Model HL-F2 Machine Code: H560 Field Service Manual

October, 2013

Important Safety Notices

SAFETY INFORMATION

Caution for Laser Product (WARNHINWEIS fur Laser drucker)

WARNING

• WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injuries.

• CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injuries.

🚼 Important

• IMPORTANT indicates a potentially hazardous situation which, if not avoided, may result in damage to property or loss of product functionality.



Prohibition icons indicate actions that must not be performed.



Electrical Hazard icons alert you to possible electrical shock.



Fire Hazard icons alert you to the possibility of fire.



Hot Surface icons warn you not to touch product parts that are hot.

• Note

• Notes tell you how you should respond to a situation that may arise or give tips about how the operation works with other features.

To use the Machine Safely

Please keep these instructions for later reference and read them before attempting any maintenance. If you do not follow these safety instructions, there is a possibility of a fire, electrical shock, burn or suffocation.

	Warning
<u>/</u> ł	ELECTRICAL HAZARDS Failure to follow the warnings in this section may create the risk of an electrical shock. In addition, you could create an electrical short, which may create the risk of a fire.
Â	There are high voltage electrodes inside the product. Before you access the inside of the product, including for routine maintenance such as cleaning, make sure you have unplugged the power cord from the AC power outlet, as well as Ethernet (RJ-45) cables (Network models only) from the product. Never push objects of any kind into this product through cabinet slots, since they may touch dangerous voltage points or short out parts.
Â	DO NOT handle the plug with wet hands.
Â	DO NOT use this product during an electrical storm.
	Always make sure the plug is fully inserted. DO NOT use the product or handle the cord if the cord has become worn or frayed.
▲	DO NOT allow this product to come into contact with water.
▲	This product should be connected to an AC power source within the range indicated on the rating label. DO NOT connect it to a DC power source or inverter.

	Warning
▲	 Power Cord Safety: This product is equipped with a 3-wire grounded plug. This plug will only fit into a grounded power outlet. This is a safety feature. DO NOT defeat the purpose of the grounded plug. Use only the power cord supplied with this product. DO NOT allow anything to rest on the power cord. DO NOT place this product where people can walk on the cord. DO NOT place this product in a position where the cord is stretched or strain is otherwise put on the cord. Doing so may cause the cord to become worn or frayed. We DO NOT advise using an extension cord. If an extension cord is used with this product, make sure that the total ampere ratings on the products plugged into the extension cord do not exceed the extension cord ampere rating
	 Also, make sure that the total of all products plugged into the AC power outlet does not exceed 15 amperes. DO NOT plug one extension cord into another. DO NOT put a toner cartridge or a toner cartridge and drum unit assembly into a fire. It could explode, resulting in injuries. DO NOT use flammable substances, any type of spray, or an organic solvent/liquid containing alcohol or ammonia to clean the inside or outside of the product. Doing so could cause a fire or electrical shock. Instead, use only a dry, lint-free cloth.
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∕	DO NOT attempt to operate this product with a paper jam or with stray pieces of paper inside the product. Prolonged contact of the paper with the drum unit could cause a fire.



Caution for Laser Product (WARNHINWEIS fur Laser drucker)

- When the machine during servicing is operated with the cover open, the regulations of VBG 93 and the performance instructions for VBG 93 are valid.
- In case of any trouble with the laser unit, replace the laser unit itself. To prevent direct exposure to the laser beam, do not try to open the enclosure of the laser unit.
- Im Falle von Störungen der Lasereinheit muß diese ersetzt werden. Das Gehäuse der Lasereinheit darf nicht geöffnet werden, da sonst Laserstrahlen austreten können.

Location of the laser beam window



Additional Information

When servicing the optical system of the machine, be careful not to place a screwdriver or other reflective object in the path of the laser beam. Be sure to take off any personal accessories such as watches and rings before working on the machine. A reflected beam, though invisible, can permanently damage the eyes.

Since the beam is invisible, the following caution label is attached on the laser unit.



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Symbols, Abbreviations and Trademarks

This manual uses several symbols and abbreviations. The meaning of those symbols and abbreviations are as follows:

$\langle 7 \rangle$	Clip ring
F	Screw
ju L	Connector
j.	Clamp
C	E-ring
SEF	Short Edge Feed
LEF	Long Edge Feed



[A] Short Edge Feed (SEF)

[B] Long Edge Feed (LEF)

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Electrodes location of the machine	
Faulty registration	
Dark	
Poor fixing	
Completely blank	
Image distortion	
All black	
Dirt on the back of paper	
Vertical streaks	
Black vertical streaks in a light background	
Black horizontal stripes	
White vertical streaks	
White horizontal streaks	
Faint print	
White spots	
Black spots or dirt	
Black band	
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Product Overview

Component Layout

Printer part



21. Eject roller 2

22. Eject pinch roller

- 10. Separation pad
- 11. Separation roller

Scanning part



5. CIS unit

Paper Path

Printer part



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- 1. Manual feed slot path
- 2. Paper tray path
- 3. Rear paper eject path

Scanning part



Specifications

General Specifications

	ltem	Specification
Print method		Electrophotographic/Laser
Resolution		600 × 600 dpi, HQ1200 (2400 x 600 dpi) quality
Print speed	One-sided	Up to 20/21 ppm * When loading A4 or Letter-size paper from the paper tray.
	Two-sided	N/A
Warm-up time	From Sleep mode	Less than 7 seconds at 73.4F / 50% (23°C / 50%)
	From Power OFF⇒ ON	Less than 27 seconds at 73.4F / 50% (23°C / 50%)
First print time	From Ready mode	Less than 10.0 seconds
	From Sleep mode	Less than 19.0 seconds
CPU		ARM9 200 MHz
Memory	Standard	16 MB
	Option	N/A
Interface		USB Hi-Speed 2.0

ltem			Specification
Power	Peak		1080 W
consumption	sumption Copying		Average: Approximately 360 W
	Quiet Mode	e/	N/A
	Copying		
	Ready		Average: Approximately 55 W
	Sleep, Wire ON	eless LAN:	N/A
	Deep Sleep	,	Average: Approximately 1.5 W
	Auto Power		N/A
	Down Mod	e	
Noise level	Sound	Printing	LpAm = 53 dB(A)
	pressure	Ready	LpAm = 30 dB(A)
	Sound power	Printing	LWAd = 6.18 B(A)
		Ready	LWAd = 4.25 B(A)
		Printing	N/A
		(Quiet Mode)	
Environment	Temperatur	e	Operating 50°F to 90.5°F (10 to 32.5°C)
			Storage 32°F to 104°F (0 to 40°C)
	Humidity		Operating 20 to 80% (without condensation)
			Storage 10 to 90% (without condensation)
Dimensions Carton Size		!	458 × 476 × 436 mm (180 × 187 × 172 inch)
(W × D × H)	Machine Size		360 × 368 × 311 mm (145 × 142 × 122 inch)
Weights	Without Carton,		8 8 kg / 19 4 lb
	With toner/	′drum	
LCD Size			1.85 × 0.43 inch (16 characters × 2 lines)

Computer Requirement

Computer Platform &		Processor Minimum	Minim	Recom	Hard Disk Space to install		Supporte d PC	Supp orted
Оре	rating System Version	Speed	Speed Um mende RAM d RAM		For Drive rs	For Appl icati ons	Software Function s	Interf ace *2
Windo ws® Operat ing System	Windows® XP Home *1 *4 Windows® XP Professional *1 *4	Intel® Pentium® II or equivalent	128 MB	256 MB	150 MB	500 MB	Printing, PC-Fax * 3 Scannin g	USB
*1	Windows® XP Professional x64 Edition * 1 *4	64-bit (Intel® 64 or AMD 64) supported CPU	256 MB	512 MB	-			
	Windows Vista® *1 *4	Intel® Pentium® 4 or equivalent 64-bit (Intel®64 or AMD 64) supported CPU	512 MB	1 GB	500 MB	1.2 GB		
	Windows® 7 *1 *4	Intel® Pentium® 4 or equivalent 64-bit (Intel® 64 or AMD 64) supported CPU	1 GB (32- bit) 2 GB (64- bit)	1 GB (32- bit) 2 GB (64- bit)	650 MB			
Macint osh Operat	OS X 10.5.8	PowerPC® G4/G5 Intel® Processor	512 MB	1 GB	80 MB	400 MB	Printing, PC-Fax Send	USB
ing	OS X 10.6.x	Intel® Processor	1 GB	2 GB			*3,	
System	OS X 10.7.x	Intel® Processor	2 GB	2 GB			Scannin g	

*1 For WIA, 1200 x 1200 resolution. Scanner Utility enables to enhance up to 19200 × 19200 dpi.

*2 Third-party USB ports are not supported.

- *3 PC-Fax supports black and white only.
- *4 NuanceTM PaperPortTM 12SE supports Microsoft® SP3 or higher for Windows® XP and SP2 or higher for Windows Vista® and Windows® 7.

Supported Paper Sizes

Paper handling

	ltem	Specification
Paper Input	Paper tray 1	250 sheets
	Manual feed slot	1 sheet
	ADF	20 sheets
		30 sheets (staggered)
Paper Output	Face-down	100 sheets (80 g/m2)
	Гасе-ир	1 sheet (straight paper path)
Duplex		N/A

Specifications are subject to change without notice.

Media specifications

	ltem	Specification
Paper Input	Paper tray 1	Plain Paper, Thin Paper, Recycled Paper
	Manual feed slot	Plain Paper, Thin Paper, Thick Paper, Recycled Paper, Bond Paper, Labels and Envelopes
	Duplex	N/A
	ADF	Plain Paper, Recycled Paper

	ltem	Specification
Paper weight	Paper tray 1	60 to 105 g/m2 (16 to 28 lb)
	Manual feed slot	60 to 163 g/m2 (16 to 43 lb)
	Duplex	N/A
	ADF	64 to 90 g/m2 (17 to 24 lb)
Paper size	Paper tray 1	A4, Letter, B5(ISO/JIS), A5, A5(Long Edge), B6(ISO), A6, Executive
	Manual feed slot	Width 76.2 to 216 mm, Length 116 to 406.4 mm (Width 3.0" to 8.5", Length 4.6" to 16")
	Duplex	N/A
	ADF	Width 147.3 to 215.9mm, Length 147.3 to 355.6 mm (Width 5.8" to 8.5", Length 5.8" to 14.0")

Printable & Scannable Area

The figures below show maximum unprintable and unscannable areas.

The unprintable and unscannable areas may vary depending on the paper size or settings in the application you are using.



Usage	Document Size	Top (1) Bottom (3)	Left (2) Right (4)
FAX (Send)	Letter	3 mm (0.12 inch)	4 mm (0.16 inch)
	Legal	3 mm (0.12 inch)	4 mm (0.16 inch)
	A4	3 mm (0.12 inch)	1 mm (0.4 inch)
Сору	Letter	3 mm (0.12 inch)	4 mm (0.16 inch)
	Legal	3 mm (0.12 inch)	4 mm (0.16 inch)
	A4	3 mm (0.12 inch)	3 mm (0.12 inch)

FAX

ltem		Specification
Modem Speed		33,600 bps (FAX)
Transmission speed		Approximately 2.5 seconds (ITU-T Test Chart #1, Std resolution, JBIG)
ITU-T group		Super G3
Color FAX	Sending	N/A
	Receiving	N/A
Internet FAX		N/A

Specifications are subject to change without notice.

Сору

ltem	Specification
Copy Speed (A4/Letter)	Up to 20/21 ppm

	ltem	Specification
First copy out time	From Ready mode and Paper tray	Less than 12 seconds
	From Sleep mode and Paper tray	Less than 29 seconds
Resolution (dpi)		300 x 600 dpi
Auto duplex scanning copy		N/A

Scanner

ltem	I	Specification
Resolution		Maximum scanning 600 (main scanning) x 600 (sub scanning) dpi
Resolution (Interpolate	d)	Maximum scanning 19200 (main scanning) x 19200 (sub scanning) dpi
Scanning speed	Monochrome	A4: 2.63 seconds Letter: 2.47 seconds
	Color	N/A

Specifications are subject to change without notice.

Installation Requirements

Environment

Temperature Range: 10°C to 32.5°C

Humidity Range: 20% to 80% RH (Non-condensing)

Atmospheric pressure: 620 to 1,013 hPa (Above sea level: 0 to 4,000m)

Machine Space Requirements

• Keep a minimum gap around the machine as shown in the illustration.



- The components included in the box may differ depending on your country.
- We recommend that you save the original packaging.
- If for any reason you must ship your machine, carefully repack the machine in the original packaging to avoid any damage during transit. The machine should be adequately insured with the carrier. For how to repack the machine, see Packing and shipping the machine in the Advanced User's Guide.
- The interface cable is not a standard accessory. Buy the appropriate interface cable.



Power Requirements

Peak: Approx.1080 W at 25 °C

Preventive Maintenance Tables

PM Tables

There are no PM parts for this machine.

Image Quality Standards

Both manuscript and recording paper is evaluated in 4200 XEROX paper.

Magnification Error	Main Scan	±1.1%
	Sub Scan	±1.4%
Laterality Feed		3 mm or less (A4)
Skew	Upper End	3 mm or less
	Lower End	3 mm or less (difference between the left edge of the lower end and the upper end)

4. Replacement and Adjustment

Transferring Received Fax Data

When the machine at the user site requires to be repaired, unplugging the power cord from the electrical outlet for sending the machine for repair may lose received fax data if left in the machine.

To prevent such data loss, the service personnel should instruct end users (e.g., by telephone) to transfer data to another fax machine or PC using the procedure below.

Note

- The number of files that can be transferred at a time is 99. To transfer 100 files or more, carry out the following procedure more than one time.
- If there are both color and monochrome data in a file to be transferred, the monochrome data will be transferred first. If the receiver machine does not support the color function, the sender machine cannot transfer color data, resulting in an error.

Operating Procedure

- 1. If the error message is displayed, press the [Stop/Exit] button to close it.
- 2. Press the [Menu] button.
- 3. Choose [Service] by using the [▲] or [▼] button.
- 4. Press the [OK] button.
- 5. Choose [Data transfer] by using the [▲] or [♥] button.
- 6. Press the [OK] button.
- 7. Choose [Fax transfer] by using the [▲] or [♥] button.
- 8. Press the [OK] button.
- 9. If [No data] appears on the LCD, there are no faxes left in the machine's memory. Then, press the [Stop/Exit] button. If a fax number entry screen appears, there are faxes in the machine's memory. Then enter the fax number to which faxes will be forwarded.
- 10. Press the [Start] button.

Before You Do

Safety Precautions

To avoid creating secondary problems by mishandling, follow the warnings and precautions below during maintenance work.

WARNING

Some parts inside the machine are extremely hot immediately after the machine is used. When
opening the front cover ASSY or back cover to access any parts inside the machine, never touch
the shaded parts shown in the following figures.



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- Turn off the main power switch and unplug the machine before you do the procedures in this chapter.
- Be careful not to lose screws, washers, or other parts removed.
- Be sure to apply grease to applicable positions specified in this chapter.
- When using soldering irons or other heat-generating tools, take care not to accidentally damage parts such as wires, PCBs and covers.
- Static electricity charged in your body may damage electronic parts. When transporting PCBs, be sure to wrap them in conductive sheets.
- When replacing the PCB and all the other related parts, put on a grounding wrist band and perform the job on a static mat. Also take care not to touch the conductor sections on the flat cables or on the wire harness.
- After disconnecting flat cables, check that each cable is not damaged at its end or shortcircuited.
- When connecting flat cables, do not insert them at an angle. After insertion, check that the cables are not at an angle.
- When connecting or disconnecting connectors, hold the connector body, not the cables. If the connector is locked, release it first.

- After a repair, check not only the repaired portion but also harness treatment. Also check that other related portions are functioning properly.
- Violently closing the front cover without mounting the toner cartridge and the drum unit can damage the machine.
- After assembly, it is recommended to conduct dielectric strength test and continuity test.
- When mounting the power switch, check that the tabs are secured to the frame firmly and that the harness is not caught in the frame.
- When mounting the inlet, check that the inlet is housed in the frame completely and that the harness is not caught in the frame.

Type of Screw

Screw Catalogue

Taptite bind B

Taptite bind B M3×10	(}) ()11111111 h560e2019
Taptite bind B M4×12	(

Taptite cup B

Taptite cup B M3×10	
	h560e2021

Taptite cup S

Taptite cup S M3×6 SR	h560e2022
Taptite cup S M3×8 SR	h560e2023

Taptite cup S M3×12	
	h560e2024

Taptite flat B

Screw bind

Taptite pan

Taptite pan B M4×14	
	h560e2027

Screw pan (S/P washer)

Screw pan (S/P washer) M3×6	h560e2028
Screw pan (S/P washer) M3×12 DB	h560e2029
Screw pan (S/P washer) M3.5×6	(F) (1) (h) (h) (h) (h) (h) (h) (h) (h) (h) (h
Screw pan (S/P washer) M3.5×8	60e2031

Screw List

• Note

• For verifying the shape of each screw, refer to page 33 "Screw Catalogue".
Location of screw	Screw type	Q'ty
Paper tray cover	Taptite bind B M4x12	2
Document tray ASSY	Taptite cup B M4x12	2
Side cover L	Taptite bind B M4x12	1
Side cover R	Taptite bind B M4x12	1
Handset holder (Upper cover L)	Taptite bind B M4x12	1
Upper cover R	Taptite bind B M4x12	1
ADF earth harness	Taptite cup S M3x6 SR	1
Document chute ASSY	Taptite bind B M4x12	4
Document chute upper ASSY	Taptite cup B M3x10	3
Separation pad ASSY	Taptite cup B M3x8	1
Document lower cover	Taptite cup B M3x10	3
ADF drive frame	Taptite cup B M3x10	3
ADF motor	Screw pan (S/P washer) M3x6	1
Modem earth harness R	Screw pan (S/P washer) M3.5x6	2
Modem earth harness L	Screw pan (S/P washer) M3.5x6	1
Modem unit	Taptite bind B M4x12	2
Modem shield cover	Screw pan (S/P washer) M3.5x6	1
Modem PCB ASSY	Taptite cup S M3x6 SR	2
Inner chute cover	Taptite bind B M4x12	2
Inner chute ASSY	Taptite bind B M4x12	2
Fuser unit	Taptite pan B M4x14	2
LVPS shield plate cover	Taptite bind B M4x12	3
	Screw pan (S/P washer) M3.5x6	1
	Screw pan (S/P washer) M3X12 DB	1

Location of screw	Screw type	Q'ty
Low voltage power supply PCB ASSY	Screw pan (S/P washer) M3.5x6	1
	Taptite flat B M3x10	1
	Taptite bind B M4x12	1
High voltage power supply PCB ASSY	Taptite bind B M4x12	1
New toner sensor PCB ASSY	Taptite bind B M3x10	1
Laser unit	Taptite cup S M3x8 SR	4
Main PCB ASSY	Taptite cup S M3x6 SR	3
Front chute ASSY	Taptite bind B M4x12	2
Under bar	Taptite bind B M4x12	1
Chute earth plate	Taptite cup S M3x6 SR	1
PF frame ASSY	Taptite bind B M4x12	1
Earth plate laser L	Taptite cup S M3x6 SR	1
Main frame L ASSY	Taptite bind B M4x12	2
	Taptite cup S M3x6 SR	2
Develop drive sub ASSY	Taptite cup S M3x6 SR	1
	Taptite bind B M4x12	3
Motor drive sub ASSY	Taptite bind B M4x12	6
Main motor	Screw bind M3x4	3
Main PCB shield calking ASSY	Taptite cup S M3x6 SR	1
	Taptite bind B M4x12	3

Preparation

Prior to proceeding with the disassembly procedure,

- 1. Disconnect the following:
 - AC cord [A]

- USB cable [B] (if connected)
- Telephone line [C] (if connected)
- 2. Remove the following:
 - Paper tray [D]
 - Toner cartridge and drum unit [E]
 - Telephone jack cap [F]



How to Access the Object Component

On the next page is a disassembly flowchart which helps you access the object components. To remove the fuser unit, for example, first find it on the flowchart and note its name ("Fuser unit"). To access it, you need to remove all the parts above the fuser unit on the flowchart ("Side cover R" \Rightarrow "Back Cover" \Rightarrow "Outer chute ASSY" \Rightarrow "Fuser unit cover" \Rightarrow "Inner chute ASSY") before the unit itself can be removed.

Unless otherwise specified, all parts should be replaced in the reverse order to which they were removed to reassemble the machine.

Disassembly Flowchart



4

Special Tools and Lubricants

There are no applicable parts for lubrication.

Replaceable Parts

Paper Tray

1. Remove the two taptite bind B M4x12 screws [A] and the four bosses [B], and then remove the paper tray cover [C] from the paper tray [D].



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- 2. Release the two hooks [A] of the separation pad ASSY [B].
- 3. Press both side arms [C] of the separation pad ASSY to remove the pins [D], and remove the separation pad ASSY.
- 4. Remove the separation pad spring [E] from separation pad ASSY.

Note

• Be careful not to lose the separation pad spring [E].

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5. Push the hook [A] of the lift gear 46 [B] while pushing up the plate up plate [C], and remove the lift gear 46.

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6. Remove the gear Z23M10Z14M75 [A] and the gear Z19M10 [B].



Cord Hook

1. Turn the two cord hooks [A], and then remove them from the machine.



Back Cover

- 1. Open the back cover [A].
- 2. Push the both side ribs [B] of the back cover outward, and release the two bosses [C] of the outer chute ASSY.
- 3. Pull the back cover in the direction of arrow 3a, and remove it from the pin [D], and then slide it in the direction of arrow 3b to remove it from the machine.



4. Release the hook [E], and remove the back cover sensor lever [F] from the back cover.

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Assembling Note:

• When assembling the back cover, close the back cover with engaging the two bosses of the outer chute ASSY with the groove of both side ribs of the back cover.

Outer Chute ASSY

 Pull the outer chute ASSY [C] in the direction of arrow 1a, and release the boss A [A]. Slide the outer chute ASSY in the direction of arrow 1b, and release the boss B [B], and then remove the outer chute ASSY from the machine.



Fuser Unit Cover

1. Hold the both knobs [A] on the fuser unit cover [B], and pull down the fuser unit cover to your side.

- 2. Pull the fuser unit cover in the direction of the arrow to remove it from the two bosses [C], and then remove it from the machine.

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Assembling Note:

• When attaching the fuser unit cover, set the roller parallel. (Check the position of anti-curl levers. Refer to page 305 "Curl in the paper".)

Front Cover ASSY

- 1. Open the front cover ASSY [A].
- 2. Release the hook [B] of the develop joint link [C] to remove the develop joint link from the front cover ASSY.

- 3. Pull up the rib [D] on the front chute ASSY [E], and slide the front cover ASSY in the direction of arrow 3, and then remove it from the machine.

Document Tray ASSY

1. Remove the two taptite cup B M4x12 screws [A]. And release the two hooks [B] of the document tray ASSY [C], and remove the document tray ASSY from the machine.



Side Cover L

1. Remove the taptite bind B M4x12 screw [A]. And release the 17 hooks [B] to remove the side cover L [C] from the machine.



Side Cover R

1. Remove the taptite bind B M4x12 screw [A]. And release the 16 hooks [B] to remove the side cover R [C] from the machine.



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Upper Back Cover

 Float section A [A], and remove the boss [B]. And slide the upper back cover [C] in the direction of the arrow to release the three hooks [D], and then remove the upper back cover from the machine.



Upper Cover L / Upper Cover R

- 1. Open the control panel ASSY [A].
- 2. Disconnect the control panel cover sensor harness [B] from the main PCB ASSY [C], and release them from the guide [D].
- 3. Release the wiring of the control panel cover sensor harness from the guides [E] of the upper cover L [F].
- Remove the taptite bind B M4x12 screw [G] from the upper cover L. And release the hook [H], and slide the upper cover L in the direction of the arrow to remove it from the machine.

- [G] [I] [H]^{*} [H] [F] -[A] [E] [D] [B]· [B]-O) [C]
- 5. Remove the taptite bind B M4x12 screw from the upper cover R [I]. And release the hook, and slide the upper cover R in the direction of the arrow to remove it from the machine.

Control Panel Cover Link

1. Remove the two control panel cover links [A] from the machine.



Document Chute ASSY

- 1. Release the wiring of the control panel cover sensor harness [A] from the guide [B] of the machine.
- 2. Remove the taptite cup S M3x6 SR screw [C], and remove the ADF earth harness [D] and the modem earth harness L [E].
- 3. Disconnect the CIS flat cable [F], the ADF motor harness [G] and the panel PCB harness [H] from the main PCB ASSY [I]. And release the ADF motor harness, the panel PCB harness and the ADF earth harness from the guide, and then pull out the CIS flat cable from the core [J] of the machine.



4. Remove the four taptite bind B M4x12 screws [K], and remove the document chute ASSY [L] from the machine.

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Reference

• Harness routing : Refer to page 119 "Panel Unit/ADF Motor"

Assembling Note:

- When assembling the ADF earth harness and the modem earth harness L to the machine, place them inside of width of the metal where screw is fastened.
- 5. Release the panel PCB harness [A] from the securing fixtures.

6. Open the control panel ASSY [B] at an angle of 45 degrees [C], and remove it from the document chute ASSY [D] in the direction of the arrow.



• Harness routing : Refer to page 119 "Panel Unit/ADF Motor"

Document Chute Upper ASSY

1. Remove the three taptite cup B M3x10 screws [A]. And release the two hooks [B] to remove the document chute upper ASSY [C] from the control panel ASSY [D].



Separation Pad ASSY

1. Remove the taptite cup B M3x8 screw [A], and remove the front plate spring ASSY [B] and the separation pad ASSY [C].

Push the both side arms of the separation pad holder [D] inside to release the two bosses
[E], and remove the separation pad holder from the document chute upper ASSY [F].
Then remove the separation pad spring [G] from the separation pad holder.



Control Panel ASSY

- 1. Remove the panel PCB harness [A] from the guide [B] of the panel sub cover [C].
- 2. Release the two hooks [D], and float the panel PCB ASSY [E].
- 3. Release the two hooks [F], and slide the LED PCB ASSY [G] in the direction of the arrow.
- 4. Release the lock [H], and disconnect the LCD flat cable [I] from the LED PCB ASSY. Then remove the panel PCB ASSY and LED PCB ASSY from the control panel cover [J].

- <image><image>
- 5. Disconnect the panel PCB harness from the panel PCB ASSY.

- 6. Remove the rubber key R [A] and the rubber key L [B] from the control panel cover [C].
- 7. Release the two hooks [D], and slide the LCD holder [E] in the direction of the arrow to remove it from the control panel cover.
- 8. Release the two hooks [F], and remove the LCD [G] from the LCD holder [H].

- 9. Release the two hooks [I], and remove the panel sub cover [J] from the control panel cover.

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Assembling Note:

• Assemble the rubber key from L, R in this order.

Document Separate Roller

1. Turn the bushing [A] in the direction of arrow 1 a to unlock, and pull it out in the direction of arrow 1b to remove the document feed roller [B] from the document chute ASSY [C].



- Remove the three taptite cup B M3x10 screws [A], and remove the document lower cover [B] from the document chute ASSY [C].
- 3. While pushing down the hook [D], hold up the center of the document separate roller gear shaft [E], and slide it in the direction of the arrow to release the lock part [F] from the rib [G]. Then remove the document separate roller gear shaft from the document chute ASSY.
- 4. Remove the bushing (large) [H] from the document separate roller gear shaft [I].
- 5. Move the document separate roller [J] in the direction of arrow 5a to remove the shaft A [K], and slide in the direction of arrow 5b to remove the shaft B [L]. Then remove the document separate roller from the document chute ASSY.



6. Remove bushing (small) [M] from the document separate roller.

Assembling Note:

• When assembling each bushing, place "N" as shown in the above figures.

ADF Motor

1. Turn the bushing [A] in the direction of arrow 1 a to unlock, and pull out in the direction of arrow 1b. Then remove the document eject roller [B] from the document chute ASSY [C].



- 2. Remove the three taptite cup B M3x10 screws [A], and remove ADF earth harness [B] and the ADF drive frame [C] from the document chute ASSY [D]. Then pull out the ADF earth harness and ADF motor harness [E] from the hole of the document chute.
- 3. Release the hook [F], and remove the core [G] of the ADF motor harness from the housing [H] of the document chute ASSY.

 Remove the screw pan (S/P washer) M3x6 screw [I]. Turn the ADF motor [J] in the direction of the arrow to release it from the hook, and then remove it from the ADF drive frame.



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Assembling Note:

- When assembling the ADF earth harness, attach it as shown in above figure.
- When assembling the ADF drive frame, tighten the screws in the sequence of the numbers engraved.

CIS Unit

- 1. Release the two hooks [A] of the CIS glass stopper [B], and slide the CIS glass stopper to remove it from the document chute ASSY [C].
- 2. Remove the CIS glass [D] from the document chute ASSY.
- 3. Hold up the CIS unit [E] to disconnect the CIS flat cable [F].
- 4. Remove the two CIS spacers [G] from the CIS unit.
- 5. Remove the two CIS springs [H] from the document chute ASSY.

6. Pull out the CIS flat cable [I] from the document chute ASSY.



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Reference

• Harness routing : Refer to page 117 "Modem Unit"

Assembling Note:

• When replacing the CIS flat cable, fold it in advance as shown in the following figure.



- 1: Reinforcing plate surface (back: terminal surface)
- 2: To be connected to main PCB

- 3: Reinforcing plate surface (back: terminal surface)
- 4: To be connected to CIS unit

Control Panel Cover Sensor

1. Release the two hooks [A], and remove the control panel cover sensor [B] from the document chute ASSY [C].



Modem PCB ASSY

- 1. Remove the two screw pan (S/P washer) M3.5x6 screws [A]. And release the modem earth harness R [B] from the securing fixtures to remove it from the machine.
- Remove the screw pan (S/P washer) M3.5x6 screw [C]. And release the modem earth harness L [D] from the securing fixtures to remove it from the machine.
- Disconnect the modem PCB flat cable [E] from the main PCB ASSY [F], and then disconnect it from the core [G] of the machine.
- Remove the two taptite bind B M4x12 screws [H], and remove the modem unit [I] from the machine.

