tandem LCF

Order for adjustment	Paper source	Code	Paper size	Acceptable value	Remarks
1	1st drawer	440	A4	0 to 40	
2	2nd drawer	441	A3	0 to 40	
3	Tandem LCF	429	A4	0 to 40	
4	LCF	443	A4	0 to 40	
5	Bypass feed	442	A3	0 to 40	
6	Duplexing	445	A3	0 to 40	Paper fed from the 2nd/4th drawer
-	All	408	-	0 to 80	

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON. \rightarrow (Adjustment Mode)
- (2) Press [1] ([3] for duplexing) \rightarrow [FAX]. (A grid pattern with 10 mm squares is printed out.)
- (3) Check the grid pattern on the test chart printed out and 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.

(Adjustment Mode) \rightarrow (Key in the code shown above) \rightarrow [START]

- \rightarrow (Key in an acceptable value shown above)
- → [ENTER] or [INTERRUPT] (Stored in memory)
- → "100% A" is displayed
- \rightarrow Press [1] ([3] for duplexing) \rightarrow [FAX] \rightarrow (A grid pattern is printed out.)
- * The larger the adjustment value is, the longer the distance D becomes (approx. 0.4 mm/step).

[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

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON. \rightarrow (Adjustment Mode)
- (2) Press [3] → [FAX]. (A grid pattern with 10 mm squares is printed out. Use A3/LD in the 2nd/4th 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.
 - $(Adjustment Mode) \rightarrow (Key in code [498]) \rightarrow [START] \rightarrow [0] \rightarrow [START]$
 - \rightarrow (Key in a value (acceptable values: 0 to 255))
 - → [ENTER] or [INTERRUPT] (Stored in memory)
 - \rightarrow "100% A" is displayed.
 - \rightarrow Press [3] \rightarrow [FAX] \rightarrow (A grid pattern is printed out.)
 - * The larger the adjustment value is, the longer the distance E becomes (0.05 mm/step).
- [E-2] Adjustment for short-sized paper

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON. \rightarrow (Adjustment Mode)
- (2) Press [3] → [FAX]. (A grid pattern with 10 mm squares is printed out. Use A4/LT in the 1st drawer/tandem LCF.
- (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.

 $(Adjustment Mode) \rightarrow (Key in the code [498]) \rightarrow [START] \rightarrow [1] \rightarrow [START]$

- \rightarrow (Key in a value (acceptable values: 0 to 255))
- \rightarrow [ENTER] or [INTERRUPT] (Stored in memory).
- \rightarrow "100% A" is displayed
- \rightarrow Press [3] \rightarrow [FAX] \rightarrow (A grid pattern is printed out.)
- * The larger the adjustment value is, the longer the distance E becomes (0.05 mm/step).

<Adjustment procedure summarization for A to E>

- [0] [5] [Power ON] \rightarrow [1] ([3](05-445, 498) for duplex) \rightarrow [FAX]
 - A: 05-401 (2nd/4th drawer, A3/LD)

→ 200±0.5 mm
 (e-STUDIO 520/523/600/603/720/723:
 0.3 mm/step,
 e-STUDIO 850/853: 0.1 mm/step)

- B: 05-411 (2nd/4th drawer, A3/LD)
- C: 05-488 (2nd/4th drawer, A3/LD)
- D: 05-440 (1st drawer, A4/LT), 441 (2nd drawer, A3/LT), 444 (3rd drawer, A3/LT), 428 (4th drawer, A4/LD), 443 (LCF, A4/LT), 442 (Bypass feed, A4/LT), 445 (Duplexing, A3/LD)
- E: 05-498-0 (2nd/4th drawer, A3/LD), 498-1 (1st drawer/Tandem LCF, A4/LT)

- → 52±0.5 mm (0.05 mm/step)
- \rightarrow Key in the same value for 05-410.
- → 200±0.5 mm (0.2 mm/step)
- → 52±0.5 mm (0.4 mm/step)

→ 52±0.5 mm (0.05 mm/step)

3.2.4 Scanner related adjustment

Make a copy, compare the result with the original and make an adjustment if the image is distorted.

[A] Image distortion



Fig. 3-13

<Procedure>

- (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) Remove the original glass.
- (5) 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).
 - Step 2
 - In case of C: Tighten the mirror-1 adjustment screw (CW).
 - In case of D: Loosen the mirror-1 adjustment screw (CCW).









[B] Reproduction ratio adjustment of the primary scanning direction <Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power $ON \rightarrow (Adjustment Mode)$
- (2) Place a ruler on the original glass (along the direction from the rear to the front of the equipment).
- (3) Press [COPY] to make a copy at the mode of A3 (LD), 100% and the 2nd/4th drawer.
- (4) Measure the distance A from 10 mm to 210 mm of the copied image of the ruler.
- (5) Check if the distance A is within the range of 200±0.5 mm.
- (6) If not, use the following procedure to change values and repeat the steps (3) to (5) above.
 (Adjustment Mode) → (Key in the code [405]) → [START]
 - \rightarrow (Key in a value (acceptable values: 0 to 255))
 - \rightarrow Press the [ENTER] or the [INTERRUPT] button (stored in memory).
 - \rightarrow ("100% A" is displayed.)
 - * The larger the adjustment value is, the higher the reproduction ratio and the longer the distance A become.
 - (e-STUDIO 520/523/600/603/720/723: 0.3 mm/step, e-STUDIO 850/853: 0.1 mm/step)





[C] Image position adjustment of the primary scanning direction <Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON. \rightarrow (Adjustment Mode)
- (2) Place a ruler on the original glass with its leading edge pushed against the rear side and its side along the original scale on the left.
- (3) Press [COPY] to make a copy at the mode of A3 (LD), 100% and the 2nd/4th drawer.
- (4) Measure the distance B from the left edge of the paper to 100 mm of the copied image of the ruler.
- (5) Check if the distance B is within the range of 100±1.0 mm.
- (6) If not, use the following procedure to change values and repeat the steps (3) to (5) above.

(Adjustment Mode) \rightarrow (Key in the code [306]) \rightarrow [START]

- \rightarrow (Key in a value (acceptable values: 0 to 255))
- \rightarrow Press the [ENTER] or the [INTERRUPT] button (stored in memory).
- \rightarrow ("100% A" is displayed.)
- The smaller the adjustment value is, the more the image is shifted to the left and the distance B becomes narrower (0.169 mm/step).



Fig. 3-17

[D] Reproduction ratio adjustment of the secondary scanning direction <Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON. \rightarrow (Adjustment Mode)
- (2) Place a ruler on the original glass with its leading edge pushed against the original scale on the left.
- (3) Press [COPY] to make a copy at the mode of A3 (LD), 100% and the 2nd/4th drawer.
- (4) Measure the distance C from 10 mm to 210 mm of the copied image of the ruler.
- (5) Check if the distance C is within the range of 200±0.5 mm.
- (6) If not, use the following procedure to change values and repeat steps (3) to (5) above.

(Adjustment Mode) \rightarrow (Key in the code [340]) \rightarrow [START]

- \rightarrow (Key in a value (acceptable values: 0 to 255))
- \rightarrow Press the [ENTER] or the [INTERRUPT] button (stored in memory).
- \rightarrow ("100% A" is displayed.)
- * The smaller the adjustment value is, the lower the reproduction ratio becomes (0.46 mm/ step).



Feeding direction



[E] Image position adjustment of the secondary scanning direction <Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON. \rightarrow (Adjustment Mode)
- (2) Place a ruler on the original glass with its leading edge pushed against the original scale on the left.
- (3) Press [COPY] to make a copy at the mode of A3 (LD), 100% and the 2nd/4th drawer.
- (4) Measure the distance D from the leading edge of the paper to 10 mm of the copied image of the ruler.
- (5) Check if the distance D is within the range of 10±2.0 mm.
- (6) If not, use the following procedure to change values and repeat the steps (3) to (5) above.

(Adjustment Mode) \rightarrow (Key in the code [305]) \rightarrow [START]

- \rightarrow (Key in a value (acceptable values: 0 to 255))
- \rightarrow Press the [ENTER] or the [INTERRUPT] button (stored in memory).
- \rightarrow ("100% A" is displayed.)
- ^t The larger the adjustment value is, the more the image is shifted to the trailing edge (0.143 mm/step).



Fig. 3-19

[F] Top margin

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON. \rightarrow (Adjustment Mode)
- (2) Open the RADF.
- (3) Press [FAX] to make a copy at the mode of A3/LD, 100%, Text/Photo and the 2nd/4th 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 of 3 ± 0.5 mm.
- (6) If not, use the following procedure to change values and repeat the steps (3) to (5) above.

(Adjustment Mode) \rightarrow (Key in the code [430]) \rightarrow [START]

- \rightarrow (Key in a value (acceptable values: 0 to 255))
- → Press the [ENTER] or the [INTERRUPT] button (stored in memory).
- \rightarrow ("100% A" is displayed.)
- * The larger the adjustment value is, the wider the blank area becomes (approx. 0.04 mm/ step).



Fig. 3-20
[G] Right margin

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON. \rightarrow (Adjustment Mode)
- (2) Open the RADF.
- (3) Press [FAX] to make a copy at the mode of A3/LD, 100%, Text/Photo and the 2nd/4th 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 of 2±1.0 mm.
- (6) If not, use the following procedure to change values and repeat the steps (3) to (5) above.

(Adjustment Mode) \rightarrow (Key in the code [432]) \rightarrow [START]

- \rightarrow (Key in a value (acceptable values: 0 to 255))
- → Press the [ENTER] or the [INTERRUPT] button (stored in memory).
- \rightarrow ("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).



Fig. 3-21

3

[H] Bottom margin

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON. \rightarrow (Adjustment Mode)
- (2) Open the RADF.
- (3) Press the [FAX] to make a copy at the mode of A3/LD, 100%, Text/Photo and the 2nd/4th 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 of 2±1.0 mm.
- (6) If not, use the following procedure to change values and repeat the steps (3) to (5) above.

(Adjustment Mode) \rightarrow (Key in the code [433]) \rightarrow [START]

- \rightarrow (Key in value (acceptable values: 0 to 255))
- → Press the [ENTER] or the [INTERRUPT] button (stored in memory).
- \rightarrow ("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).



Fig. 3-22

3.3 Image Quality Adjustment (Copying Function)

3.3.1 Density adjustment

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

	< Ad	justment	Mode ((05)) >
--	------	----------	--------	------	-----

Original mode			Itom to be adjusted	Domorko	
Text/Photo	Photo	Text		Reindiks	
503	501	504	Manual density mode center value	The larger the value is, the darker the image becomes.	
(931)	(933)	(932)		Acceptable values: 0 to 255	
505	506	507	Manual density mode light step value	The larger the value is, the lighter the light side becomes.	
(934)	(936)	(935)		Acceptable values: 0 to 255	
508	509	510	Manual density mode dark step value	The larger the value is, the darker the dark side becomes.	
(937)	(939)	(938)		Acceptable values: 0 to 255	
514	512	515	Automatic density mode	The larger the value is, the darker the image becomes.	
(940)	(942)	(941)		Acceptable values: 0 to 255	

* The values in "()" are the adjustment codes of the Custom Mode. Make a test copy and compare the image obtained with the current settings; if necessary, make adjustment using 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 an adjustment value.(To correct the keyed-in value, press the [CLEAR] button.)
- (4) Press the [ENTER] or [INTERRUPT] button to store the value. → The equipment goes back to the ready state.
- (5) Shut down (turn the power OFF), back ON, and then perform the copying job.
- (6) If the desired image density has not been attained, repeat step (1) to (5).

3.3.2 Gamma slope adjustment

Original mode			Itom to be adjusted	Bomorko
Text/Photo Photo Text		item to be adjusted	Rellidiks	
593 (943)	594 (945)	595 (944)	Gamma slope adjustment	1 to 9: Select the gamma slope angle. (The larger the value is, the larger the angle becomes.)

Gamma slope is adjustable with the following codes.

* The values in "()" are the adjustment codes of the Custom Mode.

<Procedure>

Procedure is same as that of D P.3-23 "3.3.1 Density adjustment".

3.3.3 Background adjustment

Background of the gamma data can be adjusted with the following codes.

_	-			< Adjustment Mode (05) >	
Original mode			Itom to be adjusted	Pomorko	
Text/Photo	Photo	Text	item to be adjusted	Remains	
600 (946)	602 (947)	601 (948)	Background adjustment	1 to 9: The larger the value is, the background becomes lighter.	

3.3.4 Sharpness adjustment

If you want to make copy images look softer or sharper, perform the following adjustment. < Adjustment Mode (05) >

Original mode					
	Pho			Item to be	Remarks
Text/Photo	Error diffu- sion process	Dither pro- cess	Text	adjusted	
620 (922)	621-0 (924-0)	621-1 (924-1)	622 (923)	Sharpness adjustment	Key in the following values depend- ing on the original mode. One's place 1: Text/Photo 3: Photo 2: Text Ten's place 1 to 9: Change intensity (The larger the value is, the sharper the image becomes.) • Example of value entry in case the mode is "Text/Photo". 2 Fixed value for Text/ Photo mode Key in a value 1 to 9

* The values in "()" are the adjustment codes of the Custom Mode.

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

<Procedure>

Procedure is same as that of P.3-23 "3.3.1 Density adjustment".

< Adjustment Mode (05) >

3.3.5 Setting range correction

The values of the background peak / text peak in the range correction 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 affect the reproduction of the background density and the values of the text peak affect that of the text density.

-			-	< Adjustment Mode (05) >
C	riginal mode	e	léans éa ba a diuséa d	Domorko
Text/Photo	Photo	Text	Item to be adjusted	Remarks
570 (913)	571 (915)	572 (914)	Range correction for original manually set on the original glass	The following are the default values set for each original mode. Text/Photo: 12, Photo: 12, Text: 22
693 (916)	694 (918)	695 (917)	Range correction for original set on the RADF	 Each digit stands for: One's place: Automatic density mode Ten's place: Manual density mode The setting conditions possible are as follows:
				1:fixedfixed2:variedfixed3:fixedvaried4:variedvaried

* The values in "()" are the adjustment codes of the Custom Mode.

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

<Procedure>

Procedure is same as that of P.3-23 "3.3.1 Density adjustment".

3.3.6 Setting range correction (Adjustment of background peak)

The levels of the background peak for the range correction can be set at the following codes.

< Adjustment	Mode ((05)) >
--------------	--------	------	-----

Original mode			Itom to be adjusted	Bomarka	
Text/Photo	Photo	Text	item to be adjusted	Rellidiks	
532 (919)	533 (921)	534 (920)	Background peak for range correction	When the value increases, the back- ground (low density area) of the image is not output. Acceptable values: 0 to 255 (Default: Text/Photo: 40, Photo: 16, Text: 64)	

* The values in "()" are the adjustment codes of the Custom Mode.

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

<Procedure>

Procedure is same as that of P.3-23 "3.3.1 Density adjustment".

3.3.7 Adjustment of smudged/faint text

The smudged/faint text can be set at the following codes.

< Adjustment Mode (05) >

Original mode	Itom to be adjusted	Pomarks		
Text/Photo	item to be adjusted	Remarks		
653 (928)	Adjustment of smudged/faint spotted text	When the value increases, the faint text is improved. When the value decreases, the smudged text is improved. Acceptable values: 0 to 255 (Default: 192)		
		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.		

* The values in "()" are the adjustment codes of the Custom Mode.

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

<Procedure>

Procedure is same as that of Density adjustment".

3.4 Image Quality Adjustment (Printing Function)

3.4.1 Adjustment of smudged/faint text

The smudged/faint text can be set at the following codes.

Language PS PCL		Remarks	

< Adjustment Mode (05) >

<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 keyed-in value, press the [CLEAR] button.)
- (4) Press the [ENTER] or [INTERRUPT] button to store the value. The equipment goes back to the ready state.
- (5) Shut down (turn the power OFF), back ON, and then perform the printing job.
- (6) If the desired text density has not been attained, repeat step (1) to (5).

3.4.2 Gamma balance adjustment

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) >

					· ··· j·······························
	Language	and screen			
Smooth (PS)	Detail (PS)	Smooth (PCL)	Detail (PCL)	Item to be adjusted	Remarks
596-0	597-0	598-0	599-0	Low density	The larger the value is, the
596-1	597-1	598-1	599-1	Medium density	adjusted becomes darker.
596-2	597-2	598-2	599-2	High density	Acceptable values: 0 to 255. (Default: 128)

<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 [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 printing job.
- (8) If the image density has not been attained, repeat step (1) to (7).

3.4.3 Image density adjustment

Adjust the image density level when normal printing (Toner save: Disable) and (Toner save: Enable). < Adjustment Mode (05) >

Normal	I Toner Saving mode		Item to be adjusted	Remarks	
PS/PCL	PS	PCL			
663	664	665	Image density adjustment	The image density level in the Printer function can be set. The smaller the value is, the lighter the density of image becomes. Acceptable values: 0 to 255.	

<Procedure>

Procedure is same as that of D P.3-27 "3.4.1 Adjustment of smudged/faint text".

3.5 Image Quality Adjustment (Scanning Function)

3.5.1 Density adjustment

Adjusts the center density and the variation of density adjustment button.

	-			< 4	Adjustment Mode (05) >
Original mode				Item to be	Demosive
Text/Photo	Photo	Text	Gray Scale	adjusted	Remarks
845	847	846	848	Manual density mode center value	The larger the value is, the darker the image becomes. Acceptable values: 0 to 255
850	852	851	853	Manual density mode light step value	The larger the value is, the lighter the light side becomes. Acceptable values: 0 to 255
855	857	856	858	Manual density mode dark step value	The larger the value is, the darker the dark side becomes. Acceptable values: 0 to 255
860	862	861	863	Automatic density mode	The larger the value is, the darker the image becomes. Acceptable values: 0 to 255

<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 keyed-in value, press the [CLEAR] button.)
- (4) Press the [ENTER] or [INTERRUPT] button to store the value. The equipment goes back to the ready state.
- (5) Shut down (turn the power OFF), back ON, and then perform the scanning job.
- (6) If the desired image density has not been attained, repeat step (1) to (5).

3

3.5.2 Sharpness adjustment

Original mode				Item to be	Demorko	
Text/Photo	Photo	Text	Gray Scale	adjusted	Remarks	
865-0	867-0	866-0	868-0	150 to 200 dpi	Key in the following values	
865-1	867-1	866-1	868-1	300 to 400 dpi	One's place	
865-2	867-2	866-2		600 dpi	 Leave the value in one's place at the fixed value. Ten's place 1 to 9: Change intensity The larger the value is, the sharper the image becomes.) Example of value entry in case the mode is "Text/ Photo". 2 1 Fixed value for Text/ Photo mode Key in a value 1 to 9 	

If you want to make scan images look softer or sharper, perform the following adjustment. < Adjustment Mode (05) >

<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 the sub code (0,1 or 2), and press the [START] button.
- (4) Key in an adjustment value.(To correct the keyed-in value, 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) Shut down (turn the power OFF), back ON, and then perform the scanning job.
- (8) If the desired image density has not been attained, repeat step (1) to (7).

3.5.3 Setting range correction

The values of the background peak / text peak in the range correction 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 affect the reproduction of the background density and the values of the text peak affect that of the text density.

-			-		< Adjustment Mode (05) >	
	Origina	al mode		ltem to be	Remarks	
Text/Photo	Photo	Text	Gray Scale	adjusted		
825	827	826	828	Range correction for original manu- ally set on the origi- nal glass	The following are the default val- ues set for each original mode. Text/Photo: 12, Photo: 12, Text: 12, Gray Scale:12	
830	832	831	833	Range correction for original set on the RADF	Lach digit stands for:One's place: Automatic density modeTen's place: Manual density modeThe setting conditions possible are as follows:Background peakText peak1:fixed2:varied3:fixed4:varied	

<Procedure>

Procedure is same as that of D P.3-29 "3.5.1 Density adjustment".

3.5.4 Setting range correction (Adjustment of background peak)

The levels of the background peak for the range correction can be set at the following codes. < Adjustment Mode (05) >

Original mode				Item to be	Bemerke	
Text/Photo	Photo	Text	Gray Scale	adjusted	Reliains	
835	837	836	838	Background peak for range correc- tion	When the value increases, the background (low density area) of the image is not output. Acceptable values: 0 to 255 (Default: text/photo: 40, photo: 16, text: 48, Gray Scale:16)	

<Procedure>

Procedure is same as that of D P.3-29 "3.5.1 Density adjustment".

3

3.5.5 Background adjustment

Background of the gamma data can be adjusted with the following codes.

				0	< Adjustment Mode (05) >
	Origina	al mode		Item to be	Domorko
Text/Photo	Photo	Text	Gray Scale	adjusted	Remarks
869	871	870	872	Background adjustment	1 to 9: The larger the value is, the back- ground becomes lighter.

3.6 Measurement at Replacement of High-Voltage Transformer

The high-voltage transformer does not need to be adjusted, however, when you check each value of the main charger bias and the developer bias, it needs to be measured.

Note:

When carrying out the operation, be careful not to touch the electronic section because it is high voltage.

3.6.1 Measurement

[1] Preparation

Items to check		Main Charger	Developer Bias		
Process Unit		Take off from the equipmentRemove the connector of the au toner sensor, and release the de oper unit from the drum.			
Digital Function switch		D	DC		
Tester	Full-scale (range)	1000 V			
Remarks Use a digital test		Use a digital tester with an input resist	ance of 10 M Ω (RMS value) or higher.		
How to turn ON the power		Attach the door switch jig and start with the adjustment mode [05] while the front cover opened.			

[2] Installing Jig

- (1) Put in the door switch jig and slide it down.
- (2) Rotate the jig counterclockwise by 90 degrees.



Fig. 3-23

[3] Connection

(1) Connection for main charger measurement





(2) Connection for developer bias measurement



Fig. 3-25

[4] Operation

Connect the digital testers as described in "[3] Connection", and follow the procedure on the next page to measure the output from the main charger and developer bias charger.



Note:

If the output value does not reach a specified level, replace the high-voltage transformer.

Remark:

Transfer bias ON timing adjustment(Not essential)

Depending on the environmental condition or the paper type, transfer ability for the paper leading edge may decrease slightly and the poor image transfer may occur.

In this case, the image quality can be improved by adjusting the leading edge void width wider. Also, it can be improved by changing the transfer bias ON timing using the setting code 08-841.

- * When using the setting code 08-841 to improve the image quality, increase the value by one and check the result. If the result is not sufficient, repeat the same procedure. (The transfer ability for the paper leading edge shows a tendency as shown in the table below.)
- * The transfer ability for the paper leading edge and the paper separation ability from the photo-conductive drum are inversely related as shown in the table below. Therefore, if the value is increased too much, this may cause the slight decrease of the paper separation ability from the photo-conductive drum. So, when adjusting the value, be sure to check the paper feeding as well as the image quality.

	Cor	Transfer abil-	Paper separa-	
Value	e-STUDIO520/523/600/603/ 720/723	e-STUDIO850/853	ity for paper leading edge	tion ability from the photo-con- ductive drum
0	Approx. 1.4 mm slower than the standard ON timing	Approx. 1.6 mm slower than the standard ON timing		Separation abil- ity improves
1	Same as the standard ON tim- ing. (Default value)	Same as the standard ON tim- ing. (Default value)		
2	Approx. 1.4 mm faster than the standard ON timing	Approx. 1.6 mm faster than the standard ON timing.		
3	Approx. 2.8 mm faster than the standard ON timing.	Approx. 3.3 mm faster than the standard ON timing.		
4	Approx. 7.1 mm faster than the standard ON timing.	Approx. 8.2 mm faster than the standard ON timing.	Transfer ability improves	

[Setting code 08-841: Transfer timing correction]

3.7 Adjustment of the Scanner Section

3.7.1 Carriages

[A] Installing carriage wires

When replacing the carriage wires, refer illustrations below:

[Front side]





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.

[B] Adjusting carriages-1 and -2 positions <Procedure>

- (1) Move the carriage-2 toward the exit side.
- (2) 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.



Fig. 3-29

(3) Put the carriage-1 on the rail, make the sections C and D of it touch with the inside of the exit side frame and screw up the front/rear sides 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.



Fig. 3-30

[C] Assembling carriage wires (Winding the wire around the wire pulley) <Procedure>

- (1) 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.
- (2) 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
 - 5 turns toward the boss side

Note:

- Pay attention to the following 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. 3-31

(3) After winding the wires around the pulleys, attach the wire holder jigs not to loosen the wires.

Notes:

- When the wire holder jig is attached, make sure that the wire is not shifted or loosened.
- The wire should come out of the slot of the wire holder jig and be passed through between the arm and the jig.



Fig. 3-32

3.7.2 Lens unit

- [A] 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 10 screws indicated with the arrows.





• Handle the unit with care. Do not hold the lens and adjusted part (hold the unit as shown below).



Fig. 3-34

[B] Adjustment of the magnification ratio of the lens

Notes:

- Perform this adjustment only when the lens unit is taken off or replaced.
- Make sure that the primary scanning reproduction ratio (printer section) is correct before this adjustment.
- (1) Place a ruler on the original glass (in the primary scanning direction) and make a copy on A4/LT-sized paper at 100% reproduction ratio.
- (2) Compare the copied ruler with the actual ruler.





(3) If each mark on the rulers differs, perform the adjustment with the following procedures.

<Procedure>

- (1) Take off the original glass and lens cover.
- (2) Loosen 4 screws fixing the lens unit.



Fig. 3-36

(3) Slide the lens unit to the right or left direction using the marks on the lens base as a guide. (Slide right when the copied ruler is magnified and slide left when the copied ruler is demagnified.) The following table shows how the reproduction ratio difference between the copied ruler and actual ruler corresponds to the movement amount of the lens unit.

Reproduction-ratio error	Movement amount of unit
0.1%	0.5 mm
0.2%	0.9 mm
0.3%	1.4 mm
0.4%	1.8 mm
0.5%	2.3 mm
0.6%	2.7 mm
0.7%	3.2 mm
0.8%	3.6 mm
0.9%	4.1 mm
1.0%	4.5 mm





Note:

Fine adjustment can be made in the "Reproduction ratio of primary scanning direction (printer)". on the copied ruler and actual ruler match.

- (4) Tighten 4 screws fixing the lens unit.
- (5) Attach the lens cover and original glass. Make a copy to confirm the reproduction ratio.
- (6) Repeat the procedure 1 to 5 until the marks on the copied ruler and actual ruler match.

3

3.7.3 Scan motor

When the scan motor has been installed again, adjust the belt tension in the following procedure.

<Procedure>

- (1) Install the belt tension jig (spring).
- (2) Loosen 2 screws. Then tighten these screws when the belt is tensed enough.



Fig. 3-38

3.8 Adjustment of the Paper Feeding System

3.8.1 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 when feeding paper from the bypass tray or the drawer. Move the front cover to the rear side when feeding paper from the Tandem LCF. (Arrow (A) direction in the lower figure).

The center of the printed image shifts to the rear side. -> Move the guide to the rear side when feeding paper from the bypass tray or the drawer. Move the front cover to the front side when feeding paper from the Tandem LCF. (Arrow (B) direction in the lower figure).



Fig. 3-39

Bypass feeding

- 1) Loosen the screen.
- 2) Move the entire guide to the front or rear side.
- 3) Tighten the screw.



- Drawer feeding 1) Loosen 2 screws.
- 2) Move the entire guide to the front or rear side.
- 3) Tighten the screws.



Fig. 3-41







3

Tandem LCF

- (1) Remove the screw 1 on the left side of the Tandem LCF and the screw 2 on the right side, and then temporarily fix it to the oblong hole. rescrew it to the oblong hole.
- (2) Loosen the screw 2 on the left side of the Tandem LCF and the screw 1 on the right side.
- (3) Remove screw 3, and then temporarily fix to the oblong hole.
- (4) Move the front cover of the Tandem LCF to the front or rear side, and then tighten screw 1 and 2.
- (5) Align the surface of the covers of the 2nd drawer and Tandem LCF. If they do not align, adjust the angle of the Tandem LCF front cover.
- (6) Tighten screw 6.



Fig. 3-43

Note:

When the sideways deviation has been adjusted for the Tandem LCF feeding, adjust its protruding point.

If the Tandem LCF drawer cannot be closed securely, decrease the protruding amount. (When the value decreases in increments of "1", the protruding amount decreases by 1 mm.)

(1) Move 2 screws of the bracket on the rear side in the same increments as the digit of the scale at right on the front side.

(In case of No. 5, 6 and 7, place the bracket upside down to install it.)



Fig. 3-44

3.8.2 Separation roller pressure force adjustment

In some cases the life of the separation roller may be shortened or paper jams and multiple feeding (EB50) may occur regardless of the operation frequency of the equipment. This comes from the weight or edge status of paper used and the amount of paper dust.

Generally paper jams and multiple feeding often occur as the life end of the roller approaches. However, if they often occur even though its life has not yet reached its replacement timing, or if the life end comes much earlier than the scheduled replacement timing, the jams and multiple feeding can be suppressed by adjusting the pressure force of the separation roller.

In this method, however, when the roller life becomes longer, jams and multiple feeding may occur frequently, and when the jams and multiple feeding are suppressed, the roller life may become shorter. Therefore, perform this adjustment while checking the status carefully, and if necessary, give a sufficient explanation to users.

<Procedure>

- (1) Take off the paper feed unit. (Refer to the Service Manual Chapter 9.)
- (2) Remove 1 screw, and then screw it temporarily to an oblong hole located next to it.

Note:

Make a mark for the installation position of the bracket in advance.



(3) Move the bracket.

Move to the direction A: The roller life will become longer (but multiple feeding may occur frequently).

Move to the direction B: Multiple feeding will be suppressed (but the roller life may become shorter).

Note:

The recommended moving distance of the bracket is within 2 scale marks.



Fig. 3-45

Fig. 3-46

(4) Tighten the screw that temporarily screwed.

Note:

In this step check the Mylar attached before the separation roller because the roller life may become shorter if this Mylar is scraped and worn.

Reference value of distance C (from the edge of the plate to that of the Mylar): 7.9±0.2 mm

* If the distance C is 7.0 mm or shorter, the Mylar must be replaced.



Fig. 3-47

3.9 Adjustment of Developer Unit

None of the doctor-sleeve gap, drum sleeve gap and developer sleeve pole position needs to be adjusted.

3

3.10 Adjustment of Fuser Unit

3.10.1 Adjustment of fuser roller pressure

Normally, the heat roller pressure need not be adjusted. However, it must be carried out when wrinkles frequently appear on copies made on plain paper.

<Procedure>

- (1) Open the RADF and make a copy with A3/LD size (solid copy).
- (2) Turn the power OFF after copying is finished.
- (3) Open the front cover quickly, and pull out the transfer/transport unit.
- (4) Insert the copy made in (1) into the fuser entrance guide with the image side facing down while turning the jam release lever CCW until the center of the copy paper isnipped by the heat roller.
- (5) Leave the copy paper for about 20 seconds, and then take it out by quickly turning the jam release lever CCW again.
- (6) Measure the width of the area nipped by the heat and pressure rollers at the front and the rear.





- (7) Remove 2 screws and take off the cleaning web unit.
- (8) If |F-R| >= 0.5mm, lift up the upper separation finger unit and loosen the fixing screw of the pressure spring on the side with the wider nip width. One half turn corresponds to narrowing the nipped section by about 0.5mm.

(9) If |F-R|<0.5mm, the adjustment is completed. Close the RADF and make five blank copies with A3/LD size to clean the heat and pressure rollers.



Fig. 3-49

3.10.2 Setting of fuser/pressure roller temperature

The fuser has been set (heat roller surface temperature: 200°C) taking the fusing performance, wrinkling, curling and toner transfer deficiency at the leading/trailing edges of the duplex print into consideration when our company recommended paper is used. This is to allow the characteristics of the paper to be demonstrated in a well-balanced manner. However, various types of paper are used in the field, and factors such as the paper thickness and smoothness greatly effect the fusing performance, in particular. If the fusing performance deteriorates while using a specific type of paper, deal with that by changing the fuser roller temperature at the setting mode "08".

Change the fuser roller temperature (in ready status, during printing).

To improve fusing efficiency, a change is made in the range of the setting value between "12" and "14" (200°C to 210°C).

<Setting mode(08)>

Code	Contents			
411	Fuser roller temperature in ready status			
410	Fuser roller temperature during printing with plain paper			
413	Fuser roller temperature during printing with thick paper 1			
437	Fuser roller temperature during printing with thick paper 2			
412	Fuser roller temperature during printing with thick paper 3			
1804	Fuser roller temperature during printing with OHP			

Notes:

- 1. When a large value is set (to increase the temperature), the level of wrinkling, curling and toner transfer deficiency at the leading/trailing edges of the duplex print tends to be wors-ened.
- 2. Do not set the fuser roller temperature in the ready status (08-411) higher than the one during printing (08-410, 413, 437, 412).
- 3. When printing with OHP, remember that the OHP films tend to stick together if the setting value for the fuser roller temperature (08-1804) is higher than the default value.

Change the starting temperature of the pressure roller low speed pre-running during ready in the setting mode (08-845, 847). To improve the fusing quality, change the setting value to "12" (110°C).

Note:

The frequency of pre-running is increased when the starting temperature of the pressure roller pre-runningduring ready is increased.

3.10.3 Adjustment of fuser entrance guide

Check the gap between the fuser entrance guide and the press roller when the following troubles occur:

- Stain on the paper back side
- Jam at the fuser entrance
- Paper wrinkling

Adjust the fuser entrance guide following the procedure below until the troubles are cleared.

The gap is 0.8 mm when the screw is at position 1. (Default value)





<Adjustment procedure>

- (1) Move the screw to the screw hole 2 and check the gap. (Fixed value of the gap is 1.3 mm.)
- (2) Move the screw to the screw hole 3 and check the gap. (Fixed value of the gap is 1.8 mm.)
- (3) Move the screw to the oblong hole 4 and adjust the gap. (Adjust it with o.4<gap<1.7.)
 * The scale is marked off in ±1 mm (Also adjust the leveling of the fuser entrance guide after the screw has been moved to the oblong hole 4 and the adjustment has been made)



Fig. 3-51

3.10.4 High-fusing mode

When the fusing level needs to be raised, it can be set at the setting mode "08".

(1) Level up at 1st printing

Changing the setting of the pre-running time for first printing The level is raised by delaying the time for the 1st printing and extending the time to warm the fuser roller. At this code, the time to delay is set.

<setting mode(08)=""></setting>

Code	Contents			
440	First printing time with plain paper			
441	First printing time with thick paper 1			
439	First printing time with thick paper 2			
417	First printing time with thick paper 3			
526	First printing time with OHP			

(2) Level up at continuous printing.

The level for the continuous printing is set at the "high-fusing mode (08-433)". The level is raised by delaying the printing cycle and controlling not to lower the fuser roller temperature.

The setting of 08-433 is reflected when "Thick paper 3" is selected.

Note:

08-417 of (1) and 08-433 of (2) can be combined.

3.10.5 Changing Printing Speed

When the fuser roller temperature drops drastically during the continuous printing, the printing may be stopped to increase the fuser roller temperature because the shortage in supply to the fuser unit, depending of the use condition (use environment, power voltage condition, heat reserve condition of the fuser unit).

To prevent the printing from stopping or to decrease its frequency, enable the setting of changing the printing speed when the temperature drops, at the setting mode "08".

Code	Contents	Default	Values
858	Changing Printing Speed (Plain paper)	0	0: Disabled, 1: Enabled only for 5min. 2: Always enabled
859	Changing Printing Speed (Thick paper 1)	0	0:Disabled, 1: Enabled only for 5min. 2: Always enabled
860	Changing Printing Speed (Thick paper 2)	0	0:Disabled, 1: Enabled only for 5min. 2: Always enabled
861	Changing Printing Speed (Thick paper 3)	0	0:Disabled, 1: Enabled only for 5min. 2: Always enabled

<Setting mode(08)>

Notes:

- 1. This adjustment is valid for e-STUDIO600/720/850.
- 2. When the setting value "1" is selected, the printing speed slows down if the fuser roller temperature drops for only 5 minutes after the warming-up time.
- 3. When the setting value "2" is selected, the printing speed slows down if the fuser roller temperature drops.

3.11 Adjustment of the RADF

3.11.1 Adjustment of RADF position

It is mainly performed at the installation. It is also required when the RADF is dislocated for some reason such as moving the equipment.

Remove the platen sheet during adjustment.

<Procedure>

(1) Open the RADF and remove the positioning pin hole covers.



Fig. 3-52

(2) Attach 2 positioning pins to the equipment.



Fig. 3-53
(3) Close the RADF to check that the positioning pins fit smoothly into the holes on the RADF. If they do not, adjust them according to the following procedure.





(4) Loosen the stepped screw 1 turn and 2 screws on the adjustment plate a half turn (status of temporary fixing).



Fig. 3-55

(5) Remove the stepped screw at the rear of right-hand hinge.





3

(6) Remove the positioning pin at the front side. Close the RADF to fit the positioning pin into the hole at the rear side of the RADF. While peering inside from the front side, fit the positions of the pin and hole by moving the RADF right and left.



Fig. 3-57

(7) Tighten the positioning pin at the front side. Close the RADF to fit the positioning pin into the hole at the front side of the RADF. (For the front side, adjust the RADF position all around.)



Fig. 3-58

(8) While peering inside from the left side, close the RADF. Check the positions of the holes of the RADF and pins and then fit their positions by moving the RADF back and forth. (For the front side, also adjust the RADF position right and left.) Make sure not to dislocate the positions of the pin and hole at the rear side.



Fig. 3-59

(9) Match the rear hole of the right-hand hinge and the hole of the equipment side to tighten the stepped screw. If they do not fit, adjust the position of the hole by turning the screw of the adjustment plate.





(10) Tighten the stepped screw and 2 screws on the adjustment plate.

Open and close the RADF to check again that the positioning pins fit smoothly into the holes on the RADF. Remove the positioning pins after checking it.

(Replace the positioning pins at the rear of the right-hand hinge of the RADF.)

2 screws: Half turn Stepped screw: 1 turn

Fig. 3-61

(11) Place the platen sheet on the original glass with the cutout on your right. Align the platen sheet against the left and rear side of the original glass. Close the RADF slowly. Open the RADF to check that the platen sheet is correctly attached.





3

3.11.2 Adjustment of RADF height

It is mainly performed at the installation. It is also required when the RADF is dislocated for some reason such as moving the equipment.

Perform the following adjustment by using the screw of the left and right hinge.

Note:

Perform this adjustment after "3.11.1 Adjustment of RADF position". Turn the exposure lamp ON during the gap check. (Test Mode: 03-267)

<Procedure>

(1) Adjustment standard

Adjust the height so that the platen guide holder touches the ADF original glass. (Adjust after removing the top left cover.)





Adjust the height of the hinge by turning the height adjusting screw on the hinge.
 CW: The height of the hinge becomes high.
 CCW: The height of the hinge becomes low.



Fig. 3-64

3.11.3 Skew adjustment

When an image skew occurs, adjust it according to the following steps, Step 1 \rightarrow Step 2 \rightarrow Step 3.

Note:

Perform this adjustment after confirming that the equipment has been adjusted properly. Prior to this adjustment, of RADF position and height are needed to be adjusted.

(1) Step 1

Case A:

Shift the screw to an oblong hole, and then move the plate towards the side A to adjust the image skew.

Case B:

Shift the screw to an oblong hole, and then move the plate towards the side B to adjust the image skew.



Fig. 3-65



Fig. 3-66



(2) Step 2

Case C:

Loosen 2 fixing screws and then turn the adjustment screw counterclockwise. Case D:

Loosen 2 fixing screws and then turn the adjustment screw clockwise.

Note:

When adjusting, refer to the hinge position (scribed line) and be sure not to move it from the hinge position ± 0.5 mm or further. Otherwise, image failures such as a jitter may occur.



Fig. 3-68



Fig. 3-69

(3) Step 3

Case E:

Shift the screw to an oblong hole, and then move the plate towards the side B to adjust the image skew.

Case F:

Shift the screw to an oblong hole, and then move the plate towards the side A to adjust the image skew.









3.11.4 Automatic adjustment of sensors and initialization of EEPROM

When the PC board is replaced with a new one, make sure to perform the EEPROM initialization (352), the automatic sensor adjustment (356) and the tray width adjustment (367, 368) in the Adjustment Mode (05).

Perform them after removing all originals on the sensor and closing the RADF.

Also, when any of the original length detection sensor (S63), read sensor (S69), small original reverse sensor (S66), large original exit sensor (S68) is replaced with a new one, make sure to perform the automatic sensor adjustment in the Adjustment Mode (05).

When the original tray width sensor (S54) is replaced with a new one, make sure to perform the tray width adjustment in the Adjustment Mode (05).

Refer to DP2-41 "2.2.4 Adjustment mode (05)" for the details.

Error such as paper jamming or miss detection for paper size may occur if the automatic sensor adjustment and the tray width adjustment are not performed after the above mentioned parts were replaced.

3.11.5 Adjustment of reverse solenoid

RADF Parts Layout



Refer to "16.13 Disassembly and Replacement [F] Solenoid" for the procedure to disassemble the solenoid.

[A] Large original exit roller release solenoid

<Procedure>

- (1) Put the end faces of the bracket and solenoid together.
- (2) When the large original exit driven roller contacts the large original exit roller, tighten the screw B, move the screw A to position C, temporarily fix it, and shift the solenoid downward..
- (3) When the large original exit driven roller and large original exit roller are disengaged, tighten and fix the screws.



Fig. 3-72

[B] Small original exit solenoid

<Procedure>

- (1) Put the end faces of the bracket and solenoid together.
- (2) When the small original exit flapper is not pulled out completely, loosen the screws and then shift the solenoid upward.
- (3) When the small original exit flapper is pulled out completely, tighten and fix the screws



Fig. 3-73

[C] Large original exit solenoid

<Adjustment procedure>

- (1) Put the end faces of the bracket and solenoid together.
- (2) When the large original exit flapper is not pulled out completely, loosen the screw and then shift the solenoid upward.
- (3) When the large original exit flapper is pulled out completely, tighten and fix the screw.



Fig. 3-74

3.11.6 Adjustment of RADF opening/closing switch

Adjust the bracket position so that the switch is turned ON when the height A becomes 40-45 mm (within the empty weight falling limit).



Fig. 3-75

3.11.7 Adjustment of original tray width

<Procedure>

- (1) While pressing [0] and [5] simultaneously, turn the power ON.
- (2) Narrow the original guide to the limit.
- (3) Input the code "367".
- (4) Press the [START] button.



Fig. 3-76

- (5) Extend the original guide to the limit.
- (6) Input the code "368".
- (7) Press the [START] button.
- (8) Turn the power OFF by shut down.



Fig. 3-77

3

3.12 Adjustment of Finisher

3.12.1 Adjusting the Height Sensor (PS1)

Perform the following adjustments whenever you have replaced the finisher controller PCB or the height sensor (PS1).

(1) Set SW3 on the finisher controller PCB as indicated.



Fig. 3-78

- (2) Place a paper on the tray.
- (3) Press SW1 on the finisher controller PCB. This causes the finisher to execute automatic adjustment, in which the tray unit will shift.
 - At the end of adjustment, trays will return to their home positions.
 - During adjustment, LED1 flashes. At the end of adjustment, LED1 turns and remains.
 - If automatic adjustment fails, the mechanism stops while the tray in question is being adjusted (at the same time, LED1 turns OFF).
- (4) Shift all bits on SW3 to OFF, and turn OFF the host machine once. This causes the finisher to execute automatic adjustment, in which the tray unit will shift.

3.12.2 Adjusting the Alignment Position

If you have replaced the finisher controller PCB or if an alignment fault occurs, adjust as follows. Performing the steps will affect all paper sizes.

- (1) Remove the rear cover of the finisher unit.
- (2) Set SW3 of the finisher controller PCB as indicated.





- (3) If you are using A4 paper, press SW1 on the finisher controller PCB. If you are using LT paper, press SW2 on the finisher controller PCB.
 - Pressing SW1/2 will open the swing guide and cause the alignment plate to move to A4/LT positions.
- (4) WPlace 10 sheets of A4/LT paper between the alignment plate and the guide plate, butting them against the stoppers.
- (5) Press SW1 or SW2 on the finisher controller PCB, and butt the alignment plate, against the sheets.
 - Pressing SW1 will shift the alignment plate to the front in 0.35 mm increments.
 - Pressing SW2 will shift the alignment plate to the rear in 0.35 mm increments.
- (6) Press SW1 and SW2 simultaneously to store the adjustment value (this will lower the swinging guide).
- (7) Shift all bits of SW3 OFF, and install the rear cover of the finisher unit.

3.12.3 Adjusting the Staple Position (stapler movement range)

Adjust as follows if you have replaced the finisher controller PCB. Performing the steps will affect all paper sizes and all stapling positions.

- (1) Remove the rear cover from the finisher unit.
- (2) Set SW3 on the finisher controller PCB as indicated.





- (3) If you are using A4 paper, press SW1 on the finisher controller PCB. If you are using LT paper, press SW2 on the finisher controller PCB.
 - Pressing SW1/2 will open the swing guide and cause the feed belt to rotate.
- (4) Within 5 seconds after pressing the switch, place one sheet of A4/LT paper between the alignment plate and the guide plate, butting it against the stoppers.
 - When the finisher detects the paper, it will lower the swing guide and execute stapling (rear, 1-position). Take out the stapled paper manually as delivery will not be executed.





(5) If the stapling position is correct, set all bits on SW3 to OFF to end the adjustments. If you need to change the stapling position,on the other hand, go to the next step.

- (6) To suit the position of the staple on the paper, press SW1 or SW2 on the finisher controller PCB as many times as necessary.
 - Pressing SW1 will shift the stapling position to the front in 0.3 mm increments.
 - Pressing SW2 will shift the stapling position to the rear in 0.3 mm increments.





- (7) Press SW1 and SW2 simultaneously.
 - This will open the swing guide, and cause the feed belt to rotate. Placement of one sheet of A4/LT paper will cause the finisher to start stapling.
- (8) Check the stapling position. If good, set all bits of SW3 to OFF. If re-adjustments are necessary, go back to Step 6.

Caution:

The settings held by the finisher controller PCB are changed as soon as SW1 or SW2 is pressed. As such, to recover the previous settings after the press, you must press the other of the two switches as many times as you pressed previously.

3.12.4 Adjusting the Buffer Roller Winding Amount

Perform this adjustment in the following instances:

- a. When the finisher controller PCB or the EEPROM (Q2) on the finisher controller PCB has been replaced
- b. When something causes the winding amount to fluctuate

The "winding amount" is the amount of difference between the First and Second sheets wound onto the buffer roller device in the feed direction.





(1) Set SW3 on the finisher controller PCB as indicated.





- (2) Turn the host machine OFF then back ON again.
- (3) Set the mode setting on the host machine to "1" and the number of originals (A4 or LT) to "3" in the staple mode.
- (4) Press the copy start key.
 - Copying starts, three sheets for the first copy are output as a stack on the staple tray, and copying stops with the copies held at the delivery roller.
- (5) Remove the stack of sheets from the finisher delivery taking care to prevent the offset of the output sheets from changing.

