

SERVICE MANUAL

FIELD SERVICE

magicolor 4650EN magicolor 4650DN

2008.01 KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. Ver. 2.0

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magicolor 4650EN/4650DN main body

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SAFETY AND IMPORTANT WARNING ITEMS

Read carefully the safety and important warning Items described below to understand them before doing service work.

IMPORTANT NOTICE

Because of possible hazards to an inexperienced person servicing this product as well as the risk of damage to the product, KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. (hereafter called the KMBT) strongly recommends that all servicing be performed only by KMBT-trained service technicians.

Changes may have been made to this product to improve its performance after this Service Manual was printed. Accordingly, KMBT does not warrant, either explicitly or implicitly, that the information contained in this service manual is complete and accurate.

The user of this service manual must assume all risks of personal injury and/or damage to the product while servicing the product for which this service manual is intended.

Therefore, this service manual must be carefully read before doing service work both in the course of technical training and even after that, for performing maintenance and control of the product properly.

Keep this service manual also for future service.

DESCRIPTION ITEMS FOR DANGER, WARNING AND CAUTION

In this service manual, each of three expressions " $\underline{\land}$ DANGER", " $\underline{\land}$ WARNING", and " $\underline{\land}$ CAUTION" is defined as follows together with a symbol mark to be used in a limited meaning.

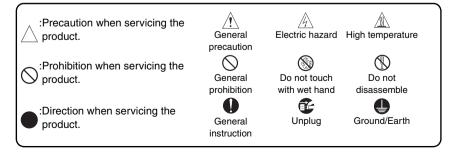
When servicing the product, the relevant works (disassembling, reassembling, adjustment, repair, maintenance, etc.) need to be conducted with utmost care.

 $_{
m b}$ DANGER: Action having a high possibility of suffering death or serious injury

WARNING: Action having a possibility of suffering death or serious injury

CAUTION: Action having a possibility of suffering a slight wound, medium trouble, and property damage

Symbols used for safety and important warning items are defined as follows:



SAFETY WARNINGS

[1] MODIFICATIONS NOT AUTHORIZED BY KONICA MINOLTA BUSINESS TECHNOLOGIES, INC.

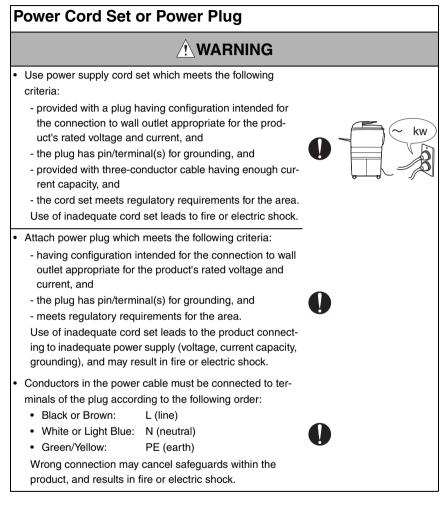
KONICA MINOLTA brand products are renowned for their high reliability. This reliability is achieved through high-quality design and a solid service network.

Product design is a highly complicated and delicate process where numerous mechanical, physical, and electrical aspects have to be taken into consideration, with the aim of arriving at proper tolerances and safety factors. For this reason, unauthorized modifications involve a high risk of degradation in performance and safety. Such modifications are therefore strictly prohibited. the points listed below are not exhaustive, but they illustrate the reasoning behind this policy.

F	Prohibited Actions		
•	Using any cables or power cord not specified by KMBT.	\bigcirc	
•	Using any fuse or thermostat not specified by KMBT. Safety will not be assured, leading to a risk of fire and injury.	\bigcirc	
•	Disabling fuse functions or bridging fuse terminals with wire, metal clips, solder or similar object.	\bigcirc	
•	Disabling relay functions (such as wedging paper between relay contacts)	\bigcirc	
•	Disabling safety functions (interlocks, safety circuits, etc.) Safety will not be assured, leading to a risk of fire and injury.	\bigcirc	(Jacob)
•	Making any modification to the product unless instructed by KMBT	\bigcirc	
•	Using parts not specified by KMBT	\bigcirc	or [®]

[2] POWER PLUG SELECTION

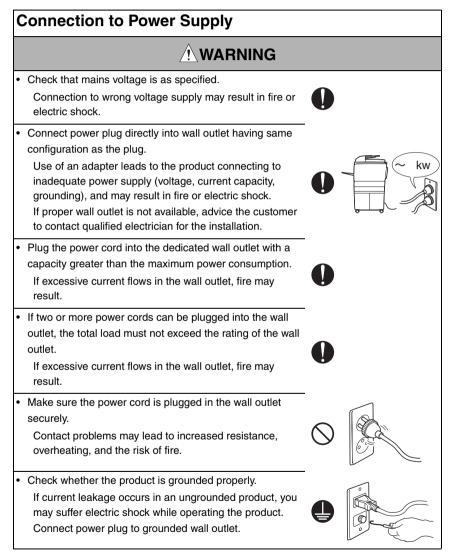
In some countries or areas, the power plug provided with the product may not fit wall outlet used in the area. In that case, it is obligation of customer engineer (hereafter called the CE) to attach appropriate power plug or power cord set in order to connect the product to the supply.



[3] CHECKPOINTS WHEN PERFORMING ON-SITE SERVICE

KONICA MINOLTA brand products are extensively tested before shipping, to ensure that all applicable safety standards are met, in order to protect the customer and customer engineer (hereafter called the CE) from the risk of injury. However, in daily use, any electrical equipment may be subject to parts wear and eventual failure. In order to maintain safety and reliability, the CE must perform regular safety checks.

1. Power Supply



Pc	ower Plug and Cord		
	WARNING		
tl ir V	Vhen using the power cord set (inlet type) that came with his product, make sure the connector is securely inserted in the inlet of the product. When securing measure is provided, secure the cord with he fixture properly. If the power cord (inlet type) is not connected to the prod- uct securely, a contact problem may lead to increased resistance, overheating, and risk of fire.	0	
	Check whether the power cord is not stepped on or inched by a table and so on. Overheating may occur there, leading to a risk of fire.	\bigcirc	
	Check whether the power cord is damaged. Check whether the sheath is damaged. If the power plug, cord, or sheath is damaged, replace with a new power cord (with plug and connector on each end) specified by KMBT. Using the damaged power cord may result in fire or electric shock.	0	0
	Do not bundle or tie the power cord. Overheating may occur there, leading to a risk of fire.	\bigcirc	
а	Check whether dust is collected around the power plug and wall outlet. Using the power plug and wall outlet without removing dust may result in fire.	0	
	Do not insert the power plug into the wall outlet with a wet and. The risk of electric shock exists.		
С	Vhen unplugging the power cord, grasp the plug, not the able. The cable may be broken, leading to a risk of fire and electric shock.	0	0

Wiring

WARNING Never use multi-plug adapters to plug multiple power cords in the same outlet. If used, the risk of fire exists. When an extension cord is required, use a specified one. Current that can flow in the extension cord is limited, so using a too long extension cord may result in fire. Do not use an extension cable reel with the cable taken up. Fire may result.

2. Installation Requirements

Prohibited Installation Places

WARNING

• Do not place the product near flammable materials or volatile materials that may catch fire.

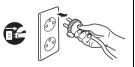
A risk of fire exists.

- Do not place the product in a place exposed to water such as rain.
 - A risk of fire and electric shock exists.

When not Using the Product for a long time

WARNING

• When the product is not used over an extended period of time (holidays, etc.), switch it off and unplug the power cord.



Dust collected around the power plug and outlet may cause fire.

Ventilation

 The product generates ozone gas during operation, but it will not be harmful to the human body.

If a bad smell of ozone is present in the following cases, ventilate the room.

- a. When the product is used in a poorly ventilated room
- b. When taking a lot of copies
- c. When using multiple products at the same time

Stability

 Be sure to lock the caster stoppers.
 In the case of an earthquake and so on, the product may slide, leading to a injury.

Inspection before Servicing

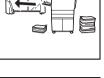
Before conducting an inspection, read all relevant documentation (service manual, technical notices, etc.) and proceed with the inspection following the prescribed procedure in safety clothes, using only the prescribed tools. Do not make any adjustment not described in the documentation.

If the prescribed procedure or tool is not used, the product may break and a risk of injury or fire exists.

• Before conducting an inspection, be sure to disconnect the power plugs from the product and options.

When the power plug is inserted in the wall outlet, some units are still powered even if the POWER switch is turned OFF. A risk of electric shock exists.

• The area around the fixing unit is hot. You may get burnt.









Work Performed with the Product Powered On

WARNING

Take every care when making adjustments or performing an operation check with the product powered. If you make adjustments or perform an operation check with the external cover detached, you may touch live or high-voltage parts or you may be caught in moving gears or the timing belt, leading to a risk of injury.
Take every care when servicing with the external cover detached. High-voltage exists around the drum unit. A risk of electric shock exists.

S	Safety Checkpoints		
	WARNING		
•	Check the exterior and frame for edges, burrs, and other damage. The user or CE may be injured.	0	
•	Do not allow any metal parts such as clips, staples, and screws to fall into the product. They can short internal circuits and cause electric shock or fire.	\bigcirc	Po
•	Check wiring for squeezing and any other damage. Current can leak, leading to a risk of electric shock or fire.	0	
•	Carefully remove all toner remnants and dust from electri- cal parts and electrode units such as a charging corona unit. Current can leak, leading to a risk of product trouble or fire.	0	
•	Check high-voltage cables and sheaths for any damage. Current can leak, leading to a risk of electric shock or fire.	0	

Safety Checkpoints **WARNING** Check electrode units such as a charging corona unit for deterioration and sign of leakage. Current can leak. leading to a risk of trouble or fire. Before disassembling or adjusting the write unit (P/H unit) incorporating a laser, make sure that the power cord has been disconnected. The laser light can enter your eye, leading to a risk of loss of eyesight. Do not remove the cover of the write unit. Do not supply power with the write unit shifted from the specified mounting position. The laser light can enter your eve. leading to a risk of loss of eyesight. When replacing a lithium battery, replace it with a new lithium battery specified in the Parts Guide Manual. Dispose of the used lithium battery using the method specified by local authority. Improper replacement can cause explosion. After replacing a part to which AC voltage is applied (e.g., optical lamp and fixing lamp), be sure to check the installation state. A risk of fire exists. Check the interlock switch and actuator for loosening and check whether the interlock functions properly. If the interlock does not function, you may receive an electric shock or be injured when you insert your hand in the product (e.g., for clearing paper jam). Make sure the wiring cannot come into contact with sharp edges, burrs, or other pointed parts. Current can leak, leading to a risk of electric shock or fire.

Safety Checkpoints

Make sure that all screws, components, wiring, connectors, etc. that were removed for safety check and maintenance have been reinstalled in the original location. (Pay special attention to forgotten connectors, pinched cables, forgotten screws, etc.)



A risk of product trouble, electric shock, and fire exists.

Handling of Consumables

 Toner and developer are not harmful substances, but care must be taken not to breathe excessive amounts or let the substances come into contact with eyes, etc. It may be stimulative.

If the substances get in the eye, rinse with plenty of water immediately. When symptoms are noticeable, consult a physician.

• Never throw the used cartridge and toner into fire. You may be burned due to dust explosion.

Handling of Service Materials

• Unplug the power cord from the wall outlet.

Drum cleaner (isopropyl alcohol) and roller cleaner (acetone-based) are highly flammable and must be handled with care. A risk of fire exists.

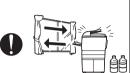
 Do not replace the cover or turn the product ON before any solvent remnants on the cleaned parts have fully evaporated.

A risk of fire exists.



Handling of Service Materials

- Use only a small amount of cleaner at a time and take care not to spill any liquid. If this happens, immediately wipe it off. A risk of fire exists.
- When using any solvent, ventilate the room well. Breathing large quantities of organic solvents can lead to discomfort.



[4] Used Batteries Precautions

ALL Areas

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Germany

VORSICHT!

Explosionsgefahr bei unsachgemäßem Austausch der Batterie. Ersatz nur durch denselben oder einen vom Hersteller empfohlenen gleichwertigen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

France

ATTENTION

Il y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur.

Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

Denmark

ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage til leverandøren.

Finland, Sweden

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu. Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

VARNING

Explosionsfara vid felaktigt batteribyte.

Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.

Kassera använt batteri enligt fabrikantens instruktion.

Norway

ADVARSEL

Eksplosjonsfare ved feilaktig skifte av batteri.

Benytt samme batteritype eller en tilsvarende type anbefalt av apparatfabrikanten. Brukte batterier kasseres i henhold til fabrikantens instruksjoner.

[5] Laser Safety

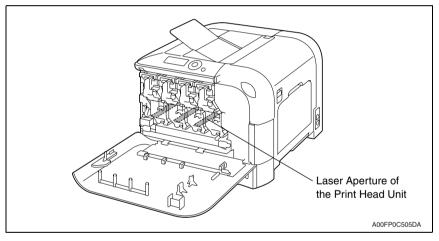
 This is a digital machine certified as a Class 1 laser product. There is no possibility of danger from a laser, provided the machine is serviced according to the instruction in this manual.

5.1 Internal Laser Radiation

semiconductor laser	
Maximum power of the laser diode	15 mW
Maximum average radiation power (*)	8.5 μW
Wavelength	770-800 nm

*at laser aperture of the Print Head Unit

- This product employs a Class 3B laser diode that emits an invisible laser beam. The laser diode and the scanning polygon mirror are incorporated in the print head unit.
- The print head unit is NOT A FIELD SERVICEABLE ITEM. Therefore, the print head unit should not be opened under any circumstances.



U.S.A., Canada (CDRH Regulation)

- This machine is certified as a Class 1 Laser product under Radiation Performance Standard according to the Food, Drug and Cosmetic Act of 1990. Compliance is mandatory for Laser products marketed in the United States and is reported to the Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration of the U.S. Department of Health and Human Services (DHHS). This means that the device does not produce hazardous laser radiation.
- The label shown on page S-16 indicates compliance with the CDRH regulations and must be attached to laser products marketed in the United States.

CAUTION

• Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

semiconductor laser		
Maximum power of the laser diode	15 mW	
Wavelength	770-800 nm	

All Areas

CAUTION

• Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

semiconductor laser		
Maximum power of the laser diode	15 mW	
Wavelength	770-800 nm	

Denmark

ADVARSEL

 Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling. Klasse 1 laser produkt der opfylder IEC60825-1 sikkerheds kravene.

halvlederlaser		
Laserdiodens højeste styrke	15 mW	
bølgelængden	770-800 nm	

Finland, Sweden

LUOKAN 1 LASERLAITE KLASS 1 LASER APPARAT

VAROITUS!

 Laitteen käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

puolijohdelaser		
Laserdiodin suurin teho	15 mW	
aallonpituus	770-800 nm	

VARNING!

 Om apparaten används på annat sätt än i denna bruksanvisning specificerats, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

halvledarlaser	
Den maximala effekten för laserdioden	15 mW
våglängden	770-800 nm

VARO!

 Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättomälle lasersäteilylle. Älä katso säteeseen.

VARNING!

 Osynlig laserstråining när denna del är öppnad och spärren är urkopplad. Betrakta ej stråien.

Norway

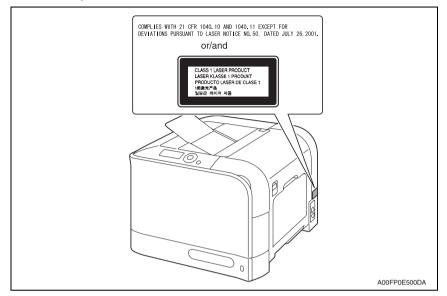
ADVERSEL

 Dersom apparatet brukes på annen måte enn spesifisert i denne bruksanvisning, kan brukeren utsettes för unsynlig laserstrålning, som overskrider grensen for laser klass 1.

halvle	eder laser
Maksimal effekt till laserdiode	15 mW
bølgelengde	770-800 nm

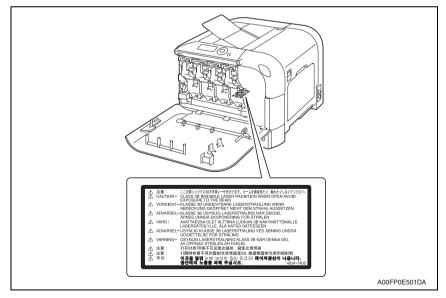
5.2 Laser Safety Label

• A laser safety label is attached to the inside of the machine as shown below.



5.3 Laser Caution Label

• A laser caution label is attached to the outside of the machine as shown below.



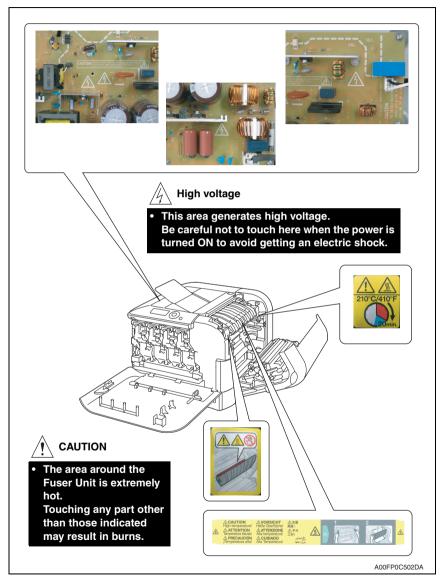
5.4 PRECAUTIONS FOR HANDLING THE LASER EQUIPMENT

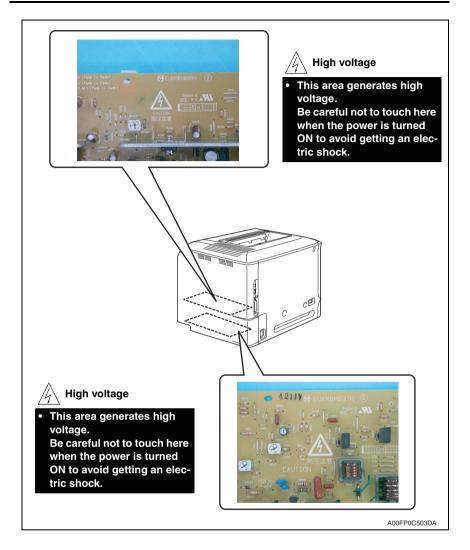
- When laser protective goggles are to be used, select ones with a lens conforming to the above specifications.
- When a disassembly job needs to be performed in the laser beam path, such as when working around the printerhead and PC Drum, be sure first to turn the printer OFF.
- If the job requires that the printer be left ON, take off your watch and ring and wear laser protective goggles.
- A highly reflective tool can be dangerous if it is brought into the laser beam path. Use utmost care when handling tools on the user's premises.
- The Print Head is not to be disassembled or adjusted in the field. Replace the Unit or Assembly including the Control Board. Therefore, remove the Laser Diode, and do not perform Control Board trimmer adjustment.

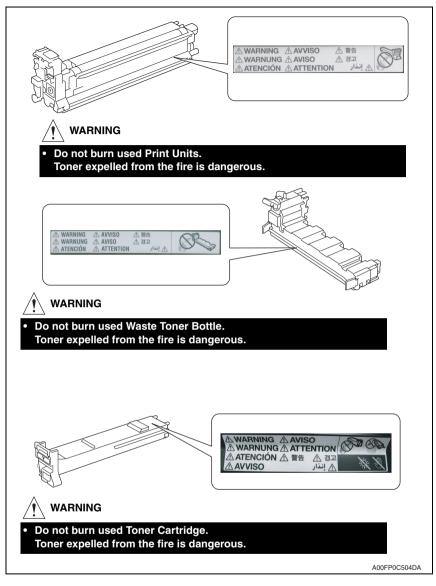
WARNING INDICATIONS ON THE MACHINE

Caution labels shown are attached in some areas on/in the machine.

When accessing these areas for maintenance, repair, or adjustment, special care should be taken to avoid burns and electric shock.







 You may be burned or injured if you touch any area that you are advised not to touch by any caution label. Do not remove caution labels. If any caution label has come off or soiled and therefore the caution cannot be read, contact our Service Office.

MEASURES TO TAKE IN CASE OF AN ACCIDENT

- If an accident has occurred, the distributor who has been notified first must immediately take emergency measures to provide relief to affected persons and to prevent further damage.
- 2. If a report of a serious accident has been received from a customer, an on-site evaluation must be carried out quickly and KMBT must be notified.
- 3. To determine the cause of the accident, conditions and materials must be recorded through direct on-site checks, in accordance with instructions issued by KMBT.
- 4. For reports and measures concerning serious accidents, follow the regulations specified by every distributor.

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Composition of the service manual

This service manual consists of Theory of Operation section and Field Service section to explain the main machine and its corresponding options.

Theory of Operation section gives, as information for the CE to get a full understanding of the product, a rough outline of the object and role of each function, the relationship between the electrical system and the mechanical system, and the timing of operation of each part.

Field Service section gives, as information required by the CE at the site (or at the customer's premise), a rough outline of the service schedule and its details, maintenance steps, the object and role of each adjustment, error codes and supplementary information.

The basic configuration of each section is as follows. However some options may not be applied to the following configuration.

<Theory of Operation section>

OUTLINE: COMPOSITION/OPERATION:	Explanation of system configuration, product specifications, unit configuration, and paper path Explanation of configuration of each unit, operating system, and control system
<field section="" service=""></field>	
GENERAL:	Explanation of system configuration, and product specifications
MAINTENANCE:	Explanation of service schedule, maintenance steps, ser- vice tools, removal/reinstallation methods of major parts, and firmware version up method etc.
ADJUSTMENT/SETTING:	Explanation of utility mode, service mode, and mechanical adjustment etc.
TROUBLESHOOTING:	Explanation of lists of jam codes and error codes, and their countermeasures etc.
APPENDIX:	Parts layout drawings, connector layout drawings, timing chart, overall layout drawing are attached.

Notation of the service manual

A. Product name

In this manual, each of the products is described as follows:

(1)	magicolor 4650EN/4650DN	Main body		
(2)	Microsoft Windows 98:	Windows 98		
	Microsoft Windows Me:	Windows Me		
	Microsoft Windows NT 4.0:	Windows NT 4.0 or Windows NT		
	Microsoft Windows 2000:	Windows 2000		
	Microsoft Windows XP:	Windows XP		
	Microsoft Windows Vista:	Windows Vista		
	When the description is made in combi	nation of the OS's mentioned above:		
		Windows 98/Me		
		Windows NT 4.0/2000		
		Windows NT/2000/XP/Vista		
		Windows 98/Me/ NT/2000/XP/Vista		

B. Brand name

The company names and product names mentioned in this manual are the brand name or the registered trademark of each company.

C. Feeding direction

- When the long side of the paper is parallel with the feeding direction, it is called short edge feeding. The feeding direction which is perpendicular to the short edge feeding is called the long edge feeding.
- Short edge feeding will be identified with [S (abbreviation for Short edge feeding)] on the paper size. No specific notation is added for the long edge feeding.
 When the size has only the short edge feeding with no long edge feeding, [S] will not be added to the paper size.

<Sample notation>

Paper size	Feeding direction	Notation
Α4	Long edge feeding	A4
A4	Short edge feeding	A4S
A3	Short edge feeding	A3



SERVICE MANUAL

FIELD SERVICE

magicolor 4650EN magicolor 4650DN Main Body

2008.01 KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. Ver. 2.0

Revision history

After publication of this service manual, the parts and mechanism may be subject to change for improvement of their performance.

Therefore, the descriptions given in this service manual may not coincide with the actual machine.

When any change has been made to the descriptions in the service manual, a revised version will be issued with a revision mark added as required.

Revision mark:

- To indicate clearly a section revised, show $\underline{\land}$ to the left of the revised section. A number within $\underline{\land}$ represents the number of times the revision has been made.
- To indicate clearly a section revised, show **A** in the lower outside section of the corresponding page.

A number within **A** represents the number of times the revision has been made.

NOTE

Revision marks shown in a page are restricted only to the latest ones with the old ones deleted.

- When a page revised in Ver. 2.0 has been changed in Ver. 3.0: The revision marks for Ver. 3.0 only are shown with those for Ver. 2.0 deleted.
- When a page revised in Ver. 2.0 has not been changed in Ver. 3.0: The revision marks for Ver. 2.0 are left as they are.

2008/01	2.0	Â	Error correction / Addition of transfer roller replacement procedures / Addition of AIDC Mode
2007/11	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

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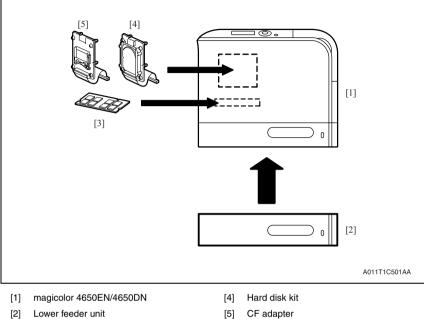
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General

System configuration 1.



[3] Memory (DIMM) CF adapter

2. Product specifications

A. Type

Desktop tandem full-color A4 laser beam printer
Electro photographic printing system
4 laser diode and 1 polygon mirror
OPC (organic photo conductor)
Blade cleaning system
600 dpi x 600 dpi x 4 bit
Two-way system (Tray 1: 100 sheets, Tray 2: 250 sheets) * Expandable up to a three-way system by adding lower feeder units (up to one)
Mono-component SMT
Needle charging system (with Ozone suction feature)
Transfer belt system
Curvature separation + charge-neutralizing system
Belt fusing
Face down (Output tray capacity: A4S/Letter, 200 sheets)

B. Functions

Warm-up time	Average: 36 sec. or less (Power on to ready, at ambient temperature of 23° C/73.4° F and rated source voltage)				
Process speed	144 mm/sec (plain paper, Monochrome/full color m	ode)			
First-page-out-time	14.0 second (Full-color mode, A4S/Letter, 1-sided mode, plain paper)				
Print speed	24 pages/min. (A4S, 1-sided print, plain paper) 25 pages/min. (Letter, 1-sided print, plain paper)				
Tray capacities	Plain paper Label, postcard, thick 1, thick 2, glossy 1, glossy 2, transparency, letterhead	: 100 sheets (Tray1) 250 sheets (Tray2) : 20 sheets (Tray1)			
	Envelop	: 10 sheets (Tray1)			

C. Media

	Туре	Paper source (max	kimum tray capacity)	
	Туре	Tray 1	Tray 2	
	Plain paper (60 to 90 g/m ² ; 16 to 24 lb)	100 sheets	250 sheets	
	Thick 1 (91 to 150 g/m ²)			
	Thick 2 (151 to 210 g/m ²)			
	Label			
Media type	Letterhead	20 sheets		
	Transparencies	20 3116613	—	
	Glossy 1 (100 to 128 g/m ²)			
	Glossy 2 (129 to 158 g/m ²)			
	Postcard			
	Envelope	10 sheets		
Media	Width	92 to 216 mm (3.6 to 8.5 inch)	92 to 216 mm (3.6 to 8.5 inch)	
dimensions	Length	148 to 356 mm (5.8 to 14.0 inch)	148 to 297 mm (5.8 to 11.7 inch)	

D. Maintenance

E. Machine specifications

	-	-	
Power requirements	Voltage:	AC 100V, 120 V, 220 to 240 V	
Fower requirements	Frequency:	50 to 60 Hz ± 3 Hz	
Max power consumption		1200 W or less 16 W less (Energy saver mode)	
Dimensions		469 mm (W) x 536 mm (D) x 385 mm (H) 18.5 inch (W) x 21.1 inch (D) x 15.2 inch (H)	
Weight		31.0 kg (68.3 lb) or less without consumables	
		During standby : 39 dB (A) or less During printing : 52 dB (A) or less	

F. Operating environment

Temperature	10° to 35° C / 50° F to 95° F
Humidity	15% to 85%

G. Print functions

Туре	Built-in type controller	
	5	Pentium 2: 400 MHz (Pentium 3: 500 MHz or higher is recommended)
	Personal computer	Power Mac G3 or later (G4 or later is recommended)
		Macintosh equipped with an Intel processor
	Operating system	Microsoft Windows Vista Home Basic/Home Premium/Ulti- mate/Business/Enterprise, Windows Vista Home Basic /Home Premium /Ultimate/Business /Enterprise x64 Edition, Windows XP Home Edition/Professional (Service Pack 1 or later; Service Pack 2 or later is recommended), Windows XP Professional x64 Edition, Windows Server 2003, Windows Server 2003 x64 Edition, Windows 2000 (Service Pack 4 or later)
System Requirements		Mac OS X (10.2 or later; We recommend installing the newest patch), Mac OS X Server (10.2 or later)
		Red Hat Linux 9.0, SuSE Linux 8.2
		Approximately 20 MB of free hard disk space for printer driver and Status Monitor
	Free hard disk space	Approximately 128 MB of free hard disk space for image pro- cessing
	RAM	128 MB or more
		10Base-T/100Base-TX/1000Base-T Ethernet interface port
	Interfaces	USB Revision 2.0 compliant port
		Parallel (IEEE 1284) port

NOTE

• These specifications are subject to change without notice.

Maintenance

3. Periodical check

3.1 Maintenance items

3.1.1 Parts to be replaced by users (CRU)

No	Class	Part to be replaced	Number of prints	Clean	Replace	Description
1		Standard-capacity toner cartridge *1 (C,M,Y,K)	4,000 (Continuous printing)		•	
2	Processing section	High-capacity toner cartridge (C,M,Y,K)	8,000 (Continuous printing)		•	
3	3601011	Imaging unit (C,M,Y,K)	30,000 (Continuous printing)		•	
4		Ozone filter *3	120,000		●	
5	Tray 2 media feed section	Feed roller	When malfunction occurs	•		
6	Tray 1 media feed section	Feed roller	When malfunction occurs	•		
7		Transfer belt unit	120,000 (Continuous printing, 2P/J *2)		•	
8	Image transfer section	Transfer roller *3	120,000 (Continuous printing, 2P/J *2)		•	
9	00011011	Waste toner bottle	36,000 (K *4)			
9			9,000 (Y,M,C,K *5)		-	
10	Fusing section	Fuser unit	120,000 (Continuous printing) 100,000 (2P/J *2)		•	

*1: The life of the toner cartridge furnished with the machine at the time of shipment is 3,000 printed pages

- *2 : 2 pages/job
- *3 : When printed in black only
- *4 : When printed in color only
- *5 : The transfer roller and ozone filter are available as a kit and must be replaced at the same time

3.1.2 Parts to be replaced by a service engineer (FRU)

No	Class	Part to be replaced	Number of prints	Clean	Replace	Description
1	Tray 2 media feed section	Feed roller	300,000		٠	
2	Tray 1 media feed section	Feed roller	300,000		٠	
3	Lower feeder unit	Feed roller	300,000		•	

3.2 Maintenance parts

- To ensure that the machine produces good prints and to extend its service life, it is recommended that the maintenance jobs described in this schedule be carried out as instructed.
- The replacing time is to be determined by the total counter value.
- Maintenance conditions are based on A4S or letterS,1-side print.

3.2.1 Replacement parts

A. Main body

No	Class	Maintenance parts	Quan tity	Actual durable cycle	Parts No.	Descrip- tion	Ref.page
1	Tray 2	Feed roller	1	300,000	4138 3032 ##		P.8
2	Tray 1	Feed roller	1	300,000	4138 3032 ##		P.9

B. Option

No	Class	Maintenance parts	Quan tity	Actual durable cycle	Parts No.	Descrip- tions	Ref.page
1	Lower feeder unit	Feed roller	1	300,000	4128 3214 ##		*1

*1: For details, see the optional lower feeder unit service manual.

3.3 Concept of parts life

	Description	Life value
Waste toner	 Detected by the waste toner full sensor. A waste toner full condition is detected when about 1,500 	Monochrome: 36,000 prints
bottle	color printed pages are produced after a waste toner near full condition has been detected.	Color: 9,000 prints
	 Based on the fusing motor rotation data, the fuser unit driv- ing time is counted. 	120,000 prints (Continuous printing)
Fuser unit	Comparing the fuser unit driving time count value with the number of pages printed, the machine detects the one that reaches its life value earlier.	100,000 prints (2P/J)
Ozone filter	—	120,000 prints
Transfer roller	Based on the number of pages printed, the life is detected.	120,000 prints
Transfer belt	 Base on the intermediate transport motor rotation data, the transfer belt driving time is counted and the life is detected. 	120,000 prints
	Base on the color PC drum motor or intermediate transport motor rotation data, the imaging unit driving time is	30,000 prints (Continuous printing)
Imaging unit	counted. Comparing the imaging unit driving time count value and the number of pages printed, the machine detects the one that reaches its life value earlier.	20,000 prints (2P/J)

A. Conditions for life specifications values

• The life specification values represent the number of pages printed or figures equivalent to it when the given conditions (see the table given below) are met. They may be more or less, depending on the machine operating conditions of each individual user.

Item	Description
Job type	2 consecutive pages (2 pages/job)
Media size	A4S or LetterS
Color ratio	Black to Color = 6 : 4
Original density	C/W ratio = 5% each color

3.4 Maintenance Procedure (periodical check parts)

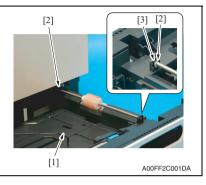
3.4.1 Replacing the tray 2 feed roller

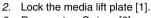
A. Periodically replaced parts/cycle

• Tray 2 feed roller: Every 300,000 prints

B. Procedure

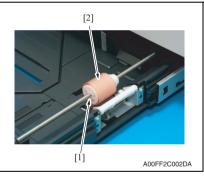
1. Slide out tray 2.

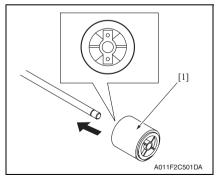




3. Remove two C-rings [2], and remove the bearing [3] at the front.

4. Remove the C-rings [1], and remove the feed roller [2].





NOTE

• When reinstalling the feed roller [1], make sure that it is mounted in the direction shown in the illustration on the left.

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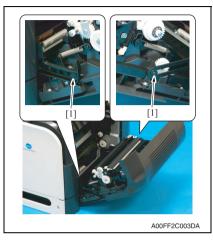
3.4.2 Replacing the tray 1 feed roller

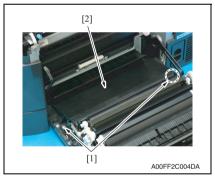
A. Periodically replaced parts/cycle

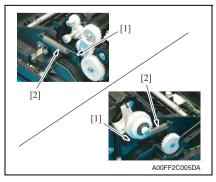
• Tray 1 feed roller: Every 300,000 prints

B. Procedure

1. Open the right door.



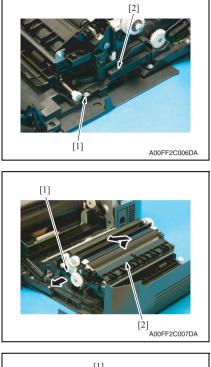


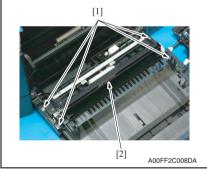


2. Remove two screws [1].

3. Remove two screws [1], and remove the cover [2].

4. Remove two screws [1], and remove two springs [2].

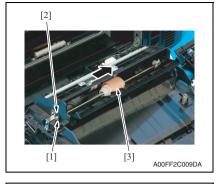


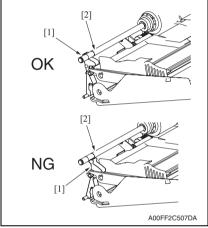


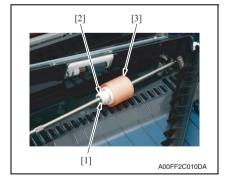
- Field Service Ver. 2.0 Jan. 2008
- 5. Remove the screw [1], and remove the cover [2].

6. Pull the hook part [1] in the direction of the arrow and remove it. Remove the transport unit [2].

7. Remove four screws [1], and remove the tray 1 feed roller unit [2].







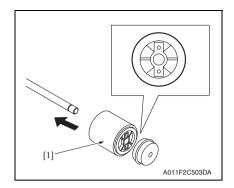
 Remove the E-ring [1] and remove the bearing [2]. Then, slide the tray 1 feed roller assy [3] in the direction of the arrow shown.

NOTE

• When reinstalling the tray 1 feed roller assy, make sure that the shaft [2] sits on the front side of the stopper [1] as shown in the illustration. magicolor 4650EN magicolor 4650DN

9. Remove the E-ring [1], and remove the clutch [2] and the feed roller [3].

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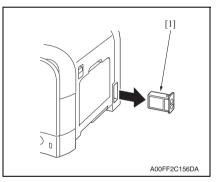


3.4.3 Replacing the ozone filter

A. Periodically replaced parts/cycle

Ozone filter: Every 120,000 prints

B. Procedure



- 2. Install a new ozone filter in the machine.
- 3. Replace the transfer roller. See P.21

NOTE

• When reinstalling the feed roller [1] and the clutch, make sure that it is mounted in the direction shown in the illustration on the left.