- 5. Remove the screw pan (S/P washer) M3.5x6 screw [J], and remove the modem shield cover [K] from the modem unit.
- 6. Remove the two taptite cup S M3x6 SR screws [L], and remove the modem PCB ASSY [M] from the modem unit.
- 7. Disconnect the modem PCB flat cable [N] from the modem PCB ASSY.



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Reference

• Harness routing : Refer to page 117 "Modem Unit" and page 118 "Modem Earth Harness R"

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Assembling Note:

• When assembling the modem earth harness to the machine, attach it as shown in the above figure.

Inner Chute Cover

- 1. Disconnect the speaker harness [A] from the main PCB ASSY [B].
- 2. Remove the two taptite bind B M4x12 screws [C]. And release the six hooks [D], and hold up the front side of the inner chute cover [E], and then slide it in the direction of the arrow to remove.



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Reference

• Harness routing : Refer to page 116 "Speaker Unit"

Inner Chute ASSY

- 1. Pull down both side green envelope levers [A] of the fuser unit [B].
- Remove the two taptite bind B M4x12 screws [C], and remove the inner chute ASSY [D] from the machine.



- Release the hook [E] of the eject pinch roller L ASSY [F], and open the eject pinch roller L ASSY at an angle of 80 degrees. And release the boss A [A], and then release the boss B [B] from the guide [G] to remove the eject pinch roller L ASSY from the inner chute ASSY [H]. (2 places)
- Release the hook [I] of the eject pinch roller R ASSY [J], and open the eject pinch roller R ASSY at an angle of 80 degrees. And release the boss C [C], and then release the boss D



[D] from the guide [K] to remove the eject pinch roller R ASSY from the inner chute ASSY. (2 places)

Fuser Unit

1. Release the harness of the fuser unit [A] from the guide [B] of the main frame R ASSY [C].
2. While pushing the hook [D] of the connector of the fuser unit, disconnect the connector on the low voltage power supply PCB ASSY [E].



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3. Put the connector of the fuser unit [A] through the hole [B] of the main frame R ASSY, and send it inside.

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4. Disconnect the connectors of the center thermistor harness ASSY [A] and side thermistor harness ASSY [B] from the eject sensor PCB ASSY [C].

5. Release the harnesses of the center thermistor harness ASSY and side thermistor harness ASSY from the guides [D] of the main frame L ASSY [E].



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Reference

- Harness routing : Refer to page 115 "Fuser Unit"
- 6. Remove the two taptite pan B M4x14 screws [A] to remove the fuser unit [B].

• Note

- Do not apply a physical impact or vibration on the fuser unit.
- Do not touch the roller [C] to prevent breakage of the fuser unit.



Low Voltage Power Supply PCB ASSY

- 1. Remove the earth spring front chute [A] from the LVPS shield plate cover [B] and the front chute ASSY.
- 2. Remove the hook part of the earth harness under R [C] from the LVPS shield plate cover.

 Remove the three taptite bind B M4x12 screws [D], the screw pan (S/P washer) M3.5x6 screw [E] and the screw pan (S/P washer) M3x12 DB screw [F] to remove the LVPS shield plate cover.



Assembling Note:

- Hanging the earth spring front chute on the guide [G] of the main frame R ASSY [H].
- Remove the screw pan (S/P washer) M3.5x6 screw [A] to remove the earth harness [B] from the low voltage power supply PCB ASSY [C].
- 5. Remove the taptite flat B M3x10 screw [D] to remove the inlet [E] of the low voltage power supply PCB ASSY.
- 6. Release the two hooks [F], and remove the power supply switch [G] of the low voltage power supply PCB ASSY.
- 7. Remove the taptite bind B M4x12 screw [H].



8. Release the harness of the low voltage power supply PCB ASSY [I] from the guide [J] on the main frame R ASSY [K].

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Assembling Note:

• Attach the inlet [A] as shown in the figure below.



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9. Remove the low voltage power supply PCB ASSY [A], and disconnect the three connectors [B] from the rear side.

10. Remove the LVPS insulation sheet [C].



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Reference

• Harness routing : Refer to page 105 "Registration Front/Rear Sensor PCB ASSY"

Main Fan

- 1. Disconnect the connector [A] of the main fan [B] from the high voltage power supply PCB ASSY [C].
- 2. Release the harness of the main fan from the guides [D] of the main frame R ASSY [E].



3. Release the two hooks [F], and remove the main fan.

Reference

• Harness routing : Refer to page 112 "Main Fan"

Assembling Note:

- When assembling the main fan, put the harness through the guide of the main frame R ASSY before attachment.
- When assembling the main fan, place the attached label [G] outward.
- When assembling the main fan, secure the harness to the position of above figure with the tape [H].

High Voltage Power Supply PCB ASSY

- 1. Release the flat cable [A] from the guides [B] of the main frame R ASSY [C], and disconnect it from the high voltage power supply PCB ASSY [D].
- 2. Remove the taptite bind B M4x12 screw [E].



3. Release the three hooks [F] to remove the high voltage power supply PCB ASSY.

Reference

• Harness routing : Refer to page 114 "High Voltage Power Supply PCB ASSY"

Assembling Note:

• Assemble the front cover sensor lever [G] after assembling the high voltage power supply PCB ASSY.

New Toner Sensor PCB ASSY

- 1. Rotate the machine 180 degrees to the side of main frame LASSY [A].
- 2. Disconnect the new toner sensor harness [B] from the main PCB ASSY [C], and release it from the guide [D] of the main frame L ASSY.
- 3. Remove the taptite bind B M3x10 screw [E].



4. Release the hook [F] to remove the new toner sensor PCB ASSY [G].

Reference

• Harness routing : Refer to page 107 "New Toner Sensor PCB ASSY"

Filter

1. Release the two hooks [A] to remove the air duct [B].



2. Pull the rib [C] of the air duct in the direction of arrow 2, and remove the filter [D].

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Assembling Note:

• When assembling the air duct [E], align the notch part of the air duct with the pins [F] of the machine.

Laser Unit

1. Disconnect the flat cable [A] of the high voltage power supply PCB ASSY from the main PCB ASSY [B], and remove it from the guide [C] on the main frame L ASSY.

- 2. Disconnect the flat cable [D] of the laser unit from the laser unit [E].
- 3. Remove the flat cable of the laser unit from the guide of the main frame LASSY, and disconnect the flat cable of the laser unit from the main PCB ASSY.
- 4. Remove the four taptite cup S M3x8 SR screws [F], and remove the laser unit.



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Reference

• Harness routing : Refer to page 111 "Laser Unit"

• Note

• Be careful not to touch the lens [A] of the laser unit [B].

4



• Attach the laser serial label [A] as shown in the figure below (on laser plate [B]) after replacing the laser unit [C].



Pick-up Roller ASSY

- 1. Turn the machine [A] upside down, and put it as shown in the figure below.
- 2. Push the link arm [B] in the direction of arrow 2, and turn the pick-up roller ASSY [C] to release the boss [D].



3. Slide the pick-up roller ASSY in the direction of arrow 3 to release it from the shaft [E], and remove the pick-up roller ASSY from the machine.

Rubber Foot

1. Remove the two rubber foots [A] from the machine [B].



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Main PCB ASSY

- 1. Turn the machine upside down, and put it as shown in the figure below.
- 2. Disconnect the two flat cables [A] and the five connectors [B].
- 3. Remove the three taptite cup S M3x6 SR screws [C].



4. Release the hook [D] to remove the main PCB ASSY [E] and the main PCB sheet [F].

Reference

 Harness routing : Refer to page 105 "Registration Front/Rear Sensor PCB ASSY", page 108 "T1 Clutch ASSY, Registration Clutch ASSY", page 109 "Eject Sensor PCB ASSY", page 110 "Main Motor" and page 113 "Low Voltage Power Supply PCB ASSY"

T1 Clutch ASSY, Registration Clutch ASSY

- 1. Release the harness of the T1 clutch ASSY [A] and the registration clutch ASSY [B] from the guides [C] of the main frame L ASSY [D].
- 2. Release the hook [E] to remove the T1 clutch ASSY.

3. Release the hook to remove the registration clutch ASSY.



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Reference

• Harness routing : Refer to page 108 "T1 Clutch ASSY, Registration Clutch ASSY"

Assembling Note:

- When wiring the harness of the T1 clutch ASSY and the registration clutch ASSY to the guides of the main frame L ASSY, check that there is no slack in the harness.
- 4. Remove the registration earth spring [A] from the motor drive sub ASSY [B] and the conductive bearing 5 [C].

- 5. Remove the conductive bearing 5 from the pin [D] of the main frame L ASSY, and turn it to the direction of arrow 5 until the releasing position, and then pull out the conductive bearing 5 from the registration roller shaft 2 [E].
- 6. Pull out the registration roller shaft 2.



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Assembling Note:

• Assemble the registration earth spring as shown in the above figure.

Main Frame L ASSY

1. Remove the two taptite bind B M4x12 screws [A] to remove the front chute ASSY [B].



- 2. Place the machine so that the main frame LASSY [A] is at the top.
- 3. Release the low voltage power supply harness ASSY [B] from the guide of the main frame LASSY.
- 4. Remove the taptite bind B M4x12 screw 4a [C] (for Under bar [D]).
- Remove the taptite cup S M3x6 SR screw 5a [E] (for Chute earth plate [F]), the taptite bind B M4x12 screw 5b [G] (for PF frame ASSY) and the taptite cup S M3x6 SR screw 5c [H] (for Earth plate laser L).
- 6. Release the hook to remove the feeder gear 17 [1].
- Turn the feeder cam lever [J] in the direction of the arrow, and remove the taptite bind B M4x12 screw 7 [K].



8. Remove the taptite bind B M4x12 screw 8a [L] and the two taptite cup S M3x6 SR screws 8b [M] to remove the main frame L ASSY.

Assembling Note:

• When assembling the main frame LASSY, check that there is the chute earth plate on the upper side of the earth plate main PCB [N].

Develop Drive Sub ASSY, Develop Gear Joint/52

Remove the taptite cup S M3x6 SR screw [A] and the three taptite bind B M4x12 screws
[B] to remove the develop drive earth harness [C] and the develop drive sub ASSY [D].



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Assembling Note:

- When assembling the develop drive sub ASSY, tighten the three taptite bind B M4x12 screws in numerical order written on the plate.
- Be careful not to bend the earth plate laser L [E].

2. Place the develop drive sub ASSY [A] as shown in the figure below.

- 3. Release the two hooks [B] of the develop joint [C] with being careful not to damage them, and then remove the develop joint spring [D] and the develop gear joint/52 [E].

Motor Drive Sub ASSY, Main Motor

1. Remove the six taptite bind B M4x12 screws [A] to remove the stopper [B] and the motor drive sub ASSY [C].



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• Harness routing : Refer to page 110 "Main Motor"

Assembling Note:

- When assembling the motor drive sub ASSY, tighten the six taptite bind B M4x12 screws in numerical order written in the plate.
- 2. Place the motor drive sub ASSY [A] as shown in the figure below.
- 3. Remove the drum gear 26L/131L [B].
- 4. Remove the three screw bind M3x4 screws [C] to remove the main motor [D].



Internal Temperature Thermistor

1. Release the harness of the internal temperature thermistor [A] from the guide [B] to remove the internal temperature thermistor.



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Reference

• Harness routing : Refer to page 106 "Internal Temperature Thermistor"

Eject Sensor PCB ASSY

- Remove the taptite bind B M4x12 screw [A] to remove the develop drive earth harness [B].
- Remove the taptite cup S M3x6 SR screw [C] and the two taptite bind B M4x12 screws [D].



3. Release the two hooks [E] to remove the main PCB shield calking ASSY [F].

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Assembling Note:

- When assembling the main PCB shield calking ASSY, insert the flat cable of the eject sensor PCB ASSY into the hole of the main PCB shield calking ASSY.
- When assembling the main PCB shield calking ASSY, tighten the two taptite bind B M4x12 screws in numerical order written on the plate.
- 4. Release the hook [A] to remove the eject sensor PCB ASSY [B] from the pin [C] of the main frame L ASSY [D].
- Release the harness [E] of the eject sensor PCB ASSY from the guides [F] of the main frame L ASSY.



6. Release the two hooks [G] to remove the back cover sensor [H].

h560e2092

Reference

• Harness routing : Refer to page 109 "Eject Sensor PCB ASSY"

Assembling Note:

• When assembling the back cover sensor, attach it while pushing the center of the rear side of the back cover sensor.

Fuser Gear 28/34

1. Remove the ejector gear 40 [A].

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- 2. Remove the fuser gear 28/34 [B].

• Gear position : Refer to page 103 "Paper Eject Part"

Overview of Gears

Paper Feeder Part

<Layout view>



h560e2094

<Development view>



<Name of gears>

- 1. Feeder gear 17
- 2. Feeder gear/Feeder gear holder/Feeder gear spring/Feeder holder spring
- 3. Feeder gear 24/27
- 4. Feeder gear idle 65
- 5. Feeder gear 21/30/17
- 6. Feeder gear 41
- 7. Feeder gear 31 pendulum
- 8. Feeder gear 26/52R

* These parts are subject to change without notice.

Development Part

<Layout view>



<Development view>



h560e2097

<Name of gears>

- 9. Develop joint link
- 10. Develop joint lift cam
- 11. Develop joint lift disk
- 12. DEV gear 33
- 13. DEV gear 21/45R

* These parts are subject to change without notice.

Paper Eject Part

<Layout view>



h560e2098

<Development view>



<Name of gears>

- 14. Ejector gear 10/15
- 15. Ejector gear 22
- 16. Ejector gear 40
- 17. Fuser gear 28/34
- 18. Fuser gear 20/54R pendulum
- 19. Ejector gear 29
- * These parts are subject to change without notice.

Harness Routing

Registration Front/Rear Sensor PCB ASSY



- 1. Guide
- 2. Registration front/rear sensor PCB ASSY
- 3. Registration front/rear sensor harness
- 4. Low voltage power supply PCB ASSY





- 1. Internal temperature thermistor
- 2. Guide
- 3. Main PCB ASSY
4

New Toner Sensor PCB ASSY



h560e2103

1. Guide

2. New toner sensor PCB ASSY

3. Main PCB ASSY





- 1. Main PCB ASSY
- 2. T1 clutch ASSY
- 3. Guide
- 4. Registration clutch ASSY

Eject Sensor PCB ASSY



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1. Eject sensor PCB ASSY	6. Main PCB ASSY
2. Main frame L ASSY	7. Hook
3. Main PCB shield calking ASSY	8. Back cover sensor harness
4. Main PCB sheet	9. Guide
5. Main-eject sensor flat cable	10. Back cover sensor

4

Main Motor



- 1. Main motor
- 2. Main PCB ASSY

Laser Unit



- 1. Main PCB ASSY
- 2. Hole of guide
- 3. Guide
- 4. Laser unit
- 5. Main-scanner flat cable harness

Main Fan



- 1. Hole of guide
- 2. Tape
- 3. Main fan
- 4. Guide
- 5. High voltage power supply PCB ASSY

Low Voltage Power Supply PCB ASSY



- 1. Low voltage power supply PCB ASSY
- 2. Low voltage power supply harness ASSY
- 3. Main PCB ASSY
- 4. Guide





- 1. Main-HVPS flat cable harness
- 2. Guide
- 3. Main PCB ASSY
- 4. High voltage power supply PCB ASSY

Fuser Unit



- 1. Main frame R ASSY
- 2. Guide
- 3. Heater harness
- 4. Center thermistor harness ASSY
- 5. Side thermistor harness ASSY
- 6. Main frame LASSY
- 7. Fuser unit

Speaker Unit



- 1. Speaker unit
- 2. Guide
- 3. Main PCB ASSY
- 4. Speaker harness

Modem Unit



- 1. Modem PCB ASSY
- 2. Modem PCB flat cable
- 3. Guide
- 4. Core
- 5. Modem earth harness L
- 6. Main PCB ASSY

Modem Earth Harness R



- 1. Guide
- 2. Modem unit
- 3. Modem earth harness R

Panel Unit/ADF Motor



1. ADF motor harness	6 Core
2. Main PCB ASSY	7 Papel PCB ASSY
3. Panel PCB harness	9 Control namel ASSY
4. ADF earth harness	
5. Guide	9. ADT 110101

CIS Unit



- 1. CIS unit
- 2. CIS flat cable
- 3. Core
- 4. Main PCB ASSY

Requirement Adjustment after Parts Replacement

If You Replace the Main PCB ASSY

<What to do after replacement>

- Rewriting the firmware
- Initialization of EEPROM of main PCB ASSY (function code: 01)
- Setting by country (function code: 74)
- Entering the adjusted value of the laser unit
- Setting the serial number
- Acquisition of white level data (function code: 55)
- Operational check of sensors (function code: 32)

♦ Note

• Since the counters are reset when the main PCB ASSY is replaced, the consumables and/or periodical replacement parts may reach the end of life before the message is displayed.

What you need to prepare

- 1. One USB cable
- 2. Create a temporary folder on the C drive of the computer (Windows® XP/2000 or higher).
- 3. Service setting tool (BrUsbn.zip) Copy it into the temporary folder created on the C drive. Extract the copied file and double-click the "BrUsbsn.exe" file to start it.
- 4. Download utility (FILEDG32.EXE) Copy it into the temporary folder created on the C drive.
- 5. Maintenance USB printer driver (Maintenance_Driver.zip) Copy it into the temporary folder created on the C drive. Extract the copied file.
- 6. Firmware

Main firmware	LZXXXX_\$.upd *
(E.g.) LZXXXX: First six digits of the part number of the firmware	
\$: Alphabetic character representing the revision version of the firmware	

- * upd: Used to rewrite the firmware via a computer.
- 7. Installing the maintenance driver.

Rewriting the firmware

Checking firmware version

Check if the firmware written on the main PCB is the latest version or not. If it is the latest version, there is no need to rewrite the firmware. If it is not, make sure to rewrite the firmware to the main PCB in accordance with "Rewriting the firmware using computer" in this section.

<How to check firmware version>

Press the [*] and [#] buttons at the same time in the ready state. Then, the firmware version information is displayed on the LCD.

Rewriting the firmware using computer

• Note

DO NOT unplug the power cord of the machine or your computer or disconnect the USB cable while rewriting the program files.

<Procedures>

- Turn OFF the power switch of the machine. Then turn it ON again with the [5] button held down ([Number of Copies] button for models without numeric keys). Check that
 "Image: Image: Image:
- 2. Connect the computer to the machine with the USB cable.
- 3. Double-click the "FILEDG32.EXE" file to start it. Select the "Maintenance USB Printer".
- Drag and drop a program file that you want to rewrite (for instance, LZXXXX_\$.upd) onto the "Maintenance USB Printer" icon.

Note

- 5. Upon completion of rewriting, the machine restarts and returns to the ready state automatically.

Initialization of EEPROM of Main PCB ASSY (Function Code: 01)

Initialize the EEPROM in accordance with page 134 "EEPROM Parameter Initialization (Function code 01, 91)".

Setting by Country (Function Code: 74)

Make appropriate settings by country in accordance with page 160 "Setting by Country (Function code 74)".

Setting the Serial Number and Entering the Adjusted Value of the Laser Unit

Note

- After replacing the laser unit, be sure to attach the serial number label provided with the new laser unit to the laser plate.
- When entering the adjusted value, be sure to enter the serial number of the new laser unit.

<Procedures>

- 1. Connect the computer to the machine with the USB cable.
- 2. Double-click the "BrUsbsn.exe" file that was copied to the temporary folder to start it.

👪 Br UsbSn	
File(<u>F</u>) Help(<u>H</u>)	
Port	•
Serial No =	
S⊟>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	S A
Scanner Video Cl VXXY	k. / =
Product Category	2 Mono-Laser 💽
2013	FAX-1195L
OK	Cancel
	h560e2159

- 3. Click "2013".
- 4. In the [Port] field, select the port number assigned to the Maintenance USB Printer. If the port number is unknown, follow steps below to check it.
 - 1. Click [Start], [Settings], and [Printers and Faxes]. The Printers and Faxes window appears.
 - 2. Right-click the "Maintenance USB Printer" icon.
 - 3. Click [Properties]. The Maintenance USB Printer Properties window appears.
 - 4. Click the [Ports] tab.
 - 5. Check the port number assigned to the Maintenance USB Printer.
- 5. Enter the serial number (15 digits) of the machine in the [Serial No.] field.

6. Enter the number (2nd digit from the left) on the laser serial number label [A] attached to the location shown in the illustration below in the [SDxxxxxVXXYY] field.



- 7. Enter the number (last five digits) on the laser serial number label in the [Scanner Video Clk] field, and click the [OK] button.
- 8. The serial number and the adjusted value of the laser unit are written to the machine.

Acquisition of White Level Data (Function Code: 55)

Acquire the white level data in accordance with page 158 "Acquisition of White Level Data/ Compensation of Scanning Width (Function code 55)".

Operational Check of Sensors (Function Code: 32)

Check performance of the sensors in accordance with page 146 "Operational Check of Sensors (Function code 32)".

If You Replace the Laser Unit

Entering the Adjusted Value of the Laser Unit

Note

- After replacing the laser unit [A], be sure to attach the serial number label [B] provided with the new laser unit to the laser plate [C].
- When entering the adjusted value of the laser unit, be sure to enter the serial number of the new laser unit.



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<Procedures>

1. Double-click the "BrUsbsn.exe" file to start it.

👪 Br UsbSn	
File(E) Help(H)	
Port	•
Serial No =	
S=>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	S A
Scanner Video Cl VXXY	k. /
Product Category	2 Mono-Laser 💽
Product Category 2 Mono-Laser 2013 FAX-1195L	
OK	Cancel
	h560e2159

- 2. Click "2013".
- 3. In the [Port] field, select the port number assigned to the Maintenance USB Printer.

 Enter the number (2nd digit from the left) on the laser serial number label [A] attached to the location shown in the illustration below in the [S□xxxxxVXXYY] field.



- Enter the number (last five digits) on the laser serial number label in the [Scanner Video Clk] field, and click the [OK] button.
- 6. The adjusted value of the laser unit is written to the machine.

If You Replace the Low Voltage Power Supply PCB ASSY

Reset of Irregular Power Supply Detection Counter

The irregular power supply detection counter increases by one when the machine detects irregular power supply. When the counter reaches the limit (100 times) and the irregular power supply detection error (error code EF) is displayed, replace the low voltage power supply PCB ASSY, which may have been damaged by repeated irregular power supply, and reset the irregular power supply detection counter.

In this case, if the same power supply is used, the same error may occur even when the low voltage power supply PCB ASSY is replaced. Ask the user to review the installation environment.

Note

- The maintenance driver must have been installed.
- Press the [Menu] button and then the [Start] button while the machine is in the ready state. Next, press the [▲] button four times to enter the maintenance mode. " ■ MAINTENANCE ■ appears on the LCD, indicating that the machine is in the initial state of the maintenance mode.
- 2. Connect the computer to the machine with the USB cable.
- 3. Double-click the "FILEDG32.EXE" file to start it. Select the "Maintenance USB Printer".
- 4. Drag and drop the "SQWAVE.PJL" file onto the "Maintenance USB Printer" icon.

Check the Irregular Power Supply Detection Counter

- 1. Press the [4] and [0] buttons in this order in the initial state of the maintenance mode.
- 2. Press the [▲] or [♥] button to select "E2P DUMP ENGN ALL".
- 3. Press the [OK] button.

The machine prints an irregular power supply detection counter list. The example of it is shown below.

4. Press the [9] button twice in the initial state of the maintenance mode.

The machine exits the maintenance mode and returns to the ready state.

Irregular power supply detection counter list

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If You Replace the CIS Unit

<What to do after replacement>

• Acquisition of white level data (function code: 55)

4

- Scanning and printing check
- Scanning lock (function code: 06)

Acquisition of White Level Data (Function Code: 55)

Perform the acquisition of white level data in accordance with page 158 "Acquisition of White Level Data/ Compensation of Scanning Width (Function code 55)".

Scanning and Printing Check

Scan the test chart TC-023 with the ADF, and check that there are no problems in the printed image.

Check that there are no problems in operations of the ADF, scanner unit and recording part.

Scanning Lock (Function Code: 06)

Move the document scanner unit to the transportation position in accordance with page 137 "Scanning Lock (Function code 06)".

If You Replace the Panel Unit

<What to do after replacement>

- Operational check of LCD (function code: 12)
- Operational check of control panel buttons (function code: 13)

Operational Check of LCD (Function Code: 12)

Check performance of the LCD in accordance with page 143 "Operational Check of LCD (Function code 12)".

Operational Check of Control Panel Buttons (Function Code: 13)

Check performance of the control panel buttons in accordance with page 144 "Operational Check of Control Panel Buttons (Function code 13)".

If You Replace the LCD Unit

<What to do after replacement>

• Operational check of LCD (function code: 12)

Operational Check of LCD (Function Code: 12)

Check performance of the LCD in accordance with page 143 "Operational Check of LCD (Function code 12)".

Service Maintenance

Enabling and Disabling the Maintenance Mode

Enabling

For details, ask your supervisor.

Disabling

- To exit the maintenance mode and return to the ready state, press the [9] button twice in the initial state of the maintenance mode. For models without numeric keys, press the [▲] or [▼] button until "MAINTENANCE 99" appears on the LCD. Then press the [OK] button, and the machine returns to the ready state.
- When the [Stop/Exit] button is pressed, the machine beeps for one second and returns to the initial state of the maintenance mode.
- When an incorrect function code is entered, the machine beeps for one second and returns to the initial state of the maintenance mode.

Enabling the User Accessible Maintenance Mode

The maintenance mode is exclusively designed for the checking, setting and adjustments of the machine by using the buttons on the control panel. In the maintenance mode, the operational check of the LCD, control panel PCB and sensors, print test, display of the log information and error codes, and change of the worker switches (WSW) can be performed.

How to enter the end-user accessible maintenance mode

Basically, the maintenance-mode functions should be accessed by service personnel only. However, you can allow end users to access some of these under the guidance of service personnel by phone.

The end-user accessible functions are shaded in the table in page 132 "List of Maintenance Mode Functions". (Function codes 06, 09, 10, 11, 12, 25, 43, 45, 53, 54, 77, 80, 82, 87 and 91)

<Operating Procedure>

 Press the [Menu], [Start], [Menu], and [^A] buttons in this order while the machine is in the ready state. "MAINTENANCE 06" appears on the LCD.

- 2. Press the [▲] or [▼] button until the desired maintenance-mode function code appears on the LCD, and press the [OK] button.
- 3. When each of the user-accessible functions is completed, the machine automatically returns to the ready state.

List of Maintenance Mode Functions

Function Code	Function
01	EEPROM parameter initialization
05	Printout of scanning compensation data
06	Scanning lock
08	ADF performance test
09	Monochrome image quality test pattern
10	Worker switch (WSW) setting
11	Printout of worker switch data
12	Operational check of LCD
13	Operational check of control panel buttons
25	Software version check
32	Operational check of sensors
43	PC print function
45	Changing return value of USB No.
53	Received data transfer function
54	Fine adjustment of scan start/end positions
55	Acquisition of white level data
57	Automatic scanning position adjustment
67	Continuous print test
74	Setting by country

Function Code	Function
77	Printout of maintenance information
78	Operational check of fan
80	Display of machine log history
82	Error code indication
87	Sending communication error list
91	EEPROM parameter initialization
99	Exit the maintenance mode

* The functions shaded in the table above are user-accessible.

Detailed Description of Maintenance mode Functions

EEPROM Parameter Initialization (Function code 01, 91)

Function

This function is used to initialize the setting values of the operation parameters, user switches, and worker switches (WSW) registered in the EEPROM.

Entering function code 01 initializes most EEPROM areas. Meanwhile, entering function code 91 initializes only the specified areas as shown in the table below.

Data item	Function code 01	Function code 91
Counter information	These will not be	These will not be
Error History	initialized.	initialized.
Operation lock of the control panel password	These will be	-
Secure function lock	initialized.	
Worker switch	-	
Telephone function registration	-	
One-touch dialing		
Speed dialing		
Group dialing		
User switches (items to be initialized when resetting to the factory default settings)		These will be initialized.
Function settings except user switches	-	
(items except the factory default settings)		
• Languages		
• Reprint		
Secure Print		
Interfaces		
PCL core area (Emulation settings)		

Operating Procedure

- Press the [0] and [1] buttons (or the [9] and [1] buttons according to your need) in this order in the initial state of the maintenance mode. "PARAMETER INIT" appears on the LCD.
- 2. Upon completion of parameter initialization, the machine returns to the initial state of the maintenance mode.

Vote

• Function code 01 is for service personnel. Function code 91 is for user support.

Printout of Scanning Compensation Data (Function code 05)

Function

This function is used to print the brightness level data for scanning compensation.

Operating Procedure

Note

- Be sure to execute this operating procedure not immediately after the power is turned ON, but after conducting the document scanning operation at least once in scanning. Since the machine initializes the brightness level data and obtains the standard value for document scanning compensation when starting scanning the document, the correct data for compensation cannot be printed even if this operation is implemented without scanning the document. Be sure to execute this operating procedure not immediately after the power is turned ON, but after conducting the document scanning operation at least once in scanning. Since the machine initializes the brightness level data and obtains the standard value for document scanning the document scanning the standard value for document scanning compensation when starting scanning the document, the correct data for compensation when starting is many to be printed even if this operation at least once in scanning compensation when starting is level data and obtains the standard value for document scanning compensation when starting is scanning the document, the correct data for compensation cannot be printed even if this operation is implemented without scanning the document.
- The print result varies depending on whether color scanning or black and white scanning is performed immediately before this operating procedure. Check the brightness level data you want to print and then implement the procedure below.
- For white and black scanning, copy the document. For color scanning, implement color scanning of the document.