- (6) Measure the winding amount (shift) of the stack of sheets, and compare this amount with the standard amounts.
 - This amount should be measured at the center of the paper leading edge.





- (7) If the amount is within the standard, turn the host machine OFF, and then set all bits of SW3 to OFF. If the amount is outside the standard, perform the following.
- (8) Turn the host machine OFF, and set SW3 on the finisher contoroller PCB as indicated. If EEPROM (Q2) on the finisher controller PCB has been replaced, proceed to step 10.



Fig. 3-86

(9) Turn the host machine ON, and then press SW2 on the finisher controller PCB.The current setting values are displayed at LED1.

Adjustment value 0	Lights for 1 second (once)
Adjustment value +N	Blinks (lights for 0.2 second) for N times.
Adjustment value -N	Lights for 1 second (once), and blinks (lights for 0.2 second) for N times.

The adjustment width is 0.72mm for each N=1.

(10) Turn the host machine OFF, and then set SW3 on the finisher controller PCB as indicated.



Fig. 3-87

3

- (11) Press SW1 or SW2 on the finisher controller PCB as necessary.
 - Each press of SW1 increments the winding amount in 0.72mm increments.
 - Each press of SW2 decrements the winding amount in 0.72mm increments.



Fig. 3-88

- (12) Repeat steps 1) though 6) twice. Check that the winding amount is within the standard in both times.
- (13) Turn the host machine OFF, and set all bits of SW3 to OFF. This completes the adjustment.

3.13 Adjustment of Saddle stitch finisher

3.13.1 Adjusting the Folding Position

The folding position is adjusted by changing the settings of bits 6 through 8 of DIPSW1 on the saddle stitcher controller PCB to match the stitching position (i.e.,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 PCB, be sure to set the new DIPSW1 so that the settings will be the same as those on the old DIPSW1. If, for any reason, you must change the following position, perform the following steps:

(1) Remove the PCB cover, and set bits 1 through 4 of DIPSW1 on the saddle stitcher controller PCB as indicated.





- Fig. 3-89
- (2) Remove the rear cover of the saddle stitcher unit, and tape the actuator of the inlet cover sensor (PI9S) and the inlet cover switch (MS1S) of the saddle stitcher unit in place.
- (3) Before inserting the paper, mark the top of the paper (you will be using two sheets of A3 or LD paper).



Fig. 3-90

- (4) Press SW2 on the saddle stitcher controller PCB so that the feed motor (M1S) starts to rotate. (Press SW2 three seconds or more if LD paper is used).
- (5) Open the inlet cover, and insert two sheets of paper (push them in by hand until the leading edge of the sheets butts against the paper positioning plate).



- (6) Close the inlet door while holding it down with your hand.
- (7) Press SW2 on the saddle stitcher controller PCB.
 - The saddle stitcher unit will "stitch" the sheets, and fold and deliver the stack automatically.

- (8) 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."









- (9) Change the settings of bits 6 through 8 on DIPSW1 referring to the table below.
 - If the width adjustment is "0",

The stitching position and the folding position match, requiring no change.

- If for "positive width adjustment," Set DIPSW1 so that the difference resulting from subtraction
 of the interval from the appropriate setting in the table is provided.
 For instance, if the DIPSW1 is currently set to +2 and the interval is +1 mm, set DIPSW1 to
 reflect -2.
- If for "negative width adjustment" Set DIPSW1 so that the sum resulting from addition of the interval from the appropriate setting is provided.
 For instance, if the DIPSW1 is currently set to -1 and the interval is +0.5 mm, set DIPSW1 to reflect +1.

DIPSW1 bit settings			Settings
bit 6	bit 7	bit 8	(in units of 0.5 mm)
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 touch the following:

bit 6	bit 7	bit 8
ON	OFF	OFF

(10) Set bits 1 through 4 on DIPSW1 to OFF.

3.13.2 Stitching Position (adjusting center stitching)

Use the host machine adjustment mode to perform the following:

3.14 Adjustment of Hole punch unit

3.14.1 Sensor output adjustment

Perform this adjustment when the punch driver PCB, transmission sensor (photosensor PCB/LED PCB) or reflection sensor (scrap full detection PCB unit) has been replaced.

- (1) Remove the rear cover of the finisher unit.
- (2) Set bits 1 through 6 of DIPSW3 on the finisher controller PCB as indicated.



Fig. 3-92

- (3) Press SW1 on finisher controller PCB. Pressing this switch automatically adjusts sensor output.
- (4) Set all bits on DIPSW3 to OFF

3.14.2 Registering the number of punch holes

This operation registers which puncher unit is attached to the IC on the punch driver PCB so that the puncher unit can be identified by the finisher. For this reason, this operation must be performed when the punch driver PCB has been replaced.

- (1) Remove the rear cover of the finisher unit.
- (2) Set bits 1 through 6 of DIPSW3 on the finisher controller PCB as indicated.



Fig. 3-93

- (3) Set bits 7 and 8 on DIPSW3 on the finisher controller PCB to match the number of punch holes of the attached puncher unit according to the table.
- (4) Press SW1 on the finisher controller PCB. Press SW2 when setting a 2-/3-hole model (MJ-6003N). Pressing this switch registers the number of punch holes to the punch driver PCB.

Number of Punch Holes	DIPSW3 b	Puch switch	
Number of Functi noies	bit 7	bit 8	Fush switch
2-hole OFF OFF SW1 (MJ-6003E)	OFF	OFF	SW1
2-/3-hole OFF OFF SW2 (MJ-6003N)	OFF	OFF	SW2
4-hole ON OFF SW1 (MJ-6003F)	ON	OFF	SW1
4-hole ON ON SW1 (MJ-6003S)	ON	ON	SW1

(5) Set all bits on DIPSW3 to OFF.

3.14.3 Checking the sensitivity level of the transmission sensor

How dirty the transmission sensor (photosensor PCB/LED PCB) can be checked by the number of times that LED1 on the finisher controller PCB lights. For this reason, how dirty the transmission sensor is serves as a guide for when to perform cleaning during periodic maintenance.

- (1) Remove the rear cover of the finisher unit.
- (2) Set bits 1 through 6 of DIPSW3 on the finisher controller PCB as indicated.



Fig. 3-94

(3) Press SW1 on the finisher controller PCB. Pressing this switch lights LED1 on the finisher controller PCB as indicated in the table so that you can check the sensitivity level of the transmission sensor.

Sensitivity Level	Number of LED Lightings
Sensor not dirty	Lit 1X
Sensor slightly dirty	Lit 2X
Sensor dirty	Lit 3X

(4) Set all bits on DIPSW3 to OFF.

3.15 Adjustment of Inserter

Each adjustment condition and such at the inserter can be checked through the LEDs on the inserter control panel.



3.15.1 Tray guide width adjustment

When replacing boards and volumes and disassembling or installing the tray unit, make sure to follow these adjustments.

- (1) Turn ON the power with pressing the control panel mode key and start key. (The start LED blinks in green.)
- (2) Press the mode key and set up only the mode LED3 to light ON, and press the start key. (The start LED lights ON in green.)
 - * With pressing the mode key for more than 1 sec., all the mode LEDs light OFF and become able to be reset.
- (3) Press the start key. (The mode LED2, 3 blink.)
- (4) Move the tray guide to the position where its width becomes the narrowest, and press the start key.
- (5) The mode LED display switches. (The mode LED1, 4 blink.)
- (6) Move the tray guide to the position where its width becomes the broadest.

- (7) The mode LED1~4 light OFF and the writing operation of the tray width adjustment data into the EEPROM is finished.
 - * When the writing into the EEPROM has been finished, make sure to check the result with the following table.

Writing result	Mode LED display				
Writing result	LED1	LED2	LED3	LED4	
Success	0	-	0	-	
Failure (minimum position)	0	0	-	-	
Failure (maximum position)	-	-	O	O	
Failure (both maximum) and minimum positions)	O	O	O	0	

○ : Blinking

○ : Light ON

- : Light OFF

3.15.2 Input check 1

This is a mode at which the checking of each motor, solenoid and clutch operation is carried out.

- (1) Turn ON the power with pressing the control panel mode key and start key. (The start LED blinks in green.)
- (2) Press the mode key and set up the LED1 to blink and LED2~4 to light OFF, and press the start key. (The start LED lights ON in green.)
 - * With pressing the mode key for more than 1 sec., all the mode LEDs light OFF and become able to be reset.
- (3) Press the mode key and check the operations referring to the following table. The operational mode is switched at every time the mode key is pressed.
 - * Num (at the right table): the number of times which the key is pressed
 - * At the operational mode 7~36, the motor rotation speed is switched whenever the start key is pressed. The motor rotation speed can be checked by referring to the mode LED blinking speed.

Mode LED blinking at 1000msec. cycle: Low speed Mode LED blinking at 700msec. cycle: Medium speed Mode LED blinking at 500msec. cycle: High speed 1 Mode LED blinking at 250msec. cycle: High speed 2 Mode LED blinking at 100msec. cycle: High speed 3

*Num.	Operation	LED1	LED2	LED3	LED4
1	Pickup trigger solenoid ON	0	-	-	-
2	Pickup trigger solenoid OFF	-	-	-	-
3	Pickup clutch ON	-	0	-	-
4	Pickup clutch OFF	-	-	-	-
5	Reverse solenoid ON	-	-	0	-
6	Reverse solenoid OFF	-	-	-	-
7	Feed motor rotated forward (low speed)	0	-	-	-
8	Feed motor stopped	-	-	-	-
9	Feed motor rotated forward (medium speed)	0	-	-	-
10	Feed motor stopped	-	-	-	-
11	Feed motor rotated forward (high speed 1)	0	-	-	-
12	Feed motor stopped	-	-	-	-
13	Feed motor rotated forward (high speed 2)	0	-	-	-
14	Feed motor stopped	-	-	-	-
15	Feed motor rotated forward (high speed 3)	0	-	-	-
16	Feed motor stopped	-	-	-	-
17	Feed motor rotated in reverse (low speed)	-	0	-	-
18	Feed motor stopped	-	-	-	-
19	Feed motor rotated in reverse (medium speed)	-	0	-	-
20	Feed motor stopped	-	-	-	-
21	Feed motor rotated in reverse (high speed 1)	-	0	-	-
22	Feed motor stopped	-	-	-	-
23	Feed motor rotated in reverse (high speed 2)	-	0	-	-
24	Feed motor stopped	-	-	-	-
25	Feed motor rotated in reverse (high speed 3)	-	0	-	-
26	Feed motor stopped	-	-	-	-
27	Transport motor rotated forward (low speed)	-	-	0	-
28	Transport motor stopped	-	-	-	-
29	Transport motor rotated forward (medium speed)	-	-	O	-
30	Transport motor stopped	-	-	-	-
31	Transport motor rotated forward (high speed 1)	-	-	O	-
32	Transport motor stopped	-	-	-	-
33	Transport motor rotated forward (high speed 2)	-	-	0	-
34	Transport motor stopped	-	-	-	-
35	Transport motor rotated forward (high speed 3)	-	-	O	-
36	Transport motor stopped	-	-	-	-
37	Fan motor ON	-	-	-	0

*Num.	Operation	LED1	LED2	LED3	LED4
38	Fan motor OFF	-	-	-	-

 \bigcirc : Blinking

◯: Light ON

- : Light OFF

3.15.3 Check of sensor operations 1

This is a mode 1 to check each sensor operation separately.

- (1) Turn ON the power with pressing the control panel mode key and start key. (The start LED blinks in green.)
- (2) Press the mode key and set up the mode LED2 to blink and mode LED1, 3, 4 to light OFF, and press the start key. (The start LED lights ON in green.)
 - * With pressing the mode key for more than 1 sec., all the mode LEDs light OFF and become able to be reset.
- (3) Check the ON/OFF status of each sensor through the mode LED display.
 * The display is switched whenever the start key is pressed.

LED display

When the start switch is OFF:

Mode LED	Display	Sensor status
LED1	Light OFF	Separation sensor OFF
	Light ON	Separation sensor ON
LED2	Light OFF	Reverse path sensor OFF
	Light ON	Reverse path sensor ON
LED3	Light OFF	Transport sensor OFF
	Light ON	Transport sensor ON
LED4	Light OFF	DC 24V supplied
	Light ON	DC 24V cut off

When the start switch is ON:

Mode LED	Display	Sensor status
LED1	Light OFF	Empty sensor OFF
	Light ON	Empty sensor ON
LED2	Light OFF	Paper length sensor OFF
	Light ON	Paper length sensor ON

3.15.4 Check of sensor operations 2

This is a mode 2 to check each sensor operation separately.

- (1) Turn ON the power with pressing the control panel mode key and start key. (The start LED blinks in green.)
- (2) Press the mode key and set up the mode LED1, 2 to blink and mode LED3, 4 to light OFF, and press the start key. (The start LED lights ON in green.)
 - * With pressing the mode key for more than 1 sec., all the mode LED light OFF and become able to be reset.
- (3) Check the ON/OFF status of each sensor through the mode LED display.
 * The display is switched whenever the start key is pressed.

LED display

When the start switch is OFF:

Mode LED	Display	Sensor status
LED1	Light OFF	Joint sensor OFF
	Light ON	Joint sensor ON
LED2	Light OFF	Tray open/close sensor OFF
	Light ON	Tray open/close sensor ON
LED3	Light OFF	Transport cover 1 open/close sensor OFF
	Light ON	Transport cover 1 open/close sensor ON
LED4	Light OFF	Transport cover 2 open/close sensor OFF
	Light ON	Transport cover 2 open/close sensor ON

When the start switch is ON:

Mode LED	Display	Sensor status
LED1	Light OFF	Dip-switch 1 OFF
	Light ON	Dip-switch 1 ON
LED2	Light OFF	Dip-switch 2 OFF
	Light ON	Dip-switch 2 ON
LED3	Light OFF	Dip-switch 3 OFF
	Light ON	Dip-switch 3 ON
LED4	Light OFF	Dip-switch 4 OFF
	Light ON	Dip-switch 4 ON

3.16 Adjustment of LCF (MP-4004)

3.16.1 Sheet sideways deviation adjustment

When the center of the printed image shifts to the front side or rear side, adjust the tray position taking the following procedure.

<Procedure>

- (1) Pull out the tray unit.
- (2) Loosen 3 screws and move the adjustment board to the right position. Then screw it shut.





• The center of the printed image shifts to the front side: Move the adjustment board to the front side (Arrow (B) in the upper figure).



Fig. 3-96

• The center of the printed image shifts to the rear side: Move the adjustment board to the rear side (Arrow (A) in the upper figure).



Fig. 3-97

Note:

After the tray position adjustment, re-adjust the front cover position. Adjustment: loosen 4 screws and slide the front cover to adjust the gap between the front and upper cover, and the front and right cover to 3 mm respectively.



Fig. 3-98

3.16.2 LCF slant adjustment

Compensate the slant of LCF by the adjusting the stoppers.

<Procedure>

- (1) Pull out the LCF from the equipment.
- (2) Turn 2 screws and adjust the stoppers.
 Turn to the right: Stopper moves downward.
 Turn to the left : Stopper moves upward.

Note:

When moving the equipment, need to move the stopper upward.





3

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 output pages ever printed 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 output 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 output pages, 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 executed 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

			10		
	100% 2				
	Cpy. 137 Cnt. 205 Chg2005/04/01				
	MAIN UNIT	OUTPUT PAGES(k)	PM OUTPUT PAGES(k)	DRIVE COUNTS(k)	PM DRIVE COUNTS(k)
	CLEANER/DRUM	0.1k	600k	0.2k	410k
	MAIN CHARGER	0.1k	600k	0.2k	410k
(1)-	DEVELOPER	0.1k	600k	Ø.2k	410k
	TONER BAG	0.1k	600k	0.2k	410k
	TRANSFER BELT UNIT	0.1k	600k	0.2k	410k
	(RETURN) RESET SUB UNIT Prev				
		5 (8	9



- 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 (⑥ and ⑧), 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
- Displaying of the present number of output pages counts (x 1,000)
 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 output pages counts has exceeded its PM standard number.
- ⑦ Displaying of the standard number of output pages counts (x 1,000) to replace the unit parts
- Bisplaying of the present drive counts (x 1,000)
 "*" is displayed next to the present number when the number of drive counts has exceeded its PM standard number.
- (9) Displaying of the standard number of drive counts (x 1,000) to replace the unit parts
- Displaying of the number of output pages counts (Cpy.), 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:

- When the value of the output pages or the drive counts among the sub units (parts) is different, "_" is displayed at the value section of the main unit and "CHECK SUB UNIT" is displayed at the top.
- "—" is always displayed at the drive counts section for the reversing automatic document feeder (RADF) and feed unit.
- The paper source differs depending on the structure of options, however, "0.0k" is displayed in "OUTPUT PAGES (k)" and its standard number of output pages is displayed in "PM OUT-PUT PAGES (k)" even for the installed paper source.

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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
- Displaying of the present number of output pages counts (x 1,000)
 "*" is displayed next to the present number when the number of output pages counts has exceeded its PM standard number.
- 5 Displaying of the standard number of output pages counts (x 1,000) to replace the sub unit (parts)
- Displaying of the present drive counts (x 1,000)
 "*" 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 (x 1,000) to replace the sub unit (parts)
- B Displaying of the number of output pages counts, drive counts and previous replacement date for a chosen sub unit

3) Clear screen





- (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 output pages counts" and "Present driving counts" are cleared and "Previous replacement date" is updated.

4

[3] LCD screen display list

Note:

The name inside [] is displayed on the LCD screen.

Main screen	Sub-screen
Drum/cleaner unit [CLEANER/DRUM]	Drum [DRUM] Drum cleaning blade [DRUM BLADE] Drum cleaning brush [DRUM BRUSH] Drum separation finger [SEPARATION FINGER(DRUM)]
Main charger [MAIN CHARGER]	Main charger wire [GRID] Charger wire [MAIN CHARGER WIRE] Cleaning pad [CLEANING PAD]
Developer unit [DEVELOPER]	Developer [DEVELOPER]
Toner bag [TONER BAG]	Toner bag [TONER BAG]
Transfer belt unit [TRANSFER BELT UNIT]	Transfer belt [TRANSFER BELT] Cleaning blade [BELT BLADE] Cleaning brush [BELT BRUSH]
Filter [FILTER]	Ozone filter [OZONE FILTER] Toner filter [TONER FILTER]
Fuser unit [FUSER]	Fuser roller [FUSER ROLLER] Pressure roller [PRESS ROLLER] Cleaning web [CLEANING WEB] Web pushing roller [CLEANING WEB ROLLER] Separation finger [SEPARATION FINGER (FUSER)] Web roller one-way clutch [WEB ROLLER ONE-WAY CLUTCH]
1st drawer [1st CST.]	1st drawer pickup roller [PICK UP ROLLER (1st CST.)] 1st drawer feed roller [FEED ROLLER (1st CST.)] 1st drawer separation roller [SEP ROLLER (1st CST.)]
2nd drawer [2nd CST.]	2nd cassette pickup roller [PICK UP ROLLER (2nd CST.)] 2nd cassette feed roller [FEED ROLLER (2nd CST.)] 2nd cassette separation roller [SEP ROLLER (2nd CST.)]
Bypass feed unit [SFB]	Bypass pickup roller [PICK UP ROLLER (SFB)] Bypass feed roller [FEED ROLLER (SFB)] Bypass separation roller [SEP ROLLER (SFB)]
RADF unit [RADF]	RADF pickup belt [PICKUP BELT (RADF)] RADF feed roller [FEED ROLLER (RADF)] RADF separation roller [SEP ROLLER (RADF)]
T-LCF feed unit [T-LCF]	T-LCF pickup roller [PICK UP ROLLER (T-LCF)] T-LCF feed roller [FEED ROLLER (T-LCF)] T-LCF separation roller [SEP ROLLER (T-LCF)]
3rd drawer [3rd CST.]	3rd drawer pickup roller [PICK UP ROLLER (3rd CST.)] 3rd drawer feed roller [FEED ROLLER (3rd CST.)] 3rd drawer separation roller [SEP ROLLER (3rd CST.)]
4th drawer [4th CST.]	4th drawer pickup roller [PICK UP ROLLER (4th CST.)] 4th drawer feed roller [FEED ROLLER (4th CST.)] 4th drawer separation roller [SEP ROLLER (4th CST.)]
O-LCF feed unit [O-LCF]	O-LCF pickup roller [PICK UP ROLLER (O-LCF)] O-LCF feed roller [FEED ROLLER (O-LCF)] O-LCF separation roller [SEP ROLLER (O-LCF)]

4.1.3 Work flow of parts replacement

The timing for the parts replacement usually depends on the number of output pages ever made after they were replaced before. However, its drive counts time is also to be considered when replacing the parts. Even if the number of output 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 output 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 output pages and the drive counts.

Example 1: When the number of output pages has reached the specified level



Example 2:

When the image failure occurred before the number of output pages has reached the specified level



4

4.2 General Descriptions for PM Procedure

Perform the preventive maintenance in the following timing.

- e-STUDIO520/523:every 450,000 sheets
- e-STUDIO600/603:every 500,000 sheets
- e-STUDIO720/723:every 575,000 sheets
- e-STUDIO850/853:every 600,000 sheets
- (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 \rightarrow [2] \rightarrow [START] 9S-103 : [9] + [START] + [POWER] ON \rightarrow [103] \rightarrow [START]

UNIT	OUTPUT PAGES	PM OUTPUT PAGE	DRIVE COUNTS	PM DRIVE COUNTS
DRUM	81813	150000	119758	220000
DRUM BLADE	81813	150000	119758	220000
GRID	81813	150000	119758	220000
MAIN CHARGER WIRE	81813	150000	119758	220000
SEPARATION FINGER (DRUM	1) 81813	150000	119758	220000

Fig. 4-5

- 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.

e-STUDIO520/523/600/603/720/723/850/853 PREVENTIVE MAINTENANCE (PM)

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4.3 **Operational Items in Overhauling**

Overhaul each equipment with the following timing.

- e-STUDIO520/523: When the number of output pages has reached 900,000 or 2.5 years have passed from the start of use (Whichever is earlier)
- e-STUDIO600/603: When the number of output pages has reached 1,000,000 or 2.5 years have passed from the start of use (Whichever is earlier)
- e-STUDIO720/723: When the number of output pages has reached 1,150,000 or 2.5 years have passed from the start of use (Whichever is earlier)
- When the number of output pages has reached 1,200,000 or 2.5 years have e-STUDIO850/853: 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 necessarv.
- (5) Clean inside the equipment thoroughly.

4.4 Preventive Maintenance Checklist

	Cleaning		Lubrication	Replacement	Operation check		
A	Clean with alcohol	L	Launa 40	The number of sheets consumed before replacement confirm the confi		After cleaning or	
В	Clean with soft pad, cloth or vacuum		Coating			replacement, confirm there is	
	cleaner	SI W AV	Silicon oil White grease (Molykote X5-6020) Alvania No.2	(Value x 1,000) R Replace if deformed or damaged		no problem.	

Symbols used in the checklist

[Preventive Maintenance Checklist]

Notes:

• Perform cleaning and lubricating in the following timing. Lubricate the replacement parts according to the replacement cycle.

e-STUDIO520/523: every 450,000 sheets

e-STUDIO600/603: every 500,000 sheets

e-STUDIO720/723: every 575,000 sheets

- e-STUDIO850/853: every 600,000 sheets
- Values under "Replacement" indicate the replacement cycle for the e-STUDIO520/ e-STUDIO600/e-STUDIO720/e-STUDIO850 or e-STUDIO523/e-STUDIO603/e-STUDIO723/ e-STUDIO853.
- The replacement cycle of the parts in the feeding section equals to the number of sheets fed from each paper source.
- Be careful not to put oil on the rollers, belts and belt pulleys when lubricating.

	Items to check	Cleaning	Lubrication	Replacement (x 1,000 sheets)	Operation check	Parts list <p-l></p-l>	Remarks
A1	Original glass	B or A				P35-I12	*1
A2	ADF original glass	В				P34-l2	
A3	Mirror-1	В					
A4	Mirror-2	В					
A5	Mirror-3	В					
A6	Reflector	В					
A7	Lens	В				P34-I1	
A8	Exposure lamp			R	С	P36-I3	
A9	Automatic original detection sensor	В			С	P38-17	
A10	Slide sheet (front and rear)	B or A		R			

A. Scanner

B. Laser unit related section

	Items to check	Cleaning	Lubrication	Replacement (x 1,000 sheets)	Operation check	Parts list <p-l></p-l>	Remarks
B1	LSU slit glass	В					*2
B2	Dustproof slit glass	В				P32-I2	*3

C. Feed unit

	Items to check	Cleaning	Lubrication	Replacement (x 1,000 sheets)	Operation check	Parts list <p-l></p-l>	Remarks
C1	Pickup roller (drawer)			200		P7-138	*4
C2	Feed roller (drawer)			200		P7-138	*4
C3	Separation roller (drawer)			200		P7-I52	*4
C4	Transport roller	A		R		P2-I2, P7-I17	
C5	Paper guide (all)	В					
C6	Drive gear (tooth face and shaft)		W				*5
C7	GCB bushing bearing		L				
C8	Registration roller (rubber)	A		R		P16-l8	
C9	Registration roller (metal)	A		R		P16-I10	
C10	Paper dust removal brush-1	В		R		P16-I19	*26
C11	Paper dust removal brush-2	В		R			*26
C12	Pickup roller (Tandem LCF)			400		P7-138	
C13	Feed roller (Tandem LCF)			400		P7-138	
C14	Separation roller (Tandem LCF)			400		P7-152	

D. Bypass feed unit

	Items to check	Cleaning	Lubrication	Replacement (x 1,000 sheets)	Operation check	Parts list <p-l></p-l>	Remarks
D1	Pickup roller			100		P10-I36	
D2	Feed roller			100		P10-I35	
D3	Separation roller		AV	100		P11-I35	*25
D4	Transport roller	А		R		P11-l8	
D5	Bypass tray	В					
D6	Drive gear (tooth face and shaft)		W				
D7	GCB bushing bearing		L				

E. Process related section

	Items to check	Cleaning	Lubrication	Replacement (x 1,000 sheets)	Operation check	Parts list <p-l></p-l>	Remarks
E1	Discharge LED	В					*22
E2	Drum shaft	В					
E3	Ozone filter			450/500/575/ 600		P33-I25	

F. Main charger

	Items to check	Cleaning	Lubrication	Replacement (x 1,000 sheets)	Operation check	Parts list <p-l></p-l>	Remarks
F1	Charger case	В					*6
F2	Charger wire			450/500/575/ 600	С	P40-I19	*6
F3	Contact point of termi- nals	В					
F4	Charger wire cleaning pad			450/500/575/ 600		P40-19	
F5	Grid			450/500/575/ 600		P40-I27	

G. Drum/Cleaner

	Items to check	Cleaning	Lubrication	Replacement (x 1,000 sheets)	Operation check	Parts list <p-l></p-l>	Remarks
G1	Photoconductive drum			450/500/575/ 600			
G2	Whole cleaner unit	В					*7
G3	Drum cleaning blade			450/500/575/ 600		P49-I9	*8
G4	Drum cleaning brush			450/500/575/ 600		P48-I38	*8
G5	Recovery blade	В		R			*9
G6	Separation finger for drum			450/500/575/ 600	С	P49-I4,I21	*10
G7	Auger drive section		W				*11
G8	Cleaner lower guide	В					
G9	Image quality sensor	В		R		P50-I16	*7

H. Developer unit

	Items to check	Cleaning	Lubrication	Replacement (x 1,000 sheets)	Operation check	Parts list <p-l></p-l>	Remarks
H1	Whole developer unit	В					
H2	Developer motor unit		W				*21
H3	Developer material			450/500/575/ 600			*12
H4	Front shield	В		R			
H5	Oil seal (9 pcs.)		AV	900/1000/1150/ 1200			*13
H6	Guide roller	B or A		R			
H7	Toner filter			450/500/575/ 600		P42-I24	

I. Toner recycle

	Items to check	Cleaning	Lubrication	Replacement (x 1,000 sheets)	Operation check	Parts list <p-l></p-l>	Remarks
11	Whole toner recycle unit	В					*14

J. Transfer belt

	Items to check	Cleaning	Lubrication	Replacement (x 1,000 sheets)	Operation check	Parts list <p-l></p-l>	Remarks
J1	Transfer belt			450/500/575/ 600		P22-I18	
J2	Transfer belt power supply roller	A		R		P22-I6	*15
J3	Transfer belt drive roller	A		R		P22-I9	
J4	Transfer belt follower roller	A		R		P22-I2	
J5	Transfer belt cleaning blade			450/500/575/ 600		P23-I31	
J6	Transfer belt cleaning brush			450/500/575/ 600		P23-I10	*16
J7	Flicker periphery	В					*16

K. Toner bag

	Items to check	Cleaning	Lubrication	Replacement (x 1,000 sheets)	Operation check	Parts list <p-l></p-l>	Remarks
K1	Toner bag			900/1000/1150/ 1200		P203-I3	*20

L. Fuser unit

	Items to check	Cleaning	Lubrication	Replacement (x 1,000 sheets)	Operation check	Parts list <p-l></p-l>	Remarks
L1	Fuser roller			450/500/575/ 600		P25-I14	
L2	Pressure roller			450/500/575/ 600		P25-I12	
L3	Upper separation fin- ger			450/500/575/ 600		P27-I22	*17
L4	Lower separation fin- ger	A		R		P27-I9	
L5	Cleaning web			450/500/575/ 600		P27-I11	*18
L6	Web pushing roller			450/500/575/ 600		P27-I12	*18
L7	Thermistor (4 pcs.)	А		R		P27-I6,I28	*19
L8	Fuser unit entrance/ exit guide	A					
L9	Web motor worm gear		W				

	Items to check	Cleaning	Lubrication	Replacement (x 1,000 sheets)	Operation check	Parts list <p-l></p-l>	Remarks
L10	Fuser unit motor gear		W				
L11	Fuser roller drive gear/ Cleaning web drive gear			R			
L12	Fuser roller bearing/ One*way bearing			R			
L13	Fuser unit exit roller	А				P28-I3,I23	
L14	Web roller one-way clutch			450/500/575/ 600		P27-I35	

M. Exit/Reverse section

	Items to check	Cleaning	Lubrication	Replacement (x 1,000 sheets)	Operation check	Parts list <p-l></p-l>	Remarks
M1	Exit/Reversal guide	А					
M2	Exit roller	A	SI	R		P14- I4,I19,I30	*23
M3	Drive gear		W				*24
M4	Reverse section transport roller (upper, lower)	A		R		P13-I6,I7	
M5	Reverse section fol- lower roller (upper, lower)	A				P14-I24	
M6	Horizontal transport section transport roller (4 pcs.)	A				P20- I13,I14	
M7	Horizontal transport section follower roller (8 pcs.)	A				P20-18	
M8	Reverse section mylar (2pcs.)	B or A					
M9	Bearing for GCB bushing		L				
M10	Bearing of plastic bushing		W				
M11	Paper guide	В					

N. RADF

l	Items to check	Cleaning	Lubrication	Replacement (x 1,000 sheets)	Operation check	Parts list <p-l></p-l>	Remarks
N1	Pickup belt			600		P81-I20	
N2	Separtaion roller			600		P82-I22	
N3	Feed roller			600		P81-l21	
N4	Original length sen- sor	В					
N5	Registration roller	А					
N6	1st roller	А					
N7	2nd roller	А					
N8	Read sensor	В					
N9	Read guide	В					
N10	Read roller	А					
N11	3rd roller	А					
N12	4th roller	А					
N13	Reverse sensor	В					
N14	Exit roller	А					
N15	Reverse roller	А					
N16	Platen sheet	B or A					

O. LCF (MP-4004)

	Items to check	Cleaning	Lubrication	Replacement (x 1,000 sheets)	Operation check	Parts list <p-l></p-l>	Remarks
01	Pickup roller	А		500		P5-128	
02	Feed roller	A		500		P4-I20	
O3	Separation roller	А		500		P4-I31	
O4	Drive gears (tooth face)		W				
O5	Brush unit	В					
O6	Paper path section	В					

P. Finisher (MJ-1027/1028)

	Items to check	Cleaning	Lubrication	Replacement (x 1,000 sheets)	Operation check	Parts list <p-l></p-l>	Remarks
P1	Feed belt	В				P15-I2	
P2	Paddle	В				P16-I33	



Fig. 4-6 Front side (NAD and SAD models)



Fig. 4-7 Front side (TWD, ASD, ASU, AUD, MJD, CND and KRD models)



Fig. 4-8 Rear side



Fig. 4-9 Reversing Automatic Document Feeder



Fig. 4-10 Large Capacitor Feeder (MP-4004)



Fig. 4-11 Finisher (MJ-1027/1028)

Remarks "*" in the Preventive Maintenance Check List

- * 1. Original glass
 - Clean both sides of the 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.

2. LSU slit glass

Take off the laser optical unit and clean the LSU slit glass.





3. Dustproof slit glass

Take off the cleaner unit. Then release the hook to take off the dustproof slit glass unit and clean the face and back side of the dustproof slit glass.



Fig. 4-13



Fig. 4-14

* 4. Pickup roller / feed roller / separation roller
 When installing the pickup roller and feed roller, pay attention to allocate the pickup roller, gear, feed roller and one-way clutch correctly.
 When replacing the separation roller, replace only the roller and continue to use the torque limiter.





* 5. Drive gears in the paper feeding section (teeth face and shafts) Apply some white grease (Molykote X5-6020) to the teeth faces 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.

 Main charger case / main charger wire
 Clean the main charger case and wire with a cloth soaked in water and squeezed tightly, and then wipe them with a dry cloth.

Note:

Be careful of the following when attaching a new wire (length: 363mm).

- Insert the wire securely into the V-grooves of the front and rear sides.
- Do not twist the wire.
- Do not touch the wire with your bare hand.
- * 7. Cleaner Unit / Image quality sensor

Be sure to connect the ground wire to an aluminum die cast to prevent the image quality sensor from being damaged by static electricity before you clean the cleaner unit. Then clean the unit with a vacuum cleaner.

Also wipe the window of the image quality sensor with cotton swabs or tissues after having cleaned the cleaner unit. Do not use a vacuum cleaner for the sensor. Be sure to clean the window of the image quality sensor since the sensor may not function properly if this window is dirty.



Fig. 4-16

Fig. 4-17

- * 8. Drum cleaning blade / Drum cleaning brush The edge of the blade is breakable and can be easily damaged by matters such as the adherence of paper dust. Replace the cleaning blade and brush with new ones if poor images are copied due to the damaged blade regardless of the number of copies which have been made.
- * 9. Recovery blade Replace the recovery blade regardless the number of copies if the edge of the blade get damaged.
- * 10. Separation fingers for the drum The paper jam may be caused if the tip of the separation finger is damaged or deformed. If there is any problem with it, replace the finger with a new one regardless of the number of copies which have been made. If any mark which was made by the finger appears on the printed image, clean the tip of the finger.

Notes:

- 1. Wipe the tip of the finger lightly with a dry cloth trying not to deform it. Do not leave the lint on the tip.
- 2. Apply patting power to the tip of the fingers and drum surface after replacing or cleaning them.
- 11. Cleaner auger drive section

Apply white grease to the cleaner auger drive section (shown by arrow).



Fig. 4-18

* 12. Developer material

After replacing the developer material, be sure to perform the auto-toner adjustment and then enforced erforming of image quality control.

(P.3-3 "3.2 Image Dimensional Adjustment")

When removing the developer material from the developer unit with a vacuum cleaner or air blower, be sure to ground the bracket of the developer unit to prevent the auto toner sensor from being damaged by static electricity.



Fig. 4-19

[•] 13.

Oil seal	
Mixer shaft	4 pcs
Paddle shaft	2 pcs.
Upper developer sleeve (rear side)	1 pc.
Lower developer sleeve (rear side)	1 pc.
Transport sleeve (front side)	1 pc.

During replacement, coat the oil seal with grease (Alvania No.2).

- (1) Push in a new oil seal parallel to the mounting hole section of the developer frame or outside of the nozzle mixer.
 - * 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 the exudes from the inside.



Fig. 4-20

Mixer Shaft

Apply a coating of grease (Alvania No.2) to the entire periphery of the mixer shaft before attaching the bearing.



Fig. 4-21

- * 14. Whole toner recycle unit Clean up the toner in the toner recycle unit when replacing the developer material.
- (1) Take off the toner recycle unit.
- (2) Remove 3 screws to separate the recycle toner hopper and the auger pipe.





(3) Vacuum off the toner inside and the supply section of the recycle toner hopper.





- (4) Remove 1 screw and take off the cover of the supply opening.
- (5) Vacuum off the toner in the auger section.





4 - 27

Note:

When cleaning the auger section with a vacuum cleaner, be sure to ground the motor bracket to prevent the motor from being damaged by static electricity.



Fig. 4-25

* 15. Transfer belt power supply roller Fully clean up the toner and such adhered to the roller with alcohol since an image failure may occur if there remains any blot on the roller.





* 16. Transfer belt cleaning bush/Flicker periphery When replacing the transfer belt cleaning brush, clean the toner pooling under the brush (around the flicker).



Fig. 4-27

* 17. Upper 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 copies 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.

* 18. Cleaning web/web pushing roller

Be sure to replace both of the cleaning web and the web pushing roller at the same time, since the cleaning web may be caught by the web pushing roller if this roller is continuously used.

Notes:

- 1. When the web pushing roller has been replaced, reel the web for 3 to 5 turns by hand.
- 2. Check if the cleaning web is tightly reeled after it has been installed in the fuser unit.
- 3. Turn the jam access knob of the fuser unit for 10 to 15 times to fit the web and the fuser roller. At this time, check if there is no installation defect in the unit.
- 4. Check the secure installation of the cleaning web as follows:
 - Be sure that the cleaning web does not hang out of the space between the upper entrance guide and the fuser roller when it is seen from the fuser unit entrance side.
 - Open the fuser unit cover and make sure that there are no slacks or creases on the cleaning web.



Fig. 4-28

- Start the PM Support mode (6S) to reset the counter of the cleaning web when the web has been replaced, otherwise the cleaning ability of the web may be narrowed. At the first power-ON after this counter reset, the web motor rotates for 65 seconds.
- 6. Turn the power of the equipment ON. Then confirm that the message "READY" has appeared on the touch panel.
- 7. Perform the final check of the cleaning web (same as Step 4 above).
- 8. When the web motor is rotated at the output check in the Test mode (03-124), the cleaning web may be slackened. Do not rotate the motor for more than 10 seconds to prevent the web from being slacked.
- It is recommended to replace all the supplies for the fuser unit at the same time. If it is necessary to replace the cleaning web before it is finished for any reason, set the counters manually for the newly replaced web according to its previous usage.

Counter related to the life span control of total feeding amount of the cleaning web Present output pages for control: 08-1252-6

Total feeding amount for control: 08-1252-7

PM support screen related counter

Cleaning web counter: 08-1252-3

Also, when replacing the web pushing roller or one-way clutch which is half-way used, set the following counters manually.

Web pushing roller: 08-1254-0, 08-1254-3

One-way clutch: 08-1338-0, 08-1338-3

Additionally, when the present output pages for control (08-1252-6) has reached the setting value to display that the cleaning web is consumed (08-405), the time to replace the cleaning web appears on the screen and the feeding amount becomes small.

If the cleaning web which has exceeded its life span is used continuously, this could damage the fuser roller. Replace the cleaning web as soon as possible when it is finished.

* 19. Thermistor

Clean the thermistor with alcohol if the toner or dirt is adhered on it while the fuser unit is reassembled or disassembled, such as the case 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.

* 20. Toner bag

Be sure to check the amount of the used toner in the toner bag before starting the preventive maintenance. Tap the toner bag to even out the surface of the used toner, and if this top surface is higher than 180 mm from the bottom of the toner bag, replace the bag. Photoconductive drum defects may increase the used toner amount. Therefore be sure to check the used toner amount in the bag when the drum has been replaced. In addition, whenever fogging on the photoconductive drum increases, be sure to check the used toner amount in the toner bag.

* 21. Developer motor unit

When an abnormal noise occurs in the developer unit, apply white grease (Molykote X5-6020) to the areas described below.

- · The shaft of the developer motor
- Between the drive pulleys and the E-rings

<< Method of applying white grease (Molykote X5-6020) >>

- (1) Take off the developer motor unit.
- (2) Remove 2 E-rings and take off the pulleys and belt.



Fig. 4-29

- (3) Apply white grease (Molykote X5-6020) to the places shown below.
 - Motor shaft (arrow A) : About 3 small drops
 - E-rings (arrow B ; 2 places) : About 2 small drops
 - * Apply to the surface contacting the pulleys.



Fig. 4-30

- * 22. Discharge LED Clean with soft pads or cloth. Do not use a vacuum cleaner.
- * 23. Exit roller Remove the pin from the exit roller (upper), and then apply a few drops of silicon oil over the hole of the exit roller.
- * 24. Exit roller drive gear Apply 1 rice-grain amount of white grease (Molykote X5-6020) on the shaft section where the drive gear is installed.
- * 25. Separation roller (bypass feed unit) Apply an even coat of grease (Alvania No.2) to all round the inside of the spring.
- * 26. Paper dust removal brush Clean the frame if needed because paper dust brushed off with the corresponding brush accumulates on the lower frame of the registration rollers. (Cleaning period guideline: Every two or three times of Preventive Maintenance.)

4.5 PM KIT

KIT name	Component	Part name	Qty.
PM-KIT-6000	MO-KIT-6000	-	1
	MA-KIT-6000	_	1
	FR-KIT-6000	-	1
PM-KIT-6000C	MO-KIT-6000	-	1
	MA-KIT-6000	-	1
MO-KIT-6000	Main charger wire	WIRE-CH-060*398	1
	Main charger grid	GRID-340	1
	Charger wire cleaning pad	K-BASE-PAD-CH-M	1
	Drum cleaning blade	BL-6000D	1
	Drum cleaning brush	B-6000	1
	Drum separation finger	K-CLAW-DRUM	2
		ASYS-CLAW-DRUM-C	1
	Developer material	D-6000	1
	Transfer belt	BT-6510TR	1
	Transfer belt cleaning blade	BL-6510TR	1
	Transfer belt cleaning brush	B-6510TR	1
MA-KIT-6000	Ozone filter	FLTR-OZN-800-390	1
	Toner filter	FILTER-DEV-F300	1
FR-KIT-6000	Fuser roller	HR-6000-U	1
	Pressure roller	HR-6000-L	1
	Cleaning web	CW-6000	1
	Web pushing roller	PR-6000W	1
	Web roller one-way clutch	BRG-ONEWAY-6-H	2
	Fuser unit upper separation finger	SCRAPER-212	6
DF-KIT-8110	Feed roller	FEED-ROLLER	1
	Separation roller	SEP-ROLLER	1
	Pickup roller	ROL-BELT-PICK	1
ROL-KIT-81CST	Feed roller	ASYS-ROL-FEED	1
	Separation roller	ASYS-ROL-SPT	1
	Pickup roller	ASYS-ROL-FEED	1
ROL-KIT-4004	Feed roller	ASYS-ROL-FEED-LCF	1
	Separation roller	ASYS-ROL-SPT-LCF	1
	Pickup roller	ASYS-ROL-PICK-L	2

4.6 Jig List

Itom	Parts	s list
nem	Page	ltem
Door switch jig	201	1
Area sheet	201	2
RADF position pin	201	4
Wire holder jig	201	5
Developer bottle nozzle	201	6
Belt tension jig	201	7
Downloading jig (DLM board)	202	1
Downloading JIG-2 (6 Flash ROMs)	202	2
Downloading JIG-1 (2 Flash ROMs)	202	3
ROM writer adapter (For 1881)	202	4
ROM writer adapter (For 1931)	202	5











P202-l2





Fig. 4-31

4

4.7 Grease List

	Grosse nome	Port nomo	Volumo	Containar	Parts list	
				Container	Page	ltem
SI	Silicon oil	ASM-SILICON-1M	100cc	Bottle	201	8
L	Launa 40	OIL-LAUNA40-100	100cc	Oiler	201	9
W	White grease (Molykote X5-6020)	MOLYKOTE-100	100g	Tube	201	12
AV	Alvania No.2	ASM-PG-ALV2	100g	Tube	201	11

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) OPC drum

Like the toner and developer, OPC drums should be stored in a dark place where the ambient temperature is between 10 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 to 35°C, and should also be protected against high humidity, chemicals and/or their fumes.

- Fuser roller / Pressure roller / Cleaning web / Transfer belt / Drum cleaning brush / Transfer belt cleaning brush Avoid places where the heat rollers may be subjected to high humidity, chemicals and/or their fumes.
- 5) Copy 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 characteristics 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) Handling precautions

As the drum surface is very sensitive, be sure to handle the drum carefully when installing and removing it so as not damage its surface.

Be sure to apply "patting powder" (lubricant) to the entire surface of the drum and separation claws on the cleaner before installing the drum into the machine. When the drum has been replaced, reset the drum counter in the PM Support mode (6S).

Then perform "Image quality control enforcement" in the Adjustment mode (05-290).

Notes:

- Application of the patting powder is for reducing the friction between the drum, cleaning blade, and separation fingers. If the application of patting powder is neglected, the drum and cleaning blade may be damaged.
- When paper fibers adhere to the cleaning blade edge, they may reduce the cleaning efficiency and, in addition, may damage the blade and the drum. Be sure to remove any fibers found adhering to the blade.
- 3) Installation of Copier and Storage of Drum

Avoid installing the copier where it may be subjected to high temperature, high humidity, chemicals and/or their fumes.

Do not leave drums in a brightly lit place for a long time. Otherwise the drum will fatigue, and will not produce sufficient image density immediately after being installed in the machine. However, this effect may decrease as time elapses.

4) Cleaning the Drum

At periodic maintenance calls, wipe the entire surface of the drum clean using the designated cleaning cotton. 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.

5) Scratches on OPC 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.

6) Collecting Used OPC Drums

Regarding the recovery and disposal of used OPC 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 loose thread 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 drum cleaning brush and transfer belt cleaning brush

Do not touch the brush surface with bare hands.

4.8.5 Handling of transfer belt

- 1) Do not touch the belt surface with your bare hands.
- 2) Prevent oil or other foreign matter from adhering to the belt surface.
- 3) Do not touch the transfer belt with alcohol or other organic solvents.
- 4) Do not apply external pressure that might scratch the transfer belt.
4.8.6 Checking and cleaning of fuser roller and pressure roller

1) Handling precautions

- Do not leave oil (fingerprints, etc.) on the fuser roller.
- Be extremely careful not to allow a hard object to hit or rub against the rollers because the thin teflon layer coated on the aluminum substrate is easily damaged and, if damaged, will result in defective drum cleaning.
- 2) Checking
 - Check for stain and damage to the fuser and pressure rollers and clean or replace if necessary. If marks made by the separation fingers have become distinct, open the fuser unit cover and move the position of the E-ring by sliding the upper separation finger unit to the direction of the thick arrow in the figure. The separation fingers thus contact with the different position on the fuser roller. In case there is any scratch which may cause a printing problem or the coating of the roller is removed, replace the roller.