1. Hold onto the handle of the ozone filter [1] and slide it out of the machine.

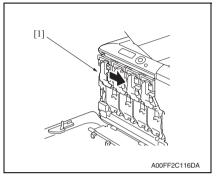
3.4.4 Replacing the toner cartridge (C/M/Y/K)

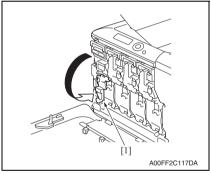
A. Periodically replaced parts/cycle

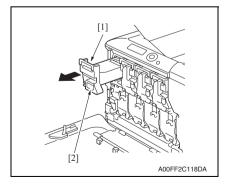
- Toner cartridge furnished with the machine (C,M,Y,K): Every 3,000 prints
- Standard-capacity toner cartridge (C,M,Y,K): Every 4,000 prints
- High-capacity toner cartridge (C,M,Y,K): Every 8,000 prints

B. Removal procedure

1. Open the front cover.







2. Slide the lock lever [1] to the right.

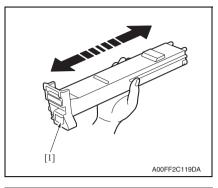
3. Pull down the lock lever to unlock the toner cartridge.

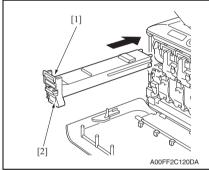
4. Grasp the toner cartridge handle [1] and pull the toner cartridge [2] out.

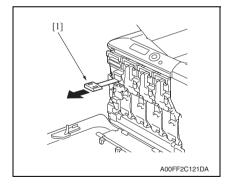
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C. Reinstallation procedure

1. Take the toner cartridge out of its plastic bag.







2. Gently shake the toner cartridge [1] three times to agitate the toner.

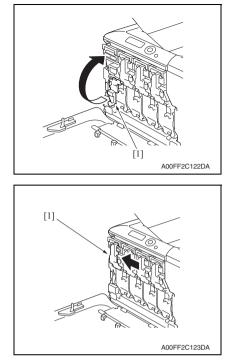
3. Grasp the toner cartridge handle [1] and slide the toner cartridge [2] in.

4. Remove the protective sheet by pulling it.

5. Raise the lock lever [1].

6. Slide the lock lever [1] to the left to lock the toner cartridge.





7. Close the front cover.

NOTE

When removing or reinstalling the toner cartridge while it is being used or after it
has been used up, do not hold it or place it upside down, as spilled toner could
result.

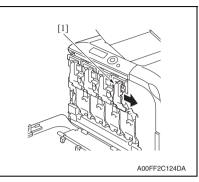
3.4.5 Replacing the imaging unit (C,M,Y,K)

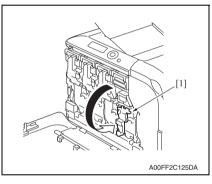
A. Periodically replaced parts/cycle

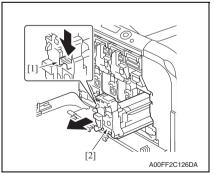
• Imaging unit: Every 3,000 prints

B. Removal procedure

1. Open the front cover.





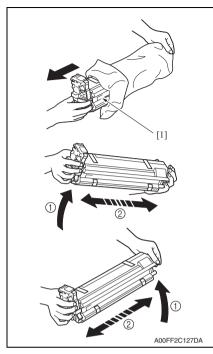


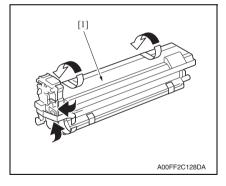
2. Slide the lock lever [1] to the right.

3. Pull down the lock lever [1] to unlock the imaging unit.

- 4. Press down the "Push" marked place [1].
- 5. Pull the imaging unit [2] out.

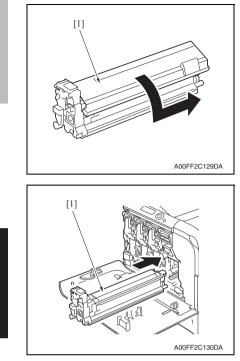
C. Reinstallation procedure

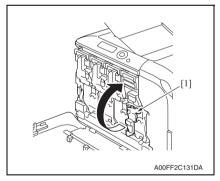




 After removing the plastic bag, hold the imaging unit [1] with your hands and shake it two times as shown in the left illustration.

2. Take the imaging unit [1] out of the plastic bag and remove the shipping tape.

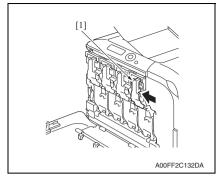




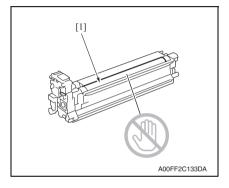
3. Remove the protective cover [1].

4. Slide the imaging unit [1] in.

5. Raise the lock lever [1].



7. Close the front cover.



- 3. Periodical check
- 6. Slide the lock lever [1] to the left to lock the imaging unit.

NOTE

• When installing and removing the imaging unit, take care not to touch the surface of the PC drum [1].

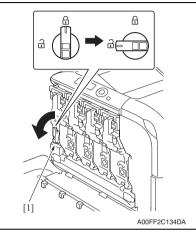
3.4.6 Replacing the waste toner bottle

A. Periodically replaced parts/cycle

Waste toner bottle: Every 36,000 prints (when printed in black only) / 9,000 prints (when printed in color only)

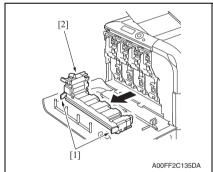
B. Removal procedure

1. Open the front cover.



2. Turn the lever [1] to unlock the waste toner bottle.

3. Holding the left and right handles [1], remove the waste toner bottle [2].



4. To reinstall, reverse the order of removal.

3. Periodical check

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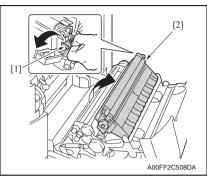
3.4.7 Replacing the transfer roller

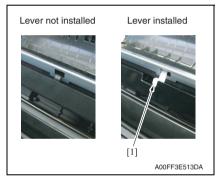
A. Periodically replaced parts/cycle

Transfer roller: Every 120,000 prints

$\underline{\Uparrow}$ B. Checking the transfer roller for installed condition

1. Open the right door.

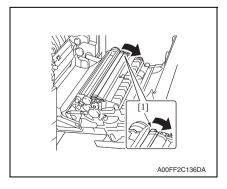




C. Removal procedure

$\underline{\uparrow}$ (1) When the lock lever is not available

1. Open the right door.



 Hold onto the tab [1] and raise the transfer roller assy [2] in the direction shown by the arrow.

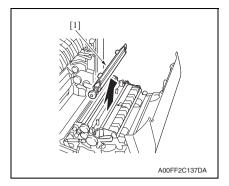
3. Check to see if the lock lever [1] is available or not at the position shown on the left.

 If there is no lock lever [1] available, perform the removal procedure by following the steps given in "(1) When the lock lever is not available". See P.21

- If the lock lever [1] is available, perform the removal procedure by following the steps given in "(2) When the lock lever is available".
 See P.22
- 2. Unlock the lock lever [1].

3. Holding the levers, remove the trans-

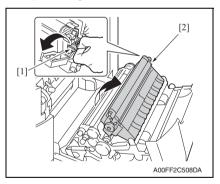
fer roller [1].



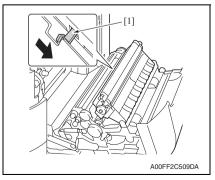
- 4. To reinstall, reverse the order of removal.
- 5. Replacing the ozone filter. See P.12
- From the Menu, select [MAINTENANCE MENU] → [SUPPLIES] → [REPLACE] → [TRANS. ROLLER.] and execute this function to reset the transfer roller counter value. For details, see "Adjustment/Setting."
- From the Menu, select [QUALITY MENU] → [CARIBRATION] → [AIDC PROCESS] and execute this function.
 For details, see "Adjustment/Setting."

(1) (2) When the lock lever is available

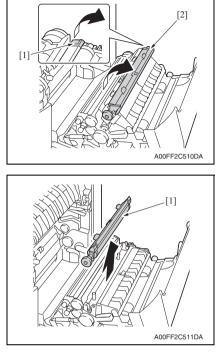
1. Open the right door.



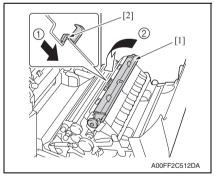
2. Hold onto the tab [1] and raise the transfer roller assy [2] in the direction shown by the arrow.



3. Unlock the lock lever [1].



6. To reinstall, reverse the order of removal.



- 7. Replacing the ozone filter. See P.12
- From the Menu, select [MAINTENANCE MENU] → [SUPPLIES] → [REPLACE] → [TRANS. ROLLER.] and execute this function to reset the transfer roller counter value. For details, see "Adjustment/Setting."
- From the Menu, select [QUALITY MENU] → [CARIBRATION] → [AIDC PROCESS] and execute this function.
 For details, see "Adjustment/Setting."

 Hold onto the tab and raise the transfer roller [2] in the direction shown by the arrow.

5. Remove the transfer roller [1].

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NOTE

• When reinstalling the transfer roller [1], do that while unlocking the lock lever [2] as shown on the left.

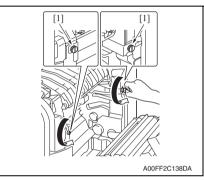
3.4.8 Replacing the transfer belt

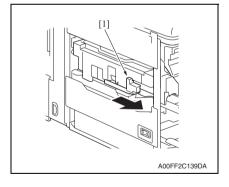
A. Periodically replaced parts/cycle

• Transfer belt: Every 120,000 prints

B. Removal procedure

- 1. Turn OFF the power switch.
- 2. Open the front cover.
- 3. Remove the waste toner bottle. See P.20
- 4. Remove the imaging unit (C,M,Y,K). See P.16
- 5. Remove the left cover. See P.49
- 6. Open the right door.





7. Loosen two screws [1], and unlock the transfer belt.

8. Slide the shutter lever [1] to the front.

[1]

A00FF2C140DA

A00FF2C141DA

A00FF2C142DA

[2]

9. Grasp the transfer belt [1] handle and pull the transfer belt [1] out.

10. Remove the packing material from the new transfer belt.

NOTE

• Use care not to touch the belt of the transfer belt.

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11. Insert the transfer belt [1] along the rail [2].

NOTE

 When inserting the unit, use care not to allow the docking gear to hit against the rail or other mechanism to prevent damage.

- 12. To reinstall, reverse the order of removal.
- 13. From the Menu, select [MAINTENANCE MENU] → [SUPPLIES] → [REPLACE] → [TRANS. BELT] and execute this function to reset the transfer belt counter value. For details, see "Adjustment/Setting."
- 14. From the Menu, select [QUALITY MENU] → [CALIBRATION] → [AIDC PROCESS] and execute this function.
 For details, and "A divergent/Certine"

For details, see "Adjustment/Setting."

3.4.9 Replacing the fuser unit



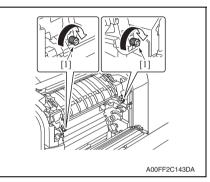
• The temperature gets high in the vicinity of the fuser unit. You may get burned when you come into contact with the area. Before replacement operations, make sure that more than 20 minutes have elapsed since the main and sub power switches were turned off.

A. Periodically replacing parts/cycle

• Fuser unit: Every 120,000 prints (continuous printing) / Every 100,000 prints (2P/J)

B. Procedure

- 1. Turn OFF the power switch, unplug the power cord from the power outlet, and let the machine to stand idle for about 20 min.
- 2. Open the right door.



3. Using a coin, remove the two screws[1] on the left side.

- 4. Remove the fuser unit [1].

- 5. Install the new fuser unit.
- From the Menu, select [MAINTENANCE MENU] → [SUPPLIES] → [REPLACE] → [FUSER UNIT] and execute this function to reset the fuser unit counter value. For details, see "Adjustment/Setting."

4. Service tool

4.1 Service material list

Tool name	Shape	Material No.	Remarks
Cleaning pad	A02EF2C526DA	000V-18-1	10pcs/1pack
Isopropyl alcohol	A00KF2C506DA		

4.2 CE tool list

Tool name	Shape	Quantity	Parts No.
Laser lens cleaning tool	A00FF2C504DA	1	A011 1901 ##
Laser lens cleaning tool pad	A00FF2C505DA	1	4138 2018 ##

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4.3 Consumable parts

4.3.1 Toner cartridge

Part name	Life expectancy
Standard-capacity toner cartridge - black (K)	4,000 prints
Standard-capacity toner cartridge - yellow (Y)	4,000 prints
Standard-capacity toner cartridge - magenta (M)	4,000 prints
Standard-capacity toner cartridge - cyan (C)	4,000 prints
High-capacity toner cartridge - black (K)	8,000 prints
High-capacity toner cartridge - yellow (Y)	8,000 prints
High-capacity toner cartridge - magenta (M)	8,000 prints
High-capacity toner cartridge - cyan (C)	8,000 prints

For the predetermined conditions, See P.7

NOTE

• The life of the toner cartridges furnished with the machine at the time of shipment is 3,000 prints.

4.3.2 Imaging unit

Part name	Life expectancy
Black imaging unit	30,000 prints
Yellow imaging unit	30,000 prints
Magenta imaging unit	30,000 prints
Cyan imaging unit	30,000 prints

For the predetermined conditions, See P.7

4.3.3 Waste toner bottle

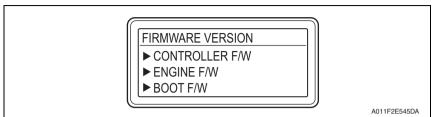
Part name	Life expectancy
Waste toner bottle	Monochrome: 36,000 prints
	Color: 9,000 prints

For the predetermined conditions, See P.7

5. Firmware upgrade

5.1 Checking the current firmware version

- 1. Display [SERVICE MENU].
- 2. Display [FIRMWARE VERSION].



3. Select the firmware to be updated and check the current version. For details, See P.173 of "Adjustment/Setting."

5.2 Firmware upgrading procedure by USB memory device

5.2.1 Preparations for firmware upgrading

A. System requirements

- PC equipped with a USB port
- USB memory device

B. Saving the firmware data into the USB memory device

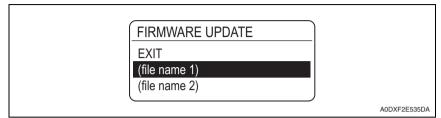
- 1. Save the firmware data in appropriate space in the PC.
- 2. Connect the USB memory device to the PC.
- 3. Create a "firmware" folder immediately under the drive of the USB memory device.
- 4. Copy the firmware data (***.exe) in the firmware folder created in step 3.

NOTE

- Be sure to save the firmware data in "drive:/firmware/***.exe."
- The printer can display up to 20 files of firmware data during upgrading.

C. How to write firmware data

- 1. Turn the power switch ON.
- 2. Connect the USB memory device to the printer.
- 3. Call the SERVICE MENU to the display.
- See P.171 4. Select [FIRMWARE UPDATE] and press the Menu/Select key.
 - A list of firmware data in the USB memory device is displayed.

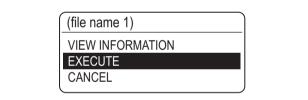


NOTE

 Before upgrading firmware, use [VIEW INFORMATION] to check that the firmware data is correct.

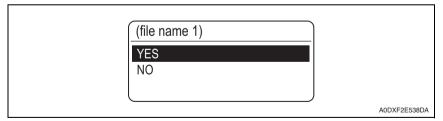
See P.189

- 5. Select the specific firmware data to be upgraded and press the Menu/Select key.
- 6. Select [EXECUTE] and press the Menu/Select key.

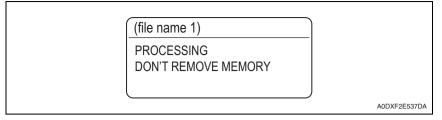


A0DXF2E536DA

7. Select [YES] and press the Menu/Select key.



8. The firmware upgrading procedure starts.



NOTE

- NEVER disconnect the USB memory device from the printer during the firmware upgrading procedure.
- 9. The printer is automatically restarted as soon as the firmware is upgraded correctly.

5.3 Firmware upgrading procedure by updater

5.3.1 Updating method

• To update the firmware, perform "Firmware Updater."

A. System requirements

Computer	Windows	PC with a Pentium 2, 400 MHz or faster processor (A Pentium 3, 500 MHz or faster processor is recommended.)
Computer	Macintosh	 Apple Macintosh computer with a PowerPC G3 or later processor (A PowerPC G4 or later is recommended.)
OS	Windows	 Microsoft Windows XP Home Edition/Professional, Windows 2000
00	Macintosh	 MacOS X 10.2 or later (We recommend installing the newest patch.)
Available	Windows	Approximately 20 to 26 MB
hard disk space	Macintosh	Approximately 30 to 42 MB
Memory		128 MB or more
Interface	Windows	 10Base-T/100Base-TX/1000Base-T Ethernet USB 2.0 (High Speed) compliant Parallel (IEEE 1284)
	Macintosh	10Base-T/100Base-TX/1000Base-T Ethernet

B. Connection for Windows

(1) Starting the firmware updater

NOTE

- Before starting the firmware updater, turn on the printer, and make sure that it is correctly connected.
- 1. Download the firmware updater.
- 2. Double-click "xxxxxxxxxxx.exe."
- 3. The printer name and firmware version are displayed. Click the [Next].

🖄 The Updater	
This tool is for updating the firmware.	
Printer name: KONICA MINOLTA magicolor 5480	
Firmware version: Giot Mot	
Next Exit	

4. The license agreement is displayed. Select "I agree", and then click the [Next].

🚖 The Updater 🛛 🗙	
Licence	
In consideration of payment of the license fee, which is a part of the purchase price, KONICA MINOLTA grants to you a non-exclusive right to use the software subject to the following conditions:	
KONICA MINOLTA grants to you a non-exclusive right to use the software, without the right to distribute, rent, sub-license, or lease the software or documentation. Nou may not alter, modify, or adapt the software or documentation, including but not limited to, translating, decompiling, disassembling, creating derivative works, or reverse engineering. The software product may be duplicated or copied as specified in the manual for your own personal use and al lemovable copies must be at the copyright notice contained on the original software. However, the software may not be duplicated for the purposes of resell or distribution.	
C I do not agree	
€ lagree	
Next Exit	
	A011F2E556DA

5. The list of printer drivers is displayed. Select the appropriate connection for the environment where the printer is being used.

😹 The I	Updater 🔀	
	Printer driver list: KONICA MINOLTA mc	
	Network port Local port Printer IP address Nevd Ext	
		A011F2E55

- For a network connection: Select "Network port." See P.34
- For a local connection: Select "Local port."
 See P.37
- When specifying the IP address of the printer: Select "Printer IP address." See P.38

NOTE

- If you select "Network port" or "Local port", make sure that the printer driver has been installed.
- If you select "Printer IP address", the firmware can be updated even if a printer driver is not already installed.

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(2) For a network connection

- 1. When "Network port" is selected, a list of printer drivers for the network port appears.
- 2. Select the printer driver, and then click the [Next].

Please select the port for u	updating.	
Printer driver list:		
KONICA MINOLTA KONICA MINOLTA		
KONICA MINOLIA		
,		
 Network port 		
 Network port Local port 		
C Local port		

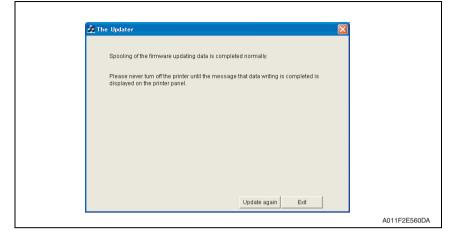
3. A message appears, requesting confirmation to update the firmware. Click the [Start] to begin transferring the firmware.

NOTE

• Do not turn off the printer while its firmware is being updated.

35 The	Updater 🔀	
	Please do not update the firmware during printing.	
	And, please do not turn off the printer during updating.	
	If you are ready, please start now.	
	Start	
		A011F2E559DA

4. The result of the firmware transfer is displayed. Click the [Exit].



5. If the firmware was successfully updated, the printer will automatically restart.

magicolor 4650EN magicolor 4650DN

<lf spooling of the data fails>

NOTE

- If spooling fails, data may remain in the printer spooler. Delete this data, and then try again.
- 1. If spooling of the data fails, the following message appears.
- 2. Click [OK].

5450G01601BPR1	
Spooling of data has failed.	
<u>(</u>	
	A011F2E561DA

3. Check that the printer is ready and that it is correctly connected, and then click the [Update again].

35 TI	ne Updater 🔀	
	Spooling of the firmware updating data has failed.	
	Please check if the printer is ready and connected correctly, and then retry.	
	Update again Exit	
		A011F2E562D4

(3) For a local connection

- 1. When "Local port" is selected, a list of printer drivers for the local port appears.
- 2. Select the printer driver, and then click the [Next].

🚵 The Updater 🛛 🔀	
Please select the port for updating. Printer driver list.	
KONICA MINOLTA 1995 HE FE KONICA MINOLTA 1997 HE FCL	
C Network port	
Cocal port	
C Printer IP address	
Next Exit	
	A011F2E563DA

3. A message appears, requesting confirmation to update the firmware. Click the [Start] to begin transferring the firmware.

NOTE

• Do not turn off the printer while its firmware is being updated.

👪 The	9 Updater	
	Please do not update the firmware during printing.	
	And, please do not turn off the printer during updating.	
	If you are ready, please start now.	
	Start	
		A011F2E

4. The result of the firmware transfer is displayed. Click the [Exit].

🌺 The	Updater 🔀	3
	Spooling of the firmware updating data is completed normally.	
	Please never turn off the printer until the message that data writing is completed is displayed on the printer panel.	
	Update again Exit	

5. If the firmware was successfully updated, the printer will automatically restart.

<If spooling of the data fails>

For details, see "For a network connection." See P.36

(4) When specifying the IP address of the printer

- 1. When "Printer IP address" is selected, the "Printer IP address" box becomes available.
- 2. Type in the IP address, and then click the [Next].

Please select the port for updat Printer driver list	ing.				
C Network port C Local port C Printer IP address	192.168.1.3				
		Next	Exit	A011F2E566D/	Ą

3. A message appears, requesting confirmation to update the firmware. Click the [Start] to begin transferring the firmware.

NOTE

Г

• Do not turn off the printer while its firmware is being updated.

ĺ	📩 The Updater 🛛 🔀	
	Please do not update the firmware during printing.	
	And, please do not turn off the printer during updating.	
	ifyou are ready, please start now.	
	Start	
		A011F2E567DA

4. The result of the firmware transfer is displayed. Click the [Exit].

🗴 The Updater 🛛 🔀	
Spooling of the firmware updating data is completed normally.	
Please never turn off the printer until the message that data writing is completed is displayed on the printer panel.	
Update again Exit	
	A011F2E565D

5. If the firmware was successfully updated, the printer will automatically restart.

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<lf transferring of the data fails>

- 1. If transferring of the data fails, the following message appears.
- 2. Click [OK].



3. Check that the printer is ready and that it is correctly connected, and then click the [Update again].

🐉 The	Updater 🔀	
	Transferring of the firmware updating data has failed.	
	Please check if the printer is ready and connected correctly, and then retry.	
	Update again Exit	
		A011F2E570

C. Connection for Macintosh

(1) Starting the firmware updater and the updating procedure

NOTE

- Before starting the firmware updater, turn on the printer, and make sure that it is correctly connected.
- 1. Download the firmware updater.
- 2. Double-click "xxxxxxxxxxxx."
- 3. The printer name and firmware version are displayed. Click the [Next].

000	The Updater	
This tool is for upo	dating the firmware.	
Printer name:	KONICA MINOLTA magicolor 5450	
Firmware version:	COIROI	
	Next Exit	
L		A011F2E57

4. The license agreement is displayed. Select "I agree", and then click the [Next].

Licence		
a part o you a nu KONICA use the	deration of payment of the license fee, which is the purchase price, KONICA MINOLTA grants to n-exclusive right to use the software subject to wing conditions: MINOLTA grants to you a non-exclusive right to software, without the right to distribute, rent,	
◯ I do ● I agr	not agree	

1

5. The screen for specifying the IP address of the printer appears.

O O The Updater	
Please enter the printer IP address.	
Next Exit	

6. Type in the IP address, and then click the [Next].

O O The Updater	
Please enter the printer IP address.	
Next Exit	A011F2E574DA

7. A message appears, requesting confirmation to update the firmware. Click the [Start] to begin transferring the firmware.

NOTE

Г

• Do not turn off the printer while its firmware is being updated.

<u>A</u> .	Please do not update the firmware during printing. And, please do not turn off the printer during updating.	
	If you are ready, please start now.	A011F2E575DA

8. The result of the firmware transfer is displayed. Click the [Exit].



9. If the firmware was successfully updated, the printer will automatically restart.

If transferring of the data fails>

- 1. If transferring of the data fails, the following message appears.
- 2. Click [OK].

|--|--|

3. Check that the printer is ready and that it is correctly connected, and then click the [Update again].

O O The Updater	
Transferring of the firmware updating data has failed.	
Please check if the printer is ready and connected correctly, and then retry.	
Update again Exit	
	A011F2E578DA

Checking the version after the firmware update 5.3.2

- Display [SERVICE MENU].
 Display [FIRMWARE VERSION].

FIRMWARE VERSION	
► CONTROLLER F/W	
► ENGINE F/W	
▶ BOOT F/W	
	A011F2E545DA

3. Select the firmware that has been updated and check the current version. For details, See P.173 of "Adjustment/Setting."

6. Other

6.1 Disassembly/adjustment prohibited items

A. Paint-locked screws

NOTE

- To prevent loose screws, a screw lock in blue or green series color is applied to the screws.
- The screw lock is applied to the screws that may get loose due to the vibrations and loads created by the use of machine or due to the vibrations created during transportation.
- If the screw lock coated screws are loosened or removed, be sure to apply a screw lock after the screws are tightened.

B. Red-painted screws

NOTE

- The screws which are difficult to be adjusted in the field are painted in red in order to prevent them from being removed by mistake.
- Do not remove or loosen any of the red-painted screws in the field. It should also be noted that, when two or more screws are used for a single part, only one representative screw may be marked with the red paint.

C. Variable resistors on board

NOTE

- Do not turn the variable resistors on boards for which no adjusting instructions are given in Adjustment/Setting.
- D. Removal of PWBs

- When removing a circuit board or other electrical component, refer to "Handling of PWBs" and follow the corresponding removal procedures.
- The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.
- Where it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.

6.2 Disassembly/assembly/cleaning list (other parts)

6.2.1 Disassembly/assembly parts list

No	Section	Part name	Ref.Page
1	Exterior parts	Front cover	P.48
2		Right front cover	P.48
3		Operation panel lower cover	P.49
4		Left cover	P.49
5		Rear cover	P.50
6		Exit tray	P.50
7		Right rear cover	P.51
8		Tray 2	P.51
9		Operation board (OB)	P.52
10		Hard disk kit (option)	P.52
11		Print control board (PRCB)	P.53
12	Boards and etc.	MFP board (MFPB)	P.55
13	Doards and etc.	DC power supply (DCPU)	P.58
14		High voltage unit/1 (HV1)	P.59
15		High voltage unit/2 (HV2)	P.60
16		Toner level sensor board (TLSB)	P.61
17	Units	PH unit	P.64
18	Offits	Driving unit	P.70
19		Backup battery	P.72
20		PWB box	P.73
21		Color PC drum motor (M2)	P.75
22		Transport motor (M3)	P.75
23		Fusing motor (M4)	P.75
24		K developing motor (M5)	P.76
25		Toner supply motor/Y,M (M6)	P.76
26		Toner supply motor/C,K (M7)	P.76
27	Other Parts	Media feed clutch assy	P.77
28	Other Farts	Registration roller clutch (CL3)	P.78
29		1st image transfer retraction position clutch (CL4)	P.79
30		2nd image transfer retraction position clutch (CL5)	P.80
31		Swichback roller feed clutch (CL11) *1	P.81
32		Switchback roller reverse clutch (CL12) *1	P.83
33		Duplex transport roller clutch (CL13) *1	P.84
34		Temperature/ humidity sensor (TEM/HUMS)	P.86
35		IDC sensor board /Re (IDCSB/R)	P.87
36		IDC sensor board /Fr (IDCSB/F)	1.07

*1: Only for magicolor 4650DN

6.2.2 Cleaning parts list

No	Section	Part name	Ref.Page
1	Tray 1	Feed roller	P.88
2	Tray 2	Feed roller	P.88
3	Processing section	Laser irradiation section	P.89

Slide the front cover [2] to the left off

Remove the E-ring [1].

the machine.

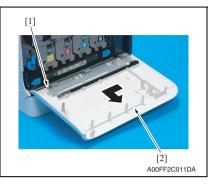
2.

З.

6.3 Disassembly/assembly procedure

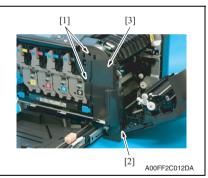
6.3.1 Front cover

1. Open the front cover.



6.3.2 Right front cover

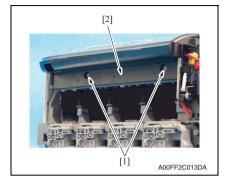
- 1. Remove the front cover. See P.48
- 2. Open the right door.
- 3. Slide out tray 2.



-
- 4. Remove two screws [1], and unhook the tab [2].
- 5. Remove the right front cover [3].

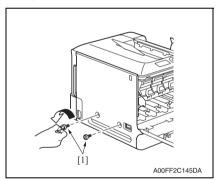
6.3.3 Operation panel lower cover

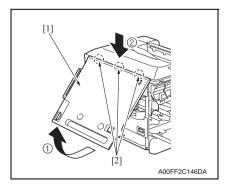
- 1. Remove the right front cover. See P.48
- 2. Remove the all toner cartridges. See P.13



6.3.4 Left cover

1. Open the front cover.





3. Remove two screws [1], remove the operation panel lower cover [2].

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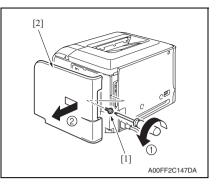
2. Using a coin, remove two screws [1] on the left side.

3. Remove the left cover [1].

NOTE

• Remove the left cover as shown in the illustration on the left, taking care not to damage the three tabs [2] on the upper edge of the left cover.

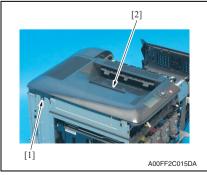
6.3.5 Rear cover



6.3.6 Exit tray

- 1. Remove the operation panel lower cover. See P.49
- 2. Remove the left cover. See P.49
- 3. Remove the rear cover. See P.50
- 4. Remove the right front cover. See P.48





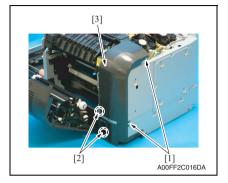
- 1. Remove the screw [1].
- 2. Slide the rear cover [2] in the direction shown in the illustration on the left off the machine.

5. Disconnect the connector [1].

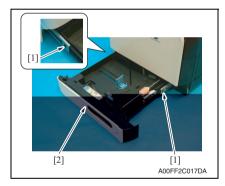
6. Remove the screw [1], remove the exit tray [2].

6.3.7 Right rear cover

- 1. Remove the exit tray. See P.50
- 2. Remove the ozone filter. See P.12



6.3.8 Tray 2

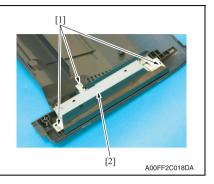


 Remove two screws [1], unhook two tabs [2] and remove the right rear cover [3].

- 1. Slide out tray 2 [1].
- 2. Pressing the tabs [2] on both sides, remove tray 2 [1].

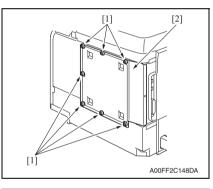
6.3.9 Operation board (OB)

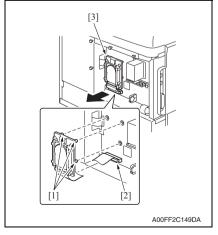
1. Remove the exit tray. See P.50



6.3.10 Hard disk kit (option)

1. Remove the rear cover. See P.50





2. Remove three screws [1], and remove the operation board [2].

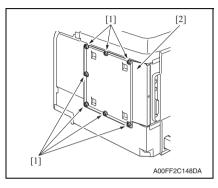
2. Loosen seven screws [1], and remove the print control board protective shield [2].

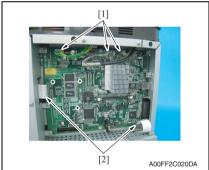
 Remove three mounting pins [1], disconnect the connector [2], and remove the hard disk kit [3].

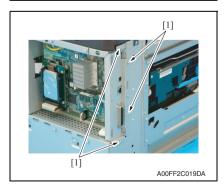
6.3.11 Print control board (PRCB)

NOTE

- After the Print control board replacement, you need to set the language to be displayed on the control panel again.
 - See P.146
- 1. Remove the rear cover. See P.50
- 2. Remove the left cover. See P.49



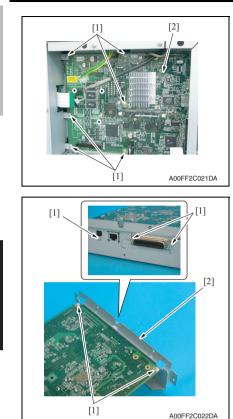


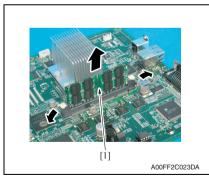


 Loosen seven screws [1], and remove the print control board protective shield [2].

- 4. Disconnect three connectors [1] on the print control board.
- 5. Remove two flat cables [2].

6. Remove four screws [1].





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- 7. Remove six screws [1], and remove the print control board assy [2].

8. Remove five screws [1], and remove the interface protective cover [2].

9. Remove the memory [1] from the print control board.

10. Remove the backup battery from the print control board. See P.72

NOTE

• When the print control board is replaced, upgrade the firmware to the latest version.

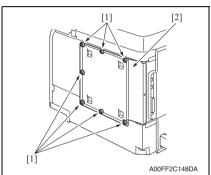
See P.29

• After the replacement of the print control board, you need to rewrite new security data into the hard disk and the compact flash if you would like to continue to use the data that has been stored in these disks.

See P.190

6.3.12 MFP board (MFPB)

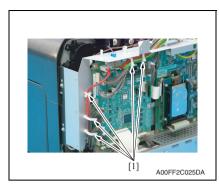
- 1. Remove the exit tray. See P.50
- 2. Remove the right rear cover. See P.51



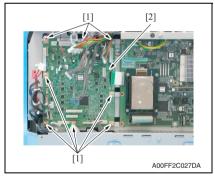
3. Remove seven screws [1], and remove the print control board protective shield [2].

A00FF2C024DA

- Remove seven screws [1], and remove the MFP board protective shield [2].







5. Remove the harness from five wire saddles [1].

6. Disconnect all connectors and flat cables from the MFP board [1].

7. Remove eight screws [1], and remove the MFP board [2].

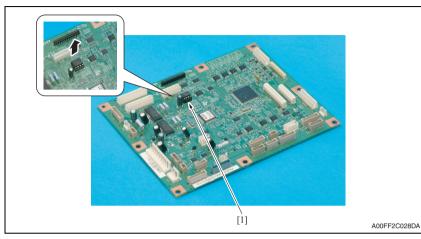
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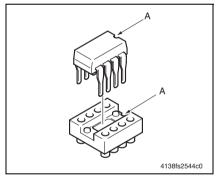
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8. Remove parameter chip (IC4) [1] from the MFP board.

NOTE

• When the MFP board (MFPB) has been replaced, be sure to remount parameter chip (IC4). Unmount parameter chip (IC4) from the old MFP board and mount it on the new MFP board.



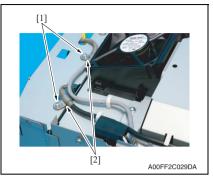


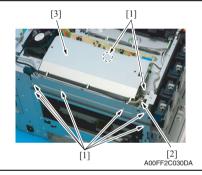
NOTE

 When mounting parameter chip (IC4), make sure the notches ("A") are precisely lined up.

6.3.13 DC power supply (DCPU)

1. Remove the exit tray. See P.50



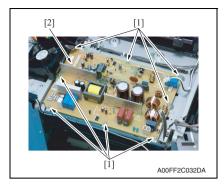




- 2. Remove two screws [1].
- 3. Remove the harness from two wire saddles [2].

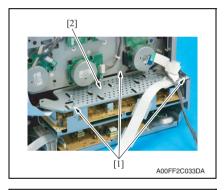
 Remove eight screws [1], disconnect the connector [2], and remove the DC power supply protective cover [3].

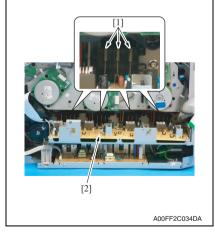
5. Disconnect all connectors from the DC power supply.



6.3.14 High voltage unit /1 (HV1)

1. Remove PWB box. See P.73





6. Remove eight screws [1], and remove the DC power supply [2].

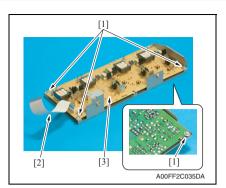
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remove the harness plate [2].