Press the [0] and [5] buttons in this order in the initial state of the maintenance mode.
 "PRINTING" appears on the LCD, and the machine prints the scanning compensation data list containing the following:

Black and white/color scanning

Note

• In the case of the black and white scanning, the output data (B) and (R) are invalid.

a)	LED CURRENT DATA	1 byte
b)	LED pulse data 1 (UP) (G)	2 bytes
c)	LED pulse data 1 (DOWN) (G)	2 bytes
d)	LED pulse data 1 (UP) (B)	2 bytes
e)	LED pulse data 1 (DOWN) (B)	2 bytes
f)	LED pulse data 1 (UP) (R)	2 bytes
g)	LED pulse data 1 (DOWN) (R)	2 bytes
h)	REFH data	1 byte
i)	Background color compensation data	1 byte
j)	Black level data	Based on previous scanning pixel count
k)	White level data (G)	Based on previous scanning pixel count
1)	White level data (B)	Based on previous scanning pixel count
m)	White level data (R)	Based on previous scanning pixel count



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Scanning Lock (Function code 06)

Function

This function is used to disable the scanning operation until the power is turned OFF and then ON again.

5

Operating Procedure

1. Press the [0] and [6] buttons in this order in the initial state of the maintenance mode. "SCAN LOCKED" appears on the LCD, and scanning operation is disabled.

ADF Performance Test (Function code 08)

Function

This function is used to test the performance of the automatic document feeder (ADF). The machine counts the documents fed by the ADF and displays the result on the LCD.

Operating Procedure

- Load the documents. (Do not exceed the paper capacity of the ADF.) "DOC.READY" appears on the LCD.
- 2. Press the [0] and [8] buttons in this order.
- 3. The documents are fed and ejected while the scanned pages are counted, displaying the number of pages on the LCD as shown below.

ADF CHECK P.01

Current count (1st page in this example)

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4. When the [Stop/Exit] button is pressed, the machine beeps for one second and returns to the initial state of the maintenance mode.

Test Pattern (Function code 09)

Function

This function is used to print various monochrome test patterns to check any missing image and print quality.

Operating Procedure

1. Press the [0] and [9] buttons in this order in the initial state of the maintenance mode.

2. Printing of the monochrome image quality test pattern (see the figure below) starts. When printing is completed, the machine beeps for one second and returns to the initial state of the maintenance mode.



Firmware Switch Setting (Function code 10)

The machine incorporates the following worker switch functions which may be activated with the procedures using the buttons on the control panel. The worker switches have been set at the factory in conformity to the codes of each country. Do not disturb them unless necessary.

Some of these switches are disabled according to the model and specifications.

Refer to page 179 "Firmware Switches (WSW)".

Operating Procedure

- Press the [1] and [0] buttons in this order in the initial state of the maintenance mode. "WSW00" appears on the LCD, indicating that the machine is ready to accept worker switch number entry.
- 2. Enter the desired number from the worker switch numbers (01 through 78). The following display appears on the LCD.

- 3. Enter a value to be set (0 or 1) using the [0] and [1] buttons.
- 4. Press the [OK] button. The new selector values are saved in the EEPROM, and the LCD returns to the ready state for worker switch number entry.
- 5. Repeat steps (2) through (4) until the modification for the desired worker switches is completed.
- 6. When the [Stop/Exit] button is pressed, the machine beeps for one second and returns to the initial state of the maintenance mode.

\rm Note

- To cancel the operation and return the machine to the initial state of the maintenance mode during the above procedure, press the [Stop/Exit] button.
- If there is a pause of more than one minute after a single-digit number is entered for double-digit worker switch numbers, the machine will automatically return to the initial state of the maintenance mode.

Printout of Firmware Switch Data (Function code 11)

Function

This function is used to print the setting items of the worker switches and the set contents.

Operating Procedure

1. Press the [1] button twice in the initial state of the maintenance mode. "PRINTING" appears on the LCD.

2. Printing of CONFIGURATION LIST (see the figure below) starts. When printing is completed, the machine beeps for one second and returns to the initial state of the maintenance mode.


Operational Check of LCD (Function code 12)

Function

This function is used to check that the LCD on the control panel works normally.

Operating Procedure

- 1. Press the [1] and [2] buttons in this order in the initial state of the maintenance mode. The LCD appears as in <Display 1> in the table below.
- 2. Each press of the [Start] button cycles through the displays as shown below.

3. When the [Stop/Exit] button is pressed regardless of the display, the operation is canceled, and the machine beeps for one second and returns to the initial state of the maintenance mode.

Display 1



Display 2

Backlight : Not lit



Display 3

Backlight : Not lit

Display 4

Backlight : Lit



Display 5



Display 6

Backlight : Lit

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Operational Check of Control Panel Buttons (Function code 13)

Function

This function is used to check that the buttons on the control panel are operating normally.

Operating Procedure

- 1. Press the [1] and [3] buttons in this order in the initial state of the maintenance mode. "00" appears on the LCD.
- 2. Press the buttons in the order designated in the illustration shown below. The LCD shows the corresponding number in decimal notation each time a button is pressed. Check that the displayed number is correct by referring to the illustration below. When the buttons are pressed in an incorrect order, a warning beep goes off and "INVALID OPERATE" appears on the LCD at the same time. Press the [Stop/Exit] button, and then press the correct buttons.

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3. When button operation is normal, the machine beeps for one second and returns to the initial state of maintenance mode when the last button is pressed.

Note

• When the [Stop/Exit] button is pressed during button operation, the machine beeps for one second and returns to the initial state of the maintenance mode.

Software Version Check (Function code 25)

Function

This function is used to check the management information of the software programs such as version information and check sum.

Operating Procedure

- 1. Press the [2] and [5] buttons in this order in the initial state of the maintenance mode. The machine displays each of items described below on the LCD.
- 2. Press the [▲] or [▼] button to change the display item.
- When the [Stop/Exit] button is pressed regardless of the display, the operation is canceled, and the machine beeps for one second and returns to the initial state of the maintenance mode.

LCD	Description
TOTAL: Ver T * 1	Main firmware version information (T): Revision information
ENG: Ver1.00	Engine firmware version information
B09014151027: AF57 *1	Boot program creation date
U09040911553: A668 *1	Main firmware creation date
D:	Not used.
ROM Check Sum	Check sum self-diagnosis function *2

- *1 How to display the check sum information Press the [OK] button when each version is displayed on the LCD to display the check sum information. Press the [OK] button again to go back to the version information display. Press the [▲] or [▼] button to change the display item.
- *2 There are two types of check sum information which can be checked with this function. This function checks if these two types of check sum information match each other. When you press the [OK] button while "ROM Check Sum" is displayed, check is automatically conducted for each ROM of each software part. When the check sum matches, "OK" is displayed on the LCD. When all ROMs result in OK, "ROM Check Sum OK" is displayed at the end, and the operation is finished. When the check sum of any ROM does not match, "NG" is displayed, and the display stops.

Operational Check of Sensors (Function code 32)

Function

This function is used to check that the sensors are operating normally.

Operating Procedure

1. Press the [3] and [2] buttons in this order in the initial state of the maintenance mode.

2. Check mode is entered. The speaker emits 1,100 Hz and 400 Hz tones cyclically through the following volumes. To stop tones, press the [OK] button.



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"**RCNTRMRAPOCV25" appears on the LCD, and the sensor operating conditions defined in the table below are applied. When the [Start] button is pressed, the display changes to "DFDR****AC****". The table below shows the relationship between the LCD display, sensor names and detection status.

LCD	Sensor name	Sensor name displayed	displayed
RC	Back cover sensor	Cover closed	Cover open
NT	New toner sensor	ON	OFF
RM	Registration front sensor	No paper	Paper set
RA	Registration rear sensor	No paper	Paper set
PO	Eject sensor	No paper	Paper set
CV	Front cover sensor	Cover closed	Cover open
25 (last two digits)	Internal temperature thermistor	Measured value displayed	NG
DF	Document detection sensor	No paper	Paper set
DR	Document scanning position sensor	No paper	Paper set
AC	Control panel cover sensor Cover closed Co		Cover open

Vote

• "**" appears on the LCD if the parts are not installed or there is no item.

- Change the detection condition of each sensor and check that the display on the LCD changes depending on the sensor status.
 For instance, insert the paper through the document detection sensor or the registration front / registration rear sensor, open the front cover or the back cover, etc.
- 4. When the [Stop/Exit] button is pressed, the machine beeps for one second and returns to the initial state of the maintenance mode.

Location of sensors



h560e2124

- 1. Document detection / Document scanning position sensor
- 2. Registration rear actuator
- 3. Registration front actuator
- 4. Front cover sensor
- 5. Front cover actuator
- 6. Registration front / Registration rear sensor
- 7. New toner actuator
- 8. New toner sensor
- 9. Internal temperature thermistor
- 10. Back cover sensor
- 11. Eject sensor
- 12. Paper eject actuator
- 13. Control panel cover sensor
- 14. Document detection actuator
- 15. Document scanning position actuator

PC Print Function (Function code 43)

Function

This function is used to change the settings of the various print functions summarized in the table below.

Operating Procedure

- Press the [4] and [3] buttons in this order in the initial state of the maintenance mode. "Manual Feed" appears on the LCD.
- Press the [▲] or [▼] button to select the function you want to change the setting and press the [OK] button.
- 3. When you select a fixed (On/Off) parameter, press the [▲] or [▼] button to change the parameter setting, and press the [OK] button. When you select a parameter requiring numerical value entry, use the keypad to enter a numerical value, and press the [OK] button.
- 4. When the [Stop/Exit] button is pressed, the machine beeps for one second and returns to the initial state of the maintenance mode.

Function setting

LCD	Description	Set value	Initial value
Manual Feed	Switching of the Manual Feed	On/Off	Off
Resolution	Resolution to print	300/600/1,200 dpi	600
Toner Save	Switching of the Toner Save	On/Off	Off
Density	Switching of the Density level	-6 to 6	0
JB-Can Time	Setting of the time until the host time-out at the Job Cancel	0 to 225 (seconds)	4
Sleep Time	Setting of the time until enter the Sleep Mode	0 to 99 (minutes)	5
Page Protection	Switching of the protection of the page memory	Off/Letter/A4/Legal/ Auto	Off
Emulation	Switching of the emulation	Auto/HP/PS	Auto
Auto I/F Time	Switching of the I/F open time	1 to 99 (seconds)	5
Media Type	Switching of the recording paper type	Thin/Plain/Thick/ Thicker/ Transparency/ Recycled/Bond/ Envelopes/EnvThin/ EnvThick	Plain or Thin
Paper Size	Switching of the area of develop the image	Letter/Legal/A4/ Executive/B5/ JISB5/A5/B6/A6/ Monarch/C5/ COM10/DL/DLL/ A4Long/PostCard/ Folio	Letter or A4
Copies	Switching of the print copies	1 to 99 (pages)	1
Orientation	Switching of the print direction	Portrait/Landscape	Portrait
P-Pos X-Offset	Switching of the offset print position of the landscape orientation	-500 to 500 (1/300 dpi)	0

LCD	Description	Set value	Initial value
P-Pos Y-Offset	Switching of the offset print position of the portrait orientation	-500 to 500 (1/300 dpi)	0
AutoFF	Switching of the auto form feed	On/Off	Off
AutoFF Time	Switching of the time-out period of the auto form feed	1 to 99 (seconds)	5
FF Suppress	Switching of the FF Suppress	On/Off	Off
Auto LF	Switching of the auto LF	On/Off	Off
Auto CR	Switching of the auto CR	On/Off	Off
Auto WRAP	Switching of the auto CRLF at the print width	On/Off	Off
Auto Skip	Switching of the Skip at the backend/tip of the paper	On/Off	On
Left Margin	Switching of the margin at the left end	0 to 145 (columns)	0
Right Margin	Switching of the margin at the right end	10 to 155 (columns)	80
Top Margin	Switching of the margin at the upper end	0 to 2.00 (inches)	0.5
Bottom Margin	Switching of the margin at the bottom end	0 to 2.00 (inches)	0.5
Lines	Number of the text lines in the page	5 to 128 (lines)	60
Error Print	Switching of the ErrorPrint of the PostScript	On/Off	On

Detail description

LCD	Detail description
Manual Feed	Effective for the print from the computer, or for the print of the NetWorkConfig/ TestPrint/Fontlist/Configuration from the panel. When the tray is selected on the computer, the setting becomes effective. And this setting is ignored.
Resolution	Effective only for the print from the computer. When the Resolution is set on the computer, the setting becomes effective. And this setting is ignored.

LCD	Detail description	
Toner Save	Effective for all print, and change the setting of the Function Menu. However, as for the Copy, this setting becomes invalid. When the TonerSave is set on the computer, the setting becomes effective. And this setting is ignored.	
Density	Effective for the print from the computer, or for the print of the NetWorkConfig/ TestPrint/FontList/Configuration from the panel. Link the setting of the TonerSave. Judge the both setting, and decide the density. When the Density is set on the computer, the setting becomes effective. And this setting is ignored.	
JB-Can Time	Configure the setting for until the host time-out at the Job Cancel. The setting value is the second time scale.	
Sleep Time	Configure the setting for the time until shift to the Sleep Time. Change the setting of the Function Menu.	
Page Protection	Configure the setting to protect the page memory, when recording in computer. Set in the PCL-Core. There is not the influence of the memory management problem of the MFC.	
Emulation	Configure the setting for the Emulation. Change the setting of the Function Menu. When the data include the ENTER LANGUAGE, the setting becomes effective. And this setting is ignored.	
Auto I/F Time	Configure the setting for the interface open time. The function is in the PC-Print. When the PC-Scan/Remote-SetUp works on the way, the setting becomes invalid.	
Media Type	Effective for the print from the computer. When the type of the recording paper is set on the computer, the setting becomes effective. And this setting is ignored. The default value is the Plain.	
Paper Size	Switching of the area of develop the image. Does not set the Paper Size of the Menu, set the drawing size of the PC-Print. When the size of the recording paper is set on the computer, the setting becomes effective. And this setting is ignored. The default value is the A4.	
Copies	Effective for the print from the computer. When the number of copies is set on the computer, the setting becomes effective. And this setting is ignored.	
Orientation	Configure the switching for the print direction. Effective for the print from the computer.	

LCD	Detail description
P-Pos X-Offset	Configure the setting for the offset print position of the landscape orientation. Effective for the print from the computer. When the X-Offset is set on the computer, the setting becomes effective. And this setting is ignored.
P-Pos Y-Offset	Configure the setting for the offset print position of the portrait orientation. Effective for the print from the computer. When the Y-Offset is set on the computer, the setting becomes effective. And this setting is ignored.
AutoFF	Configure the setting for the ON/OFF of the Auto Form Feed. Effective for the print from the computer.
AutoFF Time	Configure the setting for the Time Out, when the Auto Form Feed is ON.
FF Suppress	Configure the setting for the skip of the blank page. Effective for the print from the computer. The blank data in the Copy/Fax cannot be turned ON/OFF in this setting.
Auto LF	Configure the setting for the auto line feed.
Auto CR	Configure the setting for the auto Carriage Return.
Auto WRAP	Configure the setting for the auto CRLF at the print width.
Auto Skip	Configure the setting for the skip at the back-end/tip of the recording paper and add the blank space.
Left Margin	Configure the setting for the column space at the left end.
Right Margin	Configure the setting for the column space at the right end.
Top Margin	Configure the setting for the space at the upper end.
Bottom Margin	Configure the setting for the space at the bottom end.
Lines	Configure the setting for the number of the lines in the PCL.
Error Print	Configure the setting for the Error Print of the BR-Script 3.

Changing Return Value of USB No. (Function code 45)

Function

When the operating system (OS) installed on the computer is Windows Vista®, and the machine is connected to this computer using USB 2.0 FULL, the OS may fail to obtain the serial number of the USB

device depending on the computer and USB device. If the serial number cannot be obtained, the return value may continue to increase every time the device is connected to the computer. To avoid this problem, this function is used to fix the return value of the serial number to "0".

LCD	Detail description	
USBNo. =ON	Returns the serial number of the machine. (Default)	
USBNo. =OFF	Returns "O".	

Operating Procedure

- Press the [4] and [5] buttons in this order in the initial state of the maintenance mode. "USBNo." appears on the LCD.
- 2. Press the [OK] button. "USBNo. =ON*" appears on the LCD.
- Press the [▲] or [▼] button to select "USBNo. =ON" or "USBNo. =OFF", and then press the [OK] or [Start] button. The machine returns to the initial state of the maintenance mode.
- 4. Turn OFF the power switch of the machine.

Vote

• The setting is applied after the power of the machine is turned OFF and then ON again.

Received Data Transfer Function (Function code 53)

Function

This function is used to transfer the received FAX data to another machine. It is useful when the machine cannot print the received data due to an error current in the printing mechanism. The maintenance information of the machine can also be faxed.

• Note

- The number of files that can be transferred in one operation is up to 99. When there are 100 or more files, the operation procedure below must be performed several times to transfer all files.
- If there are both color and monochrome data in a FAX file to be transferred, the monochrome data
 will be transferred first. If the receiver machine does not support the color function, the sender
 machine cannot transfer color data, resulting in an error.

Operating Procedure

- Press the [5] and [3] buttons in this order in the initial state of the maintenance mode.
 "FAX TRANSFER" appears on the LCD.
 - To check the number of received files, press the [1] button. "1.NO. OF JOBS" appears on the LCD. Press the [OK] button, and the number of received files appears, for example, "NO. OF. JOBS: 10".
 - To transfer only the activity report, press the [2] button. "2.ACTIVITY" appears on the LCD.
 - To transfer the received files (together with the activity report), press the [3] button.
 "3.DOCUMENTS" appears on the LCD. If there are no received files, the "NO DOCUMENTS" appears.
 - To transfer the communication list for the latest communication, press the [4] button. "4.COM.LIST (NEW)" appears on the LCD.
 - To transfer the communication list for the last three errors, press the [5] button. "5.COM.LIST (ERR3)" appears on the LCD.
 - Press the [6] button to transfer the maintenance information (list printed by function code 77).
 "6.MNT77LIST" appears on the LCD.
- While the "2.ACTIVITY", "3.DOCUMENTS", "4.COM.LIST (NEW)", "5.COM.LIST (ERR3)", or "6.MNT77LIST" is displayed, press the [OK] button. The "ENTER NO&SET" appears on the LCD.
- 3. Enter the telephone number of the receiver machine, and press the [OK] button again.
- 4. The machine displays "ACCEPTED" for approximately two seconds and starts dialing to transfer the data.

Note

- Be sure to type the telephone number with the numerical buttons. One-touch dialing is not allowed in this procedure.
- No station ID will be attached to the data to be transferred. Instead, a cover page and end page as shown on the next page will be automatically attached.

Cover page sample



5



- 1. Job number to identify the transmission
- 2. Total number of pages to be transferred
- 3. Station ID registered in the sender machine
- 4. Fax number of the sender machine
- 5. Telephone number of the sender machine
- 6. Transfer date and time
- 7. Model code
- 8. Boot ROM information
- 9. ROM information
- 10. Serial number

End page sample



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- 1. Job number to identify the transmission
- 2. Total number of pages to be transferred
- 3. Station ID registered in the sender machine
- 4. Fax number of the sender machine
- 5. Telephone number of the sender machine
- 6. Error codes

Fine Adjustment of Scan Start/End Positions (Function code 54)

Function

This function is used to adjust the scan start/end positions on the ADF.

Operating Procedure

- 1. Press the [5] and [4] buttons in this order in the initial state of the maintenance mode. "SCAN START ADJ." appears on the LCD.
- After two seconds, "SUB" appears. Press the [OK] button. The present setting is displayed on the LCD. ("0" is the default.)

- Press the [▲] button to increase the value or the [▼] button to decrease the value to adjust the setting in the range of +50 and -50. When the [Stop/Exit] button is pressed, the machine beeps for one second and returns to the initial state of the maintenance mode without changing the setting.
- 4. When the desired value is set, press the [OK] button. "ACCEPTED" appears on the LCD.
- 5. When adjustment is completed, press the [Stop/Exit] button. The machine beeps for one second and returns to the initial state of the maintenance mode.

Acquisition of White Level Data/ Compensation of Scanning Width (Function code 55)

Function

This function is used to acquire the white level of the scanner unit and save it in the EEPROM of the main PCB.

Vote

After Deep Sleep mode is released, execute this function code. If the correct white level data is not
yet acquired, install the latest firmware. If installing the firmware is not possible, open and close the
front cover, and then retry acquisition after the main motor has stopped.

Operating Procedure

- 1. Press the [5] button twice in the initial state of the maintenance mode.
- "Press START" appears on the LCD. Press the [Start] button. "SCANNER AREA SET" appears on the LCD.
- After a few seconds, the machine saves the compensation value for the white level data/ scanning width in the EEPROM, beeps for one second, and returns to the initial state of the maintenance mode.

Automatic Scanning Position Adjustment (Function code 57)

Function

This function is used to automatically adjust the scanning start position.

Operating Procedure

- 1. Connect the computer to the machine in the initial state of the maintenance mode.
- 2. Double-click the "FILEDG32.EXE" file to start it. Select "Maintenance USB Printer".
- Drag and drop the "XXXX.prn" file onto the "Maintenance USB Printer" icon. Document data is printed.
- 4. Cut the printed document data along the cutoff line to the A5 size.
- After cutting, set this in the document tray and adjust the document guide to the document width.

Vote

- Fit the document guide to the document completely. Otherwise, the scanning start position cannot be adjusted correctly.
- 6. Press the [5] and [7] buttons in this order. "******** appears on the LCD.
- 7. Press the [Start] button. The scanning start position is automatically adjusted.
- 8. When adjustment is completed, "*******" appears on the LCD. Press the [Stop/Exit] button, and the machine returns to the initial state of the maintenance mode.

Continuous Print Test (Function code 67)

Function

This function is used to conduct paper feed and eject tests while printing patterns.

Operating Procedure

- Press the [6] and [7] buttons in this order in the initial state of the maintenance mode. "PAPER FEED TEST" appears on the LCD, and continuous printing starts using a grid pattern.
- 2. When the [Stop/Exit] button is pressed, the operation is canceled, and the machine returns to the initial state of the maintenance mode.

Vote

- Test printing continues until there is no paper in the tray. When the correct operation is confirmed, press the [Stop/Exit] button to stop printing. (Printing is resumed when paper is loaded in the tray.)
- In the event that an error occurs during test printing, continuous printing is suspended. (If you do not
 press the [Stop/Exit] button, printing is resumed when the error is cleared.)
- To clear the error, remove the error factors, and then press the [Start] button.

Setting by Country (Function code 74)

Function

This function is used to customize the machine according to language, function settings, and worker switch settings.

Note

• Be sure to perform this procedure after replacing the main PCB ASSY or rewriting the firmware.

Operating Procedure

- 1. Press the [7] and [4] buttons in this order in the initial state of the maintenance mode. The country code currently set is displayed on the LCD.
- 2. Enter the country code you want to set. This country code is displayed on the LCD.

Note

- The machine does not work normally when an incorrect country code is entered.
- Press the [Start] button. The new setting is saved and "PARAMETER INIT" is displayed on the LCD. The machine beeps for one second and returns to the initial state of the maintenance mode.

\rm Note

• When the [Stop/Exit] button is pressed during the above procedure or when no button is pressed for one minute, the operation is canceled, and the machine beeps for one second and returns to the initial state of the maintenance mode. In this case, the modified setting data is not saved.

Country code

Country code: 2054

Printout of Maintenance Information (Function code 77)

Function

This function is used to print the log information.

Operating Procedure

- 1. Press the [7] button twice in the initial state of the maintenance mode.
- 2. The machine prints a list of log information. When printing is completed, the machine returns to the initial state of the maintenance mode. The example of the log information is shown below.

Maintenance information

< <mathienancess< th=""><th></th><th></th><th></th><th></th></mathienancess<>				
(1) FAX-1195L	②Date	2013/08/	22	
义 8X5-E03	(4	2047528	600	
	. (8)	D1112271	322	
(9) U1304021730	10 VER.A	2DE 3		
U RTC	OK	OK 14:5	6 15:13	
12 WHAL	Ø2A3	E71357G3	J446814	
(13) 55		OK		
14 MEMORY VERSION		a		
13 RAM SIZE		16M		
16 FUNC CHECKER		OK		
1 HV CHECKER		OK		
18 C019008100015001		00000150		
041000002020000	0000000	00000150	•	
00000088 00007020	00000CAU	0000706	8	
	00000000	0000000	0	
A TONER CAPTRIDGE		76%		
(19 TUNER CARTRIDGE		10%	100%	
AVERAGE COVERAGE		0011920	100%	
A TOTAL		10 06%		
62 CUPPENT		10.00%		
TOTAL PAGES PRINTE	ъ	0000070		
2 COPV PAGE COUNT	<i></i>	00000011		
29 PRINT PAGE COUNT		0000011		
COLIST/FAX PAGE COL	NT	0000019		
20 TOTAL PAGES PICKUP		0000015		
T1/MN/DX		8000069/9	09999991/099999	10
A4+LTR/LGL+FDL		0000063/	0000000	
B5+EXE/ENVELOPE		0000000/	0000000	
A5/OTHER		0000000/	0000007	
PLN+THI+REC		0000063		
THK+TKR+BND/ENVLP		0000000/	0000000	
_ LABEL/HAGAKI		0000000/1	0000007	
20 TOTAL PAPER JAMS		000002		
29 T1/INSIDE/REAR/DX		00000/00	002/00000/0000	30
TONER CARTRIDGE				
WREPLACE COUNT		000		
3 REPLACE DATE		00/00/00		
32 PAGE COUNT1		0000070		
3 PAGE GUUNIZ		0000000		
A DEDIACE COUNT		000		
BADERIACE DATE		000		
BARACE COUNT		00700700		
A ROUND COUNT		00000000		
	COUNT	0000000055		
39 DEVELOPING BIAS	000111	419V		
MAC FREDR 1/2		44:130823	21503:0000068/	/88:1308221
3/4		44:130823	21050:0000064/	88:1308121
5/6		44:130101	10003:00000000/	/00:0401010
7/8		00.04010	0000:0000000	/00:0401010
9/10		00:04010	10000:00000000	/00:0401010
(1) ADF PAGE COUNT		0000016		
42 ADF JAM COUNT		000000		
(43) COM ERROR 1		20010000:	1308121204	
2		11050000:	1308121158	
3		00000000	0401010000	
49 HODN_ER:000 FUSR_E	R:000 MT	LK_ER:000	3	
49 POWER ON TIME		00000006		
46 POWER ON COUNT		00000015		L 500 - 0 107
(4) KO: 000000/018255	MN:00251	5/001105		n560e2127

Display information

- 1. Model name
- 2. The date of printing the maintenance list
- 3. Model code
- 4. Country code
- 5. Switch check sum (Factory management item)
- 6. Toner type *1
- 7. Boot firmware creation date
- 8. Demo firmware creation date
- 9. Main firmware creation date
- 10. Main firmware version / Main ROM check sum
- 11. Result of RTC*2 backup / Time before backup / Time after backup
- 12. WHQL / USB product ID / Serial number of machine
- 13. Result of function code 55
- 14. Memory version
- 15. RAM size
- 16. Result of function check
- 17. Result of high-voltage PCB check
- 18. Not necessary for maintenance (Factory management item)
- 19. Estimated remaining toner amount
- 20. Count value and remaining ratio of drum unit
- 21. Accumulated average coverage
- 22. Average coverage by the toner cartridge which is currently used
- 23. Total printed pages
- 24. Total copied pages

- 25. Total printed PC pages
- 26. Total printed list/fax pages
- 27. Total fed pages per paper size/type
- 28. Total number of paper jams
- 29. Paper jams that have occurred in each section in the machine
- 30. The number of times that toner cartridges have been replaced
- 31. The latest date of toner cartridge replacement
- 32. Printed pages of currently set toner cartridge
- 33. Printed pages of previously set toner cartridge
- 34. The number of times that drum units have been replaced
- 35. The latest date of drum unit replacement
- 36. Printed pages by the drum unit which is currently used
- 37. Rotations of the drum
- 38. Rotations of the developer roller
- 39. Developing bias voltage value
- 40. Machine error log (The last 10 errors)
- 41. Pages of ADF scanning
- 42. Document jams that have occurred in ADF
- 43. Communication error log
- 44. The number of times that discharge error / fuser unit error / ** error occurred
- 45. Total power distribution time
- 46. The number of times that the power is turned ON
- 47. Not necessary for maintenance (Factory management item)
- * 1 00 : Starter toner 02 : Standard toner
- *2 RTC: Real Time Clock

Operational Check of Fan (Function code 78)

Function

This function is used to check that the fan is operating normally.

Operating Procedure

- Press the [7] and [8] buttons in this order in the initial state of the maintenance mode. "FAN: 100%" is displayed on the LCD.
- 2. Pressing the [Start] button changes the display according to the sequence shown below. Check the fan operation.
- 3. When the [Stop/Exit] button is pressed, the operation is canceled, and the machine beeps for one second and returns to the initial state of the maintenance mode.



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Location of fans



Display of Machine Log History (Function code 80)

Function

This function is used to view the machine's history (log). The display items are shown in the table below.