Fig. 4-32

- Clean the upper/lower separation fingers and check for chipped claws.
- Check the cleaning condition of the cleaning web (kinks, lines and slacks on the cleaning web).
- Clean the thermistor and check proper contact with the fuser roller.
- Check the fused condition of the toner image.
- Check the gap between the lower entrance guide and pressure roller (do not make them touch each other).
- Check the gap between the fuser roller and thermostat (2~2.5mm).
- Check the fuser and pressure rollers for proper rotation.
- Check the fuser and pressure rollers for bearing.
- Check the fuser roller drive gear and cleaning web drive gear
- Check the web motor lubrication to the warm gear (white molykote).
- 3) Cleaning procedure for fuser roller

When the fuser roller becomes dirty, it will cause paper jamming. If this happens, wipe the roller surface clean with cotton moistened in alcohol. For a better cleaning effect, clean the roller when it is still warm.

Note:

Be careful not to rub the teflon-coated surface with your fingernails or hard objects because it is easily damaged. Do not apply the silicon oil to the fuser roller.

4.8.7 Checking and replacing of cleaning web

1) Handling precaution Never allow solvents such as paint thinner to adhere to the cleaning roller.

2) Defective cleaning and countermeasures

Defective cleaning should be judged by the toner deposited on the fuser and pressure rollers. When the fuser roller has heavy toner deposits, replace the cleaning web and web pushing roller. The cleaning web and cleaning rollers will be gradually degraded due to the subjection to the heat from the heat roller over a long period of time. Replace them preferably after a specified number of copies have been made.

- 3) Precaution when installing cleaning web
 - <u>Fully confirm that the cleaning web has no slacks</u>, which may cause a cleaning defect by generating kinks and lines.
 - Be sure to replace both of the cleaning web and the web pushing roller at the same time.
 - Be sure to reset the counter of the cleaning web counter in the PM Support mode (6S) when the cleaning web roller has been replaced.

5. TROUBLESHOOTING

When any of the PC boards or the HDD requires replacement, refer to \square P.5-153 "5.3 Replacement of PC Boards and HDD".

5.1 Diagnosis and Prescription for Each Error Code

5.1.1 Paper transport jam

[E010] Paper not reaching fuser transport sensor

Open the jam access cover. Is there any paper on the transport path or in the fuser unit?

 \downarrow YES \rightarrow Remove the paper.

NO

<u>Is the fuser transport sensor working?</u> (Perform the input check in the test mode: 03-[FAX]OFF/[7]/[C])

I	NO →	1) Check if the connector of the fuser transport sensor is disconnected.
		Check if the connector CN332 on the LGC board is disconnected.
I		3) Check if the connector pins are disconnected and the harnesses are
ļ		open circuited.
		4) Check if the conductor pattern on the LGC board is short circuited or
1		open circuited.
1		5) Replace the fuser transport sensor.
т Л		6) Replace the LGC board.

YES

Is the transfer belt working?

 	NO →	 Check if the connector of the transport belt is disconnected. Check if the connector on the transport motor driving PC board is dis-
1		connected.
1		3) Check if the connector CN341 on the LGC board is disconnected.
İ		 Check if the connector pins are disconnected and the harnesses are open circuited.
		5) Check if the conductor pattern on the LGC board is short circuited or open circuited.
Ì		6) Replace the transport motor driving PC board.
Ì		7) Replace the LGC board.
\checkmark		

YES

<u>Is the drum separation finger solenoid working?</u> (Perform the output check in the test mode: 03-111,161)

I	NO →	1) Check if the connector of the drum separation finger solenoid is dis-
I		connected.
I		2) Check if the connector CN339 on the LGC board is disconnected.
		3) Check the installation state of cleaner.
I		4) Is the relay connector connecting the cleaner unit and the equipment
I		disconnected or stained with toner?
1		Replace the drum separation finger solenoid.
		6) Replace the LGC board.
\mathbf{V}		

YES

Is the registration sensor working?

(Perform the input check in the test mode: 03-[FAX]ON/[4]/[E])

l I	NO →	 Check if the connector of the registration sensor is disconnected. Check if the registration sensor is installed correctly.
I		3) Check if the registration actuator is operating properly.
1		4) Check if the connector CN341 on the LGC board is disconnected.
		5) Check if the connector pins are disconnected and the harnesses are open circuited.
		 Check if the conductor pattern on the LGC board is short circuited or open circuited.
1		7) Replace the registration sensor.
İ		8) Replace the LGC board.
1		

YES

<u>Is the registration motor working?</u> (Perform the output check in the test mode: 03-108/158)

	NO →	 Check if the connector of the registration roller clutch is discon- nected.
I		2) Check if the connector CN341 on the LGC board is disconnected.
		3) Check if the connector pins are disconnected and the harnesses are open circuited.
		4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
1		5) Replace the registration roller clutch.
\downarrow		6) Replace the LGC board.

YES

Check if there is any abnormality in the space between the registration motor and the registration roller (metal).

Check if the registration roller (rubber) is rotating smoothly.

Check the condition of the registration roller at the horizontal transport section and clean or replace it.

* If the error [E010] caused by a paper jam underneath the drum cleaner often occurs due to an insufficient paper separation from the photoconductive drum, set a smaller value in the code 08-841, and see what happens. At this time, however, pay attention to the transferability at the leading edge of the paper since this transferability can be slightly narrowed depending on the environments and conditions under which the equipment is placed or the media type of the paper used. (Refer to 3.6.1 in this manual about the details of the code 08-841.)

[E020] Paper stopping at fuser transport sensor

<u>Is the fuser transport sensor working?</u> (Perform the input check in the test mode: 03-[FAX]OFF/[7]/[C])

+ + + + + + + +	NO →	 Check if the connector of the fuser transport sensor is disconnected. Check if the connector CN332 on the LGC board is disconnected. Check if the connector pins are disconnected and the harnesses are open circuited. Check if the conductor pattern on the LGC board is short circuited or open circuited. Replace the fuser transport sensor. Replace the LGC board.
YES		
<u>Is the re</u> (Perform	verse mot	<u>or driving?</u> It check in the test mode: 03-126)
 	NO →	 Check if the connector of the reverse transport unit is not disconnected. Check if the connector CN335 on the LGC board is not disconnected. Check if the connector pins are not disconnected and the harness is not open circuited. Check if the conductor pattern on the LGC board is not short- or open-circuited. Replace the LGC board

YES

1) Check if the separation finger for the fuser unit is working normally.

2) Replace the LGC board

5

[E030] Power-ON jam

```
Open the cover of the unit/area whose picture is blinking on the control panel. Is there any paper on the transport path? (Refer to the following table.)
```

 \downarrow YES \rightarrow Remove the paper.

NO

<u>Is the sensor in the jamming area working?</u> (Perform the input check in the test mode: refer to the following table.)

	NO →	 Check if the connector of the sensor is disconnected. Check if any of the connectors on the LGC board is disconnected. Check if the connector pins are disconnected and the harnesses are open circuited. Check if the conductor pattern on the LGC board is short circuited or open circuited. Replace the sensor. Replace the LGC board.
↓ YES		

Replace the LGC board.

Relation between the jamming area and the corresponding sensors and covers

Jamming area	Sensor	Test mode / Input check
Registration area	Registration sensor	03-[FAX]ON/[4]/[E]
Exit/Reverse area	Exit sensor	03-[FAX]OFF/[7]/[B]
	Reverse sensor-1	03-[FAX]OFF/[7]/[E]
	Reverse sensor-2	03-[FAX]OFF/[7]/[D]
	Fuser transport sensor	03-[FAX]OFF/[7]/[C]
Reverse transport area	Horizontal transport sensor-1	03-[FAX]OFF/[9]/[F]
	Horizontal transport sensor-2	03-[FAX]OFF/[9]/[G]
	Horizontal transport sensor-3	03-[FAX]OFF/[9]/[H]
Paper feeding area	1st drawer feed sensor	03-[FAX]OFF/[1]/[D]
	2nd drawer feed sensor	03-[FAX]OFF/[2]/[D]
	3rd drawer / tandem LCF feed sensor	03-[FAX]OFF/[3]/[D]
	4th drawer feed sensor	03-[FAX]OFF/[4]/[D]
	1st drawer transport sensor	03-[FAX]OFF/[1]/[C]
	2nd drawer transport sensor	03-[FAX]OFF/[2]/[C]
	3rd drawer / tandem LCF transport sensor	03-[FAX]OFF/[3]/[C]
	4th drawer transport sensor	03-[FAX]OFF/[4]/[C]
	Intermediate transport sensor	03-[FAX]OFF/[1]/[A]

[E061] Incorrect paper size setting for 1st drawer [E062] Incorrect paper size setting for 2nd drawer [E063] Incorrect paper size setting for 3rd drawer [E064] Incorrect paper size setting for 4th 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.
- Check if the connectors connecting the SYS board, SLG board and PLG board are disconnected.
- 4) Check if the connectors of the HDD are disconnected.
- 5) Check if the harnesses connecting the SYS board, SLG board and PLG board are opencircuited.
- 6) Replace the HDD, SYS board, SLG board and PLG board.

[E200] 1st drawer transport jam (paper not reaching registration sensor) [E210] 2nd drawer transport jam (paper not reaching registration sensor) [E300] 3rd drawer transport jam (paper not reaching registration sensor) [E330] 4th drawer transport jam (paper not reaching registration sensor) [E3C0] Tandem LCF transport jam (paper not reaching registration sensor)

(First page of printing)

Open the jam access cover. Is there paper in front of the registration sensor?

 \downarrow YES \rightarrow Replace the paper.

NO

<u>Is the registration sensor(S18) working?</u> (Perform the input check in the test mode: 03-[FAX]ON/[4]/[E])

I NO → I	 Check if the connector of the registration sensor is disconnected. Check if the connector CN305 on the LGC board is disconnected.
	 Check if the connector pins are disconnected and the harnesses are open circuited.
	 Check if the conductor pattern on the LGC board is short circuited or open circuited.
	5) Replace the registration sensor.
\downarrow	6) Replace the LGC board.

YES

1) Check the transport roller. Replace it if it is worn out.

(Second page or later of printing)

Open the jam access	cover. Is there any paper	on the transport path?

I	$YES \rightarrow$	If the paper is damaged, remove the paper and check the followings
I		1) Check if the paper is skewed, and correct it if it is skewed.
I		2) Check the paper amount.
1		3) Check if the paper is not the one with printing on its back side.
1		4) Check if the width of the side guides of the drawer is too narrow.
1		Check the motor-related adjustment value.
\checkmark		

NO

Is the intermediate transport se	nsor (S17) working?
(Perform the input check in the	test mode: 03-[FAX]OFF/[1]/[A])

Ι	NO →	1) Are paper dusts accumulated on the intermediate transport sensor?
I		2) Check if the harness is not damaged.
I		3) Check if the connector is disconnected.
\checkmark		

YES

Is the transport motor	(M17) rotating?	-
(Perform the output ch	eck in the test r	node: 03-133,183)

I	NO →	Check if the bearing of the transportation roller is locked.
I		Replace the transport motor.
		 Check if the connector of the transport motor is disconnected.
I		2) Check if the connector CN327 on the LGC board is disconnected.
		 Check if the connector on the transport motor driving PC board is dis- connected.
		4) Check if the connector pins are disconnected and the harnesses are open circuited.
i		5) Check if the conductor pattern on the LGC board is short circuited or
Ì		open circuited.
1		6) Replace the LGC board.
\checkmark		7) Replace the transport motor driving PC board.

YES

Check if the spring of the follower roller of the intermediate transport roller is working properly.

Check if the registration roller (rubber) is rotating smoothly.

[E220] 2nd drawer transport jam (paper not reaching 1st drawer transport sensor) [E310] 3rd drawer transport jam (paper not reaching 1st drawer transport sensor) [E340] 4th drawer transport jam (paper not reaching 1st transport sensor) [E3D0] Tandem LCF transport jam (paper not reaching 1st drawer transport sensor)

(First page of printing)

Open the jam access cover. Is there paper in front of the 1st drawer transport sensor?

 \downarrow YES \rightarrow Remove the paper.

NO

Is the 1st drawer transport se	ensor (S33) working?
(Perform the input check in the	ne test mode: 03-[FAX]OFF/[1]/[C])

l I	NO →	 Check if the connector of the 1st drawer transport sensor is discon- nected.
I		2) Check if the connector CN305 on the LGC board is disconnected.
		3) Check if the connector pins are disconnected and the harnesses are open circuited.
		 Check if the conductor pattern on the LGC board is short circuited or open circuited.
Ì		5) Replace the 1st drawer transport sensor.6) Replace the LGC board.
\mathbf{v}		· · · · · · · · · · · · · · · · · · ·

YES

<u>Are the transport clutches (CLT5,7,9,11) working?</u> (Perform the output check in the test mode: 03-210/225/229/230/231)

l I	NO →	 Check if the connectors of the transport clutches are disconnected. Check if the connector CN328,329,350 on the LGC board is discon-
I		nected.
		3) Check if the connector pins are disconnected and the harnesses are open circuited.
 		4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
i		5) Replace the transport clutches.
\downarrow		6) Replace the LGC board.

YES

- 1) Check the condition of the feed roller, separation roller and pickup roller of each paper source, and clean or replace them.
- 2) Check the transport roller. Clean or replace it.

(Second page or later of printing)

Open the jam access cover. Is there any paper on the transport path?

I	YES \rightarrow	If the paper is damaged, remove the paper and check the followings:
Ι		1) Check if the paper is skewed, and correct it if it is skewed.
		2) Check the paper amount.
		3) Check if the paper is not the one with printing on its back side.
		4) Check if the width of the side guides of the drawer is too narrow.
\mathbf{V}		Check the motor-related adjustment value.
h		

NO

Check if the spring of the follower roller of the intermediate transport roller is working properly.

5

[E201] 1st drawer transport jam (paper not reaching intermediate transport sensor)

[E211] 2nd drawer transport jam (paper not reaching intermediate transport sensor)

[E301] 3rd drawer transport jam (paper not reaching intermediate transport sensor)

[E331] 4th drawer transport jam (paper not reaching intermediate transport sensor)

[E3C1] Tandem LCF transport jam (paper not reaching intermediate transport sensor)

[E261] Option LCF transport jam (paper not reaching intermediate transport sensor)

[E2A1] Transport jam during duplex printing (paper not reaching intermediate transport sensor) (First page of printing)

Is the intermediate transport sensor working?

(Perform the input	t check in the test mode: 03-[FAX]OFF/[1]/[A])
I NO →	Open the jam access cover. Remove the paper and check the follow-
	ings.
	 Check if the connector of the intermediate transport sensor is discon- nected.
	2) Check if the connector CN327 on the LGC board is disconnected.3) Check if the connector pins are disconnected and the harnesses are
	open circuited.
	4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
1	5) Replace the LGC board.
↓ ↓	
YES	
Is the transport me	otor rotating?
(Perform the output	ut check in the test mode: 03-133,183)
I NO →	Check if the bearing of the transportation roller is locked.
I	Replace the transport motor.
	1) Check if the connector of the transport motor is disconnected.
	2) Check if the connector CN327 on the LGC board is disconnected.
	3) Check if the connector on the transport motor driving PC board is dis- connected.
	4) Check if the connector pins are disconnected and the harnesses are open circuited.
	5) Check if the conductor pattern on the LGC board is short circuited or open circuited.
	 6) Check if the conductor pattern on the transport motor driving PC board is short circuited or open circuited
·	7) Replace the LGC board.
I	8) Replace the transport motor driving PC board.
\checkmark	
YES	
Is the 1st drawer t	ransport clutch working?
(Perform the output	<u>ut check in the test mode: 03-210/225/229/230/231)</u>
I NO →	 Check if the connector of the 1st drawer transport clutch is discon- nected.
	2) Check if the connector CN305 on the LGC board is disconnected.
	3) Check if the connector pins are disconnected and 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 transport clutch.
- 6) Replace the LGC board.

Check if the spring of the follower roller of the intermediate transport roller is working properly.

I

T

(Second page or later of printing)

Leading	edge	of paper	not reaching the fuser exit sensor.

<u>Leaung euge</u>	<u>or paper not reaching the fuser exit sensol.</u>
I YES I I	 → If the paper is damaged, remove the paper and check the followings. 1) Check if the paper is skewed, and correct it if it is skewed. 2) Check the paper amount.
I	3) Check if the paper is not the one with printing on its back side.
l	4) Check if the width of the side guides of the drawer is too narrow.
I	5) Check the motor-related adjustment value.
\checkmark	
NO	
Is the intermed	liate transport sensor working?
(Perform the in	<u>put check in the test mode: 03-[FAX]OFF/[1]/[A])</u>
I NO -	→ 1) Are paper dusts accumulated on the intermediate transport sensor?
I	Check if the harness is not damaged.
\checkmark	Check if the connector is disconnected.
YES	
Is the transpor	t motor rotating?
(Perform the o	utput check in the test mode: 03-133,183)
I NO -	\rightarrow Check if the bearing of the transportation roller is locked.
I	Replace the transport motor.
I	1) Check if the connector of the transport motor is disconnected.
I	2) Check if the connector CN327 on the LGC board is disconnected.
l	3) Check if the connector on the transport motor driving PC board is dis-
I	 Check if the connector pins are disconnected and the harnesses are
I	open circuited
	5) Check if the conductor pattern on the LGC board is short circuited or
1	open circuited.
1	
	Check if the conductor pattern on the transport motor driving PC
I	 Check if the conductor pattern on the transport motor driving PC board is short circuited or open circuited.
 	6) Check if the conductor pattern on the transport motor driving PC board is short circuited or open circuited.7) Replace the LGC board.
, 	 6) Check if the conductor pattern on the transport motor driving PC board is short circuited or open circuited. 7) Replace the LGC board. 8) Replace the transport motor driving PC board.

Check if the spring of the follower roller of the intermediate transport roller is working properly.

5

[E230] 1st drawer transport jam (paper not reaching 1st drawer transport sensor)

[E240] 2nd drawer transport jam (paper not reaching 2nd drawer transport sensor)

[E250] Option LCF transport jam (paper not reaching Option LCF transport sensor)

[E370] 3rd drawer transport jam (paper not reaching 3rd drawer / Tandem LCF transport sensor)

[E380] 4th drawer transport jam (paper not reaching 4th drawer transport sensor)

[E3F0] Tandem LCF transport jam (paper not reaching 3rd drawer / Tandem LCF transport sen-

sor)

(First page of printing)

Is the intermediate transport sensor working?

(Perform the input check in the test mode: 03-[FAX]OFF/[1]/[A], OFF/[1]/[C], OFF/[2]/[C], OFF/[3]/[C], OFF/[4]/[C])

l	NO →	Open the jam access cover. Remove the paper and check the follow-
		 Check if the connector of the transport sensor is disconnected. Check if the connector on the LGC board is disconnected. Check if the connector pins are disconnected and the harnesses are open circuited.
 ↓		 Check if the conductor pattern on the LGC board is short- or open- circuited. Replace the LGC board.
YES		
<u>Is the rev</u> (Perform	<u>versed par</u> the outpu	<u>per transport clutch working?</u> It check in the test mode: 03-210/225/229/230/231)
		4) Obselvitithe convectors of the transment dutches are disconvected

I	NO →	1) Check if the connectors of the transport clutches are disconnected.
I		2) Check if the connector CN328, 329, 350 on the LGC board is discon-
I		nected.
		3) Check if the connector pins are disconnected and the harnesses are opencircuited.
		 Check if the conductor pattern on the LGC board is short- or open- circuited.
1		5) Replace the transport clutches.
\downarrow		6) Replace the LGC board.

YES

Check the conditions of the feed roller, separation roller and pickup roller of the drawer in use, and replace them if necessary

(Second page or later of printing)

Leading edge of paper not reaching the fuser exit sensor.

→	YES →	 Is there any damage on the paper? (Remove the paper and check the followings.) 1) Check if the paper is skewed, and correct it if it is skewed. 2) Check the paper amount. 3) Check if the paper is not the one with printing on its back side. 4) Check if the width of the side guides of the drawer is too narrow.
NO		

Is the intermediate transport sensor working?

(Perform the inpu	t check in the test mode: 03-[FAX]OFF/[1]/[A], OFF/[1]/[C], OFF/[2]/[C],
<u> </u>	

	NO →	1) Are paper dusts accumulated on the intermediate transport sensor?
I		Check if the actuator of the sensor is working normally.
I		3) Check if the harness is not damaged.
\mathbf{h}		4) Check if the connector is disconnected.

YES

Check the conditions of the feed roller, separation roller and pickup roller of the drawer in use, and replace them if necessary.

[E260] Option LCF transport jam (paper not reaching registration sensor)

Is there any paper before the registration sensor when the bypass unit cover is opened?

 \downarrow YES \rightarrow Remove the paper.

NO

Is the registration sensor working?

(Perform the input check in the test mode: 03-[FAX]ON/[4]/[E])

I NO → I I I I I I I I I I I I I I I I I I I	 Check if the registration sensor connector is not disconnected. Check if the connector J341 on the LGC board is not disconnected. Check if the connector pins are not disconnected and the harness is not open circuited. Check if the conductor pattern on the LGC board is not short circuited or open circuited. Replace the registration sensor. Replace the LGC board.
YES	
Is the external LC	CF transport motor driving?
(Perform the out	put check in the test mode: 03-122/172)
I NO → I I	 Check if the connector of the transport motor is not disconnected. Check if the connectors J854 on the LCF board are not disconnected. Check if there is any abnormality at the transport drive unit.
YES	.,
(Perform the out	<u>prit check in the test mode: 03-272)</u>
I NO →	 Check if the external LCF clutch connector is not disconnected. Check if the connectors J851 on the LCF board are not disconnected.
	3) Check if the connector CN346 on the LGC board is not disconnected.
	 Check if the connector pins are not disconnected and the harness is not open circuited.
	Check if the conductor pattern on the LCF and LGC boards is not short circuited or open circuited.
1	6) Replace the external LCF feed clutch.
Ì	7) Replace the LCF board.
I	8) Replace the LGC board.
\checkmark	

5

YES

<u>Is the external LCF transport clutch working?</u> (Perform the output check in the test mode: 03-273)

l I	NO →	 Check if the connector of the external LCF feed clutch is not discon- nected.
 		 Check if the connectors J851 on the LCF board are not disconnected.
I		3) Check if the connector CN346 on the LGC board is not disconnected.
		4) Check if the connector pins are not disconnected and the harness is not open circuited.
 		5) Check if the conductor pattern on the LCF and LGC boards is not short circuited or open circuited.
i		6) Replace the external LCF feed clutch.
i		7) Replace the LCF board.
I		8) Replace the LGC board.
\checkmark		
FS		

YES

Leading edge of paper not reaching the fuser exit sensor.

Ι	YES \rightarrow	Is there any damage on the paper? (Remove the paper and check the
I		followings.)
I		1) Check if the paper is skewed, and correct it if it is skewed.
I		2) Check the paper amount.
ļ		3) Check if the paper is not the one with printing on its back side.
		4) Check if the width of the side guides of the drawer is too narrow.
\mathbf{V}		, C

NO

Is the intermediate transport sensor working?

(Perform the input check in the test mode: 03-[FAX]OFF/[1]/[A], OFF/[1]/[C], OFF/[2]/[C], OFF/[3]/[C], OFF/[4]/[C])

I.	$N \cap \rightarrow$	1) Are paper dusts accumulated on the intermediate transport sensor?
		The paper dusts accumulated on the intermediate transport sensor
I		Check if the actuator of the sensor is working normally.
I		3) Check if the harness is not damaged.
\checkmark		4) Check if the connector is disconnected.

YES

- 1) Check the conditions of the feed roller, separation roller and pickup roller of the drawer in use, and replace them if necessary.
- 2) Check if there is any abnormality at the transport drive unit.
- 3) Check the condition of the external LCF feed roller and separation roller and clean or replace them.

Check if the registration roller (rubber) is rotating smoothly.

[E320] 3rd drawer transport jam (paper not reaching 2nd drawer transport sensor) [E350] 4th drawer transport jam (paper not reaching 2nd drawer transport sensor) [E3E0] Tandem LCF transport jam (paper not reaching 2nd drawer transport sensor)

Open the feed cover. Is there paper in front of the 2nd drawer transport sensor?

Ι	$YES \rightarrow$	If the paper is damaged, remove the paper and check the followings	
I		1) Check if the paper is skewed, and correct it if it is skewed.	
I		2) Check the paper amount.	
I		3) Check if the paper is not the one with printing on its back side.	
\checkmark		4) Check if the width of the side guides of the drawer is too narrow.	
0			
the 2nd drawer transport sensor working?			

N

(Perform the input	check in the te	<u>est mode: 03-[FA</u>	<u>X10FF/[2]/[C1</u>
· ·		-	

Ι	NO →	1) Check if the connector of the 2nd drawer transport sensor is discon-
I		nected.
I		2) Check if the connector CN329 on the LGC board is disconnected.
		 Check if the connector pins are disconnected and the harnesses are open circuited.
		 Check if the conductor pattern on the LGC board is short circuited or open circuited.
1		Replace the 2nd drawer transport sensor.
\downarrow		6) Replace the LGC board.
E۵		

YES

Are the transport clutches working?

(Perform the output check in the test mode: 03-210/225/231)

	NO \rightarrow	1) Check if the connectors of the (lower/middle) transport clutches are
i		
I		disconnected.
		2) Check if the connector $CN329.350$ on the LGC board is discon-
i		
1		nected.
		3) Check if the connector pipe are disconnected and the harpesses are
1		5) Check if the connector pins are disconnected and the namesses are
		open circuited.
		4) Check if the conductor pattern on the LCC heard is short circuited or
1		4) Check if the conductor pattern on the LGC board is short circuited of
		open circuited
1		5) Replace the (lower/middle) transport clutches.
		6) Replace the LGC board
\mathbf{V}		

YES

- 1) Check the condition of the feed roller, separation roller and pickup roller of each paper source, and clean or replace them.
- 2) Check the transport roller. Clean or replace it.

5

[E360] 4th drawer transport jam (paper not reaching 3rd drawer / Tandem LCF transport sensor)

Open the feed cover. Is there any paper in front of the 3rd drawer / Tandem LCF feed sensor?

	YES →	If the paper is damaged, remove the paper and check the followings1) Check if the paper is skewed, and correct it if it is skewed.2) Check the paper amount.3) Check if the paper is not the one with printing on its back side.
\checkmark		4) Check if the width of the side guides of the drawer is too narrow.

NO

Is the 3rd drawer / Tandem LCF feed sensor working?
(Perform the input check in the test mode: 03-[FAX]OFF/[2]/[D])

l	NO →	 Check if the connector of the 3rd drawer / Tandem LCF feed sensor is disconnected.
I		2) Check if the connector CN328 on the LGC board is disconnected.
		3) Check if the connector pins are disconnected and the harnesses are open circuited.
		4) Check if the conductor patterns on the LGC board is short circuited or open circuited.
I I		5) Replace the 3rd drawer / Tandem LCF drawer feed sensor.
\checkmark		6) Replace the LGC board.

YES

<u>Is the 4th drawer transport clutch working?</u> (Perform the output check in the test mode: 03-225)

l I	NO →	 Check if the connector of the 4th drawer transport clutch is discon- nected.
I		2) Check if the connector CN350 on the LGC board is disconnected.
		3) Check if the connector pins are disconnected and the harnesses are open circuited.
		 Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
I		5) Replace the 4th drawer transport clutch.
\downarrow		6) Replace the LGC board.

YES

- 1) Check the condition of the feed roller, separation roller and pickup roller of each paper source, and clean or replace them.
- 2) Check the PFP transport roller. Clean or replace it.

[E510] Transport jam during duplex printing (paper not reaching reverse sensor-2)

Open the exit cover. Is there any paper in front of the reverse sensor-2?

 \downarrow YES \rightarrow Remove the paper.

NO

Is the reverse sensor-1 working?

(Perform the input check in the test mode: 03-[FAX]OFF/[1]/[G])

I	NO \rightarrow	1) Check if the connector of the reverse sensor-1 is disconnected.
I		2) Check if the connector CN335 on the LGC board is disconnected.
I		3) Check if the connector pins are disconnected and the harnesses are
		open circuited.
l		 Check if the conductor patterns on LGC board are short circuited or open circuited
I		5) Replace the reverse sensor-1
		6) Deplace the LCC heard
\checkmark		o) Replace the LGC board.

YES

<u>Is the horizontal transport section driving clutch working?</u> (Perform the output check in the test mode: 03-222)

	NO \rightarrow	 Check if the connector of the horizontal transport section driving clutch is disconnected.
I		2) Check if the connector CN334 on the LGC board is disconnected.
		 Check if the connector pins are disconnected and the harnesses are open circuited.
		 Check if the conductor pattern on the LGC board is short circuited or open circuited.
1		5) Replace the horizontal transport section driving clutch.
\checkmark		6) Replace the LGC board.

YES

Is the Mylar at the reverse section normal?

 \downarrow NO \rightarrow Replace the Mylar.

YES

Check the condition of the roller at the horizontal transport section and clean or replace it.

[E511] Transport jam during duplex printing (paper not reaching horizontal transport sensor-1)

Is there any paper at the reverse section when the exit cover is opened?

 \downarrow YES \rightarrow Remove the paper.

NO

<u>Is the Horizontal transport sensor-1 working?</u> (Perform the input check in the test mode: 03-[FAX]OFF/[9]/[F])

Ι	NO →	1) Check if the connector of the Horizontal transport sensor-1 is not dis-
Ι		connected.
		 Check if the connector CN334 on the LGC board is not discon- nected
I		3) Check if the connector pins are not disconnected and the harness is
		not open circuited.
		 Check if the conductor pattern on the LGC board is not short cir- cuited or open circuited
1		5) Replace the Horizontal transport sensor-1
1		6) Deplace the LCC beard
I		6) Replace the LGC board.
\checkmark		

YES

<u>Is the transport roller 1/2 at the horizontal transport section rotating?</u> (Perform the output check in the test mode: 03-110/220)

 	NO →	 Check if the connectors of the and horizontal transport section driv- ing clutch-1 and horizontal transport section driving clutch-2 are not disconnected.
		 Check if the connectors of the and horizontal transport section driv- ing clutch-1 and and horizontal transport section driving clutch-2 are not misconnected (drive clutch: black-black, transport clutch 1: bluepurple).
1		 Check if the connector CN334 on the LGC board is not discon- nected.
i I		4) Check if the connector pins are not disconnected and the harness is not open circuited.
 		Check if the conductor pattern on the LGC board is not short- or open circuited.
1		6) Replace the transport drive clutch and transport clutch 1.
		Replace the LGC board.
!		Check if the front side timing belt is put on properly.
\downarrow		9) Check the installation state of the horizontal transport section driving clutch-1.

YES

Check the condition of the rollers at the horizontal transport section and clean or replace them.

[E512] Transport jam during duplex printing (paper not reaching horizontal transport sensor-2)

Is there any paper at the reverse section when the exit cover is opened?

 \downarrow YES \rightarrow Remove the paper.

NO

<u>Is the Horizontal transport sensor-2 working?</u> (Perform the input check in the test mode: 03-[FAX]OFF/[9]/[G])</u>

I	NO \rightarrow	1) Check if the connector of the Horizontal transport sensor-2 is not dis-
I		connected.
		 Check if the connector CN334 on the LGC board is not discon- nected.
		 Check if the connector pins are not disconnected and the harness is not open circuited.
1		 Check if the conductor pattern on the LGC board is not short- or open-circuited.
i		5) Replace the Horizontal transport sensor-2.
i		6) Replace the LGC board.
\mathbf{V}		

YES

<u>Is the transport roller 3/4 at the horizontal transport section rotating?</u> (Perform the output check in the test mode: 03-110/221)

	NO →	 Check if the connectors of the horizontal transport section driving clutch-1 and horizontal transport section driving clutch-3 are not dis- connected.
		 Check if the connectors of the horizontal transport section driving clutch-1 and horizontal transport section driving clutch-3 are not mis- connected (drive clutch: black-black, transport clutch 2: blackblue)
		 Check if the connector CN334 on the LGC board is not discon- nected.
I		4) Check if the connector pins are not disconnected and the harness is not open circuited.
I		Check if the conductor pattern on the LGC board is not short- or open-circuited.
l I		6) Replace the and horizontal transport section driving clutch-1 and and horizontal transport section driving clutch-2.
I		7) Replace the LGC board.
		8) Check if the front side timing belt is put on properly.
$\mathbf{\Psi}$		

YES

Check the condition of the rollers at the horizontal transport section and clean or replace them.

[E540] Transport jam during duplex printing (paper not reaching horizontal transport sensor-3)

<u>Is the Horizontal transport sensor-3 working?</u> (Perform the input check in the test mode: 03-[FAX]OFF/[9]/[H])

l I	NO →	1) Check if the connector of the Horizontal transport sensor-3 is not dis- connected.
		 Check if the connector CN334 on the LGC board is not discon- nected.
		 Check if the connector pins are not disconnected and the harness is not open circuited.
I I I		 Check is the conductor pattern on the LGC board is not short- or open-circuited.
i		5) Replace the Horizontal transport sensor-3.
i		6) Replace the LGC board.
\checkmark		
/F0		

YES

Check the condition of the roller at the horizontal transport section and clean or replace it.

[E550] Paper remaining jam at paper transport path

Open the cover of the unit/area whose picture is blinking on the control panel. Is there any paper on the transport path?

 \downarrow YES \rightarrow Remove the paper.

NO

Is the sensor in the jamming area working? (Perform the input check in the test mode: refer to the following table)

Ι	NO→	 Check if the connector of the sensor is disconnected.
I		2) Check if any of the connectors on the LGC board is disconnected.
		3) Check if the connector pins are disconnected and the harnesses are open circuited.
 ↓		 Check if the conductor pattern on the LGC board is short circuited or open circuited. Replace the sensor. Replace the LGC board.

YES

1) Check if any multiple paper is fed from the drawer.

2) Replace the LGC board.

Relation between the jamming area and the corresponding sensors and covers

Jamming area	Sensor	Test mode / Input check
Registration area	Registration sensor	03-[FAX]ON/[4]/[E]
Exit/Reverse area	Exit sensor	03-[FAX]OFF/[7]/[B]
	Reverse sensor-1	03-[FAX]OFF/[7]/[E]
	Reverse sensor-2	03-[FAX]OFF/[7]/[D]
	Fuser transport sensor	03-[FAX]OFF/[7]/[C]
Reverse transport area	Horizontal transport sensor-1	03-[FAX]OFF/[9]/[F]
	Horizontal transport sensor-2	03-[FAX]OFF/[9]/[G]
	Horizontal transport sensor-3	03-[FAX]OFF/[9]/[H]
Paper feeding area	1st drawer feed sensor	03-[FAX]OFF/[1]/[D]
	2nd drawer feed sensor	03-[FAX]OFF/[2]/[D]
	3rd drawer / tandem LCF feed sensor	03-[FAX]OFF/[3]/[D]
	4th drawer feed sensor	03-[FAX]OFF/[4]/[D]
	1st drawer transport sensor	03-[FAX]OFF/[1]/[C]
	2nd drawer transport sensor	03-[FAX]OFF/[2]/[C]
	3rd drawer / tandem LCF transport sensor	03-[FAX]OFF/[3]/[C]
	4th drawer transport sensor	03-[FAX]OFF/[4]/[C]
	Intermediate transport sensor	03-[FAX]OFF/[1]/[A]

[E570] Transport jam during duplex printing (paper not reaching reverse sensor-1)

Is there any paper before the registration sensor when the exit cover is opened?

 \downarrow NO \rightarrow Remove the paper.

YES

Is the reverse sensor 1 working?

(Perform the input check in the test mode: 03-[FAX]OFF/[7]/[E])

1	NO →	1) Check if the connector of the reverse sensor-1 is not disconnected.
I		 Check if the connector CN335 on the LGC board is not discon- nected
		3) Check if the connector pins are not disconnected and the harness is not open circuited.
		 Check if the conductor pattern on the LGC board is not short- or open circuited.
1		5) Replace the reverse sensor-1.
\checkmark		6) Replace the LGC board.
YES		

Is the	reverse	motor	drivina?
10 110	1010100	1110101	GITTE I I G

1	Perform th	e output	check in	the test	mode [.] ((3-126)
2		c output				JJ-1207

 	NO →	 Check if the connector of the reverse transport unit is not discon- nected.
 		 Check if the connector CN335 on the LGC board is not discon- nected.
		3) Check if the connector pins are not disconnected and the harness is not open circuited.
		 Check if the conductor pattern on the LGC board is not short- or open-circuited.
i		5) Replace the reverse moter.
i		6) Replace the LGC board
\checkmark		
10		

YES

<u>Is the gate solenoid working?</u> (Perform the output check in the test mode: 03-274)

 	NO →	 Check if the connector of the gate solenoid is not disconnected. Check if the connector CN335 on the LGC board is not disconnected.
		3) Check if the connector pins are not disconnected and the harness is not open circuited.4) Check if the conductor pattern on the LGC board is not short- or
 		open-circuited.5) Replace the gate solenoid.6) Replace the LGC board
\checkmark		

YES

- 1) Check if there is no mechanical loading at the exit/reversal gate.
- 2) Check the myler at the reverse section and clean or replace it.

Is there any paper at the reverse section when the exit cover is opened?

 \downarrow NO \rightarrow

YES

Is the reverse sensor- 1/2 working?

(Perform the input check in the test mode: 03-[FAX]OFF/[7]/[D], [7]/[E])

I	NO →	1) Check if the connector of the reverse sensor 1/2 is not disconnected.
l		Check if the connector CN335 on the LGC board is not discon-
		nected.
		 Check if the connector pins are not disconnected and the harness is not open circuited.
		 Check if the conductor pattern on the LGC board is not short- or open-circuited.
I I		5) Replace the reverse sensor- 1/2.
\downarrow		6) Replace the LGC board.

YES

- 1) Check if the setting of the paper size is correct.
- 2) Check the condition of the roller at the reverse section and clean or replace it.
- 3) Check if there is no mechanical loading at the follower roller and no abnormality at the myler.
- 4) Check if the adjustment of the reverse motor speed (05-453/454/456) is appropriate.
- 5) Replace the reverse sensor-2 if it is drastically damaged.

[E590] Paper stopping at exit section

Is there any paper at the reverse section when the exit cover is opened?

 \downarrow NO \rightarrow Remove the paper.

YES

Is the exit motor driving?

(Perform the output check in the test mode: 03-120)

		1) Check if the connector of the ovit mater is not disconnected
I	NU 7	T) Check if the connector of the exit motor is not disconnected.
I		2) Check if the connector CN336 on the LGC board is not discon-
Ι		nected.
		 Check if the connector pins are not disconnected and the harness is not open circuited
1		not open circulted.
I		4) Check if the conductor pattern on the LGC board is not short- or
1		opencirculea.
J.		5) Replace the LGC board.
~		

YES

- 1) Check if the setting of the paper size is correct.
- 2) Check if there is no abnormality and extraneous material at the guide and myler in front of the exit roller.
- 3) Check if there is no mechanical loading at the exit follower roller.

[E5A0] Paper not reaching exit sensor

Is the exit sensor (Perform the input	<u>working?</u> t check in the test mode: 03-[FAX]ON/ [1]/[C])
I NO → I I	 Check if the connector of the exit sensor is not disconnected. Check if the connector CN335 on the LGC board is not disconnected.
	3) Check if the connector pins are not disconnected and the harness is not open circuited.
	 Check if the conductor pattern on the LGC board is not short- or open circuited.
¦ ↓	5) Replace the exit sensor.6) Replace the LGC board.

YES

<Simple discharging>

<u>Is the gate solenoid working?</u> (Perform the output check in the test mode: 03-274)

I	NO →	1) Check if the connector of the gate solenoid is not disconnected.
I		2) Check if the connector CN335 on the LGC board is not discon-
I		nected.
		3) Check if the connector pins are not disconnected and the harness is not open circuited.
		 Check if the conductor pattern on the LGC board is not short- or open circuited.
\downarrow		5) Replace the LGC board.

YES

Replace the LGC board.

<Reversal discharging>

- 1) Check if the setting of the paper size is correct.
- 2) Check if there is no abnormality and extraneous material at the guide and myler in front of the exit roller.
- * Perform 05-447 for thick paper to increase the value by 2 to 4.

[EB50] Paper remaining on the transport path due to multiple feeding

In case the paper is fed from the 1st drawer, bypass unit or

Open the by	ass unit cover. Is there any paper in front of the drawer feed sensor?
I YE I ↓	 S → Remove the paper. * Clean or replace the feed roller and separation roller if this error occurs frequently.
NO	
<u>Is the registra</u> (Perform the	ation sensor working? input check in the test mode: 03-[FAX]ON/[4]/[E])
NO 	 → 1) Check if the connector of the registration sensor is disconnected. 2) Check if the connector CN341 on the LGC board is disconnected. 3) Check if the connector pins are disconnected and 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. Clean or replace them.

In case the paper is fed from the 2nd drawer, 3rd drawer, 4th drawer, Tandem LCF

Open the bypass unit cover. Is there any paper in front of the 1st drawer transport sensor?

	YES →	Remove the paper. * Clean or replace the feed roller and separation roller if this error
\checkmark		occurs frequently.

NO

Are the 1st drawer transport sensor working?
(Perform the input check in the test mode: 03-[FAX]OFF/[1]/[C])

 	NO →	 Check if the connector of the 1st drawer transport sensor is discon- nected.
I		2) Check if the connector CN329 on the LGC board is disconnected.
		3) Check if the connector pins are disconnected and the harnesses are open circuited.
		4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
I		5) Replace the 1st drawer transport sensor.
\downarrow		6) Replace the LGC board.

YES

If any paper remains in the equipment or drawer, remove it. Check the rollers. Clean or replace them.

[EB60] Paper remaining on the transport path

Open the bypass unit cover. Is there any paper in front of the registration sensor?

 \downarrow YES \rightarrow Remove the paper.

NO

Is the registration sensor working?

(Perform the input check in the test mode: 03-[FAX]OFF/[4]/[E])

I	NO →	1) Check if the connector of the registration sensor is disconnected.
I		2) Check if the connector CN341 on the LGC board is disconnected.
		3) Check if the connector pins are disconnected and the harnesses are
1		open circuited.
1		4) Check if the conductor pattern on the LGC board is short circuited or
1		open circuited.
1		5) Replace the registration sensor.
т Л		6) Replace the LGC board.
¥		

YES

Check the rollers. Clean or replace them.

5.1.2 Paper misfeeding

[E110] Transport jam during duplay printing (paper not reaching registration sensor)

(First page of printing)

Open the jam access cover. Is there paper in front of the registration sensor?

 \downarrow YES \rightarrow Remove the paper.

NO

Is the registration sensor working?

(Perform the input check in the test mode: 03-[FAX]ON/[4]/[E])

I	NO \rightarrow	1) Check if the connector of the registration sensor is disconnected.
I		Check if the connector CN341 on the LGC board is disconnected.
1		3) Check if the connector pins are disconnected and the harnesses are
		open circuited.
		4) Check if the conductor pattern on the LGC board is short circuited or
		open circuited.
1		5) Replace the registration sensor.
\downarrow		6) Replace the LGC board.

YES

<u>Is the transport motor (M17) rotating?</u> (Perform the output check in the test mode: 03-133.183)

I N I I I I I I I I I I I I I I I I I I	IO → R€ 1) 2) 3) 4) 5) 6) 7) 8)	 place the transport motor. Check if the connector of the transport motor is disconnected. Check if the connector CN327 on the LGC board is disconnected. Check if the connector on the transport motor driving PC board is disconnected. Check if the connector pins are disconnected and the harnesses are open circuited. Check if the conductor pattern on the LGC board is short circuited or open circuited. Check if the conductor pattern on the transport motor driving PC board is short circuited or open circuited. Check if the conductor pattern on the transport motor driving PC board is short circuited or open circuited. Replace the LGC board.
\mathbf{v}		

YES

<u>Check if the spring of the follower roller of the intermediate transport roller is working properly.</u>

YES

Check the transport roller. Clean or replace it.

(Second page or later of printing)

Leading edge	of paper not	reaching the fuse	r exit sensor.

I.	YES →	If the paper is damaged, remove the paper and check the followings
	120 /	i lie paper la damagea, remove the paper and check the relievinge.
I		1) Check if the paper is skewed, and correct it if it is skewed.
I		2) Check the paper amount.
		3) Check if the paper is not the one with printing on its back side.
		4) Check if the width of the side guides of the drawer is too narrow.
- I - I.		Check the motor-related adjustment value.
v		

NO

Is the intermediate transport sensor working?

(Perform the input check in the test mode: 03-[FAX]OFF/[1]/[A])

Ι	NO →	1) Are paper dusts accumulated on the intermediate transport sensor?
Ι		2) Check if the harness is not damaged.
\mathbf{V}		Check if the connector is disconnected.

YES

Is the transport motor rotating?

(Perform the output check in the test mode: 03-133,183)

- $NO \rightarrow$ Replace the transport motor.
 - 1) Check if the connector of the transport motor is disconnected.
 - 2) Check if the connector on the LGC board is disconnected.
 - 3) Check if the connector pins are disconnected and 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

Check if the spring of the follower roller of the intermediate transport roller is working properly.

Replace the registration roller(rubber) if not solved.

[E120] Bypass misfeeding (paper not reaching registration sensor)

Open the bypass unit cover. Is there any paper in front of the registration sensor?

 \downarrow YES \rightarrow Remove the paper.

NO

Is the registration sensor working?

(Perform the input check in the test mode: 03-[FAX]ON/[4]/[E])

I	NO →	1) Check if the connector of the registration sensor is disconnected.
I		2) Check if the connector CN341 on the LGC board is disconnected.
I		3) Check if the connector pins are disconnected and the harnesses are
I		open circuited.
1		4) Check if the conductor pattern on the LGC board is short circuited or
1		open circuited.
1		5) Replace the registration sensor.
т Л		6) Replace the LGC board.
v		

YES

Is the width of the side guides of the bypass unit too narrow? Is the paper skewed?

 \downarrow YES \rightarrow Match the width of the side guides and that of the paper.

NO

Is the bypass feed clutch working? (Perform the output check in the test mode: 03-204)
Is the bypass feed sensor working? (Perform the input check in the test mode: 03-
[FAX]OFF/[6]/[G])

Ι	NO →	1) Check if the connector of the bypass feed clutch and bypass feed
I		sensor are disconnected.
I		2) Check if the connector CN327 on the LGC board is disconnected.
ļ		3) Check if the connector pins are disconnected and the harnesses are
1		open circuited.
1		4) Check if the conductor pattern on the LGC board is short circuited or
1		open circuited.
1		5) Replace the bypass feed clutch and bypass feel sensor.
↓		6) Replace the LGC board.
•		

YES

Check the bypass transport roller, feed separation and separation rollers. Clean or replace them.

[E130] 1st drawer misfeeding (paper not reaching 1st drawer feed sensor)

Open the feed cover. Is there any paper in front of the 1st drawer transport sensor?

 \downarrow YES \rightarrow Remove the paper.

NO

<u>Is the 1st drawer feed sensor working?</u> (Perform the input check in the test mode: 03-[FAX]OFF/[1]/[D])

I	NO →	1) Check if the connector of the 1st drawer feed sensor is disconnected.
I		2) Check if the connector CN329 on the LGC board is disconnected.
		3) Check if the connector pins are disconnected and the harnesses are open circuited.
		 Check if the conductor pattern on the LGC board is short circuited or open circuited.
1		Replace the 1st drawer feed sensor.
\downarrow		6) Replace the LGC board.