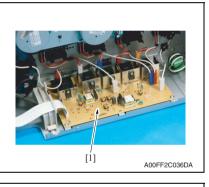
2. Remove three screws [1], and

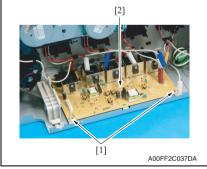
3. Remove twelve springs [1], and the high voltage unit /1 assy [2].



6.3.15 High voltage unit /2 (HV2)

1. Remove the high voltage unit /1. See P.59

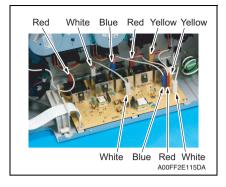




 Remove four screws [1] and the flat cable [2], and remove the high voltage unit /1 [3].

2. Disconnect all connectors and flat cables from high voltage unit /2 [1].

3. Remove two screws [1], and remove the high voltage unit /2 [2].

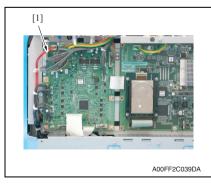


6.3.16 Toner level sensor board (TLSB)

- 1. Open the front cover.
- 2. Remove the toner cartridge (C,M,Y,K). See P.13
- 3. Remove the print unit (C,M,Y,K). See P.16

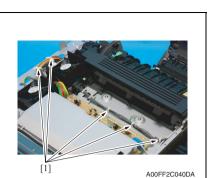
NOTE

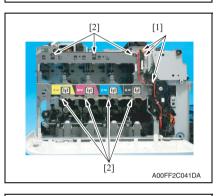
- After the print unit has been removed from the main body, be sure to place it in the plastic bag (black) or wrap it in a light shielding cloth, and store it in a dark place. Do not leave the Print unit exposed to light for a extended period of time, as it may become damaged.
- 4. Remove the waste toner bottle. See P.20
- 5. Remove the right front cover. See P.48
- 6. Remove the exit tray. See P.50
- Remove the MFP board protective shield. See the steps 1 to 4 on P.55 "MFP board (MFPB)".

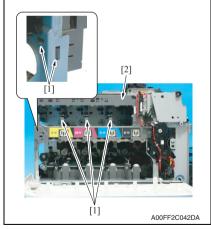


 Disconnect the connector (PJ13A) [1] from the MFP board.

 When reinstalling high voltage unit / 2, make sure that each color connector is in the correct position, as shown in the illustration on the left.





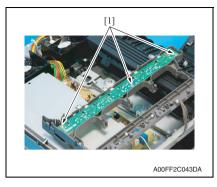


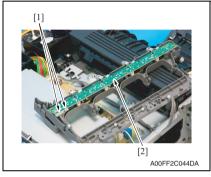
9. Remove the harness from five wires addles [1].

10. Disconnect three connectors [1], and remove seven screws [2].

11. Remove five tabs [1], and remove the toner level sensor board assy [2].

Maintenance





12. Remove three screws [1].

6. Other

 Disconnect two connectors [1], remove the toner level sensor board [2].

6. Other

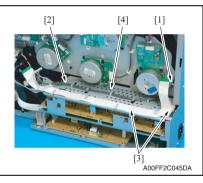
6.3.17 PH Unit

A. Removal procedure

- 1. Open the front cover.
- 2. Remove the toner cartridge (C,M,Y,K). See P.13
- *3.* Remove the print unit (C,M,Y,K). See P.16

NOTE

- After the print unit has been removed from the main body, be sure to place it in the plastic bag (black) or wrap it in a light shielding cloth, and store it in a dark place. Do not leave the Print unit exposed to light for a extended period of time, as it may become damaged.
- 4. Remove the waste toner bottle. See P.20
- 5. Remove the transfer belt. See P.24
- 6. Remove PWB box. See P.73



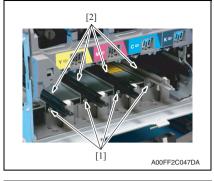
[2] [1] A00FF2C046DA

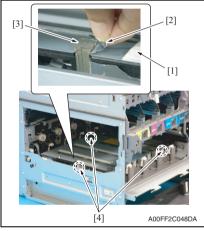
- 7. Remove the harness [2] from the wire saddle [1].
- 8. Remove the harness [2] and two flat cables [3] from the harness plate [4].

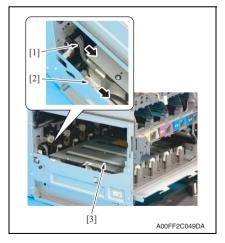
 Remove the screw [1], and remove the drawing up transportation assy [2].

NOTE

- Waste toner may spill out from the waste toner inlet of the drawing up transportation assy.
 - Take care not to tilt the waste toner inlet when removing the drawing up transportation assy. The drawing up transportation assy also needs to be placed in a horizontal position where no waste toner will spill out.







10. Remove four screws [1], and remove corresponding four print unit rails [2].

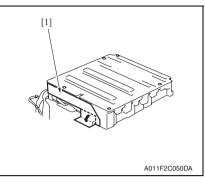
- Remove the tape [1], pull the aluminum part [2], and remove the gasket [3].
- *12.* Remove three shoulder screws [4] of the PH unit.
- Maintenance

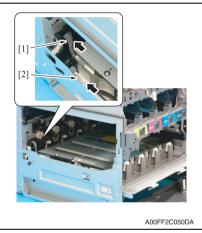
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13. Pull the connector [1] and the flat cable [2] out, and remove the PH unit [3].

B. Reinstallation procedure

1. Remove the shipping tape affixed on the new PH unit shield sheet.





[1] AOFF2C051DA

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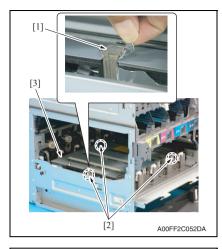
 Unfold the rectangular area of the shield sheet [1] so that the part is lying flat.

3. Insert the PH unit connector [1] and flat cable [2] from the positions shown in the left illustration. Then route them to the rear direction.

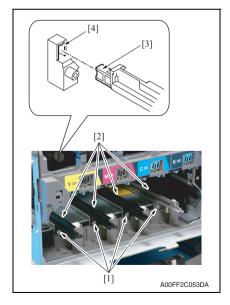
4. Install the PH unit [1] into the main body.

NOTE

- After the PH unit installation, check that the shield sheet is grounded properly onto the base of the PH unit.
- Make sure that the shield sheet does not have any unnecessary crease, positional misalignment nor loose attachment.







- 5. Remove the gasket [1] that secures the shoulder screw in position.
- 6. Fix the PH unit [3] with three shoulder screws [2].

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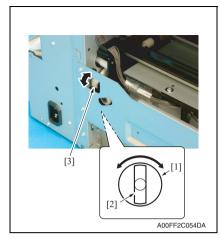
7. Reinstall the gasket [1] and fasten the aluminum part with tape [2].

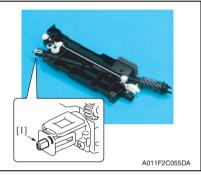
NOTE

- Make sure that the gasket [1] is pushed against the shoulder screw.
- Tape must be located on the upper side of the dotted line as shown in the illustration.
- 8. Attach the four print unit rails [2] with one screw [1] for each rail.

NOTE

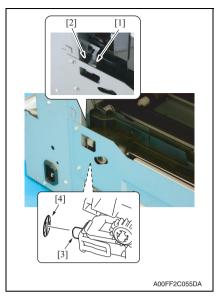
• Make sure that the convex parts [3] at rear end of the rail are fit in the locating hole [4] on the main body.

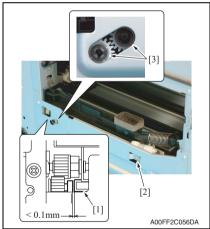




- 9. Install the drawing up transportation assy into the main body.
- <1> Turn the middle drive gear [3] so that the rear gear [1] keeps its own rectangular slot vertically long.

<2> Turn the connecting part [1] so that it becomes vertically long.





11. To reinstall, reverse the order of removal.

- <3> Insert the drawing up transportation assy shaft [1] into the rear mounting hole [2].
- <4> Insert the connecting part [3] of the drawing up transportation assy into the rear gear slot [4].

6. Other

10. While pushing the positioning protrusion [1] of the drawing up transportation assy against the housing, fix the assy with one screw [2].

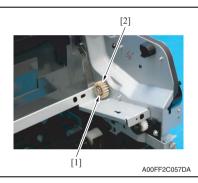
NOTE

- Check that the two drive gears [3] of the drawing up transportation assy are engaged.
- Use a 0.1 mm piece of a thickness gauge to check the gap between the positioning protrusion [1] and the main body frame. Make sure that the piece of the thickness gauge cannot pass through the gap. (A transparency can replace the thickness gauge.)
- Check that the shield sheet which confirmed in step 4, is well grounded onto PH unit base plate at malt of drawing up transportation assy.

6. Other

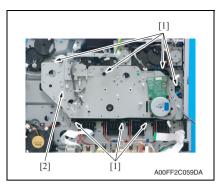
6.3.18 Driving unit

- 1. Remove the fuser unit. See P.26
- 2. Remove the PWB box. See P.73
- 3. Remove the harness plate of the high voltage unit /1. See the steps 1 to 2 on P.59 "High voltage unit".
- 4. Remove the color PC drum motor. See P.75
- 5. Remove the K developing motor. See P.76
- 6. Remove the fusing motor. See P.75
- 7. Remove the transport motor. See P.75
- 8. Remove the media feed clutch assy. See P.77
- Remove the duplex exit roller unit. See the steps 1 to 2 on P.81 "Duplex exit roller and clutch".



[1] (1) (2) ADDFF2C058DA 10. Remove the E-ring [1], and remove the gear [2].

- 11. Disconnect two connectors [1].
- 12. Remove the harness from two wire saddles [2].



13. Remove seven screws [1], and remove the driving assy [2].

NOTE

• When installing the driving unit assy, take care not to damage or soil the gears.

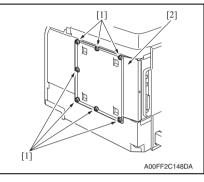
14. Remove the 1st image transfer pressure/retraction clutch assy. See the steps 1 to 2 on P.79 "1st image transfer pressure/retraction clutch". 6. Other

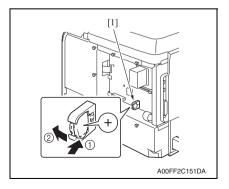
6. Other

6.3.19 Backup Battery

NOTE

- This printer uses a lithium battery to backup memory. Replace the battery with our specified memory backup battery (CR2032). Use of a different battery or the one not equal to our specified battery may present risk of explosion.
- Before your backup battery replacement, refer to the section of Removal of PWBs on P.45.
- When working with print control board, hold the boards only by the edges.
- 1. Remove the rear cover. See P.50



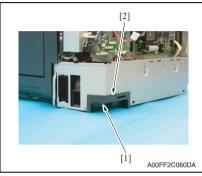


 Loosen seven screws [1], and remove the print control board protective shield [2].

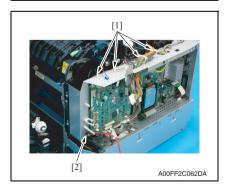
 Press the backup battery [1] in the way shown in the picture on the left and remove it from the housing.

- 4. Insert a new backup battery [1]. **NOTE**
- When inserting the new backup battery, be sure that the + side faces toward the right.

- 1. Remove the exit tray. See P.50
- 2. Remove the rear right cover. See P.51
- 3. Remove all connectors and the flat cable on the print control board. See the steps 3 to 5 on P.53 "Printer control board".
- 4. Remove all connectors and the flat cable on the MFP board. See the steps 3 to 6 on P.55 "MFP board".



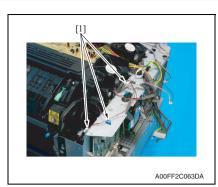
[1] (1) (2) ADDFF2C061DA

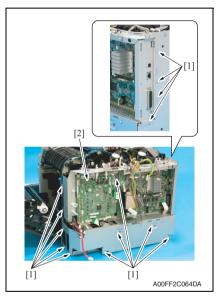


5. Remove the screw [1], and remove the cover [2].

6. Remove three screws [1], and remove three harness clamps [2].

 Remove four wire saddles [1], remove the harness from edge cover [2].



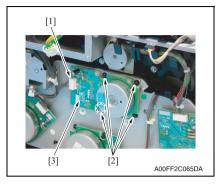


8. Disconnect three connectors [1].

9. Remove fourteen screws [1], remove the PWB box [2].

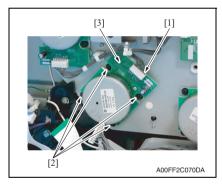
6.3.21 Color PC drum motor (M2)

1. Remove the PWB box. See P.73



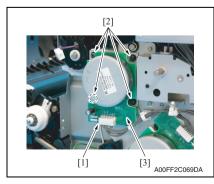
6.3.22 Transport motor (M3)

1. Remove the PWB box. See P.73



6.3.23 Fusing motor (M4)

1. Remove the PWB box. See P.73



2. Disconnect the connector [1] and remove three screws [2], and the color PC drum motor [3].

NOTE

 When installing the color PC drum motor, try to insert it straight, and take care not to damage the gears.

2. Disconnect the connector [1] and remove four screws [2], and the transport motor [3].

NOTE

 When installing the transport motor, try to insert it straight, and take care not to damage the gears.

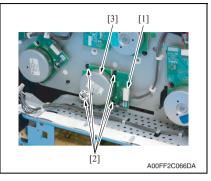
 Disconnect the connector [1] and remove four screws [2], and the fusing motor [3].

NOTE

• When installing the fusing motor, try to insert it straight, and take care not to damage the gears.

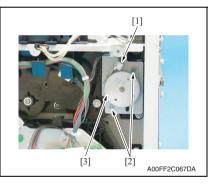
6.3.24 K Developing motor (M5)

1. Remove the PWB box. See P.73



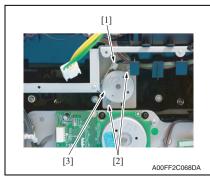
6.3.25 Toner supply motor /Y, M (M6)

1. Remove the PWB. See P.73



6.3.26 Toner supply motor /C, K (M7)

1. Remove the PWB box. See P.73



 Disconnect the connector [1] and remove two screws [2], and the toner supply motor /C, K [3].

NOTE

• When installing the toner supply motor /C, K, try to insert it straight, and take care not to damage the gears.

 Disconnect the connector [1] and remove four screws [2], and the K developing motor [3].

NOTE

• When installing the K developing motor, try to insert it straight, and take care not to damage the gears.

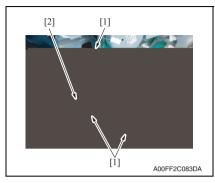
 Disconnect the connector [1] and remove two screws [2], and the toner supply motor /Y, M [3].

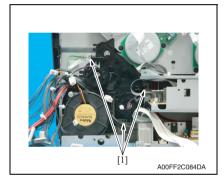
NOTE

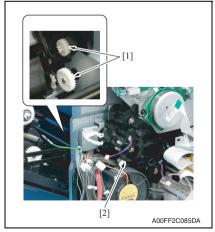
• When installing the toner supply motor /Y, M, try to insert it straight, and take care not to damage the gears.

6.3.27 Media feed clutch assy

1. Remove the PWB box. See P.73







2. Disconnect three connectors [1], remove the wire saddle [2].

3. Remove three screws [1].

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4. Remove two gears [1].

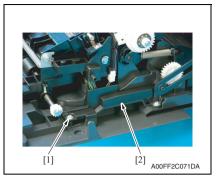
NOTE

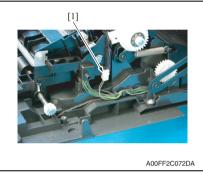
- When the media feed clutch /1 is reinstalled, replace the gears that have been removed, as these gears could have been damaged.
- 5. Remove the media feed clutch assy [2].

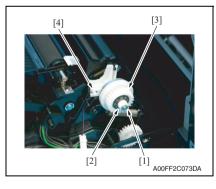
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6.3.28 Registration roller clutch (CL3)

1. Open the right door.







2. Remove the screw [1], and remove the cover [2].

3. Disconnect the connector [1].

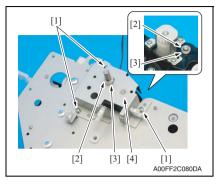
 Remove the E-ring [1] and the bearing [2], and remove the registration roller clutch [3]

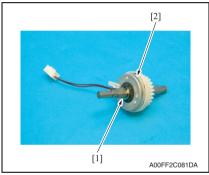
Precautions for Reinstallation

 When reinstalling the bearing, make sure that the notch [4] on the registration roller clutch comes to the position shown in the left picture.

6.3.29 1st image transfer pressure/retraction clutch (CL4)

1. Remove the driving unit assy. See P.70





- Remove three screws [1], remove two E-rings [2], and remove two bearings [3].
- 3. Remove the 1st image transfer pressure/retraction clutch assy [4].

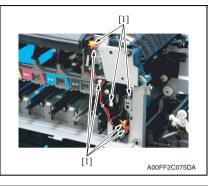
4. Remove the gear [1], and remove the 1st image transfer pressure/ retraction clutch [2]. magicolor 4650EN magicolor 4650DN

NOTE

• When reinstalling the shaft and the 1st image transfer pressure/retraction clutch, make sure that the protrusion [1] on the 1st image transfer pressure/retraction clutch fits into the locking slot [2].

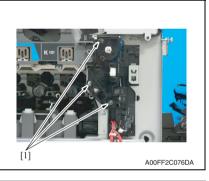
6.3.30 2nd image transfer pressure/retraction clutch (CL5)

- 1. Open the front cover.
- 2. Remove the right front cover. See P.48
- 3. Open the right door.



 Disconnect seven connectors [1], and move the harness away from the work area.

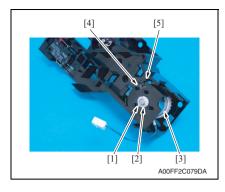
5. Remove three screws [1].



- $\begin{bmatrix} 2 & 3 \\ 1 & 1 \end{bmatrix}$
- 6. Remove the lever [1], gear/1 [2], gear/2 [3], and the bearing [4].
- Remove the 2nd image transfer pressure/retraction drive assy [5].

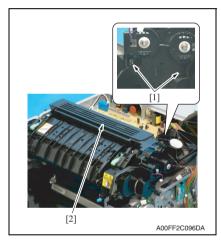
NOTE

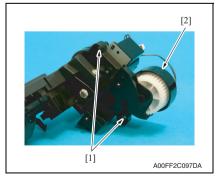
• When the media feed clutch /1 is reinstalled, replace the gears that have been removed, as these gears could have been damaged.



6.3.31 Switchback roller feed clutch (CL11)

1. Remove the MFP board. See P.55





- 2. Remove two screws [1], and remove the switchback roller clutch unit [2].
- Maintenance

- 8. Remove the C-clip [1] and remove the bearing [2].
- 9. Remove the pressure/retraction clutch /2 [3].

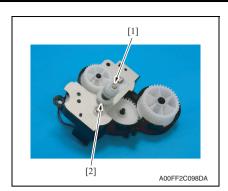
Precautions for Reinstallation

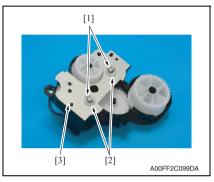
• When reinstalling the bearing and pressure/retraction clutch /2, make sure that the protrusion [4] on the pressure/retraction clutch /2 fits into the locking slot [5].

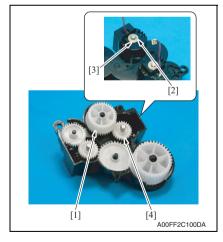
3. Remove two screws [1], remove the switchback clutch assy [2].

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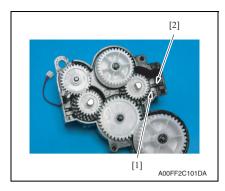




4. Remove the gear assy [1] and bearing [2].

- 5. Remove two E-rings [1], and remove the bearing [2].
- 6. Remove the metal plate [3].

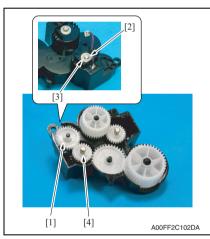
- 7. Remove the gear [1], E-ring [2], and bearing [3].
- 8. Remove the switchback roller feed clutch [4].

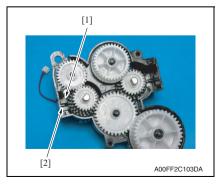


- Precautions for reinstallation
- When reinstalling the bearing and switchback roller feed clutch, make sure that the protrusion [1] on the duplex exit roller feed clutch fits into the locking slot [2].

6.3.32 Switchback roller reverse clutch (CL12)

- 1. Remove the MFP board. See P.55
- 2. Remove the switchback roller clutch unit. See the steps 1 to 6 on P.81 "Switchback roller feed clutch".





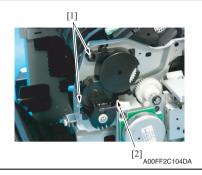
- 3. Remove the gear [1].
- 4. Remove the E-ring [2] and the bearing [3], and remove the switchback roller reverse clutch [4].

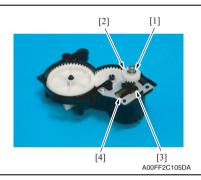
Precautions for reinstallation

• When reinstalling the bearing and duplex exit roller switch back clutch, make sure that the protrusion [1] on the switchback roller reverse clutch fits into the locking slot [2].

6.3.33 Duplex transport roller clutch (CL13)

- 1. Remove the MFP board. See P.55
- 2. Remove the duplex exit roller clutch unit. See the steps 1 to 2 on P.81 "Duplex exit roller feed clutch".



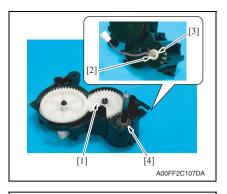


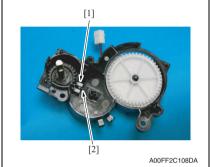
[1]

3. Remove two screws [1], remove the duplex transport roller clutch [2].

4. Remove the E-ring [1], gear [2], bearing [3], and spring [4].

5. Remove the screw [1], and remove the metal plate [2].





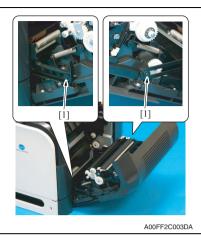
- 6. Remove the gear [1].
- Remove the E-ring [2] and bearing [3], and remove the duplex transport roller clutch [4].

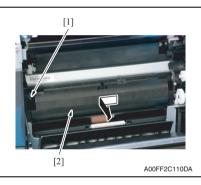
Precautions for reinstallation

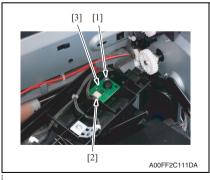
 When reinstalling the bearing and duplex transport roller clutch, make sure that the protrusion [1] on the duplex transport roller clutch fits into the locking slot [2].

6.3.34 Temperature/ humidity sensor (TEM/HUMS)

1. Open the right door.







2. Remove two screws [1], and swing the right door [2] all the way down.

- 3. Remove the screw [1] from the sensor holder [2].
- 4. Remove the sensor holder [2] as shown on the left.

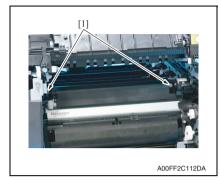
NOTE

• Do not jerk off the sensor holder, to which a harness is connected.

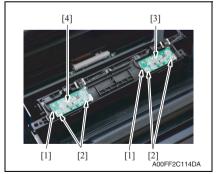
 Disconnect the connector [1], remove the screw [2], and temperature/ humidity sensor [3].

6.3.35 IDC sensor board /Re, IDC sensor board /Fr (IDCSB/R, IDCSB/L)

- 1. Open the right door.
- 2. Remove the transfer belt. See P.24







3. Remove two screws [1].

Maintenance

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NOTE

the cover [2].

Be careful not to lose the spring.

4. Unhook the spring [1] and remove

- 5. Disconnect the connector [1] each and remove two screws [2] each.
- Remove the IDC sensor board /Re
 [3] and IDC sensor board /Fr [4].

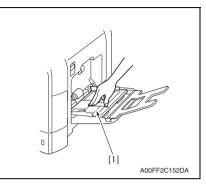
6.4 Cleaning procedure

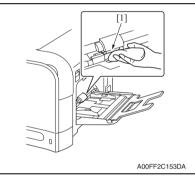
NOTE

• The alcohol described in the cleaning procedure represents the isopropyl alcohol.

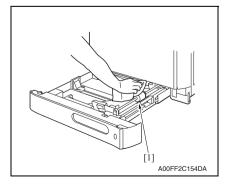
6.4.1 Tray 1 feed roller

1. Open the tray 1.





- 6.4.2 Tray 2 feed roller
- 1. Slide out tray 2.



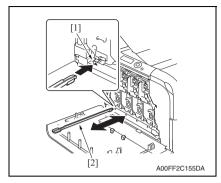
 Press down on the center of the media lifting plate [1] until the left and right locking tabs lock into place.

3. Using a cleaning pad dampened with alcohol, wipe the feed roller [1] clean of dirt.

2. Using a cleaning pad dampened with alcohol, wipe the feed roller [1] clean of dirt.

lance

1. Open the front cover.



 Align the edge of the laser lens cleaning tool [2] with the marker [1] (at four places) of the waste toner bottle. Insert the tool [2] and make two to three reciprocating motions to clean the laser irradiation section.

NOTE

• For cleaning, do not use any tool other than the specified laser lens cleaning tool.

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ce

Adjustment/Setting

7. How to use the adjustment section

- "Adjustment/Setting" contains detailed information on the adjustment items and procedures for this machine.
- Throughout this "Adjustment/Setting," the default settings are indicated by " ".

Advance checks

Before attempting to solve the customer problem, the following advance checks must be made. Check to see if:

- The power supply voltage meets the specifications.
- The power supply is properly grounded.
- The machine shares the power supply with any other machine that draws large current intermittently (e.g., elevator and air conditioner that generate electric noise).
- The installation site is environmentally appropriate: high temperature, high humidity, direct sunlight, ventilation, etc.; levelness of the installation site.
- The original has a problem that may cause a defective image.
- The density is properly selected.
- The original glass, slit glass, or related part is dirty.
- Correct paper is being used for printing.
- The units, parts, and supplies used for printing (developer, PC drum, etc.) are properly replenished and replaced when they reach the end of their useful service life.
- Toner is not running out.

- Be sure to unplug the power cord of the machine before starting the service job procedures.
- If it is unavoidably necessary to service the machine with its power turned ON, use utmost care not to be caught in the scanner cables or gears of the exposure unit.
- Special care should be used when handling the fuser unit which can be extremely hot.
- The developing unit has a strong magnetic field. Keep watches and measuring instruments away from it.
- Take care not to damage the PC drum with a tool or similar device.
- Do not touch IC pins with bare hands.

8. Description of the control panel

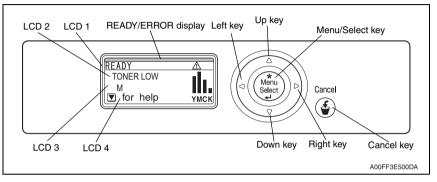
8.1 Control panel display

8.1.1 Parts of the control panel display

• The following shows the names of each part of the control panel. These names are used throughout this manual.

From the top, the panel is divided into LCD 1, LCD 2, LCD 3, and LCD 4.

• LCD 4 may display a message instructing you to press a key on the control panel. When you press that key, the displayed message changes.



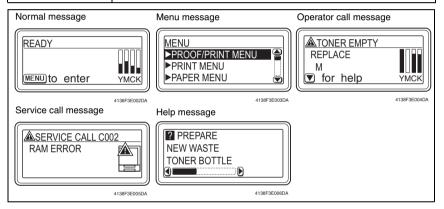
NOTE

• The display screen is not designed for touch panel operation; therefore, do not touch the icons on the screen. If it is pushed too hard, the LCD (liquid crystal display) may be damaged.

8.1.2 Message structure

• There are five types of messages.

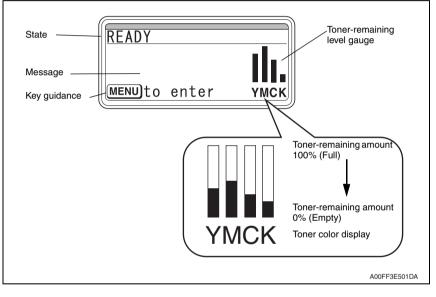
Message	Description
Normal messages	These messages are displayed after warmup has been completed: • Toner remaining gauge • Data-receiving message • Printing message • Firmware update messages • Warnings
Menu messages	These messages are displayed after the Menu/Select key is pressed.
Operator call messages	These messages are displayed when minor error(s) that can be handled by users occur.
Service call messages	These messages are displayed when error(s) that cannot be handled by users occur.
Help messages	These messages are displayed when the Down key ▼ is pressed when a Normal message/Warning or Operator Call message is displayed.



8.1.3 Normal messages

- The basic screen is displayed after warm-up has been completed.
- The line-shaped LED on the display lights up steadily in a color corresponding to the specific message displayed on it.

Diaplay	Description	
Display	Description	
LCD 1	Printer mode is displayed. (Normally, "READY" is displayed.)	
LCD 2	The measure is displayed (Normally, no measure is displayed)	
LCD 3	The message is displayed. (Normally, no message is displayed.)	
LCD 4	Key guidance is displayed.	
	 Normally "MENU to enter" is displayed. 	
	When the Menu/Select key is pressed, the panel displays the MENU screen.	
	 When a WARNING message is displayed, "▼ for help" is also displayed. 	
	When the Down key ▼ is pressed, the panel displays the HELP screen.	



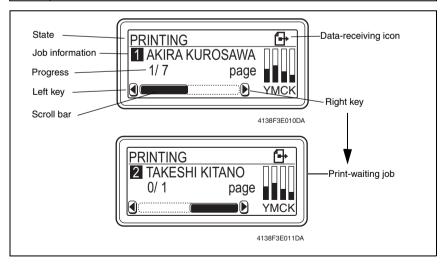
A. Toner-remaining level gauge

- The amount of each color of toner remaining is graphed in 10% increments (11 scales.) However, it's not displayed during the following states:
 - Operator Call
 - Service Call
 - Menu
 - Help menu
 - BOOT message
 - When the toner remaining amount is not determined immediately after startup.
 - When using toner made by companies other than Konica Minolta

B. Data receiving message/print

• The control panel displays the following description at data receiving message/print.

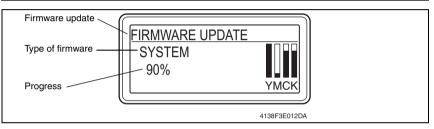
Display	Description	
LCD 1	 Printer mode is displayed (for example, PRINTING). PROCESSING is displayed during data receiving or printer startup. PRINTING is displayed during printing. When printing in sets, [COPYING] is displayed after the second set starts printing. The normal printing data-receiving icon "⊡" is displayed on the right during data receiving. The Camera-Direct connecting icon "⊡" is displayed on the right when the digital camera is connected to the machine. The Camera-Direct printing data-receiving icon "八" is displayed on the right during data receiving data receiving. 	
	 The Memory-Direct connecting icon "→ is displayed on the right when the USB memory device is connected to the machine. The Memory-Direct printing data-receiving icon " //" is displayed on the right during data receiving. 	
LCD 2	Job information is displayed (for example, 1 AKIRA KUROSAWA). • The job owner name, etc. set with PJL commands is displayed. • When multiple jobs are set, the number is displayed to the left of the owner name.	
LCD 3	 Job progress is displayed (for example, 1/7 page). In normal print mode, "Number of processed print / Total number of print" is displayed. When printing in sets, "Number of processed print/Total number of a set print" is displayed while the first set is copying. After the second set starts printing, the LCD 1 state is changed to COPYING and "Number of processed print /Total number of print" is displayed. 	
LCD 4	 Scroll bar is displayed. When multiple jobs are sent, a scroll bar is displayed. By pressing the left key ◀/right key►, the jobs waiting to be printed are displayed. The following example shows the scroll bar in the case of two jobs. By pressing the right key, the panel displays the job waiting to be printed. To return to the display of the job currently processing, press the left key. 	



C. Firmware update

• The control panel displays the following description at firmware update.

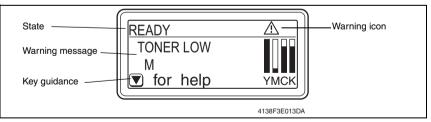
Display	Description	
LCD 1	IRMWARE UPDATE is displayed.	
LCD 2	LCD 2 displays the type of firmware (for example, SYSTEM). • SYSTEM: Controller firmware • BOOT: Boot firmware • RESOURCE: Resource file • CONFIGURATION: Equipment configuration file • ENGINE: Engine firmware	
LCD 3	Progress of the update is displayed (for example, 90%).	
LCD 4	No display	



D. Warning

• This message is displayed when the print is available but some user manipulation(s) are required. The control panel displays the following description for warning.

Display	Description	
LCD 1	Print mode is displayed and warning icon is displayed on the right (for example, READY).	
LCD 2	Warning message is displayed (for example, TONER LOW M).	
LCD 3		
LCD 4	Key guidance is displayed (for example, $\mathbf{\nabla}$ for help: By pressing the down key $\mathbf{\nabla}$, the screen displays the help screen).	

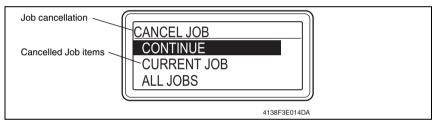


E. Job cancellation

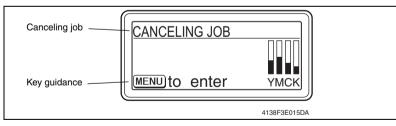
- By pressing the Cancel key after the job is sent, the control panel displays the job cancel menu.
- When no job is has been sent, pressing the Cancel key has no effect.
- The control panel displays the following description at the job cancel menu.

Display	Description	
LCD 1	CANCEL JOB is displayed.	
LCD 2	CONTINUE is displayed. Function: Continue the print of currently processing job. 	
LCD 3	CURRENT JOB is displayed. Function: Stop the print of currently processing job. 	
LCD 4	 ALL JOBS is displayed Stop the printing of all jobs, including the job currently being processed and all jobs waiting to be printed. 	

- By pressing the up key▲/down key▼, the item can be selected.
- The selected item is displayed with highlighted text. The default setting is CONTINUE.
- By pressing the Menu/Select key, the selected item is entered.
- By pressing the Cancel key, the job cancel menu is closed.



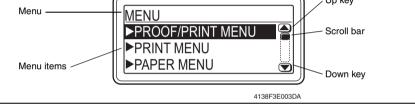
 By selecting CURRENT JOB or ALL JOB and pressing the Menu/Select key, job cancellation is implemented.



F. Menu

- The menu is displayed when the Menu/Select key is pressed.
- The control panel displays the following description at the menu screen.

Display	Description		
LCD 1	The menu of a upper stratum is displayed.		
LCD 2	 Menu items are displayed (3 items/ 10 items). By pressing the up key▲/down key▼, the item is selected. The menu consists of the following 10 items: 		
LCD 3	- PROOF/ PRINT MENU - PRINT MENU - PAPER MENU - QUALITY MENU		
LCD 4	- GUALITY MENU - MEMORY DIRECT - CAMERA DIRECT - INTERFACE MENU - SYS DEFAULT MENU - MAINTENANCE MENU - SERVICE MENU		
Menu Up key PROOF/PRINT MENU			



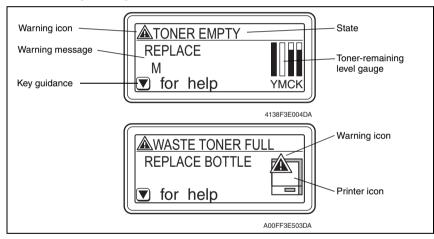
 For the details of each item, see "Menu." See P.109

8.1.4 Operator call messages

- These messages are displayed when minor error(s) that can be handled by user occur.
- The line-shaped LED lamp on the control panel lights up red steadily during operator call.
- The control panel displays the following when an operator call message is displayed.

Display	Description	
LCD 1	A warning icon " 🏝 " is displayed and the state is displayed on the right (for example, TONER EMPTY).	
LCD 2	Message is displayed (for example, REPLACE M).	
LCD 3	Niessage is displayed (101 example, NEFLACE IV).	
LCD 4	*▼ for help" is displayed.By pressing the down key, the panel displays the Help screen.	

- In the case of an operator call message related to a toner cartridge, the toner-remaining level gauge is displayed, and the gauge of the appropriate color flashes (for example, the M gauge).