	LCD	Description
Serial * 1	USB:	Serial number
PCB Serial	PCB:	Main PCB serial number
Drum related items	DRUM:	Number of drum rotations
	DRUM_PG:	Number of printed pages per drum
	DRUM_CH: *2	Number of times the drum unit has been replaced/ Date of last replacement

	LCD	Description
Toner related items	KTN_PG1:	Printed pages with the current toner cartridge
	KTN_PG2:	Printed pages with the previous toner cartridge
	KTNR_CH: *2	Number of times the toner has been replaced/ Date of last replacement
	KTNR_RND:	Toner developer roller count
Average print rate	KCVRGUSI:	Average black coverage% (Toner in use)
related items *3	KCVRGACC:	Average black coverage% (Accumulated)
Print pages related	TTL_PG:	Total printed pages
items	TTLCOPY:	Copied pages
	TTLPCPT:	Pages printed via PC
	TTLFAX:	Printed lists and faxed pages
Picked-up pages by tray	TR1_PG:	Pages fed from paper tray 1
	MN_PG:	Pages fed from the manual feed slot
	DX_PG:	Not used.
Picked-up pages by	A4+LTR:	Pages of A4 or Letter size paper that have been fed
paper size	LG+FOL:	Pages of Legal or Folio size paper that have been fed
	B5+EXE:	Pages of B5 or Executive size paper that have been fed
	ENVLOP:	Envelops that have been fed
	A5:	Pages of A5 size paper (including A5R) that have been fed
	OTHER:	Pages of other size paper (including JIS B6) that have been fed

	LCD	Description
Print pages by paper types *4	PLTNRE:	Printed pages of plain, thin, and recycled paper
	TKTRBD:	Printed pages of thick, ultra-thick and bond paper
	ENVTYP:	Printed pages of envelope, thick envelope, and thin envelope
	HAGAKI:	Printed post cards
	LABEL:	Printed labels
Number of scanned pages	ADSX_PG	Pages scanned in single-side scanning from ADF
Developing bias related time	KDEV_BIAS:	Black developing bias voltage (unit:V)
Power distribution time	POWER:	Total power distribution time (unit:H)
	PWRCNT:	Number of times that the power is turned ON
Jam related items	TTL_JAM	Total paper jams that have occurred
	TR1_JAM	Paper jams that have occurred in paper tray 1
	MN_JAM	Paper jams that have occurred in the manual feed slot
	DX_JAM	Not used.
	IN_JAM	Paper jams that have occurred in the machine
	RE_JAM	Paper jams that have occurred around the back cover
	ADSX_JAM	Paper jams that have occurred in single- side scanning from ADF
Number of error occurrences	HODN_ER:	Number of errors caused by dirt on the corona wire
	FUSR_ER:	Number of fuser unit errors
	MTLK_ER:	Number of laser scanner motor lock errors
Error log related items	MACHINEERR_ ##:*5	Error history ## displayed for users:Error code/Page count when occurred
	COMERR##:	Last communication error code

- * 1 The serial number can be changed using the steps below.
- 1. While the serial number is displayed on the LCD, press the [9], [4], [7], and [5] buttons in this order. The first digit of the serial number flashes.
- Use the numeric keys to enter the first digit of the machine's serial number, and press the
 [▶] button to change the flashing digit. Repeat this operation until the eleven-digit serial
 number is entered.

Entry method of alphabetical characters

Press the corresponding numeric keys in the table below until the desired alphabetical character is displayed.

Numeric key	Assigned characters
2	$2 \rightarrow A \rightarrow B \rightarrow C$
3	$3 \rightarrow D \rightarrow E \rightarrow F$
4	$4 \rightarrow G \rightarrow H \rightarrow I$
5	$5 \rightarrow J \rightarrow K \rightarrow L$
6	$6 \rightarrow M \rightarrow N \rightarrow O$
7	$7 \rightarrow P \rightarrow Q \rightarrow R \rightarrow S$
8	$8 \rightarrow 1 \rightarrow 0 \rightarrow h$
9	$9 \rightarrow W \rightarrow \chi \rightarrow \Lambda \rightarrow \Lambda$

- 3. When serial number entry is completed, press the [OK] button. The new setting is stored, and the machine returns to the initial state of the maintenance mode. To abort serial number entry, press the [Stop/Exit] button. Setting is canceled, and the machine returns to the initial state of the maintenance mode.
- *2 Press the [OK] button while the number of times the consumable part has been replaced is displayed, and the date the consumable part was replaced last is displayed. Press the [OK] button again, and the number of times the consumable part has been replaced is displayed again.
- *3 Average print rate = Print area / printable area
- *4 Paper type according to the printer driver settings. It does not necessarily match the type of paper actually fed.
- *5 01 to 10 are entered in ## in chronological order. When you press the [OK] button with the machine error history displayed, the page counter value when the error occurred is displayed.

Operating Procedure

1. Press the [8] and [0] buttons in this order in the initial state of the maintenance mode.

- 2. Pressing the [Start] or [♥] button displays the next item. Pressing the [▲] button displays the previous item.
- 3. When the [Stop/Exit] button is pressed, the operation is canceled, and the machine returns to the initial state of the maintenance mode.

\rm Note

 Regarding "MACHINEERR" and "COMERR", when you press the [OK] button with the error history displayed, the page counter value when the error occurred is displayed. Press the [OK] button again to return the LCD to the error history display.

Error Code Indication (Function code 82)

5

This function is used to display the latest error code on the LCD.

Operating Procedure

- Press the [8] and [2] buttons in this order in the initial state of the maintenance mode. "MACHINE ERROR X X" is displayed on the LCD.
- 2. When the [Stop/Exit] button is pressed, the operation is canceled, and the machine returns to the initial state of the maintenance mode.

Sending Communication Error List (Function code 87)

Function

This function is used to send the error list to service personnel at a remote service station when a fax communication problem has occurred in the user's machine. Receiving the error list allows the service personnel to analyze the problem current in the user's machine.

Operating Procedure

Service side

1. The service personnel connects the phone line to the user in question.

User side

 Press the [Menu] and [Start] buttons in this order while the machine is in the ready state.

- 2. Press the [0] button to display "0" on the LCD.
- 3. Press the [8] and [7] buttons in this order. "SENDING P.01" is displayed on the LCD, and the error list is sent.
- 4. When sending the error list is completed, the machine beeps for one second and returns to the initial state of the maintenance mode.

Vote

• Error list sending operation does not start if the phone line is not connected. Be sure to perform the above operation while the phone line is connected (i.e., while making a call using the built-in H/S, using the additional telephone set, or using the line monitor).

Exit the Maintenance Mode (Function code 99)

Function

This function is used to exit the maintenance mode. If a fuser error is occurring, this is cleared.

Operating Procedure

1. Press the [9] button twice in the initial state of the maintenance mode. The machine exits the maintenance mode and returns to the ready state.

Vote

• When a fuser error was occurring, be sure to cool the halogen heater sufficiently before turning ON the power.

Other Service Functions

Developer Roller Counter Reset Function

This function allows you to manually perform the same operation as when the toner cartridge is replaced with a new one. The purpose of this function is to provide an error resetting method when the toner life display cannot be cleared because the new toner is not recognized by the machine.

- 1. Open the front cover.
- Press the [Clear] button.
 "Replace Drum? 1. Yes 2. No" appears on the LCD.
- Reset the counter as described below depending on the type of toner. Starter toner: Press the [*], [1] and [0] buttons in this order. Standard toner: Press the [*], [1] and [2] buttons in this order. When the type of toner is not clear: Press the [*], [0] and [0] buttons in this order. (Regarded as the same type as the toner previously set.) The entered numbers and "Accepted" appear on the LCD for two seconds.
- 4. After two seconds, "Cover is open" appears on the LCD.
- 5. Close the front cover.

🕗 Note 📃

• If there is no operation for 30 seconds or more, the machine automatically returns to step 1.

Parts Life Reset Function (Drum)

This function is used to reset the relevant part counter when the user replaced a periodical replacement part with the correct procedure, and also used to forcibly reset the relevant part counter when an error cannot be reset because the user did not replace a consumable part with the correct procedure.

- 1. Press the [3] and [9] buttons at the same time while the machine is in the ready state.
- 2. "Reset Menu Drum" appears on the LCD. Press the [OK] button.
- 3. "Drum 1.Reset 2.Exit" appears on the LCD. Press the [1] or [2] button.
- 4. When the [1] button is pressed, the counter is cleared.

• Note

- All replacement parts are always displayed on the LCD even though they have not yet reached the end of life.
- The machine returns to the ready state automatically if no panel operation is performed for 30 seconds.

Deletion of User Setting Information, etc.

In this machine, the user setting information is stored in the EEPROM and flash memory of the main PCB. You can delete all the data listed below at a time with the procedure given below.

- Information related to Net
- User setting information
- 1. Press the [Menu] button while the machine is in the ready state.
- 2. Press the [▲] or [▼] button to display "Initial Setup" on the LCD, and press the [OK] button.
- 3. Press the [▲] or [▼] button to display "Reset" on the LCD, and press the [OK] button.
- 4. Press the [▲] or [▼] button to display "All Settings" on the LCD, and press the [OK] button.
- 5. "1.Reset 2.Exit" appears on the LCD.
- 6. Press the [1] button, and "Reboot OK? 1.Yes 2.No" appears on the LCD.
- Press the [1] button, and "Accepted" appears on the LCD. The user setting information is deleted, and the machine returns to the ready state.

🕗 Note 📃

• The machine returns to the ready state automatically if no panel operation is performed for 30 seconds.

Continue Mode / Stop Mode Settings of Toner Cartridge

You can set the machine to Continue Mode after "Replace Toner" is displayed on the LCD. The machine will continue printing until "Toner Ended" is displayed on the LCD. "Stop" is the default setting.

- 1. Press the [Menu] button while the machine is in the ready state.
- Press the [▲] or [▼] button to display "General Setup" on the LCD, and press the [OK] button.
- Press the [▲] or [▼] button to display "Replace Toner" on the LCD, and press the [OK] button.
- 4. "Continue" or "Stop" appears on the LCD. (The mode currently set is displayed.)
- 5. Press the [▲] or [▼] button to select "Continue" or "Stop".
- 6. Press the [OK] button.
- 7. Press the [Stop/Exit] button, and the machine returns to the ready state.

🕓 Note

- Printing is not guaranteed when Continue Mode is set.
- The machine returns to the default setting when the toner cartridge is replaced.

Drum Cleaning

Drum cleaning function overview

Insert the plain paper into the manual feed slot to perform drum cleaning.

- 1. Open the back cover while the machine is in the ready state.
- Press the [Clear] and [Menu] buttons at the same time. "Drum Cleaning" appears on the LCD.
- 3. Insert the paper into the manual feed slot.
- 4. Drum cleaning is performed with "Please Wait" displayed on the LCD.
- 5. The paper is ejected from the back cover, and drum cleaning is completed.
- 6. Close the back cover, and the machine returns back to the ready state.

Vote

 When the paper is jammed during drum cleaning, drum cleaning mode is canceled automatically and the error is displayed.

ON/OFF Setting of Deep Sleep Function

In addition to the sleep function with the normal specifications, the Deep Sleep function is prepared to reduce the power consumption.

The Deep Sleep function is used to stop the operation of the following functions whereas they are available in the normal sleep mode.

- Operation of the wireless LAN
- Operation of all fans

Transition conditions

The machine enters the Deep Sleep mode when the user has not operated the machine (from a computer) and no warning such as an error has been issued after it entered the normal sleep mode and all fans stopped. When Secure Print exists, the machine does not enter the Deep Sleep mode.

How to Exit

The machine exits the Deep Sleep mode when it receives an input from the external device, for instance when print data is sent from a computer, any button on the control panel is operated, or the front cover is opened or closed.

Setting of ON/OFF of the Deep Sleep function

You can set ON/OFF of the Deep Sleep function to avoid the machine from entering the Deep Sleep mode even when the aforementioned conditions are satisfied.

- 1. Press the [Menu] button while the machine is in the ready state.
- Press the [▲] or [▼] button to display "General Setup" on the LCD, and press the [OK] button.
- Press the [▲] or [▼] button to display "Ecology" on the LCD, and press the [OK] button.
- 4. Press the [▲] or [▼] button to display "Sleep Time" on the LCD, and press the [OK] button.
- 5. Press the [Start] and [▼] buttons at the same time while "Sleep Time/ *Min" is displayed on the LCD. "Deep Sleep/On*" is displayed on the LCD.
- 6. Press the [▲] or [▼] button to change Deep Sleep function between On and Off to display the status you want to set, and press the [OK] button.
- 7. The LCD returns to "Sleep Time/ *Min".

Note

- When no operation is performed for 30 seconds during setting change, the machine returns to the ready state.
- Deep Sleep is default set to On.
- In the procedure (5), the present setting (On or Off) of Deep Sleep is displayed on the LCD.
- "*" is displayed on the right side of the present setting (On or Off) of Deep Sleep.

Communication List

This function is used to print the communication list.

1. Press the [Menu] and [#], [1], [0], [4], [1], [4] buttons in this order while the machine is in the ready state.

The machine prints a last communication list. The example of the communication list is shown below.

2. Thereafter, the machine prints a communication list each time the FAX transmits or receives. To stop printing a list, turn OFF the power switch, and turn it ON again.

Communication list

XXX COMMUNICATION LIST XXX	1 ERROR CODE : 00 MODEL : 8X5-E03 TIME : 08/22/20 REV. : U1304021 PGI : 5,80 SUM : 2DE3 SER.# : E7135763	00 00 00 13 15:58 730VER.A 8J445816		
TIME TRIGGER SETTINGS TX/RX SPEED MODE	: 08/12/2013 13:09 : AUTO : RCV MODE[AUTO], EASY RCV[OFF], REMOTE ACT[OFF], RTNG[4], F/T[30], CALLER-ID[OFF], CALLWAIT[OFF], DIAL[PB], COMPATIBLE[NORMAL], LINE[NORMAL] : TX : V,17 14400 BPS 0 MSEC/LINE : MMR ECM STANDARD			
FIF RX NSF RX CSI RX DIS TX TSI TX NSS TX DCN TX PPS COMMAND RECORD TX RX RX	00 00 55 55 00 00 90 90 90 90 90 90 90 90 90 20 <td< td=""><td>18 28 18 28 19 PPS MCF</td></td<>	18 28 18 28 19 PPS MCF		

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1. Communication error code

Firmware Installation

What you need to prepare

- 1. One USB cable
- 2. Create a temporary folder on the C drive of the computer (Windows® XP/2000 or higher).
- 3. Service setting tool (BrUsbn.zip) Copy it into the temporary folder created on the C drive. Extract the copied file and double-click the "BrUsbsn.exe" file to start it.
- 4. Download utility (FILEDG32.EXE) Copy it into the temporary folder created on the C drive.
- 5. Maintenance USB printer driver (Maintenance_Driver.zip) Copy it into the temporary folder created on the C drive. Extract the copied file.
- 6. Firmware

Main firmware	LZXXXX_\$.upd *			
(E.g.) LZXXXX: First six digits of the part number of the firmware				
\$: Alphabetic character representing the revision version of the firmware				

- * upd: Used to rewrite the firmware via a computer.
- 7. Installing the maintenance driver.

Rewriting the firmware

Checking firmware version

Check if the firmware written on the main PCB is the latest version or not. If it is the latest version, there is no need to rewrite the firmware. If it is not, make sure to rewrite the firmware to the main PCB in accordance with "Rewriting the firmware using computer" in this section.

<How to check firmware version>

Press the [*] and [#] buttons at the same time in the ready state. Then, the firmware version information is displayed on the LCD.

Rewriting the firmware using computer

Note

• DO NOT unplug the power cord of the machine or your computer or disconnect the USB cable while rewriting the program files.

<Procedures>

- 2. Connect the computer to the machine with the USB cable.
- 3. Double-click the "FILEDG32.EXE" file to start it. Select the "Maintenance USB Printer".
- 4. Drag and drop a program file that you want to rewrite (for instance, LZXXXX_\$.upd) onto the "Maintenance USB Printer" icon.

Note

- When rewriting firmware is completed, the machine returns to the ready state. To continue rewriting other program files, turn OFF the power switch of the machine. Then turn it ON again with the [5] button held down. Check that "■ ■ ■ ■ ■ appears on the LCD, and then start rewriting.
- 5. Upon completion of rewriting, the machine restarts and returns to the ready state automatically.
Firmware Switches (WSW)

This describes the functions of the Worker switches, which can be divided into two groups: one is for customizing preferences designed for the shipping destination and the other is for modifying preferences that match the machine to the environmental conditions. Use the latter group if the machine malfunctions due to mismatching.

Each switch has eight selectors. However, some of them cannot be set by an end user. Only selectors in the worker switch setting tables that are shaded can be set by an end user.

The worker switch setting procedure is described in Service Manual.

Worker Switch List

WSW No.	Function
WSW01	Dial pulse setting
WSW02	Tone signal setting
WSW03	PABX mode setting
WSW04	Transfer facility setting
WSW05	1 st dial tone and busy tone detection
WSW06	[Redial/Pause] button setting and 2nd dial tone detection
WSW07	Dial tone setting 1
WSW08	Dial tone setting 2
WSW09	Protocol definition 1
WSW10	Protocol definition 2
WSW11	Busy tone setting
WSW12	Signal detection condition setting
WSW13	Modem setting
WSW14	AUTO ANS facility setting
WSW15	Redial facility setting
WSW16	Function setting 1

WSW No.	Function
WSW17	Function setting 2
WSW18	Function setting 3
WSW19	Transmission speed setting
WSW20	Overseas communications mode setting
WSW21	Erasure of message stored in the memory after the message transfer
WSW22	ECM and call waiting caller ID
WSW23	Communications setting
WSW24	TAD setting 2
WSW25	Not used.
WSW26	Function setting 4
WSW27	Function setting 5
WSW28	Function setting 6
WSW29	Function setting 7
WSW30	Not used.
WSW31	Function setting 9
WSW32	Function setting 10
WSW33	Function setting 11
WSW34	Function setting 12
WSW35	Not used.
WSW36	Function setting 14
WSW37	Function setting 15
WSW38	V.34 transmission settings
WSW39	V.34 transmission speed
WSW40	V.34 modem settings
WSW41	Modem attenuator

WSW No.	Function
WSW42	Internet mail settings
WSW43	Function setting 16
WSW44	Not used.
WSW45	Not used.
WSW46	Monitor of power ON/OFF state and parallel port kept at high
WSW47	Switching between high- and full-speed USB
WSW48	Not used.
WSW49	End-of-copying beep and print in black
WSW50	SDAA settings
WSW51	Function setting 17
WSW52	Not used.
WSW53	Function setting 19
WSW54	Function setting 20
WSW55	Interval of time required for the developing bias voltage correction
WSW56	Function setting 21
WSW57	Function setting 22
WSW58	Not used.
WSW59	Function setting 24
WSW60	Function setting 25
WSW61	Not used.
WSW62	Not used.
WSW63	Function setting 26
WSW64	Setting the language / Default paper size
WSW65	Setting the paper support
WSW66	Reserved (Change of the setting is prohibited)

WSW No.	Function
WSW67	Reserved (Change of the setting is prohibited)
WSW68	Reserved (Change of the setting is prohibited)
WSW69	Reserved (Change of the setting is prohibited)
WSW70	Reserved (Change of the setting is prohibited)
WSW71	Reserved (Change of the setting is prohibited)
WSW72	Reserved (Change of the setting is prohibited)
WSW73	Reserved (Change of the setting is prohibited)
WSW74	Not used.
WSW75	Not used.
WSW76	Not used.
WSW77	Not used.
WSW78	Not used.

The functions and settings for each worker switch (WSW) are described below;

WSW01 (Dial pulse setting)

Selector No.	Function	Setting and Specifications						
	Dial pulse generation mode	No.	1	2				
_			0	0	: N			
2			0	1	: N+1			
Z			1	0	: 10-N			
			1	1	: N			

Selector No.	Function	Setting and Specifications						
		No.	3	4				
			0	0	: 60 ms			
3	Break time length in pulse dialing		0	1	: 67 ms			
-			1	0	: 40 ms			
			1	1	: 64 ms (for 16 PPS)			
	Inter-digit pause	No.	5	6				
			0	0	: 800 ms			
5			0	1	: 850 ms			
6			1	0	: 950 ms (for 16 PPS)			
			1	1	: 600 ms (at 106-ms intervals)			
7	Switching between pulse and tone	0: Yes						
/	dialing, by the function switch	1: No						
8	Default dialing mode, pulse (DP)	O: PB						
0	or tone (PB) dialing	1: DP						

• Selectors 1 and 2: Dial pulse generation mode

These selectors set the number of pulses to be generated in pulse dialing.

N: Dialing "N" generates "N" pulses. (Dialing "0" generates 10 pulses.)

N + 1: Dialing "N" generates "N + 1" pulses.

10 - N: Dialing "N" generates "10 - N" pulses.

• Selectors 3 and 4: Break time length [A] in pulse dialing

These selectors set the break time length in pulse dialing.

(Example: If "1," "2," and "3" are dialed when N is set by selectors 1 and 2.)



• Selectors 5 and 6: Inter-digit pause [A]

These selectors set the inter-digit pause in pulse dialing.

(Example: If "1," "2," and "3" are dialed when N is set by selectors 1 and 2.)



• Selector 7: Switching between pulse and tone dialing, by the function switch

This selector determines whether or not the dialing mode can be switched between the pulse (DP) and tone (PB) dialing by using the function switch.

• Selector 8: Default dialing mode, pulse (DP) or tone (PB) dialing

This selector sets the default dialing mode (pulse dialing or tone dialing) which can be changed by the function switch. If the user switches it with the function switch when selector 7 is set to "0," the setting specified by this selector will also be switched automatically.

Selector No.	Function	Setting and Specifications						
	Tone signal transmission time length	No.	1	2				
_			0	0	: 70 ms			
2			0	1	: 80 ms			
L			1	0	: 90 ms			
			1	1	: 100 ms			

WSW02 (Tone signal setting)

Selector No.	Function	Setting and Specifications						
	Min. pause in tone dialing	No.	3	4				
_			0	0	: 70 ms			
3			0	1	: 80 ms			
			1	0	: 90 ms			
			1	1	: 140 ms			
5	Attenuator for pseudo ring backtone to the line (selectable in the range of 0-15 dB, in 1 dB increments)	0: 0 dB 1: 8 dB						
I 8		0: 0 dB 1: 4 dB						
		0: 0 dB 1: 2 dB						
		0: 0 dB 1: 1 dB						

 Selectors 1 through 4:Tone signal transmission time length [A] and Min. pause [B] in tone dialing These selectors set the tone signal transmission time length and minimum pause in tone dialing. (Example: If "1," "2," "3," "4," and "5" are dialed.)



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• Selectors 5 through 8: Attenuator for pseudo ring backtone to the line

These selectors are used to adjust the sound volume of a ring backtone in the F/T mode, an onhold sound, or a beep generated as a signal during remote control operation or at the start of ICM recording.

The larger the value specified by these selectors, the greater the attenuation.

WSW03 (PABX mode setting)

Selector No.	Function	Setting and Specifications						
1	CNG detection when sharing a modular wall socket with a telephone	O: A 1: B						
		No.	2	3	4			
			0	0	0	: 50 ms		
			0	0	1	: 210 ms		
2	Detection time length of PABX*		0	1	0	: 500 ms		
I	dial tone, required for starting dialing		0	1	1	: 800 ms		
4			1	0	0	: 900 ms		
			1	0	1	: 1.5 sec.		
			1	1	0	: 2.0 sec.		
			1	1	1	: 2.5 sec		
5	CNG detection when sharing a modular wall socket with a	0: A						
5	telephone	1: B						
		No.	6	7				
			0	0	: No detection (3.5 sec. wait)			
6 7	Dial tone detection in PABX*		0	1	: No detection (5 sec. wait)			
			1	0	: No detection (7 sec. wait)			
			1	1	: Dete	ection (Frequency only)		
8	Not used.							

* PABX: Private automatic branch exchange

Note

- Selectors 2 through 4, 6 and 7 are not applicable where no PABX is installed.
- Selectors 1 and 5: CNG detection when sharing a modular wall socket with a telephone

These selectors determine whether or not the machine detects a CNG signal when a line is connected to a telephone sharing a modular wall socket with the machine. Upon detection of CNG signals by the number of cycles specified by these selectors, the machine interprets CNG as an effective signal and then starts FAX reception.

Sele	Quele		
No. 1	No. 5	Cycle	
0 (A)	0 (A)	0.5 cycle	
0 (A)	1 (B)	1.0 cycle	
1 (A)	0 (A)	1.5 cycles	
1 (B)	1 (B)	2.0 cycles	

• Selectors 2 through 4:Detection time length of PABX dial tone, required for starting dialing

Upon detection of the PABX dial tone for the time length set by these selectors, the machine starts dialing. These selectors are effective only when both selectors 6 and 7 are set to "1" (Detection).

• Selectors 6 and 7: Dial tone detection in PABX*

These selectors activate or deactivate the dial tone detection function which detects a dial tone when a line is connected to the PABX.

Setting both of these selectors to "1" activates the dial tone detection function so that the machine starts dialing upon detection of a dial tone when a line is connected.

Other setting combinations deactivate the dial tone detection function so that the machine starts dialing after the specified WAIT (3.5, 5.0, or 7.0 sec.) without detection of a dial tone when a line is connected.

Selector No.	Function	Setting and Specifications
1	Not used.	
2 3	Not used.	
4	Not used.	

WSW04 (Transfer facility setting)

5. System Maintenace

Selector No.	Function	Setting and Specifications						
5	Length of time added to time designated by selectors 3 and 4 on the WSW 24 (time between CML ON and pseudo ring backtone return).	0: Not added 1: +4 seconds added						
		No.	6	7	8			
			0	0	0	: 80 ms		
			0	0	1	: 100 ms		
6			0	1	0	: 110 ms		
I	Break time length for flash function		0	1	1	: 120 ms		
8			1	0	0	: 200 ms		
			1	0	1	: 250 ms		
			1	1	0	: 500 ms		
			1	1	1	: 700 ms		

• Selector 5: Length of time added to time designated by selectors 3 and 4 on the WSW 24 (time between CML ON and pseudo ring backtone return).

This selector add the time between CML ON and pseudo ring backtone return.

• Selectors 6 and 8: Break time length for flash function

These selectors set the break time length. This setting is effective only when the flash function is selected for the **[Search/Speed Dial]** button by using the function switch.

Selector No.	Function	Setting and Specifications								
		No.	1	2	3					
			0	0	0	: 3.5 sec. wait				
			0	0	1	: 7.0 sec. wait				
1			0	1	0	: 10.5 sec. wait				
	l st dial tone detection		0	1	1	: 14.0 sec. wait				
3			1	0	0	: 17.5 sec. wait				
			1	0	1	: 21.0 sec. wait				
			1	1	0	: 24.5 sec. wait				
			1	1	1	: Detection (Without wait)				
Λ	Max. pause time allowable for			0: 2 sec.						
	remote ID code detection	1: 1 sec.								
		No.	5	6						
	Busy tone detection in auto-matic		0	0	: No	detection				
5			0	1	: Detection only after dialing					
			1	0	: No	detection				
			1	1	: Detection before and after dialing					
7	Busy tone detection in auto-matic receiving mode	0: Yes 1: No								
8	Not used.									

WSW05 (1st dial tone and busy tone detection)

• Selectors 1 through 3: 1st dial tone detection

These selectors activate or deactivate the 1st dial tone detection function which detects the 1st dial tone issued from the PSTN when a line is connected to the PSTN.

Setting all of these selectors to "1" activates the dial tone detection function so that the machine starts dialing upon detection of a dial tone when a line is connected. (However, in those countries which support no dial tone detection function, e.g., in the U.S.A., setting these selectors to "1" makes the machine start dialing after a WAIT of 3.5 seconds.) For the detecting conditions of the 1 st dial tone, refer to WSW07 and WSW08.

Other setting combinations deactivate the dial tone detection function so that the machine starts dialing after the specified WAIT (3.5, 7.0, 10.5, 14.0, 17.5, 21.0, or 24.5 seconds) without detection of a dial tone when a line is connected to the PSTN.

• Selector 4: Max. pause time allowable for remote ID code detection

This selector sets the maximum pause time allowable for detecting the second digit of a remote ID code after detection of the first digit in remote reception.

If selector 4 is set to "0" (2 seconds), for instance, only a remote ID code whose second digit is detected within 2 seconds after detection of the first digit will become effective so as to activate the remote function.

• Selectors 5 and 6: Busy tone detection in automatic sending mode

These selectors determine whether or not the machine automatically disconnects a line upon detection of a busy tone in automatic sending mode.

Setting selector 6 to "0" ignores a busy tone so that the machine does not disconnect the line. Setting selectors 5 and 6 to "0" and "1," respectively, makes the machine detect a busy tone only after dialing and disconnect the line.

Setting both of selectors 5 and 6 to "1" makes the machine detect a busy tone before and after dialing and then disconnect the line.

Selector 7: Busy tone detection in automatic receiving mode

This selector determines whether or not the machine automatically disconnects the line upon detection of a busy tone in automatic receiving mode.

Selector No.	Function	Setting and Specifications				
		No.	1	2	3	
			0	0	0	: No pause
			0	0	1	: 3.5 sec. wait
			0	1	0	: 7 sec. wait
			0	1	1	: 10.5 sec. wait
			1	0	0	: 2.8 sec. wait
1 I 3	[Redial/Pause] button setting and 2nd dial tone detection		1	0	1	: 2nd dial tone detection both in DP and push-button (PB) dialing system
			1	1	0	: 2nd dial tone detection only in pulse dialing (DP) system
			1	1	1	: 2nd dial tone detection both in DP and push-button (PB) dialing system
		No.	4	5	6	
			0	0	0	: 50 ms
			0	0	1	: 250 ms
4			0	1	0	: 500 ms
I	Detection of 2nd dial tone		0	1	1	: 620 ms
6			1	0	0	: 800 ms
			1	0	1	: 1.5 sec.
			1	1	0	: 2.0 sec.
			1	1	1	: 2.5 sec.