YES

Is the width of the side guides of the 1st drawer too narrow? Is there any paper skewing?

 \downarrow YES \rightarrow Fit the width of the original guide to that of the paper.

NO

<u>Is the 1st drawer feed clutch working?</u> (Perform the output check in the test mode: 03-201)

 	NO →	 Check if the connector of the 1st drawer feed clutch is disconnected. Check if the connector CN329 on the LGC board is disconnected.
		3) Check if the connector pins are disconnected and the harnesses are open circuited.
		4) Check if the conductor pattern on the LGC board is short circuited or open circuited.
1		5) Replace the 1st drawer feed clutch.
\downarrow		6) Replace the LGC board.

YES

Check the 1st drawer feed roller, separation roller and pickup roller. Clean or replace them.

[E140] 2nd drawer misfeeding (paper not reaching 2nd drawer feed sensor)

Open the drawer feed cover. Is there any paper in front of the 2nd drawer transport sensor?

 \downarrow YES \rightarrow Remove the paper.

NO

Is the 2nd drawer transport sensor working?

(Perform the input check in the test mode: 03-[FAX]OFF/[2]/[D])

I	NO \rightarrow	 Check if the connector of the 2nd drawer feed sensor is discon-
I		nected.
I		2) Check if the connector CN329 on the LGC board is disconnected.
		3) Check if the connector pins are disconnected and the harnesses are
ļ		open circuited.
		4) Check if the conductor pattern on the LGC board is short circuited or
1		open circuited.
1		5) Replace the 2nd drawer feed sensor.
۰ مل		6) Replace the LGC board.
w w		

YES

Is the width of the side guides of the 2nd drawer too narrow? Is there any paper skewing?

 \downarrow YES \rightarrow Fit the width of the original guide to that of the paper.

NO

Is the 2nd drawer feed clutch working?

(Perform the output check in the test mode: 03-202)

 	NO →	 Check if the connector of the 2nd drawer feed clutch is disconnected. Check if the connector CN329 on the LGC board is disconnected.
		3) Check if the connector pins are disconnected and the harnesses are open circuited.
		 Check if the conductor pattern on the LGC board is short circuited or open circuited.
1		Replace the 2nd drawer feed clutch.
\downarrow		6) Replace the LGC board.

YES

Check the 2nd drawer feed roller, separation roller and pickup roller. Clean or replace them.

[E150] 3rd drawer misfeeding (paper not reaching 3rd drawer feed sensor) [E190] Tandem LCF misfeeding (paper not reaching feed sensor of 3rd drawer / Tandem LCF)

Open the feed cover. Is there any paper in front of the 3rd drawer / Tandem LCF feed sensor?

 \downarrow YES \rightarrow Remove the paper.

NO

<u>Is the 3rd drawer / Tandem LCF feed sensor working?</u> (Perform the input check in the test mode: 03-[FAX]OFF/[3]/[D])

	NO →	 Check if the connector of the 3rd drawer / Tandem LCF feed sensor is disconnected.
I		2) Check if the connector CN328 on the LGC board is disconnected.
		3) Check if the connector pins are disconnected and the harnesses are open circuited.
		 Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
। ↓		5) Replace the 3rd drawer / Tandem LCF feed sensor.6) Replace the LGC board.

YES

Is the width of the side guides of the 3rd drawer too narrow? Is there any paper skewing?

 \downarrow YES \rightarrow Fit the width of the original guide to that of the paper.

NO

<u>Is the 3rd drawer / Tandem LCF feed clutch working?</u> (Perform the output check in the test mode: 03-226)

	NO →	1) Check if the connector of the 3rd drawer / Tandem LCF feed clutch is disconnected.
I		2) Check if the connector CN328 on the LGC board is disconnected.
		3) Check if the connector pins are disconnected and the harnesses are open circuited.
		 Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
1		5) Replace the 3rd drawer / Tandem LCF feed clutch.
Ì		6) Replace the LGC board.
\checkmark		

YES

Check the 3rd drawer / Tandem LCF feed roller, separation roller and pickup roller. Clean or replace them.

[E160] 4th drawer misfeeding (paper not reaching 4th drawer feed sensor)

Open the feed cover. Is there any paper in front of the 4th drawer feed sensor?

 \downarrow YES \rightarrow Remove the paper.

NO

<u>Is the 4th drawer feed sensor working?</u> (Perform the input check in the test mode: 03-[FAX]OFF/[4]/[D])

I	NO →	1) Check if the connector of the 4th drawer feed sensor is disconnected.
I		2) Check if the connector CN350 on the LGC board is disconnected.
I		3) Check if the connector pins are disconnected and the harnesses are
		open circuited.
		4) Check if the conductor patterns on the PFP board and LGC board
		are short circuited or open circuited.
1		5) Replace the 4th drawer feed sensor.
L.		6) Replace the LGC board.
v		

YES

Is the width of the side guides of the 4th drawer too narrow? Is there any paper skewing?

 \downarrow YES \rightarrow Fit the width of the original guide to that of the paper.

NO

Is the 4th drawer feed clutch working? (Perform the output check in the test mode: 03-228)

I	NO →	1) Check if the connector of the 4th drawer feed clutch is disconnected.
I		2) Check if the connector CN350 on the LGC board is disconnected.
 		 Check if the connector pins are disconnected and the harnesses are open circuited.
		 Check if the conductor patterns on the PFP board and LGC board are short circuited or open circuited.
1		5) Replace the 4th drawer feed clutch.
\downarrow		6) Replace the LGC board.

YES

Check the 4th drawer feed roller, separation roller and pickup roller. Clean or replace them.

[E180] Option LCF misfeeding (paper not reaching Option LCF feed sensor)

Open the LCF front cover. Is there any paper in front of the LCF feed sensor?

 \downarrow YES \rightarrow Remove the paper.

NO

Is the LCF feed sensor working?

(Perform the input check in the test mode: 03-[FAX]OFF/[5]/[D])

I NO → I I I I I I I I I I I I I I I I I I I	 Check if the connector of the LCF feed sensor is disconnected. Check if either of the connector J851 on the LCF board is disconnected. Check if the connector J850 on the LGC board is disconnected. Check if the connector pins are disconnected and the harnesses are open circuited. Check if the conductor patterns on the LCF board and LGC board are short circuited or open circuited. Replace the LCF feed sensor. Replace the LGF board.
YES	
Is the external LC (Perform the outp	<u>CF transport motor driving?</u> out check in the test mode: 03-122/172)
$\begin{matrix} & \text{NO} \rightarrow \\ \\ \downarrow \end{matrix}$	 Check if the connector of the transport motor is not disconnected. Check if the connector J854 on the board are not disconnected. Check if there is any abnormality at the transport drive unit.
YES	
Is the LCF feed of (Perform the outp	lutch working? but check in the test mode: 03-272)
I NO → I I I I I I I I I I I I I I I I I I I	 Check if the connector of the LCF feed clutch is disconnected. Check if any of the connector J851 on the LCF board is disconnected. Check if the connector CN346 on the LGC board is disconnected. Check if the connector pins are disconnected and the harnesses are open circuited. Check if the conductor patterns on the LCF board and LGC board are short circuited or open circuited. Replace the LCF feed clutch. Replace the LGF board.
VEO	

YES

- 1) Check if there is any abnormality at the transport drive unit.
- 2) Check the LCF feed roller, separation roller and pickup roller. Clean or replace them.
- * Check if the paper weight is within the specified range.

5.1.3 Cover open jam

[E410] Front cover open jam

Is the front cover open?

 \downarrow YES \rightarrow Remove the paper if there is any, then close the cover.

```
NO
```

Is the voltage of 24V being supplied from the power supply unit? (Perform the input check in the test mode: 03-[FAX] ON/[9]/[H])

 	NO →	 Check if the connector for 24 V power supply is disconnected. Check if the connector CN344 on the LGC board is disconnected. Check if the connector pins are disconnected and the harnesses are open circuited. Check if the conductor pattern on the LGC board is short circuited or open circuited. Replace the LGC board.
YES		
Replace	the LGC b	ooard.

[E440] Right lower cover (feed cover) open jam

Is the feed cover open?

 \downarrow YES \rightarrow Remove the paper if there is any, then close the cover.

NO

Is the side door switch working?

(Perform the input check in the test mode: 03-[FAX]ON/[2]/[A])

I	NO →	1) Check if the connector of the feed cover sensor is disconnected.
Ι		2) Check if the connector CN304 on the LGC board is disconnected.
		 Check if the connector pins are disconnected and the harnesses are open circuited.
		 Check if the conductor pattern on the LGC board is short circuited or open circuited.
1		Replace the feed cover sensor.
\downarrow		6) Replace the LGC board.

YES

Replace the LGC board.

5

[E450] Option LCF side cover opened jam

Is the LCF front cover open?

 \downarrow YES \rightarrow Remove the paper if there is any, then close the cover.

NO

<u>Is the LCF side cover opening/closing switch working?</u> (Perform the input check in the test mode: 03-[FAX]OFF/[5]/[B])

	NO →	 Check if the connector of the LCF side cover opening/closing switch is disconnected
Ì		 2) Check if either of the connectors CN100 or CN106 on the LCF board is disconnected.
i I		 3) Check if the connector CN338 on the LGC board is disconnected. 4) Check if the connector pins are disconnected and the barresses are
 		 check if the connector pins are disconnected and the namesses are open circuited. Check if the connector pins are disconnected and the namesses are open circuited.
 		short circuited or open circuited.
I		Replace the LCF side cover opening/closing switch.
I		Replace the LCF board.
I		8) Replace the LGC board.
\checkmark		

YES

- 1) Replace the LCF board.
- 2) Replace the LGC board.

[E460] Right center cover (bypass feed unit cover) open jam

Is the bypass feed unit cover open?

 \downarrow YES \rightarrow Remove the paper if there is any, then close the bypass feed unit cover.

NO

<u>Is the bypass feed unit cover sensor working?</u> (Perform the input check in the test mode: 03-[ENERGY SAVER]OFF/[6]/[H])

Ι	NO →	1) Check if the connector of the bypass feed unit cover sensor is dis-
I		connected.
I		2) Check if the connector CN338 on the LGC board is disconnected.
		 Check if the connector pins are disconnected and the harnesses are open-circuited.
		4) Check if the conductor patterns on the LGC board are short- or open- circuited.
1		Replace the bypass feed unit cover sensor.
\mathbf{v}		6) Replace the LGC board.

YES

Replace the LGC board.
[E470] Left lower cover (exit cover) open jam

Is the exit cover close?

```
\downarrow YES \rightarrow Remove paper if there is any, then close the cover.
```

NO

Is the voltage of 24V being supplied from the power supply unit? (Perform the input check in the test mode: 03-[FAX] ON/[9]/[H])

Ι	NO →	1) Check if the connector for 24V power supply is disconnected.
Ι		2) Check if the connector CN344 on the LGC board is disconnected.
		3) Check if the connector pins are disconnected and the harnesses are
ļ		open circuited.
		 Check if the conductor pattern on the LGC board is short- or open- circuited.
⊥ √		5) Replace the LGC board.

YES

<u>Is the exit cover switch working?</u> (Perform the input check in the test mode: 03-[FAX]OFF/[7]/[A]

	NO →	 Check if the connector of the exit cover switch is disconnected. Check if the connector CN335 on the LGC board is disconnected. Check if the connector pins are disconnected and the harnesses are open circuited. Check if the conductor pattern on the LGC board is short- or open-circuited. Replace the exit cover switch. Replace the LGC board.
\mathbf{v}		

YES

Replace the LGC board.

5.1.4 Transport jam (RADF)

Note:

If any of the ADF board, original length detection sensor, read sensor, small original reverse sensor and large original exit sensor has been replaced in an RADF-related troubleshooting, perform "Automatic adjustment of RADF sensor and EEPROM initialization (05-356)" in the Adjustment mode. If "EEPROM initialization (05-352)" had been performed, be sure to perform "RADF original guide width adjustment (05-367/368)" consecutively.

[E711] Original not reaching the original length detection sensor [E712] Original not reaching the registration sensor

Are the pickup belt, feed roller and separation roller stained or worn out?

 \downarrow YES \rightarrow Clean or replace the rollers or belt.

NO

Is the transport force of the pickup belt, feed roller and separation roller insufficient?

 \downarrow YES \rightarrow Replace the rollers or belt.

NO

Is the original excessively curled or folded?

 \downarrow

YES

Flatten and set it again.

[E714] Feed signal reception jam

Is the original empty sensor working? (Perform the input check: 03-[FAX]ON/[7]/[B])

I	NO →	1) Check if the lever of original empty sensor is working normally.
		2) Check if the connector of the original empty sensor is disconnected.
		3) Check if the connector CN5 on the ADF 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 ADF board is short circuited or open circuited.
1		6) Replace the original empty sensor.
\downarrow		7) Replace the ADF board.

YES

Replace the ADF board.

[E715] Tray lifting movement time-out [E716] Tray lowering movement time-out

Is there any foreign matter which interrupts lifting or lowering the tray?

 \downarrow YES \rightarrow Remove the foreign matter.

NO

Is the connector of the tray lift motor or the connector CN5 on the ADF board disconnected?

 \downarrow YES \rightarrow Reconnect the connector.

NO

Is the harness connecting the ADF board and tray lift motor open circuited?

 \downarrow YES \rightarrow Replace the harness.

NO

Is the connector CN12 or CN15 on the ADF board disconnected?

 \downarrow YES \rightarrow Reconnect the connector.

NO

Are the harnesses connecting the ADF board and the lifting tray upper limit detection sensor or the lifting tray lower limit detection sensor open circuited?

 \downarrow YES \rightarrow Replace the harness.

NO

Replace the ADF board.

[E721] Original not reaching read sensor

[E722] Original not reaching large original exit sensor (during scanning)

[E713] Original stopping at original length detection sensor

[E724] Original stopping at registration sensor

[E731] Original stopping at large original exit sensor

Are the registration roller, read roller and exit roller stained?

 \downarrow

YES

Clean the rollers.

[E723] Original not reaching small original reverse sensor (during scanning)

[E751] Original stopping at original intermediate transport sensor

[E752] Original not reaching original intermediate transport sensor

[E728] Original not reaching small original exit sensor (during scanning)

[E732] Original stopping at small original exit sensor

[E741] Original stopping at small original reverse sensor

[E742] Original not reaching small original reverse sensor (during reverse feeding)

[E743] Original not reaching small original exit sensor (during reverse feeding)

Are the registration roller, read roller and small original reverse roller stained?

 \downarrow YES \rightarrow Clean the rollers.

NO

Are the small original exit flapper and small original reverse flapper operating normally?

 \downarrow

NO

Adjust the small original exit solenoid.

[E725] Original stopping at read sensor (while its back side is being scanned)

Are the read roller and registration roller stained?

 \downarrow YES \rightarrow Clean the rollers.

NO

Replace the rollers.

[E726] Transport/exit signal reception jam

- 1) If the original remains in the RADF, remove it.
- 2) If any paper remains in the equipment, remove it.
- 3) Turn the power OFF and then back ON. If the jam still occurs, lead the following procedure.
- 4) Check the connection between the ADF board and SLG board, and the connection between the ADF board and switching power supply.
 - Are the connection of the connectors and joint connectors normal?
 - Are the connector pins disconnected or are the harnesses open circuited?
- 5) Check if the 24V and 5V outputs of the switching power supply are normal.
- 6) Check if the conductor pattern on the ADF board is short circuited or open circuited.
- 7) Replace the ADF board.
- 8) Check if the conductor pattern on the SLG board is short circuited or open circuited.
- 9) Replace the SLG board.

[E733] Original not reaching large original exit sensor (exit section)

Are the read roller and reverse roller stained?

 \downarrow YES Clean the rollers.

NO

Is the reverse flapper working properly?

↓ YES

NO

Adjust the reverse solenoid.

[E761] Original remaining at original length detection sensor
[E762] Original remaining at original registration sensor
[E763] Original remaining at original width detection sensor
[E764] Original remaining at read sensor
[E765] Original remaining at original intermediate transport sensor
[E766] Original remaining at small original reverse sensor
[E767] Original remaining at small original reverse sensor

[E768] Original remaining at large original exit sensor

Is the paper positioned on the sensor?

 \downarrow YES \rightarrow Remove the paper.

NO

<u>Are the connector on the ADF board disconnected?</u> (CN11,CN13,CN15,CN16)

 \downarrow YES \rightarrow Connect the connector.

NO

Are the sensors working?

(Perform the input check in the test mode: 03-[FAX] OFF/[8]/[E]. OFF/[7]/[H]. OFF/[8]/[F]. OFF/[8]/[G]. OFF/[8]/[H]. OFF/[7]/[G]. OFF/[7]/[F]. OFF/[8]/[D]. OFF/[8]/[C]. OFF/[7]/[E])

 \downarrow YES \rightarrow Replace the ADF board.

NO

Are the connector of the sensors disconnected?

 \downarrow YES \rightarrow Connect the connector.

NO

In case of [E761],[E764],[E766],[E768], perform the automatic adjustment of RADF sensor. In case of [E762],[E763],[E765],[E767], replace the sensor.

[E800] 24 VDC supply off jam

Are the main unit and RADF working normally?

 \downarrow NO \rightarrow Connect the connector.

YES

If the RADF opening / closing switch open circuited?

 \downarrow

YES

Adjust the RADF opening switch.

[E860] Jam access cover open jam

Are the connector CN3 on the ADF board disconnected?

 \downarrow YES \rightarrow Replace the harness.

NO

Is the jam access cover sensor working improperly?

 \downarrow YES \rightarrow Replace the jam access cover sensor.

NO

Is the harness between the ADF board and jam access cover opening/closing switch open circuited?

 \downarrow YES \rightarrow Replace the harness.

NO

Is the jam access cover opening/closing switch working improperly?

 \downarrow YES \rightarrow Replace the cover open/close sensor.

NO

Is the harness between the ADF board and RADF opening/closing switch open circuited?

 \downarrow YES \rightarrow Replace the harness.

NO

Is the RADF opening/closing switch working improperly?

 \downarrow YES \rightarrow Replace the RADF opening/closing switch.

NO

Is 24V supplied from the copier?

 \downarrow YES \rightarrow Replace the ADF board.

NO

Check if the power at the copier is ON.

Is the connector CN11 on the ADF board disconnected?

 \downarrow YES \rightarrow Connect the connector.

NO

Is the harness between the ADF board and RADF open/close sensor open-circuited?

 \downarrow YES \rightarrow Replace the harness.

NO

Is the RADF open/close sensor working improperly?

 \downarrow YES \rightarrow Replace the RADF open/close sensor.

NO

Is the harness between the ADF board and APS operation sensor open-circuited?

 \downarrow YES \rightarrow Replace the harness.

NO

Is the APS operation sensor working improperly?

 \downarrow YES \rightarrow Replace the APS operation sensor.

NO

Replace the ADF board.

5.1.5 Finisher jam

[1] Paper jam in puncher unit

[E9F0] Hole punch jam

Is there any paper remaining on the transport path in the finisher or equipment?

 \downarrow YES \rightarrow Remove the paper.

NO

<u>Is the connector J1 on the punch driver PC board disconnected?</u> <u>Is the harness connecting the punch driver PC board and punch home position sensor</u> (PI3P) open circuited?

 \downarrow YES \rightarrow Connect the connector securely. Replace the harness.

NO

Is the punch home position sensor working properly?

 $\begin{array}{ccc} I & NO \rightarrow & 1) \text{ Connect the connector of the punch home position sensor securely.} \\ \downarrow & & 2) \text{ Replace the punch home position sensor.} \end{array}$

YES

Replace the punch driver PC board.

[2] Paper jam in finisher section

[EA10] Paper transport delay jam

Is there any paper remaining on the transport path in the finisher or equipment?

↓ YES → Remove the paper.

NO

Is the connector J17 on the finisher controller PC board disconnected? Is the harness connecting the finisher controller PC board and inlet sensor (PI1) open circuited?

 \downarrow YES \rightarrow Connect the connector securely. Replace the harness.

NO

Is the inlet sensor working normally? (Check the movement of the actuator.)

Ι	NO →	1) Connect the connector of the inlet sensor securely.
I		2) Attach the actuator securely if its shaft is out of place.
\checkmark		3) Replace the inlet sensor.

YES

Is there any paper remaining on the transport path in the finisher or main unit?

 \downarrow YES \rightarrow Remove the paper.

NO

Is any of the connectors J17, J24, J9 and J11 on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and inlet sensor (PI1) open-circuited?

<u>Is the harness connecting the finisher controller PC board and buffer path inlet paper sensor</u> (PI17) open-circuited?

Is the harness connecting the finisher controller PC board and buffer path paper sensor (PI14) open circuited?

Is the harness connecting the finisher controller PC board and stapling tray sensor (PI4) open circuited?

Is the harness connecting the finisher controller PC board and delivery sensor (PI3) open circuited?

 \downarrow YES \rightarrow Connect the connectors securely. Replace the harnesses.

NO

Is the inlet sensor working properly? (Check the movement of the actuator.) Is the buffer path inlet paper sensor working properly? (Check the movement of the actuator.) Is the buffer path paper sensor working properly? (Check the movement of the actuator.)

Is the stapling tray sensor working properly? (Check the movement of the actuator.) Is the delivery sensor working properly? (Check the movement of the actuator.)

	NO \rightarrow	 Connect the connectors of the sensors securely.
I		2) Attach the actuators securely if their shafts are out of place.
\checkmark		3) Replace the sensors.

YES

Replace the finisher controller PC board.

Is there any paper remaining on the transport path in the finisher?

 \downarrow YES \rightarrow Remove the paper.

NO

Is any of the connectors J17, J24 and J11 on the finisher controller PC board disconnected? Is the harness connecting the finisher controller PC board and inlet sensor (PI1) open-circuited?

Is the harness connecting the finisher controller PC board and buffer path inlet paper sensor(PI17) open-circuited?

Is the harness connecting the finisher controller PC board and buffer path paper sensor (PI14) open circuited?

Is the harness connecting the finisher controller PC board and delivery sensor (PI3) open circuited?

 \downarrow YES \rightarrow Connect the connectors securely. Replace the harnesses.

NO

<u>Is the inlet sensor working properly? (Check the movement of the actuator.)</u> <u>Is the buffer path inlet paper sensor working properly? (Check the movement of the actuator.)</u>

<u>Is the buffer path paper sensor working properly? (Check the movement of the actuator.)</u> Is the delivery sensor working properly? (Check the movement of the actuator.)

I	NO \rightarrow	 Connect the connectors of the sensors securely.
Ι		2) Attach the actuators securely if their shafts are out of place.
\checkmark		3) Replace the sensors.

YES

Is there any paper remaining on the transport path in the finisher or main unit?

 \downarrow YES \rightarrow Remove the paper.

NO

Is the finisher connected with the main unit?

 \downarrow NO \rightarrow Connect the finisher with the main unit.

YES

Is the connector J12 on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and joint sensor (PI15) open-circuited?

 \downarrow YES \rightarrow Connect the connector securely. Replace the harness.

NO

Is the joint sensor working properly?

I NO \rightarrow 1) Connect the connector of the joint sensor securely.

 \downarrow 2) Replace the joint sensor.

YES

Is the door of the finisher closed?

 \downarrow NO \rightarrow Close the door.

YES

Is the connector J12 on the finisher controller PC board disconnected? Is the harness connecting the finisher controller PC board and door opening sensor (PI16) open-circuited?

 \downarrow YES \rightarrow Connect the connector securely. Replace the harness.

NO

Is the door opening sensor working properly?

I NO \rightarrow 1) Connect the connector of the door opening sensor securely.

2) Replace the door opening sensor.

YES

 $\mathbf{1}$

Is the connector J5 on the finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and door switch (MS1) open-circuited?

 \downarrow YES \rightarrow Connect the connector securely. Replace the harness.

NO

Is the connector J5 on the punch driver PC board disconnected?

Is the harness connecting the punch driver PC board and front door switch (MS2P) opencircuited?

 \downarrow YES \rightarrow Connect the connector securely. Replace the harness.

NO

T

Are the upper and front door switches working properly?

- NO \rightarrow 1) Connect the connectors of the door switch and the front door switch securely.
- \downarrow 2) Replace the upper/front door switches.

YES

[EA50] Stapling jam

Is there any paper remaining on the transport path in the finisher or equipment or on the stapling tray?

 \downarrow YES \rightarrow 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?

 \downarrow YES \rightarrow End.

NO

<u>Is the connector J8 on the finisher controller PC board disconnected?</u> <u>Is the harness connecting the finisher controller PC board and stapling home position sensor (PI22) open circuited?</u>

 \downarrow YES \rightarrow Connect the connector securely. Replace the harness.

NO

Is the stapling home position sensor working properly?

Ι	NO →	1) Connect the connector of the stapling home position sensor securely.
\checkmark		2) Replace the stapling home position sensor.

YES

Replace the finisher controller PC board.

[EA60] Early arrival jam

Is there any paper remaining on the transport path in the finisher or equipment?

 \downarrow YES \rightarrow Remove the paper.

NO

Is the connector J17 on the finisher controller PC board disconnected? Is the harness connecting the finisher controller PC board and inlet sensor (PI1) open circuited?

 \downarrow YES \rightarrow Connect the connector securely. Replace the harness.

NO

Is the inlet sensor working properly? (Check the movement of the actuator.)

Ι	NO →	1) Connect the connector of the inlet sensor securely.
Ι		2) Attach the actuator securely if its shaft is out of place.
\checkmark		Replace the inlet sensor.

YES

[3] Paper jam in saddle stitcher section

[EA80] Stapling jam

Is there any paper remaining on the transport path in the finisher, saddle stitcher section or main unit, or on the stapling tray?

 \downarrow YES \rightarrow 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?

 \downarrow YES \rightarrow End

NO

<u>Is the connector J8 on the saddle stitcher controller PC board disconnected?</u> <u>Is the harness connecting the saddle stitcher controller PC board and stitcher home position</u> <u>switch (rear: MS5S, front: MS7S) open-circuited?</u>

 \downarrow YES \rightarrow Connect the connector securely. Replace the harness.

NO

Are the stitcher home position switches working properly?

Ι	NO \rightarrow	1) Connect the connectors of the stitcher home position switches
Ι		securely.
\checkmark		2) Replace the stitcher home position switches.

YES

Replace the saddle stitcher controller PC board.

[EA90] Door open jam

Is there any paper remaining on the transport path in the finisher, saddle stitcher section or main unit?

 \downarrow YES \rightarrow Remove the paper.

NO

Is the saddle stitcher door closed?

 \downarrow NO \rightarrow Close the door.

YES

Is either of the connectors J10 or J11 on saddle stitcher controller PC board disconnected? Are the harnesses connecting the saddle stitcher controller PC board and cover opening sensors (PI2S: front door opening/closing sensor, PI3S:delivery cover sensor, PI9S: inlet cover sensor) open-circuited?

 \downarrow YES \rightarrow Connect the connector securely. Replace the harness.

NO

Are the cover opening sensors working properly?

Ι	NO →	1) Connect the connectors of the cover opening sensors securely.
\mathbf{V}		Replace the cover opening sensors.

YES

Is there any paper remaining on the transport path in the finisher or saddle stitcher section?

 \downarrow YES \rightarrow Remove the paper.

NO

Is any of the connectors J10, J13 and J9 on the saddle stitcher controller PC board disconnected?

Is the harness connecting the saddle stitcher controller PC board and No.1 paper sensor (PI18S) open-circuited?

Is the harness connecting the saddle stitcher controller PC board and No.2 paper sensor (PI19S) open-circuited?

Is the harness connecting the saddle stitcher controller PC board and No.3 paper sensor (PI20S) open-circuited?

Is the harness connecting the saddle stitcher controller PC board and vertical path paper sensor (PI17S) open-circuited?

Is the harness connecting the saddle stitcher controller PC board and delivery sensor (PI11S) open-circuited?

 \downarrow YES \rightarrow Connect the connectors securely. Replace the harnesses.

NO

Is the No.1 paper sensor working properly? (Check the movement of the actuator.) Is the No.2 paper sensor working properly? (Check the movement of the actuator.) Is the No.3 paper sensor working properly? (Check the movement of the actuator.) Is the vertical path paper sensor working properly? (Check the movement of the actuator.) Is the delivery sensor working properly? (Check the movement of the actuator.)

Ι	NO →	 Connect the connectors of the sensors securely.
Ι		2) Attach the actuators securely if their shafts are out of place.
\checkmark		3) Replace the sensors.

YES

Replace the saddle stitcher controller PC board.

[EAB0] Paper transport stop jam

Is there any paper remaining on the transport path in the finisher, saddle stitcher section or main unit?

 \downarrow YES \rightarrow Remove the paper.

NO

Is the connector J17 on finisher controller PC board disconnected?

Is the harness connecting the finisher controller PC board and inlet sensor (PI1) open-circuited?

Is either of the connectors J10 or J9 on the saddle stitcher controller PC board disconnected?

Is the harness connecting the saddle stitcher controller PC board and No.1 paper sensor (PI18S) open-circuited?

Is the harness connecting the saddle stitcher controller PC board and No.2 paper sensor (PI19S) open-circuited?

Is the harness connecting the saddle stitcher controller PC board and No.3 paper sensor (PI20S) open-circuited?

Is the harness connecting the saddle stitcher controller PC board and delivery sensor (PI11S) open-circuited?

 \downarrow YES \rightarrow Connect the connectors securely. Replace the harnesses.

NO

Is the inlet sensor working properly? (Check the movement of the actuator.) Is the No.1 paper sensor working properly? (Check the movement of the actuator.) Is the No.2 paper sensor working properly? (Check the movement of the actuator.) Is the No.3 paper sensor working properly? (Check the movement of the actuator.) Is the delivery sensor working properly? (Check the movement of the actuator.)

I	NO →	1) Connect the connectors of the sensors securely.
Ι		2) Attach the actuators securely if their shafts are out of place.
\checkmark		3) Replace the sensors.

YES

Replace the saddle stitcher controller PC board.

[EAC0] Transport delay jam

Is there any paper remaining on the transport path in the finisher, saddle stitcher section or main unit?

 \downarrow YES \rightarrow Remove the paper.

NO

Is the connector J17 on the finisher controller PC board disconnected? Is the harness connecting the finisher controller PC board and inlet sensor (PI1) open-circuited?

 \downarrow YES \rightarrow Connect the connector securely. Replace the harness.

NO

Is the inlet sensor working properly? (Check the movement of the actuator.)

Ι	NO →	1) Connect the connector of the sensor securely.
Ι		2) Attach the actuator securely if its shaft is out of place.
\checkmark		Replace the sensor.

YES

Replace the finisher controller PC board.

[4] Paper jam in inserter section

[EC00] Inserter feeding delay jam

Are the pickup roller, feed roller and separation roller tainted?

 \downarrow YES \rightarrow Clean up the rollers.

NO

Is the harness between the inserter control board and separation sensor open-circuited?

 \downarrow YES \rightarrow Replace the harness.

NO

Is the separation sensor working improperly?

 \downarrow YES \rightarrow Replace the separation sensor.

NO

Replace the inserter control board.

[EC10] Inserter feeding stop jam

Are the transport roller and reverse roller tainted?

 \downarrow YES \rightarrow Clean up the rollers.

NO

Is the harness between the inserter control board and separation sensor open-circuited?

 \downarrow YES \rightarrow Replace the harness.

NO

Is the separation sensor working improperly?

 \downarrow YES \rightarrow Replace the separation sensor.

NO

Replace the inserter control board.

[EC20] Inserter reverse path delay jam-1 [EC30] Inserter reverse path stop jam-1 [EC40] Inserter reverse path delay jam-2 [EC50] Inserter reverse path stop jam-2

Are the transport roller and reverse roller tainted?

 \downarrow YES \rightarrow Clean up the rollers.

NO

Is the harness between the inserter control board and reverse path sensor is open-circuited?

 \downarrow YES \rightarrow Replace the harness.

NO

Is the reverse path sensor working improperly?

 \downarrow YES \rightarrow Replace the reverse path sensor.

NO

Replace the inserter control board.

[EC60] Inserter transport delay jam-1 [EC70] Inserter transport stop jam-1 [EC80] Inserter transport delay jam-2 [EC90] Inserter transport stop jam-2

Is the transport roller tainted?

 \downarrow YES \rightarrow Clean up the roller.

NO

Is the harness between the inserter control board and transport sensor is open-circuited?

 \downarrow YES \rightarrow Replace the harness.

NO

Is the transport sensor working impropely?

 \downarrow YES \rightarrow Replace the transport sensor.

NO

Replace the inserter control board.

[ECA0] Paper remaining in Inserter Unit at power-ON

Is there any paper remaining at the inserter transport path?

 \downarrow YES \rightarrow Remove the paper.

NO

Are the separation sensor, reverse path sensor and transport sensor working improperly?

 \downarrow YES \rightarrow Replace the sensors.

NO

Replace the inserter control board.

[ECB0] Incorrect setting of paper size for Inserter Unit

Is the paper size on the inserter tray consist with the size set at the copier control panel?

 \downarrow NO \rightarrow Set the same paper size as that on the tray.

YES

Is the separation sensor working improperly?

 \downarrow YES \rightarrow Replace the separation sensor.

NO

Perform the width adjustment of the inserter tray side guide.

[ECC0] Inserter Unit misfeeding

Is the condition improved when the copier power switch is turned OFF/ON?

 \mathbf{V}

NO

- 1) Replace the copier LGC board.
- 2) Replace the IPC board.
- 3) Replace the inserter control board.

[ECD0] Inserter Unit door open jam

Is the problem solved by opening the inserter jam access cover?

 $\mathbf{1}$

NO

- 1) Check the installation state of the cover.
- 2) Replace the cover switch and plate spring.

[5] Other paper jam

[EAD0] Print end command time-out jam

Is the main motor rotating normally?

 \downarrow

NO

- 1) Replace the SYS board.
- 2) Replace the LGC board.

[EAE0] Receiving period time-out jam

Is the finisher working?

 \downarrow YES \rightarrow 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.
- 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 period time-out jam

Is there paper in the equipment?

 \downarrow NO \rightarrow Replace the LGC board.

YES

Are the IPC board and LGC board properly connected to each other?

 \downarrow NO \rightarrow Connect them properly.

YES

Is the harness securely connected to the IPC board?

 \downarrow NO \rightarrow 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?

 \downarrow NO \rightarrow 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.

5.1.6 Paper feeding system related service call

[C130] 1st drawer tray abnormality

[C140] 2nd drawer tray abnormality

[C150] 3rd drawer tray abnormality

[C160] 4th drawer tray abnormality

Does the tray go up?

(Perform the output check in the test mode: 03-276,278,279,280)

Ι	NO →	 Check if the connector of the tray-up motor is disconnected.
Ι		2) Check if the connector CN331 on the LGC board is disconnected.
Ι		3) Check if the connector pins are disconnected and the harnesses are
I		open circuited.
		4) Check if the conductor pattern on the LGC board is short circuited or
		open circuited.
1		5) Replace the LGC board.
\mathbf{v}		

YES

Is the tray-up sensor working?

(Perform the input check in the test mode: 03-[FAX]OFF/[1]/[E], /[2]/[E], /[3]/[E], /[4]/[E])

	NO →	 Check if the connector of the sensor is disconnected. Check if the connector CN329, CN328, CN350 on the LGC board is disconnected. Check if the slit reaches the sensor. Check if the connector pins are disconnected and the harnesses are open circuited. Check if the conductor pattern on the LGC board is short circuited or open circuited. Replace the LGC board.
\checkmark		

YES

- 1) Check if the positioning pin of the drawer is tightly screwed.
- 2) Check if the paper is not caught in the coupling when the tray goes up.
- 3) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 4) Replace the LGC board.

[C180] Tandem LCF tray-up motor is abnormality

Does the tray move?

(Perform the output check in the test mode: 03-270)

 	NO →	 Check if the connector of the Tandem LCF tray-up motor is discon- nected.
 		 2) Check if the connector CN345 on the LGC board is disconnected. 3) Check if the connector pins are disconnected and the harnesses are open circuited.
 ↓		 Check if the conductor patterns on the LCF board and LGC board are short circuited or open circuited. Replace the LCF tray-up moter. Replace the LGC board.

YES

<u>Are the 3rd drawer/tandem LCF tray-up sensor and tandem LCF bottom sensor working?</u> (Perform the input check in the test mode: 03-[FAX]OFF/[3]/[E], /[8]/[F])

l	NO →	 Check if the connectors of the sensors are disconnected. Check if the connector CN328, CN345 on the LGC board is discon-
I		nected.
I		Check if the slit reaches the sensors.
		 Check if the connector pins are disconnected and the harnesses are open circuited.
		Check if the conductor patterns on the LCF board and LGC board are short circuited or open circuited.
\checkmark		6) Replace the LGC board.

YES

1) Check if the driving mechanism is abnormal.

2) Check if the conductor pattern on the LGC board is short circuited or open circuited.

3) Replace the LGC board.

[C1A0] Tandem LCF end fence motor abnormality

<u>Is the Tandem LCF end fence motor working?</u> (Perform the output check in the test mode: 03-207)

I NO→	 Check if the connector of the Tandem LCF end fence motor is dis- connected.
 	 2) Check if the connector CN345 on the LGC board is disconnected. 3) Check if the connector pins are disconnected and the harnesses are open circuited.
 	 4) Check if the conductor patterns on the LCF board and LGC board are short circuited or open circuited. 5) Replace the Tanden LCF end fence motor. 6) Replace the LGC board.

YES

<u>Are the LCF end fence stop position sensors working?</u> (Perform the input check in the test mode: 03-[FAX]OFF/[8]/[G], /[8]/[H])

Ι	NO →	 Check if the connectors of the sensors are disconnected.
Ι		2) Check if the connector CN345 on the LGC board is disconnected.
I		Check if the slit reaches the sensors.
ļ		4) Check if the connector pins are disconnected and the harnesses are
I		open circuited.
I		5) Check if the conductor patterns on the LCF board and LGC board are
1		short circuited or open circuited.
۰ ل		6) Replace the LGC board.
v		

YES

- 1) Check if the driving mechanism is abnormal.
- 2) Check if the conductor pattern on the LGC board is short circuited or open circuited.
- 3) Replace the LGC board.

[C1C0] Option LCF tray-up motor abnormality

Is the tra	y motor dri	ving?				
(Perform	the output	check in	the test	mode:	03-271)

 ↓	NO →	 Check if the connector on the LCF tray motor is not disconnected. Check if the connectors J851 on the LCF board are not disconnected. Check if the connector of the tray-up sensor is not disconnected. Check if the actuator reaches the sensor. Replace the LCF board. Replace the LGC board.
YES		
<u>Is the tra</u> (Perform	<u>y-up sens</u> the input	or working? check in the test mode: 03-[FAX] OFF/[5]/[E]

Ι	NO →	1) Check if the connector of the tray-up sensor is not disconnected.
Ι		2) Check if the connectors J851 on the LCF board are not discon-
I		nected.
		Check if the actuator reaches the sensor.
		4) Check if the connector pins are not disconnected and the harness is
I		not open circuited.
I		5) Replace the LCF board.
Υ.		6) Replace the LGC board.

YES

- 1) Check if the tray lifting mechanism has no abnormality.
- 2) Replace the LCF board.
- 3) Replace the LGC board.

5.1.7 Scanning system related service call

[C260] Peak detection error

Does the exposure lamp light? (Perform the output check in the test mode: 03-267)

I	YES \rightarrow	1) Check if the connectors on the CCD and SLG boards are discon-
I		nected.
		Check if the shading correction plate is detached or dirty.
		 Check if the conductor pattern on the CCD board is short circuited or open circuited.
 		 Check if the conductor pattern on the SLG board is short circuited or open circuited.
i		5) Replace the lens unit.
\downarrow		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 CN1 is disconnected and 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 turning OFF within a specified period of time

Remove the original glass and move the carriages to the paper feeding side. Turn ON the power and check the following items.

Are the carriages slightly moved to the feeding direction? Are the carriages staying at a position other than home position?

I	YES \rightarrow	1) Check if the conductor pattern on the SLG board is short circuited or
I		open circuited.
\checkmark		2) Replace the SLG board.

NO

- 1) Check if the connector pin is disconnected and 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 turning ON within a specified period of time

Remove the original glass and move the carriages to the paper feeding side. Turn ON the power and check the following items.

Do the carriages make a big noise after they arrive at the home position?

I	$YES \rightarrow$	The carriage home position sensor is not turned ON.
		1) Check if the connector of the sensor is disconnected.
		Replace the carriage home position sensor.
		3) Check if the conductor pattern on the SLG board is short circuited or
1		open circulted.
I		4) Replace the SLG board
\checkmark		

NO

The carriages are stopped at the home position and do not move.

- 1) Check if the connector pins are disconnected and 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.

5.1.8 Fuser unit related service call

Caution

Be sure to turn OFF the power and unplug the power cable beforehand when checking the IH control circuit and IH coil.

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 abnormality at power-ON

1.Check the power voltage

 Check if the power voltage is normal.(Is the voltage during the operation ±10% of the rated voltage?)

2.Check the thermistors

- (1) Check if the connectors are disconnected.
- (2) Check if the center and side thermistors (front, rear) are in contact with the surface of the fuser roller properly?
- (3) Check if the harnesses of the center and side thermistors (front, rear) are open circuited.

3. Check the heater

- (1) Check if the IH coil is broken.
- (2) Check if the connector of the IH coil is disconnected.
- (3) Check if the thermostat is blown.
- (4) Check if the connectors on the IH control board are disconnected (AC input connector and LGC I/F connectors CN455).
- (5) Check if the IH control board is abnormal.Replace the IH control board.

4. Check the LGC board

- (1) Check if the connectors CN332,CN334 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/C449] Heater abnormality after abnormality judgment

<u>1,2.3. Check the thermistors, Heater and LGC board</u> Check the above components following the procedures 1, 2 and 3 for [C411/C412].

4. Clear the status counter

Change the current status counter value (08-400) "3", "5", "6", "9", "19", "21", "22", "23", "24", "25", "27" or "29" 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" or "6"
 - The error occurred after the equipment has become ready: "7"
 - The temperature detected by the center thermistor is 240°C or higher, the temperature detected by the side thermistor is 250°C or higher or the temperature detected by the edge thermistor is 270°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: "26" or "27"
 - A paper jam occurred: "28" or "29"

[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 thermistor is in contact with the surface of the fuser roller properly.
- (3) Check if the harness of the pressure roller thermistor is open circuited.

2. Check the LGC board

- (1) Check if the connector CN332,CN334 is disconnected.
- (2) Check if the conductor pattern on the board is short circuited or open circuited.
- (3) Replace the LGC board.

3. Clear the status counter

Change the current status counter value (08-400) "5", "6", "7", "8", "18", "20", "24", "26" or "28" to "0"

[C471/472/473/474/475] IH power voltage abnormality or IH initial abnormality

1. Check the AC input voltage

Check if the AC input voltage is within the specified range.

(especially when the heater becomes ON after the power is turned ON (the copier is warming up))

2. Check the thermostat

Check if the thermostat is blown.

3. Check the IH control board

- (1) Check if the AC input connector on the IH control board, the LGC I/F connectors CN455 is disconnected?
- (2) Check if the fuse on the IH control board has blown.
- (3) Replace the IH control board.

4. Check the LGC board

- (1) Check if the connector CN332 and CN334 are disconnected.
- (2) Check if the conductor pattern on the board is short- or open-circuited.
- (3) Replace the LGC board.

5. Clear the status counter

Change the values "10", "11", "12" or "16" of the status counter (08-400) to "0".

[C480] IH abnormality

1. Check the IH control board

- (1) Check if the IGBT or IGBT radiation plate are normal. (Is the radiation plate securely attached?)
- (2) Check if the conductor pattern on the board is short- or open-circuited.
- (3) Replace the IH control board.

2. Clear the status counter

Change the values "15" of the status counter (08-400) to "0".

[C481] IGBT abnormality

<u>1. Check the operation of the IH fan</u> Check if the IH fan is rotating normally. (Is the connector securely connected?)

2. Check the IH control board

- (1) Check if the IGBT or IGBT radiation plate are normal. (Is the radiation plate securely attached?)
- (2) Check if the conductor pattern on the board is short- or open-circuited.
- (3) Replace the IH control board.

3. Clear the status counter

Change the values "14" of the status counter (08-400) to "0".

[C490] IH control circuit abnormality or IH coil abnormality

1. Check the power voltage

Is the voltage normal? (Is the voltage during the operation ±10% of the rated voltage?)

2. Check the IH control board

- (1) Check if the harness of IH coil is loosened.
- (2) Check if the conductor pattern on the board is short circuited or open circuited.
- (3) Replace the IH control board.

3. Check the IH coil

- (1) Check if the coil is broken or shorted.
- (2) Replace the IH coil.

4. Clear the status counter

Change the current status counter value (08-400) "17" to "0".

[C47X], [C481] and [C490] can be cleared by turning OFF and ON the main switch as long as the problem was solved, and the status counter does not have to be changed to "0".

The value of the status counter remains until the next service call overwrites the value.

[C4A0] End of cleaning web

- (1) Check if the cleaning web is remaining.
- (2) Check if the connector CN332 on the LGC board is not disconnected.
- (3) Check if there is no abnormality at the web sensor.
- (4) Replace the LGC board.

[C4B0] IGBT overheating abnormality

1. Check the LGC board

- (1) Check if the conductor pattern on the board is short circuited or open circuited.
- (2) Check if NVRAM is mounted.
- (3) Replace the LGC board.

2. Clear the status counter

Change the current status counter value (08-400) "30 or more" or "4" to "0".

[CD50] Web motor signal path abnormality

- (1) Check if the connector of the web motor and connector pins are not disconnected.
- (2) Check if the harness at the fuser unit is not open-circuited.
- (3) Check if the connector of the LGC board and connector pins are not disconnected.
- (4) Check if the harness between the connector of the LGC board and the fuser unit is not open circuited.
- (5) Replace the LGC board.
- (6) Replace the fuser unit.

5.1.9 Communication related service call

[C550] RADF interface error

- (1) Check if the harness connecting the ADF board and SLG board is disconnected or open circuited.
- (2) Check if the conductor pattern on the ADF 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 ADF board.
- (5) Replace the SLG board.

[C560] Communication error between Engine-CPU and PFC

- (1) Check if the conductor pattern around IC57 and IC58 is not short- or open-circuited.
- (2) Replace the LGC 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) Check if the specified finisher is attached.
- (2) Check if the harness connecting the IPC board and the finisher controller PC board is disconnected or open circuited.
- (3) Check if the conductor pattern on the IPC board is short circuited or open circuited.
- (4) Check if the conductor pattern on the finisher controller PC board is short circuited or open circuited.
- (5) Replace the IPC board.
- (6) Replace the finisher controller PC board.