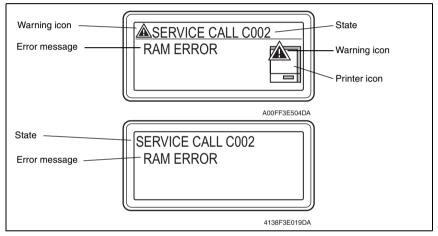
 For the details of each item, see "Operator call messages." See P.104

8.1.5 Service call messages

- These messages are displayed when error(s) that cannot be handled by the user occur.
- The line-shaped LED lamp on the control panel lights up red steadily during service call.
- The control panel displays the following description at service call.

Display	Description		
LCD 1	A "Warning icon 🏝 " is displayed and the service call message and a 4-digit-service call ID are displayed on the right (for example, SERVICE CALL C002).		
LCD 2	The error description is displayed (for example, RAM ERROR).		
LCD 3	- The error description is displayed (for example, RAM ERROR).		
LCD 4	No display		

- A printer icon is displayed with a flashing "warning icon 🛦 ."
- A service call detected during startup of the printer is displayed as shown in the bottom of the following picture.



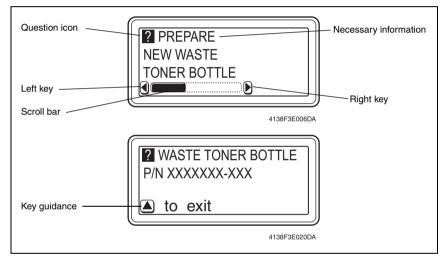
 For the details of each item, see "Service call messages." See P.106

8.1.6 Help screen

- This screen is displayed when the down key ▼ is pressed when a normal message/ warning or operator call message is displayed.
- The control panel displays the following description at the help screen.

Display	Description	
LCD 1		
LCD 2	A "Question icon ?" is displayed and the necessary information is displayed on the right (for example, PREPARE NEW WASTE TONER BOTTLE).	
LCD 3	oxample, the vite new whole foreit bottle).	
LCD 4	 A scroll bar or "▲ to exit" message is displayed. If there are several messages, a scroll bar is displayed. By pressing the left key ◄/right key►, a previous/next screen message is displayed. If all messages are displayed, "▲ to exit" displays on the screen. 	

• A graphic is displayed if necessary.



8.2 List of control panel messages

NOTE

- When two or more messages are to be displayed, the message with the higher priority will be displayed.
- When a message concerning consumables/periodic replacement parts (units) is displayed, print a statistics page from the [PRINT MENU] → [STATISTICS] menu and check the status of the other consumables, too. See P.115

8.2.1 Normal messages

A. Normal messages

Message (LCD1)	Description
INITIALIZING	The printer is being initialized
READY	Print enabled (Data not being printed)
OFFLINE	Off line condition (Data reception not available) TELNET allows offline setting.
ENERGY SAVER	Machine in energy saver mode
PROCESSING	Print data processing (Data receiving - printer is started)
PRINTING	Data being printed (Printer is started)
COPYING	Data being printed in sets
WARMING UP	During warmup
CALIBRATING	Color shift correction in progress
CANCELING JOB	Job canceled
REBOOTING	The printer is restarting
FIRMWARE UPDATE	The printer's firmware is being upgraded

B. Warning messages

Priority	Message (LCD2/LCD3)	Description
High 1	UNABLE TO COLLATE JOB	Print in sets disabled (full hard disk) (This warning message is displayed during printing.)
2	HDD NEAR FULL	The hard disk space will run out soon.
3	MEMORY CARD NEAR FULL	The compact flash space will run out soon.
4	I-UNIT END X	 Service life of the print unit (X) has been reached. (END status) Executing the printing with one of YMCK being at the END will make the operator call.
5	I-UNIT LIFE X	Service life of the print unit has been reached. Printing can be continued, but print quality is out of guarantee.)
6	TONER OUT X	The specified color toner cartridge is empty.
7	TRANS. BELT END OF LIFE	Transfer belt unit service life has been reached.
8	TRANS.ROLLER END OF LIFE	Transfer roller service life has been reached.
9	FUSER UNIT END OF LIFE	Fuser unit service life has been reached.
10	WASTE TONER NEAR FULL	The waste toner bottle needs replacement soon.
11	I-UNIT LOW X	The specified color print unit will run out soon. (This message appears when SYS DEFAULT MENU/ENABLE WARN- ING/I-UNIT LOW is set to ON.)
12	TONER LOW X	The specified color toner cartridge will run out soon. (This message appears when SYS DEFAULT MENU/ENABLE WARN- ING/TONER LOW is set to ON.)
13	PAPER EMPTY TRAY X	No media in the specified Tray. The specified tray is not installed, but it is set in the printer driver. (This message appears when SYS DEFAULT MENU/ENABLE WARN- ING/PAPER EMPTY is set to ON.)
14	INCORRECT I-UNIT X	The specified color print unit is not the correct type. A print cycle can be initiated, but is run at 1/3 the normal print speed.
15	INCORRECT TONER X	The specified color toner cartridge is not the correct type. A print cycle can be initiated, but is run at 1/3 the normal print speed.
16	NON SUPPORT CARD	A compact flash card which is inserted is not supported. The compact flash card will be invalid.
17	INCORRECT HDD	A hard disk which was formatted by other unit is installed.
18	INCORRECT MEMORY CARD	A compact flash card which was formatted by other unit is installed.
19	HUBS NOT SUPPORTED	A USB hub is connected to the USB host I/F.
Low 20	DEVICE NOT SUPPORTED	An unsupported device is connected to the USB host I/F.

8.2.2 Operator call messages

Drievity	Message		Description
Priority	LCD1	LCD2/LCD3	Description
High 1	CONFIGURA- TION ERR	TURN OFF THEN ON	 Device configuration was changed while the main switch was ON. In this condition, key operation on the control panel is disabled. To make the machine recover from the condition, turn the power switch OFF and ON.
	COVER OPEN	FRONT COVER	The front door of the machine is open.
2		SIDE COVER	The right door of the machine is open.
		TRAY3 COVER	The right cover of tray 3 is open.
3	INCORRECT TONER	INCORRECT TONER DETECTED	 The printer detects a toner manufactured by Konica Minolta but not the type specified for the model. By pressing the right key ▶, different messages appear one after another. (During the display of the messages, key operations other than the right key ▶ are disabled.) In the last message screen, the machine can recover from the error by pressing the Menu/Select key. However, the same message appears when the power switch is turned OFF and ON, the printer is being rebooted, or the printer covers are being opened or closed.
	PAPER JAM	FUSER/EXIT	A media jam has occurred at the fusing section.
		SECOND TRANS	A media jam has occurred at the second transfer section.
		VERTICAL TRANS	A media jam has occurred at the vertical transport.
4		DUPLEX1	A media jam has occurred at the duplex media feed section of the duplex option.
		DUPLEX2	A media jam has occurred at the duplex transport section of the duplex option.
		TRAY1	A media jam has occurred at tray 1 (manual feed tray).
		TRAY2	A media jam has occurred at tray 2.
		TRAY3	A media jam has occurred at tray 3.
	I-UNIT MISSING	CHECK X	The specified color print unit is not installed.
6	TONER MISSING	CHECK X	The specified color toner cartridge is not installed.
7	WASTE TONER FULL	REPLACE BOTTLE	The waste toner bottle is full.
8	I-UNIT END	REPLACE Y REPLACE M REPLACE C REPLACE K	 The specified color print unit has reached its life. This message will be displayed when performing the printing while warning message [I-UNIT END] is being displayed.

Priority		Message		Description
1 11011	FIIOIILY	LCD1	LCD2/LCD3	Doonplion
		TONER OUT	REPLACE Y	
9			REPLACE M	The specified color toner cartridge has run out.
	9		REPLACE	
			C	
			REPLACE K	
	10	TRAY X SIZE ERR	ADD SSSS *1	 The message appears after the paper has been take up, if the size of the paper loaded in the tray does no match the paper size setting made for the tray. Load "SSSS" size media in the specified tray.
	11	TRAY X TYPE ERROR	ADD TTTT *1	 The message appears after the paper has been take up, if the type of the paper loaded in the tray is OHP, whereas the paper type setting made for the tray is one but OHP. The message appears after the paper has been take up, if the type of the paper loaded in the tray is one but OHP, whereas the paper type setting made for the tray is OHP. Load "TTTT" type media in the specified tray.
	12	MANUAL FEED	SSSS *1 TTTT *1	 During print start-up, media has been loaded in mar ual feed tray and is waiting for a print start command After the user confirms the media and gives the prin start command, printing starts. How to start printing: Press the up key. Press the down keys, select tray with help menu an press the Menu/Select key. Set the media loaded in the tray 1 again.
	13	PAPER EMPTY	SSSS *1 TTTT *1	 No specified media in trays 1 to 3. Tray is loaded with the specified media but is not set appropriately. Displays when [TRAY CHAINING] is set to [ON].
		TRAY X EMPTY	SSSS *1 TTTT *1	 No specified media in the specified tray or tray 3 is no set appropriately. Displays when [TRAY CHAINING] is set to [OFF].
1	14	PAPER ERROR	SSSS *1 TTTT *1	 The size and type of media specified in the driver is not loaded in any tray. A different size of media from the one specified in th driver is loaded in the tray at media feeding. Displays when [TRAY CHAINING] is set to [ON].
		TRAY X PAPER ERR	SSSS *1 TTTT *1	 The size and type of media specified in the driver is not loaded in the specified tray. A different size of media from the one specified in th driver is loaded in the specified tray at media feeding Displays when [TRAY CHAINING] is set to [OFF].
			REMOVE	The printed media volume has reached maximum

	Priority	Message		Description
		LCD1	LCD2/LCD3	Description
Â	16	MEMORY FULL	PRESS CANCEL	The volume of data to be printed exceeds the permissi- ble amount of data to be processed by the machine's memory.
Â	17	Hold Job Error	UNABLE TO STORE JOB	The specified data of the held job is being received, but an optional HDD is not installed.
Â	Low 18		XXXX PRESS CANCEL	When printing a stored job, the printer configuration was changed since the job was stored.

*1: SSSS represents the media size while TTTT shows the media type.

*2: Only magicolor 4650DN.

8.2.3 Service call messages

 For troubleshooting procedures, see "Troubleshooting". See P.200

Mes	sage	
LCD1 (Service Call ID)	LCD2/LCD3 (Error description)	Description
0010	P MOTOR 1	Color PC drum motor malfunction
0017	P MOTOR 2	Intermediate transport motor malfunction
0018	D MOTOR 2	Developing motor/K malfunction
001B	D MOTOR 1	Developing motor/Y,M,C malfunction
0046	FUSER FAN	Fusing fan motor malfunction
004A	DUPLEX FAN	Duplex fan motor malfunction
004C	OZONE FAN	Ozone ventilation fan motor malfunction
004E	POWER FAN	DC power supply fan motor malfunction
0060	FUSER MOTOR	Fusing motor malfunction
0094	XFER DETACH2	2nd image transfer pressure/retraction failure
0096	XFER DETACH1	1st image transfer pressure/retraction failure
0300	POLYGON MOTOR	Polygon motor malfunction
0310	LASER ERROR	Laser malfunction
0500	FUSER ERROR	Heating roller warm-up failure
0501	FUSER ERROR	Fusing pressure roller warm-up failure
0502	THERMISTOR 1	Thermistor open-circuit failure
0503	THERMISTOR 2	Thermistor resistance failure
0510	FUSER ERROR	Abnormally low heating roller temperature
0520	FUSER ERROR	Abnormally high heating roller temperature
0F50	PT SENSOR	OHP sensor malfunction
0F52	TE SENSOR Y	Toner level sensor/Y malfunction
0F53	TE SENSOR M	Toner level sensor/M malfunction
0F54	TE SENSOR C	Toner level sensor/C malfunction
0F55	TE SENSOR K	Toner level sensor/K malfunction

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ſ	Message		
	LCD1 (Service Call ID)	LCD2/LCD3 (Error description)	Description
-	13C0	ENGINE H/W ERROR	MFP board malfunction
	13DD	EEPROM BK	Backup data error
	13E2	FLASH WRITE	Flash ROM write error
	13E3	FLASH DEVICE	Flash ROM device fault
	13F0	ENGINE ERR	Engine control fault
	3C00	EEPROM1	Trouble related to security
Â	3C10	EEPROM2	
	C002	RAM ERROR	RAM error at startup (standard memory)
	C003	RAM ERROR	RAM error at startup (expanded memory)
	C013	H/W ADDRESS	MAC address error at startup (MAC address is invalid)
-	C015	BOOT ROM	Boot ROM error at startup
	C025		Controller ROM error (Configuration information error)
	C026	CONTROLLER ROM	Controller ROM error (Access error)
	C027		Controller ROM error (Data error)
	C050	HDD ERROR	HDD access error
	C051	HDD DISK FULL	HDD full error *1
	C052	CARD ERROR	Compact flash access error
	C053	CARD FULL	Compact flash full error *1
-	C060	UPDATE ERROR	Firmware update error
	C071	H/W CONFIGURA- TION ERROR	Hardware configuration error
	FFFF	I/F COMMUNICA- TION ERROR	Interface communication error

*1: If this error occurs, the device is automatically formatted when the printer is later restarted.

8.3 Cancelling a print job

- A print job being processed or printed can be cancelled by pressing the Cancel key.
- When no job has been sent, pressing the Cancel key has no effect.
- 1. If the Cancel key is pressed while a print job is being printed, a message appears on the control panel.
- Select the job to be cancelled using the up key▲/ down key▼ and press the Menu/ Select key.

By pressing the Cancel key, the job cancel menu is closed.

Panel Display (LCD2 - LCD4)	Description	
CONTINUE	Continue printing the currently processing job.	
CURRENT JOB	Stop printing the currently processing job.	
ALL JOB	Stop printing all jobs, including the currently processing job and all jobs waiting to be printed.	

CANCEL JOB
CONTINUE
CURRENT JOB
ALL JOBS

9. Menu

9.1 List of menu functions

			MENU		Ref. page
	PROOF/PRINT ME	NU *1		P.114	
	PRINT MENU	CONFIGURATION PG			P.114
		DEMO PAGE			P.115
		STATISTICS PAG	θE		P.115
		FONT LIST	POSTSCRIPT		P.119
			PCL		
		MENU MAP			P.119
1		DIRECTORY LIS	ST *5		P.119
	PAPER MENU	PAPER	DEFAULT TRA	Y	P.120
		SOURCE	TRAY 1		P.120
			TRAY 2		P.122
			TRAY 3 *2		P.123
			TRAY CHAININ	IG	P.123
			TRAY MAPPIN	G	P.124
		DUPLEX *3			P.124
		COPIES			P.124
		COLLATE *4			P.125
	QUALITY MENU	COLOR MODE	P.125		
		BRIGHTNESS	P.125		
		HALFTONE	IMAGE PRINT	ING	P.125
			TEXT PRINTIN	P.126	
			GRAPHICS PF	P.126	
		EDGE	IMAGE PRINTING		P.126
		ENHANCE- MENT	TEXT PRINTIN	P.126	
			GRAPHICS PF	P.126	
		EDGE STRENGTH			P.127
		ECONOMY PRIN	NT		P.127
		PCL SETTING	CONTRAST		P.127
			IMAGE	RGB SOURCE	P.127
			PRINTING	RGB INTENT	P.128
				RGB GRAY	P.128
			TEXT PRINTING	RGB SOURCE	P.128
				RGB INTENT	P.128
				RGB GRAY	P.129
			GRAPHICS PRINTING	RGB SOURCE	P.129
				RGB INTENT	P.129
				RGB GRAY	P.129

			MENU		Ref. pag
(QUALITY MENU	PS SETTING	IMAGE	RGB SOURCE	P.130
			PRINTING	RGB INTENT	P.130
				RGB GRAY	P.130
			DESTINATION PROF	P.130	
			TEXT	RGB SOURCE	P.131
			PRINTING	RGB INTENT	P.131
				RGB GRAY	P.131
				DESTINATION PROF	P.131
			GRAPHICS	RGB SOURCE	P.132
			PRINTING	RGB INTENT	P.132
				RGB GRAY	P.132
				DESTINATION PROF	P.132
			SIMULATION	SIMULATION PROF	P.133
				SIMULATION INTENT	P.133
				CMYK GRAY	P.133
		CALIBRATION	TONE CALIBRA	ATION	P.134
			AIDC PROCES	S	P.134
			CMYK DENSIT	Y CYAN	P.134
				MAGENTA	P.134
				YELLOW	P.134
				BLACK	P.134
		COLOR SEPAR	ATION		P.135
	MEMORY	LIST OF FILES *9			P.135
[DIRECT *5, 6	TYPE OF FILES	TYPE OF FILES		
		PAPER SOURCE			P.136
		LAYOUT			P.136
		PAPER MARGIN	PAPER MARGIN		
		IMAGE	BRIGHTNESS		P.136
0	CAMERA DIRECT *7	QUALITY	CONTRAST		P.137
\ *			ECONOMY PRINT		P.137
			RGB SOURCE		P.137
			RGB INTENT		P.137
			RGB GRAY		P.137
			HALFTONE		P.138

		MENU			Ref. page
INTERFACE	JOB TIMEOUT				P.139
MENU	ETHERNET	TCP/IP	ENABLE		P.139
			IP ADDRESS		P.139
			SUBNET MASK		P.140
			DEFAULT GATE	NAY	P.140
			DHCP		P.140
			BOOTP		P.140
			ARP/PING		P.141
			HTTP	ENABLE	P.141
			FTP	ENABLE	P.141
			TELNET		P.141
			BONJOUR	ENABLE	P.141
			DYNAMIC DNS	ENABLE	P.142
			IPP	ENABLE	P.142
			RAW PORT	ENABLE	P.142
				BIDIREC- TIONAL	-
			SLP	ENABLE	P.142
			SMTP	ENABLE	P.143
			SNMP	ENABLE	P.143
			WSD PRINT	ENABLE	P.143
			IPSEC	ENABLE	P.143
			IP ADDRESS FILTER	ACCESS PREMISSION	P.143
				ACCESS REFUSE	1
			IPv6	ENABLE	P.144
				AUTO SETTING	
				LINK LOCAL	-
				GLOBAL ADDRESS	1
				GATEWAY ADDRESS	-
		NETWARE	ENABLE	1	P.144
		APPLETALK	ENABLE		P.145
		SPEED/DUPLE			P.145
		IEEE802.1X	ENABLE		P.145
	MEMORY DIRE				P.145
	CAMERA DIRE				P.145



		MENU			Ref. page
SYS DEFAULT	LANGUAGE				
MENU	EMULATION DEF. EMULATION				P.146
		POSTSCRIPT	WAIT TIMEOUT	WAIT TIMEOUT	
			PS ERROR PAG	E	P.146
			PS PROTOCOL		P.146
		PCL	CR/LF MAPPING	i	P.147
			LINES PER PAG	Ξ	P.147
			FONT SOURCE	FONT NUMBER	P.147
				PITCH SIZE	_
				POINT SIZE	
				SYMBOL SET	
		XPS *5	DIGITAL SIGNAT	URE	P.148
			XPS ERROR PAG		P.148
	PAPER	DEFAULT	PAPER SIZE		P.149
		PAPER	CUSTOM SIZE		P.149
			PAPER TYPE		
		UNIT OF MEAS	UNIT OF MEASURE		
	GRAYSCALE PAGE				
	STARTUP				
	AUTO CONTINUE				
	HOLD JOB TIMEOUT *1				
	ENERGY SAVER				
	ENERGY SAVER TIME *8				
	MENU TIMEOUT				
	LCD CONTRAST				
	SECURITY CHANGE PASSWORD				P.152
		LOCK PANEL			P.152
	CLOCK	DATE (xx.xx.xx)			P.153
		TIME			
		TIME ZONE			P.153
	HDD FORMAT *1				
	CARD FORMAT *9				P.154
	RESTORE	RESTORE NET	WORK		P.155
	DEFAULTS		RESTORE PRINTER		
		RESTORE ALL			
	ENABLE	PAPER EMPTY			P.162
	WARNING	TONER LOW			P.162
		I-UNIT LOW			

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		MENU		Ref. pag
MAINTENANCE	PRINT MENU	EVENT LOG		P.164
MENU		HALFTONE 64		P.164
		HALFTONE 12	8	P.164
		HALFTONE 25	6	P.165
		GRADATION		P.165
	ALIGNMENT	TOP ADJUSTN	/IENT	P.165
		LEFT ADJUSTMENT		P.165
		LEFT ADJ DUPLEX		P.166
	SUPPLIES	TRANSFER POWER	SIMPLEX PASS	P.166
			DUPLEX PASS	P.166
			MANUAL DUPLEX	P.167
		IMG ADJ THICK		P.167
		IMG ADJ BLACK		P.167
		REPLACE	TRANS. BELT	P.168
			TRANS ROLLER	P.168
			FUSER UNIT	P.168
	QUICK	UPDATE SETT	ING	P.169
	SETTING *10	BACKUP SET	TING	P.169

*1: It will be displayed only when an optional hard disk kit is installed.

*2: It will be displayed only when an optional lower feeder unit is installed.

- *3: It will be displayed only on magicolor 4650DN.
- *4: It will be displayed only when an optional hard disk kit or compact flash card (1 GB or more) is installed.
- *5: It will be displayed only when an optional hard disk kit or compact flash card is installed.
- *6: It will be displayed only when the following setting is set to "ENABLE." [INTERFACE MENU] → [MEMORY DIRECT]
- ▲ *7: It will be displayed only when the following setting is set to "ENABLE." [INTERFACE MENU] → [CAMERA DIRECT]
- $\cancel{1}$ *8: It will be displayed only when [ENERGY SAVER] is set to ON.
- $\overline{\underline{\uparrow\uparrow}}$ *9: It will be displayed only when a compact flash card is installed.

 $\overline{\text{A}}$ *10: It will be displayed only when a USB memory device is installed.

9.2 PROOF/PRINT MENU

Function	Selects and prints the job held temporarily in the printer.Selects and deletes the job held temporarily in the printer.
	NOTE This menu is available only when an optional hard disk kit is installed.
Use	 To proof one copy of a print job before printing the rest of the copies.
Setting /procedure	 How to print the held job Select [PROOF/PRINT MENU] and press the Menu/Select key. Select user name and press the Menu/Select key. Select desired print job and press the Menu/Select key. Select [PRINT] and press the Menu/Select key. If the hold job is set as secured job, enter the password with the up key▲/down key▼. Set the number of copies with the up key▲/down key▼ and press the Menu/Select key. NOTE If the hold job is set as secured job, the held job cannot be printed until the correct password is entered at the printer control panel. The held job is deleted automatically after the period of time specified in the "SYSTEM DEFAULT MENU/HOLD JOB TIMEOUT" menu.
	How to delete the held job
	 Select [PROOF/PRINT MENU] and press the Menu/Select key. Select user name and press the Menu/Select key. Select desired print job and press the Menu/Select key. Select [DELETE] and press the Menu/Select key. If the held job is set as secured job, enter the password with the up key▲/down key▼. Select [YES] and press the Menu/Select key. NOTE If the hold job is set as secured job, the held job cannot be deleted until the
	 If the hold job is set as secured job, the held job cannot be deleted until the correct password is entered.

9.3 PRINT MENU

9.3.1 CONFIGURATION PG

Function	Prints a configuration page.
Use	To check the configuration and the setting values of the machine. The following items can be checked: PRINTER INFORMATION OPTIONS INTERFACE MENU PAPER MENU SYSTEM DEFAULT MENU QUALITY MENU CAMERA DIRECT MEMORY DIRECT
Setting /procedure	Select [PRINT] and press the Menu/Select key.

9.3.2 DEMO PAGE

Function	Prints a demo page.
Use	• Prints a demo page.
Setting /procedure	Select [PRINT] and press the Menu/Select key.

9.3.3 STATISTICS PAGE

Function	Prints a statistics page.
Use	To check consumable status and the usage of the machine. The following items can be checked:
	Supplies Status PM Parts Information Counter Information Media Information Coverage Information Consumable/periodic replacement parts (units) counter information*1
	*1: For details, see the following table, "How to read consumable/periodic replace- ment parts (units) counter information.
Setting /procedure	Select [PRINT] and press the Menu/Select key.

A. Supplies Status

- Display the estimated percent of life remaining in the toner cartridge and print unit. The type of the toner cartridges that are installed in the printer is also displayed (See the table below).
- Display the status of the waste toner bottle and the staple unit.

Types of toner cartridges		
Starter	 Toner cartridge included with a product shipped from the factory: 3.0 K 	
Standard	 Standard-capacity toner cartridge: 4.0 K 	
High	 High-capacity toner cartridge: 8.0 K 	

NOTE

 The percent of life remaining in the toner cartridge or print unit can be used as a guide, but may not exactly reflect the amount that has been used in the toner cartridge or print unit.

B. PM Parts Information

• Display the estimated percent of life remaining in periodic replacement parts and units such as the transfer roller, transfer belt and fuser unit.

C. Counter Information

• The total number of pages that have been printed is counted and displayed based on the description shown in the following table.

<Counter information list>

Types of count		Contents	Count timing
Total Count	Monochrome	The total number of monochrome pages ejected from the printer. Increment by one per simplex and by two per duplex	
	Full color	The total number of color pages ejected from the printer. Increment by one per simplex and by two per duplex	
Total Count (duplex)	Monochrome	 The total number of monochrome duplex sheets ejected from the printer. Increment by one per duplex (and by zero per simplex) 	When a sheet of
	Full color	The total number of color duplex sheets ejected from the printer. Increment by one per duplex (and by zero per simplex)	media is ejected properly
Total Count (Normalized)	Monochrome	The total number of monochrome pages on a A4 basis that have been ejected from the printer. Increment by 100 per A4 simplex and by 200 per A4 duplex *1	
	Full color	The total number of color pages on a A4 basis that have been ejected from the printer. Increment by 100 per A4 simplex and by 200 per A4 duplex *1	
Sheets Printed by Paper Tray		The number of sheets used for each media source. Increment by one for both simplex and duplex	
Sheets Printed by Paper Size		The number of sheets used for each media size. Increment by one for both simplex and duplex	When a sheet of media is fed
Sheets Printed by Paper Type		The number of pages used per each media type. Increment by one for both simplex and duplex	

*1: A count of 100 in the counter is converted to 1 sheet of media and display the number of decimals are discarded.

NOTE

The total counters and the print counters count at a different timing, when a sheet
of media is properly ejected and when a sheet of media is fed, respectively.
Therefore, the sum of each total counter value may not be same with the sum of
each print counter value if a sheet of media cannot be ejected due to media jam
inside the machine or other possible problems.

D. Coverage Information

• Each coverage information is calculated and displayed based on the description shown in the following table.

<Coverage information list>

Coverage information	Contents
Normalized Coverage Information <latest job=""></latest>	 Individual average dot coverage of four colors (YMCK) in the last job is calculated on an A4 basis. (The average of the ratios of dot space on each page when the printable area is defined as 100% and shown in 0.1 percent incre- ments)
Normalized Coverage Information <current cartridge="" toner=""></current>	 Individual average dot coverage of four colors (YMCK) in the current toner cartridges is calculated on an A4 basis. (The average of the ratios of dot space on each page when the printable area is defined as 100% and shown in 0.1 percent increments)
Normalized Coverage Information <total></total>	 Individual average dot coverage of four colors (YMCK) is calculated on an A4 basis for all prints performed after the printer was installed. (The average of the ratios of dot space on each page when the printable area is defined as 100% and shown in 0.1 percent incre- ments)
Normalized Color (CMYK) Coverage Information	 Average dot coverage is calculated on an A4 basis for full color printing performed after the printer was installed. (The average of the ratios of dot space on each page when the printable area is defined as 100% and shown in 0.1 percent incre- ments)
Normalized Monochrome Coverage Information	 Average dot coverage is calculated on an A4 basis for monochrome printing performed after the printer was installed. (The average of the ratios of dot space on each page when the printable area is defined as 100% and shown in 0.1 percent incre- ments)

NOTE

• Coverage information can be used as a guide and may not completely reflect the actual amount of toner used.

9. Menu

E. How to read consumable/periodic replacement parts (units) counter information.

 The lower left part of the statistics page shows numerical values that represent consumable/periodic replacement parts (units) counter information.
 The table below explains counter information that is provided by each numerical data.

<Display on the statistics page>

0/	7L07

<Meaning of counter value> (From the left of the numerical values)

No.	Contents
1	Number of times a High-capacity toner cartridge (K) has been replaced
2	Number of times a Standard-capacity toner cartridge (K) has been replaced
3	Number of times a toner cartridge (K) made by companies other than Konica Minolta has been replaced
4	Number of times a High-capacity toner cartridge (C) has been replaced
5	Number of times a Standard-capacity toner cartridge (C) has been replaced
6	Number of times a toner cartridge (C) made by companies other than Konica Minolta has been replaced
7	Number of times a High-capacity toner cartridge (M) has been replaced
8	Number of times a Standard-capacity toner cartridge (M) has been replaced
9	Number of times a toner cartridge (M) made by companies other than Konica Minolta has been replaced
10	Number of times a High-capacity toner cartridge (Y) has been replaced
11	Number of times a Standard-capacity toner cartridge (Y) has been replaced
12	Number of times a toner cartridge (Y) made by companies other than Konica Minolta has been replaced.
13	Use of counterfeit toner cartridge (K) is set at "1." (The default value is 0.)
14	Use of counterfeit toner cartridge (C) is set at "1." (The default value is 0.)
15	Use of counterfeit toner cartridge (M) is set at "1." (The default value is 0.)
16	Use of counterfeit toner cartridge (Y) is set at "1." (The default value is 0.)
17	Use of toner refill cartridge (K) is set at "1." (The default value is 0.)
18	Use of toner refill cartridge (C) is set at "1." (The default value is 0.)
19	Use of toner refill cartridge (M) is set at "1." (The default value is 0.)
20	Use of toner refill cartridge (Y) is set at "1." (The default value is 0.)
21	Rate of transfer roller use (%)
22	Number of times a transfer roller has been replaced
23	Rate of transfer belt unit use (%)
24	Number of times a transfer belt unit has been replaced
25	Rate of fuser unit use (%)
26	Number of times a fuser unit has been replaced
27	Number of times a imaging unit (K) has been replaced
28	Number of times a imaging unit (C) has been replaced
29	Number of times a imaging unit (M) has been replaced
30	Number of times a imaging unit (Y) has been replaced

No.	Contents	
1		Year (e.g. The year 2006 is displayed as 6.)
2	Start date of use *1	Month (e.g. January is displayed as A. February is B. March is C. and December is L.)
3		Day (e.g. The day 7 is displayed as 07.)

*1: Start date of use begins when 100 prints are complete after the first new toner cartridge was detected following the main body installation.

9.3.4 FONT LIST

A. POSTSCRIPT

Function	Prints a postscript font list.
Use	 To determine which postscript fonts are available on the printer.
Setting /procedure	Select [PRINT] and press the Menu/Select key.

B. PCL

Function	Prints a PCL font list.
Use	 To determine which PCL fonts are available on the printer.
Setting /procedure	Select [PRINT] and press the Menu/Select key.

9.3.5 MENU MAP

Function	Prints a menu map.
Use	To see the printer's menu structure.
Setting /procedure	Select [PRINT] and press the Menu/Select key.

9.3.6 DIRECTORY LIST

Â	Function	Prints a directory list of the hard disk or a compact flash card.
	Use	 To check the data saved in the optional hard disk kit or compact flash card.
	Setting /procedure	 Select [PRINT] and press the Menu/Select key. NOTE This menu is available only when an optional hard disk kit or compact flash card is installed.

9.4 PAPER MENU

9.4.1 PAPER SOURCE

A. DEFAULT TRAY

Function	Sets the priority feed tray.
Use	To set the priority media feed tray.
Setting /procedure	 Select [DEFAULT TRAY] and press the Menu/Select key. Select desired tray and press the Menu/Select key. The default setting is TRAY 2.
	TRAY 1 "TRAY 2" TRAY 3
	NOTE • TRAY 3 can be selected only when one or more optional lower feeder units are installed.

B. TRAY 1

(1) PAPER SIZE

Function	Sets the size of the media in tray 1.
Use	To specify the size of the media loaded in tray 1.
Setting /procedure	 Select [PAPER SIZE] and press the Menu/Select key. Select desired paper size and press the Menu/Select key.
	For North America The default setting is LETTER.
	For other destinations The default setting is A4.
	ANY/"LETTER"/LEGAL/EXECUTIVE/A4/A5/A6/B5(JIS)/B6(JIS)/GOVT LETTER/ STATEMENT/FOLIO/SP FOLIO/UK QUARTO/FOOLSCAP/GOVT LEGAL/16K/PHOTO 4 x 6 (PHOTO 10 x 15) /KAI 16/KAI 32/ENV C6/ENV DL/ENV MONARCH/ENV CHOU#3/ENV CHOU#4/B5(ISO)/ENV #10/JPOST/JPOST-D/CUSTOM
	 NOTE ANY specifies any media size. CUSTOM is used to set a "custom media size." Depending on the setting selected for SYS DEFAULT MENU/PAPER/UNIT OF MEASURE, PHOTO 4 x 6 may change to PHOTO 10 x 15.

(2) CUSTOM SIZE

Function	Sets the custom size of media in tray 1.
Use	To specify the custom size media loaded in tray 1.
Setting /procedure	 Select [CUSTOM SIZE] and press the Menu/Select key. Select [WIDTH] or [LENGTH] and press Menu/Select key. Set desired number with the up key▲/down key▼ and press the Menu/Select key.
	<setting for="" range="" width=""> For MILLIMETERS: 92 mm to 216 mm • The default setting of WIDTH is 216 mm. (For North America) • The default setting of WIDTH is 210 mm. (For all other regions)</setting>
	 For INCHES: 3.63 inches to 8.50 inches The default setting of WIDTH is 8.50 inches. (For North America) The default setting of WIDTH is 8.26 inches. (For all other regions)
	<for america="" north=""> For MILLIMETERS: 148 mm to 356 mm • The default setting of WIDTH is 279 mm. (For North America) • The default setting of WIDTH is 297 mm. (For all other regions)</for>
	 For INCHES: 5.83 inches to 14.00 inches The default setting of WIDTH is 11.00 inches. (For North America) The default setting of WIDTH is 11.69 inches. (For all other regions)
	NOTE By changing the [UNIT OF MEASURE] setting (INCHES/MILLIMETERS), the custom size units are changed.

(3) PAPER TYPE

Function	Sets the media type for tray 1.	
Use	To specify the type of media loaded in tray 1.	
Setting /procedure	 Select [PAPER TYPE] and press the Menu/Select key. Select desired paper type and press Menu/Select key. 	
	The default setting is PLAIN PAPER.	
	ANY/"PLAIN PAPER"/RECYCLED/THICK 1/THICK 2/LABEL/TRANSPARENCY/ ENVELOPE/POSTCARD/LETTERHEAD/GLOSSY 1/GLOSSY 2	
	NOTE ANY identifies any media type. 	

C. TRAY 2 (1) PAPER SIZE

9. Menu

Function	Sets the size of the media in tray 2.	
Use	To specify the size of the media loaded in tray 2.	
Setting /procedure	 Select [PAPER SIZE] and press the Menu/Select key. Select desired paper size and press the Menu/Select key. 	
	<for america="" north=""> The default setting is LETTER. </for>	
	<for destinations="" other=""> The default setting is A4. </for>	
	ANY/"LETTER"/EXECUTIVE/A4/A5/A6/B5(JIS)/B6(JIS)/GOVT LETTER/STATEMENT/ UK QUARTO/16K/PHOTO 4 x 6 (PHOTO 10 x 15)/KAI 16/KAI 32/CUSTOM	
	 NOTE ANY specifies any media size. CUSTOM is used to set a "custom media size." Depending on the setting selected for SYS DEFAULT MENU/PAPER/UNIT OF MEASURE, PHOTO 4 x 6 may change to PHOTO 10 x 15. 	

(2) CUSTOM SIZE

Function	Sets the custom size of media in tray 2.
Use	To specify the custom size media loaded in tray 2.
Use Setting /procedure	 Select [CUSTOM SIZE] and press the Menu/Select key. Select [WIDTH] or [LENGTH] and press Menu/Select key. Set desired number with the up key▲/down key▼ and press the Menu/Select key. Setting range for WIDTH> For MILLIMETERS: 92 mm to 216 mm The default setting of WIDTH is 216 mm. (For North America) The default setting of WIDTH is 210 mm. (For all other regions) For INCHES: 3.63 inches to 8.50 inches The default setting of WIDTH is 8.20 inches. (For North America) The default setting of WIDTH is 8.26 inches. (For all other regions) For North America>
	 For MILLIMETERS: 148 mm to 356 mm The default setting of WIDTH is 279 mm. (For North America) The default setting of WIDTH is 297 mm. (For all other regions)
	 For INCHES: 5.83 inches to 14.00 inches The default setting of WIDTH is 11.00 inches. (For North America) The default setting of WIDTH is 11.69 inches. (For all other regions)
	NOTE By changing the [UNIT OF MEASURE] setting (INCHES/MILLIMETERS), the custom size units are changed.