WSW06 ([Redial/Pause] button setting and 2nd dial tone detection)

5. System Maintenace

Selector No.	Function	Setting and Specifications
7	No. of 2nd dial tone detection cycles	0: 1 cycle 1: 2 cycles
8	Allowable instantaneous interrupt during reception of 2nd dial tone	0: 30 ms 1: 50 ms

• Selectors 1 through 3: [Redial/Pause] button setting and 2nd dial tone detection

Selectors		ors							
1	2	3							
0	0	0	No wait is inserted even if the [Redial/Pause] button is pressed.						
0	0	1	If you press the [Redial/Pause] button during dialing, the machine will insert wait						
0	1	0	as defined in the above table.						
0	1	1	specified wait multiplied by the number of depressions. It applies also in hook-up						
1	0	0	dialing.						
1	0	1	When these selectors are set to "1, 0, 1":						
1	1	0	Each time you press the [Redial/Pause] button in dialing, the machine will wait for the 2nd dial tone to be sent via the communications line regardless of pulse diali						
1	1	1	or tone dialing.						
			When these selectors are set to "1, 1, 0":						
			If you press the [Redial/Pause] button in pulse dialing, the machine will first wait for the 2nd dial tone to be sent via the communications line.						
			After that, pressing the [Redial/Pause] button will cause the machine to insert a WAIT of 3.5 seconds. In tone dialing, the machine will insert a WAIT of 3.5 seconds.						
			When these selectors are set to "1, 1, 1":						
			If you press the [Redial/Pause] button, the machine will first wait for the 2nd dial tone to be sent via the communications line regardless of pulse dialing or tone dialing. After that, pressing the [Redial/Pause] button will cause the machine to insert a wait of 3.5 seconds.						
			(In those countries where no dial tone detection function is supported, setting these selectors to "1, 0, 1," "1, 1, 0," or "1, 1, 1" inserts a wait of						
			3.5 seconds.)						

• Selectors 4 through 6: Detection of 2nd dial tone

Upon detection of the 2nd dial tone for the time length specified by these selectors, the machine starts dialing.

This setting is effective only when the 2nd dial tone detection function is activated by selectors 1 through 3 (Setting 101, 110, or 111).

This function does not apply in those countries where no dial tone detection function is supported.

• Selector 7: No. of 2nd dial tone detection cycles

This selector sets the number of dial tone detection cycles required for starting dialing.

• Selector 8: Allowable instantaneous interrupt during reception of 2nd dial tone

This selector sets the allowable instantaneous interrupt period that should be ignored during reception of the 2nd dial tone.

WSW07 (Dial tone setting 1)

Selector No.	Function	Setting and Specifications				
		No.	1	2		
	Dial tone frequency band control		0	0	: Narrows by 10 Hz	
2			0	1	: Initial value	
L			1	0	: Widens by 10 Hz	
			1	1	: Widens by 10 Hz	
3	Not used.					

Selector No.	Function	Setting and Specifications					
		No.	4	5	6		
	2nd dial tone detection level (Z = 600 Ω)		0	0	0	: -21 dBm	
			0	0	1	: -24 dBm	
4			0	1	0	: -27 dBm	
I			0	1	1	: -30 dBm	
6			1	0	0	: -33 dBm	
			1	0	1	: -36 dBm	
			1	1	0	: -39 dBm	
			1	1	1	: -42 dBm	
7	Allowable instantaneous interrupt during reception of 1st dial tone	0: 30 ms					
8	Not used.						

• Selectors 1 and 2: Dial tone frequency band control

These selectors set the frequency band for the 1st dial tone and busy tone (before dialing) to be detected. This setting is effective only when selectors 1 through 3 on WSW05 are set to "1,1,1."

• Selectors 4 through 6: 2nd dial tone detection level

These selectors set the detection level of the 2nd dial tone.

• Selector 7: Allowable instantaneous interrupt during reception of 1st dial tone

This selector sets the allowable instantaneous interrupt period that should be ignored during reception of the 1 st dial tone.

Selector No.	Function	Setting and Specifications					
		No.	1	2	3		
			0	0	0	: 50 ms	
			0	0	1	: 250 ms	
1			0	1	0	: 500 ms	
I	l st dial tone detection time		0	1	1	: 620 ms	
3	lengin		1	0	0	: 800 ms	
			1	0	1	: 1.5 sec.	
			1	1	0	: 2.0 sec.	
			1	1	1	: 2.5 sec.	
	Time-out length for 1st and 2nd dial tone detection	No.	4	5			
			0	0	: 10 sec.		
4			0	1	: 20 sec.		
			1	0	: 15 sec.		
			1	1	: 30	sec.	
		No.	6	7	8		
			0	0	0	: -21 dBm	
			0	0	1	: -24 dBm	
6			0	1	0	: -27 dBm	
I	Detection level of 1st dial tone and busy tone before dialing		0	1	1	: -30 dBm	
8			1	0	0	: -33 dBm	
			1	0	1	: -36 dBm	
			1	1	0	: -39 dBm	
			1	1	1	: -42 dBm	

WSW08 (Dial tone setting 2)

• Selectors 1 through 3: 1st dial tone detection time length

Upon detection of the 1 st dial tone for the time length set by these selectors, the machine starts dialing. This setting is effective only when selectors 1 through 3 on WSW05 are set to "1, 1, 1."

• Selectors 4 and 5: Time-out length for 1st and 2nd dial tone detection

These selectors set the time-out length for the 1 st and 2nd dial tone detection so that the machine waits dial tone input for the specified time length and disconnects itself from the line when no dial tone is inputted.

Selector No.	Function	Setting and Specifications					
1	Frame length selection	0: 256 octets 1: 64 octets					
2	Use of non-standard commands	0: All	owed	1: Prol	nibited		
		No.	3	4			
			0	0	: 4 times		
3	No. of retries		0	1	: 3 times		
-			1	0	: 2 times		
			1	1	: 1 times		
5	T5 timer	0: 300 sec. 1: 60 sec.					
6	T1 timer	0: 35 sec.					
		1:40) sec.				
		No.	7	8			
					: 55 sec. (in U.S.A., Canadian,		
7 	Timeout for response from the called station in automatic sending		0	0	Chile, Brazil and South Africa models)		
8	mode			1	: 140 sec.		
			1	0	: 90 sec.		
			1	1	: 35 sec.		

WSW09 (Protocol definition 1)

• Selector 1: Frame length selection

Usually a single frame consists of 256 octets (1 octet = 8 bits). For communications lines with higher bit error rate, however, set selector 1 to "1" so that the machine can divide a message into 64-octet frames.

Note

• The error correction mode (ECM) is a facsimile transmission manner in which the machine divides a message into frames for transmission so that if any data error occurs on the transmission line, the machine retransmits only those frames containing the error data.

• Selector 2: Use of non-standard commands

If this selector is set to "0," the machine can use non-standard commands (the machine's nativemode commands, e.g., NSF, NSC, and NSS) for communications. If it is set to "1," the machine will use standard commands only.

• Selectors 3 and 4: No. of retries

These selectors set the number of retries in each specified modem transmission speed.

• Selector 5: T5 timer

This selector sets the time length for the T5 timer.

• Selector 6: T1 timer

This selector sets the time length for the T1 timer.

• Selectors 7 and 8: Timeout for response from the called station in automatic sending mode

If the machine (calling station) receives no response (no G3 command) from the called terminal in automatic sending mode for the period specified by these selectors, it disconnects the line.

WSW10 (Protocol definition 2)

Selector No.	Function	Setting and Specifications
1	Not used.	
2	Time length from transmission of the last dial digit to CML ON	0: 100 ms 1: 50 ms
3	Time length from CML ON to CNG transmission	0: 2 sec. 1: 4 sec.
4	Time length from CML ON to CED transmission (except for facsimile- to-telephone switching)	0: 0.5 sec. 1: 2 sec.

Selector No.	Function			Setting and Specifications			
			No.	5	6		
-				0	0	: 1 time	
5	No. of training retries		0	1	: 2 times		
0				1	0	: 3 times	
			1	1	: 4 times		
7	Encoding system	MR	0: Allowed 1: Not allowed				
8	(Compression)	MMR	0: Allowed 1: Not allowed				

• Selector 2: Time length from transmission of the last dial digit to CML ON

This selector sets the time length from when the machine transmits the last dial digit until the CML relay comes on.

• Selector 3: Time length from CML ON to CNG transmission

This selector sets the time length until the machine transmits a CNG after it turns on the CML relay.

• Selector 4: Time length from CML ON to CED transmission

This selector sets the time length until the machine transmits a CED after it turns on the CML relay. This setting does not apply to switching between facsimile and telephone.

• Selectors 5 and 6: No. of training retries

These selectors set the number of training retries to be repeated before automatic fallback.

• Selectors 7 and 8: Encoding system (Compression)

This selector determines whether or not to allow the use of the MR/MMR coding system.

Selector No.	Function	Setting and Specifications				
		No.	1	2		
_			0	0	: Narrows by 10 Hz	
2	Busy tone frequency band control		0	1	: Initial value	
L			1	0	: Widens by 10 Hz	
			1	1	: Widens by 10 Hz	
3		1: 250-750/250-750 ms				
4		1: 400-600/400-600 ms				
5	ON/OFF time length ranges for	1: 175-440/175-440 ms				
6	busy tone (More than one setting allowed)	1: 100-1000/17-660 ms				
7		1: 110-410/320-550 ms				
8		1: 100-660/100-660 ms				

WSW11 (Busy tone setting)

• Note

• The setting of WSW11 is effective only when selectors 5 and 6 on WSW05 are set to "0, 1" or "1, 1" (Busy tone detection).

• Selectors 1 and 2: Busy tone frequency band control

These selectors set the frequency band for busy tone to be detected.

• Selectors 3 through 8: ON/OFF time length ranges for busy tone

These selectors set the ON and OFF time length ranges for busy tone to be detected. If more than one selector is set to "1," the ranges become wider. For example, if selectors 4 and 5 are set to "1," the ON and OFF time length ranges are from 175 to 600 ms.

Selector No.	Function	Setting and Specifications			
		No.	1	2	
_	Min detection period required for		0	0	: 1500 ms
2	interpreting incoming calling		0	1	: 500 ms
L	signal (CI) as OFF		1	0	: 700 ms
			1	1	: 900 ms
		No.	3	4	
	Max. detection period for incoming calling signal (CI) being OFF		0	0	: 6 sec.
3			0	1	: 7 sec.
-			1	0	: 9 sec.
			1	1	: 11 sec.
		No.	5	6	
	Min detection period required for		0	0	: 800 ms
5	acknowledging incoming calling		0	1	: 200 ms
0	signal (CI) as ON		1	0	: 250 ms
			1	1	: 150 ms
7	Not used.				
8	Not used.				

WSW12 (Signal detection condition setting)

Selectors 1 through 4 :Min. detection period required for interpreting incoming calling signal (CI) as OFF :Max. detection period for incoming calling signal (CI) being OFF

If the machine detects the OFF state of a CI signal for the period greater than the value set by selectors 1 and 2 and less than the value set by selectors 3 and 4, it interprets the CI signal as OFF.

 Selectors 5 and 6: Min. detection period required for acknowledging incoming calling signal (CI) as ON These selectors set the period required to make the machine acknowledge itself to be called. That is, if the machine continuously detects a CI signal with the frequency set by selectors 1 through 4 on WSW14 during the period set by these selectors 5 and 6, then it acknowledges the call.

Selector No.	Function	Setting and Specifications					
		No.	1	2			
			0	0	: 0 kr	n	
1	Cable equalizer		0	1	: 1.8	km	
2			1	0	: 3.6	km	
			1	1	: 5.6	km	
	3 4 Reception level	No.	3	4			
			0	0	: -43 dBm		
3			0	1	: -47 dBm		
			1	0	: -49 dBm		
			1	1	:-51 dBm		
		No.	5	6	7	8	
			0	0	0	0	: 0 dB
			0	0	0	1	: 1 dB
5	Madam attances		0	0	1	0	: 2 dB
8			0	0	1	1	: 3 dB
			0	1	0	0	: 4 dB
					I		
			1	1	1	1	: 15 dB

WSW13 (Modem setting)

• Note

- The modem should be adjusted according to the user's line conditions.
- Selectors 1 and 2: Cable equalizer

These selectors are used to improve the pass-band characteristics of analogue signals on a line. Attenuation in the high-band frequency is greater than in the low-band frequency. Set these selectors according to the distance from the telephone switchboard to the machine.

• Selectors 3 and 4: Reception level

These selectors set the optimum receive signal level.

Selectors 5 through 8: Modem attenuator

These selectors are used to adjust the transmitting level attenuation of the modem when the reception level at the remote station is improper due to line loss. This function applies for G3 protocol signals.

Setting two or more selectors to "1" produces addition of attenuation assigned to each selector.

If selector 8 on WSW23 is set to "0," this setting is so limited that 10 dB (1 dB in France) or higher setting only is effective.

WSW14 (AUTO ANS facility setting)

Selector No.	Function	Setting and Specifications						
1 2	Frequency band selection (lower limit) for incoming calling signal (CI)	No.	1	2				
			0	0	: 13 Hz			
			0	1	: 15 Hz			
			1	0	: 23 Hz			
			1	1	: 20 Hz			
	Frequency band selection (upper limit) for incoming calling signal (CI)	No.	3	4				
_			0	0	: 30 Hz			
3 4			0	1	: 55 Hz			
			1	0	: 70 Hz			
			1	1	: 200 Hz			

Selector No.	Function	Setting and Specifications					ations
		No.	5	6	7	8	
			0	0	0	0	: Fixed to once
			0	0	0	1	: 1 to 6 times
			0	0	1	0	: 1 to 8 times
			0	0	1	1	: 2 to 8 times
			0	1	0	0	: 1 to 2 times
			0	1	0	1	: 1 to 3 times
5			0	1	1	0	: 1 to 4 times
I	No. of rings in AUTO ANS mode		0	1	1	1	: 1 to 5 times
8			1	0	0	0	: 2 to 3 times
			1	0	0	1	: 2 to 4 times
			1	0	1	0	: 2 to 5 times
			1	0	1	1	: 2 to 6 times
			1	1	0	0	: 1 to 10 times
		1	1	0	1	: 2 to 10 times	
			1	1	1	0	: 3 to 5 times
			1	1	1	1	: 4 to 10 times

- Selectors 1 through 4: Frequency band selection for incoming calling signal (CI) These selectors are used to select the frequency band of CI for activating the AUTO ANS facility.
- Selectors 5 through 8: No. of rings in AUTO ANS mode

These selectors set the number of rings to initiate the AUTO ANS facility.

Selector No.	Function	Setting and Specifications								
		No.	1	2						
			0	0	: 5 m	: 5 min.				
2	Redial interval		0	1	:1 m	in.				
			1	0	: 2 m	: 2 min.				
			1	1	: 3 min.					
		No.	3	4	5	6				
			0	0	0	0	: 16 times			
3			0	0	0	1	: 1 times			
I	No. of redialings		0	0	1	0	: 2 times			
6			0	0	1	1	: 3 times			
			1	1	1	1	: 15 times			
7	Not used.									
8	CRP option	0: Di	sable	l : Enak	ole					

WSW15 (Redial facility setting)

• Selectors 1 through 6: Redial interval and No. of redialings

The machine redials by the number of times set by selectors 3 through 6 at intervals set by selectors 1 and 2.

• Selector 8: CRP option

If a command error occurs in the machine (calling station), the machine usually waits for three seconds and then makes a retry three times. This CRP option is a request command that can be sent from the called station for requesting the calling station to retry the failed command immediately.

WSW16 (Function setting 1)								
Selector No.	Function	Setting and Specifications						
1	Not used.							

Selector No.	Function	Setting and Specifications
2	ITU-T (CCITT) superfine recommendation	0: OFF 1: ON
3	Not used.	
4	Not used.	
5	Not used.	
6	Not used.	
7	Max. document length limitation	0: 400 cm 1: 90 cm
8	[Stop/Exit] button pressed during reception	0: Not functional 1: Functional

• Selector 2: ITU-T (CCITT) superfine recommendation

If this selector is set to "1," the machine communicates in ITU-T (CCITT) recommended superfine mode (15.4 lines/mm). If it is set to "0," it communicates in native superfine mode.

• Selector 7: Max. document length limitation

This selector is used to select the maximum length of a document to be sent.

• Selector 8: [Stop/Exit] button pressed during reception

If this selector is set to "1," pressing the **[Stop/Exit]** button can stop the current receiving operation. The received data will be lost.

WSW17 (Function setting 2)

Selector No.	Function	Setting and Specifications						
1	Off-hook alarm	No.	1	2				
			0	0	: No alarm			
			0	1	: Always valid			
2			1	0	: Valid except when' call reservation' is selected.			
			1	1	: Valid except when' call reservation' is selected.			

Selector No.	Function	Setting and Specifications
3	Not used.	
4	Not used.	
5	Calendar clock type	0: U.S.A. type 1: European type
6	Not used.	
7	Non-ring reception	0: OFF 1: ON
8	Not used.	

• Selectors 1 and 2: Off-hook alarm

These selectors activate or deactivate the alarm function which sounds an alarm when the communication is completed with the handset being off the hook.

• Selector 5: Calendar clock type

If this selector is set to "O" (USA), the MM/DD/YY hh:mm format applies; if it is set to "1" (Europe), the DD/MM/YY hh:mm format applies: DD is the day, MM is the month, YY is the last two digits of the year, hh is the hour, and mm is the minute.

• Selector 7: Non-ring reception

Setting this selector to "1" makes the machine receive calls without ringer sound if the number of calling is set to 0.

Selector No.	Function	Setting and Specifications					
1	Addition of registration of station ID for PC-FAX	0: Add 1: Not add					
		No.	2	3			
			0	0	: 40 sec.		
2	Detection enabled time for CNG and no tone		0	1	: 0 sec. (No detection)		
			1	0	: 5 sec.		
			1	1	: 80 sec.		

WSW18 (Function setting 3)

Selector No.	Function	Setting and Specifications							
4	Not used.								
5	Not used.								
6	Registration of station ID	0: Permitted 1: Prohibited							
	Tone sound monitoring	No.	7	8					
			0	0	: No monitoring				
			0	1	: No monitoring				
7 8			1	0	: Up to phase B at the calling station only				
			1	1	: All transmission phases both				
					at the calling and called stations				

• Selector 1: Addition of registration of station ID for PC-FAX

The sending state is as follows whether add the station ID in the PC side or not. The data do not add the station ID in the PC side.

 \Rightarrow Follow the Selector 1 in WSW 18, add the station ID or not.

The data add the station ID in the PC side.

 \Rightarrow Let it lie in the main body side.

• Selectors 2 and 3: Detection enabled time for CNG and no tone

After the line is connected via the external telephone or by picking up the handset of the machine, the machine can detect a CNG signal or no tone for the time length specified by these selectors. The setting specified by these selectors becomes effective only when selector 8 on WSW20 is set to "1."

• Selector 6: Registration of station ID

Setting this selector to "0" permits the registration of station ID for Austrian and Czech models.

• Selectors 7 and 8: Tone sound monitoring

These selectors set monitoring specifications of the tone sound inputted from the line.

Selector No.	Function	Setting and Specifications						
		No.	1	2	3			
1		No.	4	5	6			
I	First transmission speed choice for fallback		0	0	0	: 2,400 bps		
3			0	0	1	: 4,800 bps		
			0	1	0	: 7,200 bps		
			0	1	1	: 9,600 bps		
4			1	0	0	: 12,000 bps		
I	Last transmission speed choice for fallback		1	0	1	: 14,400 bps		
6			1	1	0	: 14,400 bps		
			1	1	1	: 14,400 bps		
7	V.34 mode	0: Permitted						
		1: Prohibited						
8	V.17 mode	0: Pe 1: Pro	rmittec ohibite	l d				

WSW19 (Transmission speed setting)

• Selectors 1 through 6: First and last choices of transmission speed for fallback

These selectors are used to set the MODEM speed range. With the first transmission speed choice specified by selectors 1 through 3, the machine attempts to establish the transmission link via the MODEM. If the establishment fails, the machine automatically steps down to the next lowest speed and attempts to establish the transmission link again. The machine repeats this sequence while stepping down the transmission speed to the last choice specified by selectors 4 through 6.

If the MODEM always falls back to a low transmission speed (e.g., 4,800 bps), set the first transmission speed choice to the lower one (e.g., modify it from 12,000 bps to 7,200 bps) in order to deactivate the high-speed MODEM function and reduce the training time for shorter transmission time.

Generally, to save the transmission time, set the last transmission speed choice to a higher one.

• Selector 7: V.34 mode

If this selector is set to "0," selectors 5 through 8 on the WSW38 through WSW40 and on WSW41, will become effective.

• Selector 8: V.17 mode

This selector inhibits the V.17 mode if the machine malfunctions in the short training of the image signal.

WSW20 (Overseas communications mode setting)

Selector No.	Function	Setting and Specifications										
1	EP* tone prefix	0: OFF 1: ON										
2	Overseas communications mode (Reception)	0: 2100 Hz 1: 1100 Hz										
3	Overseas communications mode (Transmission)	0: OFF 1: Ignores DIS once.							0: OFF 1: Ignores DIS once.			
		No.	4	5								
	Min. time length from reception of CFR to start of transmission of video signals		0	0	: 100 ms							
4			0	1	: 200 ms							
, C			1	0	: 300 ms							
			1	1	: 400 ms							
		No.	6	7								
6			0	0	: Yes, at both ON/OFF timings							
7	chattering noise		0	1	: Yes, at OFF timing							
			1	0	: No							
			1	1	: No							
8	Limitation on CNG detection	0: OFF 1: ON										

• Selector 1: EP tone prefix

Setting this selector to "1" makes the machine transmit a 1700 Hz echo protection (EP) tone immediately preceding training in V.29 modulation system to prevent omission of training signals.

Prefixing an EP tone is useful when the machine fails to transmit at the V.29 modem speed and always has to fall back to 4800 bps transmission.

The setting made by this selector takes effect only when the Overseas Mode is set to ON.

• Selectors 2 and 3: Overseas communications mode

These selectors should be used if the machine malfunctions in overseas communications. According to the communications error state, select the signal specifications.

Setting selector 2 to "1" allows the machine to use 1100 Hz CED signal instead of 2100 Hz in receiving operation. This prevents malfunctions resulting from echoes, since the 1100 Hz signal does not disable the echo suppressor (ES) while the 2100 Hz signal does.

Setting selector 3 to "1" allows the machine to ignore a DIS signal sent from the called station once in sending operation. This operation suppresses echoes since the first DIS signal immediately follows a 2100 Hz CED (which disables the ES) so that it is likely to be affected by echoes in the disabled ES state. However, such a disabled ES state will be removed soon so that the second and the following DIS signals are not susceptible to data distortion due to echoes. Note that some models when called may cause error by receiving a self-outputted DIS.

The setting made by selector 3 takes effect only when the Overseas Communications Mode is set to ON. (The setting made by selector 2 is always effective.)

• Selectors 4 and 5:

These selectors can be done the receiving of the image signal by changing time from CFR to sending the image signal if fails the receiving of the image signal and the machine malfunctions in communication.

Selectors 8: Limitation on CNG detection

If this selector is set to "1," the machine detects a CNG signal according to the condition preset by selectors 2 and 3 on WSW18 after a line is connected. If it is set to "0," the machine detects a CNG signal as long as the line is connected.

WSW21 (Erasure of message stored in the memory after the message transfer)

Selector No.	Function	Setting and Specifications
1	Not used.	
5		
6 7	Not used.	

Selector No.	Function	Setting and Specifications
8	Erasure of message stored in the memory after the message transfer	0: Yes 1: No

• Selector 8: Erasure of message stored in the memory after the message transfer

Setting this selector to "O" will erase the message recorded in the memory after the document retrieval feature transfers the message.

WSW22 (ECM and call waiting caller ID)

Selector No.	Function	Setting and Specifications
1	ECM* in sending	0: Valid
		1: Invalid
2	ECM* in receiving	0: Valid
		1: Invalid
3	Not used.	
4	Not used.	
5		
I	Not used.	
8		

* ECM: Error correction mode

WSW23 (Communications setting)

Selector No.	Function	Setting and Specifications
1	Starting point of training check (TCF)	0: 0 From the head of a series of zeros 1: From any arbitrary point

Selector No.	Function	Setting and Specifications			
	Allowable training error rate	No.	2	3	
			0	0	:0%
2			0	1	: 0.5 %
5			1	0	:1%
			1	1	: 2 %
		No.	4	5	
			0	0	:16%
4	Decoding error rate for transmission of RTN		0	1	:14%
J			1	0	:10%
			1	1	: 8 %
6	Not used.				
7	Not used.				
8	Limitation of attenuation level	0: Yes 1: ON			

• Selector 1: Starting point of training check (TCF)

At the training phase of receiving operation, the called station detects for 1.0 second a training check (TCF) command, a series of zeros which is sent from the calling station for 1.5 seconds to verify training and give the first indication of the acceptability of the line.

This selector sets the starting point from which the called station should start counting those zeros. If this selector is set to "0," the called station starts counting zeros 100 ms after the head of a series of zeros is detected.

If it is set to "1," the called station starts counting zeros upon detection of 10-ms successive zeros 50 ms after the head of a series of zeros is detected. In this case, if the detection of 10-ms successive zeros is too late, the data counting period will become less than 1.0 second, making the called station judge the line condition unacceptable.

• Selectors 2 and 3: Allowable training error rate

The called station checks a series of zeros gathered in training (as described in Selector 1) according to the allowable training error rate set by these selectors. If the called station judges the line condition to be accepted, it responds with CFR; if not, it responds with FTT.

• Selectors 4 and 5: Decoding error rate for transmission of RTN

The machine checks the actual decoding errors and then transmits an RTN according to the decoding error rate (Number of lines containing an error per page ÷ Total number of lines per page) set by these selectors.

• Selector 8: Limitation of attenuation level

Setting this selector to "O" limits the transmitting level of the modem to -10 dB. This setting has priority over the settings selected by WSW02 (selectors 5 through 8) and WSW13 (selectors 5 through 8).

Selector No.	Function	Setting and Specifications			
1 2	Not used.				
3 4	Time length from CML ON to start of pseudo ring backtone transmission	No.	3	4	
			0	0	: 4 sec.
			0	1	: 3 sec.
			1	0	: 2 sec.
			1	1	: 1 sec.
5					
I	Not used.				
8					

WSW24 (TAD setting 2)

• Selectors 3 and 4: Time length from CML ON to start of pseudo ring backtone transmission

These selectors set the length of time from CML-ON up to the start of pseudo ring backtone transmission.

In models with OGM facilities, the settings made by these selectors also apply to the length of time from CML-ON up to the start of OGM transmission.

WSW25 (Not used.)

Selector No.	Function	Setting and Specifications
1		
2	Not used.	
3		
4	Not used.	
5		
I	Not used.	
7		
8	Not used.	

WSW26 (Function setting 4)

Selector No.	Function	Setting and Specifications					
1	Not used.						
2	Not used.						
3	Dialing during document reading into the temporary memory in in- memory message transmission	0: Disable 1: Enable					
Selector No.	Function	Setting and Specifications					
--------------	--	---------------------------------------	------	---------	--------------------	--	--
		In the case of Selector 3=0 in WSW54.					
		No.	4	5			
			0	0	: 0.5 (A)		
			0	1	: 1 (B)		
	No. of CNG cycles to be		1	0	: 1.5 (C)		
4	detected (when the line is connected via the external		1	1	: 2 (D)		
5	telephone except in the external	In the	case	of Sele	ctor 3=1 in WSW54.		
	telephone)	No.	4	5			
			0	0	: 2.5 (A)		
			0	1	: 3 (B)		
			1	0	: 3.5 (C)		
			1	1	: 4 (D)		
	No. of CNG cycles to be detected (when the line is	In the case of Selector 6=0 in WSW58.					
		No.	6	7			
			0	0	: 0.5 (A)		
			0	1	: 1 (B)		
			1	0	: 1.5 (C)		
6	connected via the external telephone in the external TAD		1	1	: 2 (D)		
7	mode, via the built- in telephone in the TAD mode, or via the	In the	case	of Sele	ctor 6=1 in WSW58.		
	machine in the automatic	No.	6	7			
	reception of the F/T mode)		0	0	: 2.5 (A)		
			0	1	: 3 (B)		
			1	0	: 3.5 (C)		
			1	1	: 4 (D)		
8	Not used.						

• Selector 3: Dialing during document reading into the temporary memory in in- memory message transmission

If this selector is set to "0," the machine waits for document reading into the memory to complete and then starts dialing. This enables the machine to list the total number of pages in the header of the facsimile message.

• Selectors 4 and 5: No. of CNG cycles to be detected (when the line is connected via the external telephone except in the external TAD mode or via the built-in telephone)

The machine interprets a CNG as an effective signal if it detects the CNG by the number of cycles specified by these selectors when the line is connected via the external telephone except in the external TAD mode or via the built-in telephone.

 Selectors 6 and 7: No. of CNG cycles to be detected (when the line is connected via the external telephone in the external TAD mode, via the built-in telephone in the TAD mode, or via the machine in the automatic reception of the F/T mode)

The machine interprets a CNG as an effective signal if it detects the CNG by the number of cycles specified by these selectors when the line is connected via the external telephone in the external TAD mode, via the built-in telephone in the TAD mode, or via the machine in the automatic reception of the F/T mode.

WSW27	(Function	setting	5)
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Selector No.	Function	Setting and Specifications
1	Not used.	
2	Ringer OFF setting	0: Yes 1: No
3	Not used.	
4	Not used.	
5	Not used.	
6	Not used.	
7	Not used.	
8	Not used.	

Selector 2: Ringer OFF setting

This selector determines whether or not the ringer can be set to OFF.