[C590] Communication error between Engine-CPU and Laser-CPU

- (1) Check if the harness between the LGC board and PLG board is not disconnected or open-circuited.
- (2) Check if the conductor pattern around IC13, IC55, IC125 and CN342 on the LGC board is not short circuited or open circuited.
- (3) Check if the conductor pattern around IC9, IC25, IC32 and CN204 on the PLG board is not shortor opencircuited.
- (4) Check if the connector CN103, CN104 on the SYS board is disconnected.
- (5) Replace the LGC board.
- (6) Replace the PLG board.

[F070] Communication error between System-CPU and Engine-CPU [F110] Communication error between System-CPU and Scanner-CPU [F111] Scanner response abnormality

- (1) Check if the connector CN102, CN103 on the SYS board is disconnected.
- (2) Check if the connector CN10 on the SLG board is disconnected.
- (3) Check if the harness connecting the SYS board and SLG board is disconnected or open circuited.
- (4) Check if the harness connecting the SYS board and LGC board is disconnected or open circuited.
- (5) Check the version of the system ROM on the SYS board.
- (6) Check the version of the engine ROM version on the LGC board.
- (7) Check the version of the scanner ROM version on the SLG board.
- (8) Replace the SYS board.
- (9) Replace the SLG board.
- (10) Replace the LGC board.

5.1.10 RADF related service call

Note:

If any of the ADF board, original length detection sensor, read sensor, small original reverse sensor and large original exit sensor has been replaced in an RADF-related troubleshooting, perform "Automatic adjustment of RADF sensor and EEPROM initialization (05-356)" in the Adjustment mode. If "EEPROM initialization (05-352)" had been performed, be sure to perform "RADF original guide width adjustment (05-367/368)" consecutively.

[C730] EEPROM error

- (1) Check the ADF board, mainly IC3, for short circuits and open circuits.
- (2) Replace the ADF board.

[C820] Read sensor adjustment error

- (1) Check if there is any foreign matter between the read sensor and the reflecting mirror. Check if the reflecting mirror is dirty.
- (2) Check if the harness connecting the read sensor and the ADF board is open circuited.
- (3) Check the circuits and connectors on the ADF board, mainly IC6, IC11 and CN11 and CN15, for short circuits and open circuits.
- (4) Replace the read sensor.
- (5) Replace the ADF board.

[C830] Original length sensor adjustment error

- (1) Check if there is any foreign matter between the original length detection sensor and reflecting mirror. Check if the reflecting mirror is dirty.
- (2) Check if the harness connecting the original length detection sensor and the ADF board is open circuited.
- (3) Check the circuits and connectors on the ADF board, mainly IC6, IC11 and CN15, for short circuits and open circuits.
- (4) Replace the original length detection sensor.
- (5) Replace the ADF board.

[C840] Small original reverse sensor adjustment error

Is there any extraneous material between the small original reverse sensor and reflective mirror?

 \downarrow YES \rightarrow Remove the extraneous material.

NO

Is the reflective mirror tainted?

 \downarrow YES \rightarrow Clean up the mirror.

NO

Is the conductor pattern around IC6, IC11 and CN16 on the ADF board short- or open-circuited?

 \downarrow YES \rightarrow Replace the ADF board.

NO

Replace the small original reverse sensor.

[C850] Tray lift motor abnormality

Is the lifting tray lifted when originals are set on the feeding tray?

I	NO →	Is the loading of the lifting tray normal?			
 		 ↓	NO →	Adjust the mechanical loading. Remove, if any, extraneous materials.	
1		YES			
l		Is the po	ower volta	ge for CN5-5 and CN6 on the ADF board 24V?	
I I		\checkmark	NO →	Replace the ADF board.	
1		YES			
1		Replace the lifting tray motor.			
\downarrow					

YES

Is the lifting tray upper limit detection sensor working properly when the lifting tray is lifted?

 \downarrow NO \rightarrow Replace the lifting tray upper limit detection sensor.

YES

Is the lifting tray lowered when originals are removed from the original tray?

I	NO →			
 ↓		 ↓	NO →	Is the loading of the lifting tray abnormal, adjust the mechanical loading. Remove, if any, extraneous materials.
YES		YES		
1) Repl	ace the lift	ing tray l	ower limit	detection sensor.

2) Replace the ADF board.

[C860] Large original exit sensor adjustment error

Is there any extraneous material between the large original exit sensor and reflective mirror?

 \downarrow YES \rightarrow Remove the extraneous material.

NO

Is the reflective mirror tainted?

 \downarrow YES \rightarrow Clean up the mirror.

NO

Is the conductor pattern around IC6, IC11 and CN11 on the ADF board short circuited or open circuited?

I	YES →	1) Replace the ADF board.
I		2) Perform the sensor automatical adjustment of ADF and tray width
$\mathbf{\Lambda}$		sensor adjustment.

NO

1) Replace the large original exit sensor.

2) Perform the sensor automatical adjustment of ADF

[C870] Temperature detection error

Check if the conductor pattern around thermistor(TH1) on the ADF board is not short circuited or open circuited. Replace the ADF board.
5.1.11 Laser optical unit related service call

[CA10] Polygonal motor abnormality

Is the polygonal motor rotating?

	NO →	 (e-STUDIO520/523,e-STUDIO600/603,e-STUDIO720/723) 1) Check if the connector CN209 on the PLG board is disconnected. 2) Check if the harness is open circuited and the connector pin is disconnected. 3) Check if the following signals are transmitted on the pins of the connector CN209 on the PLG board. Pin 1: 27±1V, Pin 2: GND, Pin 3: Less than or equal to 1V (Lo), Pin 4: Less than or equal to 0.7 V (Lo), Pin 5: Do not touch. 4) Check if the conductor pattern on the PLG board is short circuited or open circuited. 5) Replace the laser optical unit. 6) Replace the PLG board. (e-STUDIO850/853) 1) Check if the connector CN206 on the PLG board is disconnected. 2) Check if the harness is open circuited and the connector pin is disconnected.
		 Check if the connector CN206 on the PLG board is disconnected. Check if the harness is open circuited and the connector pin is disconnected. Check if the following signals are transmitted on the pins of the connector CN206 on the PLG board.
i I		Pin 1: 27±1V, Pin 2: GND, Pin 3: Less than or equal to 1V (Lo), Pin 4: Less than or equal to 0.7 V (Lo), Pin 5: Do not touch.
l I		 Check if the conductor pattern on the PLG board is short circuited or open circuited.
		5) Replace the laser optical unit.6) Replace the PLG board.
\checkmark		

YES

Is the deformed image output?

NO →	(e-STUDIO520/523,e-STUDIO600/603,e-STUDIO720/723)
	 Check if the connector CN209 on the PLG board is about to be dis- connected
	2) Check if the harness is about to be open circuited and the connector
	pin is disconnected.
	 Check if the following signals are transmitted on the pins of the con- nector CN209 on the PLG board.
	Pin 1: 27±1V, Pin 2: GND, Pin 3: Less than or equal to 1V (Lo),
	Pin 4: Less than or equal to 0.7 V (Lo), Pin 5: Do not touch.
	 Check if the conductor pattern on the PLG board is short circuited or open circuited.
	5) Check if the laser unit cooling fan is not stopped.
	6) Check if the intake area of the laser unit cooling fan is not blocked.
	7) Replace the laser optical unit.
	8) Replace the PLG board.
	(e-STUDIO850/853)
	1) Check if the connector CN206 on the PLG board is about to be dis-
	2) Check if the harness is about to be open circuited and the connector
	pin is disconnected.
	3) Check if the following signals are transmitted on the pins of the con-
	nector CN206 on the PLG board.
	Pin 1: 27±1V, Pin 2: GND, Pin 3: Less than or equal to 1V (Lo),
	Pin 4: Less than or equal to 0.7 V (Lo), Pin 5: Do not touch.
	4) Check if the conductor pattern on the PLG board is short circuited or
	open circuited.
	5) Check if the laser unit cooling fan is not stopped.
	6) Check if the intake area of the laser unit cooling fan is not blocked.
	7) Replace the laser optical unit.
	Replace the PLG board.

YES

| | |

- 1) Check if the conductor pattern on the PLG board is short circuited or open circuited.
- 2) Check if the grounding wire of the high-voltage unit (e.g. developer unit, transfer unit) is grounded securely.
- 3) Check if the bias contact point of the high-voltage unit is contacted securely. (Check if the point is not stained either.)
- 4) Check if the metal plates of the transport system are grounded securely.
- 5) Check if the equipment is grounded securely?
- 6) Check if the laser unit cooling fan is not stopped.
- 7) Check if the intake area of the laser unit cooling fan is not blocked.
- 8) Replace the laser optical unit.

[CA20] H-sync detection error

(e-STUDIO520/523,e-STUDIO600/603,e-STUDIO720/723)

Is the harness connecting the connector (J207) on the PLG board and the connector on the LDR1 board open circuited? Are the connectors damaged or disconnected?

Is the harness connecting the connector (CN202) on the PLG board and the connector on the SNS board open circuited? Are the connectors damaged or disconnected?

(e-STUDIO850/853)

Is the harness connecting the connector (J207) on the PLG board and the connector on the LDR1 board open circuited? Are the connectors damaged or disconnected?

Is the harness connecting the connector (J208) on the PLG board and the connector on the LDR1 board open circuited? Are the connectors damaged or disconnected?

Is the harness connecting the connector (J210) on the PLG board and the connector on the SNS board open circuited? Are the connectors damaged or disconnected?

- NO \rightarrow (e-STUDIO520/523,e-STUDIO600/603,e-STUDIO720/723)
 - 1) Replace the harness. Reconnect the connector.
 - 2) Check if the connector(J207) on PLG board hold the harness securely?
 - Check if the following signals are transmitted on the pin of the connector(CN1) on the PLG board?
 Pin 1: 5V, Pin 3: 0V
 - 4) Replace the laser optical unit.
 - (e-STUDIO850/853)
 - 1) Replace the harness. Reconnect the connector.
 - 2) Check if the connector(J207,J208) on PLG board hold the harness securely?
 - 3) Replace the laser optical unit.

YES

 $\mathbf{\gamma}$

- 1) Check if the conductor pattern on the PLG board is short circuited or open circuited.
- 2) Check if the grounding wire of the high-voltage unit (e.g. developer unit, transfer unit) is grounded securely.
- 3) Check if the bias contact point of the high-voltage unit is contacted securely. (Check if the point is not stained either.)
- 4) Check if the metal plates of the transport system are grounded securely.
- 5) Check if the equipment is grounded securely?
- 6) Replace the laser optical unit.

[CA30] Secondary scanning coarse adjustment error [e-STUDIO850/853]

- [CA41] Window comparator abnormality (error during secondary scanning control) [e-STUDIO850/853]
- [CA42] Sensor signal busy error (error during secondary scanning control) [e-STUDIO850/853]
- [CA43] Comparator abnormality [e-STUDIO850/853]
- [CA44] Beam sensor detection error [e-STUDIO850/853]
- [CA50] Laser power adjustment error [e-STUDIO850/853]
- [CAA0] Secondary scanning fine adjustment error [e-STUDIO850/853]
- [CAB0] Inter-page correction error of secondary scanning [e-STUDIO850/853]
- [CAC0] Primary scanning dot adjustment error [e-STUDIO850/853]
- [CAF0] Inter-page correction error of primary scanning [e-STUDIO850/853]

[CD00] Laser initialization time-out [e-STUDIO850/853]

Is any harness between the PLG board and galvanic mirror, PLG board and laser drive PC board and PLG board and H-Sync detection PC board open circuited or any connector disconnected?

 \downarrow YES \rightarrow Replace the harness. Reconnect the connector.

NO

- 1) Replace the PLG board.
- 2) Replace the laser optical unit.

[CA90] Image data transmission error of sys board

Is the harness between the PLG board and SYS board open-circuited or the connector disconnected?

 \downarrow YES \rightarrow Replace the harness. Reconnect the connector.

NO

- 1) Replace the PLG board.
- 2) Replace the SYS board.

5.1.12 Finisher related service call

[CB10] Feed motor abnormality

```
[Procedure 1]
Is second feed motor (M8) rotating in reverse at the fixed timing?
                     Replace second feed motor or finisher controller PC board.
          NO \rightarrow
   \mathbf{r}
YES
Is the shutter securely attached to the shutter upper/lower bars?
          NO →
                     Attach it securely.
   \mathbf{r}
YES
Turn the feed roller-2 in reverse by hand. Do the shutter upper/lower bars move up and
down?
          NO \rightarrow
                     Fix the mechanism including the shutter upper/lower bars and gears of
    T
   \mathbf{1}
                     the feed roller-2.
YES
Is the shutter closed detecting switch (MS4) working normally?
          NO \rightarrow
                     Replace the switch.
   \mathbf{1}
YES
Replace the finisher controller PC board.
[Procedure 2]
Is second feed motor (M8) rotating in reverse at the fixed timing?
   \mathbf{1}
          NO \rightarrow
                     Replace second feed motor or finisher controller PC board.
YES
Is the shutter securely attached to the shutter upper/lower bars?
   \mathbf{1}
          NO \rightarrow
                     Attach it securely.
YES
Turn feed roller-2 in reverse by hand. Do the shutter upper/lower bars move up and down?
                     Fix the mechanism including the shutter upper/lower bars and gears of
    Т
          NO \rightarrow
   \mathbf{\gamma}
                     the feed roller-2.
YES
Is the shutter open sensor (PI5) working normally?
          NO \rightarrow
                     Replace the sensor.
   \mathbf{1}
YES
```

Replace the finisher controller PC board.

[Procedure 3]

Check the safety zone switch (MS3). Is the switch working normally?

 \downarrow NO \rightarrow Replace the switch.

YES

Is the safety zone switch (MS3) correctly pressed?

 \downarrow NO \rightarrow Fix the mechanism.

YES

Is the shutter closed detecting switch (MS4) working normally?

↓ NO \rightarrow Replace the switch.

YES

Is the shutter closed detecting switch (MS4) correctly pressed?

 \downarrow NO \rightarrow Fix the mechanism.

YES

Replace the finisher controller PC board.

[CB20] Delivery motor abnormality

Rotate the delivery motor by hand. Does it rotate smoothly?

 \downarrow NO \rightarrow Fix the mechanism.

YES

Is the delivery motor clock sensor (PI10) working normally?

 \downarrow NO \rightarrow Replace the sensor.

YES

Does the voltage between J11-4 and -5 on the finisher controller PC board become 24V when the delivery motor starts rotating?

 \downarrow NO \rightarrow Replace the finisher controller PC board.

YES

Is the wiring between the delivery motor and finisher controller PC board correct?

 \downarrow YES \rightarrow Correct the wiring.

NO

Replace the motor.

[CB30] Tray lift motor abnormality

[Procedure 1]

Is the tray 1 home position sensor (PI8) working properly?

↓ NO → Replace the tray 1 home position sensor.

YES

Is the tray 1 lifting mechanism working properly?

 \downarrow NO \rightarrow Correct the defect of the mechanism.

YES

Is 24V supplied to the tray1 lifting motor (M5) from the finisher control board at the timing of tray driving?

 \downarrow NO \rightarrow Replace the finisher control board.

YES

Is the harness between the finisher control board and tray 1 lifting motor normal?

 \downarrow NO \rightarrow Replace the harness.

YES

Replace the tray 1 lifting motor.

[Procedure 2]

Is the tray 1 lifted/lowered?

Ι	YES \rightarrow	<u>Is the w</u>	viring betw	een the finisher controller PC board and tray 1 lifting
Ι		<u>motor r</u>	normal?	
 		\checkmark	NO →	Correct the wiring.
l		YES		
т Л		Replace	e the tray	1 lifting motor.

NO

Is the power supplied to the motor from the finisher control board at the timing of tray 1 lifting?

 \downarrow NO \rightarrow Replace the finisher control board.

YES

Is there any abnormality at the tray 1 lifting mechanism?

 \downarrow YES \rightarrow Correct the defect of the mechanism.

YES

Correct the defect of the mechanism.

[Procedure 3]

Is the tray 2 home position sensor (PI25) working properly?

 \downarrow NO \rightarrow Replace the tray 2 home position sensor.

YES

Is the tray 2 lifting mechanism working properly?

 \downarrow NO \rightarrow Correct the defect of the mechanism.

YES

Is 24V supplied to the tray 2 lifting motor (M10) from the finisher control board at the timing of tray driving?

 \downarrow NO \rightarrow Replace the finisher control board.

YES

Is the harness between the finisher control board and tray 2 lifting motor normal?

 \downarrow NO \rightarrow Replace the harness.

YES

Replace the tray 2 lifting motor.

[Procedure 4]

Is the tray 2 lifted/lowered?

I	YES \rightarrow	Is the ha	arness bet	ween the finisher control board and tray 2 lifting motor
I		normal?	-	
 		\checkmark	NO \rightarrow	Correct the wiring.
		YES		
ı ↓		Replace	e the tray 2	2 lifting motor.

NO

.

Is the power supplied to the motor from the finisher control board at the timing of tray 2 lifting?

 \downarrow NO \rightarrow Replace the finisher control board.

YES

Is there any abnormality at the tray 2 lifting mechanism?

 \downarrow YES \rightarrow Correct the defect of the mechanism.

NO

Replace the tray 2 lifting motor.

[Procedure 5]

Is the tray lifting mechanism working properly?

 \downarrow NO \rightarrow Correct the defect of the mechanism.

YES

Is the tray coming close detection switch working properly?

 \downarrow NO \rightarrow Replace the switch.

YES

Replace the finisher controller PC board.

[CB40] Alignment motor (rear) abnormality

Is the alignment guide home position sensor (PI5S) working normally?

 \downarrow NO \rightarrow Replace the sensor.

YES

Is the wiring between the finisher controller PC board and the alignment motor (M5S) correct?

 \downarrow YES \rightarrow Correct the wiring.

NO

Is there any mechanical problem with the alignment guide movement path?

 \downarrow YES \rightarrow Fix the mechanism.

NO

Is the problem solved by replacing the alignment motor?

↓ NO → Replace the finisher controller PC board.

YES

END

[CB50] Staple motor abnormality

Is the wiring between the finisher controller PC board and the stapler normal?

 \downarrow NO \rightarrow Correct the wiring.

YES

Is the problem solved by replacing the stapler?

 \downarrow YES \rightarrow END

NO

Replace the finisher controller PC board.

5

[CB60] Stapler shift motor abnormality

Is the stapler shift home position sensor (PI7) working normally?

 \downarrow NO \rightarrow Replace the sensor.

YES

Is the wiring between the finisher controller PC board and the stapler shift motor (M4) correct?

 \downarrow YES \rightarrow Correct the wiring.

NO

Is there any mechanical problem with the stapler stand motion path?

 \downarrow YES \rightarrow Fix the mechanism.

NO

Try replacing the staple shift motor. Is the problem corrected?

 \downarrow YES \rightarrow END

NO

Replace the finisher controller PC board.

[CB70] Stack amount detection sensor abnormality

[Procedure 1]

Is the problem solved by turning OFF and ON the power of the equipment?

 \downarrow YES \rightarrow END

NO

Is the wiring between the finisher controller PC board and the height sensor (PS1) correct?

 \downarrow YES \rightarrow Correct the wiring.

NO

Is the voltage between J6-2(+) and J6-4(-) on the finisher controller PC board 5V DC?

 \downarrow NO \rightarrow Replace the finisher controller PC board.

YES

Re-adjust the height sensor. Replace the height sensor if it still causes the problem.

[Procedure 2]

Is the connector J6 on the finisher controller PC board, J114 of the height sensor (PS1) or relay connector J212 and J213 disconnected?

 \downarrow YES \rightarrow Connect the connector(s).

NO

Is the voltage between J6-2(+) and J6-4(-) on the finisher controller PC board 5V DC?

 \downarrow NO \rightarrow Replace the finisher controller PC board.

YES

Is the wiring between the finisher controller PC board and height sensor correct?

 \downarrow YES \rightarrow Correct the wiring.

NO

Replace the height sensor.

[Procedure 3]

Is the problem solved by readjusting the DIP switch?

 \downarrow YES \rightarrow END

NO

Is the wiring between the finisher controller PC board and height sensor (PS1) correct?

 \downarrow YES \rightarrow Correct the wiring.

NO

Is the voltage between J6-2(+) and J6-4(-) on the finisher controller PC board 5V DC?

 \downarrow NO \rightarrow Replace the finisher controller PC board.

YES

Replace the height sensor.

[CB80] Backup RAM data abnormality

Is the problem solved by turning the power of the equipment OFF and ON?

 \downarrow YES \rightarrow End.

NO

Replace the finisher controller PC board. Replace tha punch driver PC board.

[CB90] Paper pushing plate motor abnormality

[Procedure 1]

Is the paper pushing plate home position sensor (PI14S) working normally?

 \downarrow NO \rightarrow Replace the sensor.

YES

Is the paper pushing plate motor (M8S) operating at the fixed timing?

 \downarrow YES \rightarrow Replace the saddle stitcher controller PC board.

NO

Is the paper pushing plate drive mechanism normal?

 \downarrow NO \rightarrow Fix the mechanism.

YES

Is the problem solved by replacing the paper pushing plate motor (M8S)?

 \downarrow NO \rightarrow Replace the saddle stitcher controller PC board.

YES

END

[Procedure 2]

Is the paper pushing plate top position sensor (PI15S) working normally?

 \downarrow NO \rightarrow Replace the sensor.

YES

Is the paper pushing plate motor (M8S) operating at the fixed timing?

 \downarrow YES \rightarrow Replace the saddle stitcher controller PC board.

NO

Is there any problem with the paper pushing plate drive mechanism?

 \downarrow YES \rightarrow Fix the mechanism.

NO

Is the problem solved by replacing the paper pushing plate motor (M8S)?

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 \downarrow NO \rightarrow Replace the saddle stitcher controller PC board.

YES

END

[Procedure 3]

Is the paper pushing plate motor clock sensor (PI1S) working normally?

 \downarrow NO \rightarrow Replace the sensor.

YES

Is the paper pushing plate motor (M8S) operating at the fixed timing?

 \downarrow YES \rightarrow Replace the saddle stitcher controller PC board.

NO

Is there any problem with the pushing plate drive mechanism?

 \downarrow YES \rightarrow Fix the mechanism.

NO

Is the problem solved by replacing the paper pushing plate motor (M8S)?

 \downarrow NO \rightarrow Replace the saddle stitcher controller PC board.

YES

END

[CBA0] Stitch motor (front) abnormality [CBB0] Stitch motor (rear) abnormality

Are the front and rear stitchers and their stands installed properly?

 \downarrow NO \rightarrow Install them properly.

YES

Are the stitcher home position switches (MS7S/MS5S) on the front and rear stitchers working normally?

 \downarrow NO \rightarrow Replace the front or rear stitcher.

YES

Are the front and rear stitchers operating at the fixed timing?

 \downarrow NO \rightarrow Replace the front or rear stitcher.

YES

Check the wiring between the stitcher and saddle stitcher controller PC board. If there is no problem, replace the controller PC board.

[CBC0] Alignment motor abnormality

Is the alignment plate home position sensor (PI5S) working normally? NO \rightarrow Replace the sensor. $\mathbf{1}$ YES Is the alignment motor (M5S) operating at the fixed timing? $\mathbf{1}$ YES \rightarrow Replace the saddle stitcher controller PC board. NO Is the alignment plate drive mechanism normal? NO → Fix the mechanism. $\mathbf{\Lambda}$ YES Is the problem solved by replacing the alignment motor (M5S)? NO \rightarrow Replace the saddle stitcher controller PC board. $\mathbf{1}$ YES

[CBD0] Guide motor abnormality

Is the guide home position sensor (PI13S) working normally?

 \downarrow NO \rightarrow Replace the sensor.

YES

END

Is the guide motor (M3S) operating at the fixed timing?

 \downarrow YES \rightarrow Replace the saddle stitcher controller PC board.

NO

Is the guide plate drive mechanism normal?

 \downarrow NO \rightarrow Fix the mechanism.

YES

Is the problem solved by replacing the guide motor (M3S)?

 \downarrow NO \rightarrow Replace the saddle stitcher controller PC board.

YES

END

[CBE0] Paper folding motor abnormality

Is the paper folding motor clock sensor (PI4S) working normally? $\mathbf{1}$ NO \rightarrow Replace the sensor. YES Is the paper folding motor (M2S) operating at the fixed timing? $\mathbf{1}$ YES \rightarrow Replace the saddle stitcher controller PC board. NO Is the paper folding roller drive mechanism normal? NO → Fix the mechanism. $\mathbf{\Lambda}$ YES Is the problem solved by replacing the paper folding motor (M2S)? NO \rightarrow Replace the saddle stitcher controller PC board. $\mathbf{1}$ YES END

[CBF0] Paper positioning plate motor abnormality

Is the paper positioning plate home position sensor (PI7S) working normally?

 \downarrow NO \rightarrow Replace the sensor.

YES

Is the paper positioning plate operating at the fixed timing?

 \downarrow YES \rightarrow Replace the saddle stitcher controller PC board.

NO

Is the paper positioning plate drive mechanism normal?

 \downarrow NO \rightarrow Fix the mechanism.

YES

Is the problem solved by replacing the paper positioning plate motor (M4S)?

 \downarrow NO \rightarrow Replace the saddle stitcher controller PC board.

YES

END

[CC00] Sensor connector connection error abnormality

[Procedure 1]

Is the guide home position sensor (PI13S) connected to the saddle stitcher controller PC board?

 \downarrow NO \rightarrow Connect it to the board.

YES

Is the wiring between the sensor and the saddle stitcher correct?

 \downarrow YES \rightarrow Correct the wiring.

NO

Is 5V DC being supplied from J9-7 on the saddle stitcher controller PC board?

 \downarrow NO \rightarrow Replace the saddle stitcher controller PC board.

YES

Is J9-11 on the saddle stitcher controller PC board correctly connected to the ground?

 \downarrow NO \rightarrow Replace the saddle stitcher controller PC board.

YES

END

[Procedure 2]

Is the paper pushing plate home position sensor (PI14S) connected to the saddle stitcher controller PC board?

 \downarrow NO \rightarrow Connect it to the board.

YES

Is the wiring between the sensor and the saddle stitcher correct?

 \downarrow YES \rightarrow Correct the wiring.

NO

Is 5V DC being supplied from J9-10 on the saddle stitcher controller PC board?

 \downarrow NO \rightarrow Replace the saddle stitcher controller PC board.

YES

Is J9-11 on the saddle stitcher controller PC board properly connected to the ground?

 \downarrow NO \rightarrow Replace the saddle stitcher controller PC board.

YES

END

[Procedure 3]

Is the paper pushing plate top position sensor (PI15S) connected to the saddle stitcher controller PC board?

 \downarrow NO \rightarrow Connect it to the board.

YES

Is the wiring between the sensor and the saddle stitcher correct?

 \downarrow YES \rightarrow Correct the wiring.

NO

Is 5V DC being supplied from J9-13 on the saddle stitcher controller PC board?

 \downarrow NO \rightarrow Replace the saddle stitcher controller PC board.

YES

Is J9-14 on the saddle stitcher controller PC board properly connected to the ground?

\mathbf{V}	NO \rightarrow	Replace the saddle stitcher controller PC board
--------------	------------------	---

YES

END

5

[CC10] Microswitch abnormality

[Procedure 1]

Is the switch actuator for the inlet door working properly?

 \downarrow NO \rightarrow Fix the mechanism.

YES

Is the inlet cover switch (MS1S) working normally?

↓ NO → Replace the switch.

YES

Measure the voltage of J10-8 on the saddle stitcher controller PC board when the inlet door is open. Is it 5V?

 \downarrow NO \rightarrow The inlet cover sensor (PI9S) is broken. Replace it.

YES

Measure the voltage between J1-1 (+) and J1-2 (-) on the saddle stitcher controller PC board. Is it 24 V?

 \downarrow NO \rightarrow Replace the saddle stitcher controller PC board.

YES

Check the wiring between J19 on the finisher controller PC board and J1 on the saddle stitcher controller PC board. If there is no problem, replace the saddle stitcher controller PC board.

[Procedure 2]

Is the switch actuator for the front door working properly?

 \downarrow NO \rightarrow Fix the mechanism.

YES

Is the front cover switch (MS2S) working normally?

 \downarrow NO \rightarrow Replace the switch.

YES

Measure the voltage of J11-12 on the saddle switcher controller PC board when the front door is opened. Is it 5V?

 \downarrow NO \rightarrow The front door opening/closing sensor is broken. Replace it.

YES

Replace the saddle stitcher controller PC board.

[Procedure 3]

Is the switch actuator for the delivery door working properly?

 \downarrow NO \rightarrow Fix the mechanism.

YES

Is the delivery cover switch working normally?

 \downarrow NO \rightarrow Replace the switch.

YES

Measure the voltage of J11-9 on the saddle stitcher controller PC board when the delivery door is opened. Is it 5V ?

 \downarrow NO \rightarrow The delivery cover sensor (PI3S) is broken. Replace it.

YES

Replace the saddle stitcher controller PC board.

[CC20] Communication error between Finisher and Saddle stitcher section

Is the problem solved by turning OFF and ON the power switch of the equipment?

 \downarrow YES \rightarrow END

NO

Is the wiring between the finisher controller PC board and the saddle stitcher controller PC board connected?

 \downarrow YES \rightarrow Connect the wiring.

NO

Measure the voltage between J3-2 (+) and J3-1 (-) on the finisher controller PC board. Is it DC 5V?

 \downarrow NO \rightarrow Replace the finisher controller PC board.

YES

Replace the saddle stitcher controller PC board.

[CC40] Swing motor abnormality

[Procedure 1]

Rotate the swing motor in reverse by hand. Does the swing guide move up and down?

 \downarrow NO \rightarrow Fix the swing mechanism.

YES

Is the swing guide closed detection switch-2 (MS6) working normally?

 \downarrow NO \rightarrow Replace the switch.

YES

Is the swing guide open sensor (PI18) working normally?

↓ NO → Replace the sensor.

YES

Is the swing motor (M7) rotating in reverse at the fixed timing?

 \downarrow NO \rightarrow Replace the motor.

YES

END

[Procedure 2]

Is the safety zone switch (MS3) working normally?

 \downarrow NO \rightarrow Replace the switch.

YES

Is the safety zone switch (MS3) correctly pressed?

 \downarrow NO \rightarrow Fix the mechanism.

YES

Is the swing guide closed detection switch-2 (MS6) working normally?

↓ NO → Replace the switch.

YES

Is the swing guide closed detection switch-2 (MS6) correctly pressed?

 \downarrow NO \rightarrow Fix the mechanism.

YES

Replace the finisher controller PC board.

[Procedure 3]

Is the swing motor clock sensor (PI20) working normally?

 \downarrow NO \rightarrow Replace the sensor.

YES

Does the voltage between J11-6 and -7 on the finisher controller PC board become 24V when the swing motor starts rotating?

 \downarrow NO \rightarrow Replace the finisher controller PC board.

YES

Is the wiring between the swing motor and finisher controller PC board correct?

 \downarrow YES \rightarrow Correct the wiring.

NO

Replace the swing motor.

[CC50] Horizontal registration motor abnormality

Is the horizontal registration home position sensor (PI1P) working normally?

 \downarrow NO \rightarrow Replace the sensor.

YES

Is the wiring between the finisher controller PC board and horizontal registration home position sensor (PI1P) correct?

 \downarrow NO \rightarrow Correct the wiring.

YES

Is there any problem with the horizontal registration mechanism?

 \downarrow YES \rightarrow Fix the mechanism.

NO

Is the problem solved by replacing the horizontal registration motor (M2P)?

 \downarrow YES \rightarrow END

NO

Is the problem solved by replacing the punch motor?

 \downarrow YES \rightarrow END

NO

Replace the finisher controller PC board.

5

[CC60] Punch motor abnormality

Is the punch home sensor (PI3P) working normally?

 \downarrow NO \rightarrow Replace the sensor.

YES

Is the wiring between the punch home sensor (PI3P) and finisher controller PC board correct?

 \downarrow NO \rightarrow Correct the wiring.

YES

Is the punching mechanism normal?

 \downarrow YES \rightarrow Fix the mechanism.

NO

Is the problem solved by replacing the punch motor (M1P)?

 \downarrow YES \rightarrow END

NO

Is the problem solved by replacing the punch driver board?

 \downarrow YES \rightarrow END

NO

Replace the finisher controller PC board.

[CC80] Front alignment motor abnormality [MJ-1029]

Is the front alignment plate home position sensor (PI29) normal?

 \downarrow NO \rightarrow Replace the sensor.

YES

Is the wiring between the finisher controller PC board and the front alignment motor (M11) correct?

 \downarrow NO \rightarrow Correct the wiring.

YES

Is there any mechanical problem with the path of the alignment plate?

 \downarrow NO \rightarrow Fix the mechanism.

1) Replace the front alignment motor (M11).

2) Replace the finisher controller PC board.

[CCC1] Communication error between Inserter Unit and Finisher

Is the front alignment plate home position sensor (PI29) normal?

 \downarrow NO \rightarrow Replace the harness.

YES

Is 5V output to CN13-5 on the inserter control board?

 \downarrow YES \rightarrow Replace the finisher control board.

NO

Replace the inserter control board.

[CCD1] Inserter EEPROM abnormality

Is the conductor pattern around IC5 on the inserter control board short- or open-circuited?

 \downarrow

YES

1) Replace the inserter control board.

2) Perform the inserter tray volume adjustment.

[CCE1] Inserter fan motor abnormality

Is the harness between the inserter control board and inserter fan normal?

↓ NO → Replace the harness.

YES

Is the conductor pattern around Q11, Q16 and CN8 on the inserter control board short circuited or open circuited?

 \downarrow NO \rightarrow Replace the inserter fan.

YES

Replace the inserter control board.

[CDE0] Paddle unit home position error detection [MJ-1029]

Check the paddle home position sensor (PI26). Does the sensor operate normally?

 \downarrow NO \rightarrow Replace the sensor.

YES

Is the wiring between the finisher controller PC board and paddle motor (M14) normal?

 \downarrow NO \rightarrow Repair the wiring.

YES

Is there any abnormality in the paddle mechanism?

 \downarrow NO \rightarrow Check the assembly and repair the paddle mechanism.

YES

Does it improve when the paddle motor (M14) is replaced?

 \downarrow NO \rightarrow Replace the finisher controller PC board.

YES

End

[CF00] Belt escape unit home position error detection [MJ-1029]

Check the Knurled belt home position sensor (PI28). Does the sensor operate normally?

 \downarrow NO \rightarrow Replace the sensor.

YES

Is the wiring between the finisher controller PC board and Knurled belt motor (M13) normal?

 \downarrow NO \rightarrow Repair the wiring.

YES

Is there any abnormality in the belt escape mechanism?

 \downarrow NO \rightarrow Check the assembly and repair the mechanism.

YES

Does it improve when the Knurled belt motor (M13) is replaced?

 \downarrow NO \rightarrow Replace the finisher controller PC board.

YES

End

[CF10] Undefined error code processing

- (1) Is the error recovered when the power of the equipment is turned OFF and then back ON?
- (2) If not as in step 1, check if the LGC board and IPC board are connected correctly.
- (3) If the error has still not been recovered in step 2, check if there is any defect in the LGC board, IPC board or finisher control board. If not, replace the LGC board, IPC board or finisher control board.

5.1.13 Service call for others

[C360] Wire cleaner drive motor abnormality

- (1) Check if the main charger is not disconnected.
- (2) Check if the wire cleaner drive motor is driving.
- (3) Is the wire cleaner position detection switch working?
- (4) Replace the LGC board.

[C370] Wire cleaner drive motor abnormality

- (1) Is the transport belt unit working normally? (there is no extraneous material or toner clod).
- (2) Check if the connector of the transfer belt cam motor is not disconnected.
- (3) Check if the connector CN335 on the LGC board is disconnected.
- (4) Check if the fuse on the LVPS has blown.
- (5) Check if the transfer belt release detection sensor and transfer belt contact detection sensor is working properly.
- (6) Replace the transfer belt cam motor.
- (7) Replace the LGC board.

[C940] Engine-CPU is abnormality

Is the "Call for Service" displayed even after the power is turned OFF and back ON?

 \downarrow NO \rightarrow Leave it and see what happens.

YES

- 1) Check if the circuit pattern between the Engine-CPU and FROM is short circuited or open circuited.
- 2) Replace the LGC board if this error occurs frequently.

[C970] High-voltage transformer leakage 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 main charger wire is broken or the main charger grid is deformed.
- (4) Check if any foreign matters is on the main charger win or the main charger grid.
- (5) Replace the High-voltage transformer.
- (6) Replace the LGC board.

- (1) Check if the cleaning brush, recovery toner transport auger and recycle toner transport auger are not locked (no extraneous material or toner clod in both the toner transport sections at the cleaner unit and recycle toner unit).
- (2) Is the cleaning brush drive motor (M13) disconnected?
- (3) Check if the connector (CN337) on the LGC board and connector pins are not disconnected.
- (4) Replace the cleaning brush drive motor and recycle toner transport motor (M8).
- (5) Replace the LGC board.

[CD20] Used toner transport motor abnormality

- (1) Check if the transport auger is not locked (there is no extraneous material or toner clod).
- (2) Is the toner bag full detection sensor (S11) working normally?
- (3) Is the used toner transport motor (M9) disconnected?
- (4) Check if the connector (CN333) on the LGC board and connector pins are not disconnected.
- (5) Replace the used toner transport motor.
- (6) Replace the LGC board.

[CD30] Recycle toner transport motor abnormality

- (1) Check if the recycle toner transport auger is not locked (no extraneous material or toner clod in both the transport sections at the toner recycle unit).
- (2) Is the Recycle toner transport motor (M8) disconnected?
- (3) Check if the connector (CN337) on the LGC board and connector pins are not disconnected.
- (4) Replace the recycle toner transport motor.
- (5) Replace the LGC board.

[CD40] Toner bag full

- (1) Check the toner bag.
 - Is the toner bag full?
- (2) Check thetoner bag full detection sensor (S11).
 - Is the tone full detection sensor working properly?
 - Is the connector not disconnected?
- (3) Check the used toner transport motor.
 - Is the used toner transport motor driving?
 - Does the pulley beside the motor become heavy when it is turned toward the direction of arrow (counterclockwise)?
- (4) Replace the LGC board.
- (5) Release the status counter.
 - Turn the power ON while pressing both the [0] and [8] keys.
 - Press the [START] key after inputting [476] with digital keys.
 - Change the status counter "1", "2" or "3" to "0" and press the [SET] or [INTERRUPT] key ([CD4] released).
 - Check if the copier becomes to a standby state normally when power is turned ON again.
 - In case that the used toner transport motor does not drive or [CD4] is not released when power is turned ON again, do the above procedure after manually turning the pulley beside the motor toward the direction of arrow (counterclockwise) several times.

[CE50] Temperature/humidity sensor abnormality

Is the connector CN338 on the LGC board or the connector of the temperature/humidity sensor (S7) disconnected?

Is the harness between the LGC board and the temperature/humidity sensor disconnected?

 \downarrow YES \rightarrow Connect the connector securely. Replace the harness.

NO

- 1) Check the connection of the KEY1 board and DSP board.
- 2) Check the connection of the DSP board and LGC board.
- 3) Replace the temperature/humidity sensor.
- 4) Replace the LGC board.

[CE90] Drum thermistor abnormality

Is the connector CN337 on the LGC board, or the connector of the drum thermistor disconnected?

Is the harness between the LGC board and the drum thermistor (THM5) disconnected?

 \downarrow YES \rightarrow Connect the connector securely. Replace the harness.

NO

- 1) Replace the drum thermistor.
- 2) Replace the LGC board.

[CF70] New toner transport motor abnormality

- (1) Check if the transport auger and paddle are not locked (no extraneous material or toner clod in both the toner transport sections at the cleaner unit).
- (2) Is the new toner transport motor disconnected?
- (3) Check if the connector of the LGC board and connector Pins are not disconnected.
- (4) Replace the new toner transport motor.
- (5) Replace the LGC board.

[CF80] Hopper motor lockup

- (1) Check if the recycle toner transport motor is not locked (no extraneous material or toner clod in both the toner transport sections at the recycle toner unit).
- (2) Is the disconnected?
- (3) Check if the connector of the LGC board and connector Pins are not disconnected.
- (4) Replace the hopper motor.
- (5) Replace the LGC board.

[F090] SRAM abnormality on 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 [INI-TIALIZE]. (SRAM is cleared.)
- (3) Turn the power OFF and then back ON. If the error is not recovered, replace the SYS board.

[F091] FRAM abnormality on SYS board

- (1) Turn the power OFF and start up the Setting Mode (08).
- (2) When the message "FRAM ERROR DOES IT INITIALIZE?" is displayed on the LCD, press [INI-TIALIZE]. (FRAM is initialized.)

Note:

When the FRAM is initialized, the scanner and image processing related adjustments are also initialized. Readjust them after the FRAM initialization.

(3) Turn the power OFF and then back ON. If the error is not recovered, replace the FRAM on the SYS board.

[F092] SRAM and FRAM abnormality on the SYS board

- (1) Turn the power OFF and start up the Setting Mode (08).
- (2) When the message "FRAM/SRAM ERROR DOES IT INITIALIZE?" is displayed on the LCD, press [INITIALIZE]. (SRAM is cleared and FRAM is initialized.)

Note:

When the FRAM is initialized, the scanner and image processing related adjustments are also initialized. Readjust them after the FRAM initialization.

(3) Turn the power OFF and then back ON. If the error is not recovered, replace the FRAM on the SYS board.

[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 power supply connector is disconnected.
- (5) Check if the connector J111 on the SYS board is disconnected.
- (6) Replace the harness.
- (7) Initialize the HDD. (Key in "2" at 08-690.)
- (8) Replace the HDD.
- (9) Replace the SYS board.

[F101] HDD unmounted [F102] HDD boot error [F103] HDD transfer time-out [F104] HDD data error [F105] other HDD 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 broken.
- (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] /BOX 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) Rebuild the databases. (Perform 08-684.)
- (2) If the error is not recovered, initialize the HDD. (Key in "2" at 08-690.)

[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.

[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.

5.1.14 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 refer to DP.5-153 "5.3.1 Replacing HDD" for the details.

[1] Internet FAX related error (When GM-1050/4010, GM-1051/4010, GM-2040, GM-2041, GM-1110/4110, or GM-2110 is installed)

[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.

[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 if the SMTP authentication method is correct. Check if there are any illegal characters in the Terminal mail address. Select the correct SMTP authentication method. Delete the illegal characters and reset the mail address. Then try 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 authentication again.

[1C72] POP Before SMTP ERROR

Check that both the POP Before SMTP setting and POP3 setting are correct, then perform authentication 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 (When GM-1050/4010, GM-1051/4010, GM-2040, GM-2041, GM-1110/4110, or GM-2110 is installed)

[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 address ERROR (RFC: 550)

Check the destination address, status of mailbox access restriction on the server, etc. then perform authentication again.

[2551] Destination address ERROR (RFC: 551)

Check that the destination address is valid and the mail server works correctly, then perform authentication again.

[2552] From/Destination address ERROR (RFC: 552)

Check the capacity of the mail box in the mail server. Select "Text "of the original modes for the original data or lower the resolution level and then retransmit. Or divide the original data into several pieces and retransmit them.

[2553] Destination mail address error (RFC: 553)

Check if there is an illegal character in the mail box in the mail server.

[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]).

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).

[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.

[4] E-mail related error (When GM-1050/4010, GM-1051/4010, GM-2040, GM-2041, GM-1110/4110, or GM-2110 is installed)

[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 "Message size limitation" 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.

[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] 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 if the SMTP authentication method is correct. Check if there are any illegal characters in the Terminal mail address. Select the correct SMTP authentication method. Delete the illegal characters and reset the mail address. Then try 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.

[5] File sharing related error (When GM-1050/4010, GM-1051/4010, GM-2040, GM-2041, GM-1110/4110, or GM-2110 is installed)

[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 failure (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 document number

Delete some documents in the folder, and then perform the job in error again.

[2D20] System management module access abnormality

[2D21] Job control module access abnormality

[2D22] Job control module access abnormality

[2D60] File library access abnormality

Delete some files in the shared folder by using Explorer because of automatic/manual file deletion failure (in case of [2DA6])

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 or local disk has a sufficient space in disk 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] 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.

[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.

[6] E-mail reception related error (when GM-1020/3020, 1030/3030, 2020 or 2030 is installed)

[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: 200×100 , 200×200 , 200×400 , 400×400 , 300×300 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.

[4030] No printer kit/Invalid

Install the print kit and perform the job again. Install the Expansion Memory (GC-1230) and perform the job again. Register it officially and perform the job again.

[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.

[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 [A291] Limit over ERROR [A292] Limit over ERROR

Clear the limit counter.

5.1.15 Troubleshooting for image quality control

[Corrective action when "Service Recommended for IQC" is blinked]

Check the control status of the image quality control (05-291).

< When "2" is displayed: pattern error>

The pattern is not read or formed correctly.

< When "4" is displayed: sensor error>

The sensor output is out of the acceptable range.

(1) Corrective action for pattern error	
Output the test print (04-113 : 33-gradation pattern in subscanning direction).	
Check the value for 05-294 and 05-295. Either of the values is 630 or more.	

	NO →	<stains on="" print="" test="" the=""> If the cleaning blade is not installed to the cleaner unit properly, install it correctly. If the cleaning blade is damaged, etc., replace it, and then perform the image quality control enforcement / condition check (image check; described later). <the density="" high="" image="" is="" of="" print="" remarkably="" test="" the=""> Replace the LGC board or PLG board, and then perform the image quality control enforcement / condition check (image check; described later). <the is="" normal="" print="" test=""> Replace the image quality sensor, and then perform the image quality</the></the></stains>
I ↓		control enforcement / condition check (image check; described later).

YES

Is the printout blank?

	YES →	Check the output of 05-205 (developer bias) and 05-210 (main charger grid bias). The output reference value of the developer bias is -500±22V and that of the main charger grid bias is -394±22V. If the output is outside of the range, replace the high-voltage transformer. If it is within the allowance range, replace the PLG board or LGC board (See " Trouble-shooting for the Image"). When the equipment is ready for printing, perform image quality control enforcement / condition check (image check; described later).
\checkmark		

NO

Is the image density of the image uneven or remarkably low?

 	NO →	 Perform the test print (04-113) again. If the printout is blank, return to the previous step " Is the printout blank?". If the test print is normal, check the surface of the image quality sen- sor, clean it or replace it, and then perform the image quality control enforcement / condition check (image check; described later).
YES		

5

(The following procedure is for the normal image printing. See " Troubleshooting for the Image".)

Is the developer unit inserted securely and locked properly?

I	NO \rightarrow	Insert the developer unit securely until it locks. When the normal image
I		is able to be output, perform the image quality control enforcement /
\checkmark		condition check (image check; described later).

YES

Is developer material in the developer remarkably low or any foreign matter in the developer?

1	YES \rightarrow	Replace the developer material and the developer unit if needed. When
I I		the normal images is able to be output, perform the image quality control
\checkmark		enforcement / condition check (image check; described later).

NO

Is the main charger wrongly installed or the main charger grid stained?

I	YES \rightarrow	Install the main charger properly. Clean the main charger grid. If the
I		main charger grid is damaged, replace it. When the normal image is
I		able to be output, perform image quality control enforcement / condition
$\mathbf{\Lambda}$		check (image check; described later).