(3) PAPER TYPE

Function	Sets the media type for tray 2.		
Use	To specify the type of media loaded in tray 2.		
Setting /procedure	 Select [PAPER TYPE] and press the Menu/Select key. Select desired paper type and press Menu/Select key. The default setting is PLAIN PAPER. 		
	ANY "PLAIN PAPER" RECYCLED		
	NOTE ANY identifies any media type. 		

D. TRAY 3

(1) PAPER SIZE

/procedure	2. Select [PAPER SIZE] and press the Menu/Select key.	
Use Setting	To check the paper size. Select [PAPER SOURCE] and press the Menu/Select key.	
Function	Automatically detects the set paper size and displays it.	

(2) PAPER TYPE

Function	Sets the paper type for tray 3.		
Use	To specify the type of media loaded in tray 3.		
Setting	The default setting is "PLAIN PAPER."		
/procedure	ANY	"PLAIN PAPER"	RECYCLED
	NOTE Tray 3 can be selected only when the optional lower feeder unit is mounted. [ANY] identifies any media type. 		

E. TRAY CHAINING

Function	Sets auto tray switching.	
Use	 To specify that the printer should pull media from another tray when the specified tray runs is empty. 	
Setting	 The default setting is ON. 	
/procedure	"ON"	OFF

F. TRAY MAPPING (1) TRAY MAPPING MODE

Function	Selects whether or not the tray mapping function is used.		
Use	To specify whether trays are mapped.		
Setting	The default setting is OFF.		
/procedure	ON	"OFF"	

(2) LOGICAL TRAY0-9

Function	 Specifies whether jobs received from another manufacturer's printer driver are printed using tray 1 to tray 3. 	
Use	• To specify the media source for print jobs using another manufacturer's printer driver.	
Setting /procedure	• Only the default for LOGICAL TRAY 1 is PHYSICAL TRAY 1. PHYSICAL TRAY 2 is the default for all trays other than LOGICAL TRAY 1.	
	PHYSICAL TRAY 1 PHYSICAL TRAY 3	"PHYSICAL TRAY 2"
	NOTE • Only the mounted Tray can be see	elected.

9.4.2 DUPLEX

Function	Sets duplex printing mode.		
Use	To specify duplex printing. OFF : Duplex print is OFF LONG EDGE : Duplex print is ON, long edge SHORT EDGE : Duplex print is ON, short edge		
Setting	The default setting is OFF.		
/procedure	"OFF"	LONG EDGE	SHORT EDGE
	NOTE The setting in the printer driver overrides the setting in this menu. 		setting in this menu.

9.4.3 COPIES

Function	Sets the number of prints.	
Use	To specify the number of copies of the job to be printed.	
Setting /procedure	 Select [COPIES] and press the Menu/Select key. Select desired print number with the up key▲/down key▼ and press the Menu/ Select key. The default setting is 1 copy. 	
	"1" copy to 9999 copies.	
	NOTE The setting in the printer driver overrides the setting in this menu. 	

Adjustment / Setting

9.4.4 COLLATE

Function	Sets printing in sets.	
Use	To print several sets of multiple pages. ON : Print in sets. OFF : Print in page.	
Setting /procedure	The default setting is OFF. ON	"OFF"
		nen an optional hard disk kit is installed. er overrides the setting in this menu.

9.5 QUALITY MENU

9.5.1 COLOR MODE

Function	Sets the color mode for printing.		
Use	 To specify whether jobs should be printed in color or grayscale. 		
Setting	The default setting is COLOR.		
/procedure	"COLOR"	GRAYSCALE	

9.5.2 BRIGHTNESS

Function	Sets the brightness of the printed image.							
Use	 To adjust the brightness of the printed image. 							
Setting • The default setting is 0%.								
/procedure	-15%	-10%	-5%	"0%"	+5%	+10%	+15%	

9.5.3 HALFTONE

A. IMAGE PRINTING

Function	 Sets the halftone characteristic of image to be printed. 				
Use	 To set the halftone characteristic that is used for the printed image (picture.) LINE ART : HALFTONE characteristic that emphasizes the resolution of the print image. DETAIL : HALFTONE characteristic that emphasizes the balance between the resolution and the tone reproducibility of the print image. SMOOTH : HALFTONE characteristic that emphasizes the tone reproducibility of the print image. 				
Setting /procedure	The default setting is DETAIL. LINE ART "DETAIL" SMOOTH				

B. TEXT PRINTING

Function	 Sets the halftone characteristic of the text to be printed. 				
Use	To set the halftone characteristic that is used for printing text (letter). LINE ART : HALFTONE characteristic that emphasizes the resolution of the print image. DETAIL : HALFTONE characteristic that emphasizes the balance between the resolution and the tone reproducibility of the print image. SMOOTH : HALFTONE characteristic that emphasizes the tone reproducibility of the print image.				
Setting	The default setting is LINE ART.				
/procedure	"LINE ART" DETAIL SMOOTH				

C. GRAPHICS PRINTING

Function	 Sets the halftone characteristic for graphics printing. 				
Use	 To set the halftone characteristic that is used for printing graphics (figures). LINE ART : HALFTONE characteristic that emphasizes the resolution of the print image. DETAIL : HALFTONE characteristic that emphasizes the balance between the resolution and the tone reproducibility of the print image. SMOOTH : HALFTONE characteristic that emphasizes the tone reproducibility of the print image. 				
Setting /procedure	The default setting is DETAIL. LINE ART "DETAIL" SMOOTH				

9.5.4 EDGE ENHANCEMENT

A. IMAGE PRINTING

Function	Selects whether or not to add edge enhancement during image printing.		
Use	 To add edge enhancement and sharpen the outline of images when printing image data such as photographs. 		
Setting	 The default setting is OFF. 		
/procedure	ON	"OFF"	

B. TEXT PRINTING

Function	 Selects whether or not to add edge enhancement during text printing. 		
Use	 To add edge enhancement and sharpen the outline of images when printing text data such as letters. 		
Setting	The default setting is ON.		
/procedure	"ON"	OFF	

C. GRAPHICS PRINTING

Function	Selects whether or not to add edge enhancement during graphic printing.		
Use	 To add edge enhancement and sharpen the outline of images when printing text data such as graphics. 		
Setting	 The default setting is ON. 		
/procedure	"ON"	OFF	

9.5.5 EDGE STRENGTH

Function	 Sets edge strength applied to printing with edge enhancement. 				
Use	 To adjust edge strength depending on each image. In the order of Low, Middle, and High, edge strength increases. 				
Setting	The default setting is MIDDLE.				
/procedure	OFF	LOW	"MIDDLE"	HIGH	
	NOTE If this setting is set to OFF, the [EDGE ENHANCEMENT] setting is disabled and jobs print without edge enhancement. 				

9.5.6 ECONOMY PRINT

Function	 Selects whether or not to use the economy print mode where job prints with lower print density and less toner consumption. 		
Use	 To reduce toner consumption In the economy print mode, toner consumption will be reduced by approx. 30% compared to the normal mode. 		
Setting	The default setting is OFF.		
/procedure	ON	"OFF"	

9.5.7 PCL SETTING

A. CONTRAST

Function	Sets the contrast of a PCL printed image.							
Use	 To adjust the contrast of a PCL printed image. 							
Setting	The default setting is 0%.							
/procedure	-15%	-10%	-5%	"0%"	+5%	+10%	+15%	

B. IMAGE PRINTING (1) RGB SOURCE

Function	 Sets the RGB color space of the image to be printed. 			
Use	To set the input RGB color space that is used for printing the image (picture). SRGB : Profile that has been preset to the printer. DEVICE COLOR: It uses the device color in the color space.			
Setting	The default setting is sRGB.			
/procedure	DEVICE COLOR	"sRGB"		

(2) RGB INTENT

Function	 Sets the RGB characteristics of the image to be printed. 		
Use	used for printing VIVID	To set the color conversion characteristic from input RGB to device CMYK that is used for printing the image (picture). VIVID : Color conversion characteristic suited to the image emphasiz- ing on color vividness. PHOTOGRAPHIC: Color conversion characteristic suited to the image emphasiz- ing on color image.	
Setting /procedure	The default setting is PHOTOGRAPHIC. VIVID "PHOTOGRAPHIC"		

(3) RGB GRAY

Function	Sets the RGB gray reproduction of the image to be printed.		
Use	To set the gray print method that is used for the printed image (picture). COMPOSITE BLACK : Print gray with the toner of 4 colors CMYK. BLACK AND GRAY : Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY : Print gray only with K toner.		
Setting	The default setting is COMPOSITE BLACK.		
/procedure	"COMPOSITE BLACK" BLACK AND GRAY BLACK ONLY		

C. TEXT PRINTING (1) RGB SOURCE

Function	Sets the RGB color space of the text to be printed.	
Use	To set the input RGB color space that is used for printing text (letter). SRGB : Profile that has been preset to the printer. DEVICE COLOR: It uses the device color in the color space.	
Setting	The default setting is sRGB.	
/procedure	DEVICE COLOR "sRGB"	

(2) RGB INTENT

Function	Sets the RGB characteristic of the text to be printed.		
Use	used for printing text (letter). VIVID : Color conversi ing on color viv	on characteristic suited to the image emphasiz-	
Setting /procedure	The default setting is VIVID. "VIVID" PHOTOGRAPHIC		

Adjustment / Setting

(3) RGB GRAY

Function	Sets the RGB gray reproduction of the text to be printed.		
Use	To set the gray print method that is used for printing text (letter). COMPOSITE BLACK : Print gray with the toner of 4 colors CMYK. BLACK AND GRAY : Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY : Print gray only with K toner.		
Setting	The default setting is BLACK AND GRAY.		
/procedure	COMPOSITE BLACK "BLACK AND GRAY" BLACK ONLY		

D. GRAPHICS PRINTING (1) RGB SOURCE

Function	Sets the RGB color space of the graphics to be printed.	
Use	To set the input RGB color space that is used for printing graphics (figures). SRGB : Profile that has been preset to the printer. DEVICE COLOR: It uses the device color in the color space.	
Setting /procedure	The default setting is sRGB.	
/procedure	DEVICE COLOR "sRGB"	

(2) RGB INTENT

Function	Sets the RGB characteristic for graphics printing.	
Use	To set the color conversion characteristic from input RGB to device CMYK that is used for graphics (figures). VIVID : Color conversion characteristic suited to the image emphasiz- ing on color vividness. PHOTOGRAPHIC: Color conversion characteristic suited to the image emphasiz- ing on color image.	
Setting /procedure	The default setting is VIVID. "VIVID" PHOTOGRAPHIC	

(3) RGB GRAY

Function	Sets the RGB gray reproduction of the graphics to be printed.		
Use	To set the gray print method that is used for graphics (figures). COMPOSITE BLACK : Print gray with the toner of 4 colors CMYK. BLACK AND GRAY : Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY : Print gray only with K toner.		
Setting /procedure	The default setting is BLACK AND GRAY.		
	COMPOSITE BLACK "BLACK AND GRAY" BLACK ONLY		

9.5.8 PS SETTING

A. IMAGE PRINTING (1) RGB SOURCE

Function	Sets the RGB color space of the image to be printed.	
Use	To set the input RGB color space that is used for printing the image (picture). SRGBBlueAdjustRGB : Profile that has been preset to the printer. DEVICE COLOR : It uses the device color in the color space.	
Setting /procedure	The default setting is sRGB. DEVICE COLOR / "sRGB" /AppleRGB /AdobeRGB1998 /ColorMatchRGB / BlueAdjustRGB	

(2) RGB INTENT

Function	 Sets the RGB characteristics of the image to be printed. 		
Use	 To set the color conversion characteristic from input RGB to device CMYK that is used for printing the image (picture). 		
	VIVID : Color conversion characteristic suited to the image empha- sizing on color vividness.		
	PHOTOGRAPHIC : Color conversion characteristic suited to the image empha- sizing on color image.		
	RELATIVE COLOR : Reproduce the color that minimize the color difference between original and print by adjusting the basic color (white.)		
	ABSOLUTE COLOR : Reproduce the color that maintains the absolute color the device reproduced color.		
Setting	The default setting is PHOTOGRAPHIC.		
/procedure	VIVID "PHOTOGRAPHIC" RELATIVE COLOR ABSOLUTE COLOR		

(3) RGB GRAY

Function	Sets the RGB gray reproduction of the image to be printed.		
Use	To set the gray print method that is processed by the printer for the printed image (picture). COMPOSITE BLACK : Print gray with the toner of 4 colors CMYK. BLACK AND GRAY : Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY : Print gray only with K toner.		
Setting /procedure	The default setting is COMPOSITE BLACK. "COMPOSITE BLACK" BLACK AND GRAY BLACK ONLY		

(4) DESTINATION PROF

Function	Sets the output profile.		
Use	To set the custom profile used for output. AUTO : Select automatically appropriate output profile that has been pre- set at the printer with other print conditions. Custom Profile : Custom profile that has been downloaded to the printer by user.		
Setting • The default setting is AUTO.			
/procedure	"AUTO"	Custom Profile	

B. TEXT PRINTING(1) RGB SOURCE

Function	 Sets the RGB color space of the text to be printed. 	
Use	 To set the input RGB color space that is used for printing text (letter). sRGBBlueAdjustRGB : Profile that has been preset to the printer. DEVICE COLOR : It uses the device color in the color space. 	
Setting /procedure	The default setting is sRGB. DEVICE COLOR / "sRGB" /AppleRGB /AdobeRGB1998 /ColorMatchRGB / BlueAdjustRGB	

(2) RGB INTENT

Sets the RGB characteristic of the text to be printed.	
To set the color conversion characteristic from input RGB to device CMYK that is used for printing text (letter). VIVID : Color conversion characteristic suited to the image emphasizing on color vividness. PHOTOGRAPHIC : Color conversion characteristic suited to the image emphasizing on color image. RELATIVE COLOR : Reproduce the color that minimize the color difference between original and print by adjusting the basic color (white.)	
The default setting is VIVID. "VIVID" PHOTOGRAPHIC RELATIVE COLOR ABSOLUTE COLOR	

(3) RGB GRAY

Function	 Sets the RGB gray reproduction of the text to be printed. 	
Use	To set the gray print method that is used for printing text (letter). COMPOSITE BLACK : Print gray with the toner of 4 colors CMYK. BLACK AND GRAY : Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY : Print gray only with K toner.	
Setting /procedure	The default setting is BLACK AND GRAY. COMPOSITE BLACK "BLACK AND GRAY" BLACK ONLY	

(4) DESTINATION PROF

Function	Sets the output profile.	
Use	To set the custom profile used for output. AUTO : Select automatically appropriate output profile that has been pre- set at the printer with other print conditions. Custom Profile : Custom profile that has been downloaded to the printer by user.	
Setting /procedure	The default setting is AUTO. "AUTO"	Custom Profile

C. GRAPHICS PRINTING (1) RGB SOURCE

Function	 Sets the RGB color space of the graphics to be printed. 	
Use	To set the input RGB color space that is used for printing graphics (figures). sRGBBlueAdjustRGB : Profile that has been preset to the printer. DEVICE COLOR : It uses the device color in the color space.	
Setting /procedure	The default setting is sRGB. DEVICE COLOR / "sRGB" /AppleRGB /AdobeRGB1998 /ColorMatchRGB / BlueAdjustRGB	

(2) RGB INTENT

Function	 Sets the RGB characteristic of the graphics to be printed. 		
Use	 To set the color conversion characteristic from input RGB to device CMYK that is used for printing graphics (figures). VIVID : Color conversion characteristic suited to the image emphasizing on color vividness. PHOTOGRAPHIC : Color conversion characteristic suited to the image emphasizing on color image. RELATIVE COLOR : Reproduce the color that minimize the color difference between original and print by adjusting the basic color (white.) ABSOLUTE COLOR : Reproduce the color that maintains the absolute color within 		
Setting	the device reproduced color. The default setting is VIVID.		
/procedure	"VIVID" PHOTOGRAPHIC RELATIVE COLOR ABSOLUTE COLOR		

(3) RGB GRAY

Function	 Sets the RGB gray reproduction of the graphics to be printed. 	
Use	To set the gray print method that is used for printing graphics (figures). COMPOSITE BLACK : Print gray with the toner of 4 colors CMYK. BLACK AND GRAY : Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY : Print gray only with K toner.	
Setting	The default setting is BLACK AND GRAY.	
/procedure	COMPOSITE BLACK "BLACK AND GRAY" BLACK ONLY	

(4) DESTINATION PROF

Function	Sets the output profile.	
Use	To set the custom profile used for output. AUTO : Select automatically appropriate output profile that has been pre- set at the printer with other print conditions. Custom Profile : Custom profile that has been downloaded to the printer by user.	
Setting	The default setting is AUTO.	
/procedure	"AUTO"	Custom Profile

Adjustment / Setting

D. SIMULATION (1) SIMULATION PROF

Function	Sets the simulation profile.	
Use	To set a CMYK simulation profile at implementation of the simulation. SWOPDIC : Profile that has been preset at the printer. Custom profile : Custom profile that has been downloaded to the printer by users.	
Setting /procedure	The default setting is NONE. "NONE" /SWOP /Euroscale /CommercialPress /TOYO /DIC /Custom Profile	

(2) SIMULATION INTENT

Function	Sets the color characteristics.	
Use	 To set the color characteristics at the implementation of the simulation. RELATIVE COLOR : Reproduce the color that minimizes the color difference between original and print by adjusting the basic color (white.) ABSOLUTE COLOR : Reproduce the color that maintains the absolute color within the device reproduced color. 	
Setting /procedure	The default setting is RELATIVE COLOR. "RELATIVE COLOR" ABSOLUTE COLOR	

(3) CMYK GRAY

Function	Sets CMYK gray reproduction.	
Use	To set the CMYK data K maintain method at the implementation of the simulation. COMPOSITE BLACK : Print according to the result of color conversion with profile. BLACK AND GRAY : Print by maintaining the value only for black (C=M=Y=0, K=255) BLACK ONLY : Print by maintaining the value only for gray (C=M=Y=0, K=any)	
Setting /procedure	The default setting is COMPOSITE BLACK.	
-	"COMPOSITE BLACK" BLACK AND GRAY BLACK ONLY	

9.5.9 CALIBRATION

A. TONE CALIBRATION

Function	 Sets the gradation adjustment (Image stabilization with the controller). 	
Use	 To use for a particular calibration made by users. ON : Gradation adjustment is ON. OFF : Gradation adjustment is OFF. 	
Setting /procedure	The default setting is ON. "ON"	OFF

B. AIDC PROCESS

Function	Controls the image stability.		
	 To be used to adjust image quality. To be used when the transfer belt unit and/or the transfer roller are replaced. 		
Setting	 The default setting is CANCEL. 		
/procedure	EXCUTE	"CANCEL"	

C. CMYK DENSITY

(1) CYAN

Function	Sets the cyan level for the HIGHLIGHT, MIDDLE, and SHADOW area respectively.		
Use	To set the cyan level for the HIGHLIGHT, MIDDLE, and SHADOW are respectively.		
Setting /procedure	 The default setting is 0. -3 to +3 		

(2) MAGENTA

Function	 Sets the magenta level for the HIGHLIGHT, MIDDLE, and SHADOW area respec- tively. 		
Use	 To set the magenta level for the HIGHLIGHT, MIDDLE, and SHADOW are respec- tively. 		
Setting /procedure	 The default setting is 0. -3 to +3 		

(3) YELLOW

Function	Sets the yellow level for the HIGHLIGHT, MIDDLE, and SHADOW area respectively.		
Use	To set the yellow level for the HIGHLIGHT, MIDDLE, and SHADOW are respectively.		
Setting /procedure	 The default setting is 0. -3 to +3 		

(4) BLACK

Function	Sets the black level for the HIGHLIGHT, MIDDLE, and SHADOW area respectively.			
Use	 To set the black level for the HIGHLIGHT, MIDDLE, and SHADOW are respectively. 			
Setting /procedure	 The default setting is 0. -3 to +3 			
	-5 10 +5			

9.5.10 COLOR SEPARATION

Function	Sets the color separation function.			
Use	To create color separations.			
Setting	 The default setting is OFF. 			
/procedure	ON	"OFF"		

9.6 MEMORY DIRECT

- This menu appears only when the optional hard disk kit and/or the compact flash is installed.
- This menu does not appear when "DISABLE" is selected in the [INTERFACE MENU] → [MEMORY DIRECT] setting.

9.6.1 LIST OF FILES

Function	 Displays folders and files stored in a USB memory connected to the USB port and sends print jobs. 		
Use	 To select files to be printed with the USB memory direct print function. The maximum of 99 files and folders in total can be displayed. The maximum of 7 folder hierarchies can be displayed. 		
Setting /procedure	 Insert a USB memory into the USB port. Select [MEMORY DIRECT] → [LIST OF FILES] and select files to be printed then press the Menu/Select key. (When a desired file is in a folder, select the folder that includes the file and press the Menu/Select key.) Specify a media type, duplex printing ON/OFF, the number of copies, and other necessary settings. Select [PRINT] and press the Menu/Select key. NOTE Do not remove the USB memory from the main body during memory direct 		

9.6.2 TYPE OF FILES

Function	 Specifies the types of files to be displayed on [LIST OF FILES]. 		
Use	 To limit the types of files that can be listed. 		
Setting /procedure	The default setting is PDF,XPS.		
procedure	PDF,XPS,JPEG,TIFF	"PDF,XPS"	

9.7 CAMERA DIRECT

9.7.1 PAPER SOURCE

Function	Sets the tray using for camera direct photo printing.			
Use	 To change the tray using for camera direct photo printing. 			
Setting /procedure	The default setting is TRAY 2.			
procedure	TRAY1 "TRAY2" TRAY3			
	NOTE Only the mounted tray can be selected. 			

9.7.2 LAYOUT

Function	Sets the number of images printed on one page for camera direct photo printing.					
Use	To specify the number of camera direct photo printing images to be printed on each sheet.					
Setting /procedure	The default setting is 1-UP.					
	"1-UP" 1 2-UP 1 3-UP 2 3					
	4-UP 1 2 6-UP 3 4 8-UP 3 4 5 6 7 8					

9.7.3 PAPER MARGIN

Function	Sets the media margin for direct photo printing.		
Use	 To perform direct photo printing with the minimum media margin. 		
Setting	 The default setting is STANDARD. 		
/procedure	"STANDARD"	MINIMUM	

9.7.4 IMAGE QUALITY

A. BRIGHTNESS

Function	 Sets the 	Sets the brightness of the printed image for camera direct photo printing.						
Use	To adjust the brightness of the printed image for camera direct photo printing.							
Setting	 The defa 	ault setting is	s 0%.					
/procedure	-15%	-10%	-5%	"0%"	+5%	+10%	+15%	

B. CONTRAST

Function	Sets the contrast of the printed image for camera direct photo printing.							
Use	 To adjust 	 To adjust the contrast of the printed image for camera direct photo printing. 						
Setting /procedure	 The defa 	ault setting i	s 0%.					
/procedure	-15%	-10%	-5%	"0%"	+5%	+10%	+15%	

C. ECONOMY PRINT

Function	 Sets whether or not to use the economy print mode during camera direct photo print- ing. 		
Use	 To reduce toner consumption during camera direct photo printing. In the economy print mode, toner consumption can be reduced by approx. 30% compared to the normal print mode. 		
Setting /procedure	The default setting is OFF.		
procedure	ON	"OFF"	

D. RGB SOURCE

Function	Sets the RGB color space of the printed image for camera direct photo printing.	
Use	To set the input RGB color space that is used for camera direct photo printing. SRGB : Profile that has been preset to the printer. DEVICE COLOR: It uses the device color in the color space.	
Setting	The default setting is sRGB.	
/procedure	DEVICE COLOR "sRGB"	

E. RGB INTENT

Function	• Sets the RGB characteristics of the printed image for camera direct photo printing.	
Use	To set the color conversion characteristic from input RGB to device CMYK that is used for camera direct photo printing. VIVID : Color conversion characteristic suited to the image emphasiz- ing on color vividness. PHOTOGRAPHIC: Color conversion characteristic suited to the image emphasiz- ing on color image.	
Setting /procedure	The default setting is PHOTOGRAPHIC. VIVID "PHOTOGRAPHIC"	

F. RGB GRAY

Function	Sets the RGB gray reproduction of the printed image for camera direct photo printing.		
Use	To set the gray print method that is processed by the printer for camera direct photo printing. COMPOSITE BLACK : Print gray with the toner of 4 colors CMYK. BLACK AND GRAY : Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY : Print gray only with K toner.		
Setting /procedure	The default setting is COMPOSITE BLACK. "COMPOSITE BLACK" BLACK AND GRAY BLACK ONLY		

G. HALFTONE

ZZ	G. HALFI	
4650EN 4650DN	Function	Sets the halftone characteristic of the printed image for camera direct photo printing.
magicolor 4(magicolor 46	Use	 To set the halftone characteristic that is used for camera direct photo printing. LINE ART : HALFTONE characteristic that emphasizes the resolution of the print image. DETAIL : HALFTONE characteristic that emphasizes the balance between the resolution and the tone reproducibility of the print image. SMOOTH : HALFTONE characteristic that emphasizes the tone reproducibility of the print image.
	Setting /procedure	The default setting is DETAIL. LINE ART "DETAIL" SMOOTH

9.8 INTERFACE MENU

9.8.1 JOB TIMEOUT

Function	Sets the time to activate JOB TIMEOUT.	
Use	 To specify the amount of time before a print job times out. 	
Setting /procedure	The default setting is 15 seconds.	
procedure	5 seconds to 300 seconds	

9.8.2 ETHERNET

NOTE

• When the ETHERNET setting is changed, the printer restarts automatically.

A. TCP/IP

(1) ENABLE

Function	Enables TCP/IP		
Use	 To specify that the printer is connected to a TCP/IP network. YES : Enable TCP/IP. Print can be made at TCP/IP environment. NO : Disable TCP/IP. Print cannot be made at TCP/IP environment. 		
Setting /procedure	The default setting is YES. "YES" NO		
	NOTE • The following screen displays only when [ENABLE/YES] is selected. IP ADDRESS/SUBNET MASK/DEFAULT GATEWAY/DHCP/BOOTP/ARP/PING/ HTTP/FTPTELNET/BONJOUR/DYNAMIC DNS/IPP/RAW PORT/SLP/SMTP/ SNMP/WSD PRINT/IPSEC/IP ADDRESS FILTER/IPv6		

(2) IP ADDRESS

Function	 Sets the IP address of the printer used for the network. 	
Use	To set the printer's IP address.	
Setting /procedure	 Select [IP ADDRESS] and press the Menu/Select key. Set desired IP address (first bite) with the up key▲/down key▼ and press the right key ▶. Repeat the above procedures and set the IP address up to fourth bite. Press the Menu/Select key. 	
	 NOTE When setting the IP address manually, [DHCP/BOOTP] (IP auto acquisition function) setting is set to [OFF] automatically. When IP address is not allocated from the server, the IP address is set automatically within the range "169.254.0.0. to 169.254.255.255." 	

(3) SUBNET MASK

9. Menu

Function	 Sets the subnet mask of the printer used in the network. 	
Use	To set the printer's subnet mask.	
Setting /procedure	 Select [SUBNET MASK] and press the Menu/Select key. Set desired subnet mask (first bite) with the up key▲/down key▼ and press the right key ►. Repeat the above procedures and set the subnet mask up to fourth bite. Press the Menu/Select key. 	
	The default setting is "000.000.000.000."	
	000.000.000.000 to 255.255.255.255	

(4) DEFAULT GATEWAY

Function	Sets the gateway address of the printer used in the network.	
Use	 To set the printer's gateway address. 	
Setting /procedure	 Select [DEFAULT GATEWAY] and press the Menu/Select key. Set desired default gateway address (first bite) with the up key▲/down key▼ and press the right key ▶. Repeat the above procedures and set the default gateway address up to fourth bit Press the Menu/Select key. 	
	 The default setting is "000.000.000.000." 000.000.000 to 255.255.255.255 	

(5) DHCP

	NOTE When setting the IP address man 	ually, the [DHCP] setting is changed to [OFF].	
/procedure	"ON"	OFF	
Setting	The default setting is ON.		
Use	 To automatically acquire an IP address and load other network information. YES : Enable IP auto acquisition setting. No : Disable IP auto acquisition setting. 		
Function	 Automatically acquires an IP address from the DHCP server, if there is one in the network, and specifies whether to load other network information. 		

(6) BOOTP

Function	 Automatically acquires an IP address from BOOTP and specifies whether to load other network information. 	
Use	To automatically acquire an IP add ON : Enable IP auto acquisitio OFF : Disable IP auto acquisitio	5
Setting	The default setting is OFF.	
/procedure	ON	"OFF"
	NOTE • When setting the IP address ma [OFF].	anually, the [BOOTP] setting is changed to

(7) ARP/PING

Function	 Select whether or not the IP address is automatically acquired. 	
Use	To automatically acquire an IP add ON : Enable IP auto acquisition OFF : Disable IP auto acquisition	5
Setting /procedure	The default setting is OFF.	()
	ON NOTE • When setting the IP address ma [OFF].	"OFF" nually, the [ARP/PING] setting is changed to

(8) HTTP <ENABLE>

Function	Enables HTTP.	
Use	To enable HTTP. YES : HTTP is enabled. NO : HTTP is disabled.	
Setting	The default setting is YES.	
/procedure	"YES"	NO
	NOTE Setting this function to "NO" w 	ill automatically set [IPP] to "NO."

(9) FTP <ENABLE>

Function	Enables FTP.		
Use	 To enable FTP. YES : FTP is enabled. NO : FTP is disabled. 		
Setting /procedure	 The default setting is YES. 		
	"YES"	NO	

(10) TELNET

Function	Select whether to enable or disable TELNET transmissions.	
Use	To specify that the printer is connected	by TELNET transmissions.
Setting	The default setting is ENABLE.	
/procedure	"ENABLE"	DISABLE

(11) BONJOUR <ENABLE>

Function	Select whether or not to use the bonjour setting.		
Use	 To use when operating under the bon YES : Bonjour is enabled. NO : Bonjour is disabled. 	iour service environment.	
Setting	 The default setting is YES. 		
/procedure	"YES"	NO	

(12) DYNAMIC DNS <ENABLE>

Function	Select whether or not to use the dy	namic DNS setting.
Use	To use when operating under the of YES : Dynamic DNS is enabled NO : Dynamic DNS is disabled	
Setting /procedure	The default setting is NO. YES	"NO"

(13) IPP <ENABLE>

Function	• To set whether to enable or disable IPP setting.	
Use	YES : IPP is enabled. NO : IPP is disabled.	
Setting	 The default setting is YES. 	
/procedure	"YES"	NO

(14) RAW PORT <ENABLE>

Function	To set whether to enable or disable raw	port setting.	
Use	YES: Raw port is enabled. NO: Raw port is disabled.		
Setting	 The default setting is YES. 		
/procedure	"YES"	NO	

<BIDIRECTIONAL>

Function	 Enables or disables bi-directional communication for the raw port.
Use	ON : Raw port is enabled for bi-directional communication. OFF : Raw port is disabled for bi-directional communication.
Setting	The default setting is OFF.
/procedure	ON "OFF"

(15) SLP <ENABLE>

Function	• To set whether to enable or disable SLP setting.	
Use	YES : SLP is enabled. NO : SLP is disabled.	
Setting	The default setting is YES.	
/procedure	"YES"	NO

(16) SMTP <ENABLE>

Function	To set whether to enable or disable SMTP setting.
Use	YES : SMTP is enabled. NO : SMTP is disabled.
Setting	The default setting is YES.
/procedure	"YES" NO

(17) SNMP <ENABLE>

Function	To set whether to enable or disable SNMP setting.		
Use	YES : SNMP is enabled. NO : SNMP is disabled.		
Setting /procedure	The default setting is YES.		
	"YES"	NO	

(18) WSD PRINT <ENABLE>

Function	To set whether to use this printer as a WSD printer.		
Use	YES: WSD print is enabled. NO: WSD print is disabled.		
Setting /procedure	The default setting is YES.		
	"YES"	NO	

(19) IPSEC <ENABLE>

Function	 To set whether to use IPsec protocol for IP network communication. 	
Use	 When IPsec protocol is used to perform encrypted communication. YES : IPsec is enabled. NO : IPsec print is disabled. 	
Setting /procedure	 The default setting is NO. 	
	YES	"NO"

(20) IP ADDRESS FILTER <ACCESS PERMISSION>

Function	To set the IP filtering (access permission). ENABLE : Access permission is enabled. DISABLE : Access permission is disabled. NOTE The range for the IP addresses, to which access is enabled, is set using the PageScope Web Connection.	
Use		
Setting	 The default setting is DISABLE. 	
/procedure	ENABLE	"DISABLE"

<ACCESS REFUSE>

Function	To set the IP filtering (access refuse). ENABLE : Access refuse is enable DISABLE : Access refuse is disable	
Use	NOTE • The range for the IP addresses, to which access is disabled, is set using the PageScope Web Connection.	
Setting /procedure	 The default setting is DISABLE. 	

(21) IPV6 <ENABLE>

Function	To set whether to use IPv6 in IP network communication.	
Use	YES : IPv6 is enabled. NO : IPv6 is disabled.	
Setting	The default setting is YES.	
/procedure	"YES" NO	

<AUTO SETTING>

Function	To set whether to use the IPv6 address au	
Use	YES : IPv6 address is automatically obt NO : IPv6 auto configuration is disable	
Setting	The default setting is YES.	
/procedure	"YES"	NO

<LINK LOCAL>

Function	Displays the link-local address of IPv6.
Use	

<GLOBAL ADDRESS>

Function	 Displays the global address of IPv6.
Use	- Displays the global address of it vo.

<GATEWAY ADDRESS>

Function	 Displays the gateway address of IPv6.
Use	

B. NETWARE(1) ENABLE

Function	Enables NetWare.		
Use	 To specify that the printer is connected to a NetWare network. YES : Enable NetWare. Printing can be done via NetWare. No : Disable NetWare. Printing cannot be done via NetWare. 		
Setting /procedure	The default setting is NO.		
, pressuare	YES	"NO"	

C. APPLETALK (1) ENABLE

Function	Enables AppleTalk.	
Use	To specify that the printer is connected to an AppleTalk network. YES : Enable AppleTalk. Printing can be done via AppleTalk. No : Disable Apple Talk. Printing cannot be done via AppleTalk.	
Setting /procedure	The default setting is YES. "YES"	NO

D. SPEED/DUPLEX

Function	Sets the communication speed and method of network.		
Use	To set the network communication speed and method.		
Setting /procedure	 Setting items Network speed (SPEED): AUTO, 10 Mbps, 100 Mbps, 1,000 Mbps Duplex mode (DUP): AUTO, full-duplex mode, half-duplex mode The default setting is AUTO. 		
	"AUTO" 100BASE FULL	10BASE FULL 100BASE HALF	10BASE HALF 1000BASE FULL

E. IEEE802.1X

(1) ENABLE

Function	Enables IEEE802.1X.		
Use	To carry out wireless LAN communication. YES : IEEE802.1X is enabled. NO : IEEE802.1X is disabled.		
Setting	The default setting is NO.		
/procedure	YES	"NO"	

9.8.3 MEMORY DIRECT

Function	Select whether to enable or disable memory direct printing.	
Use	 ENABLE : MEMORY DIRECT menu is appeared, and memory direct printing is enabled. DISABLE : MEMORY DIRECT menu is disappeared, and memory direct printing is disabled. 	
Setting	 The default setting is ENABLE. 	
/procedure	"ENABLE"	DISABLE

9.8.4 CAMERA DIRECT

Function	Select whether to enable or disable camera direct printing.	
Use	 ENABLE : CAMERA DIRECT menu is appeared, and camera direct printing is enabled. DISABLE : CAMERA DIRECT menu is disappeared, and camera direct printing is disabled. 	
Setting	 The default setting is ENABLE. 	
/procedure	"ENABLE"	DISABLE

9.9 SYS DEFAULT MENU

9.9.1 LANGUAGE

Function	 Sets the language of the control panel display. 	
Use	To change the language of the control panel display at user's option.	
Setting /procedure	 The default setting is ENGLISH. "ENGLISH" / FRENCH / GERMAN / SPANISH / ITALIAN / PORTUGUESE / CZECH / JAPANEASE / KOREAN / SIMPLIFIED CHINESE / TRADITIONAL CHINESE/ DUTCH / RUSSIAN / POLISH 	

9.9.2 EMULATION

A. DEF. EMULATION

Function	To set the PDL (Page Description Language).		
Use	 To fix the PDL as necessary. It usually switches automatically. 		
Setting	5		
/procedure	"AUTO" POSTSCRIPT PCL		

B. POSTSCRIPT

(1) WAIT TIMEOUT

Function	 Sets the amount of time to wait for a postscript file. 	
Use	• To set the amount of time to wait for a postscript file before the print job times out.	
Setting /procedure	 Select [WAIT TIMEOUT] and press the Menu/Select key. Select desired time with the up key▲/down key▼ and press the Menu/Select key. The default setting is 0 second. 	
	"0" second to 300 seconds.	