Selector No.	Function	Setting and Specifications				
		No.	1	2	3	
			0	0	0	: O dB
			0	0	1	: +1 dB
1			0	1	0	: +2 dB
I	Transmission level of DTMF high- band frequency signal		0	1	1	: +3 dB
3	1 7 5		1	0	0	: O dB
			1	0	1	: -1 dB
			1	1	0	: -2 dB
			1	1	1	: -3 dB
	Transmission level of DTMF low- band frequency signal	No.	4	5	6	
			0	0	0	: O dB
			0	0	1	: +1 dB
4			0	1	0	: +2 dB
I			0	1	1	: +3 dB
6			1	0	0	: O dB
			1	0	1	: -1 dB
			1	1	0	: -2 dB
			1	1	1	: -3 dB
7 8	Not used.					

WSW28 (Function setting 6)

• Selectors 1 through 6: Transmission level of DTMF high-/low-band frequency signal

These selectors are intended for the manufacturer who tests the machine for the Standard. Never access them.

WSW29 (Function setting 7)

Selector No.	Function	Setting and Specifications
1		
I	Not used.	
3		
4		
I	Not used.	
6		
7	Impedance switching control in	0: OFF
	pulse dialing	1: ON
8	Not used.	

WSW30 (Not used.)

Selector No.	Function	Setting and Specifications
1		
I	Not used.	
3		
4	Not used.	
5	Not used.	
6	Not used.	
7	Not used.	
8	Not used.	

WSW31 (Function setting 9)

Selector No.	Function	Setting and Specifications
1	Not used.	

Selector No.	Function	Setting and Specifications
2	Default reduction rate for failure of automatic reduction during recording	0: 100 % 1: 75 %
3	Not used.	
4	Not used.	
5	Not used.	
6 7	Not used.	
8	Drum life indication	0: No 1: Yes

• Selector 2: Default reduction rate for failure of automatic reduction during recording

This selector sets the default reduction rate to be applied if the automatic reduction function fails to record one-page data sent from the calling station in a single page of the current recording paper. If it is set to "0," the machine records one-page data at full size (100%) without reduction; if it is set to "1," the machine records it at 70% size.

• Selector 8: Drum life indication

This selector selects whether display the LCD message at the "Drum life end soon," or not.

WSW32 (Function setting 10)

Selector No.	Function	Setting and Specifications			
1 4	Not used.				
		No.	5	6	
-			0	0	: Standard
6	5 Default resolution when FAX6 scanning		0	1	: Fine
			1	0	: Super fine
			1	1	: Photo

Selector No.	Function	Setting and Specifications					
		No.	7	8			
_	7 Default contrast when FAX 8 scanning		0	0	: Automatic		
8			0	1	: Automatic		
5			1	0	: Super light		
			1	1	: Super dark		

• Selectors 5 and 6: Default resolution

These selectors set the default resolution which applies when the machine is turned on or completes a transaction.

• Selectors 7 and 8: Default contrast

These selectors set the default contrast which applies when the machine is turned on or completes a transaction.

WSW33 (Function setting 11)

Selector No.	Function	Setting and Specifications
1		
I	Not used.	
3		
4	Notice	
5	Not used.	
,	Report output of polled	0: Yes
0	transmission requests	1: No
7		
8	Not used.	

Selector No.	Function		Setting and Specifications		
1					
I	Not used.				
3					
4	Netword				
5	Not used.				
		No.	6	7	
	Number of DTME tone signals for		0	0	: 3
6	inhibiting the detection of CNG during external TAD operation		0	1	: 2
			1	0	: 1
			1	1	: OFF
8	Not used.				

WSW34 (Function setting 12)

• Selectors 6 and 7: Number of DTMF tone signals for inhibiting the detection of CNG during external TAD operation

If the machine receives this specified number of DTMF tone signals during external TAD operation, it will not detect CNG afterwards.

If these selectors are set to "1, 1," the CNG detection will not be inhibited.

WSW35 (Not used.)

Selector No.	Function	Setting and Specifications
1		
I	Not used.	
4		
5		
I	Not used.	
8		

WSW36 (Function setting 14)

Selector No.	Function		Setting and Specifications				
1	ECP mode*	0: OI 1: OI					
2	Recovery from Inactive PC Interface	0: Di 1: En					
3	PC Power-off Recognition Time	0: No 1: Lo	0: Normal 1: Long				
4	Not used.						
5	Escape from phase C	0: Yes 1: No					
		No.	6	7	8		
	Extension of incoming calling		0	0	0	: 0 (Ignored)	
			0	0	1	: 4 (448 Hz)	
6			0	1	0	: 8 (244 Hz)	
I	signal (CI) frequency band		0	1	1	: 12 (162 Hz)	
8	on WSW14		1	0	0	: 16 (122 Hz)	
			1	0	1	: 20 (97 Hz)	
			1	1	0	: 24 (81 Hz)	
			1	1	1	: 28 (69 Hz)	

*ECP (Enhanced Capabilities Port)

• Note

- Selectors 2 and 3 will become operative if selectors 1 and 2 of WSW46 are set to "monitor" the PC power ON/OFF state.
- Selector 1: ECP mode

The ECP mode enhances the normal bidirectional communications between the machine and the connected PC for higher transmission speed through the parallel interface.

• Selector 2: Recovery from Inactive PC Interface

If the machine recognizes via the STB signal line that the connected PC is powered off through the parallel interface, it will turn the PC interface outputs Low to protect the PC from hazards that could be caused by weak electric current accidentally flown from the machine.

This selector determines whether or not the machine should recover from the inactive PC interface to normal interfacing state upon receipt of data from the PC.

• Selector 3: PC Power-off Recognition Time

This selector sets the time length from when the machine detects the PC powered off until it recognizes the detected state as power-off.

If selector 2 is set to "0," it is recommended that selector 3 be set to "1"; otherwise, the machine may mistakenly detect PC powered off.

• Selector 5: Escape from phase C

This selector determines whether or not the machine will escape from phase C when it detects an RTC (Return to Control) in non-ECM mode or an RCP (Return to Control Partial page) in ECM mode.

 Selectors 6 through 8:Extension of incoming calling signal (CI) frequency band specified by selectors 1 through 4 on WSW14

At the start of reception, if the machine detects the frequency of a CI signal specified by selectors 1 through 4 on WSW14, it starts the ringer sounding. However, the machine may fail to detect the CI signal normally due to noise superimposed at the time of reception. To prevent it, use selectors 6 through 8 on WSW36.

If the machine detects higher frequencies than the setting made here, it regards them as noise and interprets the detecting state as being normal, allowing the ringer to keep sounding according to the preset number of ringers (until it starts automatic reception of FAX data in the FAX mode or enters the TAD mode in the TEL mode).

Selector No.	Function	Setting and Specifications
1	Printout of the stored image data of an unsent document onto an error report	0: No 1: Yes
2	Erasure of the stored image data of an unsent document at the time of the subsequent in- memory message transmission	0: No 1: Yes

WSW37 (Function setting 15)

5

Selector No.	Function	Setting and Specifications
3		
Ι	Not used.	
8		

• Selector 1: Printout of the stored image data of an unsent document onto an error report

This selector determines whether or not to print out the 1st-page image data of a document onto the error report if the document image data stored in the temporary memory cannot be transmitted normally.

• Selector 2: Erasure of the stored image data of an unsent document at the time of the subsequent in-memory message transmission

If in-memory message transmission fails repeatedly when selector 1 is set to "1," the temporary memory will be occupied with image data. Setting selector 2 to "1" will automatically erase the stored 1 st-page image data of an unsent document at the time of the subsequent in-memory message transmission only when recording paper or toner runs out.

WSW38	(V.34	transmission	settings)
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Selector No.	Function		S	and Specifications	
1 2		No.	1	2	
			0	0	: Automatic
	Setting of the equalizer		0	1	: Automatic
			1	0	: Fixed to 4 points
			1	1	: Fixed to 16 points
3	Sending level of guard tone at phase 2	0: No 1: No	ormal - ormal	7 db	
4 Stepping down the transmission speed at fallback each		0: 2,400 bps 1: 4,800 bps			

Selector No.	Function	Setting and Specifications			
	Automatic control of modem's	No.	5	6	
5 6	speed choice		0	0	: For higher transmission speed than the current setting
			0	1	: No change from the current setting
			1	0	: For lower transmission speed than the current setting
			1	1	: For further lower transmission than the setting made by 1, 0
7	Redialing when a communications error occurs	0: OI 1: OI	N FF		
8	Detection of CED for stopping CNG	0: ON 1: OFF			

Note

• WSW38 takes effect only when the V.34 mode is permitted (WSW19, selector 7) in models supporting V.34 mode.

• Selectors 1 and 2: Setting of the equalizer

These selectors set the equalizer's training level to be applied if the machine fails to send training due to weak line connection. If these selectors are set to "0, X," the modem will automatically set the appropriate training level.

• Selector 3: Sending level of guard tone at phase 2

This selector sets the sending level of guard tone for 1800 Hz to be sent at Phase 2 in the V. 34 mode.

• Selector 4: Stepping down the transmission speed at fallback each

This selector determines how much the modem steps down the transmission speed at fallback when called by the remote station. If this selector is set to "1," the modem may step down the transmission speed from 33600 bps to 28800 bps by one-time fallback.

• Selectors 5 and 6: Automatic control of modem's EQM gain for proper transmission speed choice

These selectors determine how the modem controls the EQM (Eye Quality Monitor) gain for proper choice of the transmission speed, which applies if the modem selects higher transmission speed than the possible speed so that it always repeats falling back.

• Selector 8: Detection of CED for stopping CNG

If this selector is set to "0," the detection time of CED specified by WSW43, selectors 4 and 5 will apply.

Selector No.	Function	Setting and Specifications						
		No.	1	2	3	4		
	-	No.	5	6	7	8		
			0	0	0	0	: 2,400 bps	
			0	0	0	1	: 4,800 bps	
			0	0	1	0	: 7,200 bps	
	First transmission speed choice for fallback		0	0	1	1	: 9,600 bps	
			0	1	0	0	: 12,000 bps	
			0	1	0	1	: 14,400 bps	
1			0	1	1	0	: 16,800 bps	
4			0	1	1	1	: 19,200 bps	
			1	0	0	0	: 21,600 bps	
			1	0	0	1	: 24,000 bps	
			1	0	1	0	: 26,400 bps	
			1	0	1	1	: 28,800 bps	
			1	1	0	0	: 31,200 bps	
			1	1	0	1	: 33,600 bps	
			1	1	1	0	: 33,600 bps	
			1	1	1	1	: 33,600 bps	

WSW39 (V.34 transmission speed)

Selector No.	Function	Setting and Specifications
5 I 8	Last transmission speed choice for fallback	

Vote

• WSW39 takes effect only when the V.34 mode is permitted (WSW19, selector 7) in models supporting V.34 mode. For the transmission speed setting in other modes, refer to WSW19.

• Selectors 1 through 8: First and last choices of transmission speed for fallback

These selectors are used to set the modem speed range. With the first transmission speed choice specified by selectors 1 through 4, the machine attempts to establish the transmission link via the modem. If the establishment fails, the machine automatically steps down to the next highest speed and attempts to establish the transmission link again. The machine repeats this sequence while stepping down the transmission speed to the last choice specified by selectors 5 through 8.

If the modem always falls back to a low transmission speed (e.g., 24,000 bps), set the first transmission speed choice to the lower one (e.g., modify it from 31,200 bps to 26,400 bps) in order to deactivate the high-speed modem function and reduce the training time for shorter transmission time.

WSW39 will be limited by selectors 3 through 8 on WSW40.

WSW40 (V.34 modem settings)

Selector No.	Function	Setting and Specifications
1	Not used.	
2	Not used.	

Selector No.	Function	Setting and Specifications						
3 I 8	Masking of symbol _ rate(s)			Not masking	Masking			
		No.	3	0	1	3429 symbols/sec		
		No.	4	0	1	3200 symbols/sec		
		No.	5	0	1	3000 symbols/sec		
		No.	6	0	1	2800 symbols/sec		
		No.	7	-	-	Not used.		
		No.	8	0	1	2400 symbols/sec		

Vote

 WSW40 takes effect only when the V.34 mode is permitted (WSW19, selector 7) in models supporting V.34 mode.

Selectors 3 through 8: Masking of symbol rate(s)

These selectors allow you to limit the transmission speed range in V.34 mode by masking the desired symbol rate(s). Transmission speeds assigned to the symbol rates are listed on the next page. The setting made by these selectors will limit the setting made by selectors 1 through 4 on WSW39.

If selector 3 is set to "1" to mask the 3429 symbols/second when the first transmission speed choice is 33600 bps (specified by selectors 1 through 4 of WSW39), for example, then the allowable maximum transmission speed will be limited to 31200 bps. If selector 8 is set to "1" to mask the 2400 symbols/second when the first transmission speed choice is 33600 bps, then the allowable maximum transmission speed remains 33600 bps.

If selector 8 is set to "1" to mask the 2400 symbols/second when the first transmission speed choice is 21600 bps (specified by selectors 1 through 4 on WSW39), then the allowable maximum transmission speed remains 21600 bps but the minimum transmission speed will be limited to 4800 bps.

5

Symbol rate	Transmission speed (bps)	Symbol rate	Transmission speed (bps)	Symbol rate	Transmission speed (bps)
2400	2,400	3000	4,800	3429	4,800
	4,800		7,200		7,200
	7,200		9,600		9,600
	9,600		12,000		12,000
	12,000		14,400		14,400
	14,400		16,800		16,800
	16,800		19,200		19,200
	19,200		21,600		21,600
	21,600		24,000		24,000
			26,400		28,800
			28,800		31,200
2800	4,800	3200	4,800		33,600
	7,200		7,200		
	9,600		9,600		
	12,000		12,000		
	14,400		14,400		
	16,800		16,800		
	19,200		19,200		
	21,600		21,600		
	24,000		24,000		
	24,600		26,400		
			28,800		
			31,200		

WSW41 (Modem attenuator)

Selector No.	Function	Setting and Specifications
1		
I	Not used.	
3		

Selector No.	Function	Setting and Specifications					
4	Not used.						
	5 I Modem attenuator 8	No.	5	6	7	8	
			0	0	0	0	: -10 dBm
			0	0	0	1	:-11 dBm
5			0	0	1	0	: -12 dBm
8			0	0	1	1	: -13 dBm
			0	1	0	0	: -14 dBm
			1	1	1	1	: -25 dBm

• Selectors 5 through 8: Modem attenuator

These selectors are used to adjust the transmitting level of the modem when the reception level at the remote station is improper due to line loss. This function applies to super G3 protocol signals.

WSW42 (Internet mail settings)

Selector No.	Function	Setting and Specifications
1	Not used.	
2	Not used.	
3	Not used.	
4	JBIG encoding system	0: Not allowed 1: Allowed
5	Not used.	
6 1 8	Not used.	

• Selector 4: JBIG encoding system

This selector eliminates the malfunction by setting to "0" (the sending the DIS of the FIF set to 6 bytes from 7 bytes) if the machine malfunctions in the sending the DIS of the FIF.

WSW43 (Function	setting	16)
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Selector No.	Function	Setting and Specifications				
1	Not used.					
		No.	2	3		
	Wait time for PC-Eax recention		0	0	: 50 ms	
2	(Class 2) and FPTS command		0	1	: 100 ms	
0	transmission		1	0	: 150 ms	
			1	1	: 0 ms	
		No.	4	5		
			0	0	: 200 ms	
4	Detection time of 2100 Hz CED or ANSam		0	1	: 300 ms	
			1	0	: 400 ms	
			1	1	: 500 ms	
6	Not used.					
7	Automatic start of remote maintenance	0: No 1: Yes				
8	JPEG coding	0: Disable 1: Enable				

• Selectors 4 and 5: Detection time of 2100 Hz CED or ANSam

These selectors are effective only V.34 model.

• Selector 8: JPEG coding

Setting this selector to "O" disables the machine from sending/receiving JPEG color images and from receiving JPEG monochrome images.

WSW44 (Not used.)

Selector No.	Function	Setting and Specifications
1	Noturad	
2	Nor used.	
3	Not used.	
4	Not used.	
5	Not used.	
6		
I	Not used.	
8		

WSW45 (Not used.)

Selector No.	Function	Setting and Specifications
1		
I	Not used.	
3		
4		
I	Not used.	
6		
7	Not used.	
8	Not used.	

WSW46 (Monitor of power ON/OFF state and parallel port kept at high)

Selector No.	Function	Setting and Specifications
1	Nistand	
2	Not used.	

Selector No.	Function	Setting and Specifications
3	Not used.	
4	Previous filtering parameters for white level compensation	0: Enable 1: Disable
5	Not used.	
6		
I	Not used.	
8		

• Selector 4: Previous filtering parameters for white level compensation

At the start of scanning operation, the machine usually initializes white and black level data stored in the EEPROM by scanning the while-level reference film attached to the inside of the scanner top cover. After long use of the machine, however, the film may be contaminated with dust or dirt.

Accordingly, incorrect white level data will be set up so that white vertical streaks will be brought on the scanning result.

Setting this selector to "0" (Enabled) will apply previously saved white level data instead of new incorrect compensation.

WSW47 (Switching between high- and full-speed USB)

Selector No.	Function	Setting and Specifications
1	Not used.	
2	Not used.	
3	Netwood	
4		
5	Not used.	
6	Not used.	
7	Not used.	
8	Switching between high-speed USB and full-speed USB	0: Auto switching between high-speed USB (ver. 2.0) and full-speed USB (ver. 1.1) 1: Fixed to full-speed USB (ver. 1.1)

WSW48 (Not used.)

Selector No.	Function	Setting and Specifications
1		
2	Not used.	
3		
I	Not used.	
5		
6		
I	Not used.	
8		

WSW49 (End-of-copying beep and print in black)

Selector No.	Function	Setting and Specifications				
1 2	Not used.					
3	End-of-copying beep	0: Yes 1: No				
		No.	4	5		
	Command flag detection time		0	0	: 150 ms	
4 5			0	1	: 350 ms	
			1	0	: 550 ms	
			1	1	: 750 ms	
6	Notused					
7						
8	Not used.					

• Selectors 4 and 5: Command flag detection time

After receiving a command flag, the machine will wait for the command that should follow for the time length specified by these selectors.

WSW50 (SDAA settings)

Selector No.	Function	Setting and Specifications			
	Percentage voltage for	No.	1	2	
	interpreting the external telephone as being hooked up (based on the		0	0	: 50%
1	network's		0	1	: 80%
Z	standard voltage)		1	0	: 30%
			1	1	: No detection
3	Not used.				
4	Not used.				
5	Notused				
6	Tion used.				
		No.	7	8	
	AC voltage threshold for detection of ring		0	0	: 19 V
7			0	1	: 11 V
o			1	0	: 25 V
			1	1	: 31 V

• Selectors 5 and 6: Current control to be applied immediately after connection of the line

FAX models equipped with an SDAA circuit (on which an NTU chip is mounted) might not be connected to a broad band line such as an ADSL (Asynchronous Digital Subscriber Line) in a stable condition. If those models fail to connect to such a line, try to change the current control to be applied immediately after connection of the line by using selectors 5 and 6.

If selectors 5 and 6 are set to "0" and "1," respectively, the SDAA draws more current, decreasing the period required to terminate the current control. If they are set to "1" and "0," the SDAA finely controls precision of the termination current against the voltage to approach nearer to the specified DC curve that specifies the current vs. voltage characteristics of the network termination. Selecting either control may solve an unstable connection problem.

WSW51 (Function setting 17)

Selector No.	Function	Setting and Specifications
1	Output of communications error report when transmission verification report is disabled	0: Enable 1: Disable
2	Not used.	
3 4	Not used.	
5 I 7	Not used.	
8	Not used.	

WSW52 (Not used.)

Selector No.	Function	Setting and Specifications
1		
I	Not used.	
3		
4		
I	Not used.	
6		
7	Not used.	
8	Not used.	

Selector No.	Function	Setting and Specifications
1	Netwood	
2	Nor usea.	
3	Netword	
4	Not used.	
5	Netwood	
6	Nor used.	
7	CNG detection retry after invalid	0: Yes
/	CNG detected	1: No
8	Not used.	

WSW53 (Function setting 19)

WSW54 (Function setting 20)

Selector No.	Function	Setting and Specifications
1	Netword	
2	INOT USED.	
3	More CNG detection cycles in	0: No
3	user-friendly reception	1: 2 more cycles
4	Not used.	
5	Netword	
6	INOT USED.	
7	Not used.	
8	Not used.	

• Selector 3: More CNG detection cycles in user-friendly reception

If CNG detection fails even after adjustment of selectors 4 and 5 on WSW26, try adding 2 more cycles to the permitted number of CNG detection cycles.

Selector No.	Function	Setting and Specifications			
		0:	The developing bias voltage correction is performed on each print job.		
1	Interval of time required for the developing bias voltage	1-72:	The developing bias voltage correction is performed when a print job occurs at specified time or later		
8	correction (hour)	73-254 :	Not allowed to set.		
		255 (0xFF):	The developing bias voltage correction is not performed.		

WSW55 (Interval of time required for the developing bias voltage correction)

The setting example of the selector number is as follows;

No.	1	2	3	4	5	6	7	8	
	0	0	0	0	0	0	0	0	The developing bias voltage correction is performed on each print job.
	0	0	0	1	1	0	0	0	The developing bias voltage correction is performed when a print job occurs after 24 hours (default value) or later.
	0	1	0	0	1	0	0	0	The developing bias voltage correction is performed when a print job occurs after 72 hours or later.
	1	1	1	1	1	1	1	1	The developing bias voltage correction is not performed.

• Selector 1 to 8: Interval of time required for the developing bias voltage correction

To keep the density of four colors evenly, the developing bias voltage correction is performed when a print job occurs at specified time or later.

WSW56 (Function setting 21)

Selector No.	Function	Setting and Specifications
1	Not used.	

Selector No.	Function	Setting and Specifications
2	Not used.	
3	Not used.	
4	Not used.	
5	Not used.	
6	Switching of the display for the coverage of toner cartridge	0: The coverage only for the current toner cartridge 1: The coverage for all toner cartridges which had been consumed
7	Not used.	
8	Switching of the CPU sleep mode	0: Invalid 1: Valid

• Selector 6: Switching of the display for the coverage of toner cartridge

This selector specifies the display for the coverage of toner cartridge. Setting this selector to "O", the machine displays the coverage only for the current toner cartridge. If this selector sets to "1", the machine displays the coverage for all toner cartridge which had been consumed.

• Selector 8: Switching of the CPU sleep mode

This selector specifies the CPU sleep mode ON or OFF.

WSW57 (Function setting 22)

Selector No.	Function	Setting and Specifications				
		No.	1	2		
			0	0	: Enters the facsimile receiving mode (default)	
1	Operation after FAX data		0	1	: Disconnects the line	
2	reception in F/I mode		1	0	: Enters the "no tone" state and then disconnects the line	
			1	1	: Reserved	

Selector No.	Function	Setting and Specifications
3	Not used.	
4	Not used.	
5	Not used.	
6	Not used.	
7	Not used.	
8	Not used.	

• Selectors 1 and 2: Operation after FAX data reception in F/T mode

If CNG detection fails when receiving FAX data in the F/T mode, secure the no-tone period by setting these selectors to "10", and CNG detection may become possible.

WSW58 (Not used.)

Selector No.	Function	Setting and Specifications
1	Not used.	
I		
3		
4	Not used.	
5	Not used.	
6	Not used.	
7		
8	Not used.	

WSW59 (Function setting 24)

Selector No.	Function	Setting and Specifications
1	USB serial number (SN) transmission enabled/disabled	0: USB serial number transmitted 1: USB serial number not transmitted

Selector No.	Function	Setting and Specifications
2	Extension of the waiting time between ANSam and DIS	0: Enable 1: Disable (default)
3 7	Not used.	
8	Improvement of DTMF detection function (to minimize the effects of momentary power failure or noise)	0: Disable 1: Enable (default)

• Selector 1: Frame length selection

This is intended to prevent the problem of a continued increase in USB ports when serial numbers are transmitted from the MFC to a Windows Vista-based PC.

It is intended only to prevent a problem specific to Windows Vista; its default setting is "O: USB SN enabled."

• Selector 2: Extension of the waiting time between ANSam and DIS

Setting this selector to "0" extends the waiting time between the ANSam and DIS in order to secure the time required for switching the calling machine's echo suppressor in transmission from a G3 to G4 FAX machine.

 Selector 8: Improvement of DTMF detection function (to minimize the effects of momentary power failure or noise)

WSW60 (Function setting 25)

Selector No.	Function	Setting and Specifications
1	Not used.	
2 3	Not used.	
4 5	Not used.	
6	Output of CNG detection result to the activity report	0: Disable (default) 1: Enable (default)

5. System Maintenace

Selector No.	Function	Setting and Specifications
7	Natural	
8	Nor usea.	

• Selector 6: Output of CNG detection result to the activity report

Setting this selector to "1" (Enable) changes the items to be listed in the activity report as follows.

	CNG DETECTION STATE				
FAX NO./ NAME	(Tone detection status, calling/called status)				
DURATION	RCV MODE (FAX receive mode setting)				
PAGE (S)	EASY RCV (Easy receive setting)				
RESOULT	TRIGGER (FAX receive trigger)				

WSW61 (Not used.)

Selector No.	Function	Setting and Specifications
1		
I	Not used.	
4		
5		
I	Not used.	
8		

WSW62 (Not used.)

Selector No.	Function	Setting and Specifications
1		
I	Not used.	
4		
5		
6	Not used.	

Selector No.	Function	Setting and Specifications
7	Netwood	
8	Nor usea.	

WSW63 (Function setting 26)

Selector No.	Function	Setting and Specifications
1 2	Not used.	
3	Not used.	
4 I 7	Demo print type (Demo language)	0000: Other 0001: English 0010: USA 0011: CANADA 0100: Not used. 0101: EU1 0110: EU2 0111: EU3 1000: EU4 1001-1111: Reserved
8	Font support for Israel	0: Disable 1: Enable

• Selector 4 through 7: Demo print type (Demo language)

This selector specifies the language for Demo print.

• Selector 8: Font support for Israel

To enable the font support for Israel, set this selector to "1".

Selector No.	Function	Setting and Specifications								
		No.	1	2	3	4	5	6		
			0	0	0	0	0	0	: English	
			0	0	0	0	0	1	: French	
			0	0	0	0	1	0	: German	
			0	0	0	0	1	1	: Dutch	
			0	0	0	1	0	0	: Spanish	
			0	0	0	1	0	1	: Italian	
			0	0	0	1	1	0	: Norwegian	
	Setting and Specifications		0	0	0	1	1	1	: Portuguese	
			0	0	1	0	0	0	: Danish	
1			0	0	1	0	0	1	: Swedish	
I			0	0	1	0	1	0	: Finnish	
6			0	0	1	0	1	1	: Czech	
			0	0	1	1	0	0	: Polish	
			0	0	1	1	0	1	: Hungarian	
			0	0	1	1	1	0	: Russian	
			0	0	1	1	1	1	: Bulgarian	
			0	1	0	0	0	0	: Romanian	
			0	1	0	0	0	1	: Slovakian	
			0	1	0	0	1	0	: Brazilian	
			0	1	0	0	1	1	: Turkish	
			0	1	0	1	0	0	: Not used.	
			0	1	0	1	0	1	: Reserve	

WSW64 (Setting the language / Default paper size)

Selector No.	Function	Setting and Specifications						
7 8	Default paper size	No.	1	2				
			0	0	: Letter			
			0	1	: A4			
			1	0	: Reserve			
			1	1	: Reserve			

• Selectors 1 through 6: Setting the language

Set the language displayed in the LCD.

WSW65 (Setting the paper support)

Selector No.	Function	Setting and Specifications				
		No.	1	2		
_			0	0	: Plain Paper	
2	Default media type		0	1	: Thin Paper	
L			1	0	: Reserve	
			1	1	: Reserve	
3	Supporting of BOND paper	0: Disable 1: Enable				
4	Supporting of HAGAKI paper	0: Di 1: En	sable able			
5	Supporting of OHP	0: Disable 1: Enable				
6	Supporting of LABEL paper	0: Di: 1: En	sable able			
7	Not used.					
8	Not used.					

WSW66 (Reserved (Change of the setting is prohibited))

Selector No.	Function	Setting and Specifications
1 I 8	<reserved> * Prohibit a change of the setting</reserved>	

WSW67 (Reserved (Change of the setting is prohibited))

Selector No.	Function	Setting and Specifications
1 I 8	<reserved> * Prohibit a change of the setting</reserved>	

WSW68 (Reserved (Change of the setting is prohibited))

Selector No.	Function	Setting and Specifications
1 I 8	<reserved> * Prohibit a change of the setting</reserved>	

WSW69 (Reserved (Change of the setting is prohibited))

Selector No.	Function	Setting and Specifications
1 I 8	<reserved> * Prohibit a change of the setting</reserved>	

the transferred (change of the senting is profile licely)		
Selector No.	Function	Setting and Specifications
1 	<reserved> * Prohibit a change of the setting</reserved>	

WSW70 (Reserved (Change of the setting is prohibited))

WSW71 (Reserved (Change of the setting is prohibited))

Selector No.	Function	Setting and Specifications
1 8	<reserved> * Prohibit a change of the setting</reserved>	

WSW72 (Reserved (Change of the setting is prohibited))

Selector No.	Function	Setting and Specifications
1 8	<reserved> * Prohibit a change of the setting</reserved>	

WSW73 (Reserved (Change of the setting is prohibited))

Selector No.	Function	Setting and Specifications
1 I 8	<reserved> * Prohibit a change of the setting</reserved>	

WSW74 (Not used.)

Selector No.	Function	Setting and Specifications
1		
I	Not used.	
8		

WSW75 (Not used.)

Selector No.	Function	Setting and Specifications
1	Not used.	
2		
I	Not used.	
8		

WSW76 (Not used.)

Selector No.	Function	Setting and Specifications
1		
I	Not used.	
8		

WSW77 (Not used.)