NO

Is there any stain or dent on the surface of the photoconductive drum?

I	YES \rightarrow	Clean the photoconductive drum or replace it. Replace the cleaner unit
I		and developer unit if needed. When the normal image is able to be out-
I		put, perform the image quality control enforcement / condition check
\checkmark		(image check; described later).

NO

Replace the LGC board, and perform the image quality control enforcement / condition check (image check; described later).

Replace the laser unit, and perform the image quality control enforcement / condition check (image check; described later).

Replace the HVT board, and perform the image quality control enforcement / condition check (image check; described later).

(2) Sensor abnormality

Perform the test print. (04-113: Secondary scanning direction 33 gradation steps) Is solid black image is printed?

1	YES \rightarrow	Clear the problem so that the correct image is printed. See " Trouble-
I I		shooting for the Image" for details. When the correct image is able to be
I		output, perform the image quality control enforcement / condition check
\checkmark		(image check; described later).

NO

Is there any stain or dent on the surface of the photoconductive drum?

	YES →	 Is there any stain on the surface of the photoconductive drum facing the surface of the image quality sensor? If there is, check that the cleaning blade of the cleaner unit is installed properly. If the cleaning blade is damaged, replace it, and then perform the image quality control enforcement / condition check (image check; described later). Check that there is no dent on the surface of the photoconductive drum facing the surface of the image quality sensor. If there is, replace the photoconductive drum, and then perform the image qual- ity control enforcement / condition check (image check; described
I I		ity control enforcement / condition check (image check; described later).
\checkmark		

NO

Is the image quality sensor wrongly installed to the cleaner?

I	YES \rightarrow	Install the image quality sensor to the cleaner unit properly, and perform
Ι		the image quality control enforcement / condition check (image check;
\checkmark		described later).

NO

Is the surface of the image quality sensor stained?

I	YES \rightarrow	Clean the surface of the image quality sensor. Replace it if necessary,
I		and then perform the image quality control enforcement / condition
\checkmark		check (image check; described later).

NO

Is the connector of the image quality sensor, connector of the LGC board CN337, CN342 or connector of the SYS board CN103 disconnected?

I	YES \rightarrow	Plug the connector again, and then perform the image quality control
\mathbf{V}		enforcement / condition check (image check; described later).

NO

Is the harness between the LGC board and the image quality sensor, the LGC board and the SYS board or LGC board and the switching power supply open-circuited?

I	YES \rightarrow	Replace the open-circuited harness, and then perform the image quality
\checkmark		control enforcement / condition check (image check; described later).

NO

Is the power voltage for the 12V power normal?

I	NO →	Check the power system, replace the switching power supply, and then
1		perform the image quality control enforcement / condition check (image
\checkmark		check; described later).

YES

Is the value for the image quality sensor output value (Light source off) 05-292 outside the range between 50 and 230?

<u>Is the value for the image quality sensor light amount adjustment result 05-296 "0 "or "255"?</u> <u>Is the value for the image quality sensor light amount adjustment result 05-296 other than "0 "or "255"?</u>

Is the power voltage output (Vout2) that is created in the sensor outside the range?

 	YES →	 Is toner adhered to the connector that connects the cleaner unit and this equipment and the connector almost short-circuited or discon- nected? Replace the harness if needed, and then perform the image
 		quality control enforcement / condition check (image check; described later).
i I		 Replace the LGC board, and perform the image quality control enforcement / condition check (image check; described later).
i ↓		 Replace the image quality sensor, and perform the image quality control enforcement / condition check (image check; described later).

NO

Replace the LGC board, and perform the image quality control enforcement / condition check (image check; described later).

<<Procedure of the "enforced performing of image quality control"/"control status check">> Set the value for the number of times of sensor abnormality (08-800) to "0". Set the value for the Image quality closed-loop control (08-1809), (08-1810) to "0" (valid). Perform the "enforced performing of image quality control" (05-290).

Check the control status of the image quality control (05-291) and number of times of sensor abnormality (08-800).

Are both values for 05-291 and 08-800 "0"?

Perform the test print (04-113: Secondary scanning direction 33 gradation steps). Is the image printed properly?

 \downarrow YES \rightarrow END

NO

See "Troubleshooting for the Image" and clear the problem.

- Is the value for 05-291 "1"? Attempt the procedure again from the beginning.
- Is the value for 05-291 "2"?
 Pattern abnormality. Go back to "(1) Pattern abnormality " and clear the problem.
- Is the value for 05-291 "4"? Sensor abnormality. Go back to "(2) Sensor abnormality" and clear the problem.
- * When the value for 05-242 (Drum surface potential sensor control status) is other than "0", there is a problem on the drum surface potential control. Clear the problem with the troubleshooting for surface potential control related.

<< Procedure of the "enforced performing of image quality control"/"control status check">>

Set the value for the number of times of sensor abnormality (08-800) to "0". Set the value for the Image quality closed-loop control (08-1809), (08-1810) to "0" (valid). Perform the "enforced performing of image guality control" (05-290). Check the control status of the image guality control (05-291) and number of times of sensor abnormality (08-800).

Are both values for 05-291 and 08-800 "0"? Perform the test print (04-113: Secondary scanning direction 33 gradation steps). Is the image printed properly?

YES → END $\mathbf{1}$

NO

See "Troubleshooting for the Image" and clear the problem.

- Is the value for 05-291 "1"? Attempt the procedure again from the beginning.
- Is the value for 05-291 "2"? Pattern abnormality. Go back to "(1) Pattern abnormality " and clear the problem.
- Is the value for 05-291 "4"? Sensor abnormality. Go back to "(2) Sensor abnormality" and clear the problem.
- * When the value for 05-242 (Drum surface potential sensor control status) is other than "0", there is a problem on the drum surface potential control. Clear the problem with the troubleshooting for surface potential control related.

5

5.1.16 Troubleshooting for surface potential control

[Corrective action when " Service Recommended for SPC" is blinked]

Check the control status of the surface potential sensor (05-242).

<When "2" is displayed: sensor error>

The sensor detection value is abnormal or the sensor output value is not changed even though the main charger bias value is changed.

Is the connector of the surface potential sensor connected properly? Is the main charger attached poorly?

Are leaks and such occurring?

YES → After removing, if any, dust and correcting the defect, perform the "sur-Т face potential sensor control check" (described later). $\mathbf{1}$

NO

Is the connector of LGC board CN337, CN342 or that of SYS board CN103 disconnected?

I	YES \rightarrow	Connect them properly again, and perform drum surface potential sen-
\checkmark		sor control / condition check (described later).

NO

Is the main charger wrongly installed? Are the main charger grid/wire wrongly installed?

Is the charger leakage, etc. occurring?

I	YES \rightarrow	Remove the dusts or toner stains if any, and then install them properly.
I		Perform the drum surface potential sensor control / condition check
\checkmark		(described later)

NO

Check the value for 05-244. Is the value for 05-244 within the range between 400 and 800?

	NO →	1) Perform the charging transformer output (05-210) and check that the value is within the range of -500±12V. If the voltage is outside the range, replace the HVT board and perform the drum surface potential sensor control / condition check (described later).
		 When the charging transformer output is within the range of - 500±12V, replace the drum surface potential sensor, and perform the drum surface potential sensor control / condition check (described later).
· →		 If the problem still occurs, replace the LGC board, and perform the drum surface potential sensor control/condition check (described later).

YES

Check the value for 05-268 and 05-269. Is the value which is subtracted the value for 05-268 from the one for 05-269 "400" or more?

I NO → I I I I I I I V V	 Replace the HVT board, and perform the drum surface potential sensor control / condition check (described later). Replace the photoconductive drum, and perform the drum surface potential sensor control / condition check (described later). Replace the surface potential sensor, and perform the drum surface potential sensor control / condition check (described later). If the problem still occurs, replace the LGC board, and perform the drum surface potential sensor control / condition check (described later).
--------------------------	---

YES

Replace the LGC board and perform the drum surface potential sensor control / condition check (described later).

<< Procedure of the "surface potential sensor control check">>

- 1) Set the value for the number of detected abnormalities of the drum surface potential control (08-1812) to "0".
- 2) Set the value for the drum surface potential setting (08-1813) to "0" (valid).
- 3) Perform the "enforced performing of image quality control" (05-290).
- 4) Check the status of drum surface potential sensor control (05-242) and number of drum surface potential sensor control abnormality (08-1812).

Are both values for 05-242 and 08-1812 "0"?

Perform the test print (04-113: Secondary scanning direction 33 gradation steps). Is there any problem with the image?

 \downarrow YES \rightarrow End

NO

See "Troubleshooting for the Image" to clear the problem.

- Is the value for 05-242 "1"? Repeat the procedure from the beginning.
- Is the value for 05-242 "2"? Drum surface potential sensor control abnormality. Go back to "Troubleshooting for surface potential control related" and clear the problem.
- * When 05-291 (Status of image quality control) is other than "0", there is a problem with the image quality control. Clear the problem with the trouble shooting for the image quality control related.

5.1.17 Troubleshooting for remaining toner detection sensor

Take an appropriate countermeasure for the following cases:

- When a message notifying the toner cartridge needs to be replaced is displayed and the cartridge is replaced accordingly, but the message remains displayed
- When a message notifying the toner cartridge needs to be replaced is displayed and the equipment simultaneously stops its operation during the process of a job (The equipment should keep its operation for a while even if such message is displayed.)
- The Auto Supply Order function does not work.

Countermeasure

- 1) Check if the connector or connector pins on the toner drive are disconnected.
- 2) Replace the remaining toner detection sensor.

5.2 Troubleshooting for the Image

If any abnormal image occurs in the test copying, perform trouble shooting for the image.

1) Abnormality of image density / Gray balance





Defective area	Step	Check items	Prescription
Density/Gray balance	1	Check the density/gray balance.	Adjust the density.
Printer section	2	Check test print image (04-113).	Go to step 4 if there is any problem on image.
Scanner	3	Are the original glass, mirrors and lens dirty?	Clean them.
Printed image	4	Is the image faded?	Perform troubleshooting for faded image.
	5	Is background fogging occurring?	Perform troubleshooting for back- ground fogging.
	6	Is there a blotch on the image?	Perform troubleshooting for blotched image.
	7	Is the image transferred normally?	Perform troubleshooting for abnor- mal transfer.

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2) Background fogging



Fig. 5-2

Defective area	Step	Check items	Prescription
Density reproduction	1	Check the reproduction of the image density.	Adjust the density.
Printer section	2	Check test print image (04-113).	Go to step 4 if there is any problem on image.
Parameter adjustment value	3	Check the image processing parameter.	Check the range correction setting and the adjustment value of the background peak for range correc- tion. (ch. 3.3.4, ch. 3.3.5) If they need to be adjusted, check the print image in the above circle mark to adjust the adjustment value of the background peak for range correc- tion.
Scanner	4	Are the original glass (especially shading position),mirrors and lens dirty?	Clean them.
Developer material/Toner/ Photoconductive drum	5	Using the specified developer mate- rial, toner and photoconductive drum?	Use the specified developer material, toner and photoconductive drum.
	6	Have the developer material and the photoconductive drum reached their PM life?	Replace the developer material and photoconductive drum.
	7	Is the storage environment of the toner cartridge 35°C or less without dew?	Use the toner cartridge stored in the environment within specification.

Defective area	Step	Check items	Prescription
Main charger output	8	Is the setting value proper? Is the main charger output normal?	Replace the high-voltage transformer with a new one and print out a test chart. If any abnormal image appears, check the harness connection between the LGC board and the high-voltage transformer, power sup- ply and stain on the main charger wire.
Developer unit	9	Is the contact between the drum and developer material normal?	Replace the high-voltage transformer with a new one and print out a test chart. If any abnormal image appears, check the harness connection between the LGC board and the high-voltage transformer, power sup- ply and stain on the main charger wire.
Developer bias output	10	Is the setting value proper? Is the developer bias output normal?	If the setting value is out of specifica- tion, adjust it. If the output is not normal, check the circuits. (Note 1)
Increasing toner density	11	Is the Auto-toner sensor connected correctly?	Check the connection of the connector of the Auto-toner sensor.
	12	Is the toner density high?	Adjust the toner density. (Note 2: See the toner density cor- recting method.)
Image quality sensor/ Surface potential sensor	13	Are the image quality sensor and the surface potential sensor normal?	Check the performance of the image quality sensor and the surface poten- tial sensor. (See the troubleshooting related with the image quality con- trol.)
Drum cleaning blade	14	Is the drum cleaned properly?	(See the troubleshooting for the poor cleaning.)

Note:

1. Toner density correcting method

Change the setting value 'Toner density life correction setting (08-414)' (6 is the default setting.) 0: Appox. 0.75% lower than the current value

- 1: Appox. 0.50% lower than the current value
- 2: Appox. 0.25% lower than the current value
- 3: The current value (Default setting)
- 4: Appox. 0.15% higher than the current value
- 5: Appox. 0.25% higher than the current value
- 6: Appox. 0.50% higher than the current value
- 7: Appox. 0.75% higher than the current value

<Caution for correction>

When increasing or decreasing the toner density too much, the image may become poor or the life of developer material, cleaner, photoconductive drum and fuser unit, etc. may shorten. Therefore it is not recommended to correct (to shift) the toner density basically. If it is shifted, make sure that the image may be improper in a few minutes after shifting.

3) Moire/lack of sharpness





Moire

Defective area	Step	Check items	Prescription
Density reproduction	1	Check the reproduction of the image density.	Adjust the density.
Parameter adjustment value	2	Check the image processing parameters.	Check the adjustment value for sharpness.
Printer section	3	Check test print image (04-113).	When defects occur, perform the cor- responding troubleshooting proce- dure.

Lack of sharpness

Defective area	Step	Check items	Prescription
Density reproduction	1	Check the reproduction of the image density.	Adjust the density.
Parameter adjustment value	2	Check the image processing parameters.	Check the adjustment value for sharpness.
Printer section	3	Check test print image (04-113).	When defects occur, perform the cor- responding troubleshooting proce- dure.
	4	Check the image processing parameters.	Check the encircled areas A and B in the image, and change the sharp- ness intensity in the sharpness adjustment mode.



Fig. 5-4

Toner offset (Shadow image appears approx. 188 mm toward the dark image.)

Defective area	Step	Check items	Prescription
Density	1	Is the density too high?	Adjust the density.
Fuser unit	2	Is the pressure of the fuser roller nor- mal?	Check the pressure releasing parts and pressurization mechanism.
	3	Is the thermistor in contact with the fuser roller?	Contact the thermistor with the fuser roller.
	4	Is there a scratch on the fuser roller surface?	Replace the fuser roller.
	5	Has the fuser roller reached its PM life?	Replace the fuser roller.
	6	Is the setting temperature of the fuser roller normal?	Check the adjustment values of fuser roller temperature? 08-410, 411
Fuser unit	7	Using the specified fuser roller and the pressure roller?	Use the specified fuser roller and the pressure roller.
	8	Is the pressurization of cleaning web normal?	Check the installation state of clean- ing web mechanism.
	9	Is the cleaning web transported nor- mally?	Check the drive system of the clean- ing web. Check and correct setting (08-403, 1252-6 1252-7)
	10	Has the cleaning web reached its PM life?	Replace the cleaning web.
	11	Using the specified cleaning web?	Use the specified cleaning web.
	12	Is there any trouble with the ther- mistor?	Clean or replace the thermistor.

Defective area	Step	Check items	Prescription
Paper	13	Has the appropriate paper type been selected?	Select a proper mode.
	14	Is the setting temperature of the fuser roller in each paper type normal?	Check the setting and correct it. 08-410, 412, 413, 437, 1804
	15	Using the recommended paper?	Use the recommended paper.
Developer material/Toner	16	Using the specified developer mate- rial and toner?	Use the specified developer material and toner.
Scanner	17	Are the original glass (especially the position of shading correction plate), mirror and lens dirty?	Clean them.

5) Blurred image



Fig. 5-5

Defective area	Step	Check items	Prescription
Paper	1	Is the paper in the drawer or LCF damp?	Change paper. Avoid storing paper in damp place.
Bedewed scanner	2	Is the scanner bedewed?	Clean the scanner.
Drum	3	Is the drum surface wet or dirty?	Wipe the drum with a piece of dry cloth. * Do not use alcohol or other organic solvents.

6) Poor fusing



Fig. 5-6

Defective area	Step	Check items	Prescription
IH electric power	1	Check if the connector contacts properly.	Correct it.
	2	Is the IH coil shorted or broken? Is there any abnormality on the Heater Control PC board.	Replace the IH Coil or Heater Control PC board.
Pressure between fuser roller and pressure roller	3	Are the pressure springs working properly?	Check and adjust the pressure springs.
Fuser roller temperature	4	Is the temperature of the fuser roller normal?	Check the setting and correct it. 08-410, 411
Developer material/Toner	5	Using the specified developer mate- rial and toner?	Use the specified developer material and toner.
Thermistor	6	Is there any problem with the ther- mistor?	Clean or replace the thermistor
Paper	7	Is the paper in the drawer or LCF damp?	Avoid storing paper in damp place.
	8	Is the paper type corresponding to its mode?	Use the proper type of paper or select the proper mode.
	9	Is the setting temperature of the fuser roller in each paper type normal?	Check the setting and correct it. 08-410, 412, 413, 437, 1804
	10	Using the recommended paper?	Use the recommended paper.



Fig. 5-7

Defective area	Step	Check items	Prescription
Bias supply connector	1	Is the connector inserted properly?	Insert the connector properly.
High-voltage transformer (Transfer charger, Devel-	2	Is the high-voltage transformer out- put defective?	Replace the transformer.
oper blas)	3	Are the connectors of the high-volt- age harness securely connected? Is the harness open circuited?	Reconnect the harness securely. Replace the high-voltage harness.
Developer unit	4	Is the developer unit installed prop- erly?	Check and correct the engaging con- dition of the developer unit gears.
	5	Do the developer sleeve and mixers rotate?	Check and fix the drive system of the developer unit.
	6	Is the developer material smoothly transported?	Remove the foreign matter from the developer material.
Drum	7	Is the drum rotating?	Check the drive system of the drum.
CCD, SLG, SYS, LGC boards and harnesses	8	Are the connectors securely con- nected? Check if the harnesses connecting the boards are open circuited.	Connect the connectors securely. Replace the harness.

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Fig. 5-8

Defective area	Step	Check items	Prescription
Exposure lamp and inverter	1	Does the exposure lamp light?	Check if the connector contacts with the exposure lamp terminal. Replace the defective inverter.
Scanner	2	Is there any foreign matter on the light path?	Remove it.
Bedewed scanner and drum	3	Is the scanner or drum bedewed?	Clean the mirrors, lens and drum. Keep the power cord plugged in all trough the day and night. (For the model with damp heater)
Main charger	4	Is the main charger securely installed?	Install it securely.
	5	Is the main charger wire broken?	Replace the main charger wire.
High-voltage transformer (Main charger)	6	Is the high-voltage transformer out- put defective?	Replace the transformer.
	7	Are the connectors of the high-volt- age harness securely connected? Is the harness open circuited?	Reconnect the harness securely. Replace the high-voltage harness.
CCD, SLG, SYS, LGC boards and harnesses	8	Are the connectors securely con- nected? Check if the harnesses connecting the boards are open circuited.	Connect the connectors securely. Replace the harness.

9) White banding (in the feeding direction)



Fig. 5-9

Defective area	Step	Check items	Prescription
Laser optical unit	1	Is there a foreign matter or stain on the slit glass?	Remove the foreign matter or stain.
Main charger grid	2	Is there a foreign matter or dew on the charger grid?	Remove the foreign matter.
Developer unit	3	Is the developer material transported properly?	Remove the foreign matter if there is any.
	4	Is there a foreign matter or dew on the Polyurethane seal?	Remove the foreign matter or dew.
	5	Is the upper Polyurethane seal of the developer unit in contact with the drum?	Correct the position of the Polyure- thane seal or replace it.
Drum	6	Is there a foreign matter on the drum surface?	Replace the drum.
Transport path	7	Does the toner image contact with any foreign matter before the paper enters the fusing section after the separation?	Remove the foreign matter.
Discharge LED	8	Is any of the discharge LEDS off?	Replace the discharge LED.
Scanner	9	Is there a foreign matter on the light path?	Remove the foreign matter.
	10	Are the original glass (especially the position of shading correction plate) mirror and lens dirty?	Clean them.
Cleaner	11	Is there any foreign matter, which contacts the drum on the cleaner stay?	Remove the foreign matter.

10)White banding (at right angle with the feeding direction)



Fig. 5-10

Defective area	Step	Check items	Prescription
Main charger	1	Is there a foreign matter on the charger?	Remove the foreign matter.
	2	Is the connector in proper contact with the terminal?	Clean or adjust the terminal.
Drum	3	Is there any abnormality on the drum surface?	Replace the drum.
Discharge LED	4	Does the discharge LED light nor- mally?	Replace the discharge LED or check the harness and the circuit.
Developer unit	5	Is the developer sleeve rotating nor- mally? Is there any abnormality on the sleeve surface?	Check the drive system of the devel- oper unit, or clean the sleeve sur- face.
Drive system	6	Are the drum and scanner jittering?	Check each drive system.
High-voltage transformer (Main charger / Developer bias / Transfer charger)	7	Is the high-voltage transformer out- put defective?	Replace the transformer.
Feed system	9	Is the aligning amount proper?	Adjust the aligning amount.

11)Skew (inclined image)



Fig. 5-11

Defective area	Step	Check items	Prescription
Drawers LCF	1	Is the drawer or LCF properly installed?	Install the drawer or LCF properly.
	2	Is there too much paper in the drawer or LCF?	The height of paper stack should not exceed 55 mm. 137 mm or lower/room for tandem LCF. 428 mm or lower for external LCF.
	3	Is the corner of the paper folded?	Change the direction of the paper and set it again.
	4	Are the side guides of the drawer or LCF properly installed?	Adjust the position of the side guides.
Feed roller	5	Is the surface of the feed roller dirty?	Clean the feed roller surface with alcohol, or replace the roller.
Rollers	6	Are the roller and shaft secured?	Check and tighten the E-rings, pins, clips and setscrews.
Alligning amount	7	Is the aligning amount proper?	Increase the aligning amount.
Registration roller	8	Is the spring detached from the regis- tration roller?	Attach the spring correctly. Clean the roller if it is dirty.
Pre-registration guide	9	Is the pre-registration guide properly installed?	Correct it.
Carriage-1	10	Is the carriage-1 slanted?	Adjust the carriage-1.

12)Black banding (in the feeding direction)



Fig. 5-12

Defective area	Step	Check items	Prescription
Scanner	1	Is there a foreign matter on the light path?	Clean the slit, lens and mirrors.
Shading correction plate	2	Is there dust or stains on part of the original glass where the shading correction plate is placed.	Clean the plate.
Main charger	3	Is there a foreign matter or stain on the charger grid, or in the main charger case?	Remove the foreign matter or stain.
	4	Is the main charger grid deformed?	Replace the main charger grid.
	5	Is there a foreign matter on the main charger grid?	Remove the foreign matter.
Drum	6	Are there scratches on the drum sur- face?	Replace the drum.
Laser optical unit	7	Is there a foreign matter or stain on the 2 slit glasses?	Remove the foreign matter or the stain.
	8	Is the inside of the main charger case dirty?	Clean the inside of the main charger case.
Cleaner	9	Is there paper dust sticking to the drum cleaning blade edge?	Clean or replace the cleaning blade.
	10	Does the drum cleaning blade work smoothly?	Push the cleaning blade by hand. If its move is not smooth enough, clean the section where the blade is installed, then install it again.
	11	Has the used toner been recovered properly?	Clean the toner recovery auger.
Fuser unit	12	Is the fuser roller surface dirty or damaged?	Clean or replace the fuser roller.
	13	Is the fuser roller thermistor dirty?	Clean the fuser roller thermistor.

13)Black banding (at right angle with the feeding direction)



Fig. 5-13

Defective area	Step	Check items	Prescription
Fuser unit	1	Is the fuser roller dirty?	Clean them.
	2	Has the cleaning roller, pressure roller, fuser roller and separation fin- ger for fuser roller reached their PM life?	Replace them.
High-voltage transformer (Main charger / Developer bias / Transfer charger)	3	Is the high-voltage transformer out- put defective?	Replace the transformer.
Drum	4	Is there a deep scratch on the drum surface?	Replace the drum if the scratch has reached the aluminum base.
Scanner	5	Is there a foreign matter on the car- riage rail?	Remove the foreign matter.



Fig. 5-14

Defective area	Step	Check items	Prescription
Toner empty	1	Is the toner supply symbol lighting?	Replace the toner cartridge.
	2	Is the toner cartridge installed prop- erly?	Check the installation state of the toner cartridge.
	3	Is the performance of the new toner supply motor normal?	Check the performance of the new toner supply motor.
	4	Is the toner cartridge normal?	Check the toner cartridge. Replace if it is not normal.
Decreasing toner density	5	Is the Auto-toner sensor connected correctly?	Check the connection of the connec- tor of the Auto-toner sensor.
	6	Is the toner density low?	Correct the toner density. (Note 2: See 'Toner density correct- ing method'.)
Developer material/Toner/ Photoconductive drum	7	Using the specified developer mate- rial, toner and photoconductive drum?	Use the specified developer material, toner and photoconductive drum.
	8	Have the developer material and the photoconductive drum reached their PM life?	Replace the developer material and photoconductive drum.
	9	Is the storage environment of the toner cartridge 35°c or less without dew?	Use the toner cartridge stored in the environment within specification.
	10	Is there any dent on the surface of the photoconductive drum?	Replace the drum.
	11	Is there any film forming on the pho- toconductive drum?	Clean or replace the drum.
Defective area	Step	Check items	Prescription
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Main charger	12	Is there any foreign object on the charger?	Remove it.
	13	Is the charger dirty or deformed?	Clean or replace the main charger wire and grid.
Main charger output	14	Is the setting value proper? Is the main charger output normal?	Replace the high-voltage transformer with a new one and print out a test chart. If any abnormal image appears, check the harness connection between the LGC board and the high-voltage transformer, power sup- ply and stain on the main charger wire.
Developer bias output	15	Is the setting value proper? Is the developer bias output normal?	Replace the high-voltage transformer with a new one and print out a test chart. If any abnormal image appears, check the harness connection between the LGC board and the high-voltage transformer, power sup- ply and stain on the main charger wire.
Transfer belt	16	Is there any foreign object or fiber, etc. on the belt surface?	Remove it.

Note:

1. Toner density correcting method

Change the setting value 'Toner density life correction setting (08-414)' (6 is the default setting.) 0: Appox. 0.75% lower than the current value

- 1: Appox. 0.50% lower than the current value
- 2: Appox. 0.25% lower than the current value
- 3: The current value (Default setting)
- 4: Appox. 0.15% higher than the current value
- 5: Appox. 0.25% higher than the current value
- 6: Appox. 0.50% higher than the current value
- 7: Appox. 0.75% higher than the current value

<Caution for correction>

When increasing or decreasing the toner density too much, the image may become poor or the life of developer material, cleaner, photoconductive drum and fuser unit, etc. may shorten. Therefore it is not recommended to correct (to shift) the toner density basically. If it is shifted, make sure that the image may be improper in a few minutes after shifting.

15)Poor image transfer



Fig. 5-15

Defective area	Step	Check items Prescription			
Transfer belt unit	1	Is the surface of the transfer belt sup- ply roller dirty with toner?			
Paper	2	Is the paper in the drawer or LCF/ PFP curled?	Reinsert the paper with the reverse side up or change the paper.		
	3	Is the paper in the drawer or LCF damp?	Avoid storing paper in damp place.		
	4	Is the paper type corresponding to its mode?	Select the proper mode.		
	5	Using the recommended paper?	Use the recommended paper.		
Registration roller	6	Is there any abnormality related to the registration roller or with the roller itself?	Clean the roller if it is dirty. Securely attach the springs if they are detached. Replace the clutch if it is defective. Adjust the rotation speed of the roller.		
High-voltage transformer (Transfer charger)	7	Is the high-voltage transformer out- put defective?	Replace the transformer.		

Note:

Refer to 3.6.1 of chapter 3 for the poor image transfer at the paper leading edge.

16)Uneven image density



Fig. 5-16

Defective area	Step	Check items	Prescription		
Main charger	1	Is the main charger dirty?	Clean or replace the main charger grid.		
Transfer belt unit	2	Is the surface of the transfer belt sup- ply roller dirty with toner?	Clean it with alcohol.		
Laser optical unit	3	Is there any foreign matter or stain on the 2 slit glasses?	Remove the foreign matter or stain.		
Discharge LED	4	Are the connectors of discharge LED harness securely connected?	Reconnect the harness securely.		
	5	Is the discharge LED dirty?	Clean the discharge LED.		
	6	Is any of the discharge LEDs off?	Replace the discharge LED.		
Developer unit	7	Is the developer material transported normally?	Remove foreign matters if there is any.		
Scanner section	8	Are the original glass (especially the position of shading correction plate), mirror and lens dirty?	Clean them.		

17)Faded image (low density, abnormal gray balance)



Fig. 5-17

Defective area	Step	Check items	Prescription	
Developer material/Toner/ Photoconductive drum	1	Using the specified developer mate- rial, toner and photoconductive drum?	Use the specified developer material, toner and photoconductive drum.	
	2	Have the developer material and the photoconductive drum reached their PM life?	Replace the developer material and photoconductive drum.	
	3	Is there any film forming on the pho- toconductive drum?	Clean or replace the drum.	
Toner Cartridge	4	Is the toner supply symbol lighting?	Replace the toner cartridge.	
	5	Is the toner cartridge installed prop- erly?	Check the installation state of the toner cartridge, install it securely.	
	6	Is the performance of the new toner supply motor normal?	Check the performance of the new toner supply motor.	
	7	Is the toner cartridge normal?	Check the toner cartridge. Replace if it is not normal.	
Main charger output	8	Is the setting value proper? Is the main charger output normal?	Replace the high-voltage transformer with a new one and print out a test chart. If any abnormal image appears, check the harness connection between the LGC board and the high-voltage transformer, power sup- ply and stain on the main charger wire.	

Defective area	Step	Check items	Prescription
Developer bias output	9	Is the setting value proper? Is the developer bias output normal?	Replace the high-voltage transformer with a new one and print out a test chart. If any abnormal image appears, check the harness connection between the LGC board and the high-voltage transformer, power sup- ply and stain on the main charger wire.
Decreasing toner density	10	Is the Auto-toner sensor connected correctly?	Check the connection of the connec- tor of the Auto-toner sensor.
	11	Is the toner density low?	Correct the toner density. (Note 2: See 'Toner density correct- ing method'.)
Image quality sensor/ Sur- face potential sensor	12	Are the image quality sensor and the surface potential sensor normal?	Check the performance of the image quality sensor and the surface poten- tial sensor. (See the trouble shooting related with the image quality con- trol.)
Main charger	13	Is the main charger dirty?	Clean or replace it.

Note:

- 1. Toner density correcting method
- Change the setting value 'Toner density life correction setting (08-414)' (6 is the default setting.) 0: Appox. 0.75% lower than the current value
 - 1: Appox. 0.50% lower than the current value
 - 2: Appox. 0.25% lower than the current value
 - 3: The current value (Default setting)
 - 4: Appox. 0.15% higher than the current value
 - 5: Appox. 0.25% higher than the current value
 - 6: Appox. 0.50% higher than the current value
 - 7: Appox. 0.75% higher than the current value

<Caution for correction>

When increasing or decreasing the toner density too much, the image may become poor or the life of developer material, cleaner, photoconductive drum and fuser unit, etc. may shorten. Therefore it is not recommended to correct (to shift) the toner density basically. If it is shifted, make sure that the image may be improper in a few minutes after shifting.

18)Image dislocation in feeding direction



Fig. 5-18

Defective area	Step	Check items	Prescription		
Scanner/Printer adjust- ment	1	Have the printed images been dislo- cated in the same manner?	Adjust the position of the leading edge of paper in the Adjustment Mode.		
Registration roller	2	Is the registration roller dirty, or the spring detached?	Clean the registration roller with alco- hol. Securely attach the springs.		
	3	Is the registration roller working prop- erly?	Adjust or replace the gears if they are not engaged properly.		
Feed clutch	4	Is the feed clutch working properly?	Check the circuit or feed clutch, and replace them if necessary.		
Pre-registration guide	5	Is the pre-registration guide installed properly?	Install the guide properly.		



Fig. 5-19

Defective area	Step	Check items	Prescription				
-	1	Is the toner image on the drum nor- mal?	If normal, perform steps 2 to 4. Per- form step 5 and followings in case the image is abnormal.				
Registration roller	2	Is the registration roller rotating nor- mally? Check the registration roller area a springs for installation condition.					
Fuser roller and pressure roller	3	Are the fuser roller and pressure roller rotating normally?Check the fuser roller area. Replace the rollers if necessary.					
Drum	4	Is there a big scratch on the drum?	Replace the drum.				
Operation of carriage	5	Is there any problem with the slide sheet?	Replace the slide sheet.				
	6	Is there any problem with the car- riage foot?	Replace the carriage foot.				
	7	Is the tension of the timing belt nor- mal?	Adjust the tension.				
	8	Is there any problem with the drive system of the carriage?	Check the drive system of the car- riage.				
Scanner	9	Is the mirror secured?	Secure it.				
Drum drive system	10	Is there any problem with the drive system of the drum?	Check the drive system of the drum. Clean or replace the gears if they have stains or scratches.				



Fig. 5-20

Defective area	Step	Check items	Prescription					
Developer material/Toner/ Photoconductive drum	1	Using the specified developer mate- rial, toner and photoconductive drum?						
Dram cleaning brush	2	Is the cleaning brush damaged or Replace the cleaning brush. has it reached its PM life?						
Fuser unit	3	Are there bubble-like scratches on the fuser roller (188mm pitch on the printed image)?	Replace the fuser roller. Check and adjust the temperature control circuit.					
	4	Is the pressurization of the press roller normal?	Check and adjust the pressurization mechanism.					
	5	Is the temperature of the fuser roller normal?	Check the adjustment value of fuser roller temperature. (08-410, 411, 412, 413, 437, 1804)					
	6	Is the pressurization of the cleaning web normal?	Check the installation state of the cleaning web mechanism.					
	7	Is the cleaning web transported nor- mally?	Replace the moter.					
	8	Using the specified cleaning web?	Use the specified cleaning web.					
Drum cleaning blade	9	Is the drum cleaning blade in proper contact with the drum?	Check the cleaning blade and replace it if it does not contact with the cleaning blade properly.					
	10	Has the drum cleaning blade been turned up?	Replace the drum cleaning blade. Check and replace the drum if neces- sary.					
Toner recovery auger	11	Is the toner recovered normally?	Clean the toner recovery auger. Check the pressure of the cleaning blade.					

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21)Uneven light distribution



Fig. 5-21

Defective area	Step	Check items	Prescription	
Original glass	1	Is the original glass dirty?	Clean the original glass.	
Main charger	2	Are the needle electrode, main charger grid and main charger case dirty?	Clean or replace them.	
Discharge LED	3	Is the discharge LED dirty?	Clean the discharge LED.	
	4	Is any of the discharge LEDs off?	Replace the discharge LED.	
Scanner	5	Are the reflector, exposure lamp, mir- rors, lens, and original glass (espe- cially the position of shading correction plate) dirty?	Clean them.	
Exposure lamp	6	Is the exposure lamp discolored or degraded?	Replace the exposure lamp.	



Fig. 5-22

Defective area	Step	Check items	Prescription	
Paper	1	Is the paper type corresponding to its mode?	Check the paper type and mode.	
	2	Is the paper too dry?	Change the paper.	
Transfer belt unit	3	Is the surface of the transfer belt sup- ply roller dirty with toner?	Clean it with alcohol.	
	4	Does the transfer belt exceed its nor- mal life span?	Replace the transfer belt.	
High-voltage transformer (Transfer charger)	5	Is the output from the high-voltage transformer normal?	Adjust the output. Replace the trans- former if necessary.	

5.3 Replacement of PC Boards and HDD

When the HDD requires replacement, refer to P.5-153 "5.3.1 Replacing HDD". When the SYS board requires replacement, refer to P.5-156 "5.3.2 Replacing SYS 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. <u>To maintain the security, ask users to perform the backup/restore for users' data/information</u> 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.

- [A] 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".
- (2) F-code information, Template registration information, Address book Back them up in the "Administrator" menu of TopAccess.
- (3) Department management data Export them in "Administrator" menu of TopAccess.
- (4) Log data (Print, Scan, FAX (Transmission / Reception)) Export them in the "Administrator" menu of TopAccess. (Import cannot be performed.)
- (5) 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.)
- (7) Print job (Private print data, Schedule print data)If any job is left, print them. (The data cannot be backed up.)
- (8) FAX saved data (Confidential / Bulletin board data) Print them. (The data cannot be backed up.)
- (9) Registration data for FAX transmission (Delayed transmission / Recovery transmission) The data cannot be backed up.

- [B] Print out the "FUNCTION LIST FOR MAINTENANCE" (content of Function Mode (13) setting) list.
- (1) Press the [USER FUNCTIONS] button and then the [USER] button.
- (2) Press the [LIST] button.
- (3) Key in [*] [#] [*] [3] [3] and then press the [START] button. \rightarrow The list is outputted.
- [C] Print out the "FUNCTION" list.
- (1) Press the [USER FUNCTIONS] button.
- (2) Press the [ADMIN] button, enter the password, and then press the [ENTER] button.
- (3) Press the [LIST/REPORT] button and then the [LIST] button.
- (4) Press the [FUNCTION] button. \rightarrow The list is outputted.
- [D] Replace the HDD.
- [E] Update of HDD program data and UI data.
- Create partitions. (In case of using the download jig, this is not necessary.) While pressing [3] and [CLEAR] button, turn the power ON. When "Firmware Version Up Mode" appears on the LCD, key in [3] and press the [START] button.
- (2) Update with the download jig or USB storage.See P.6-1 "6. FIRMWARE UPDATING" for details.
- (3) Format the HDD. (Setting Mode (08-690: 2))
 * When the FAX unit (GD-1150) is installed. Start up with the FAX Clearing Mode (1*) Perform the 1*-100 (FAX Set Up), 1*-102 (Clearing the image data) of the FAX Clearing Mode.
- [F] Ask users to reset the user's setting items and to restore the data/information. See the following for the reset and the restore.
- (1) Printer driver Upload them in the "Administrator" menu of TopAccess.
- (2) F-code information, Template registering information, Address book Restore them in the "Administrator" menu of TopAccess
- (3) Department management data Import them in the "Administrator" menu of TopAccess.

- (4) Image data in the Electronic Filing Upload them in the "e-Filing" of TopAccess.
- (5) 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
- (6) 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
- [G] Referring to the "FUNCTION LIST FOR MAINTENANCE" list which was printed beforehand, perform the re-setting.
- (1) Print out the "FUNCTION LIST FOR MAINTENANCE" list after the formatting. (Refer to the procedure of (2).)
- (2) While pressing [1] and [3] simultaneously, turn the power ON. (Function Mode)
- (3) 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.
- (4) Turn the power OFF.
- [H] Referring to the "FUNCTION" list which was printed beforehand, perform the re-setting of the default setting of the FAX function.
- (1) Press the [USER FUNCTIONS] button.
- (2) Press the [ADMIN] button, enter the password, and then press the [ENTER] button.
- (3) Press the [FAX] button and then the [TERMINAL ID] button to set each item.
- (4) Press the [INITIAL SETUP] button to set each item.

5.3.2 Replacing SYS board

<<CAUTION IN REPLACING the SYS board>> Perform the following procedures and settings when the SYS board is replaced.

<After replacing the SYS board>

- (1) Install DIMM (main 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) Update the version of system ROMs (System Firmware, OS data, UI data) (The ROMs had been used for the old SYS board).
 - * See 💷 P.6-1 "6. FIRMWARE UPDATING" for the details of System ROM update.
- (4) Turn the power OFF and start up with the Setting Mode (08).
- (5) When the message "SRAM ERROR DOES IT INITIALIZE?" is displayed on the LCD, press the [INITIALIZE] button.
 - SRAM is cleared
 - * If SRAM is not performed, 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.
- (6) [If a scrambler board has already been installed] Perform 08-698 (Entering the key code for scrambler board). Have the user enter the key code.
- (7) Perform 08-200 (date and time setting) to set Date/Time.
- (8) Check the serial number after performing 08 Code 995. If the number is different from the number on the label attached on the rear cover of the machine, re-input the correct number with 08 Code 995.
- (9) Perform 08-693 (initialization of the NIC information).
- (10) Turn the power OFF.
 - * If the FAX board has not been installed, skip to step (14).
- (11) Start up with the FAX Clearing Mode (1*)

(12) Perform 1*-102 (Clearing the image data).

Note:

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
- (13) Turn the power OFF.
- (14) Turn the power ON.
- (15) Set the dial type. [USER FUNCTIONS] \rightarrow [ADMIN] \rightarrow [FAX] \rightarrow [INITIAL SETUP]

5.3.3 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.

100% D HDD Erase [OK]	
	SYS V1.0

- 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.
- * When the scrambler board is installed, data in the HDD are overwritten with encrypted data and erased.

<<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)

Caution

If these codes are performed, the equipment cannot be started up.

5.3.4 Replacing NVRAM

<<Caution in replacing the NVRAM>> When exchanging or replacing the NVRAM of the SYS board, the setting must be performed according to the following procedure.

<After replacing the NVRAM>

- (1) Take off the FAX board if installed.
- (2) Start up with the Setting Mode (08).
- (3) Check the serial number after performing 08-995 (Equipment number display). If the number is different from the one on the label attached to the rear cover of the equipment, enter the correct serial number again with 08-995.

Note:

The MAC address of the equipment is generated based on this serial number. Entering the incorrect serial number may result in an inability to access the network due to an invalid MAC address.

- (4) Perform 08-693 (initialization of the NIC information).
- (5) Perform "1: Electrical counter -> Backup counter" of 08-257 (Counter copy) to recover the total counter.
- (6) Shut down the equipment.
- (7) Install the FAX board taken off in step (1).
 * If the FAX board has not been installed, the following steps are not necessary.
- (8) Start up with the Setting Mode (08).
- (9) Set the destination with 08-701 (Destination setting of FAX machine).
- (10) Start up with the FAX Clearing Mode (1*).
- (11) Perform 1*-100 (FAX Set Up).
- (12) Turn the power OFF.
- (13) Turn the power ON.
- (14) Set the dial type. [USER FUNCTIONS] \rightarrow [ADMIN] \rightarrow [FAX] \rightarrow [INITIAL SETUP]

5.3.5 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	e HDD seria	al numb	er	
100% 670 TEST MODE					
WDCXWD800BB-22JHC0> (WD-	WMAM9204944	13)			
ID NAME		VALUE	NAV	Worst	
01 Read Error Rate		0	200	200	
02 Throughput Performance	ce				
03 Spin Up Time		2691	166	165	
04 Spin Start/Stop Count		216	100	100	
05 Re-allocated Sector (Count	0	200	200	
	6	<u>س</u>			1/6
Prev					

- 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	Description	Diagnosis	
05	0	Low possibility of physical failure	HDD replacement	
c5	0		is not required.	
05	From 1 to 999	Defective sector has been reassigned and HDD is recovered.	HDD replacement	
c5	0		is not required.	
05	Any value	High possibility of defective sector existence. (There will be a	HDD replacement	
c5	1 or more	possibility of physical failure depending on the use of HDD.)	is recommended.	
05	Either one is at	High possibility of physical failure	HDD replacement	
c5	least 1000.		is recommended.	
05	All values are dis-	High possibility of physical failure (A HDD connector, harness	HDD replacement	
c5	played as "".	or SYS board may be one of the causes.)	is recommended.	

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 dur- ing 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 reallo- cation 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 uncorrect- able 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

- 1) Operation cannot be performed (operation from the control panel is not successful) after installing the option(s) such as Wireless LAN module, Scrambler board and/or Parallel board.
 - Check if the optional board is installed properly.
- 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 FUNC-TIONS] → [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.

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 "V1.04/ 2.38".	USB Storage Device * When replacing the system control PC board (SYS board), update with the Download jig.
Engine ROM (Machine firmware)	Logic PC board (LGC board)	USB Storage Device * Updating with the Download jig is also possible.
Scanner ROM (Scanner firmware)	Scanning section control PC board (SLG board)	USB Storage Device * Updating with the Download jig is also possible.
Laser ROM (Printer firmware)	Laser control PC board (PLG board)	USB Storage Device * Updating with the Download jig is also possible.
PFC ROM	Logic PC board (LGC board)	USB Storage Device * Updating with the Download jig is also possible.
RADF ROM (RADF firmware)	RADF control PC board (ADF board)	Download jig
Finisher ROM (Finisher firmware)	Finisher control PC board (MJ-1027/1028)	Download jig
Finisher ROM (Saddle stitcher firmware)	Saddle stitcher control PC board (MJ-1028)	Download jig
FAX ROM (FAX firmware)	FAX board (GD-1170)	Download jig
Inserter ROM	Inserter main board (MJ-7001)	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.6-39 "6.2 Firmware Updating with USB Storage Device"

Notes:

- 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 "V1.03 / 8.30" or earlier version to the latest one, update it to "V1.04 / 2.38" first. Select all of the SYS, OS, UI and HDD when updating "V1.03 / 8.30" 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, finisher control PC board and saddle stitcher control PC board.
 When any of above boards is replaced with a new one in the field, confirm the other firmware

When any of above boards is replaced with a new one in the field, confirm the other firmware version used with and then write 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 two 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).

Firmere	Stored	Download jig		
Firmware	Stored	Individual update	Batch update	
Master data	Hard disk	PWA-DWNLD-350-JIG2 (48 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 "V1.04/2.38".	PWA-DWNLD-350-JIG2 (48 MB)		
Engine ROM	Logic PC board (LGC board)	K-PWA-DLM-320 or PWA-DWNLD-350-JIG2 (48 MB)		
Scanner ROM	Scanning section control PC board (SLG board)	K-PWA-DLM-320 or PWA-DWNLD-350-JIG2 (48 MB)	PWA-DWNLD-350-JIG2 (48 MB)	
Laser ROM	Laser control PC board (PLG board)	K-PWA-DLM-320 or PWA-DWNLD-350-JIG2 (48 MB)		
PFC ROM	Logic PC board (LGC board)	K-PWA-DLM-320 or PWA-DWNLD-350-JIG2 (48 MB)		
RADF ROM	RADF control PC board (ADF board)	K-PWA-DLM-320	-	
Finisher ROM (Finisher firmware)	Finisher control PC board (MJ-1027/1028)	K-PWA-DLM-320	-	
Finisher ROM (Saddle stitcher firmware)	Saddle stitcher control PC board (MJ-1028)	K-PWA-DLM-320	-	
FAX ROM	FAX board (GD-1107)	K-PWA-DLM-320	-	
Inserter ROM	Inserter main board (MJ-7001)	K-PWA-DLM-320	-	

Refer to the following for the details to update with each download jig.