(2) PS ERROR PAGE

Function	Specifies whether error pages are printed at the time of a postscript error.	
Use	 To specify whether error pages are printed after a postscript error occurs. ON : Error pages are printed at the time of postscript error. OFF : Error pages are not printed at the time of postscript error. 	
Setting	The default setting is OFF.	
/procedure	ON "OFF"	

(3) PS PROTOCOL

Function	Sets the protocol to be used for postscript printing.		
Use	To use the protocol when printing by postscript printing. AUTO : Automatic recognition NORMAL : ASCII letter code data BINARY : Binary data		
Setting /procedure	The default setting is AUTO. "AUTO" NORMAL BINARY		

C. PCL (1) CR/LF MAPPING

Function	Sets the line feed code for PCL printing.		
Use	 To specify the type of linefeed to be used for PCL printing. 		
Setting	The default setting is CR=CR LF=LF.		
/procedure	"CR=CR LF=LF" CR=CRLF LF=LF CR=CR LF=LFCR CR=CRLF LF=LFCR		

(2) LINES PER PAGE

Function	Sets the lines per page for PCL printing.	
Use	 To set the number of lines to be printed per page for PCL jobs. 	
Setting /procedure	 Select [LINES PER PAGE] and press the Menu/Select key. Select desired line number with the up key▲/down key▼ and press the Menu/Select key. The default setting is 60 lines. 	
	5 lines to 128 lines	

(3) FONT SOURCE

Function	 Sets the PCL font to be used for PCL printing. 	
Use	To set the font to be used for printing PCL jobs.	
Setting /procedure	 Select [FONT NUMBER] and press the Menu/Select key. Select desired font with the up key▲/down key▼ and press the Menu/Select key. The default setting is 0. 	
	"0" to 102	
	 NOTE According to the selected [FONT NUMBER], [PITCH SIZE] or [POINT SIZE] setting is available. Details on the font which corresponds to the font No. can be checked by the PCL font list. See P.119 	

<PITCH SIZE / POINT SIZE>

Function	Sets the pitch size of the PCL font for PCL printing.	
Use	To set the pitch size of the font to be used for printing PCL jobs.	
Setting /procedure	 Select [PITCH SIZE] and press the Menu/Select key. Select desired pitch size with the up key▲/down key▼ and press the Menu/Select key. The default setting is 10.00. 	
	0.44 pt to 99.99	
	 NOTE When one of the following "FONT NUMBERs" is selected, "PITCH SIZE" setting is available. FONT NUMBER: 0 to 5, 21 to 23, 54 to 57, 81, 82. 	

<SYMBOL SET>

Function	 Sets the symbol set for PCL printing. 	
Use	 To set the symbol set to be used for printing PCL jobs. 	
Setting /procedure	The default setting is PC8. "PC8" / DESKTOP / ISO4 / ISO6 / ISO11 / ISO15 / ISO17 / ISO21 / ISO60 / ISO69 / ISOL1 / ISOL2 / ISOL5 / ISOL6 / ISOL9 / LEGAL / MATH8 / MCTEXT / MSPUBL / PC775 / PC850 / PC852 / PC858 / PC8DN / PC8TK / PC1004 / PIFONT / PSMATH / PSTEXT / ROMAN8 / WIN30 / WINBALT / WINL1 / WINL2 / WINL5 / ARABIC8 / HPWARA / PC864ARA / HEBREW7 / HEBREW8 / ISOHEB / PC862HEB / ISOCYR / PC866CYR / WINCYR / PC866UKR / GREEK8 / WINGRK / PC851GRK / PC8GRK / ISOGRK	

D. XPS (1) DIGITAL SIGNATURE

Function	Selects whether to verify digital signatures atta	ached to XPS (XML Paper Specifica-
Use	tion) files when printing the files.When ON is selected, files with invalid digital s	signatures are not printed.
Setting	 The default setting is DISABLE. 	
/procedure	ENABLE	"DISABLE"

(2) XPS ERROR PAGE

Function	• To set whether to print error information when an error occurs while printing a XPS
Use	use file. ON : XPS error page is printed when an XPS error occurs. OFF : No XPS error page is printed when an XPS error occurs.
Setting	The default setting is ON.
/procedure	"ON" OFF

9.9.3 PAPER

A. DEFAULT PAPER (1) PAPER SIZE

Function	Sets the default media size.
Use	To set the default media size.
Setting /procedure	<pre><for america="" north=""> • The default setting is LETTER. </for></pre> For other destinations> • The default setting is A4. LETTER/LEGAL/EXECUTIVE/A4/A5/A6/B5(JIS)/B6(JIS)/GOVT LETTER/STATE- MENT/FOLIO/SP FOLIO/UK QUARTO/FOOLSCAP/GOVT LEGAL/16K/PHOTO 4 x 6 (PHOTO 10 x 15) /KAI 16/KAI 32/ENV C6/ENV DL/ENV MONARCH/ENV CHOU#3/ ENV CHOU#4/B5(ISO)/ENV #10/JPOST/JPOST-D/CUSTOM
	NOTE Depending on the setting selected for SYS DEFAULT MENU/PAPER/UNIT OF MEASURE, PHOTO 4 x 6 may change to PHOTO 10 x 15.

(2) CUSTOM SIZE

Function	Sets the custom media width and length.
Use	To set the width and length of the custom media size.
Setting /procedure	 Select [CUSTOM SIZE] and press the Menu/Select key. Select [WIDTH] or [LENGTH] and press Menu/Select key. Set desired number with the up key▲/down key▼ and press the Menu/Select key.
	<setting for="" range="" width=""> For MILLIMETERS: 92 mm to 216 mm • The default setting of WIDTH is 216 mm. (For North America) • The default setting of WIDTH is 210 mm. (For all other regions)</setting>
	 For INCHES: 3.63 inches to 8.50 inches The default setting of WIDTH is 8.50 inches. (For North America) The default setting of WIDTH is 8.26 inches. (For all other regions)
	<for america="" north=""> For MILLIMETERS: 148 mm to 356 mm • The default setting of WIDTH is 279 mm. (For North America) • The default setting of WIDTH is 297 mm. (For all other regions)</for>
	 For INCHES: 5.83 inches to 14.00 inches The default setting of WIDTH is 11.00 inches. (For North America) The default setting of WIDTH is 11.69 inches. (For all other regions)
	NOTE By changing the [UNIT OF MEASURE] setting (INCHES/MILLIMETERS), the custom size units are changed.

(3) PAPER TYPE

Function	Sets the default media type.
Use	To set the default media type.
Setting /procedure	The default setting is PLAIN PAPER.
,procoduro	"PLAIN PAPER"/RECYCLED/THICK 1/THICK 2/LABEL/TRANSPARENCY/ENVE- LOPE/POSTCARD/LETTERHEAD/GLOSSY 1/GLOSSY 2

B. UNIT OF MEASURE

Function	 Sets the measurement units for custom size mode. Sets the measurement units for SYS DEFAULT MENU/DEFAULT PAPER/CUSTOM SIZE mode. 		
Use	To change media measurement units	S.	
Setting /procedure	<for america="" north=""> The default setting is INCHES. </for>		
	<for destinations="" other=""> The default setting is MILLIMETERS </for>	i.	
	INCHES	MILLIMETERS	

9.9.4 GRAY SCALE PAGE

Function	 Sets the color mode (color or monochrome) applied to monochrome pages include in a color print job. 						
Use							
	AUTO	: Automatically determines color or monochrome from the job's first page.					
	GRAYSCALE PRI	RINT: Automatically determines color or monochrome on a job's page basis.					
	COLOR PRINT	: Always makes color printing for print.	a job where it selected color				
Setting	The default setting is AUTO.						
/procedure	"AUTO"	GRAYSCALE PRINT	COLOR PRINT				

9.9.5 STARTUP OPTIONS

A. DO STARTUP PAGE

Function	 Sets whether a startup page is printed at startup of the printer.
Use	 To specify whether a startup page is printed. ON : Start up page is printed at startup the printer. OFF : Start up page is not printed at startup of the printer.
Setting /procedure	The default setting is OFF. ON "OFF"

9.9.6 AUTO CONTINUE

Function	 At the time of the following operator call, continues auto printing by ignoring the media type or size. "PAPER EMPTY" (except "MANUAL FEED"), "xxxx SIZE ERROR", "xxxx TYPE ERROR". 			
Use	To specify whether printing should are not available. ON : Auto continuous printing OFF : Auto continuous printing			
Setting /procedure	The default setting is OFF. ON	"OFF"		

9.9.7 HOLD JOB TIMEOUT

Function	Sets the amount of time before a job saved temporarily in the printer is automatically deleted.				
Use	To change the amount of time a job is held before being deleted.				
Setting /procedure	The default setting is DISABLE (No auto delete.). "DISABLE" 1 hour 4 hours 1 day 1 week				
	NOTE This menu is available only when an optional hard disk kit is installed. 				

9.9.8 ENERGY SAVER

Function	 Sets whether the printer should go into energy saver mode when not printing or cessing a print job and when the control panel is not being used. To set the amou time before energy saver mode is activated, use the "ENERGY SAVER TIME" r Energy saver mode is automatically cancelled when any of the following operation performed: The machine is restarted. A print job is received. Any of the keys on the control panel is pressed. 		
Use	 To specify whether energy saver mode 	is to be used.	
Setting /procedure	The default setting is ON.		
, procedure	"ON"	OFF	

9.9.9 ENERGY SAVER TIME

Function	 Sets the amount of time before the machine enters energy saver mode after the last print is received or the last key operated. 				
Use	To change the ar	nount of time befor	e the machine ente	ers energy saver mode.	
Setting /procedure	The default settir 5 minutes 9 minutes 13 minutes 1 hour NOTE This menu is av	6 minutes 10 minutes 14 minutes 3 hours	7 minutes 11 minutes "15 minutes" [ENERGY SAVER	8 minutes 12 minutes 30 minutes 3] is not set to "OFF."	

9.9.10 MENU TIMEOUT

Function	Sets the amount of time before the control panel returns to the status screen from menu mode and the help display.				
Use	 To set the amount of the time before the control panel returns to the status screen from the menu and the help display. 				
Setting	 The default setting is 2 m 	ninutes.			
/procedure	OFF 1 minute "2 minutes"				

9.9.11 LCD CONTRAST

Function	Sets the	brightness o	f the contro	l panel LCD	display.			
Use	 To set the 	e brightness	of the contr	ol panel LCE) display.			
Setting /procedure	The default	setting is 0.						
/procedure	-3	-2	-1	"0"	+1	+2	+3	

9.9.12 SECURITY

A. CHANGE PASSWORD

Function	Sets the password used for the lock panel function.
Use	To change the password used for the lock panel function. 0000 : Panel lock function is OFF. 0001 to FFFF : Valid password for panel lock function.
Setting /procedure	 Select [CHANGE PASSWORD] and press the Menu/Select key. Set desired password (first digit) with the up key▲/down key▼ and press the right key▶. Repeat the above procedures to set up to fourth digit password. The default setting is 0000.
	"0000" to FFFF
	 NOTE Make sure to set the password to something other than "0000" when the [LOCK PANEL] function is set to [ON]. If you forget the password, it can be initiated (0000) with [SERVICE MENU/ RESTORE PASSWORD]. See P.187

B. LOCK PANEL

Function	 Protects the menu (except the service menu) with a password. 							
Use	To make the menu (except the service menu) impossible to change unless the cor- rect password is entered. OFF : Panel lock function is OFF. MINIMUM : Panel lock function is ON. Protect the operation of [INTERFACE MENU], [SYS DEFAULT MENU]. ON : Panel lock function is ON. Protect the operation of [PROF/PRINT MENU], [PRINT MENU], [PAPER MENU], [QUALITY MENU], [INTERFACE MENU], [SYS DEFAULT MENU].							
Setting /procedure	The default setting is OFF. "OFF" MINIMUM ON							

9.9.13 CLOCK

A. DATE

Function	Sets the date of the printer's built-in clock.
Use	To change the date of the printer's built-in clock.
Setting /procedure	DATE (DD.MM.YY): For Europe DATE (MM.DD.YY): For North America DATE(YY.MM.DD): For Japan, Asia, China The following shows how to set DATE (DD.MM.YY). 1. Select [CLOCK] and press the Menu/Select key. 2. Select [DATE (DD.MM.YY)] and press the Menu/Select key. 3. Set date with the up key▲/down key▼ and press the right key▶. 4. Repeat the above procedures to set month and year. 5. Press the Menu/Select key. DD : 01 to 31 MM : 01 to 12 YY : 2007 to 2032

B. TIME

Function	Sets the time of the printer's built-in clock.
Use	 To change the time of the printer's built-in clock.
Setting /procedure	 Select [CLOCK] and press the Menu/Select key. Select [TIME] and press the Menu/Select key. Set hour with the up key▲/down key▼ and press the right key▶. Repeat the above procedures to set minute. Press the Menu/Select key.

C. TIME ZONE

Function	Sets the time zone.			
Use	• Sets the time zone.			
Setting /procedure	 Select [CLOCK] and press the Menu/Select key. Select [TIME ZONE] and press the Menu/Select key. Set time zone with the up key▲/down key▼. Press the Menu/Select key. 			

9.9.14 HDD FORMAT

Function	 Initializes the format of the optional hard disk kit. 						
Use	To initialize the format of the optional hard disk kit. USER AREA ONLY : Initialize only user area ALL : Initialize all area						
Setting /procedure	 Select [HDD FORMAT] and press the Menu/Select key. Select desired initialization method and press the Menu/Select key. [ARE YOU SURE?] is displayed. By pressing the Menu/Select key, initialization starts. By pressing the Cancel key without pressing the Menu/Select key, the start of initialization can be cancelled. The printer restarts and the hard disk is initialized. Once the initialization starts, it cannot be cancelled. The default setting is USER AREA ONLY. 						
	USER AREA ONLY ALL						
	NOTE This menu is available only when an optional hard disk kit is installed. 						

9.9.15 CARD FORMAT

Function	Initializes the format of the optional compact flash card.						
Use	To initialize the format of the optional compact flash card. USER AREA ONLY : Initialize only user area ALL : Initialize all area						
Setting /procedure	 Select [CARD FORMAT] and press the Menu/Select key. Select desired initialization method and press the Menu/Select key. [ARE YOU SURE?] is displayed. By pressing the Menu/Select key, initialization starts. By pressing the Cancel key without pressing the Menu/Select key, the start of initialization can be cancelled. The printer restarts and the hard disk is initialized. Once the initialization starts, it cannot be cancelled. The default setting is USER AREA ONLY. USER AREA ONLY NOTE 						
	This menu is available only when an optional compact flash card is installed.						

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9.9.16 RESTORE DEFAULTS

Function	Restores the factory default of each setting.							
Use	To restore the defaults of all settings. RESTORE NETWORK : Restore the default for [INTERFACE MENU/ETHERNET] setting. RESTORE PRINTER : Restore the default for [PAPER MENU], [QUALITY MENU], [SYS DEFAULT MENU] and [CAMERA DIRECT] setting. RESTORE ALL : Restore defaults for all settings.							
Setting /procedure	 Select [RESTORE DEFFAULTS] and press the Menu/Select key. Select desired mode and press the Menu/Select key. [ARE YOU SURE?] is displayed. By pressing the Menu/Select key, initialization starts. By pressing the Cancel key without pressing the Menu/Select key, the start of initialization can be cancelled. The printer restarts and the hard disk is initialized. Once the initialization starts, it cannot be cancelled. 							
	The default setting is RESTORE NETWORK. RESTORE NETWORK RESTORE PRINTER RESTORE ALL							

List of reset items 1

					Reset Item			Ref.						
				RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL	Initial Value	Page						
		DEFAULT TRAY		_	Reset	Reset	TRAY2	P.120						
			PAPER SIZE	—	Reset	Reset	Letter (A4)	P.120						
	PAPER SOURCE		CUSTOM SIZE	_	Reset	Reset	WIDTH: 8.5 inches LENGTH: 11inches	P.121						
					Reset	Reset	WIDTH:210mm LENGTH:297mm							
			PAPER TYPE	_	Reset	Reset	PLAIN PAPER	P.121						
PAPER MENU			PAPER SIZE		Reset	Reset	Letter (A4)	P.122						
WENU			PAPER TYPE		Reset	Reset	PLAIN PAPER	P.123						
								TRAY3	PAPER TYPE	_	Reset	Reset	PLAIN PAPER	P.123
		TRAY	TRAY CHAINING		Reset	Reset	ON	P.123						
		TRAY	MAPPING	—	Reset	Reset	OFF	P.124						
		DUPLEX			Reset	Reset	OFF	P.124						
		COPIES			Reset	Reset	1	P.124						
		COLLATE			Reset	Reset	OFF	P.125						

*: Destination items. For details, see the page referenced.

List of reset items 2

				Reset Item				Ref.
	Iter	m		RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL	Initial Value	Page
	COLOR MODE			_	Reset	Reset	COLOR	P.125
	BRIGHTNESS			_	Reset	Reset	0%	P.125
		IMAGE PRINTING		_	Reset	Reset	DETAIL	P.125
	HALFTONE	TEXT PF	RINTING	—	Reset	Reset	LINE ART	P.126
		-	PHICS TING	_	Reset	Reset	DETAIL	P.126
		IMAGE P	RINTING		Reset	Reset	OFF	P.126
	EDGE ENHANCE-	TEXT PF	RINTING	_	Reset	Reset	ON	P.126
	MENT	-	PHICS TING	_	Reset	Reset	ON	P.126
	EDG	E STRENG	iTH	_	Reset	Reset	MIDDLE	P.127
	ECONOMY PRINT				Reset	Reset	OFF	P.127
		CONT	RAST	_	Reset	Reset	0%	P.127
		IMAGE PRINTING	RGB SOURCE	_	Reset	Reset	sRGB	P.127
			RGB INTENT	_	Reset	Reset	PHOTO- GRAPHIC	P.128
QUALITY MENU			RGB GRAY	_	Reset	Reset	COMPOSITE BLACK	P.128
MENO	501	PCL TEXT	RGB SOURCE	_	Reset	Reset	sRGB	P.128
	PCL SETTING		RGB INTENT	_	Reset	Reset	VIVID	P.128
			RGB GRAY	_	Reset	Reset	BLACK AND GRAY	P.129
			RGB SOURCE	—	Reset	Reset	sRGB	P.129
		GRAPHICS PRINTING	RGB INTENT	—	Reset	Reset	VIVID	P.129
			RGB GRAY	_	Reset	Reset	BLACK AND GRAY	P.129
			RGB SOURCE		Reset	Reset	sRGB	P.130
	PS SETTING	IMAGE	RGB INTENT	_	Reset	Reset	PHOTO- GRAPHIC	P.130
			RGB GRAY		Reset	Reset	COMPOSITE BLACK	P.130
			DESTINA- TION PROF		Reset	Reset	AUTO	P.130

				Reset Item				Ref.
	Item				RESTORE PRINTER	RESTORE ALL	Initial Value	Page
		ТЕХТ	RGB SOURCE	_	Reset	Reset	sRGB	P.131
			RGB INTENT	_	Reset	Reset	VIVID	P.131
		PRINTING	RGB GRAY	_	Reset	Reset	BLACK AND GRAY	P.131
			DESTINA- TION PROF		Reset	Reset	AUTO	P.131
			RGB SOURCE	—	Reset	Reset	sRGB	P.132
	PS	PS SETTING PRINTING SIMULA- TION	RGB INTENT	_	Reset	Reset	VIVID	P.132
	SETTING		RGB GRAY	_	Reset	Reset	BLACK AND GRAY	P.132
QUALITY MENU			DESTINA- TION PROF	_	Reset	Reset	AUTO	P.132
MENO			SIMULA- TION PROF	_	Reset	Reset	NONE	P.133
			SIMULA- TION INTENT	_	Reset	Reset	RELATIVE COLOR	P.133
			CMYK GRAY		Reset	Reset	COMPOSITE BLACK	P.133
		TO CALIBF		—	Reset	Reset	ON	P.134
	CALIBRA-		CYAN	—	Reset	Reset	0	P.134
	TION		MAGENTA	—	Reset	Reset	0	P.134
			YELLOW	—	Reset	Reset	0	P.134
			BLACK	_	Reset	Reset	0	P.134
	COLO	COLOR SEPARATION		—	Reset	Reset	OFF	P.135

*: Destination items. For details, see the page referenced.

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List of reset items 3

				Reset Item			Ref.
	Item			RESTORE PRINTER	RESTORE ALL	Initial Value	Page
MEMORY DIRECT	TYF	PE OF FILES	—	Reset	Reset	PDF,XPS	P.135
	PAP	ER SOURCE	—	Reset	Reset	TRAY2	P.136
	LAYOUT PAPER MARGIN		—	Reset	Reset	1-UP	P.136
			—	Reset	Reset	STANDARD	P.136
	IMAGE QUALITY	BRIGHTNESS	—	Reset	Reset	0%	P.136
		CONTRAST	—	Reset	Reset	0%	P.137
CAMERA DIRECT		ECONOMY PRINT	—	Reset	Reset	OFF	P.137
DIRECT		RGB SOURCE	—	Reset	Reset	sRGB	P.137
		RGB INTENT	—	Reset	Reset	PHOTO- GRAPHIC	P.137
		RGB GRAY	_	Reset	Reset	COMPOS- ITE BLACK	P.137
		HALFTONE	_	Reset	Reset	DETAIL	P.138

List of reset items 4

			Reset Item		Initial Value	Ref. Page		
			RESTORE NETWORK	RESTORE PRINTER			RESTORE ALL	
	JO	B TIMEOU	т	—	Reset	Reset	15 seconds	P.139
		ENA	BLE	Reset	—	Reset	YES	P.139
		IP ADI	DRESS	Reset	—	Reset	000.000. 000.000	P.139
		SUBNE	T MASK	Reset	_	Reset	000.000. 000.000	P.140
		DEFAULT	GATEWAY	Reset	_	Reset	000.000. 000.000	P.140
		DH	CP	Reset	_	Reset	ON	P.140
		BO	OTP	Reset	_	Reset	OFF	P.140
INTER-		ARP/		Reset		Reset	OFF	P.141
FACE	ETHER-	HT	TP	Reset		Reset	YES	P.141
MENU	NET- TCP/IP	F	ΓP	Reset		Reset	YES	P.141
	I OF/IF	TEL	NET	Reset		Reset	ENABLE	P.141
		BON	JOUR	Reset		Reset	YES	P.141
		DYNAM	IIC DNS	Reset		Reset	NO	P.142
		IF	P	Reset		Reset	YES	P.142
		BAW	ENABLE	Reset		Reset	YES	
		PORT	BIDIREC- TIONAL	_	Reset	Reset	OFF	P.142
		SI	_P	Reset		Reset	YES	P.142
		SM	ITP	Reset		Reset	YES	P.143
		SN	MP	Reset		Reset	YES	P.143

					Reset Item	l		Ref.
				RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL	Initial Value	Page
		WSD	PRINT	Reset	_	Reset	YES	P.143
		IPS	EC	Reset	_	Reset	NO	P.143
	NET- TCP/IP	IP ADDRESS	ACCESS PERMIS- SION	Reset	_	Reset	DISABLE	P.143
		FILTER	ACCESS REFUSE	Reset	_	Reset	DISABLE	
INTER-				ENABLE	Reset	_	Reset	YES
FACE MENU		IPv6	AUTO SETTING	Reset	_	Reset	YES	P.144
	NETWARE			Reset	_	Reset	NO	P.144
	A	PPLE TALK	(Reset	_	Reset	YES	P.145
	SPE	SPEED/DUPLEX		Reset	_	Reset	AUTO	P.145
	IE	IEEE802.1X		Reset	_	Reset	NO	P.145
	MEMORY DIRECT		_	Reset	Reset	ENABLE	P.145	
	CAN	IERA DIRE	СТ	Reset		Reset	ENABLE	P.145

*: Destination items. For details, see the page referenced.

List of reset items 5

					Reset Item			Ref.
	Iter	m		RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL	Initial Value	Page
	LANGUAGE			_	Reset	Reset	ENGLISH	P.146
		DEF. EM	ULATION	_	Reset	Reset	AUTO	P.146
			WAIT TIM- EOUT	_	Reset	Reset	0	P.146
		POST- SCRIPT	PS ERROR PAGE		Reset	Reset	OFF	P.146
			PS PRO- TOCOL	—	Reset	Reset	AUTO	P.146
			CR/LF MAPPING	—	Reset	Reset	CR=CR LF=LF	P.147
			LINES PER PAGE		Reset	Reset	60	P.147
	EMULA- TION		FONT SOURCE/ FONT NUMBER	_	Reset	Reset	0	
	non	PCL	FONT SOURCE/ PITCH SIZE (or POINT SIZE)		Reset	Reset	10.00	P.147
0)/0			FONT SOURCE/ SYMBOL SET		Reset	Reset	PC8	
SYS DEFAULT MENU		XPS	DIGITAL SIGNA- TURE	_	Reset	Reset	DISABLE	P.148
			XPS ERROR PAGE	_	Reset	Reset	ON	P.148
			PAPER SIZE	_	Reset	Reset	LETTER (A4)	P.149
		DEFAULT	CUSTOM SIZE/ WIDTH	_	Reset	Reset	8.5 inches	P.149
	PAPER	PAPER	CUSTOM SIZE/ LENGTH		Reset	Reset	11.00 inches	P.149
			PAPER TYPE	_	Reset	Reset	PLAIN PAPER	P.149
		UNIT OF I	MEASURE	—	Reset	Reset	INCHES	P.150
	STARTUP OPTIONS	DO STAR	TUP PAGE	_	Reset	Reset	OFF	P.150
	AUT	AUTO CONTINUE			Reset	Reset	OFF	P.150
	HOLD	JOB TIME	OUT	—	Reset	Reset	DISABLE	P.151
	ENE	ERGY SAVE	ER	—	Reset	Reset	ON	P.151
	ENER	GY SAVER	TIME	—	Reset	Reset	15 minutes	P.151
	MEI		JT	—	Reset	Reset	2 minutes	P.151
	LCE	CONTRA	ST		Reset	Reset	0	P.152

	ltem				Reset Item			Bef.
				RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL	Initial Value	Page
	SECURITY	CHANGE F	ASSWORD	—	Reset	Reset	0000	P.152
	SECONT	LOCK	PANEL	—	Reset	Reset	OFF	P.152
	CLOCK	DA	ΤE	—	Reset	Reset	_	P.153
		TI	ME	—	Reset	Reset	_	P.153
SYS DEFAULT		TIME	ZONE	_	Reset	Reset	_	P.153
MENU			TRAY 1		Reset	Reset	OFF	
		PAPER EMPTY	TRAY 2		Reset	Reset	ON	P.162
			TRAY 3		Reset	Reset	ON	
		TONE	RLOW		Reset	Reset	ON	P.162
			I-UNIT	LOW	_	Reset	Reset	ON

List of reset items 6

			Reset Item			
	Item		RESTORE PRINTER	RESTORE ALL	Initial Value	Ref. Page
	Admin Password	_	Reset	Reset	administrator	_
	Refresh Rate	_	Reset	Reset	30 sec.	—
	Contact Name	_	Reset	Reset	KONICA MINOLTA Customer Support	_
	Contact Information	_	Reset	Reset	http://printer. konicaminolta. com/	_
tion	Contact Utility Link	—	Reset	Reset	http://page scope.com/	_
PageScope Web Connection	Corporate URL	_	Reset	Reset	http://printer. konicaminolta. com/	_
e Web	Supplies and Accessories	—	Reset	Reset	http://www.q- shop.com/	_
geScope	Product Help URL	_	Reset	Reset	http://printer. konicaminolta. com/	_
Pa	Auto IP	Reset		Reset	DHCP	—
	WINS/NetBIOS Resolution	Reset	_	Reset	Checked	_
	** NetBIOS Name	Reset	—	Reset	MC4650- XXXXXX	—
	Domain/Workgroup	Reset	—	Reset	WORK- GROUP	—
	Use DHCP	Reset	_	Reset	Checked	_
	IPP Config Printer Name	Reset	_	Reset	Blank	—
	IPP Config Printer Location	Reset	—	Reset	Blank	_

*: Destination items. For details, see the page referenced. **: XXXXXX are the final 6 digits of the printer's MAC address.

9.9.17 ENABLE WARNING

A. PAPER EMPTY

(1) TRAY1

Function	 Specifies whether a [TRAY 1 Paper Empty] (manual feed tray) is displayed as a nor- mal message when it is empty.
Use	 To specify whether to display a [TRAY 1 Paper Empty] message as a normal message. ON : Paper empty message is displayed on normal message when tray is empty. OFF : Paper empty message is not displayed on normal message when tray is empty.
Setting /procedure	The default setting is OFF. "OFF" ON

(2) TRAY2

Function	 Specifies whether a [TRAY 2 Paper Empty] is displayed as a normal message when it is empty. 			
Use	 To specify whether to display a [TRAY 2 Paper Empty] message as a normal message. ON : Paper empty message is displayed on normal message when tray is empt OFF : Paper empty message is not displayed on normal message when tray is empty. 			
Setting /procedure	The default setting is ON.			
procedure	OFF	"ON"		

(3) TRAY3

Function	• Specifies whether a [TRAY 3 Paper Empty] is displayed as a normal message when it is empty.		
Use	 To specify whether to display a [TRAY 3 Paper Empty] message as a normal message. ON : Paper empty message is displayed on normal message when tray is empty. OFF : Paper empty message is not displayed on normal message when tray is empty. 		
Setting /procedure	The default setting is ON. OFF "ON" NOTE This menu is available only when an optional lower feeder unit is installed.		

B. TONER LOW

Function	Specifies whether or pet a warping appears	ing appears when the toner is about to rup out		
Use	 Specifies whether or not a warning appears when the toner is about to run out 			
Setting	 The default setting is ON. 			
/procedure	"ON"	OFF		

C. I-UNIT LOW

Function	Specifies whether or not a warning appears when the print unit is about to reach the			
Use	end of its service life.			
Setting	The default setting is ON.			
/procedure	"ON" OFF			

9.10 MAINTENANCE MENU

9.10.1 How to enter the MAINTENANCE MENU

A. Procedure

- 1. Display [MAINTENANCE MENU] on the menu screen and press the Menu/Select key.
- 2. [ENTER PASSWORD] message is displayed.
- 3. Set the first digit of user password with the up key▲/down key▼ and press the right key►.
- 4. Repeat the above procedures to set up to fourth digit of password. (The initial setting for user password is [0000].)
- 5. Press the Menu/Select key.

B. Exiting

• Press the Cancel key.

9.10.2 PRINT MENU

A. EVENT LOG

Function	Prints the event log.
Use	To check the jams/troubles that occurred, and history of replacing the consumables, etc. The items that can be checked are as follows. Paper Jam Error : The number of jams occurred and its history Engine Fatal Error : The history of troubles which caused service call Fuser Unit : The history of replacing the fuser unit Transfer Belt : The history of replacing the transfer belt Second Trans : The history of replacing the transfer roller Toner Cartridge : The history of replacing the toner cartridge Imaging Unit : The history of replacing the print unit Trouble Counter : Troubles counted at each section
Setting /procedure	 Select [EVENT LOG] and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.

B. HALFTONE 64

Function	Prints the halftone pattern with 25% level for CMYK respectively.
Use	 To check the unevenness of the density and the pitch.
Setting /procedure	 Set the A4S or letterS media on the tray. Select [HALFTONE 64] and press the Menu/Select key. Select desired color with the up key▲/down key▼ and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.

C. HALFTONE 128

Function	Prints the halftone pattern with 50% level for CMYK respectively.
Use	 To check the unevenness of the density and the pitch.
Setting /procedure	 Set the A4S or letterS media on the tray. Select [HALFTONE 128] and press the Menu/Select key. Select desired color with the up key▲/down key▼ and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.

D. HALFTONE 256

Function	Prints the halftone pattern with 100% level for CMYK respectively.
Use	 To check the unevenness of the density and the pitch.
Setting /procedure	 Set the A4S or letterS media on the tray. Select [HALFTONE 256] and press the Menu/Select key. Select desired color with the up key▲/down key▼ and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.

E. GRADATION

Function	Prints the gradation pattern.
Use	To check the gradation reproductively.
Setting /procedure	 Set the A4S or letterS media on the Tray. Select [GRADATION] and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.

9.10.3 ALIGNMENT

A. TOP ADJUSTMENT

Function	Adjusts the top margin of media for single-sided printing.
Use	To correct a misaligned print image. PLAIN PAPER : Adjust the head margin of plain paper. THICK : Adjust the head margin of thick paper. ENVELOPE : Adjust the head margin of envelope. TRANSPARENCY: Adjust the head margin of transparency.
Setting /procedure	 Select [TOP ADJUSTMENT] and press the Menu/Select key. Select desired media type and press the Menu/Select key. Select desired adjustment amount with the up key ▲/down key ▼ and press the Menu/Select key.
	-15 to +15 (1 step: 0.2 mm)

B. LEFT ADJUSTMENT

Function	Adjusts the left margin of media for single-sided printing.
Use	 To correct a misaligned print image. LEFT ADJ TRAY 1: Adjust the left margin of media fed from tray 1 (manual tray.) LEFT ADJ TRAY 2: Adjust the left margin of media fed from tray 2. LEFT ADJ TRAY 3: Adjust the left margin of media fed from tray 3.
Setting /procedure	 Select [LEFT ADJUSTMENT] and press the Menu/Select key. Select desired tray and press the Menu/Select key. Select desired adjustment amount with the up key▲/down key▼ and press the Menu/Select key.
	-15 to +15 (1 step: 0.2 mm)

C. LEFT ADJ DUPLEX

Function	 Adjusts the left margin of media for double-sided printing.
Use	To correct a misaligned print image. LEFT ADJ TRAY 1: Adjust the left margin of duplex print media fed from tray 1 (manual tray.) LEFT ADJ TRAY 2: Adjust the left margin of duplex print media fed from tray 2. LEFT ADJ TRAY 3: Adjust the left margin of duplex print media fed from tray 3.
Setting /procedure	 Select [LEFT ADJ DUPLEX] and press the Menu/Select key. Select desired tray and press the Menu/Select key. Select desired adjustment amount with the Up key▲/down key▼ and press the Menu/Select key.
	-15 to +15 (1 step: 0.2 mm)

D. TRANSFER POWER

(1) SIMPLEX PASS

Functions	Adjust the 2nd image transfer output (ATVC) on the single-sided pages for each media type.
Use	To use when the transfer failure at the trailing edge occurs.
Adjustment Range	The default setting is 0. -8 to +7
Adjustment Instructions	To increase the ATVC value (in the direction of a foggier image), decrease the setting value. To decrease the ATVC value (in the direction of a less foggy image), increase the setting value.
Setting/ Procedure	 Select [TRANSFER POWER] and press the Menu/Select key. Select [SIMPLEX PASS] and press the Menu/Select key. Select desired media type with the up key▲/down key▼ and press the Menu/Select key. Select desired setting value with the up key▲/down key▼ and press the Menu/Select key.

(2) DUPLEX PASS

Functions	• Adjust the 2nd image transfer output (ATVC) on the duplexed pages for each media type.
Use	To use when the transfer failure at the trailing edge occurs.
Adjustment Range	The default setting is 0. -8 to +7
Adjustment Instructions	To increase the ATVC value (in the direction of a foggier image), decrease the setting value. To decrease the ATVC value (in the direction of a less foggy image), increase the setting value.
Setting/ Procedure	 Select [TRANSFER POWER] and press the Menu/Select key. Select [DUPLEX PASS] and press the Menu/Select key. Select desired media type with the up key▲/down key▼ and press the Menu/Select key. Select desired setting value with the up key▲/down key▼ and press the Menu/Select key.

(3) MANUAL DUPLEX

Functions	Adjust the 2nd image transfer output (ATVC) on the manual duplexed pages for each media type.
Use	To use when the transfer failure at the trailing edge occurs.
Adjustment Range	The default setting is 0. -8 to +7
Adjustment Instructions	To increase the ATVC value (in the direction of a foggier image), decrease the setting value. To decrease the ATVC value (in the direction of a less foggy image), increase the setting value.
Setting/ Procedure	 Select [TRANSFER POWER] and press the Menu/Select key. Select [MANUAL DUPLEX] and press the Menu/Select key. Select desired media type with the up key▲/down key▼ and press the Menu/Select key. Select desired setting value with the up key▲/down key▼ and press the Menu/Select key.

E. IMG ADJ THICK

Functions	To fine-adjust density of printed images of each color for thick paper and OHP trans- parencies.
Use	To change the density of the printed image for each color with thick paper and OHP transparencies.
Adjustment Range	The default setting is 0. -5 to +5
Adjustment Instructions	Light color: increase the setting value Dark color: decrease the setting value
Setting/ Procedure	 Select [IMG ADJ THICK] and press the Menu/Select key. Select desired color with the up key▲/down key▼ and press the Menu/Select key. Select desired setting value with the up key▲/down key▼ and press the Menu/Select key.