Selector No.	Function	Setting and Specifications
1		
I	Not used.	
8		

WSW78 (Not used.)

Selector No.	Function	Setting and Specifications
1	Not used.	
2	Not used.	
3	Not used.	
4		
5	Not used.	
I		
8		

5. System Maintenace
Error Indications

Error Messages

The error messages displayed on the LCD of the machine and their description are shown in the table below.

Error Message	Description	
Access Error	The device was removed during data processing.	
Cartridge Error	The new toner sensor could not detect the new toner cartridge correctly.	CO
Cooling Down	The internal temperature thermistor detected a temperature higher than the specified value.	75
	The eject sensor detected that the fuser unit cover was open.	56
Cover is Open	When the power switch was turned ON, the eject sensor detected paper pass or detected that the fuser unit cover was open.	8D
	The front cover sensor detected that the front cover was open.	A1
	The control panel cover sensor detected that the control panel cover was open.	A4
Document Jam	The document scanning position sensor detected that the document length was 90 cm or more while scanning the document.	A2
	The document scanning position sensor does not detect the leading edge of the document although the document has been fed for the specified distance.	A3
Drum End Soon	The drum unit will reach the end of life soon.	
Drum Error	Detected discharge that may be attributable to dirty corona wire on the drum unit.	

Error Message	Description	
Drum Stop	Detected discharge when the number of rotations of the drum has exceeded twice the life limit.	
		58
		59
		6A
		бB
		6C
Europ Ennon	Error related to the fuser unit. Check the error code to check	6D
ruser Error	the details.	6F
		76
		78
		DD
		DE
		E2
Jam Inside	The eject sensor does not detect paper pass after the registration rear sensor detected the end of paper pass.	88
Jam Rear	The eject sensor remains ON (paper pass detected) for more than the specified time even after the registration rear sensor detected the end of paper pass.	
Jam Tray	The registration front sensor does not detect paper pass within the specified time.	
Machine Error **	Refer to the error code for details. (* * indicates the error code.)	
Manual Feed	The registration front sensor detected that there was no paper set in the manual feed slot when feeding from the manual feed slot was set.	
No Paper	There is no paper set in the paper tray.	

Error Message	Description	
No Toner	The new toner sensor detected that the toner cartridge was not set.	
	There is insufficient memory to expand PC- print data.	
Out of Memory	The memory size allotted for Secure Print was exceeded when saving Secure Print data.	C8
Print Unable **	Refer to the error code for details. (* * indicates the error code.)	-
Panlace Drum	The drum reached the end of life while the WSW 78 selector 1 was set to ON.	19
	The number of rotations of the drum unit has reached the life limit. (Printing does not stop.)	50
	The number of rotations of the developer roller reached the upper limit when Stop Mode is set for the toner cartridge.	63
Replace Toner	The number of rotations of the developer roller will reach the upper limit soon when Continue Mode is set for the toner cartridge.	9C
Scan Unable ** Refer to the error code for details. (** indicates the error code.)		-
Scanner Error Error related to the scanner unit. Check the error code to check the details.		BO to BD
Self-DiagnosticRechecking the error after the power switch was turned OFF and then ON again because an error was detected by the center thermistor of the fuser unit.		59
Size Mismatch	The paper size set on the machine is smaller than the specified fax size.	7F
	The registration front sensor detected that the paper set in the paper tray was smaller than the specified size.	80
Toner Ended The number of rotations of the developer roller reached the upper limit when Continue Mode is set for the toner cartridge.		9B

Error Message	Description	Error codes
Toner Low	The number of rotations of the developer roller will reach the upper limit when Stop Mode is set for the toner cartridge.	67

Communication Error Codes

Code 1	Code 2	Cause	
10	07	No document detected when calling.	
10	08	Wrong number called.	
11	01	No dial tone detected before start of dialing.	
11	02	Busy tone detected before dialing.	
11	03	2nd dial tone not detected.	
11	05	No loop current detected.	
11	06	Busy tone detected after dialing or called.	
11	07	No response from the remote station in sending.	
11	10	Unobtainable tone detected after dialing.	
17	07	No response from the calling station in receiving.	
20	01	Unable to detect a flag field.	
20	02	Carrier was OFF for 200 ms or longer.	
20	03	Abort detected ("1" in succession for 7 bits or more).	
20	04	Overrun detected.	
20	05	A frame for 3 seconds or more received.	
20	06	CRC error in answerback.	
20	07	Echo command received.	
20	08	Invalid command received.	

Code 1	Code 2	Cause	
20	09	Command ignored once for document setting or for damping-out at turn- around transmission.	
20	0A	T5 time-out error	
20	ОВ	CRP received.	
20	0C	EOR or NULL received.	
20	OD	Corresponding command not received although the FIF command sending bit is ON.	
20	OE	EOR command received.	
32	01	Remote terminal only with V.29 capability in 2,400 or 4,800 bps transmission.	
32	02	Remote terminal not ready for polling.	
32	10	Remote terminal not equipped with password function or its password switch OFF.	
40	02	Illegal coding system requested.	
40	03	Illegal recording width requested.	
40	05	ECM requested although not allowed.	
40	06	Polled while not ready.	
40	07	No document to be sent when polled.	
40	10	Nation code or manufacturer code not correct.	
40	12	Retrieval attempted while not ready for retrieval.	
40	13	Polled by any other manufacturers' terminal while waiting for secure polling.	
40	14	Common key not registered although it needs to be used.	
40	17	Invalid resolution selected.	
63	02	Password not correct.	
63	03	Polling ID not correct.	
74	XX	DCN received.	

Code 1	Code 2	Cause	
80	01	Fallback impossible.	
90	01	Unable to detect video signals or commands within 6 seconds after CFR is ransmitted.	
90	02	Received PPS containing invalid page count or block count.	
AO	03	Error correction sequence not terminated even at the final transmission speed for fallback.	
A0	11	Receive buffer empty (5-second time-out).	
A0	12	Receive buffer full during operation except receiving into memory.	
A0	13	Decoding error continued on 500 lines or more.	
A0	14	Decoding error continued for 15 seconds or more.	
A0	15	Time-out: 13 seconds or more for one-line transmission.	
A0	16	RTC not found or carrier OFF detected for 6 seconds.	
A0	17	RTC found but no command detected for 60 seconds or more.	
A0	19	No video data to be sent.	
A8	01	RTN, PIN, or ERR received (sending terminal).	
A9	01	RTN, PIN, or ERR sent (receiving terminal).	
AA	18	Receive buffer full during receiving into memory.	
ВО	01	Polarity reversion detected.	
ВО	02	Unable to receive the next-page data.	
ВО	04	PC interface error.	
C0	01	No common modulation mode or failed to poll.	
C0	02	Unable to detect JM.	
C0	03	Unable to detect CM.	
C0	04	Unable to detect CJ.	
C0	10	Cannot finish V. 34 negotiation or training.	

Code 1	Code 2	Cause	
C0	11	Modem error detected during V. 34 negotiation or training.	
C0	20	Modem error detected during sending of commands.	
C0	21	Aodem error detected during receiving of commands.	
C0	22	Control channel connection time-out.	
C0	30	Nodem error detected during sending of video signals.	
C0	31	Modem error detected during receiving of video signals.	
FF	ХХ	Equipment error. (For XX, refer to page 257 "Error Codes".)	

Establishment of FAX communication:

FAX communication is established when the calling station receives a DIS (reception capability) signal from the called station and the called station receives a NSS or DCS (communications test) signal from the calling station.

Error Codes

Check the User Check items first. If an error cannot be resolved, follow the procedures in numerical order in the Step field.

Error code OB, OE and OF

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 10 to 18

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 19

Г

Replace Drum
Open the Front Cover, replace the Drum Unit. Refer to the User's Guide for instructions.

The drum reached the end of life while the WSW 78 selector 1 was set to ON.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 1A to 1D

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

_	_	_

An unidentified error occurred.

<User Check>

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 1E

Drum End Soon

The drum unit will reach the end of life soon.

<User Check>

• Prepare a new drum unit.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 1F to 23

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 24

Print Unable 24

Turn the power off and then back on again.

An error occurred in the internal temperature thermistor.

Step	Cause	Remedy
1	Connection failure of the internal temperature thermistor harness	Reconnect the internal temperature thermistor harness.
2	Internal temperature thermistor failure	Replace the internal temperature thermistor.

Step	Cause	Remedy
3	Main PCB failure	Replace the main PCB ASSY.

Error code 25 to 35

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 36

Print Unable 36

Turn the power off and then back on again.

An error occurred in the high voltage power supply PCB in the ready state.

Step	Cause	Remedy
1	Connection failure of the high voltage power supply PCB harness	Reconnect the high voltage power supply PCB harness.
2	High voltage power supply PCB failure	Replace the high voltage power supply PCB ASSY.
3	Main PCB failure	Replace the main PCB ASSY.

Error code 37 to 3A

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 3B

Print Unable 3B	
Turn the power off and then back on again.	

An error occurred during access to the DRAM in the main PCB.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 3C to 43

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 44

No Toner
Open the Front Cover, then install the Toner Cartridge.

The new toner sensor detected that the toner cartridge was not set.

<User Check>

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• Install the toner cartridge.

Step	Cause	Remedy
1	Connection failure of the new toner sensor harness	Reconnect the new toner sensor harness.
2	New toner sensor failure	Check the sensor performance following the procedure in page 146 "Operational Check of Sensors (Function code 32)". If any problem occurs, replace the new toner sensor PCB ASSY.
3	Main PCB failure	Replace the main PCB ASSY.

Error code 45 to 4F

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

6

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 50

The number of rotations of the drum unit has reached the life limit. (Printing does not stop.)

<User Check>

• Prepare a new drum unit.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 51 to 55

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 56

Cover is Open
Close the Fuser Cover which can be found behind the Back Cover of the machine.

The eject sensor detected that the fuser unit cover was open.

<User Check>

• Close the fuser unit cover properly.

Step	Cause	Remedy
1	Paper eject actuator catching on some position	Correct the position of the paper eject actuator.
2	Eject sensor PCB failure	Check the sensor performance following the procedure in page 146 "Operational Check of Sensors (Function code 32)". If any problem occurs, replace the eject sensor PCB ASSY.
3	Main PCB failure	Replace the main PCB ASSY.

Error code 57

This error does not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 58

Print Unable 58
Turn the power off and then back on again.

Any of errors 6A to 6D, 6F, 76 or 78 occurred when the power was turned ON or the machine goes back to the ready state from sleep mode.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Any fuser error occurs when started in the ready state.	Follow the "Remedy" of the error code that has reoccurred.

Error code 59

Self-Diagnostic

Will Automatically Restart within 15 minutes.

Rechecking the error after the power switch was turned OFF and then ON again because an error was detected by the center thermistor of the fuser unit. (Displayed for approximately 15 minutes when the power was turned OFF and then ON again after occurrence of error code 58)

Step	Cause	Remedy
1	Connection failure of the center thermistor harness of the fuser unit	Reconnect the center thermistor harness of the fuser unit.
2	Connection failure of the heater harness of the fuser unit	Reconnect the heater harness of the fuser unit.

Step	Cause	Remedy
3	Connection failure of the eject sensor PCB harness	Reconnect the eject sensor PCB harness.
4	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
5	Low voltage power supply PCB failure	Replace the low voltage power supply PCB ASSY.
6	Main PCB failure	Replace the main PCB ASSY.
7	Fuser unit failure	Replace the fuser unit.

CAUTION

 Turn OFF the power switch once, and after checking that the fuser unit sufficiently cools down, turn ON the power switch again and leave the machine for 10 minutes. Then, this problem may be cleared.

Error code 5A to 62

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 63

Replace Toner

Open the Front Cover, replace Toner Cartridge.

The number of rotations of the developer roller reached the upper limit when Stop Mode is set for the toner cartridge.

<User Check>

• Replace the toner cartridge with a new one.

• Press the [Menu] button. Next, press the [1] button and [7] button to clear the Stop Mode*, and shift to the Continue Mode.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

• When the machine is in the Stop Mode, LCD shows "REPLACE TONER" to guarantee the print quality. On the other hand, when the Continue Mode is turned ON, the end user can choose either to continue printing or replace the toner cartridge with a new one.

Error code 64 to 66

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

-

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 67

Toner Low	
Prepare New Toner Cartridge.	

The number of rotations of the developer roller will reach the upper limit when Stop Mode is set for the toner cartridge.

<User Check>

• Prepare a new toner cartridge.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 68 and 69

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 6A

Print Unable 6A	
Turn the power off and then back on again.	

The center thermistor of the fuser unit does not reach the specified temperature within the specified time.

Step	Cause	Remedy
1	Connection failure of the fuser unit harness	Reconnect the fuser unit harness.
2	Fuser unit failure	Replace the fuser unit.
3	Low voltage power supply PCB failure	Replace the low voltage power supply PCB ASSY.
4	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

Error code 6B

Print Unable 6B

Turn the power off and then back on again.

The center thermistor of the fuser unit does not reach the specified temperature within the specified time.

Step	Cause	Remedy
1	Connection failure of the fuser unit harness	Reconnect the fuser unit harness.
2	Fuser unit failure	Replace the fuser unit.
3	Low voltage power supply PCB failure	Replace the low voltage power supply PCB ASSY.
4	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

Error code 6C

Print Unable 6C

Turn the power off and then back on again.

The center thermistor of the fuser unit detected a temperature higher than the specified value.

Step	Cause	Remedy
1	Connection failure of the fuser unit harness	Reconnect the fuser unit harness.
2	Fuser unit failure	Replace the fuser unit.
3	Low voltage power supply PCB failure	Replace the low voltage power supply PCB ASSY.
4	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

Error code 6D

Print Unable 6D

Turn the power off and then back on again.

After the heat unit was heated normally, the center thermistor of the fuser unit detected a temperature lower than the specified value.

Step	Cause	Remedy
1	Connection failure of the fuser unit harness	Reconnect the fuser unit harness.
2	Fuser unit failure	Replace the fuser unit.
3	Low voltage power supply PCB failure	Replace the low voltage power supply PCB ASSY.
4	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

Error code 6E

This error does not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 6F

Print Unable 6F Turn the power off and then back on again.

The center thermistor or the side thermistor of the fuser unit detected a temperature error.

Step	Cause	Remedy
1	Connection failure of the fuser unit harness	Reconnect the fuser unit harness.
2	Fuser unit failure	Replace the fuser unit.
3	Low voltage power supply PCB failure	Replace the low voltage power supply PCB ASSY.

Step	Cause	Remedy
4	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

Error code 70

This error does not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 71

Print	Unabl	e 71
-------	-------	------

Turn the power off and then back on again.

Detected an error in the synchronized signal of the polygon motor for the laser unit.

<User Check>

• There is a possibility that the condensation has occurred. Turn OFF the power, and leave the machine at least one hour in a well-ventilated place. And then turn ON the power.

Step	Cause	Remedy
1	Correction value error of the laser unit	Enter the correction value of the laser unit correctly.
2	Connection failure of the laser unit flat cable	Reconnect the laser unit flat cable.
3	Main PCB failure	Replace the main PCB ASSY.
4	Laser unit failure	Replace the laser unit.

Error code 72

Print Unable 72

Turn the power off and then back on again.

Cannot detect the signal from the beam sensor for the laser unit.

<User Check>

• There is a possibility that the condensation has occurred. Turn OFF the power, and leave the machine at least one hour in a well-ventilated place. And then turn ON the power.

Step	Cause	Remedy
1	Correction value error of the laser unit	Enter the correction value of the laser unit correctly.
2	Connection failure of the laser unit flat cable	Reconnect the laser unit flat cable.
3	Main PCB failure	Replace the main PCB ASSY.
4	Laser unit failure	Replace the laser unit.

Error code 73 and 74

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

--

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 75

Cooling Down		
Wait for a while		

The internal temperature thermistor detected a temperature higher than the specified value.

<User Check>

• Leave the machine for a while as the power remains ON.

Step	Cause	Remedy
1	Internal temperature thermistor failure	Replace the internal temperature thermistor.
2	Main PCB failure	Replace the main PCB ASSY.

Error code 76

Print Unable 76
Turn the power off and then back on again.

The center thermistor of the fuser unit detected a temperature rise greater than the specified value within the specified time.

Step	Cause	Remedy
1	Fuser unit failure	Replace the fuser unit.
2	Low voltage power supply PCB failure	Replace the low voltage power supply PCB ASSY.
3	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
4	Main PCB failure	Replace the main PCB ASSY.

Error code 78

Print Unable 78

Turn the power off and then back on again.

The center thermistor of the fuser unit detected a temperature fall greater than the specified value within the specified time.

Step	Cause	Remedy
1	Fuser unit failure	Replace the fuser unit.
2	Low voltage power supply PCB failure	Replace the low voltage power supply PCB ASSY.

Step	Cause	Remedy
3	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
4	Main PCB failure	Replace the main PCB ASSY.

Error code 7A

Print Unable 7A

Turn the power off and then back on again.

Cannot detect the synchronized signal of the main motor. The speed of the main motor does not stabilize within the specified time.

Step	Cause	Remedy
1	Connection failure of the main motor flat cable	Reconnect the main motor flat cable.
2	Main motor failure	Replace the main motor.
3	Low voltage power supply PCB failure	Replace the low voltage power supply PCB ASSY.
4	Main PCB failure	Replace the main PCB ASSY.

Error code 7B and 7C

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 7D

Drum Error

Open the Front Cover and slide the blue tab across the Drum Unit several times.

Detected discharge that may be attributable to dirty corona wire on the drum unit.

<User Check>

- Clean the corona wire of the drum unit.
- Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Dirt on electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine.
2	High voltage power supply PCB failure	Replace the high voltage power supply PCB ASSY.
3	Main PCB failure	Replace the main PCB ASSY.

Error code 7E

This error does not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 7F

Size mismatch	
Fax received. Set correct paper size in menu.	

The paper size set on the machine is smaller than the specified fax size.

<User Check>

• Reset the paper size setting in menu.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 80

Size mismatch	
Reload correct paper, then press Start.	

The registration front sensor detected that the paper set in the paper tray was smaller than the specified size.

<User Check>

• Set the A4 size paper.

Step	Cause	Remedy
1	Registration front sensor failure	Replace the regist frame ASSY.
2	Main PCB failure	Replace the main PCB ASSY.

Error code 81 and 82

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 83



Replace the Drum Unit. Refer to the instructions in the carton of the new drum.

Detected discharge when the number of rotations of the drum has exceeded twice the life limit.

<User Check>

 Replace the drum unit with a new one and reset the drum counter. (Refer to page 172 "Parts Life Reset Function (Drum)".)

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 84

Jam Rear
Open the Back Cover and remove the jammed paper, then press Start.

The eject sensor remains ON (paper pass detected) for more than the specified time even after the registration rear sensor detected the end of paper pass.

<User Check>

• Check that the paper is not jammed. If jammed, remove it.

Step	Cause	Remedy
1	Foreign object in the feed system at the rear section of the machine	Remove the foreign object in the feed system at the rear section of the machine.
2	Paper eject actuator attachment failure	Reattach the paper eject actuator.
3	Coming off of the eject pinch roller R or L ASSY	Reattach the eject pinch roller R or L ASSY.
4	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

Error code 85 to 87

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 88

Jam Inside

Open the Front Cover, pull out the Drum Unit completely and remove the jammed paper.

The eject sensor does not detect paper pass after the registration rear sensor detected the end of paper pass.

<User Check>

• Check that the paper is not jammed. If jammed, remove it.

Step	Cause	Remedy
1	Connection failure of the eject sensor PCB ASSY harness	Reconnect the eject sensor PCB ASSY harness.
2	Paper eject actuator catching on some position	Correct the position of the paper eject actuator.
3	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
4	Fuser unit gear damaged	Replace the fuser unit.
5	Main PCB failure	Replace the main PCB ASSY.

Error code 89

This error does not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 8A

Г

Jam Tray
Remove the jammed paper from Tray, then press Start.

The registration front sensor does not detect paper pass within the specified time.

<User Check>

- Check that the paper is not jammed at the paper tray and the front cover.
- Adjust the paper guide corresponding to the paper size.
- Check that the thickness of the paper is 60 to 105 g/m2.
- Check that there is not too much paper set in the tray.

Step	Cause	Remedy
1	Coming off of the registration front actuator	Reattach the registration front actuator.
2	Connection failure of the registration front/rear sensor PCB ASSY harness	Reconnect the registration front/rear sensor PCB ASSY harness.
3	Registration front/rear sensor PCB failure	Check the performance of the registration front sensor and the registration rear sensor following the procedure in page 146 "Operational Check of Sensors (Function code 32)". If any problem occurs, replace the regist frame ASSY.
4	Main PCB failure	Replace the main PCB ASSY.

Error code 8B and 8C

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 8D

Cover is Open

Make sure there is no paper jammed inside the machine and close the Back Cover, then press Start.

When the power switch was turned ON, the eject sensor detected paper pass or detected that the fuser unit cover was open.

<User Check>

- Close the fuser unit cover.
- Remove the jammed paper around the back cover.

Step	Cause	Remedy
1	Paper eject actuator catching on some position	Correct the position of the paper eject actuator.
2	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
3	Main PCB failure	Replace the main PCB ASSY.

Error code 8E to 99

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 9A

Manual Feed		
Load Paper.		

The registration front sensor detected that there was no paper set in the manual feed slot when feeding from the manual feed slot was set.

<User Check>

• Load the paper into the manual feed slot.

Step	Cause	Remedy
1	Connection failure of the registration front/rear sensor PCB ASSY harness	Reconnect the registration front/rear sensor PCB ASSY harness.
2	Main PCB failure	Replace the main PCB ASSY.
3	Registration front sensor failure	Check the performance of the registration front sensor following the procedure in page 146 "Operational Check of Sensors (Function code 32)". If any problem occurs, replace the regist frame ASSY.

Error code 9B

Toner Ended

Open the Front Cover, replace Toner Cartridge.

The number of rotations of the developer roller reached the upper limit when Continue Mode is set for the toner cartridge.

<User Check>

• Replace the toner cartridge.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 9C

Replace Toner

Received faxes are also stored in memory until the toner cartridge is replaced or the memory is full.

The number of rotations of the developer roller will reach the upper limit soon when Continue Mode is set for the toner cartridge.

<User Check>

• Replace the toner cartridge with a new one.

Step	Cause	Remedy
1	New toner actuator catching on some position (when the error message does not disappear)	Correct the position of the new toner actuator.
2	Connection failure of the new toner sensor harness (when the error message does not disappear)	Reconnect the new toner sensor harness.
3	New toner sensor PCB failure (when the error message does not disappear)	Replace the new toner sensor PCB ASSY.
4	Main PCB failure	Replace the main PCB ASSY.

Error code 9D and 9E

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code 9F

| ----

The registration front sensor detected that the paper has run out when faxing or printing a list or report.

<User Check>

• Set the paper in the paper tray.

Step	Cause	Remedy
1	Registration front actuator catching on some position	Correct the position of the registration front actuator.
2	Connection failure of the registration front/rear sensor PCB ASSY harness	Reconnect the registration front/rear sensor PCB ASSY harness.
3	Registration front/rear sensor PCB failure	Replace the regist frame ASSY.
4	Low voltage power supply PCB failure	Replace the low voltage power supply PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

Error code A0

This error does not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

| ----

An unidentified error occurred.

<User Check>

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code A1

Cover is Open

Close the Front Cover.

The front cover sensor detected that the front cover was open.

<User Check>

• Check that the front cover is closed correctly.

Step	Cause	Remedy
1	Connection failure of the high voltage power supply PCB ASSY harness (Front cover sensor is mounted in high voltage power supply PCB ASSY.)	Reconnect the high voltage power supply PCB ASSY harness.
2	Part pressing the front cover sensor is broken, which is provided at inside of front cover	Replace the front cover ASSY.
3	Front cover sensor failure	Check the performance of the front cover sensor following the procedure in page 146 "Operational Check of Sensors (Function code 32)". If any problem occurs, replace the high voltage power supply PCB ASSY.
4	Main PCB failure	Replace the main PCB ASSY.

Error code A2

Document	Jam
----------	-----

Clear the scanner jam, then press the Stop Key.

The document scanning position sensor detected that the document length was 90 cm or more while scanning the document.

<User Check>

• Check that the document or the foreign object is not jammed in the ADF. If jammed, remove it.

Step	Cause	Remedy
1	Document scanning position actuator catching on some position	Correct the position of the document scanning position actuator.
2	Document scanning position sensor failure	Replace the panel PCB ASSY.
3	Main PCB failure	Replace the main PCB ASSY.

Error code A3

Г

Document Jam	
Clear the scanner jam, then press the Stop Key.	

The document scanning position sensor does not detect the leading edge of the document although the document has been fed for the specified distance.

<User Check>

• Check that the document is not jammed in the ADF. If jammed, remove it.

Step	Cause	Remedy
1	Document scanning position actuator catching on some position	Correct the position of the document scanning position actuator.
2	Connection failure of the document scanning position sensor harness	Reconnect the document scanning position sensor harness.
3	Document scanning position sensor failure	Replace the panel PCB ASSY.
4	Main PCB failure	Replace the main PCB ASSY.

Error code A4

Cover is Open

Close the Control Panel Cover.

The control panel cover sensor detected that the control panel cover was open.

<User Check>

284

• Close the control panel cover.

Step	Cause	Remedy
1	Coming off of the control panel cover sensor	Reattach the control panel cover sensor.
2	Connection failure of the control panel cover sensor harness	Reconnect the control panel cover sensor harness.
3	Control panel cover sensor failure	Replace the control panel cover sensor.
4	Deformation and/or breakage of the control panel cover	Replace the control panel cover ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

Error code A5

Scan Unable

Remove the original document. Turn the power off, then on again.

When scanning the fax, white or black compensation data for the CIS was not within the correct range.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Incorrect white level data	Execute page 158 "Acquisition of White Level Data/ Compensation of Scanning Width (Function code 55)".
2	CIS unit failure	Replace the CIS unit.
3	Main PCB failure	Replace the main PCB ASSY.

Error code A6

Scan Unable A6 See Troubleshooting and routine maintenance chapter in User's Guide. Although operation was retried due to error A5 that occurred while scanning the fax, white or black compensation data for the CIS was not within the correct range.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Incorrect white level data	Execute page 158 "Acquisition of White Level Data/ Compensation of Scanning Width (Function code 55)".
2	CIS unit failure	Replace the CIS unit.
3	Main PCB failure	Replace the main PCB ASSY.

Error code A7

Print Unable A7

Turn the power off and then back on again.

Color parameter in the ROM does not match the CIS.

Step	Cause	Remedy
1	Incorrect white level data	Execute page 158 "Acquisition of White Level Data/ Compensation of Scanning Width (Function code 55)".
2	CIS unit failure	Replace the CIS unit.
3	Main PCB failure	Replace the main PCB ASSY.

Error code A8

Scan Unable

See Troubleshooting and routine maintenance chapter in User's Guide.

An error was detected in the color parameter in the ROM during image processing.
Step	Cause	Remedy
1	Incorrect white level data	Execute page 158 "Acquisition of White Level Data/ Compensation of Scanning Width (Function code 55)".
2	CIS unit failure	Replace the CIS unit.
3	Main PCB failure	Replace the main PCB ASSY.

Error code A9 to AC

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code AD

Scan Unable	
Remove the original document. Turn the power off, then on again.	

Image processing cannot be completed correctly because the number of pixels required for image processing is insufficient in the scanned data.

Step	Cause	Remedy
1	CIS unit failure	Replace the CIS unit.
2	Main PCB failure	Replace the main PCB ASSY.

Error code AE and AF

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

6

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code BO

Scanner Error

Detected that the CIS harness was not inserted correctly.

Step	Cause	Remedy
1	Connection failure of the CIS unit harness	Reconnect the CIS unit harness.
2	CIS unit failure	Replace the CIS unit.
3	Main PCB failure	Replace the main PCB ASSY.

Error code B1

Scanner Error

Dark level offset data adjustment error for scanning.

* This error is indicated on the LCD in the maintenance mode.

Step	Cause	Remedy
1	CIS unit failure	Replace the CIS unit.
2	Main PCB failure	Replace the main PCB ASSY.

Error code B2

Scanner Error

Gain control data adjustment error for scanning.

* This error is indicated on the LCD in the maintenance mode.

Step	Cause	Remedy
1	CIS unit failure	Replace the CIS unit.
2	Main PCB failure	Replace the main PCB ASSY.

Error code B3 to B6

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy	
1	Main PCB failure	Replace the main PCB ASSY.	

Error code B7

Scanner Error

The voltage value was above the upper limit during scanning.

Step	Cause	Remedy
1	CIS unit failure	Replace the CIS unit.
2	Main PCB failure	Replace the main PCB ASSY.

Error code B8

The voltage value was below the lower limit during scanning.

Step	Cause	Remedy
1	CIS unit failure	Replace the CIS unit.

Step	Cause	Remedy	
2	Main PCB failure	Replace the main PCB ASSY.	

Error code B9

Scanner Error

The white level does not increase during scanning although the light intensity was increased.

Step	Cause	Remedy	
1	CIS unit failure	Replace the CIS unit.	
2	Main PCB failure	Replace the main PCB ASSY.	

Error code BA

This error does not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy	
1	Main PCB failure	Replace the main PCB ASSY.	

Error code BB

A white level not within the standard was scanned when function code 55 was executed.

Step	Cause	Remedy
1	Dirt on the pressure bar	Clean the pressure bar.
2	CIS unit failure	Replace the CIS unit.
3	Main PCB failure	Replace the main PCB ASSY.

Error code BC

This error does not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy	
1	Main PCB failure	Replace the main PCB ASSY.	

Error code BD

Scanner Error			

A black level not within the standard was scanned when function code 55 was executed.

Step	Cause	Remedy	
1	CIS unit failure	Replace the CIS unit.	
2	Main PCB failure	Replace the main PCB ASSY.	