P.6-5 "6.1.1 PWA-DWNLD-350-JIG2 (48 MB) <Master data>"

P.6-11 "6.1.2 PWA-DWNLD-350-JIG2 (48 MB) <System ROM / Engine ROM / Scanner ROM / Laser ROM / PFC ROM>"

P.6-28 "6.1.4 K-PWA-DLM-320"

PWA-DWNLD-350-JIG2 (48MB)



Fig. 6-1 Jig board: PWA-DWNLD-350-JIG2 (48 MB)

Important:

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.6-26 "6.1.3 Writing the data to the download jig (PWA-DWNLD-350-JIG)"

K-PWA-DLM-320



Fig. 6-2 Jig board: K-PWA-DLM-320

Important:

Pay attention to the direction of the ROM.

6.1.1 PWA-DWNLD-350-JIG2 (48 MB) <Master data>

The master data written on the hard disk can be updated. Update the master data according to the need such as the case of replacing the hard disk.

The data to be overwritten are as follows.

- HDD program data (RIP data, list data, Web data, filing box control data)
- UI data (fixed section data, common section data, the language 1 to 7 data, the language 1 to 6 data for Web)
- [A] Update procedure

Important:

- Use the download jig "PWA-DWNLD-350-JIG2 (48 MB)".
- 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.
- Write the data to the download jig.
 P.6-26 "6.1.3 Writing the data to the download jig (PWA-DWNLD-350-JIG)"
- (2) Shut down the equipment.
- (3) Remove the cover plate.



Fig. 6-3

(4) Connect the download jig with the jig connector (CN107) on the SYS board.



Fig. 6-4

(5) Turn ON the power.
 Downloading starts automatically and the processing status is displayed on LCD screen.

```
Download Board Firmware Update Mode
Download Board -> HDD Update Start.
Check Devices - Checking
Update Status -
```

Fig. 6-5

(6) "Update Completed!!" is displayed at the bottom of the LCD screen after the updating is completed properly.

Download Board Fi	irmware Update Mode			
Download Board -> HDD Update Start.				
Check Devices Update Status	- Completed - Completed	ххх/ууу		
	Update Completed!!			

Fig. 6-6

"Update Failed." is displayed at the bottom of the LCD screen when the updating is not completed properly. Turn OFF the power, and then check the following items. After confirming and clearing 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?

```
Download Board Firmware Update Mode
Download Board -> HDD Update Start.
Check Devices - Checking
Update Status -
Update Failed.
```

Fig. 6-7

- (7) Turn OFF the power, and then remove the download jig.
- (8) Perform the "Updating System ROM" continuously.
 P.6-11 "6.1.2 PWA-DWNLD-350-JIG2 (48 MB) <System ROM / Engine ROM / Scanner ROM / Laser ROM / PFC ROM>" <Updating System ROM>
- [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.

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 08-923: UI data common section version 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 08-930: Version of UI data in FROM displayed at power ON 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

[C] Display during the update

The processing status is displayed as follows on the LCD screen during the update.



Download Board Firmware Update Mode Download Board -> HDD Update Start. Check Devices -Checking Update Status -

When the device check completes, copying the data to HDD starts.



When copying all the files completes, the backup of the RIP font starts.

Download Board Firmware Update Mode Download Board -> HDD Update Start. Check Devices - Completed Update Status - Backup file /PRF -> /PR2

ххх/ууу

Υ,

When the backup of the RIP font completes, the update completes with the following screen.

Download Board Firmware Update Mode	
Download Board -> HDD Update Start.	
Check Devices - Completed Update Status - Completed	ххх/ууу
Update Completed!!	

* If an error occurs, the following error message is displayed and the update is interrupted.



Error message

6.1.2 PWA-DWNLD-350-JIG2 (48 MB) <System ROM / Engine ROM / Scanner ROM / Laser ROM / PFC ROM>

The firmware of the equipment except the hard disk and the option can be updated individually or in a batch. 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, common section data, UI data in FROM displayed at power ON)
- <Updating Engine ROM> Engine ROM data
- <Updating Scanner ROM> Scanner ROM data
- <Updating Laser ROM> Laser ROM data
- <Updating PFC ROM> PFC ROM data
- [A] Update procedure

Important:

- Use the download jig "PWA-DWNLD-350-JIG2 (48 MB)".
- 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.
- Write the ROM data to be updated to the download jig.
 P.6-26 "6.1.3 Writing the data to the download jig (PWA-DWNLD-350-JIG)"
- (2) Shut down the equipment.

6

(3) Remove the cover plate.





(4) Connect the download jig with the jig connector (CN107) on the SYS board.



Fig. 6-9

(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 "V1.03 / 8.30" or earlier:

Download Board Firmware Update Mode	Version in update media
Select Update Item	OS Version Vx.xx/x.xx
	UIF Version Vxxx.xxx.x
*O. OS Update	UIO Version Vxxx.xxx.x
*1. UI Update	UI1 Version Vxxx.xxx.x
*2. System Firmware Update	SYS Version Vxxx.xxx.x
*3. LSR Firmware Update	LSR Version xxxxx-xxx
*4. PFC Firmware Update	PFC Version xxxxx-xxx
*5. Engine Firmware Update	ENG Version xxxxx-xxx
∗6. Scanner Firmware Update	SCN Version xxxxx-xxx

Fig. 6-10

When the FROM basic section software version to be updated is "V1.04 / 2.38" or later:

in update media ion Vx.xx/x.xx x ion Vxxx xxx x
ion Vxxx.xxx x ion Vxxx.xxx x ion xxxx-xxx ion xxxx-xxx ion xxxx-xx ion xxxx-xx ion xxxxx-xx

Fig. 6-11

(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 basic="" be<br="" depending="" from="" on="" section="" software="" the="" to="" vary="" version="">updated.></items>	
	"V1.03/8.30" or earlier	"V1.04/2.38" or later
System ROM	0. OS Update 1. UI Update 2. System Firmware Update	1. OS UI Update
Laser ROM	3. LSR Firmware Update	2. LSR Firmware Update
PFC ROM	4. PFC Firmware Update	3. PFC Firmware Update
Engine ROM	5. Engine Firmware Update	4. Engine Firmware Update
Scanner ROM	6. Scanner Firmware Update	5. Scanner Firmware Update

Example: Updating the system ROM When the FROM basic section software version to be updated is "V1.03 / 8.30" or earlier:

Download Board Firmware Update Mode
Select Update ItemVersion in update media
OS Version... Vx.xx/x.xx
UIF Version... Vxxx.xx.x
UIF Version... Vxxx.xx.x
UIF Version... Vxxx.xx.x
VII Version... Vxxx.xx.x
SYS Version... Vxxx.xxx.x
SEngine Firmware UpdateVersion in update media
OS Version... Vx.xx/x.xx
UIF Version... Vx.xx/x.xx
UIF Version... Vxxx.xx.x
SYS Version... Vxxx.xx.x
SCN Version... XXXX-XXX
SCN Version... XXXX-XXX

Fig. 6-12

When the FROM basic section software version to be updated is "V1.04 / 2.38" or later:

Version in update media
OS Version Vx.xx/x.xx x
UIF Version Vxxx.xxx x
UIO Version Vxxx.xxx x
UI1 Version Vxxx.xxx x
LSR Version xxxxx-xxx
PFC Version xxxxx-xxx
ENG Version xxxxx-xx
SCN Version xxxxx-xx

Fig. 6-13

(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 "V1.03 / 8.30" or earlier:

Download Board Firmware Update Mode			
Download Board -> FROM Update Start. Check Devices - Completed	OS Update		
Update Status - Installing Data Check -	LSR Firm Update Flash Update		
LSR Update Status xxxx/nnnnn Scanner Update Status xxxx/nnnnn	Scanner Firm Update Flash Update		

Fig. 6-14

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
LSR Update		Flash Update	LSR Update		Completed
PFC Update			PFC 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 to be updated is "V1.04 / 2.38" or later:

Download Board Firmware Update Mode				
Download Board -> FROM Update Star Check Devices - Completed Update Status - Installing Data Check -	t. OS UI Update LSR Firm Update Flash Update			
	Scanner Firm Update Flash Update			
LSR Update Status xxxx/nnnnn Scanner Update Status xxxx/nnnnn				

			Fig. 6-15		
Status display during update			Status display when update is completed		
OS UI Update			OS UI Update		Completed
LSR Update		Flash Update	LSR Update		Completed
PFC Update			PFC 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 "V1.03 / 8.30" or earlier:

Download Board Firmware Update Mode	OS Update	Completed
	UI Data Update SysFirm Update LSR Firm Update PFC Firm Update Engine MAIN Update	Completed Completed Completed Completed Completed
	Scanner Firm Update	Completed
	Update Completed.	

Fig. 6-16

When the FROM basic section software version to be updated is "V1.04 / 2.38" or later:

Download Board Firmware Update Mode	
	OS UI Update Completed LSR Firm Update Completed PFC Firm Update Completed Engine MAIN Update Completed Scanner Firm Update Completed
	Update Completed.

Fig. 6-17

"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.

- · 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 "V1.03 / 8.30" or earlier:

Download Board Firmware Update Mode

OS Update	Completed
UI Data Update	Completed
SysFirm Update	Completed
LSR Firm Update	Completed
PFC Firm Update	Completed
Engine MAIN Update	Failed
Scanner Firm Update	Completed
Update Failed.	

Fig. 6-18

When the FROM basic section software version to be updated is "V1.04 / 2.38" or later:

Download Board Firmware Update Mode	
	OS UI Update Completed LSR Firm Update Completed PFC Firm Update Completed Engine MAIN Update Failed Scanner Firm Update Completed
	Update Failed.

Fig. 6-19

- (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
08-923: UI data common section version
08-930: Version of UI data in FROM displayed at power ON

<Updating Engine ROM> 08-903: Engine ROM version

<Updating Scanner ROM> 08-905: Scanner ROM version

<Updating Laser ROM> 08-904: Laser ROM version

<Updating PFC ROM> 08-906: PFC ROM version [C] Display during the update(When the FROM basic section software version to be updated is "V1.03 / 8.30" or earlier)

Update is performed in parallel as shown in the transition diagram below.



Fig. 6-20

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.



6



Select items to be updated and press the [START] button to start updating the [System ROM], [Laser ROM] and [Scanner ROM] in parallel.

Download Board Fi	irmware Update Mode	
Download Board Check Devices	-> FROM Update Start. - Completed	OS Update
Data Check		LSR Firm Update Flash Update
LSR Update Status xxxx/nnnnn Scanner Update St xxxx/nnnnn	s tatus	Scanner Firm Update Flash Update

When the [System ROM]-[OS Update] has Д been updated, "OS Update...Completed" is displayed and the [UI Update] update will start.

Download Board Firmware Update Mode	
Download Board -> FROM Update Start. Check Devices - Completed Update Status - Installing	OS Update Completed UI Data Update
Data Check –	LSR Firm Update Flash Update
LSR Update Status xxxx/nnnnn Scanner Update Status xxxx/nnnnn	Scanner Firm Update Flash Update



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 F	irmware Update Mode		
Download Board Check Devices Update Status	-> FROM Update Start. - Completed - Installing	OS Update UI Data Update SysFirm Update	Completed Completed
Data Check	_	LSR Firm Update	Flash Update
LSR Update Status	S	Scanner Firm Update	Flash Update
xxxx/nnnnn Scanner Update St xxxx/nnnnn	tatus		

Г	1	
ረ	ל	

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) LSR Firm Update Flash Update
LSR Update Status xxxx/nnnnn Scanner Update Status xxxx/nnnnn		Scanner Firm Update Flash Update
	Ŷ	When the [Scanner ROM] has been updated "Scanner Firm UpdateFlash Update" is changed to "Scanner Firm UpdateComplet
Download Board Firmware Update Mode		
		OS Update Completed UI Data Update Completed SysFirm Update Completed LSR Firm Update Flash Update
LSR Update Status xxxx/nnnnn		Scanner Firm Update Completed)
	Ŷ	When the [Laser ROM] has been updated, "LSR Firm Update…Completed" is displayed and the [PFC ROM] update will start.
Download Board Firmware Update Mode		
		OS Update Completed UI Data Update Completed SysFirm Update Completed LSR Firm Update Completed PFC Firm Update Flash Update
PFC Update Status xxxx/nnnnn		Scanner Firm Update Completed
	Ŷ	When the [PFC ROM] has been updated, "P Firm UpdateCompleted" is displayed and

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[Engine ROM] update will start.

Download Board Firmware Update Mode	
Engine Update Status xxxx/nnnnn	OS Update Completed UI Data Update Completed SysFirm Update Completed LSR Firm Update Completed PFC Firm Update Completed Engine MAIN Update Flash Update Scanner Firm Update Completed
4	 When the [Engine ROM] has been updated, "Engine MAIN UpdateFlash Update" is changed to "Engine MAIN UpdateComplet

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 LSR Firm Update Completed PFC Firm 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 LSR Firm Update Completed PFC Firm Update Completed Engine MAIN Update Failed. Scanner Firm Update Completed
Failed	items Error message

[D] Display during the update (When the FROM basic section software version to be updated is "V1.04 / 2.38" or later)

Update is performed in parallel as shown in the transition diagram below.





Below is an example of the changes of the LCD screen during update.



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Download Board Fi	irmware Update Mode	
Download Board Check Devices Update Status Data Check	-> FROM Update Start. - Completed - Installing	OS UI Update LSR Firm Update Flash Update
Dala Gleck	-	Scanner Firm Update Flash Update
LSR Update Status xxxx/nnnnn Scanner Update St xxxx/nnnnn	s catus	

 $\frac{1}{\sqrt{2}}$

When the [System ROM]-[OS Update] has been updated, "OS UI Update...Completed" is displayed.

Download Board Check Devices Update Status	-> FROM Update S - Completed - Installing	Start.	OS UI Update Completed) LSR Firm Update Flash Updat	te
Data Check	_		Scanner Firm Update Flash Updat	te
LSR Update Status xxxx/nnnnn Scanner Update St xxxx/nnnnn	s tatus			
		Ŷ	When the [Scanner ROM] has been u "Scanner Firm UpdateFlash Update" changed to "Scanner Firm Update Completed".	ipdate ' is

Download Board Fi	irmware Update Mode		
Download Board Check Devices Update Status	-> FROM Update Start. - Completed - Installing	OS UI Update LSR Firm Update	Completed Flash Update
Data Check	-	Scanner Firm Update	Completed
LSR Update Status xxxx/nnnnn	5		

ſ	ļ

When the [Engine ROM] has been updated, "Engine MAIN Update..Flash Update" is changed to "Engine MAIN Update.. Completed".

When all data has been updated, "Update Completed" is displayed.

Download Board Firmware Update Mode	
	OS UI Update Completed LSR Firm Update Completed PFC Firm 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 LSR Firm Update Completed PFC Firm Update Completed Engine MAIN Update Failed Scanner Firm Update Completed
	(Update Failed.)
Failed	items Error message

6.1.3 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. 6-22

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	PWA-DL-ADP-350-1881
(or equivalent)	(model 1881)
Minato Electronics MODEL 1893/1895/1931/1940	PWA-DL-ADP-350-1931
(or equivalent)	(model 1931)





Fig. 6-23 PWA-DL-ADP-350-1881

Fig. 6-24 PWA-DL-ADP-350-1931

- [A] Precaution when writing the data
- Set the writing voltage (VID) to 3.3V.
- 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.

	File		
Rotary Switch	Master Data	System, Engine, Scanner, Laser and PFC data	Flash ROM
1	hdos.bin	firmImage0.bin	ROM1
2	1	firmImage1.bin	ROM2
3	2	firmImage2.bin	ROM3
4	3	N/A	ROM4
5	4	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.

6.1.4 K-PWA-DLM-320

The firmware of the equipment (engine ROM, 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 Engine ROM, PFC ROM> Engine ROM data PFC ROM data

<Updating Scanner ROM> Scanner ROM data

<Updating Laser ROM> Laser ROM data

<Updating RADF ROM> RADF ROM data

<Updating Finisher ROM>

- Finisher firmware
- Saddle stitcher firmware

<Updating Inserter ROM> Inserter ROM data

<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 Engine ROM, PFC ROM>

- Install the ROM to the download jig. Make sure the direction is correct (P.6-4 "Fig. 6-2 Jig board: K-PWA-DLM-320").
- (2) Shut down the equipment.

(3) Take off the connector cover on the rear cover.





(4) Connect the downloading jig with the jig connector (Engine ROM: CN324, PFC ROM: CN325) on the LGC board (ROM attached side upward).



Fig. 6-26

- (5) Open the front cover.
- (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) 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?
- (8) Turn OFF the power, remove the download jig and install the connector cover.
- (9) Close the front cover.

<Updating Scanner ROM>

- Install the ROM to the download jig. Make sure the direction is correct (P.6-4 "Fig. 6-2 Jig board: K-PWA-DLM-320").
- (2) Shut down the equipment.
- (3) Take off the top right cover.



Fig. 6-27

(4) Take off the right upper cover.



Fig. 6-28

(5) Remove the cover plate.



Fig. 6-29

(6) Connect the download jig with the jig connector (CN6) on the scanning section control PC board (SLG board).





- (7) Open the front cover.
- (8) Turn ON the power while [0] button and [8] button are pressed simultaneously. Updating starts automatically and the LED on the download jig lights.
- (9) 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?
- (10) Turn OFF the power, remove the download jig and install the cover plate, the right upper cover and the top right cover.
- (11) Close the front cover.

<Updating Laser ROM>

- Install the ROM to the download jig. Make sure the direction is correct (P.6-4 "Fig. 6-2 Jig board: K-PWA-DLM-320").
- (2) Shut down the equipment.
- (3) Open the bypass feed unit.
- (4) Loosen a screw to open the connector cover.
- (5) Connect the downloading jig with the jig connector (J213) on the PLG board (ROM attached side upward).





- (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) After the update is completed properly, the LED on the download jig blinks. 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. 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 connector cover.
- (10) Close the front cover.

<Updating RADF ROM>

- Install the ROM to the download jig. Make sure the direction is correct (
 P.6-4 "Fig. 6-2 Jig board: K-PWA-DLM-320").
- (2) Shut down the equipment.
- (3) Take off the connector cover on the ADF rear cover.
- (4) Connect the downloading jig with the jig connector (J3) on the ADF board (ROM attached side upward).



Fig. 6-32

- (5) Open the front cover.
- (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. 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. 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 connector cover.
- (9) Close the front cover.

<Updating Finisher ROM>

Finisher firmware (MJ-1027/1028) and saddle stitcher firmware (MJ-1028) 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 and saddle stitcher control PC board.

Note:

The following updates are needed according to the finisher model.

- MJ-1027 (Console type): Only the update of "Finisher firmware" is needed.
 MJ-1028 (Console type with the saddle stitcher):
- Two kinds of update "Finisher firmware" and "Saddle stitcher firmware" are needed.
- Install the ROM to the download jig. Make sure the direction is correct (P.6-4 "Fig. 6-2 Jig board: K-PWA-DLM-320").
- (2) Shut down the equipment.
- (3) To update the finisher firmware, take off the finisher rear cover. To update the saddle stitcher firmware, take off the saddle stitcher PCB cover.
 - * Connect the finisher interface cable with the equipment.
- (4) Connect the download jig with the jig connector of the finisher control PC board or saddle stitcher control PC board.





- (5) Open the front cover.
- (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 slowly. 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, or LED flashes fast. 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.
- (9) Close the front cover.
- (10) Install the finisher rear cover and the saddle stitcher PCB cover.

6

<Updating Inserter ROM>

- Install the ROM to the download jig. Make sure the direction is correct (
 P.6-4 "Fig. 6-2 Jig board: K-PWA-DLM-320").
- (2) Shut down the equipment.
- (3) Connect the inserter to the equipment after the inserter rear cover removed.
 * At this time, do not connect the finisher interface cable to the inserter.
- (4) Connect the download jig with the jig connector of the inserter main board (ROM attached side to the left).



Fig. 6-34

- (5) Open the front cover.
- (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 slowly. 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, or LED flashes fast. 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.
- (9) Close the front cover.
- (10) Install the inserter rear cover.

<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.
- Install the ROM to the download jig. Make sure the direction is correct (
 P.6-4 "Fig. 6-2 Jig board: K-PWA-DLM-320").
- (2) Shut down the equipment.
- (3) Remove the cover plate.



Fig. 6-35

(4) Connect the download jig with the jig connector (CN602) on the FAX board.





(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

- (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 Engine ROM, PFC ROM> 08-903: Engine ROM version 08-906: PFC ROM version

<Updating Scanner ROM> 08-905: Scanner ROM version

- <Updating Laser ROM> 08-904: Laser ROM version
- <Updating RADF ROM> 08-907: RADF ROM version
- <Updating Finisher ROM> 08-908: Finisher ROM version
- <Updating Inserter ROM> 08-909: Inserter ROM version
- <Updating FAX ROM> 08-915: FAX ROM version

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. Also, the data file of each firmware can be used commonly in the updating methods with USB storage device and Download jig.

Firmware	Stored	Model specific folder name	Data file name
Master data	Hard disk	500.050	 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 "V1.04/2.38".	520_850	firmlmage0.bin, firmlmage1.bin
Engine ROM	Logic PC board (LGC board)		firmImage2.bin
Scanner ROM	Scanning section control PC board (SLG board)		
Laser ROM	Laser control PC board (PLG board)		
PFC ROM	Logic PC board (LGC board)		

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 512MB (or 1GB).
 - Operation of the USB storage device used for updating has been confirmed at the input check of this equipment (Test mode 03).
 Control Contro
 - (P.2-29 "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)

	0.1.01.01.11.	
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_520_850	[520_850] folder (Model specific folder)



Fig. 6-37

Important:

- The "mentusb.o" file stored in the root of the USB storage device is a common file in 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.

[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.6-39
 "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) Take off the cover plate.



Fig. 6-38

(4) Connect the USB storage device to the USB connector (host) on the SYS board.



Fig. 6-39

Notes:

- Do not connect multiple USB storage devices together.
- The USB storage device can be connected to either of 2 USB connectors (host).
- In case the printer kit (GM-1050/1051), printer/scanner kit (GM-2040/2041) and scanner kit (GM-4010) are used, the update must be performed after all the "dongles" are disconnected from the USB connector (host) and only the USB storage device is connected.
- (5) 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. 6-40

After the update program is finished being loaded, the following screen appears.

Download Storage Update Mode Please wait... now Initialization dlFirmWare Version VX.XX

Fig. 6-41

Note:

If the "dlFirmWare_520_850" 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 (5) and after.

Error loadModule

Fig. 6-42

(6) 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 "V1.03 / 8.30" 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 "V1.04 / 2.38" or later: All items are selected in the default settings.)

When the FROM basic section software version of the equipment is "V1.03 / 8.30" or earlier:

Download Storage Firmware Update Mode Select Update Item	Version in update media
0. OS Update	UIF Version Vxxx.xxx.x
*1. HDD Update	UIO Version Vxxx.xxx.x
*2. UI Data Update	UI1 Version Vxxx.xxx.x
*3. System Firmware Update	SYS Version Vxxx.xxx.x
*4. LSR Firmware Update	LSR Version xxxxx-xxx
*5. PFC Firmware Update	PFC Version xxxxx-xxx
*6. Engine Firmware Update	ENG Version xxxxx-xxx
*7. Scanner Firmware Update	SCN Version xxxxx-xxx

Fig. 6-43

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. LSR Firmware Update	firmImage2.bin is written.
5. PFC Firmware Update	firmImage2.bin is written.
6. Engine Firmware Update	firmImage2.bin is written.
7. Scanner Firmware Update	firmImage2.bin is written.

When the FROM basic section software version of the equipment is "V1.04 / 2.38" or later:

Download Storage Firmware Update Mode Select Update Item	Version in update media
 *1. OS UI Update *2. HDD SYS Update *3. LSR Firmware Update *4. PFC Firmware Update *5. Engine Firmware Update *6. Scanner Firmware Update 	UIF Version Vxxx.xxx.x UIO Version Vxxx.xxx.x UI1 Version Vxxx.xxx.x SYS Version Vxxx.xxx x LSR Version xxxxx-xxx PFC Version xxxxx-xxx ENG Version xxxxx-xx SCN Version xxxxx-xx

Fig. 6-44

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.

ltem	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. LSR Firmware Update	firmImage2.bin is written.
4. PFC Firmware Update	firmImage2.bin is written.
5. Engine Firmware Update	firmImage2.bin is written
6. 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 (5).

Please Set Correct USB Storage Device

6

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 (5).

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 "V1.04 / 2.38" 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. 6-46

If an attempt to update the FROM basic section software "V1.03 / 8.30" or earlier version to the latest firmware version without the update program, the following screen appears. In this case, store "mentusb.o" and "dlFirmWare_520_850", which are the files for update program, in the specified folder and repeat step (5) and after.

Inflate Error Please Change USB Storage or Please Check ROMDATA

Fig. 6-47

 (7) 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 basic="" depending="" equipment="" from="" of="" on="" section="" software="" the="" vary="" version=""></items>		
	"1.03 / 8.30" or earlier "1.04 / 2.38" 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 firmwar)	3. System Firmware Update		
Laser ROM	4. LSR Firmware Update	3. LSR Firmware Update	
PFC ROM	5. PFC Firmware Update	4. PFC Firmware Update	
Engine ROM	6. Engine Firmware Update	5. Engine Firmware Update	
Scanner ROM	7. Scanner Firmware Update	6. Scanner Firmware Update	

Example: Updating the master data and system ROM When the FROM basic section software version of the equipment is "V1.03 / 8.30" or earlier:

Download Storage Firmware Update Mode Select Update Item	Version in update media
0. OS Update *1 HDD Update *2. UI Data Update *3. System Firmware Update 4. LSR Firmware Update 5. PFC Firmware Update 6. Engine Firmware Update 7. Scanner Firmware Update	UIF Version Vxxx.xxx.x UIO Version Vxxx.xxx.x UI1 Version Vxxx.xxx.x SYS Version Vxxx.xxx.x LSR Version xxxxx-xxx PFC Version xxxxx-xxx ENG Version xxxxx-xxx

Fig. 6-48

When the FROM basic section software version of the equipment is "V1.04 / 2.38" or later:

Download Storage Firmware Update Mode Select Update Item	Version in update media
 *1. OS UI Update *2. HDD SYS Update 3. LSR Firmware Update 4. PFC Firmware Update 5. Engine Firmware Update 6. Scanner Firmware Update 	UIF Version Vxxx.xxx.x UIO Version Vxxx.xxx.x UII Version Vxxx.xxx.x SYS Version Vxxx.xxx x LSR Version xxxxx-xxx PFC Version xxxxx-xxx ENG Version xxxxx-xx SCN Version xxxxx-xx

Fig. 6-49

(Updating all the items is taken as an example and explained in the following procedures.)

(8) Press the [START] button.

Updating starts and the processing status is displayed on the LCD screen. When the multiple items are selected, updating starts in order of item number.

When the FROM basic section software version of the equipment is "V1.03 / 8.30" or earlier:

Download Storage Firmware Update Mode				
Download Storage -> FROM Update Start. Check Devices - Completed Update Status - Installing	OS Update HD Data Update			
Data Check - Download Storage -> HDD copying	LSR Firm Update Flash Update			
I/n LSR Update Status xxxx/nnnnn Scanner Update Status xxxx/nnnnn	Scanner Firm Update Flash Update			

Fig. 6-50

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
LSR Update		Flash Update	LSR Update		Completed
PFC Update			PFC 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 "V1.04 / 2.38" or later:

Download Storage Firmware Update Mode	
Download Board -> FROM Update Start. Check Devices - Completed Update Status - Installing Data Check -	OS UI Update HDD SYS Update LSR Firm Update Flash Update
Download Storage -> HDD copying 1/n	Scanner Firm Update Flash Update
LSR Update Status xxxx/nnnnn	
Scanner Update Status xxxx/nnnnn	

Fig. 6-51

Status display during update		Status display when update is completed			
OS UI Update			OS UI Update		Completed
HDD SYS Update			HDD SYS Update		Completed
LSR Update		Flash Update	LSR Update		Completed
PFC Update			PFC Update		Completed
Engine MAIN Update		Flash Update	Engine MAIN Update		Completed
Scanner Firm Update		Flash Update	Scanner Firm Update		Completed

(9) "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 "V1.03 / 8.30" or earlier:

Download Storage Firmware Update Mode OS Update Completed HD Data Update Completed UI Data Update Completed SysFirm Update Completed LSR Firm Update ... Completed PFC Firm Update ... Completed Engine MAIN Update ... Completed Scanner Firm Update ... Completed Update Completed.

Fig. 6-52

When the FROM basic section software version of the equipment is "V1.04 / 2.38" or later:

Download Storage Firmware Update Mode OS UI Update Completed HDD SYS U•date Completed LSR Firm Update ... Completed PFC Firm Update ... Completed Engine MAIN Update ... Completed Scanner Firm Update ... Completed

Fig. 6-53

"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.6-39 "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 "V1.03 / 8.30" or earlier:

Download Storage Firmware Update Mode OS Update Completed HD Data Update Completed UI Data Update Completed SysFirm Update ... Completed LSR Firm Update .. Completed PFC Firm Update .. Completed Engine MAIN Update .. Failed Scanner Firm Update .. Completed Update Failed.



When the FROM basic section software version of the equipment is "V1.04 / 2.38" or later:

Download Storage Firmware Update Mode		
	OS UI Update HDD SYS Update LSR Firm Update PFC Firm Update Engine MAIN Update Scanner Firm Update	Completed Completed Completed Completed Failed Completed
	Update Failed.	

Fig. 6-55

- (10) Turn OFF the power, remove the USB storage device and install the cover plate.
- (11) 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 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 08-938: Version of Web UI data language 6 in HDD

<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

08-923: UI data common section version

08-930: Version of UI data in FROM displayed at power ON

<Updating Engine ROM> 08-903: Engine ROM version

<Updating Scanner ROM> 08-905: Scanner ROM version

<Updating Laser ROM> 08-904: Laser ROM version

<Updating PFC ROM> 08-906: PFC ROM version [C] Display during the update(When the FROM basic section software version of the equipment is "V1.03 / 8.30" or earlier)



Update is performed in parallel as shown in the transition diagram below.

Fig. 6-56

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

*0. OS Update UIF Version Vxxx.xxx.x	Download Storage Firmware Update Mode Select Update Item	Version in update media
*1. HDD UpdateUIO Version Vxxx.xxx.x*2. UI Data UpdateUI1 Version Vxxx.xxx.x*3. System Firmware UpdateSYS Version Vxxx.xxx.x*4. LSR Firmware UpdateLSR Version xxxx-xxx*5. PFC Firmware UpdatePFC Version xxxx-xxx*6. Engine Firmware UpdateENG Version xxxx-xxx*7. Scanner Firmware UpdateSCN Version xxxx-xxx	 *0. OS Update *1. HDD Update *2. UI Data Update *3. System Firmware Update *4. LSR Firmware Update *5. PFC Firmware Update *6. Engine Firmware Update *7. Scanner Firmware Update 	UIF Version Vxxx.xxx.x UIO Version Vxxx.xxx.x UI1 Version Vxxx.xxx.x SYS Version Vxxx.xxx.x LSR Version xxxxx-xxx PFC Version xxxxx-xxx ENG Version xxxxx-xxx SCN Version xxxxx-xxx

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Select items to be updated and press the [START] button to start updating the [System ROM], [Master Data], [Laser ROM] and [Scanner ROM] in parallel.

Download Storage Firmware Up	date Mode			
Download Storage -> FROM Up Check Devices - Comple Update Status - Instal Data Check -	date Start. ted ling	OS Update HD Data Update		
		LSR Firm Update	Flash	Update
Download Storage -> HDD cop 1/n	ying			
LSR Update Status xxxx/nnnnn		Scanner Firm Update	Flash	Update
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 Storage -> FROM Update Start Check Devices - Completed Update Status - Installing Data Check -	OS Update Completed HD Data Update UI Data Update
	LSR Firm Update Flash Update
Download Storage -> HDD copying 1/n	
LSR Update Status xxxx/nnnnn	Scanner Firm Update Flash Update
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	e
Download Storage -> FROM Update Sta	rt. OS Update Completed
Check Devices - Completed	HD Data Update
Update Status – Installing	(UI Data Update Completed)
Data Check –	SysFirm Update
	LSR Firm Update Flash Update
Download Storage -> HDD copying	
1/n xxx/ yyy	
LSR Update Status xxxx/nnnnn	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 Storage Firmware Update Mode	
	OS Update Completed HD Data Update UI Data Update Completed (SysFirm Update Completed) ISR Firm Update Flash Update
Download Storage -> HDD copying 1/n xxx/ yyy	
LSR Update Status 2/n xxx/ yyy xxxx/nnnnn 3/n Scanner Update Status xxxx/nnnnn	Scanner Firm Update Flash Update
ile name of master data	Total files
	—— Copied
Û	When the [Master Data] has been updated, 7 Data UpdateCompleted" is displayed.

Download Storage Firmware Update Mode		
	OS Update (HD Data Update UI Data Update SysFirm Update LSR Firm Update	Completed Completed Completed Completed Flash Update
LSR Update Status xxxx/nnnnn Scanner Update Status xxxx/nnnnn	Scanner Firm Update	Flash Update

When the [Scanner ROM] has been updated, "Scanner Firm Update..Flash Update" is changed to "Scanner Firm Update..Completed".

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Download Storage Firmware Update Mode

	OS Update HD Data Update UI Data Update SysFirm Update LSR Firm Update	Completed Completed Completed Completed Flash Update
LSR Update Status xxxx/nnnnn	(Scanner Firm Update	Completed

 \mathcal{T}

When the [Laser ROM] has been updated, "LSR Firm Update...Completed" is displayed and the [PFC ROM] update will start.

Download Storage Firmware Update Mode	
	OS Update Completed HD Data Update Completed UI Data Update Completed SysFirm Update Completed (LSR Firm Update Completed) PFC Firm Update Flash Update
PFC Update Status xxxx/nnnnn	Scanner Firm Update Completed

When the [PFC ROM] has been updated, "PFC Firm Update...Completed" is displayed and the [Engine ROM] update will start.

Download Storage Firmware Update Mode	
	OS Update Completed HD Data Update Completed UI Data Update Completed SysFirm Update Completed LSR Firm Update Completed PFC Firm Update Completed Engine MAIN Update Flash Update
Engine Update Status xxxx/nnnnn	Scanner Firm Update Completed



When the [Engine ROM] has been updated, "Engine MAIN Update...Flash Update" is changed to "Engine MAIN Update..Completed".

When all data has been updated, "Update Completed" is displayed.

Download Storage Firmware Update Mode		
	OS Update HD Data Update UI Data Update SysFirm Update LSR Firm Update PFC Firm Update Engine MAIN Update Scanner Firm Update Update Completed.	Completed Completed Completed Completed Completed Completed 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 Update Completed HD Data Update Completed UI Data Update Completed SysFirm Update Completed LSR Firm Update Completed PFC Firm Update Completed Engine MAIN Update Failed Scanner Firm Update Completed Update Failed.
Failed	 items Error message

[D] Display during the update (When the FROM basic section software version of the equipment is "V1.04 / 2.38" or later)



Update is performed in parallel as shown in the transition diagram below.

Fig. 6-57

Below is an example of the changes of the LCD screen during update.



∏ T √ ti

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, thescreen for selecting update items is displayed.

Download Storage Firmware Update Mode Select Update Item	Version in update media
 *1. OS UI Update *2. HDD SYS Update *3. LSR Firmware Update *4. PFC Firmware Update *5. Engine Firmware Update *6. Scanner Firmware Update 	UIF Version Vxxx.xxx.x UIO Version Vxxx.xxx.x UI1 Version Vxxx.xxx.x SYS Version Vxxx.xxx x LSR Version xxxx-xxx PFC Version xxxxx-xx SCN Version xxxxx-xx

Select items to be updated and press the [START] button.

Download Storage	Firmware Update Mode		
Download Board Check Devices Update Status Data Check	-> FROM Update Start. - Completed - Installing -	OS UI Update HDD SYS Update LSR Firm Update	Flash Update
Download Storag	e -> HDD copying 1/n	Scanner Firm Update	Flash Update
LSR Update Status xxxx/nnnnn	s		
Scanner Update S ⁻ xxxx/nnnnn	tatus		



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. Check Devices - Completed Update Status - Installing Data Check -	OS UI Update Completed HDD SYS Update LSR Firm Update Flash Update
Download Storage -> HDD copying 1/n	Scanner Firm Update Flash Update
LSR Update Status xxxx/nnnnn Scanner Update Status xxxx/nnnnn	

When the [Scanner ROM] has been updated, "Scanner Firm Update..Flash Update" is changed to "Scanner Firm Update.. Completed".

Download Storage Firmware	odate Mode	
	OS UI Update Completed HDD SYS Update LSR Firm Update Flash Upd	date
Download Storage -> HDD o 1/r LSR Update Status 2/r xxxx/nnnnn 3/r	pying (Scanner Firm Update Completed xxx/ yyy xxx/ yyy	Ð
File name of master data	Total files Copies	
	When the [Master Data] / [System find that been updated, "HDD SYS Updated, "HDD SYS Updated" is displayed.	irmware] ate…
Download Storage Firmware	odate Mode	
	OS UI Update Completed (HDD SYS Update Completed LSR Firm Update Flash Upd	ן ז) date
	Scanner Firm Update Completed	d
LSR Update Status xxxx/nnnnn		
	☐ When the [Engine ROM] has been u	updated

When the [Engine ROM] has been updated, "Engine MAIN Update..Flash Update" is changed to "Engine MAIN Update.. Completed".

When all data has been updated, "Update Completed" is displayed.

Download Storage Firmware Update Mode OS UI Update Completed HDD SYS Update Completed LSR Firm Update ... Completed PFC Firm 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 St	orage 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 LSR Firm Update Completed PFC Firm Update Completed Engine MAIN Update Failed Scanner Firm Update Completed

Failed items

Error message

<Appendix> Assist Mode

This equipment has the Assist Mode to enable the following functions.

- 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 FRAM on the SYS board, the flags are cleared with this function.
- 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:

- When downloading with a download jig, it is not necessary to format a partition in advance.
- Perform the HDD partition formatting only when a new HDD and scrambler board are installed since all data in the current HDD are erased by this operation.

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. 6-58

(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	:	CN405 Pins 19 and 20
			Output to the SYS board
	+3.3VB	:	CN407 Pin 5
			Output to the PLG board
	+3.3VC	:	CN408 Pin 1
			Output to the SLG board
	+3.3VD	•	CIN400 PIN T
(2)	+5.1 V		
()	+5.1VA	:	CN405 Pins 15 and 16
			Output to the SYS board
	+5.1VB	:	CN405 Pin 14
	- 0.0		Output to the SYS board
	+5.1VC	:	CN406 Pin 2 Output to the LOO beard output of (via LOO beard)
			Output to the LGC board, external LCF (Via LGC board),
	+5 1\/D		CN408 Pins 3 and 4
	10.170	•	Output to the SLG board
	+5.1V E	:	CN407 Pin 1
			Output to the PLG board
	+5.1VF	:	CN407 Pin 2
			Output to the PLG board
	+5.1V G	:	CN409 Pin 1
			Output to the finisher
(3)	+12 \/		
(3)	+12VA		CN405 Pins 4 and 5
		•	Output to the SYS board
	+12VB	:	CN405 Pins 3 and 7
			Output to the SYS board
	+12VC	:	CN407 Pin 6
			Output to the PLG board
	+12VD	:	CN408 Pin 7
	+12)/E		Output to the SLG board
		·	Output to the LGC board
	+12VF	÷	CN410 Pin 1
		•	Output to the FAX board
			•

The following are 3 output channels for the cover switch line.

(1) +5.1 V +5.1VH : CN403 Pin 5 Output to the PLG board

(2) +24 V

• •	1041/4		CN1402 Din 1
	+24VA	•	
			Output to the LGC board
	+24VB	:	CN402 Pin 2
			Output to the LGC board
	+24VC	:	CN402 Pin 3
			Output to the LGC board, external LCF (via LGC board)
	+24VD	:	CN403 Pin 1
			Output to the PLG board
	+24VE	÷	CN404 Pin 3
			Output to the SLG board
	+24VF	÷	CN409 Pins 3 and 4
		-	Output to the finisher
	+24\/G		CN404 Pins 5 and 7
	2.1.0	•	Output to the ADE board (RADE)
(3)	+36 V		
(0)	+36\/A		CN402 Pin 7
	10017	•	Output to the LCC heard
	+30VB	•	
			Output to the LGC board
	+36VC	:	CN403 Pin 3
			Output to the PLG board
	+36VD	:	CN404 Pin 1

Output to the SLG board

Output voltage by the type of connector

Main switch line

Connector	Destination	Voltage
CN405	For the SYS board	+3.3VA, +5.1VA, +5.1VB, +12VA, +12VB
CN406	For the LGC board, external LCF (via LGC board), finisher (via LGC board)	+3.3VD, +5.1VC, +12VE
CN407	For the PLG board	+3.3VB, +5.1VE, +5.1VF, +12VC
CN408	For the SLG board	+3.3VC, +5.1VD, +12VD
CN409	For the finisher	+5.1VG
CN410	For the FAX board	+12VF

Cover switch line

Connector	Destination	Voltage
CN402	For the LGC board, external LCF (via LGC board)	+24VA, +24VB, +24VC, +36VA, +36VB
CN403	For the PLG board	+5.1VH, +24VD, +36VC
CN404	For the SLG board, ADF board (RADF)	+24VE, +24VG, +36VD
CN409	For the finisher	+24VF

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
+24VA	LGC board	Developer unit motor	M10	F4 : 8A (Semi time-lag)
		Fuser cooling fan	M28	
		Duct in fan	M30	
		Developer unit fan	M31	
		Laser unit cooling fan	M32	
		Switching regulator cooling fan-1	M34	
		Switching regulator cooling fan-2	M35	
		Drum separation finger solenoid	SOL1	
	Copy key ca	rd		
+24VB	LGC board	Web motor	M4	F3 : 8A (Semi time-lag)
		New toner supply motor	M5	
		New toner transport motor	M6	
		Hopper motor	M7	
		Recycle toner trans port motor	M8	
		Used toner transport motor	M9	
		Wire cleaner drive motor	M12	
		Cleaning brush drive motor	M13	
		Transfer belt cam motor	M15	
		Transport motor	M17	
		Exit motor	M18	
		Reverse motor	M19	
		Auto-toner sensor	S12	
		Drum surface potential sensor	S13	
		Main switch	SW6	
		High-voltage transformer	HVT	
		Discharge LED	ERS	

Voltage	Board/unit	Part		Fuse type
+24VC	LGC board	Registration motor	M16	F3 : 8A (Semi time-lag)
		Tray-up motor-1	M21	
		Tray-up motor-2	M22	
		Reverse section cooling fan-1	M24	
		Reverse section cooling fan-2	M25	
		IH board cooling fan	M26	
		Duct out fan	M27	
		Exit section cooling fan	M29	
		Tandem LCF tray-up motor	M41	
		Tandem LCF end fence motor	M42	
		Horizontal transport section driving clutch-1	CLT1	
		Horizontal transport section driving clutch-2	CLT2	
		Horizontal transport section driving clutch-3	CLT3	
		Bypass feed clutch	CLT4	
		1st drawer transport clutch	CLT5	
		1st drawer feed clutch	CLT6	
		2nd drawer transport clutch	CLT7	
		2nd drawer feed clutch	CLT8	
		3rd drawer transport clutch	CLT9	
		3rd drawer feed clutch	CLT10	
		4th drawer transport clutch	CLT11	
		4th drawer feed clutch	CLT12	
		Gate solenoid	SOL2	
		Bypass pickup solenoid	SOL3	
		Tandem LCF pickup solenoid	SOL7	
		Tandem LCF end fence solenoid	SOL8	
	External LCF	-	I.	
+24VD	PLG board	Polygonal motor (Only for e-STUDIO850 model)	M2	F4 : 8A (Semi time-lag)
+24VE	SLG board	SLG board cooling fan	M23	F4 : 8A (Semi time-lag)
		Lamp inverter board	INV-EXP	
+24VF	Finisher			F5 : 8A (Semi time-lag)
+24VG	ADF board	Read motor	M36	F6 : 4A (Semi time-lag)
		Document feed motor	M37	
		Tray lift motor	M38	
		Large original exit motor	M39	
		Small original exit motor	M40	
		RADF opening/closing switch	SW9	
		Jam access cover opening/closing switch	SW10	
		Small original exit solenoid	SOL4	
		Large original exit solenoid	SOL5	
		Large original exit roller release solenoid	SOL6	
+36VA	LGC board	Fuser motor	M3	F7 : 8A (Semi time-lag)
		Feed motor	M20	
+36VB	LGC board	Drum motor	M11	F7 : 8A (Semi time-lag)
		Transfer belt motor	M14	
+36VC	PLG board	Polygonal motor (Only for e-STUDIO520/523/600/603/720/ 723 model)	M2	F7 : 8A (Semi time-lag)
+36VD	SLG board	Scan motor	M1	F7 : 8A (Semi time-lag)



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.)

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 TECHNICIAN	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.

[ADMIN] > [SERVICE] > [SUPPLY ORDER SETUP] > [TONER ORDERING		
***** TONER ORDER	Order information (TONER/USED TONER CONTAINER)	
PART NUMBER	Part number to be ordered	
CONDITION	The number of conditions (*1)	
QUANTITY	The quantity to be ordered	
AUTO ORDER	ON/OFF setting of order for each part	

Detailed setting for the order [ADMIN] > [SERVICE] > [SUPPLY ORDER SETUP] > [TONER ORDERING

*1 The order is placed when the number of replacement reaches the number specified for the CONDITION.

E-mail information of this equipment (common information) [ADMIN] > [E-MAIL]

FROM ADDRESS	E-mail address of this equipment (*1)
FROM NAME	E-mail username of this equipment

*1 When sending an E-mail, validity of the address is checked. If the address is invalid, it is not sent.

- 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

 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.