F. IMG ADJ BLACK

Functions	To fine-adjust the density of the printed image for a black printing.
Use	 To vary the density of the printed image of a black printing.
Adjustment Range	The default setting is 0. -2 to +2
Adjustment Instructions	If the black is light, increase the setting value. If the black is dark, decrease the setting value.
Setting/ Procedure	 Select [IMG ADJ BLACK] and press the Menu/Select key. Select desired setting value with the up key▲/down key▼ and press the Menu/ Select key.

9.10.4 SUPPLIES

A. REPLACE

(1) TRANS. BELT

Function	Resets the transfer belt counter.
Use	To use when the transfer belt has been replaced.
Setting /procedure	 Select [MAINTENANCE MENU] → [SUPPLIES] → [REPLACE] → [TRANS. BELT] and select YES. Press the Menu/Select key and reset the counter.

(2) TRANS. ROLLER

Function	Resets the transfer roller counter.
Use	 To use when the transfer roller has been replaced.
Setting /procedure	 Select [MAINTENANCE MENU] → [SUPPLIES] → [REPLACE] → [TRANS. ROLLER] and select YES. Press the Menu/Select key and reset the counter.

(3) FUSER UNIT

Function	Resets the fuser unit counter.
Use	 To use when the fuser unit has been replaced.
Setting /procedure	 Select [MAINTENANCE MENU] → [SUPPLIES] → [REPLACE] → [FUSER UNIT] and select YES. Press the Menu/Select key and reset the counter.

9.10.5 QUICK SETTING

A. UPDATE SETTING

Function	To update printer settings according to the printer setting definition file stored in the USB memory device.
Use	• Printer definition files are saved according to various setting patterns and a pattern the most appropriate for a specific need can be selected promptly.
Setting /procedure	 Set the USB memory device. Call the MAINTENANCE MENU screen to the display. Select [QUICK SETTING] → [UPDATE SETTING]. The "/setup/*.ini" files in the USB memory device appear on the display. NOTE The directory name (setup) and file extension (*.ini) are fixed. The definition file with any other name or file extension is not recognized. Up to 20 files can be displayed. Using the up key ▲ or down key ▼, select the definition file to be updated and press the Menu/Select key. Select [EXECUTE] and press the Menu/Select key. The selected definition file is loaded and the settings are updated. The message "PROCESSING" appears during the updating procedure. When the updating procedure is completed, the printer gives a message notifying that the procedure is completed. INOTE The printer is automatically restarted, if an item that calls for a restart of the printer is included in the updated items.

B. BACKUP SETTING

Function	• To store, as a definition file, the current printer setting information in the USB memory device.
Use	 Printer definition files are saved according to various setting patterns and a pattern the most appropriate for a specific need can be selected promptly.
Setting /procedure	 Set the USB memory device. Call the MAINTENANCE MENU screen to the display. Select [QUICK SETTING] → [BACKUP SETTING]. Select [EXECUTE] and press the Menu/Select key. The definition file with a file name of "SETUP**.ini" is saved in the "/setup" folder of the USB memory device. The message "PROCESSING" appears while the definition file is being saved. NOTE Any number from 01 to 20 takes the place of " ** " in the file name. Up to 20 definition files can be saved. If the USB memory device already contains 20 files, the maximum number of files saved is exceeded and any new file cannot be saved. When the saving procedure is completed, the printer gives a message notifying that the procedure is completed.

10. Adjustment item list

		Replac	ement part/Service job											
Adj	ustment/set	ting Items		No	Change media type (tray 2)	Install lower feeder unit	Replace transfer roller	Replace transfer belt	Replace fuser unit	Replace PH unit	Replace MFP board	Replace print control board	RESTORE DEFAULTS	Execute F/W update
	QUALITY MENU	CALIBRATION	AIDC PROCESS	1			(2)	(2)	(2)					
		FIRMWARE VERSION	CONTROLLER F/W	2								(2)		С
			ENGINE F/W	3							(3)			С
_			BOOT F/W	4										С
MENU	SERVICE		TOP ADJUSTMENT	5	0	0				(1)				
Σ	MENU	ALIGNMENT	LEFT ADJUSTMENT	6		0				(2)				
			LEFT ADJ DUPLEX	7										
			TRANS. BELT	8				(1)						
		SUPPLIES	TRANS. ROLLER	9			(1)							
			FUSER UNIT	10					(1)					
Re-	Re-entry		11									0		
F/W update		12							(2)	(1)				
Remounting of parameter chip (MFPB)		13							(1)					

* This table shows the adjustment items that are required when a part of the machine has been replaced. Priority order, if applicable, during the adjustment procedures is indicated by the corresponding number.

11. SERVICE MENU

11.1 How to enter the service menu

NOTE

 Make sure not to reveal the password of the service menu to any unauthorized person.

A. Procedure 1

- 1. Display [SERVICE MENU] on the menu screen and press the Menu/Select key.
- 2. [ENTER PASSWORD] message is displayed.
- 3. Set first digit of password with the up key▲/down key▼ and press the right key►.
- Repeat the above procedures to set up to seventh digit of password. Enter "KMM4650" for service password.

NOTE

- The service password needs to correspond to the product name.
- 5. Press the Menu/Select key.

B. Procedure 2

1. Turn the power switch ON while pressing the up key▲ and the Menu/Select key at the power switch OFF.

NOTE

- Continue to press the up key▲ and the Menu/Select key until "INITIALIZING" message appears on the control panel.
- 2. When initializing is complete, the service menu appears.

NOTE

 Password authentication is not required before starting to operate the service menu, however, once the service menu is closed, you need to enter the password to display the service menu again.

C. Procedure 3

- If a service call message is on the display, perform the following steps, since the ordinary
 procedure may not be good for entering the service menu.
- 1. With the service call message on the display, hold down the Menu/Select key for 5 sec. or more.
- 2. Set first digit of password with the up key▲/down key▼ and press the right key▶.
- Repeat the above procedures to set up to seventh digit of password. Enter "KMM4650" for service password.

Only the following menu items are, however, available if the service menu is accessed through the above steps.

- SERIAL NUMBER
- FIRMWARE VERSION
- RESTORE PASSWORD
- BK CLEAR
- FIRMWARE UPDATE
- SOFT SWITCH

D. Exiting

Press the Cancel key.

11.2 Service menu function tree

	S	ERVICE MENU	Ref. Pa	
SERIAL NUMBER			P.173	
FIRMWARE	CONTROLLER	P.173		
VERSION	ENGINE F/W			
	BOOT F/W	BOOT F/W		
ALIGNMENT	TOP ADJUSTM	P.173		
	LEFT ADJUST	P.173		
	LEFT ADJ DUF	PLEX *1	P.174	
	TRANSFER	SIMPLEX PASS	P.174	
	POWER	DUPLEX PASS *1	P.174	
		MANUAL DUPLEX	P.175	
	IMG ADJ THIC	ĸ	P.175	
	IMG ADJ BLAC	ĸ	P.175	
	IMAGE ADJ PA	RAM	P.176	
	MAXIMUM DEM	NSITY	P.176	
	FUSER SPEED	P.176		
	TEMPERATUR	P.177		
	FUSER CONTR	P.177		
	AIDC MODE	P.178		
PRINT MENU	MAINTENANCI	P.178		
	EVENT LOG	P.181		
	CONFIGURATI	P.181		
	ELEMENT PAG	P.181		
	HALFTONE 64	P.185		
	HALFTONE 12	P.185		
	HALFTONE 25	P.185		
	GRADATION		P.186	
SUPLLIES	REPLACE	TRANS. BELT	P.186	
		TRANS. ROLLER	P.186	
		FUSER UNIT	P.186	
RESTORE PASSV	VORD		P.187	
BK CLEAR			P.187	
QUICK SETTING	2 UPDATE SETTING		P.188	
	BACKUP SETT	P.188		
FIRMWARE UPDA	ATE *2		P.189	
SOFT SWITCH	SWITCH 1	P.189		
	SWITCH 2			
	SWITCH 3	SWITCH 3		
	SWITCH 4			

*1: Available only on magicolor 4650DN *2: It will be displayed only when a USB memory device is installed.

11.3 SERIAL NUMBER

Function	Displays the serial number of the printer.
Use	 To confirm the printer's serial number.
	 Select [SERVICE MENU] and press the Menu/Select key. Select [SERIAL NUMBER] and press the Menu/Select key. The serial number of the printer is displayed.

11.4 FIRMWARE VERSION

Function	Displays the version number of the printer firmware.
Use	 To use when the firmware is updated. To confirm the version number of the printer firmware. CONTROLLER F/W: Firmware of controller ENGINE F/W : Firmware of engine BOOT/F/W : Boot firmware
Setting /procedure	 Select [FIRMWARE VERSION] and press the Menu/Select key. Select desired firmware and press the Menu/Select key. Version number of firmware is displayed.

11.5 ALIGNMENT

11.5.1 TOP ADJUSTMENT

Function	 Adjusts the top margin of media for single-sided printing.
Use	To correct a misaligned print image. PLAIN PAPER : Adjust the head margin of plain paper. THICK : Adjust the head margin of thick paper. ENVELOPE : Adjust the head margin of envelope. TRANSPARENCY: Adjust the head margin of transparency.
Setting /procedure	 Select [TOP ADJUSTMENT] and press the Menu/Select key. Select desired paper type and press the Menu/Select key. Select desired adjustment amount with the up key▲/down key▼ and press the Menu/Select key.
	-15 to +15 (1 step: 0.2 mm)

11.5.2 LEFT ADJUSTMENT

Function	Adjusts the left margin of media for single-sided printing.
Use	To correct a misaligned print image. LEFT ADJ TRAY 1: Adjust the left margin of media fed from tray 1 (manual tray.) LEFT ADJ TRAY 2: Adjust the left margin of media fed from tray 2. LEFT ADJ TRAY 3: Adjust the left margin of media fed from tray 3.
Setting /procedure	 Select [LEFT ADJUSTMENT] and press the Menu/Select key. Select desired tray and press the Menu/Select key. Select desired adjustment amount with the up key ▲/down key ▼ and press the Menu/Select key.
	-15 to +15 (1 step: 0.2 mm)

11.5.3 LEFT ADJ DUPLEX

Function	 Adjusts the left margin of media for double-sided printing.
Use	To correct a misaligned print image. LEFT ADJ TRAY 1: Adjust the left margin of duplex print media fed from tray 1 (manual tray.) LEFT ADJ TRAY 2: Adjust the left margin of duplex print media fed from tray 2. LEFT ADJ TRAY 3: Adjust the left margin of duplex print media fed from tray 3.
Setting /procedure	 Select [LEFT ADJ DUPLEX] and press the Menu/Select key. Select desired tray and press the Menu/Select key. Select desired adjustment amount with the up key▲/down key▼ and press the Menu/Select key.
	-15 to +15 (1 step: 0.2 mm)

11.5.4 TRANSFER POWER

A. SIMPLEX PASS

Functions	Adjust the 2nd image transfer output (ATVC) on the single-sided pages for each media type.	
Use	To use when the transfer failure at the trailing edge occurs.	
Adjustment Range	The default setting is 0. -8 to +7	
Adjustment Instructions	To increase the ATVC value (in the direction of a foggier image), decrease the setting value. To decrease the ATVC value (in the direction of a less foggy image), increase the setting value.	
Setting/ Procedure	 Select [TRANSFER POWER] and press the Menu/Select key. Select [SIMPLEX PASS] and press the Menu/Select key. Select desired media type with the up key▲/down key▼ and press the Menu/Select key. Select desired setting value with the up key▲/down key▼ and press the Menu/Select key. 	

B. DUPLEX PASS

Functions	Adjust the 2nd image transfer output (ATVC) on the duplexed pages for each media type.	
Use	To use when the transfer failure at the trailing edge occurs.	
Adjustment Range	The default setting is 0. -8 to +7	
Adjustment Instructions	To increase the ATVC value (in the direction of a foggier image), decrease the setting value. To decrease the ATVC value (in the direction of a less foggy image), increase the setting value.	
Setting/ Procedure	 Select [TRANSFER POWER] and press the Menu/Select key. Select [DUPLEX PASS] and press the Menu/Select key. Select desired media type with the up key▲/down key▼ and press the Menu/Select key. Select desired setting value with the up key▲/down key▼ and press the Menu/Select key. 	

C. MANUAL DUPLEX

Functions	Adjust the 2nd image transfer output (ATVC) on the manual duplexed pages for each media type.	
Use	To use when the transfer failure at the trailing edge occurs.	
Adjustment Range	The default setting is 0. -8 to +7	
Adjustment Instructions	To increase the ATVC value (in the direction of a foggier image), decrease the setting value. To decrease the ATVC value (in the direction of a less foggy image), increase the setting value.	
Setting/ Procedure	 increase the setting value. Select [TRANSFER POWER] and press the Menu/Select key. Select [MANUAL DUPLEX] and press the Menu/Select key. Select desired media type with the up key▲/down key▼ and press the Menu/Select key. Select desired setting value with the up key▲/down key▼ and press the Menu/Select key. 	

11.5.5 IMG ADJ THICK

Functions	 To fine-adjust density of printed images of each color for thick paper and OHP trans- parencies. 	
Use	 To change the density of the printed image for each color with thick paper and OHP transparencies. 	
Adjustment Range	The default setting is 0. -5 to +5	
Adjustment Instructions	Light color: increase the setting value Dark color: decrease the setting value	
Setting/ Procedure	 Select [IMG ADJ THICK] and press the Menu/Select key. Select desired color with the up key▲/down key▼ and press the Menu/Select key. Select desired setting value with the up key▲/down key▼ and press the Menu/ Select key. 	

11.5.6 IMG ADJ BLACK

Functions	 To fine-adjust the density of the printed image for a black printing. 	
Use	 To vary the density of the printed image of a black printing. 	
Adjustment Range	The default setting is 0. -2 to +2	
Adjustment Instructions	If the black is light, increase the setting value. If the black is dark, decrease the setting value.	
Setting/ Procedure	 Select [IMG ADJ BLACK] and press the Menu/Select key. Select desired setting value with the up key▲/down key▼ and press the Menu/ Select key. 	

11.5.7 IMAGE ADJ PARAM

Function	 Adjusts the printer in case of an image quality problem (uneven density) 	
Use	To correct image quality problems (uneven density) due to the printer being operated at a high altitude.	
Setting /procedure	The default setting is 0.	
	"0" 1 2 3 4	
	NOTE • When the setting has been changed, be sure to run a CALIBRATION/AIDC process. See P.134	

11.5.8 MAXIMUM DENSITY

Functions	 To adjust gradation, color, and image density to target reproduction levels by varying the maximum amount of toner sticking to media through auxiliary manual fine-adjust- ment of gamma of each color after gradation adjust. 	
Use	• An image quality problem is not corrected even after gradation adjust has been run.	
Adjustment Range	The default setting is 2. 0 1 "2" 3 4	
Adjustment Instructions	To increase the maximum amount of toner sticking, increase the setting value. To decrease the maximum amount of toner sticking, decrease the setting value.	
Setting/ Procedure	 Select [MAXIMUM DENSITY] and press the Menu/Select key. Select desired color with the up key▲/down key▼ and press the Menu/Select key. Select desired setting value with the up key▲/down key▼ and press the Menu/Select key. 	
	NOTE • When the setting has been changed, be sure to run a CALIBRATION/AIDC process. See P.134	

11.5.9 FUSER SPEED

A. HIGH SPEED

Function	To adjust the speed of the fusing motor when the transport speed is 144 mm/s so as to match the fusing speed with transport speed.	
Use	 Brush effect or blurred image is evident as a result of changes in environmental con- ditions or degraded durability. 	
Adjustment Range	The default setting is 0.	
	-20 to +20 (Step: 1)	
Adjustment Instructions	If brush effect is evident, vary the setting value and check for image. If a blurred image occurs, decrease the setting.	
Setting /procedure	 Select [FUSER SPEED] and press the Menu/Select key. Select [HIGH SPEED] and press the Menu/Select key. Select desired setting value with the up key▲/down key▼ and press the Menu/ Select key. 	

B. LOW SPEED

Function	 To adjust the speed of the fusing motor when the transport speed is 72 mm/s so as to match the fusing speed with transport speed. 	
Use	 Brush effect or blurred image is evident as a result of changes in environmental con- ditions or degraded durability. 	
Adjustment Range	The default setting is 0.	
	-20 to +20 (Step: 1)	
Adjustment Instructions	If brush effect is evident, vary the setting value and check for image. If a blurred image occurs, decrease the setting.	
Setting /procedure	 Select [FUSER SPEED] and press the Menu/Select key. Select [LOW SPEED] and press the Menu/Select key. Select desired setting value with the up key▲/down key▼ and press the Menu/Select key. 	

11.5.10 TEMPERATURE

Function	 To adjust the fusing heating temperature individually for each paper type so as to ensure good fusing performance that varies with varying environmental conditions. 	
Use	 When fusing performance is poor, or wax streak or offset occurs when the type of paper is changed or environmental conditions change. Use this function when curled paper, or paper misfeed as a result of the curled paper, occurs under varying environmental conditions or depending on the type of paper used. 	
Adjustment Range	PLAIN PAPER: -10 °C to 0 °C (step: 5 °C) TRANSPARENCY: -10 °C to 0 °C (step: 5 °C) THICK: -10 °C to 0 °C (step: 5 °C) ENVELOPE: -10 °C to 0 °C (step: 5 °C)	
Adjustment Instructions	If fusing performance is poor, increase the setting. If wax streaks occur, decrease the setting. If offset is poor, decrease the setting. If curling of the paper occurs, decrease the setting.	
Setting /procedure	 Select [TEMPERATURE] and press the Menu/Select key. Select the type of paper and press the Menu/Select key. Select desired setting value with the up key▲/down key▼ and press the Menu/Select key. 	

11.5.11 FUSER CONTROL

Function	Sets the heater lamp lighting control so that it implements the flicker standards.	
Use	To use when flickering from fluorescent light occurs.	
	0: Not set flicker control 1: Control flickering 2: Not control flickering 3: Undefined (When "3" is selected, it becomes "0: Not set flicker control.")	
Setting	The default setting is 0.	
/procedure	0 to 3	

11.5.12 AIDC MODE

Function	• Sets the frequency of image stabilization that is performed when the main power switch is turned ON or the machine returns from sleep mode.	
Use	 MODE1: Always performs image stabilization when the main power switch is turned ON or the machine returns from sleep mode. (Standard mode) MODE2: Reduces the frequency of image stabilization that is performed when the main power switch is turned ON or the machine returns from sleep mode. (Low mode) 	
Setting	The default setting is MODE1.	
/procedure	"MODE1"	MODE2

11.6 PRINT MENU

11.6.1 MAINTENANCE INFO

Functions	 To produce an output of a list of setting values, adjustment values, total counter values, and others. 		
Use	To check the maintenance information. The items which can be checked are as follows. Device Caution Information : Process caution information Count (total) : Counter value for each color Coverage (total) : Coverage rate for each color Replace count (total) : Number of times IU, TC, transfer belt, transfer roller, and fuser unit have been replaced. Imaging Unit Information : Information concerning the print unit Toner Cartridge Information: Information concerning the toner cartridge		
Setting/ Procedure	 Select [MAINTENANCE INFO] and press the Menu/Select key. Select [PRINT] and press the Menu/Select key. 		

PROCESS CAUTION INFORMATION

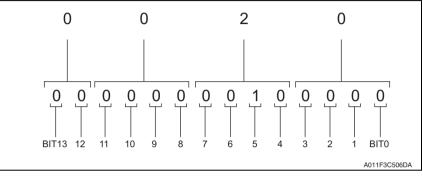
BIT	Item		Description
0	—		
1			
2	_		
3	_		—
4			—
5	IDC Sensor (Front) failure	1	 IDC sensor output values are out of the specified range.
		0	 Right door or front cover open/close, power switch OFF/ON, and normal image stabilization are complete besides the ones listed above.
6			
7	_		—
8	—		_
9	—		—
10	IDC Sensor (Back) failure	1	 IDC sensor output values are out of the specified range.
		0	 Right door or front cover open/close, power switch OFF/ON, and normal image stabilization are complete besides the ones listed above.
11	Color Shift Test Pattern failure	1	 The number of points detected in the main scan direction is more or less than the specified value during main scan direction registration correction. The number of points detected in the sub scan direction is more or less than the specified value during sub scan direction registration correction.
		0	 Right door or front cover open/close, power switch OFF/ON, and normal image stabilization are complete besides the ones listed above.
12	Color Shift Adjust failure	1	 The color shift amount is greater than the specified range during main scan direction registration correction. The color shift amount is greater than the specified range during sub scan direction registration correction. The skew correction amount is greater than the specified value.
		0	 Right door or front cover open/close, power switch OFF/ON, and normal image stabilization are complete besides the ones listed above.
13	—		-

<How to read process caution information>

• Convert the numerical value of the hexadecimal number printed on "PROCESS CAU-TION INFORMATION in [MAINTENANCE INFO] into the binary number, it compares with the allocation of each BIT, and the caution status is confirmed.

ex. When process caution information is displayed as 0x0020.

- 1. Convert four end digits "0020" of 0x0020 into the binary number (14 digits).
- 2. The BIT number is allocated in converted value "0000000100000." (BIT0 to BIT13 is sequentially allocated from the first digit.)



 In this case, BIT No. "5" corresponds to "1". From the "PROCESS CAUTION INFOR-MATION", IDC sensor (front) malfunction can be detected.

Conversion method from hexadecimal number to binary number

1. The hexadecimal number (four digits) is converted in each digit based on the following table.

Hexadeci- mal number	Binary number						
0	0000	4	0100	8	1000	С	1100
1	0001	5	0101	9	1001	D	1101
2	0010	6	0110	А	1010	E	1110
3	0011	7	0111	В	1011	F	1111

2. Match the converted numerical value of four digits, then two head digits are excluded and it is assumed the binary number of 14 digits.

11.6.2 EVENT LOG

Functions	To print the Event Log information.
Use	 To check the jams/troubles which occurred, and the history of replacing the consumables. The items which can be checked are as follows. Paper Jam Error : The number of times jam have occurred and its history Engine Fatal Error : The history of the troubles which required service call Fuser Unit : The history of replacing the fuser unit Transfer Belt : The history of replacing the transfer belt Second Trans : The history of replacing the toner cartridge : The history of replacing the toner cartridge
	Imaging Unit : The history of replacing the print unit Trouble Counter : Trouble counting for each section
Setting/ Procedure	 Select [EVENT LOG] and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.

11.6.3 CONFIGURATION PG

Functions	To print the Engine Adjustment Information.
Use	To check the adjustment values set by the Maintenance Menu and Service Menu. The items which can be checked are as follows.
	TOP ADJUSTMENT
	LEFT ADJUSTMENT
	LEFT ADJ DUPLEX
	TRANSFER POWER
	IMG ADJ THICK
	IMG ADJ BLACK
	IMAGE ADJ PARAM
	MAXIMUM DENSITY
	FUSER SPEED
	TEMPERATURE
	FUSER CONTROL
	AIDC MODE
Setting/	1. Select [CONFIGURATION PG] and press the Menu/Select key.
Procedure	2. Select [PRINT] and press the Menu/Select key.

11.6.4 ELEMENT PAGE

Functions	To print the Engine Element Data Information.
Use	To check the Element Data.See the attached chart listed below for details.
Setting/ Procedure	 Select [ELEMENT PAGE] and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.

<Engine Element Data Information>

Element Data Name	Description
INSIDE HUMIDITY	 Displays the inside humidity (in 1% increments).
INSIDE TEMPERATURE	 Displays the inside temperature (in 1 °C increments).
PH TEMPRATURE	 Displays the PH temperature (in 1 °C increments).
SENSOR INFORMATION1	 Displays the input port status of the sensors and switches in hexadeci
SENSOR INFORMATION2	mal numbers.
SENSOR INFORMATION3	 To be used for troubleshooting when troubles/jams occur. For allocating Bits for SENSOR INFORMATION 1 to 3, see the attached chart, "Sensor Information List."
FUSER HEATER1 TEMPERATURE	 Displays the latest temperature on the middle of the heating roller (in °C increments).
FUSER HEATER2 TEMPERATURE	 Displays the latest temperature at the edges of the heating roller (in 1 °C increments).
IDC SENSOR1 PS	
IDC SENSOR2 PS	 Shows the latest IDC data.
IDC SENSOR1 P	 Range of output: 0V to 9.99V (in 0.01V increments)
IDC SENSOR2 P	
TONER LEVEL SENSOR C	
TONER LEVEL SENSOR M	Displays the number of times the toner level sensor has detected an ample condition during one curls of duraling constitution
TONER LEVEL SENSOR Y	 empty condition during one cycle of developer agitation. Range of output: 0 to 200 (in increments of one time)
TONER LEVEL SENSOR K	
VDC VOLT C	
VDC VOLT M	 Displays the Vdc voltage of each color of toner.
VDC VOLT Y	 Range of output: -1000V to 255V (in 1V increments)
VDC VOLT K	
VPP VOLT C	
VPP VOLT M	 Displays the Vpp voltage of each color of toner.
VPP VOLT Y	 Range of output: 700V to 2000V (in 1V increments)
VPP VOLT K	
VPP VOLT LIMIT C	
VPP VOLT LIMIT M	 Displays the limit value of Vpp voltage of each color of toner.
VPP VOLT LIMIT Y	 Range of output: 700V to 2000V (in 1V increments)
VPP VOLT LIMIT K	
DUTY C	
DUTY M	 Displays the duty ratio of each color of toner.
DUTY Y	 Range of output: 0% to 100.0% (in 0.1% increments)
DUTY K	
Element Data Name	Description
IDC BASE REFLECTION1	 Displays the IDC intensity adjustment value.
IDC BASE REFLECTION2	 Range of output: 0 to 1023 (in 1 increments)
TRANS CURRENT2	Displays the latest second image transfer output value. Description of output: 2000/ (in 1) (incompate)

• Range of output: -800V to 5000V (in 1V increments)

<Sensor Information List>

• SENSOR INFORMATION 1

Bit	Part Name	Operation Characteristics		
ы	Fait Name	1	0	
0	Tray2 media empty sensor	Paper present	Paper not present	
1	Tray1 media empty sensor	Paper present	Paper not present	
2	Media empty sensor (Lower Feeder Unit)	Paper present	Paper not present	
3	—	—	—	
4	Registration sensor	Paper present	Paper not present	
5	Media loop sensor	Paper present	Paper not present	
6	—	—	—	
7	Exit sensor	Paper present	Paper not present	
8		—	—	
9	Media full sensor	Paper present	Paper not present	
10	Duplex transport sensor	Paper present	Paper not present	
11	Media feed sensor (Lower Feeder Unit)	Paper present	Paper not present	
12		—	—	
13	—	_		

• SENSOR INFORMATION 2

Bit	Part Name	Operation Ch	naracteristics
ы	Part Name	1	0
0	Front door sensor	Close	Open
1	Right door sensor	Close	Open
2		—	—
3	—	—	—
4	Right door sensor (Lower Feeder Unit)	Close	Open
5	—	—	—
6		—	—
7		_	—
8		_	—
9		_	—
10	—	_	—
11	—	—	—
12	Monitor of 24V	ON	OFF
13		_	_

• SENSOR INFORMATION 3

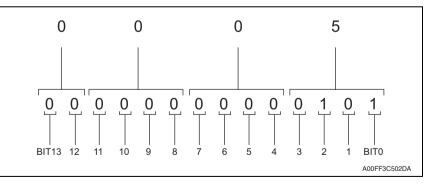
Bit	Part Name	Operation Characteristics		
ы	Part Name	1	0	
0	1st image transfer retraction position sensor	Not retracted	Retracted	
1	2nd image transfer retraction position sensor	Not retracted	Retracted	
2	Tray2 set switch	In position	Out of position	
3	—	—	—	
4	—	—	—	
5	Media size switch (1)	ON	OFF	
6	Media size switch (2)	ON	OFF	
7	Media size switch (3)	ON	OFF	
8	—	_	—	
9	—	—	—	
10	—	—	—	
11	Waste toner sensor	Full	Not full	
12	OHP sensor	OHP	Not OHP	
13	—		—	

<How to Read Sensor Information>

• Convert the numerical value of the hexadecimal number printed on [ELEMENT DATA] into the binary number, it compares with the allocation of each BIT, and the status of the sensor is confirmed.

ex. When Sensor Information1 is displayed as 0x0005.

- 1. Convert four end digits "0005" of 0x0005 into the binary number (14 digits).
- 2. The BIT number is allocated in converted value "0000000000101." (BIT0 to BIT13 is sequentially allocated from the first digit.)



- 3. In this case, because BIT No. "0" and "2" become "1", so it can be confirmed that the tray2 media empty sensor is "Paper present" state and the media empty sensor is "Paper present" states from the Sensor Information table.
- SENSOR INFORMATION 1

Bit	Part Name	Operation Characteristics		
Dit	Fait Name	1	0	
0	Tray2 media empty sensor	Paper present	Paper not present	
2	Media empty sensor (Lower Feeder Unit)	Paper present	Paper not present	

<Conversion method from hexadecimal number to binary number>

1. The hexadecimal number (four digits) is converted in each digit based on the following table.

Hexadecimal number	Binary number	Hexadecimal number	Binary number	Hexadecimal number	Binary number	Hexadecimal number	Binary number
0	0000	4	0100	8	1000	С	1100
1	0001	5	0101	9	1001	D	1101
2	0010	6	0110	А	1010	E	1110
3	0011	7	0111	В	1011	F	1111

2. Match the converted numerical value of four digits, then two head digits are excluded and it is assumed the binary number of 14 digits.

11.6.5 HALF TONE 64

Functions	 Prints the halftone pattern with 25% level for CMYK respectively.
Use	 To check the unevenness of the density and the pitch.
Setting/ Procedure	 Set the A4S or letterS media on the tray. Select [HALF TONE 64] and press the Menu/Select key. Select desired color with the up key▲/down key▼ and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.

11.6.6 HALF TONE 128

Functions	Prints the halftone pattern with 50% level for CMYK respectively.
Use	 To check the unevenness of the density and the pitch.
Setting/ Procedure	 Set the A4S or letterS media on the tray. Select [HALF TONE 128] and press the Menu/Select key. Select desired color with the up key▲/down key▼ and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.

11.6.7 HALF TONE 256

Functions	 Prints the halftone pattern with 100% level for CMYK respectively. 	
Use	To check the unevenness of the density and the pitch.	
Setting/ Procedure	 Set the A4S or letterS media on the tray. Select [HALF TONE 256] and press the Menu/Select key. Select desired color with the up key▲/down key▼ and press the Menu/Select key. Select [PRINT] and press the Menu/Select key. 	

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11.6.8 GRADATION

E	Drinks the suppletion wettern
Functions	Prints the gradation pattern.
Use	To check the gradation reproductively.
Setting/ Procedure	 Set the A4S or letterS media on the tray. Select [GRADATION] and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.

11.7 SUPPLIES

11.7.1 REPLACE

A. TRANS. BELT

Function	Resets the transfer belt counter.
Use	To use when the transfer belt has been replaced.
	 Call the service menu to the screen. Select [SUPPLIES] → [REPLACE] → [TRANS. BELT], and select "YES." Press the Menu/Select key and reset the counter.

B. TRANS. ROLLER

Function	Resets the transfer roller counter.
Use	 To use when the transfer roller has been replaced.
Setting /procedure	1. Call the service menu to the screen. 2. Select [SUPPLIES] \rightarrow [REPLACE] \rightarrow [TRANS. ROLLER], and select "YES." 3. Press the Menu/Select key and reset the counter.

C. FUSER UNIT

Function	Resets the fuser unit counter.
Use	To use when the fuser unit has been replaced.
Setting /procedure	1. Call the service menu to the screen. 2. Select [SUPPLIES] \rightarrow [REPLACE] \rightarrow [FUSER UNIT], and select "YES". 3. Press the Menu/Select key and reset the counter.

11.8 RESTORE PASSWARD

Function	Reinitializes the user password use DEFAULT MENU / MAINTENANCE	d for the [INTERFACE MENU / SYSTEM MENU] set by user.
Use	 To reinitialize the user password when the menu cannot be opened even when entering the correct password. To reinitialize the user password when the user forgets the password. YES : Initialize password NO : Not initialize password 	
Setting /procedure	 Select [RESTORE PASSWORD] and press the Menu/Select key. Select [YES] and press the Menu/Select key. Return the password set at [INTERFACE MENU / SYSTEM DEFAULT MENU / MAINTENANCE MENU] to [0000.] 	
	The default setting is NO.	
	YES	"NO"

11.9 BK CLEAR

Function	 To clear engine information backup data 		
Use	 Use when the engine information back YES: Executes data clear NO: Does not execute data clear 	up data is cleared.	
Setting	The default setting is NO.		
/procedure	YES	"NO"	

11.10 QUICK SETTING

11.10.1 UPDATE SETTING

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Function	 To update printer settings according to the printer setting definition file stored in the USB memory device.
Use	 Printer definition files are saved according to various setting patterns and a pattern the most appropriate for a specific need can be selected promptly.
Setting /procedure	 Set the USB memory device. Call the SERVICE MENU screen to the display. Select [QUICK SETTING] → [UPDATE SETTING]. The "/setup/*.ini" files in the USB memory device appear on the display. NOTE The directory name (setup) and file extension (*.ini) are fixed. The definition file with any other name or file extension is not recognized. Up to 20 files can be displayed. Using the up key ▲ or down key ▼, select the definition file to be updated and press the Menu/Select key. Select [EXECUTE] and press the Menu/Select key.
	 7. The selected definition file is loaded and the settings are updated. The message "PROCESSING" appears during the updating procedure. 8. When the updating procedure is completed, the printer gives a message notifying that the procedure is completed. NOTE The printer is automatically restarted, if an item that calls for a restart of the printer is included in the updated items.

11.10.2 BACKUP SETTING

Function	 To store, as a definition file, the current printer setting information in the USB memory device.
Use	 Printer definition files are saved according to various setting patterns and a pattern the most appropriate for a specific need can be selected promptly.
Setting /procedure	 Set the USB memory device. Call the SERVICE MENU screen to the display. Select [QUICK SETTING] → [BACKUP SETTING]. Select [EXECUTE] and press the Menu/Select key. The definition file with a file name of "SETUP**.ini" is saved in the "/setup" folder of the USB memory device. The message "PROCESSING" appears while the definition file is being saved. NOTE Any number from 01 to 20 takes the place of " ** " in the file name. Up to 20 definition files can be saved. If the USB memory device already contains 20 files, the maximum number of files saved is exceeded and any new file cannot be saved. When the saving procedure is completed, the printer gives a message notifying that the procedure is completed.

11.11 FIRMWARE UPDATE

A. VIEW INFORMATION

Function	 To display the firmware information stored in the USB memory device.
Use	 The following information is displayed: Model name (magicolor 4650) of firmware data Version information of firmware data
Setting /procedure	 Set the USB memory device. Call the SERVICE MENU screen to the display. Select [FIRMWARE UPDATE] and press the Menu/Select key. Select the specific type of firmware data to be upgraded and press the Menu/Select key. Select [VIEW INFORMATON] and press the Menu/Select key.
	NOTE An error message appears if the selected data is not of the appropriate data format.

B. EXECUTE

Function	To upgrade firmware using the USB memory device.
Use	Use for upgrading firmware.
Setting /procedure	See P.29

11.12 SOFT SWITCH

Function	
Use	Not used.
Setting /procedure	

12. Other functions

12.1 Rewriting security information into the hard disk kit and the compact flash

12.1.1 Outline

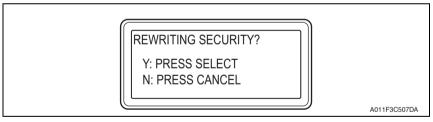
- When the optional hard disk kit and compact flash are formatted, they save the values specific to the print control board (PRCB) installed in each printer.
 Because of this, the hard disk kit and compact flash that have been used in a printer cannot be used in a different printer, in this way, job and account information stored in the hard disk kit and compact flash are protected.
- There may be cases where the print control board is damaged and replaced, in that case, it is required to rewrite security information into the user's current hard disk kit and compact flash in order to continue to use the data included in the hard disk kit and compact flash.
- Without rewriting new security information, the hard disk kit and compact flash can be used if they are formatted again.

12.1.2 Procedure

 After the print control board (PRCB) replacement, in the condition of the hard disk and the compact flash being installed, turn the power switch ON while pressing the up key▲ and the cancel key.

NOTE

- 2. After startup, "REWRITING SECURITY" message will appears.



3. When the Menu/Select key is pressed, the printer starts rewriting security information and then start operating. (If the cancel key is pressed, the printer starts operating without rewriting security information.)

INITIALIZING AND REWRITING

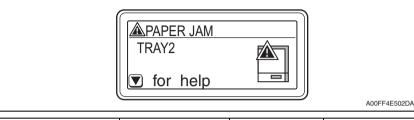
A011F3C508DA

Troubleshooting

13. Jam display

13.1 Misfeed display

• When a media misfeed occurs a message is displayed on the control panel.