Error code BE and BF

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

Step	Cause	Remedy	
1	Main PCB failure	Replace the main PCB ASSY.	

Error code CO

Scanner Error

The new toner sensor could not detect the new toner cartridge correctly.

<User Check>

• Install a new toner cartridge.

Step	Cause	Remedy	
1	Coming off of the new toner actuator	Reattach the new toner actuator.	
2	Connection failure of the new toner sensor harness	Reconnect the new toner sensor harness.	
3	New toner sensor failure	Replace the new toner sensor PCB ASSY.	
4	Main PCB failure	Replace the main PCB ASSY.	

Error code C1 to C6

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code C7

Out of Memory	
Press Stop key	

There is insufficient memory to expand PC-print data.

<User Check>

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code C8

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code C9 to CF

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code D1

Print Unable D1
See Troubleshooting and routine maintenance chapter in User's Guide.

An error occurred while initializing the modem.

<User Check>

• Turn OFF and ON the power and check that the machine recovers.

Step	Cause	Remedy
1	Modem PCB failure	Replace the modem PCB ASSY.
2	Main PCB failure	Replace the main PCB ASSY.

Error code D2 to DC

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code DD

Print	Unab	le DD
	CIIGD	

See Troubleshooting and routine maintenance chapter in User's Guide.

Fuser unit error (except error codes 6A to 6E, 76, 78, DE and E2)

<User Check>

Step	Cause	Remedy
1	Connection failure of the fuser unit harnesses	Reconnect the fuser unit harnesses.
2	Connection failure of the eject sensor PCB harness	Reconnect the eject sensor PCB harness.
3	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
4	Low voltage power supply PCB failure	Replace the low voltage power supply PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

Step	Cause	Remedy
6	Fuser unit failure	Replace the fuser unit.

Error code DE

Print Unable DE

Turn the power off and then back on again.

When the center thermistor of the fuser unit is higher than the idle temperature, the side thermistor detected a temperature lower than the specified temperature.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Connection failure of the center thermistor or side thermistor harness of the fuser unit	Reconnect the center thermistor or side thermistor harness.
2	Side thermistor or center thermistor failure	Replace the fuser unit.
3	Eject sensor PCB failure	Replace the eject sensor PCB ASSY.
4	Main PCB failure	Replace the main PCB ASSY.

Error code DF

This error does not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code E0

Print Unable EO

Turn the power off and then back on again.

An error occurred in the ROM check sum.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Firmware installation failure	Reinstall the latest firmware.
2	Main PCB failure	Replace the main PCB ASSY.

Error code E1

Print Unable E1

Turn the power off and then back on again.

Software bug

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code E2

Print Unable E2
Turn the power off and then back on again.

When the center thermistor of the fuser unit is higher than the idle temperature, the side thermistor detected a temperature higher than the specified temperature.

<User Check>

Step	Cause	Remedy
1	Connection failure of the center thermistor or side thermistor harness of the fuser unit	Reconnect the center thermistor or side thermistor harness.
2	Side thermistor or center thermistor failure	Replace the fuser unit.
3	Main PCB failure	Replace the main PCB ASSY.

Error code E3 and E4

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code E6

Print Unable E6
Turn the power off and then back on again.

Write error in the EEPROM of the main PCB

<User Check>

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code E7 to EB

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code EC

Print Un	able EC
Turn the	power off and then back on again.

Detected a main fan failure.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Connection failure of the main fan harness	Reconnect the main fan harness.
2	Connection failure of the high voltage power supply PCB harness	Reconnect the high voltage power supply PCB harness.
3	Main fan failure	Replace the main fan.
4	High voltage power supply PCB failure	Replace the high voltage power supply PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

Error code ED and EE

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code EF

Print Unable EF	
Turn the power off and then back on again.	

Unstable power supply was detected.

Step	Cause	Remedy
1	Irregular power supply detected	Replace the low voltage power supply PCB ASSY. Reset the irregular power supply detection counter following the procedure described in page 126 "If You Replace the Low Voltage Power Supply PCB ASSY".
2	Main PCB failure	Replace the main PCB ASSY.

- The irregular power supply detection error (error code EF) occurs when there is a large distortion in the power supply voltage supplied to the machine.
- In this case, if the same power supply is used, the same error may occur even when the low voltage power supply PCB ASSY is replaced. Ask the user to review the installation environment.

Error code F0

Print Unable

Turn the power off and then back on again.

Malfunction of the flash memory on the main PCB

<User Check>

6

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Malfunction of firmware	Rewrite the latest firmware.
2	Main PCB failure	Replace the main PCB ASSY.

Error code F1 to F8

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

• Turn OFF the power switch, and turn it ON again after a while.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Error code F9

Machine Error F9

The country code was not entered properly.

Step	Cause	Remedy
1	Power turned OFF while the function code 74 is being executed and "PARAMETER INIT" is being displayed.	Re-enter the country code. (Refer to page 160 "Setting by Country (Function code 74)")

Error code FA to FF

These errors do not usually occur in the normal use. The conceivable causes are noise around the installation site, fluctuation of the power supply voltage, and failures in the software.

An unidentified error occurred.

<User Check>

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.

Paper Feeding

Problems related to paper feeding are end user recoverable if following the User Check items. If the same problem occurs, follow each procedure in the order of the number described in the Step column in the tables below

Pickup function of paper tray does not work

Step	Cause	Remedy
1	Link arm catching on some position	Correct the position of the link arm.
2	Pick-up roller ASSY catching on some position	Correct the position of the pick-up roller ASSY.
3	Connection failure of the main motor harness	Reconnect the main motor harness.
4	Plate-up gear (gear Z19M10 or lift gear 46) failure	Replace the plate-up gear (gear Z19M10 or lift gear 46).
5	Main motor failure	Replace the main motor.
6	Low voltage power supply PCB failure	Replace the low voltage power supply PCB ASSY.
7	Main PCB failure	Replace the main PCB ASSY.

No feeding

Cannot detect paper when feeding.

- Check that the paper tray is loaded correctly.
- Check that the paper is loaded into the paper tray correctly.
- Check that the paper smaller than the specified size is not loaded.
- Adjust the paper guide corresponding to the position of paper guide.
- Check that there is not too much paper set in the tray.
- Clean the surface of the separation pad or pick-up/separate roller.

Step	Cause	Remedy
1	Attachment failure of the link arm and pick-up roller ASSY	Reattach the link arm and pick-up roller ASSY.
2	Connection failure of the T1 clutch ASSY harness	Reconnect the T1 clutch ASSY harness.
3	Connection failure of the registration front sensor PCB harness.	Reconnect the registration front sensor PCB harness.
4	Pick-up roller failure	Replace the paper feeding kit.
5	Plate-up gear (gear Z19M10 or lift gear 46) failure	Replace the plate-up gear (gear Z19M10 or lift gear 46).
6	T1 clutch ASSY failure	Replace the T1 clutch ASSY.
7	Main PCB failure	Replace the main PCB ASSY.
8	Registration front sensor PCB failure	Check the sensor performance following the procedure in page 146 "Operational Check of Sensors (Function code 32)" If any problem occurs, replace the regist frame ASSY.

Double feeding

<User Check>

- Check that the paper is loaded into the paper tray correctly.
- Check that the thickness of the paper is 60 to 105 g/m2.
- Clean the separation pad.
- Check that too much paper is not loaded in each tray.
- Check that the backside of used paper or damp (wet) paper is not used.

Step	Cause	Remedy
1	Pick-up roller failure	Replace the paper feeding kit.

Dirt on paper

- Replace the toner cartridge with a new one.
- Check that the drum unit or corona wire is not dirty, installation environment is appropriate, and the corona wire cleaning lever is at the specified position.

Step	Cause	Remedy
1	Fuser unit dirty	Clean the entrance of the fuser unit, or clean the pressure roller.
2	Paper eject roller dirty	Clean the eject roller.

Paper feeding at an angle

<User Check>

- Check that the paper is loaded into the paper tray correctly.
- Adjust the paper guide corresponding to the paper size.
- Check that there is not too much paper set in the tray.
- Check that the thickness of the paper is 60 to 105 g/m2.
- Remove the protective sheet of the bottom side of the drum unit.
- Check that the backside of used paper or damp (wet) paper is not used.

Step	Cause	Remedy
1	Registration clutch ASSY failure	Replace the registration clutch ASSY.
2	Main PCB failure	Replace the main PCB ASSY.

Wrinkles or creases

- Check that the paper is not damp.
- Check that the paper is loaded into the paper tray correctly.
- Check that the thickness of the paper is 60 to 105 g/m2.
- Turn over the stack of paper in the paper tray, or try rotating the paper 180 degrees in the paper tray.
- Turn the green envelope levers in the direction of the black arrow.

Step	Cause	Remedy
1	Foreign object inside the fuser unit	Remove the foreign object inside the fuser unit.
2	Fuser unit failure	Replace the fuser unit.



h560e2130

Curl in the paper

- Choose Reduce Paper Curl mode in the driver.
- Turn the anti-curl levers in the direction of the black arrow.

Step	Cause	Remedy
1	Fuser unit failure	Replace the fuser unit.



Image Defects

Light



h560e2135

- Check the machine's environment. High temperature and high humidity or low temperature and low humidity conditions can cause this problem.
- If the whole page is light, toner save mode may be ON. Turn OFF the toner save mode.
- Adjust the density by the Density Adjustment.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one. Replacing the used toner cartridge with a relatively new used toner cartridge can cause this problem.
- Check that condensation has not formed in the machine or the installation location is appropriate.

Step	Cause	Remedy
1	Dirt on electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine.
2	Developing bias failure	Reset the counter for the developer roller.
3	High voltage power supply PCB failure	Replace the high voltage power supply PCB ASSY.
4	Laser unit failure	Replace the laser unit.
5	Main PCB failure	Replace the main PCB ASSY.





Electrodes location of the machine



h560e2137

<How to clean the electrodes>

Turn OFF the power switch. Unplug the power cord from the AC power outlet, and leave the machine for a few minutes. Then, wipe the electrodes above carefully with a dry lint-free cloth. Be careful not to change the shapes of the electrodes.

Faulty registration



h560e2132

<User Check>

• Check that the appropriate media type is selected in the driver.

Step	Cause	Remedy
1	Adjusted value of the laser unit is incorrect.	Refer to page 124 "If You Replace the Laser Unit", and enter the adjusted value of the laser unit again.
2	Registration rear actuator catching on some position	Correct the position of the registration rear actuator.

Dark



h560e2133

- Check the machine's environment. High temperature and high humidity or low temperature and low humidity conditions can cause this problem.
- Adjust the density by the Density Adjustment.
- Clean the corona wire of the drum unit.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one. Replacing the relatively new toner cartridge with a used toner cartridge can cause this problem.

• If this problem occurs immediately after deep sleep mode is released, install the latest firmware. If installing the firmware is not possible, open and close the front cover, and then retry printing after the main motor has stopped.

Step	Cause	Remedy
1	Dirt on electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine.
2	High voltage power supply PCB failure	Replace the high voltage power supply PCB ASSY.
3	Laser unit failure	Replace the laser unit.
4	Main PCB failure	Replace the main PCB ASSY.

Poor fixing



h560e2134

- Check the machine's environment. High temperature and high humidity or low temperature and low humidity conditions can cause this problem.
- Clean the corona wire of drum unit.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Return the green envelope levers to the home position.
- Remove the elastic band from the drum unit.

Step	Cause	Remedy
1	Fuser unit failure	Replace the fuser unit.
2	Laser unit failure	Replace the laser unit.
3	Low voltage power supply PCB failure	Replace the low voltage power supply PCB ASSY.

Step	Cause	Remedy
4	Main PCB failure	Replace the main PCB ASSY.

Completely blank



h560e2138

- Check the machine's environment. High temperature and high humidity or low temperature and low humidity conditions can cause this problem.
- Clean the corona wire of drum unit.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Remove the elastic band from the drum unit.

Step	Cause	Remedy
1	Dirt on electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine.
2	Connection failure of the scanner harness of the laser unit	Reconnect the scanner harness of the laser unit.
3	Laser unit attachment failure	Reattach the laser unit.
4	Laser unit failure	Replace the laser unit.
5	High voltage power supply PCB failure	Replace the high voltage power supply PCB ASSY.
6	Main PCB failure	Replace the main PCB ASSY.

Image distortion



h560e2139

Step	Cause	Remedy
1	Laser unit attachment failure	Attach the laser unit correctly and secure the screw.
2	Laser unit failure	Replace the laser unit.
3	Main PCB failure	Replace the main PCB ASSY.

All black



h560e2140

- Clean the corona wire of the drum unit.
- Replace the drum unit with a new one.

Step	Cause	Remedy
1	Dirt on electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine.
2	Connection failure of the scanner harness of the laser unit	Reconnect the scanner harness of the laser unit.
3	Earth plate connection failure	Reconnect the earth plate between the laser unit and develop drive sub ASSY securely, and secure the screw.

Step	Cause	Remedy
4	High voltage power supply PCB failure	Replace the high voltage power supply PCB ASSY.
5	Laser unit failure	Replace the laser unit.
6	Main PCB failure	Replace the main PCB ASSY.

Dirt on the back of paper



h560e2141

<User Check>

• This problem may disappear after printing approximately 10 pages of completely blank sheets.

Step	Cause	Remedy
1	Dirt on the fuser unit	Replace the fuser unit.
2	Dirt in the paper feed system	Wipe off the dirt.

Vertical streaks



h560e2142

<User Check>

• This problem may occur with noise which is caused by dirt on the corona wire in the drum unit. In this case, clean the corona wire.

- If the same problem occurs after printing a few pages, the adhesive of the label or the like, paper powder or dirt may be attached on the surface of the exposure drum. Wipe off the dirt on the exposure drum. (Refer to User's Guide, and perform the Drum Cleaning.)
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- The corona wire cleaning lever is not at the home position.

Step	Cause	Remedy
1	Dirt in the paper feed system	Wipe off the dirt.
2	Dirt on the heat roller	Clean the heat roller in the following procedures.
3	Scratch on the heat roller	Replace the fuser unit.

If the machine prints the same pattern, especially including vertical streaks, continuously, black
vertical streaks may appear on the paper since the electrostatic performance of the exposure drum
is decreased temporally.

How to clean the heat roller

1. Create a completely black pattern as shown below using Microsoft Word, PowerPoint or other application, and print it on the paper set in the paper tray.



H560e2154

- 2. Set this paper in the paper tray with the printed surface (all black) facing down.
- 3. Print a completely white pattern on it.



4. Print any image on another sheet of paper and check that there is no dirt on the paper.

- 5. If there is dirt on the paper, repeat steps 2) to 4).
- 6. When dirt still appears even after steps 2) to 4) are repeated several times, replace the fuser unit.

Black vertical streaks in a light background



h560e2143

<User Check>

- Clean inside the machine and the corona wire of the drum unit.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.

Black horizontal stripes



h560e2144

- Clean inside the machine and the corona wire of the drum unit.
- When the horizontal stripes appear at intervals of 94.2 mm, replace the drum unit with a new one.
- The paper tray earth spring on the machine side may be dirty. Clean it with a dry cloth.
- Toner attached on the developer roller (horizontal stripes at intervals of 32.5 mm). This problem will disappear by printing approximate 10 pages. If the same problem occurs, replace the toner cartridge.

6. Troubleshooting

Step	Cause	Remedy
1	Dirt on electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine.
2	Bend of tray earth spring	 Correct bending of the tray earth spring [A]. Replace the paper tray.
3	Scratch or dirt on the heat roller (horizontal stripes at intervals of 53.4 mm)	Replace the fuser unit.
4	High voltage power supply PCB failure	Replace the high voltage power supply PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.



• Image defects which appear periodically may be caused by failure of rollers. Refer to the table below and determine the cause based on the diameter of the rollers or the pitch at which defects appear in the image.

No.	Parts name	Diameter	Pitch at which defects appear in the image
1	Developer roller	ø 16 mm	32.5 mm

No.	Parts name	Diameter	Pitch at which defects appear in the image
2	Exposure drum	ø 30 mm	94.2 mm
3	Heat roller in the fuser unit	ø 17 mm	53.4 mm
4	Pressure roller in the fuser unit	ø 25 mm	78.5 mm

White vertical streaks



h560e2146

<User Check>

- Check that there is no dust in the clearance between the toner cartridge and the drum unit.
- Replace the toner cartridge with a new one.
- Check the machine's environment. High temperature and high humidity or low temperature and low humidity conditions can cause this problem.
- Damp (wet) paper may be used. Change the paper with undamped one.
- Replace the drum unit with a new one.
- Leave the machine for a while with the power switch ON.

Step	Cause	Remedy
1	Laser unit failure	Replace the laser unit.

White horizontal streaks



h560e2147

<User Check>

- This problem may disappear after printing several sheets of paper. When the machine has not been used for a long time, try printing several sheets of paper.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.

Step	Cause	Remedy
1	Dirt on electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine.

Faint print



h560e2148

- Check that the machine is installed on a level surface.
- Replace the toner cartridge with a new one.

Step	Cause	Remedy
1	Main PCB failure	Replace the main PCB ASSY.
2	Laser unit failure	Replace the laser unit.
3	Fuser unit failure	Replace the fuser unit.

White spots



h560e2149

<User Check>

- When the white spots appear at intervals of 32.5 mm, replace the toner cartridge with a new one.
- If the same problem occurs after printing a few pages, the adhesive of the label or the like, paper powder or dirt may be attached on the surface of the exposure drum. Wipe off the dirt on the exposure drum. (Refer to User's Guide, and perform the Drum Cleaning.)
- When the white spots appear at intervals of 94.2 mm, replace the drum unit with a new one.

Step	Cause	Remedy
1	Dirt on electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine.
2	High voltage power supply PCB failure	Replace the high voltage power supply PCB ASSY.
3	Main PCB failure	Replace the main PCB ASSY.

Black spots or dirt



h560e2150

- When the black spots appear at intervals of 32.5 mm, replace the toner cartridge with a new one.
- If the same problem occurs after printing a few pages, the adhesive of the label or the like, paper powder or dirt may be attached on the surface of the exposure drum. Wipe off the dirt on the exposure drum. (Refer to User's Guide, and perform the Drum Cleaning.)
- When the black spots appear at intervals of 94.2 mm, replace the drum unit with a new one.

Step	Cause	Remedy
1	Dirt on electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine.
2	Dirt on the heat roller	Refer to "How to clean the heat roller" to clean the heat roller.
3	Scratch on the heat roller (black spots at intervals of 53.4 mm)	Replace the fuser unit.
4	High voltage power supply PCB failure	Replace the high voltage power supply PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

Black band



h560e2151

- Clean inside the machine and the corona wire of the drum unit. If the same problem occurs after cleaning, replace the drum unit with a new one.
- The paper tray earth spring on the machine side may be dirty. Clean it with a dry cloth.

Step	Cause	Remedy
1	Bend of tray earth spring	1. Correct bending of the tray earth spring.
		2. Replace the paper tray.

Downward fogging of solid color



H560e2152

<User Check>

• Replace the toner cartridge with a new one.

Step	Cause	Remedy
1	High voltage power supply PCB failure	Replace the high voltage power supply PCB ASSY.
2	Main PCB failure	Replace the main PCB ASSY.

Horizontal lines

H560e2153

- The paper tray earth spring on the machine side may be dirty. Clean it with a dry cloth.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.

Step	Cause	Remedy
1	Dirt on electrodes of the drum unit and those of the machine	Clean the electrodes of the drum unit and those of the machine.
2	Bend of tray earth spring	 Correct bending of the tray earth spring. Replace the paper tray.

Step	Cause	Remedy
3	Laser unit failure	Replace the laser unit.
4	Scratch and dirt on the heat roller (horizontal lines at intervals of 53.4 mm)	Replace the fuser unit.

Ghost



h560e2156

<User Check>

- Check the machine's environment. High temperature and high humidity or low temperature and low humidity conditions can cause this problem.
- Choose Reduce Ghosting mode in the driver.
- Replace the drum unit with a new one.

Step	Cause	Remedy
1	High voltage power supply PCB failure	Replace the high voltage power supply PCB ASSY.
2	Main PCB failure	Replace the main PCB ASSY.

Fogging



h560e2157

<User Check>

• This problem may disappear after printing approximately 10 pages of completely blank sheets.
- Replace the drum unit with a new one.
- Replace the toner cartridge with a new one.
- Do not use acid paper.

Step	Cause	Remedy
1	High voltage power supply PCB failure	Replace the high voltage power supply PCB ASSY.
2	Main PCB failure	Replace the main PCB ASSY.

• This problem often occurs when the drum unit or toner cartridge is nearly at the end of life.

Software Setting

The end user can solve problems pertaining to software, for instance, print cannot be made from a computer although test print and Printer Settings print can be made from the machine, by following the User Check items. If the same problem occurs, follow each procedure in the order of the number described in the Step column in the tables below.

Cannot print data

<User Check>

- Check that the USB cable is not damaged.
- Check that the correct machine is selected if you have an interface switching device.
- Check the descriptions on the software setting in the User's Guide.
- Reset the machine back to its default printer settings. (Refer to the following operations.)

Step	Cause	Remedy
1	Machine connection	For Macintosh, check the product ID*. When it is wrong, install the firmware.
2	Main PCB failure	Replace the main PCB ASSY.

* Check the product ID on a Macintosh as follows:

- 1. Select the "About This Mac" from the "Apple" menu.
- 2. Press the "More Info..." button in the "About This Mac" dialogue box.
- 3. Select the "USB" at the bottom of "Hardware" in left side "Content".
- 4. Select the "FAX-XXXX" in the "USB Device Tree".
- 5. Check the "Product ID" under or "FAX-XXXX".

Document Feeding

No feeding

<User Check>

- Set the document so that it contacts the rear of the tray, and check that LCD display varies.
- Check that the number of the documents complies with the specifications in the specification list.
- Close the control panel cover properly.
- Check that the document is within the specifications.

Step	Cause	Remedy
1	Document detection actuator catching on some position	Correct the position of the document detection actuator.
2	Connection failure of the ADF motor harness	Reconnect the ADF motor harness.
3	Control panel cover sensor malfunction	Check the sensor performance following the procedure in page 146 "Operational Check of Sensors (Function code 32)". If any problem occurs, replace the control panel cover sensor.
4	Document separation roller failure	Replace the document separation roller.
5	ADF motor failure	Replace the ADF motor.
6	Main PCB failure	Replace the main PCB ASSY.

Double feeding

- Check that the paper thinner than the specification is not used for the document.
- Flip through the paper and reset it.
- Check that the backside of used paper or damp (wet) paper is not used.

Step	Cause	Remedy
1	Separation pad ASSY worn out	Replace the separation pad ASSY.

Wrinkles

- Check that the document is loaded into the ADF correctly.
- Check that the document guide matches the document size.
- Check that the document is not curled.

Step	Cause	Remedy
1	Separation pad ASSY failure	Replace the separation pad ASSY.
2	Document feed roller failure	Replace the document feed roller.

Scanning Image Defects

Light



h560e2135

<User Check>

- Check that the setting of the contrast does not become light.
- Clean the CIS glass.

Step	Cause	Remedy
1	Incorrect white level data	Perform the acquisition of white level data. (page 158 "Acquisition of White Level Data/ Compensation of Scanning Width (Function code 55)")
2	CIS unit failure	Replace the CIS unit.
3	Main PCB failure	Replace the main PCB ASSY.

Faulty registration



h560e2132

Step	Cause	Remedy
1	Scan start position misalignment	Perform the fine adjustment of scan start position. (page 157 "Fine Adjustment of Scan Start/End Positions (Function code 54)")

6. Troubleshooting

Step	Cause	Remedy
2	Document scanning position actuator catching on some position	Correct the position of the document scanning position actuator.

Dark or bluish white



h560e2133

<User Check>

- Check that the setting of the contrast does not become dark.
- If this problem occurs immediately after deep sleep mode is released, install the latest firmware. If installing the firmware is not possible, open and close the front cover, and then retry printing after the main motor has stopped.

Step	Cause	Remedy
1	Incorrect white level data	Perform the acquisition of white level data. (page 158 "Acquisition of White Level Data/ Compensation of Scanning Width (Function code 55)")
2	CIS unit failure	Replace the CIS unit.
3	Main PCB failure	Replace the main PCB ASSY.

Completely blank



h560e2138

<User Check>

• Check that the document is not reversed.

Step	Cause	Remedy
1	CIS unit failure	Replace the CIS unit.
2	Main PCB failure	Replace the main PCB ASSY.

Vertical streaks



h560e2142

<User Check>

• Check that the CIS glass is not stained.

Step	Cause	Remedy
1	CIS unit failure	Replace the CIS unit.

White vertical streaks



h560e2146

<User Check>

• Check that the CIS glass is not stained.

Step	Cause	Remedy
1	Incorrect white level data	Perform the acquisition of white level data. (page 158 "Acquisition of White Level Data/ Compensation of Scanning Width (Function code 55)")
2	CIS unit failure	Replace the CIS unit.

Control Panel

Nothing is displayed on the LCD

<User Check>

• Check that the power switch is turned ON.

Step	Cause	Remedy
1	AC cord failure	Replace the AC cord.
2	Connection failure of the panel PCB harness	Reconnect the panel PCB harness.
3	Connection failure of the LCD harness	Reconnect the LCD harness.
4	LCD failure	Replace the LCD.
5	Low voltage power supply PCB failure	Replace the low voltage power supply PCB ASSY.
6	Panel PCB failure	Replace the panel PCB ASSY.
7	Main PCB failure	Replace the main PCB ASSY.

The control panel does not work

<User Check>

• Turn the power OFF and ON.

Step	Cause	Remedy
1	Panel unit attachment failure	Reattach the panel unit.
2	Connection failure of the panel PCB harness	Reconnect the panel PCB harness.
3	Rubber key failure	Replace the rubber key.
4	Panel PCB failure	Replace the panel PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

Lamp malfunction

Step	Cause	Remedy
1	Connection failure of the panel PCB harness	Reconnect the panel PCB harness.
2	Panel PCB failure	Replace the panel PCB ASSY.
3	Main PCB failure	Replace the main PCB ASSY.

FAX Problems

FAX cannot be sent

<User Check>

• Check that the telephone cord is securely inserted into the socket.

Step	Cause	Remedy
1	Connection failure of the modem PCB flat cable	Reconnect the modem PCB flat cable.
2	Connection failure of the panel PCB harness	Reconnect the panel PCB harness.
3	Rubber key connection failure	Replace the rubber key.
4	Modem PCB failure	Replace the modem PCB ASSY.
5	Panel PCB failure	Replace the panel PCB ASSY.
6	Main PCB failure	Replace the main PCB ASSY.

FAX cannot be received

- Check that the telephone cord is securely inserted into the socket.
- Check that the reception mode setting is correct.
- Check that the paper is loaded into the paper tray correctly.

Step	Cause	Remedy
1	Connection failure of the modem PCB flat cable	Reconnect the modem PCB flat cable.
2	Modem PCB failure	Replace the modem PCB ASSY.
3	Main PCB failure	Replace the main PCB ASSY.

Communication error occurs

Step	Cause	Remedy
1	Modem PCB failure	Replace the modem PCB ASSY.
2	Main PCB failure	Replace the main PCB ASSY.

Caller ID is not displayed

Step	Cause	Remedy
1	Modem PCB failure	Replace the modem PCB ASSY.

Others

The machine is not turned ON or the LCD indication does not appear

Step	Cause	Remedy
1	AC cord failure	Replace the AC cord.
2	Connection failure of the panel PCB harness	Reconnect the panel PCB harness.
3	Connection failure of the LCD harness	Reconnect the LCD harness.
4	LCD failure	Replace the LCD.
5	Low voltage power supply PCB ASSY failure	Replace the low voltage power supply PCB ASSY.
6	Panel PCB failure	Replace the panel PCB ASSY.
7	High voltage power supply PCB failure	Replace the high voltage power supply PCB ASSY.
8	Main PCB failure	Replace the main PCB ASSY.

Main fan does not rotate

Step	Cause	Remedy
1	Connection failure of the main fan harness	Reconnect the main fan harness.
2	Connection failure of the high voltage power supply PCB harness	Reconnect the high voltage power supply PCB harness.
3	Main fan failure	Replace the main fan.
4	High voltage power supply PCB failure	Replace the high voltage power supply PCB ASSY.
5	Main PCB failure	Replace the main PCB ASSY.

The room temperature is high or low

- Adjust the room temperature to 10°C to 30°C.
- Check that the exhaust opening is not blocked.

Step	Cause	Remedy
1	Internal temperature thermistor failure	Replace the internal temperature thermistor.
2	Main PCB failure	Replace the main PCB ASSY.

6. Troubleshooting

7. Energy Saving

Energy Save

Sleep Modes

Customers should use the sleep mode properly, to save energy and protect the environment.



The area shaded in this diagram represents the amount of energy that is saved when the timer is at the default settings. If the timers are changed, then the energy saved will be different. For example, if the timers are all set to 50 min., the grey area will disappear, and no energy is saved before 50 min. expires.

Timer Settings

The user can set this timer with User Tools (Menu > 1.General Setup >4.Ecology> 2. Sleep Time)

• Sleep timer (0 - 50 min): Default setting: 3 minutes

Return to Stand-by Mode

Sleep Mode

Recovery time.

• Max 7 sec.

Recommendation

We recommend that the default setting should be kept.

- If the customer requests that this setting should be changed, please explain that their energy costs could increase, and that they should consider the effects on the environment of extra energy use.
- If it is necessary to change the setting, please try to make sure that the Sleep timer is not too long. Try with a shorter setting first, such as 10 min., then go to a longer one (such as 30 min.) if the customer is not satisfied.
- If the timer is set to the maximum value, the machine will not begin saving energy until 50 minutes has expired after the last job. This means that after the customer has finished using the machine for the day, energy will be consumed that could otherwise be saved.