ADDRESS	NTER		
ADMINISTRATOR PASSWOR	.D		
~~~		D	

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.





(6) Press the [SERVICE] button in the ADMIN screen.

(7) The SERVICE screen is displayed.

ADDRESS	
SERVICE	
RETURN	



(8) Press the [SUPPLY ORDER SETUP] button.

ADDRESS COUNTER USER ADMIN

Fig. 8-4

(9) Press the [ORDER INFORMATION] button.

(10) The ORDER INFORMATION screen is displayed.

ADDRESS COUNTER	ADMIN
ORDER INFORMATION AUTO SUPPLY ORDER FAX MAIL HITF OFF	UPL (Fikt nmee)
	CANCEL ENTER Next



(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) SER-VICE screen.)

(13) The CUSTOMER/SUPPLIER screen is displayed.

ADDRESS	COUNTER	USER	ADMIN		
CUSTOMER NAME TEL NUMBER E-MAIL ADDRESS			SUPPLIER NAME ADDRESS		
				ENTER Next Pre	Ş

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.

	ADMIN
SERVICE TECHNICIAN NUMBER NAME TEL NUMBER E-MAIL	DESCRIPTION RESULT PRINTING OFF ALWAYS ON ERROR
	CANCEL ENTER Prev

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.

ADDRESS	
SERVICE	
RETURN	



(20) Press the [SUPPLY ORDER SETUP] button.



(21) Press the [TONER ORDERING] button.

(22) The TONER ORDERING screen is displayed.

ADDRESS		USER	ADMIN	
TONER ORDERING		<u></u>		
	TONER	USED TONER CONTAINER		
	L	CONTAINER		
RETURN				•



(23) Press the [TONER] button. (Select the part to be ordered.)

ADDRESS	ADMIN
BLACK(K) TONER ORDER	AUTO ORDER



(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 CON-DITION.

[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.

ADDRESS	COUNTER	USER	ADMIN	
TONER ORDERING	TONER	USED TONER CONTAINER		
RETURN				

Fig. 8-12

(27) Press the [USER TONER CONTAINER] button, and then input the order information of USED TONER CONTAINER in the same way of TONER.

ADDRESS	
USED TONER CONTAINER ORDER PART NUMBER CONDITION 1 QUANTITY 1	AUTO ORDER
	CANCEL



- (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 letters
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
SERVICE TECHNICIAN [E-MAIL]	745	Maximum 192 letters
Remarks [DESCRIPTION]	748	Maximum 128 letters
TONER [PART NUMBER]	758	Maximum 20 digits
TONER [CONDITION]	760	1-99
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	:XXXXXXXXXXXXXXXXXXXX	*****
CUSTOMER ADDRESS	:XXXXXXXXXXXXXXXXXXXX	*****
CUSTOMER TEL NUMBER	:XXXXXXXXXXXXXXXXXXXX	*****
CUSTOMER E-MAIL ADDRESS	:XXXXXXXXXXXXXXXXXXXX	*****
SERVICE TECHNICIAN TEL NUMBE	R :XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	*****
SERVICE TECHNICIAN E-MAIL	:XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	*****
SUPPLIER NAME	:XXXXXXXXXXXXXXXXXXXXXX	
SUPPLIER ADDRESS	:XXXXXXXXXXXXXXXXXXXXX	****
	PART NUMBER	QUANTITY
TONER CARTRIDGE		
BLACK	: XXXXXXXXXXXXX	⁹⁹ (*1)
	: XXXXXXXXXXXX	99)、 ,
DESCRIPTION AREA		
DEVICE DESCRIPTION	:XXXXXXXXXXXXXXXXXXX	XXXXXXX
SERIAL NUMBER	:XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXX
DEVICE FAX NUMBER	:XXXXXXXXXXXXXXXXXXXX	XXXXXXX
DEVICE E-MAIL ADDRESS	:XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXX
TOTAL		
PRINT COUNTER 999999999		
SCAN COUNTER 999999999		
	_	

Fig. 8-14

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: '05-03-10 00:17 Customer Number: svc02 MachineName: TOSHIBA e-STUDIO720 SerialNumber: CV Device FAX Number: 1122 Device Email: sss@linux.nam1.local OrderInformation: BLACK PartNumber: kuro-01 Quantity: 1 CounterInformation: PrintCounter(Small) FullColor: 0 TwinColor:0 Black:5 PrintCounter(Large) FullColor: 0 TwinColor:0 Black:0 ScanCounter FullColor: 0 TwinColor: 0 Black: 0



3) Result list

*1 Part not to be ordered is not output. (Less space between the lines)

	.99-99-99 99.99 ·XXX	
CUSTOMER NAME	·XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	****
CUSTOMER ADDRESS	·xxxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxxx
CUSTOMER TEL NUMBER	·xxxxxxxxxxxxxxxx	xxxxxxxxxxxxxxxxxxx
CUSTOMER E-MAIL ADDRESS	:XXXXXXXXXXXXXXXXXXXX	×××××××××××××××××××××××××××××××××××××××
SERVICE TECHNICIAN		
TEL NUMBER	:XXXXXXXXXXXXXXXXX	*****
SERVICE TECHNICIAN E-MAIL	:XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	*****
SUPPLIER NAME	:XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	*****
SUPPLIER ADDRESS	:XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	*****
	PART NUMBER	QUANTITY
TONER CARTRIDGE		
BLACK	: XXXXXXXXXXXXX	99
USED TONER CONTAINER	: XXXXXXXXXXXXXX	99) (1)
DESCRIPTION AREA		
DEVICE DESCRIPTION	:xxxxxxxxxxxxxxxx	xxxxxxx
SERIAL NUMBER	:XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXX
DEVICE FAX NUMBER	:XXXXXXXXXXXXXXXXXXXXX	XXXXXXXX
DEVICE E-MAIL ADDRESS	:XXXXXXXXXXXXXXXXX	XXXXXXXX
TOTAL		
FIGHT COUNTER 33333333		



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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 count has reached to its setting value, or the present PM driving count 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

[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.

ADDRESS	COUNTER	USER	
ADVINICEDATOD		<u> </u>	in a second second second second second second second second second second second second second second second s
		PASSWORD	

Fig. 8-17

(2) Press the [SERVICE] button.





(3) Press the [SERVICE NOTIFICATION] button.

ADDRESS COUNTER	USER	
RETURN		

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.

ADDRESS COUNTER USER ADMIN
SERVICE NOTIFICATION
OFF E-MAIL FAX
CANCEL

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.)

ADDRESS COUNTER USER	ADMIN
SERVICE NOTIFICATION E-MAIL aaa@toshiba.com E-MAIL E-MAIL	TOTAL COUNTER TRANSMIT

Fig. 8-21

• Press the [FAX NUMBER] button, key in the FAX number and then press the [ENTER] button.

ADDRESS COUNTER USER	ADMIN
SERVICE NOTIFICATION	TOTAL COUNTER TRANSMIT

(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.

ADDRESS COUNTER USER	ADMIN
TOTAL COUNTER DETAILS Sunday Monday Tuesday Wednesday Thursday Friday Saturday	Time : 10:00 CHANGE SEND NOW

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.

ADDRESS	COUNTER	USER		
TOTAL COUNTER I	DETAILS			
	Noti1 Noti1	Ty Date 1 :	0 SET 0 RESET	
			CANCEL]

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".

ADDRESS	COUNTER	USER	ADMIN	
TOTAL COUNTER I	DETAILS			
Time : 10 : 0 SET				

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).

(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, Fri- day, 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 : 01/01/2007 12:34
<u> </u>	Machine Model : TOSHIBA e-STUDIOxxx
3	
6	
۲	Name : SUPPLIER_NAME
	Tel Number : 1122334455
	Address : SUPPLIER ADDRESS
6—	– Customer:
Ŭ	Name : CUSTOMER_NAME
	E-Mail : customer emailaddress@dddd.xxx
	Address : CUSTOMER_ADDRESS
7	Service Technician:
	Name : SERVICE TECHNICIAN NAME
	Tel Number : 0987654321
	E-Mail : svc@toshibatec.co.jp
(8)—	LargeSizeChargeCount 1
<u> </u>	LargeSizeChargePaperDefinition 1
~	PMCounterFormat:
	LargeSizePMCount 1 LargeSizePMPaperDefinition 0
	Charge Counter:
	Large Small
(12)	<print counter=""> Copy 0000000 0000000</print>
13—	Print 0000000 0000000
(14)	List 0000000 0000000 EAX 00000000 0000000
	<scan counter=""></scan>
16—	Copy Scan 0000000 0000000
	FAX Scan 0000000 00000000 Net Scan 00000000 00000000
	<fax counter=""></fax>
19—	Transmit 0000000 0000000
20-	
_	Periodical Maintenance Counter:
2	
23	Set PMTime 0000000
24-	CurrentPMTime 0000000
25—	Printer Error History:
	Date lime ErrorCode
	12/13/2006 16:44 F110 12/12/2006 22:28 F110
	$\frac{12}{12}$ $\frac{12}{2006}$ $\frac{22}{22}$ $\frac{10}{22}$ $$
	10/25/2006 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
- (13) Number of output pages in the Printer Function
- (14) Number of output pages at the List Print Mode
- (15) Number of output pages in the FAX Function
- (16) Number of scanning pages in the Copier Function
- (17) Number of scanning pages in the FAX Function
- (18) Number of scanning pages in the Network Scanning Function
- (19) Number of transmitted pages in the FAX Function
- (20) Number of received pages in the FAX Function
- (21) PM count setting value
- (22) PM count present value
- (23) PM driving count setting value
- (24) PM driving count present value
- (25) 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".





- 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
- (13) Number of output pages in the Printer Function
- (14) Number of output pages at the List Print Mode
- (15) Number of output pages in the FAX Function
- (16) Number of scanning pages in the Copier Function
- (17) Number of scanning pages in the FAX Function
- (18) Number of scanning pages in the Network Scanning Function
- (19) Number of transmitted pages in the FAX Function
- (20) Number of received pages in the FAX Function
- (21) PM count setting value
- (22) PM count present value
- (23) PM driving count setting value
- (24) PM driving count present value
- (25) History of error
 - *2 The latest 20 errors are displayed.

Service Call Transmit Subject: Service Call Notification



Fig. 8-28

- (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.

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 needed for data cloning with this method are given in the following table.

Storage location	Program file name
Root directory	rootusb, clone_520_850

Important:

- 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 data cloning. 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.
- Before starting data cloning, check that "Acceptance of data cloning using USB storage device (08-9889)" is set at "0" (Accepted). If this is set at "1" (Not accepted), data cloning is disabled. In this case, ask the administrator to enable it on the TopAccess menu.
- Delete the backed up data in the USB storage device after the data cloning.

[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.
- Back up or restore SRAM data only for the same equipment in the same ROM version. If SRAM data are restored into the other equipment, problems such as overlapping serial numbers may occur.
- (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

Notes:

- Do not connect multiple USB storage devices together.
- The USB storage device can be connected to either of 2 USB connectors (host).
- In case the printer kit (GM-1050/1051), printer/scanner kit (GM-2040/2041) and scanner kit (GM-4010) are used, the data must be backed up after all the "dongles" are disconnected from the USB connector (host) and only the USB storage device is connected.

<User Data Backup>

(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 clone_xx_xxxxx_xxx	version X.XX 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.

(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

- (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" ٠ 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.

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

9

9 - 5

E.g.:

(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 *5: Department Code *6: User Info	Completed



(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 *5: Department Code *6: User Info	Completed Completed Completed

Fig. 9-7

(11) Turn the power OFF and remove the 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 clone_xx_xxxxx_xxx	version X.XX version X.XX	
 User Data Back Up User Data Restore Setting Back Up Setting Restore SRAM Data Back Up 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.

(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 *2: SaveAsFile/Email/InternetFAX *3: Notification *4: Directory Service Setting for Option 5: FAX Kit 6: WirelessLAN/Bluetooth Kit	Completed



(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 *2: SaveAsFile/Email/InternetFAX *3: Notification *4: Directory Service Setting for Option 5: FAX Kit 6: WirelessLAN/Bluetooth Kit	Completed Completed Completed Completed

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 clone_xx_xxxxx_xxx	version X.XX 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.

(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:

The backup/restore of the SRAM data can be performed only for the same model. The ROM version must be the same when the data are backed up and restored.

(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



(24) "Back Up Completed" is displayed on the LCD screen when the backup has been properly completed.

SRAM Data Back Up Completed
*1. SRAM
.....Completed



(25) Turn the power OFF and remove the USB storage device.

[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.
- (1) Shut down the equipment.
- (2) Connect the USB storage device to the USB connector (host) on the SYS board.



Fig. 9-18

Notes:

- Do not connect multiple USB storage devices together.
- The USB storage device can be connected to either of 2 USB connectors (host).
- In case the printer kit (GM-1050/1051), printer/scanner kit (GM-2040/2041) and scanner kit (GM-4010) are used, the data must be restored after all the "dongles" are disconnected from the USB connector (host) and only the USB storage device is connected.

<User Data Restore>

(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. root clor	cusb version ne_xx_xxxxx_xxx version	X. XX 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.

(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

- (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

(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 Restoer	
1: Address Book 2: Mail Box 3: Template *4: CombinedCompleted *5: Department Code *6: User Info	



(8) "Restore Completed" is displayed on the LCD screen when the restore has been properly completed.

User Data Restoer	Restore Completed
1: Address Book 2: Mail Box 3: Template *4: Combined *5: Department Code *6: User Info	Completed Completed 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] \rightarrow [ADMIN] \rightarrow Enter the password \rightarrow

[COUNTER] → [DEPARTMENT SETTING] → Enter the password → [RESET ALL COUNTERS]
* Enable the department management when the [RESET ALL COUNTERS] button is set to be disabled.

<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 clone_xx_xxxxx_xxx	version X.XX 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 (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 ServiceCompleted *2: SaveAsFile/Email/InternetFAX *3: Notification *4: Directory Service Setting for Option 5: FAX Kit 6: WirelessLAN/Bluetooth Kit

(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 *2: SaveAsFile/Email/InternetFAX *3: Notification *4: Directory Service Setting for Option 5: FAX Kit 6: WirelessLAN/Bluetooth Kit	Completed Completed Completed Completed

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 clone_xx_xxxxx_xxx	version X.XX version X.XX	
 User Data Back Up User Data Restore Setting Back Up Setting Restore SRAM Data Back Up 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

(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:

The backup/restore of the SRAM data can be performed only for the same model. The ROM version must be the same when the data are backed up and restored.

(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 *5: Department Code *6: User Info	ERROR

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

[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	Idap.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>



- 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



10 - 1 06/09 **10.2 DC Wire Harness**



10.3 Electric Parts Layout



ymbol	Name	Figure	Wire harness location
M1	SCAN-MOT Scan motor	1)-a 1)-b	8-B
M2	POL-MOT	3)-a	5-E
M3	FUS-MOT	4)	7-D
M4	Fuser motor WEB-MOT	()	7.0
1014	Web motor	4)	7-0
M5	New toner supply motor	5)	5-B
M6	NR-TR-MOT New toner transport motor	5)	5-B
M7	HOP-MOT Hopper motor	6)	6-B
M8	RCY-TNR-MOT	6)	6-B
M9	USD-TNR-MOT	6)	7-C
M10	DEV-MOT	7) 0	6.0
WITU	Developer unit motor	7)-a	0-D
M11	Drum motor	7)-a	6-E
M12	CH-CLN-MOT Wire cleaner drive motor	7)-a	6-B
M13	DRM-CLN-MOT Cleaning brush drive motor	7)-a	6-D
M14	TRB-MOT Transfer belt motor	7)-a	6-E
M15	TRB-CAM-MOT	7)-a	6-F
M16	Transfer belt cam motor RGST-MOT	0)	6 5
IVI I O	Registration motor	٥)	0-F
M17	Transport motor	8)	8-B
M18	EXII-MOT Exit motor	9)	6-A
M19	REV-MOT Reverse motor	9)	7-G
M20	FEED-MOT	13)	6-H
M21	CST-TRY-MOT1	13)	7-A
	Tray-up motor-1 CST-TRY-MOT2	10)	
M22	Tray-up motor-2 Only for JPD/NAD/SAD/DAU/DMJ model of all equipments and TWD model of e-STUDIO600/720	13)	7-B
M23	SLG-FAN-MOT SLG board cooling fan	1)-a 1)-b	2-E
M24	REV-FAN-MOTI	9)	7-F
M25	Reverse section cooling fan-1 REV-FAN-MOT2	9)	7-F
	Reverse section cooling fan-2 IH-FAN-MOT	0)	
M26	IH board cooling fan	10)	7-E
M27	Duct out fan	10)	7-C
M28	FUS-FAN-MOT Fuser cooling fan	10)	6-D
M29	EXIT-FAN-MOT	10)	7-C
M30	DCT-I-FAN-MOT	11)	6-D
M31	Duct in fan DEV-FAN-MOT	11)	6.0
10131	Developer unit fan	11)	0-D
M32	Laser unit cooling fan	11)	6-D
M33	SYS-FAN-MOT SYS board cooling fan	15)	5-C
M34	PS-FAN-MOT1 Switching regulator cooling fan-1	15)	4-F
M35	PS-FAN-MOT2 Switching regulator cooling fan 2	15)	4-F
M36	DF-READ-MOT	17)-c	3-H
	Read motor DF-FEED-MOT		
M37	Document feed motor	17)-c	3-H
M38	Tray lift motor	17)-c	3-G
M39	DF-L-EXIT-MOT Large original exit motor	17)-c	3-G
M40	DF-S-EXIT-MOT Small original exit motor	17)-c	3-G
	LCF-TRY-MOT		-
M41	Tandem LCF tray-up motor * Only for TNA/ASD/ASU/ARD/AUD/MJD/CND/KRD model of all	14)	8-H
	equipments and TWD model of e-STUDIO850 LCF-ENDF-MOT		
M42	Tandem LCF end fence motor * Only for TNA/ASD/ASU/ARD/AUD/MJD/CND/KRD model of all	14)	8-G
	equipments and TWD model of e-STUDIO850		

Symbol	Name	Figure	Wire harness
04.5	APS1-3, APS-C, APS-R	1)-a	location
51-5	Automatic original detection sensor	1)-b	2-E
S6	Carriage home position sensor	1)-a 1)-b	2-F
S7	TEMP/HUMI-SNR Temperature/humidity sensor	2)	5-A
S8	WEB-SNR Web detection sensor	4)	7-C
S9	FUS-TR-SNR	4)	7-B
	Fuser transport sensor TNR-EMP-SNR	.,	
S10	Toner cartridge empty detection sensor	5)	5-B
S11	Toner bag full detection sensor	6)	6-F
S12	ATTNR-SNR Auto-toner sensor	7)-a	5-A
S13	DRUM-SUF-SNR Drum surface potential sensor	7)-a	6-B
S14	TNR-LVL-SNR	7)-a	6-C
	Image quality sensor TRB-SNR2		
515	Transfer belt release detection sensor	/)-a	0-F
S16	Transfer belt contact detection sensor	7)-a	6-F
S17	MID-TR-SNR Intermediate transport sensor	8)	8-B
S18	RGST-SNR Registration sensor	8)	6-E
S19	HRZ-TR-SNR1	8)	7-E
	Horizontal transport sensor-1 HRZ-TR-SNR2		
520	Horizontal transport sensor-2	8)	/-E
S21	Horizontal transport sensor-3	8)	7-E
S22	EXIT-SNR Exit sensor	9)	7-F
S23	REV-SNR1 Reverse sensor-1	9)	7-F
S24	REV-SNR2	9)	7-F
005	Reverse sensor-2 SFB-COV-SNR		5.4
525	Bypass feed unit cover sensor	11)	D-A
S26	Feed cover sensor	11)	5-B
S27	SFB-FEED-SNR Bypass feed sensor	12)	8-A
S28	SFB-SIZE-SNR Bypass paper size detection sensor	12)	8-B
S29	CST1-SNR	13)	8-C
620	CST1-BTM-SNR	12)	7.4
330	1st drawer bottom sensor CST1-EMP-SNR	13)	1-5
S31	1st drawer empty sensor	13)	8-C
S32	1st drawer tray-up sensor	13)	8-C
S33	CST1-TR-SNR 1st drawer transport sensor	13)	8-C
S34	CST1-FEED-SNR 1st drawer feed sensor	13)	8-C
S35	CST2-SNR	13)	8-D
636	2nd drawer detection sensor CST2-BTM-SNR	(12)	7.4
330	2nd drawer bottom sensor	13)	7-A
S37	2nd drawer empty sensor	13)	8-D
S38	2nd drawer tray-up sensor	13)	8-D
S39	CST2-TR-SNR 2nd drawer transport sensor	13)	8-D
S40	CST2-FEED-SNR	13)	8-D
S41	CST3-SNR	13)	8-F
041	3rd drawer detection sensor CST3-BTM-SNR	107	02
S42	3rd drawer bottom sensor	13)	7-B
	TWD model of e-STUDIO600/720		
S43	3rd drawer / tandem LCF empty sensor	13)	8-E
S44	CST3-TRY-SNR 3rd drawer / tandem LCF tray-up sensor	13)	8-E
S45	CST3-TR-SNR	13)	8-E
S46	CST3-FEED-SNR	13)	8-F
	3rd drawer / tandem LCF feed sensor CST4-SNR	,	
S47	4th drawer detection sensor * Only for JPD/NAD/SAD/DALI/DMLI model of all equipments and	13)	8-F
	TWD model of e-STUDIO600/720		
S48	4th drawer bottom sensor	13)	7-B
	TWD model of e-STUDIO600/720		

Symbol	Name	Figure	Wire harness
	CST4-EMP-SNR		loouton
S49	4th drawer empty sensor * Only for JPD/NAD/SAD/DAU/DMJ model of all equipments and	13)	8-F
	TWD model of e-STUDIO600/720 CST4-TRY-SNR		
S50	4th drawer tray-up sensor * Only for JPD/NAD/SAD/DAU/DMJ model of all equipments and TWD model of e-STUDIO600/720	13)	8-F
S51	CST4-TR-SNR 4th drawer transport sensor * Only for JPD/NAD/SAD/DAU/DMJ model of all equipments and TWD model of e-STUDIO600/720	13)	8-F
S52	CST4-FEED-SNR 4th drawer feed sensor • Only for JPDINAD/SAD/DAU/DMJ model of all equipments and TWD model of e-STUDIO600/720	13)	8-F
S53	DF-TRY-SNR Original tray sensor	17)-a	3-H
S54	DF-TRY-VR-SNR Original tray width sensor	17)-a	3-H
S55	DF-RGST-SNR Original registration sensor	17)-a	3-G
S56	DF-SIZE-SNR1	17)-a	3-G
057	Original width detection sensor-1 DF-SIZE-SNR2	17) a	2.0
557	Original width detection sensor-2	17)-a	3-6
S58	Original width detection sensor-3	17)-a	3-G
S59	DF-U-LMT-SNK Lifting tray upper limit detection sensor	17)-b	3-G
S60	DF-EMP-SNR Original empty sensor	17)-b	3-G
S61	DF-COV-SNR	17)-b	3-G
562	DF-L-LMT-SNR	17)-b	4-F
0.02	Lifting tray lower limit detection sensor DF-LENG-SNR		
S63	Original length detection sensor	17)-b	4-F
S64	APS operation sensor	17)-c	2-H
S65	DF-OPN-SNR RADF opening/closing sensor	17)-c	2-G
S66	DF-SD-REV-SNR Small original reverse sensor	17)-d	4-G
S67	DF-SD-EXIT-SNR	17)-d	4-G
568	Small original exit sensor DF-LD-EXIT-SNR	17) d	2 Ц
306	Large original exit sensor DF-READ-SNR	17)-u	2-11
S69	Read sensor	17)-d	2-G
S70	Original intermediate transport sensor	17)-d	4-G
S71	LCF-BTM-SNR Tandem LCF bottom sensor * Only for TNA/ASD/ASU/ARD/AUD/MJD/CND/KRD model of all equipments and TWD model of e-STUDIO850	14)	8-G
S72	LCF-MST-SNR Standby side mis-stacking sensor * Only for TNA/ASD/ASU/ARD/AUD/MJD/CND/KRD model of all equipments and TVD model of e-STUD/0850	14)	8-G
S73	CLCF-ENDF-HP-SNR End fence home position sensor * Only for TNA/ASD/ASU/ARD/AUD/MJD/CND/KRD model of all minimum and TMV and a fence the position sensor	14)	8-G
S74	Equipments and WD model of eSTUDIO050 LCF-EMP-SNR Standby side empty sensor * Only for TNA/ASD/ASU/ARD/AUD/MJD/CND/KRD model of all cruidments and TMD model of a STUDIO50	14)	8-G
S75	Equipments and TWD model of e-STUDIO850 LCF-ENDF-STP-SNR End fence stop position sensor * Only for TNA/ASD/ASU/ARD/AUD/MJD/CND/KRD model of all enviroments and TWD model of eSTUDIO850	14)	8-G
SW1	FSR-SW Euser detection switch	4)	AC wire harness
SW2	TNR-SW Toner cartridge detection switch	5)	5-B
SW3	DEV-SW Developer unit detection switch	7)-a	6-B
SW4	CH-CLN-POS-SW	7)-a	6-C
SW5	EXIT-COV-SW	9)	7-F
014/0	Exit cover switch MAIN-SW	40)	6-B
SWG	Main switch	10)	AC wire harness
SW7	Front cover switch	10)	5-B
SW8	Cover interlock switch	10)	AC wire harness
SW9	DF-OPN-INTLCK-SW RADF opening/closing switch	17)-c	2-G
SW10	DF-COV-INTLCK-SW	17)-c	2-G
SW11	TNR-MOT-INTLCK-SW	10)	5-B
	Toner motor interlock switch	10)	

lectroma	gnetic spring clutches		Wire harness
Symbol	Name	Figure	location
CLT1	HRZ-DR-GLT1 Horizontal transport section driving clutch-1	8)	7-E
CLT2	HRZ-DR-CL12 Horizontal transport section driving clutch-2	8)	7-E
CLT3	HRZ-DR-CLT3 Horizontal transport section driving clutch-3	8)	7-E
CLT4	SFB-FEED-CLT Bypass feed clutch	12)	8-B
CLT5	CST1-TR-CLT 1st drawer transport clutch	13)	8-C
CLT6	CST1-FEED-CLT 1st drawer feed clutch	13)	8-C
CLT7	CST2-TR-CLT 2nd drawer transport clutch	13)	8-D
CLT8	CST2-FEED-CLT 2nd drawer feed clutch	13)	8-D
CLT9	CST3-TR-CLT	13)	8-E
CLT10	CST3-FEED-CLT	13)	8-E
CLT11	Srd drawer / tandem LCF teed clutch CST4-TR-CLT 4th drawer transport clutch * Only for JPD/NAD/SAD/DAU/DMJ model of all equipments and	13)	8-F
CLT12	IWD model of e-SI UDIO600//20 CST4-FEED-CLT 4th drawer feed clutch * Only for JPD/NAD/SAD/DAU/DMJ model of all equipments and TWD evolution of TWD/PCP0/T20	13)	8-F
alama' i	1110 III00ei 01 e-51 0010000//20		1
Symbol	Name	Figure	Wire harness
SOI 1	SPRT-FING-SOL	7)-a	location
SOL 2	Drum separation finger solenoid GATE-SOL	9)	7-F
SOL3	Gate solenoid SFB-SOL	12)	8-A
SOL4	Bypass pickup solenoid DF-SD-SOL	12) 17)-c	2-G
SOL 5	Small original exit solenoid DF-LD-SOL	17)-c	2-G
SOL 6	Large original exit solenoid DENG-SOL	17)-c	2-G
SOL7	Large original exit roller release solenoid LCF-PICK-SOL Tandem LCF pickup solenoid * Only for TNA/ASD/ASU/ARD/AUD/MJD/CND/KRD model of all	13)	8-E
SOL8	equipments and TWD model of e-STUDIO850 LCF-ENDF-SOL Tandem LCF end fence solenoid * Only for TNA/ASD/ASU/ARD/UD/MJD/CND/KRD model of all	14)	8-H
C h a and	equipments and TWD moder of e-510010650		
Symbol	S Name	Figure	Wire harness
Symbol	PWA-F-CCD	1)-a	location
CCD	CCD driving PC board (CCD board)	1)-b 1)-a	3-E
SLG	Scanning section control PC board (SLG board)	1)-b	3-F
DSP	Display PC board (DSP board)	2)	4-A
KEY1	Key PC board-1 (KEY1 board)	2)	4-A
KEY2	PWA-F-KEY2 Key PC board-2 (KEY2 board)	2)	3-A
PLG	PWA-F-PLG Laser control PC board (PLG board)	3)-a 3)-b	5-E
LDR1	PWA-F-LDR1 Laser driving PC board-1 (LDR1 board)	3)-a 3)-b	4-E
LDR2	PWA-F-LDR2 Laser driving PC board-2 (LDR2 board) * Only for e-STUDIO850/853 models	3)-b	4-F
	PW/A_F-SNS	3) 0	5 5
SNS	PWA-F-SNS H-sync detection PC board (SNS board)	3)-a 3)-b	5-E 5-F
SNS FUS	PWA-F-SNS H-sync detection PC board (SNS board) PWA-F-FUS Fuse PC board (FUS board) * Optional for TNA/NAD/MJD/DMJ model, standard for other mod- els	3)-a 3)-b 7)-b	5-E 5-F AC wire harness
SNS FUS IH	PWA-F-SNS H-sync detection PC board (SNS board) PWA-F-FUS Fuse PC board (FUS board) * Optional for TNA/NAD/MJD/DMJ model, standard for other models PWA-F-IH Heater control PC board (IH board)	3)-a 3)-b 7)-b 10)	5-E 5-F AC wire harness 7-D
SNS FUS IH MOT	PWA-F-SNS H-sync detection PC board (SNS board) PWA-F-FUS Fuse PC board (FUS board) * Optional for TNA/NAD/MJD/DMJ model, standard for other models PWA-F-IH Heater control PC board (IH board) PWA-F-MOT Motor driving PC board (MOT board)	3)-a 3)-b 7)-b 10) 15)	5-E 5-F AC wire harness 7-D 6-E
SNS FUS IH MOT MOT2-MT	PWA-F-SNS H-sync detection PC board (SNS board) PWA-F-FUS Fuse PC board (FUS board) * Optional for TNA/NAD/MJD/DMJ model, standard for other models PWA-F-IH Heater control PC board (IH board) PWA-F-MOT Motor driving PC board (MOT board) PWA-F-MOT2-MT Transport motor driving PC board (MOT2-MT board)	3)-a 3)-b 7)-b 10) 15) 11)	5-E 5-F AC wire harness 7-D 6-E 8-B
SNS FUS IH MOT MOT2-MT	PWA-F-SNS H-sync detection PC board (SNS board) PWA-F-FUS Fuse PC board (FUS board) * Optional for TNA/NAD/MJD/DMJ model, standard for other models PWA-F-IH Heater control PC board (IH board) PWA-F-MOT Motor driving PC board (MOT board) PWA-F-MOT2-MT Transport motor driving PC board (MOT2-MT board) PWA-F-MOT2-RV Reverse motor driving PC board (MOT2-RV board)	3)-a 3)-b 7)-b 10) 15) 11) 9)	5-E 5-F AC wire harness 7-D 6-E 8-B 7-G
SNS FUS IH MOT MOT2-MT MOT2-RV SYS	PWA-F-SNS H-sync detection PC board (SNS board) PWA-F-FUS Fuse PC board (FUS board) * Optional for TNA/NAD/MJD/DMJ model, standard for other models PWA-F-IH Heater control PC board (IH board) PWA-F-MOT Motor driving PC board (MOT board) PWA-F-MOT2-MT Transport motor driving PC board (MOT2-MT board) PWA-F-MOT2-RV Reverse motor driving PC board (MOT2-RV board) PWA-F-SYS System control PC board (SYS board)	3)-a 3)-b 7)-b 10) 15) 11) 9) 15)	5-E 5-F AC wire harness 7-D 6-E 8-B 7-G 3-B
SNS FUS IH MOT MOT2-MT MOT2-RV SYS LGC	PWA-F-SNS H-sync detection PC board (SNS board) PWA-F-FUS Fuse PC board (FUS board) * Optional for TNA/NAD/MJD/DMJ model, standard for other mod- els PWA-F-IH Heater control PC board (IH board) PWA-F-MOT Motor driving PC board (MOT board) PWA-F-MOT2-MT Transport motor driving PC board (MOT2-MT board) PWA-F-MOT2-RV Reverse motor driving PC board (MOT2-RV board) PWA-F-SYS System control PC board (SYS board) PWA-F-LGC Logic PC board (LGC board)	3)-a 3)-b 7)-b 10) 15) 11) 9) 15) 15) 15)	5-E 5-F AC wire harness 7-D 6-E 8-B 7-G 3-B 6-A
SNS FUS IH MOT2-MT MOT2-RV SYS LGC FIL	PWA-F-SNS H-sync detection PC board (SNS board) PWA-F-FUS Fuse PC board (FUS board) * Optional for TNA/NAD/MJD/DMJ model, standard for other mod- els PWA-F-IH Heater control PC board (IH board) PWA-F-MOT Motor driving PC board (MOT board) PWA-F-MOT2-MT Transport motor driving PC board (MOT2-MT board) PWA-F-MOT2-RV Reverse motor driving PC board (MOT2-RV board) PWA-F-SYS System control PC board (SYS board) PWA-F-LGC Logic PC board (LGC board) PWA-F-FIL Filter PC board (FIL board) * Only for TNA/NAD/SAD model of all equipments and TWD model of e-STUP00600720	3)-a 3)-b 7)-b 10) 15) 11) 9) 15) 15) 15) 16)-c	5-E 5-F AC wire harness 7-D 6-E 8-B 7-G 3-B 6-A AC wire harness

Symbol	Name	Figure	Wire harness location
EXP	LP-EXPO Exposure lamp	1)-a 1)-b	2-D
ERS	LP-ERS	7)-a	6-C
	Discharge LED IH-COIL	, , ,	
IH-COIL	IH coil	4)	AC wire harnes
DH1	SCN-DH-L Scanner damp heater (Left)	1)-c	AC wire harnes
DH2	SCN-DH-R Scanner damp heater (Right)	1)-c	AC wire harnes
DH3	DRM-DH Drum damp heater	7)-b	AC wire harnes
hermisto	ors and thermostats	L.	
Symbol	Name	Figure	Wire harness
	THMS-F-HTR		location
IHM1	Fuser roller front thermistor	4)	7-В
THM2	Fuser roller center thermistor	4)	7-B
THM3	THMS-R-HTR Fuser roller rear thermistor	4)	7-B
THM4	THMS-L-HTR	4)	7-C
THME	THMS-DRM	, , , , , , , , , , , , , , , , , , , ,	6.0
1 LIND	Drum thermistor	/)-a	0-0
THMO1	Fuser roller center thermostat	4)	AC wire harnes
THMO2	THERMO-S-HTR Fuser roller side thermostat	4)	AC wire harnes
THMO3	THERMO-SCN-DH Scanner damp beater thermostat	1)-c	AC wire harnes
THMO4	THERMO-DRM-DH	7)-b	AC wire harnes
	Drum damp heater thermostat	, .	
	-		
ransform	ier		
ransform Symbol	ner Name	Figure	Wire harness
Transform Symbol HVT	ner Name PS-HVT High-voltage transformer	Figure 15)	Wire harness location 6-G
Symbol HVT	ner Name PS-HVT High-voltage transformer	Figure 15)	Wire harness location 6-G
Transform Symbol HVT Others	ner Name PS-HVT High-voltage transformer	Figure 15)	Wire harness location 6-G Wire harness
Transform Symbol HVT Others Symbol	ner Name PS-HVT High-voltage transformer Name	Figure 15) Figure	Wire harness location 6-G Wire harness location
Transform Symbol HVT Others Symbol INV-EXP	ner Name PS-HVT High-voltage transformer Name INV-EXP Lamp inverter board	Figure 15) Figure 1)-a 1)-b	Wire harness location 6-G Wire harness location 2-D
Transform Symbol HVT Others Symbol INV-EXP LCD	Name PS-HVT High-voltage transformer Name INV-EXP Lamp inverter board LCD LCD	Figure 15) Figure 1)-a 1)-b 2)	Wire harness location 6-G Wire harness location 2-D 3-B
ransform Symbol HVT Dthers Symbol INV-EXP LCD	INV-EXP Lamp inverter board LCD panel TCP	Figure 15) Figure 1)-a 1)-b 2)	Wire harness location 6-G Wire harness location 2-D 3-B
ransform Symbol HVT Others Symbol INV-EXP LCD TCP	PS-HVT High-voltage transformer Name INV-EXP Lamp inverter board LCD LCD panel TCP Touch panel	Figure 15) Figure 1)-a 1)-b 2) 2) 2)	Wire harness location 6-G Wire harness location 2-D 3-B 3-B 3-B
Transform Symbol HVT Others Symbol INV-EXP LCD TCP INV-LCD	Name PS-HVT High-voltage transformer Name INV-EXP Lamp inverter board LCD LCD panel TCP TOuch panel INV-LCD LCD inverter board LCD LCD inverter board	Figure 15) Figure 1)-a 1)-b 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2)	Wire harness location 6-G Wire harness location 2-D 3-B 3-B 3-A
ransform Symbol HVT Others Symbol INV-EXP LCD TCP INV-LCD GLV	INV-EXP Lamp Inverter board LCD LCD panel INV-LCD LCD inverter board INV-LCD LCD inverter board INV-LCD LCD inverter board Galvanic mirror	Figure 15) Figure 1)-a 1)-b 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2)	Wire harness location 6-G Wire harness location 2-D 3-B 3-B 3-B 3-A 5-G
ransform Symbol HVT Others Symbol INV-EXP LCD TCP INV-LCD GLV	INV-EXP Lamp inverter board LCD LCD panel TCP Touch panel INV-LCD LCD inverter board MIR-GLV Galvanic mirror ' Only for e-STUDI0850/853	Figure 15) Figure 1)-a 1)-b 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 2) 3)-b	Wire harness location 6-G Wire harness location 2-D 3-B 3-B 3-B 3-A 5-G
ransform Symbol HVT Others Symbol INV-EXP LCD TCP INV-LCD GLV HDD	Iter Name PS-HVT High-voltage transformer Name INV-EXP Lamp inverter board LCD LCD panel TCP Touch panel INV-LCD LCD inverter board MIR-GLV Galvanic mirror * Only for e-STUDI0850/853 HDD Hard disk	Figure 15) Figure 1)-a 1)-b 2) 2) 2) 2) 2) 2) 1)-b 1)-b 1)-b 1)-b 2) 2) 1)-b 1)-b	Wire harness location 6-G Wire harness location 2-D 3-B 3-B 3-A 5-G 4-C
ransform Symbol HVT Dthers Symbol INV-EXP LCD TCP INV-LCD GLV HDD PS	INV-EXP Lamp inverter board LCD LCD panel INV-LCD LCD inverter board INV-LCD LCD inverter board MIR-GLV Galvanic mirror - Only for e-STUDIO850/853 HDD Hard disk PS-ACC Switching regulator	Figure 15) Figure 1)-a 1)-b 2) 2) 2) 2) 2) 2) 1)-b	Wire harness location 6-G Wire harness location 2-D 3-B 3-B 3-A 5-G 4-C 5-G AC wire harness
ransform Symbol HVT Dthers Symbol INV-EXP LCD TCP INV-LCD GLV HDD PS	Iter Name PS-HVT High-voltage transformer Name INV-EXP Lamp inverter board LCD LCD panel TCP Touch panel INV-LCD LCD inverter board MIR-GLV Galvanic mirror • Only for e-STUDIO850/853 HDD Hard disk PS-ACC Switching regulator	Figure 15) Figure 1)-a 1)-b 2) 2) 2) 2) 2) 1)-b 15) 15) 15) 16)-a	Wire harness location 6-G Wire harness location 2-D 3-B 3-B 3-A 5-G 4-C 5-G AC wire harness
ransform Symbol HVT Dthers Symbol INV-EXP LCD TCP INV-LCD GLV HDD PS NF1	Name PS-HVT High-voltage transformer Name INV-EXP Lamp inverter board LCD LCD panel TCP Touch panel INV-LCD LCD inverter board MIR-GLV Galvanic mirror * Only for e-STUDI0850/853 HDD Hard disk PS-ACC Switching regulator NS-FIL1 Noise filter-1	Figure 15) Figure 1)-a 1)-b 2) 2) 2) 2) 2) 2) 1)-b 1)-b 1)-b 1)-b 2) 2) 1)-b 1)-b 1)-b 15) 15) 16)-a 16)-b 16)-b	Wire harness location 6-G Wire harness location 2-D 3-B 3-B 3-B 3-A 5-G 4-C 5-G AC wire harness
ransform Symbol HVT Dthers Symbol INV-EXP LCD TCP INV-LCD GLV HDD PS NF1	Name PS-HVT High-voltage transformer Name INV-EXP Lamp inverter board LCD LCD panel TCP Touch panel INV-LCD LCD inverter board MIR-GLV Galvanic mirror * Only for e-STUDI0850/853 HDD Hard disk PS-ACC Switching regulator NS-FIL1 Noise filter-1	Figure 15) Figure 1)-a 1)-b 2) 2) 2) 2) 2) 1)-a 1)-b 2) 2) 1)- 1)- 1)- 1)- 1)- 1)- 1)- 15) 16)-a 16)-b 16)-c 16)-d	Wire harness location 6-G Wire harness location 2-D 3-B 3-B 3-A 5-G 4-C 5-G AC wire harness
ransform Symbol HVT Dthers Symbol INV-EXP LCD TCP INV-LCD GLV HDD PS NF1 NF2	INV-EXP Lamp inverter board LCD panel TCP Touch panel INV-LCD LCD inverter board MIR-GLV Galvanic mirror * Only for e-STUDIO850/853 HDD Hard disk PS-ACC Switching regulator NS-FIL1 Noise filter-1	Figure 15) Figure 1)-a 1)-b 2) 2) 2) 2) 2) 2) 1)-b 1)-b 1)-b 1)-b 2) 2) 1)-b 1)-b 1)-b 1)-b 15) 16)-a 16)-b 16)-c 16)-d 16)-b	Wire harness location 6-G Wire harness location 2-D 3-B 3-B 3-A 5-G 4-C 5-G AC wire harness AC wire harness AC wire harness
ransform Symbol HVT Dthers Symbol INV-EXP LCD TCP INV-LCD GLV HDD PS NF1 NF2	Name PS-HVT High-voltage transformer Name INV-EXP Lamp inverter board LCD LCD panel TCP Touch panel INV-LCD LCD inverter board MIR-GLV Galvanic mirror * Only for e-STUDI0850/853 HDD Hard disk PS-ACC Switching regulator NS-FIL1 Noise filter-1 NS-FIL2 Noise filter-2 * Only forJPD model of e-STUDI0850	Figure 15) Figure 1)-a 1)-b 2) 2) 2) 2) 2) 2) 1)-b 1)-b 1)-b 1)-b 2) 2) 1)-b 1)-b 1)-b 1)-b 15) 16)-a 16)-b 16)-b 16)-b	Wire harness location 6-G Wire harness location 2-D 3-B 3-B 3-A 5-G 4-C 5-G AC wire harness AC wire harness AC wire harness
ransform Symbol HVT Dthers Symbol INV-EXP LCD TCP INV-LCD GLV HDD PS NF1 NF2	Name PS-HVT High-voltage transformer INV-EXP Lamp inverter board LCD LCD panel TCP Touch panel INV-LCD LCD inverter board MIR-GLV Galvanic mirror * Only for e-STUDI0850/853 HDD Hard disk PS-ACC Switching regulator NS-FIL1 Noise filter-1 NS-FIL2 Noise filter-2 * Only forJPD model of e-STUDI0850 BREAKER1	Figure 15) Figure 1)-a 1)-b 2) 2) 2) 2) 2) 2) 15) 15) 15) 15) 16)-a 16)-b	Wire harness location 6-G Wire harness location 2-D 3-B 3-B 3-A 5-G 4-C 5-G AC wire harness AC wire harness AC wire harness
ransform Symbol HVT Dthers Symbol INV-EXP LCD TCP INV-LCD GLV HDD PS NF1 NF2 BRK1	Name PS-HVT High-voltage transformer INV-EXP Lamp inverter board LCD LCD panel TCP Touch panel INV-LCD LCD inverter board MIR-GLV Galvanic mirror * Only for e-STUDIO850/853 HDD Hard disk PS-ACC Switching regulator NS-FIL1 Noise filter-1 NS-FIL2 Noise filter-2 * Only forJPD model of e-STUDIO850 BREAKER1 Breaker-1	Figure 15) Figure 1)-a 1)-b 2) 2) 2) 2) 2) 2) 1)-b 2) 1)-b 1)-b 2) 2) 1)-b 10)-a 15) 16)-a 16)-b 16)-b 16)-b 16)-b 16)-b 16)-c 16)-b 16)-b 16)-b 16)-b 16)-b 16)-c 16)-b 16)-b 16)-b 16)-b 16)-c 16)-b 16)-c 16)-b 16)-b 16)-c 16)-b 16)-c 16)-c 16)-c 16)-c 16)-c <tr t=""></tr>	Wire harness location 6-G Wire harness location 2-D 3-B 3-B 3-A 5-G 4-C 5-G AC wire harness AC wire harness AC wire harness
ransform Symbol HVT Dthers Symbol INV-EXP LCD TCP INV-LCD GLV HDD PS NF1 NF2 BRK1	Name PS-HVT High-voltage transformer INV-EXP Lamp inverter board LCD LCD panel TCP Touch panel INV-LCD LCD inverter board MIR-GLV Galvanic mirror * Only for e-STUDI0850/853 HDD Hard disk PS-ACC Switching regulator NS-FIL1 Noise filter-1 NS-FIL2 Noise filter-2 * Only for JPD model of e-STUDI0850 BREAKER1 Breaker-1 BREAKER2	Figure 15) Figure 1)-a 1)-b 2) 2) 2) 2) 2) 2) 1)-b 1)-b 1)-a 1)-b 2) 2) 15) 15) 16)-a 16)-b 16)-c 16)-b 16)-b 16)-b 16)-c 16)-b 16)-c 16)-b 16)-c 16)-b 16)-c 16)-c 16)-d	Wire harness location 6-G Wire harness location 2-D 3-B 3-B 3-A 5-G 4-C 5-G AC wire harness AC wire harness AC wire harness AC wire harness
ransform Symbol HVT Dthers Symbol INV-EXP LCD TCP INV-LCD GLV HDD PS NF1 NF2 BRK1 BRK2	Name PS-HVT High-voltage transformer Name INV-EXP Lamp inverter board LCD LCD panel TCP Touch panel INV-LCD LCD inverter board MIR-GLV Galvanic mirror * Only for e-STUDI0850/853 HDD Hard disk PS-ACC Switching regulator NS-FIL1 Noise filter-1 NS-FIL2 Noise filter-2 * Only for JPD model of e-STUDI0850 BREAKER1 Breaker-1 BREAKER2 Breaker-2	Figure 15) Figure 1)-a 1)-b 2) 2) 2) 2) 2) 2) 1)-b 1)-b 1)-b 2) 2) 15) 15) 15) 16)-a 16)-b 16)-c 16)-b 16)-c 16)-d 16)-b	Wire harness location 6-G Wire harness location 2-D 3-B 3-B 3-A 5-G 4-C 5-G AC wire harness AC wire harness
ransform Symbol HVT Dthers Symbol INV-EXP LCD TCP INV-LCD GLV HDD GLV HDD PS NF1 NF2 BRK1 BRK2	Name PS-HVT High-voltage transformer Name INV-EXP Lamp inverter board LCD LCD panel TCP Touch panel INV-LCD LCD inverter board MIR-GLV Galvanic mirror • Only for e-STUDI0850/853 HDD Hard disk PS-ACC Switching regulator NS-FIL1 Noise filter-1 NS-FIL2 Noise filter-2 * Only for JPD model of e-STUDI0850 BREAKER1 Breaker-1 BREAKER2 Breaker-2 * Only for JPD model of e-STUDI0850 RELEY	Figure 15) Figure 1)-a 1)-b 2) 2) 2) 2) 2) 2) 1)-b 1)-b 1)-b 1)-b 2) 1) 1) 1) 1) 15) 16)-a 16)-b 16)-b 16)-b 16)-c 16)-d 16)-b	Wire harness location 6-G Wire harness location 2-D 3-B 3-B 3-A 5-G 4-C 5-G AC wire harness AC wire harness
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