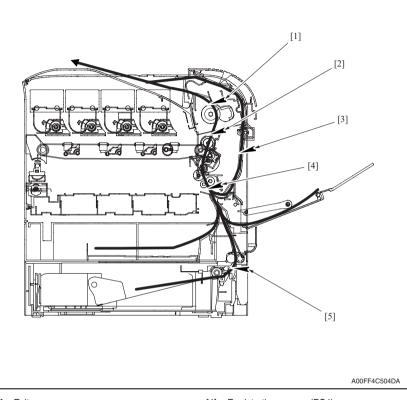
Display		Misfeed location	Misfeed processing	Action
LCD 1	LCD 2	Misiced location	location	Action
	FUSER/EXIT	Fusing/exit section	Right side coverFuser unit	P.194
	SECOND TRANS	Transfer section	 Right side cover 	P.195
	VERTICAL TRANS	Vertical transport	 Right side cover Tray3 right side cover 	P.196 See P.19 of the lower feeder unit service manual.
PAPER JAM	DUPLEX1	 Duplex transport section 	 Right side cover 	P.197
JAIVI	DUPLEX2	 Duplex media feed section 		P.198
	TRAY1	Tray1 media feed	Manual feed trayRight side cover	P.196
	TRAY2 • Tray2 media feed • Tray2 • Right side cove	Tray2Right side cover	P.196	
	TRAY3	Tray3 media feedVertical Transport	 Tray3 right side cover 	See P.18 of the lower feeder unit service manual.
Service call: F001		 Media misfeed in control logic 	_	P.199

13.2 Misfeed display resetting procedure

• Open the relevant cover, clear the sheet of misfed media, and close the cover.

13.3 Sensor layout

• System equipped with a lower feeder unit



- [1] Exit sensor
- [2] Media loop sensor (PS6)
- [3] Duplex transport sensor (PS26)
- [2] [3]

Troubleshooting

- [4] Registration sensor (PS4)
- [5] Media feed sensor (PS3)

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13.4 Solution

13.4.1 Initial check items

A. When a media misfeed occurs, first make checks of the following initial check items.

Δ	Check item	Action
	Does media meet product specifications?	Change media.
	Is media curled, wavy, or damp.	Change media.Instruct user in correct media storage.
	Is a foreign matter present along the media path, or is the media path deformed or worn?	Clean or change the media path.
	Are rolls/rollers dirty, deformed, or worn?	Clean or change the defective roll/roller.
	Are the edge guide and trailing edge stop at correct position to accommodate the media?	Set as necessary.
	Are actuators found operational as checked for correct operation?	Correct or change the defective actuator.

C-2

13.4.2 Misfeed at fusing/exit section

A. Detection timing

Туре	Description
Detection of	The exit sensor is not unblocked even after the lapse of a given period of time after the media has blocked the exit sensor.
misfeed at fusing/ exit section	The duplex transport sensor (PS26) is not unblocked even after the lapse of a given period of time after the media has blocked the exit sensor during paper take-up from the duplex unit.
Detection of media left in fusing/exit section	The exit sensor is blocked when the power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

B. Action

3

4

PS26 sensor check

Change MFPB.

Relevant electrical parts			
Exit sensor Duplex transport sensor (PS26)		MFP board (MFPB)	
		WIRING DIAGRA	M
Step	Action	Control signal	Location (electri- cal component)
1	Initial check items	—	—
2	Exit sensor check	—	—

MFPB PJ27MFPB-3 (ON)

13.4.3 Misfeed at transfer section

A. Detection timing

Туре	Description
Data atian af	The registration sensor (PS4) is not blocked even after the lapse of a given period of time after the media has unblocked PS4.
Detection of misfeed at transfer section	The media does not block the exit sensor even after the lapse of a given period of time after the media has unblocked the registration sensor (PS4).
	When a sheet of media is passing through the registration sensor (PS4), the pres- sure sequence of the 2nd transfer section has not started.
Detection of media	The registration sensor (PS4) is unblocked when the power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
section	The media loop sensor (PS6) is unblocked when the power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

Relevant electrical parts	
Registration sensor (PS4)	MFP board (MFPB)
Exit sensor	
Media loop sensor (PS6)	
2nd image transfer pressure/retraction clutch (CL5)	

		WIRING DIAGRAM	
Step	Action	Control signal	Location (electri- cal component)
1	Initial check items	—	—
2	PS4 sensor check	MFPB PJ15MFPB-3 (ON)	C-4 to 5
3	Exit sensor check	—	—
4	PS6 sensor check	MFPB PJ16MFPB-3 (ON)	C-3
5	CL5 operation check	MFPB PJ10MFPB-5 (ON)	C-6
6	Change MFPB.	—	—

13.4.4 Misfeed at tray1 media feed section

A. Detection timing

Туре	Description
,	The media does not unblock the registration sensor (PS4) even after the lapse of a given period of time after the tray1 media feed clutch is turned ON.

B. Action

Relevant electrical parts	
Registration sensor (PS4) Tray1 media feed clutch Transport motor (M3)	MFP board (MFPB)

		WIRING DIAGRAM		
Step	Action	Control signal	Location (electri- cal component)	
1	Initial check items	—	—	
2	PS4 sensor check	MFPB PJ15MFPB-3 (ON)	C-4 to 5	
3	Tray1 media feed clutch operation check	MFPB PJ6MFPB-2 (REM)	C-12	
4	M3 operation check	MFPB PJ11MFPB-1 to 7	J-3	
5	Change MFPB.	_	—	

13.4.5 Misfeed at tray 2 media feed section

A. Detection timing

Туре	Description
misteed at trav 2	The media does not unblock the registration sensor (PS4) even after the lapse of a given period of time after the tray2 media feed clutch is turned ON.

B. Action

Relevant electrical parts	
Registration sensor (PS4) Tray2 media feed clutch Transport motor (M3)	MFP board (MFPB)

		WIRING DIAGRAM		
Step	Action	Control signal	Location (electri- cal component)	
1	Initial check items	—	_	
2	PS4 sensor check	MFPB PJ15MFPB-3 (ON)	C-4 to 5	
3	Tray2 media feed clutch operation check	MFPB PJ6MFPB-4 (REM)	C-12	
4	M3 operation check	MFPB PJ11MFPB-1 to 7	J-3	
5	Change MFPB.	_	_	

Troubleshooting

13.4.6 Misfeed at duplex media transport section

A. Detection timing

Туре	Description
Detection of mis- feed at duplex	The duplex transport sensor (PS26) is not blocked even after the lapse of a given period of time after the media has unblocked PS26.
media transport section	The registration sensor (PS4) is not unblocked even after the lapse of a given period of time after the media has unblocked PS26.
Detection of media left at duplex media transport section	The duplex transport sensor (PS26) is unblocked when the power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

Relevant Electrical Parts		
Duplex transport roller clutch (CL13) Duplex transport sensor (PS26) Registration sensor (PS4)	MFP control board (MFPB)	

	Action	WIRING DIAGRAM		
Step		Control Signal	Location (Electrical Com- ponent)	
1	Initial check items	_	—	
2	PS26 sensor check	MFPB PJ27MFPB-3 (ON)	C-2	
3	PS4 sensor check	MFPB PJ15MFPB-3 (ON)	C-4 to 5	
4	CL13 operation check	MFPB PJ28MFPB-6 (REM)	C-1 to 2	
5	Change MFPB.	_	—	

13.4.7 Misfeed at duplex media feed section

A. Detection timing

Туре	Description
	The media does not unblock the registration sensor (PS4) even after the lapse of a given period of time after the media feed sequence has been started at the duplex option.

Relevant Electrical Parts	
Registration sensor (PS4) Transport motor (M3)	MFP control board (MFPB)

	Action	WIRING DIAGRAM		
Step		Control Signal	Location (Electrical Com- ponent)	
1	Initial check items	—	—	
2	PS4 sensor check	MFPB PJ15MFPB-3 (ON)	C-4 to 5	
3	M3 operation check	MFPB PJ11MFPB-1 to 7	J-3	
5	Change MFPB.	_		

13.4.8 Media misfeed in control logic

A. Detection timing

Туре	Description
	 By image write start signal timing The pressure operation of the first image transfer mechanism is not completed during full color printing. The first image transfer mechanism is not in the state of retraction during mono-chrome printing.
Detection of	While the leading edge of an image has reached the position where the first image transfer process is performed, the pressure operation of the second image transfer mechanism is not completed.
media misfeed in control logic	A duplex print job is sent with the number of pages that goes beyond the maxi- mum number of pages allowed to be in the printer for the selected media type.
	When trying to feed duplex media though there is no media to be fed to the duplex section.
	When printing is directed with the duplex print unit selected as a media source and an exit media set to be fed to the duplex section.
	While two sheets of media are in the printer, printing is directed with normal media feed settings other than a duplex media feed setting.
	In duplex printing, a size error or media error occurs.

	Relevant electrical parts			
Print control board (PRCB)		MFP board (MFPB)		
		WIRING DIAGRA	M	
Step	Action	Control signal	Location (electri- cal component)	
1	Check printer driver settings.	—	—	
2	Change PRCB.	—	_	
3	Change MFPB.	_	_	

14. Malfunction code

14.1 Trouble codes (service call)

 The printer's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding malfunction code and maintenance call mark on the control panel.



14.1.1 Trouble code list

• For the details of the malfunction codes of the options, see the service manual for the corresponding option.

LCD1 (service call ID)	LCD2/LCD3 (error descrip- tion)	Item	Detection timing
0010	P MOTOR 1	Color PC drum motor malfunction	 The color PC drum motor does not rotate evenly even after the lapse of a given period of time while it is being started.
0010			 The motor lock signal remains HIGH for a given period of consecutive time while the color PC drum motor is being rotated.
0017	P MOTOB 2	Transport motor mal- function	 The transport motor does not rotate evenly even after the lapse of a given period of time while it is being started.
0017	P MOTOR 2		 The motor lock signal remains HIGH for a given period of consecutive time while the transport motor is being rotated.
0018	0018 D MOTOR 2 K developing motor malfunction	K developing motor	 The K developing motor does not rotate evenly even after the lapse of a given period of time while it is being started.
0018		malfunction	 The motor lock signal remains HIGH for a given period of consecutive time while the K develop- ing motor is being rotated.
001B	D MOTOR 1	Color developing motor malfunction	 The color developing motor does not rotate evenly even after the lapse of a given period of time while it is being started.
			• The motor lock signal remains HIGH for a given period of consecutive time while the color developing motor is being rotated.

LCD1 (service call ID)	LCD2/LCD3 (error descrip- tion)	Item	Detection timing
0046	FUSER FAN	Fusing fan motor malfunction	 The fusing fan motor does not rotate evenly even after the lapse of a given period of time while it is being started. The motor lock signal remains HIGH for a given
			period of consecutive time while the fusing fan motor is being rotated.
004A	DUPLEX FAN	Duplex cooling fan motor malfunction	 The duplex cooling fan motor does not rotate evenly even after the lapse of a given period of time while it is being started.
004A	DUPLEXTAN		 The motor lock signal remains HIGH for a given period of consecutive time while the duplex cool- ing fan motor is being rotated.
0040		Ozone ventilation fan motor malfunction	 The ozone ventilation fan motor does not rotate evenly even after the lapse of a given period of time while it is being started.
004C	OZONE FAN		 The motor lock signal remains HIGH for a given period of consecutive time while the ozone venti- lation fan motor is being rotated.
004E	POWER FAN	DC power supply fan motor malfunction	 The DC power supply fan motor does not rotate evenly even after the lapse of a given period of time while it is being started.
004			 The motor lock signal remains HIGH for a given period of consecutive time while the DC power supply fan motor is being rotated.
0060	FUSER MOTOR	Fusing motor malfunction	 The fusing motor does not rotate evenly even after the lapse of a given period of time while it is being started.
0000			 The motor lock signal remains HIGH for a given period of consecutive time while the fusing motor is being rotated.
0094	0094 DETACH 2	2nd image transfer pressure / retraction failure	 The 2nd image transfer retraction position sensor is not activated (retracted position) within a given period of time after the retraction sequence of the 2nd transfer roller has been started.
			 The 2nd image transfer retraction position sensor is not deactivated (pressed position) within a given period of time after the pressure sequence of the 2nd transfer roller has been started.
0006	XFER DETACH 1	1st image transfer pressure / retraction failure	 The 1st image transfer retraction position sensor is not activated (retracted position) within a given period of time after the intermediate transport motor has started rotating.
0096			 The 1st image transfer retraction position sensor is not deactivated (pressed position) within a given period of time after the intermediate trans- port motor has started rotating.

14. Malfunction code

LCD1 (service call ID)	LCD2/LCD3 (error descrip- tion)	Item	Detection timing
0300	POLYGON	Polygon motor	The polygon motor does not rotate evenly even after the lapse of a given period of time after it has been started.
	MOTOR	malfunction	 The motor lock signal remains HIGH for a given period of consecutive time while the polygon motor is being rotated.
0310	LASER ERROR	Laser malfunction	 The SOS signal is not detected within a given period of time after the output of the laser has been started.
0500	FUSER ERROR	Heating roller warm-up failure	 The thermistor /1 does not detect the specified temperature and the warm-up cycle is not com- pleted even after the lapse of a given period of time after the cycle has been started.
0502	TERMISTOR1	Thermistor open-cir- cuit failure	 The temperature detected by the thermistor does not reach a predetermined level even after the lapse of a given period time after the warm- up cycle has been started.
0503	TERMISTOR2	Thermistor resistance failure	 The difference between the temperature detected by thermistor/1 and that detected by thermistor/2 exceeds a predetermined value.
0510	FUSER ERROR	Abnormally low heat- ing roller temperature	 The temperature detected by the thermistor /1 remains lower than the specified value for a given period of time or longer.
0520	FUSER ERROR	Abnormally high heat- ing roller temperature	 The temperature detected by the thermistor /1 remains higher than the specified value for a given period of time or longer. The heater lamp remains ON for a given period of time or longer.
0F50	PT SENSOR	OHP sensor malfunc- tion	 It is determined that the OHP sensor is faulty through a check made at the end of the predrive.
0F52	TE SENSOR Y	Toner level sensor /Y malfunction	An error occurs on the toner level sensor board (TLSB).
0F53	TE SENSOR M	Toner level sensor /M malfunction	
0F54	TE SENSOR C	Toner level sensor /C malfunction	
0F55	TE SENSOR K	Toner level sensor /K malfunction	
13C0	ENGINE H/W ERROR	MFP board malfunc- tion	 A communication error occurs in MFP board (MFPB).
13DD	EEPROM BK	Backup data error	• The printer determines that EEPROM is yet to be mounted when the main power switch is turned ON.
13E2	FLASH WRITE	Flash ROM write error	 Flash ROM writing is found faulty during a check.
13E3	FLASH DEVICE	Flash ROM device fault	 An erase error occurs during erasing of data in flash ROM.

	LCD1 (service call ID)	LCD2/LCD3 (error descrip- tion)	ltem	Detection timing
	13F0	ENGINE ERR	Engine control failure	An undefined malfunction occurs in the engine section (PRCB, etc.).
	3C00	EEPROM1	Trouble related to	Contact the responsible people of KONICA
	3C10	EEPROM2	security	MINOLTA when not returning in power switch OFF/ON.
Â	C002	RAM ERROR	RAM error at startup (standard memory)	 RAM error at standard memory is detected dur- ing printer start-up.
	C003	RAM ERROR	RAM error at startup (expanded memory)	 RAM error at expanded memory is detected dur- ing printer start-up.
	C013	H/W ADDRESS	MAC address error at startup	 Invalid MAC address is detected during printer start-up.
	C015	BOOT ROM	Boot ROM error at startup	Boot ROM error is detected during printer start- up.
	C025		Controller ROM error (Configuration infor- mation error)	 Lead error of destination setting file is detected during the printer starting.
	C026	CONTROL- LER ROM	Controller ROM error (Access error)	 Flash ROM access error is detected during the printer starting.
	C027		Controller ROM error (Data error)	 Final check sum error is detected during the printer starting.
	C050	HDD ERROR	HDD access error	 When correct access to the hard disk kit is failed during access.
	C051	HDD DISK FULL	HDD full error	 Range for user space is full during access to the hard disk kit.
	C052	CARD ERROR	Compact flash access error	 When correct access to the compact flash card is failed during access.
	C053	CARD FULL	Compact flash full error	 Range for user space is full during access to the compact flash card.
	C060	UPDATE ERROR	Firmware update error	 Firmware update fails to complete correctly dur- ing update.
	C071	H/W CONFIG ERROR	Hardware configura- tion error	An error occurs with hardware configuration (video clock etc.).
	FFFF	I/F COMM ERROR	Interface Communica- tion error	 Correct communication is failed when receiving/ sending the command between MFPB and PRCB.

14.2 Resetting a malfunction

• To reset a malfunction, turn the power switch OFF and then ON again.

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14.3 Solution

14.3.1 0010: Color PC drum motor malfunction

Relevant electrical parts		
	MFP board (MFPB) DC power supply (DCPU)	

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electri- cal component)
1	Check the M2 connector for proper connection and correct as necessary.	_	—
2	Check M2 for proper drive coupling and correct as necessary.	_	—
3	Check the MFPB connector for proper con- nection and correct as necessary.	_	—
4	M2 operation check	MFPB PJ11MFPB-8 to 14	J-2
5	Change M2.	—	—
6	Change MFPB.		
7	Change DCPU.		

14.3.2 0017: Transport motor malfunction

Relevant electrical parts		
Transport motor (M3)	MFP board (MFPB) DC power supply (DCPU)	

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electri- cal component)
1	Check the M3 connector for proper connec- tion and correct as necessary.	_	—
2	Check M3 for proper drive coupling and correct as necessary.	_	—
3	Check the MFPB connector for proper con- nection and correct as necessary.	_	—
4	M3 operation check	MFPB PJ11MFPB-1 to 7	J-3
5	Change M3.		_
6	Change MFPB.		
7	Change DCPU.		—

14.3.3 0018: K developing motor malfunction

Relevant ele	ectrical parts
	MFP board (MFPB) DC power supply (DCPU)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (electri- cal component)
1	Check the M5 connector for proper connec- tion and correct as necessary.	_	—
2	Check M5 for proper drive coupling and correct as necessary.	_	—
3	Check the MFPB connector for proper con- nection and correct as necessary.	_	—
4	M5 operation check	MFPB PJ8MFPB-8 to 14	J-4
5	Change M5.	—	—
6	Change MFPB.	_	—
7	Change DCPU.		_

14.3.4 001B: Color developing motor malfunction

		Relevant electrical parts			
	Color o Driving	developing motor 9 unit	MFP board (MFPB) DC power supply (DCPU)		
			WIRING DIAGRA	M	
	Step	Action	Control signal	Location (electri- cal component)	
À	1	Check the color developing motor connec- tor for proper connection and correct as necessary.	_	_	
	2	Check the MFPB connector for proper con- nection and correct as necessary.		_	
	3	The color developing motor operation check		_	
	4	Change driving unit.	—	—	
	5	Change MFPB.	—	—	
	6	Change DCPU.	—	—	

14.3.5 0046: Fusing fan motor malfunction

Relevant electrical parts				
Fusing	fan motor (FM2)	MFP board (MFPB)		
		WIRING DIAGRAM		
Step	Action	Control signal	Location (electri- cal component)	
1	Check the FM2 connector for proper con- nection and correct as necessary.	—	—	
2	Check the fan for possible overload and correct as necessary.	—	—	
3	FM2 operation check	MFPB PJ21MFPB-3 (LOCK)	C-10	
4	Change FM2.	—	_	
5	Change MFPB.	_	—	

14.3.6 004A: Duplex cooling fan motor malfunction

Relevant electrical parts				
Duplex cooling fan motor (FM4) MFP board (MFPB)				
WIRING DIAGRAM				
Step	Action	Control signal	Location (electri- cal component)	
1	Check the FM4 connector for proper con- nection and correct as necessary.	_	_	
2	Check the fan for possible overload and correct as necessary.	_	_	
3	FM4 operation check	MFPB PJ27MFPB-6 (LOCK)	C-2	
4	Change FM4.	—	—	
5	Change MFPB.	—	—	

14.3.7 004C: Ozone ventilation fan motor malfunction

Relevant electrical parts				
Ozone	ventilation fan motor (FM3)	MFP board (MFPB)		
WIRING DIAGRAM			M	
Step	Action	Control signal	Location (electri- cal component)	
1	Check the FM3 connector for proper con- nection and correct as necessary.	_	—	
2	Check the fan for possible overload and correct as necessary.	_	_	
3	FM3 operation check	MFPB PJ31MFPB-3 (LOCK)	C-11	
4	Change FM3.	—	—	
5	Change MFPB.	—	—	

14.3.8 004E: DC power supply fan motor malfunction

	Relevant electrical parts			
DC power supply fan motor (FM1) MFP board (MFPB)				
		WIRING DIAGRAM		
Step	Action	Control signal	Location (electri- cal component)	
1	Check the FM1 connector for proper con- nection and correct as necessary.	—	—	
2	Check the fan for possible overload and correct as necessary.	—	—	
3	FM1 operation check	MFPB PJ9MFPB-3 (LOCK)	C-10 to 11	
4	Change FM1.	—	—	
5	Change MFPB.	—	—	

14.3.9 0060: Fusing motor malfunction

Relevant electrical parts		
Fusing motor (M4) MFP board (MFPB)		

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electri- cal component)
1	Check the M4 connector for proper connec- tion and correct as necessary.	_	_
2	Check the fuser unit driving mechanism for possible overload and correct as neces- sary.	—	_
3	Check the MFPB connector for proper con- nection and correct as necessary.	_	_
4	M4 operation check	MFPB PJ19MFPB-3 to 9	J-3
5	Change M4.		—
6	Change MFPB.		

14.3.10 0094: 2nd image transfer pressure/retraction failure

Relevant electrical parts	
2nd image transfer retraction position sensor (PS10) 2nd image transfer pressure/retraction clutch (CL5) Transport motor (M3)	MFP board (MFPB)

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electri- cal component)
1	Check the M3 connector for proper connec- tion and correct as necessary.	—	—
2	Check the CL5 connector for proper con- nection and correct as necessary.	—	—
3	Check M3 for proper drive coupling and correct as necessary.	—	—
4	Check CL5 for proper drive coupling and correct as necessary.	—	—
5	Check the MFPB connector for proper con- nection and correct as necessary.	—	—
6	PS10 sensor check	MFPB PJ16MFPB-8 (ON)	C-4
7	CL5 operation check	MFPB PJ10MFPB-5 (ON)	C-6
8	M3 operation check	MFPB PJ11MFPB-1 to 7	J-3
9	Change M3.	—	_
10	Change CL5.		
11	Change MFPB.		

14.3.11 0096: 1st image transfer pressure/retraction failure

Relevant electrical parts	
1st image transfer retraction position sensor (PS9) 1st image transfer pressure/retraction clutch (CL4) Transport motor (M3)	. ,

	Action	WIRING DIAGRA	M
Step		Control signal	Location (electri- cal component)
1	Check the M3 connector for proper connec- tion and correct as necessary.	_	_
2	Check the CL4 connector for proper con- nection and correct as necessary.	_	_
3	Check M3 for proper drive coupling and correct as necessary.	_	_
4	Check CL4 for proper drive coupling and correct as necessary.	_	_
5	Check the MFPB connector for proper con- nection and correct as necessary.	_	—
6	PS9 sensor check	MFPB PJ7MFPB-11 (ON)	J-5
7	CL4 operation check	MFPB PJ19MFPB-2 (REM)	J-3 to 4
8	M3 operation check	MFPB PJ11MFPB-1 to 7	J-3
9	Change M3.	—	—
10	Change CL4.	—	—
11	Change MFPB.		

14.3.12 0300: Polygon motor malfunction

	Relevant electrical parts				
PH unit		MFP board (MFPB)			
WIRING DIAGRAM					
Step	Action	Control signal	Location (electri- cal component)		
1	Check the cable and connector for proper connection and correct as necessary.	—	—		
2	Change PH unit.	—	—		
3	Change MFPB.	—	—		

14.3.13 0310: Laser malfunction

Relevant electrical parts				
PH unit MFP board (MFPB)				
WIRING DIAGRAM			M	
Step	Action	Control signal	Location (electri- cal component)	
1	Check the cable and connector for proper connection and correct as necessary.	_	—	
2	Change PH unit.	—	_	
3	Change MFPB.	_		

- 14.3.14 0500: Heating roller warm-up failure
- 14.3.15 0502: Thermistor open-circuit failure
- 14.3.16 0503: Thermistor resistance failure
- 14.3.17 0510: Abnormally low heating roller temperature

14.3.18 0520: Abnormally high heating roller temperature

Relevant electrical parts	
	MFP board (MFPB) DC power supply (DCPU)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electri- cal component)
1	Check the fuser unit for correct installation (whether it is secured in position).	_	—
2	Check the fuser unit, DCPU, and MFPB for proper connection and correct as neces- sary.	_	_
3	Change fuser unit.	_	—
4	Change MFPB.	—	—
5	Change DCPU.		—

14.3.19 0F50: OHP sensor malfunction

Relevant electrical parts	
OHP sensor (PS7)	MFP board (MFPB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electri- cal component)
1	Check the MFPB connector for proper con- nection and correct as necessary.	—	—
2	PS7 sensor check	MFPB PJ15MFPB-5 (ON)	C-5
3	Change MFPB.		—

- 14.3.20 0F52: Toner level sensor /Y malfunction
- 14.3.21 0F53: Toner level sensor /M malfunction
- 14.3.22 0F54: Toner level sensor /C malfunction
- 14.3.23 0F55: Toner level sensor /K malfunction

	Relevant electrical parts				
Toner	Toner level sensor board (TLSB) MFP board (MFPB)				
WIRING DIAGRAM					
Step	Action	Control signal	Location (electri- cal component)		
1	Check the cable and connector for proper connection and correct as necessary.	—	—		
2	Change TLSB.	—	—		
3	Change MFPB.	_	_		

14.3.24 13C0: MFP board malfunction

Relevant electrical parts				
MFP board (MFPB)				
	WIRING DIAGRAM			
Step	Action	Control signal	Location (electri-	

Step	Action	Control signal	Location (electri- cal component)
1	Reboot the main body.	—	_
2	Change MFPB.	—	

14.3.25 13DD: Backup data error

	Relevant electrical parts				
Print c	Print control board (PRCB) MFP board (MFPB)				
		WIRING DIAGRA	M		
Step	Action	Control signal	Location (electri- cal component)		
1	Check the cable and connector for proper connection and correct as necessary.	_	—		
2	Change PRCB.	—	—		
3	Change MFPB.	—	—		

14.3.26 13E2: Flash ROM write error

14.3.27 13E3: Flash ROM device fault

	Relevant electrical parts				
Print c	Print control board (PRCB) MFP board (MFPB)				
		WIRING DIAGRA	M		
Step	Action	Control signal	Location (electri- cal component)		
1	Check the cable and connector for proper connection and correct as necessary.	—	_		
2	Change PRCB.	—	—		
3	Change MFPB.	_			

14.3.28 13F0: Engine control failure

Relevant electrical parts	
Print control board (PRCB)	MFP board (MFPB)

		WIRING DIAGRA	M
Step	Action	Control signal	Location (electri- cal component)
1	Check the cable and connector for proper connection and correct as necessary.	_	_
2	Change PRCB.	_	_
3	Change MFPB.	_	—

A 14.3.29 C002: RAM error at startup (standard memory) C003: RAM error at startup (expanded memory)

	Relevant electrical parts	
Â	Print control board (PRCB)	Standard memory Expanded memory

		WIRING DIAGRAM	
Step	Action	Control signal	Location (electri- cal component)
1	Reboot the main body.	—	—
2	Check connection state of the standard/ expanded memory and correct as neces- sary.	—	_
3	Check the PRCB connector for proper con- nection and correct as necessary.	_	—
4	Change the standard/expanded memory.	—	—
5	Change PRCB.	—	—

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14.3.30 C013: MAC address error at startup

14.3.31 C015: BOOT ROM error at startup

Relevant electrical parts

Print control board (PRCB)

		WIRING DIAGRA	M
Step	Action	Control signal	Location (electri- cal component)
1	Reboot the main body.	—	_
2	Check the PRCB connector for proper con- nection and correct as necessary.	—	_
3	Change PRCB.		

14.3.32 C025: Controller ROM error (Configuration information error)

14.3.33 C026: Controller ROM error (Access error)

14.3.34 C027: Controller ROM error (Data error)

	Relevant electrical parts			
Print c	Print control board (PRCB)			
		WIRING DIAGRA	M	
Step	Action	Control signal	Location (electri- cal component)	
- 1	Debast the main hady			

			· · · · · · · · · · · · · · · · · · ·
1	Reboot the main body.	—	—
2	Check the PRCB connector for proper con- nection and correct as necessary.	—	—
3	If this error message is displayed after update of firmware, conduct the firmware update procedures again.	_	—
4	Change PRCB.	_	

14.3.35 C050: HDD access error

Relevant electrical parts			
Print c	ontrol board (PRCB)	Hard disk kit (HDD)	
	Action	WIRING DIAGRAM	
Step		Control signal	Location (electri- cal component)
1	Reboot the main body.	—	—
2	Check the HDD connector for proper con- nection and correct as necessary.	_	—
3	Check the PRCB connector for proper con- nection and correct as necessary.	_	—
4	Change HDD.	—	—
5	Change PRCB.	—	—

magicolor 4650EN magicolor 4650DN

14.3.36 C051: HDD full error

Relevant electrical parts			
Print c	ontrol board (PRCB)	Hard disk kit (HDD)	
	Action	WIRING DIAGRAM	
Step		Control signal	Location (electri- cal component)
1	Reboot the main body.	—	—
2	Delete the job hold in [PROOF/PRINT MENU] to increase the available range for user space.	_	_
3	Check the HDD connector for proper con- nection and correct as necessary.	—	—
4	Format HDD with [SYS DEFAULT MENU]- [HDD FORMAT.]	_	—
5	Change HDD.	_	—

14.3.37 C052: Compact flash access error

Relevant electrical parts			
Print c	ontrol board (PRCB)	Compact flash card	
	Action	WIRING DIAGRAM	
Step		Control signal	Location (electri- cal component)
1	Reboot the main body.	—	—
2	Check the compact flash for proper con- nection and correct as necessary.	_	_
3	Check the PRCB connector for proper con- nection and correct as necessary.	_	_
4	Change compact flash.	—	—
5	Change PRCB.	—	—

14.3.38 C053: Compact flash full error

Relevant electrical parts			
Print control board (PRCB)	Compact flash card		
	WIRING DIAGRAM		

Step	Action		
		Control signal	Location (electri- cal component)
1	Reboot the main body.	—	_
2	Delete the job hold in [PROOF/PRINT MENU] to increase the available range for user space.	—	_
3	Check the compact flash for proper con- nection and correct as necessary.	—	_
4	Format compact flash with [SYS DEFAULT MENU]-[CARD FORMAT.]	_	_
5	Change compact flash.	—	_

14.3.39 C060: Firmware update error

Relevant electrical parts

Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electri- cal component)
1	Reboot the main body.	_	—
2	Check the cable that has been used for update of the firmware for proper connec- tion and correct as necessary.	—	_
3	Check the firmware update file and if the file is not the correct one, update the firmware again.	—	_
4	Check the firmware update procedure and if the procedure is not correct, update the firmware again.	—	_
5	Update the firmware again.	—	_
6	Check the PRCB connector for proper con- nection and correct as necessary.	_	_
7	Change PRCB.		

14.3.40 C071: Hardware configuration error

	Relevant electrical parts			
Print control board (PRCB)				

		WIRING DIAGRAM			
Step Action		Control signal	Location (electri- cal component)		
1	Reboot the main body.	—	_		
2	Check the PRCB connector for proper con- nection and correct as necessary.	—	—		
3	Change PRCB.		_		

14.3.41 FFFF: Interface Communication error

Check the MFPB connector for proper con-

nection and correct as necessary.

Change MFPB.

Change PRCB.

	Relevant electrical parts				
Print c	ontrol board (PRCB)	MFP board (MFPB)			
		WIRING DIAGRAM			
Step Action		Control signal	Location (electri- cal component)		
1	Reboot the main body.	—	—		
2	Check the PRCB connector for proper con- nection and correct as necessary	_	—		

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15. Power supply troubles

15.1 Machine is not energized at all (DCPU operation check)

Relevant electrical parts				
Main power switch (SW1) MFP board (MFPB)		DC power supply (DCPU)		
Step Check item Location (electrical component) Result Action				
1	Is the power source voltage being applied to CN1DCPU on DCPU?	J-1	NO	Check wiring from power outlet to PG1 to CN1DCPU.
2	Are fuses (F1 and F2) on DCPU conduct- ing?	—	NO	Change DCPU.
3	Are DC 24 V, DC 5 V and DC 3.3 V being applied to PJ1MFPB on the MFP board?	J-1	NO	Change MFPB. Change PRCB.
			YES	Change DCPU.

15.2 Control panel indicators do not light

Relevant electrical parts				
Print control board (PRCB) Operation board (OB)	DC power supply (DCPU)			

Step	Check item	Location (electri- cal component)	Result	Action
1	Is the power source voltage being applied J-1 to CN1DCPU on DCPU?		NO	Check wiring from power outlet to PG1 to CN1DCPU.
2	Are fuses (F1 and F2) on DCPU conduct- ing?	_	NO	Change DCPU.
3	Is J22PRCB on PRCB properly con- nected?	I to J-12	NO	Reconnect.
4	Is J7000PRCB on PRCB properly con- nected?	J-12 to 13	NO	Reconnect.
	Is CN1OB on OB properly connected?		NO	Reconnect.
5		K-12	YES	Change OB. Change PWB-P.

15.3 Fusing heaters do not operate

Relevant electrical parts					
Front door switch (SW2) DC power supply (DCPU) Right door switch (SW3) Fuser unit					

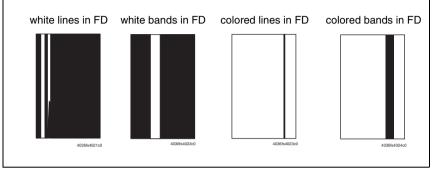
Step	Check item	Location (electri- cal component)	Result	Action
1	Is the power source voltage being applied to CN1DCPU on DCPU? The front door and right door should in closed position at this time.	J-1	NO	Check wiring from power outlet to PG1 to CN1DCPU.
2	Is the power source voltage being applied	1-2	YES	Change fuser unit.
-	² to CN2DCPU on DCPU? I-2		NO	Change DCPU.

16. Image quality problems

16.1 Solution

16.1.1 White lines in FD, white bands in FD, colored lines in FD, and colored bands in FD

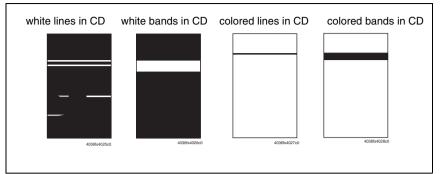
A. Typical faulty images



Step	Section	Check item	Result	Action
1		Are there scratches or lines evi- dent on photo conductor surface?	YES	Change the print unit.
2		Is the outside dirty?	YES	Clean.
3	Print unit	Is the connector or contact termi- nal between each print unit and PH unit connected properly?	NO	Clean the contact terminal or reconnect the connector.
4		Is the developing bias contact ter- minal in good contact?	NO	Clean the contact terminal or check the terminal position.
5	PH unit	Is the window surface dirty?	YES	Clean.
6		Is the transfer belt dirty with fin- gerprints or oil?	YES	Clean.
7	Transfer belt	Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
8		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
9	Media path	Is there a foreign matter on the media path?	YES	Remove foreign matter.
10	Fuser unit	Is the fusing entrance guide plate dirty or scratched?	YES	Clean. Change the fuser unit.
11		Is the separator fingers dirty?	YES	Change the fuser unit.
12		Has the problem been eliminated through the checks of steps up to 11?	NO	Change the transfer belt. Change the PH unit.

16.1.2 White lines in CD, white bands in CD, colored lines in CD, and colored bands in CD

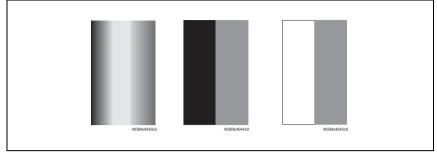
A. Typical faulty images



Step	Section	Check item	Result	Action
1		Are there scratches or lines evi- dent on photo conductor surface?	YES	Change the print unit.
2		Is the outside dirty?	YES	Clean.
3	Print unit	Is the connector or contact termi- nal between each print unit and PH unit connected properly?	NO	Clean the contact terminal or reconnect the connector.
4		Is the developing bias contact ter- minal in good contact?	NO	Clean the contact terminal or check the terminal position.
5	Transfer belt	Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
6		Is the transfer roller dirty or scratched?	YES	Change the Transfer Roller.
7	Media path	Is there a foreign matter on the media path?	YES	Remove the foreign matter.
8	Fuser unit	Is the fusing entrance guide plate dirty or scratched?	YES	Clean.
9		Is the separator fingers dirty?	YES	Change the fuser unit.
10		Has the problem been eliminated through the checks of steps up to 9?	NO	Change the DC power supply. Change the transfer belt.

16.1.3 Uneven density in FD

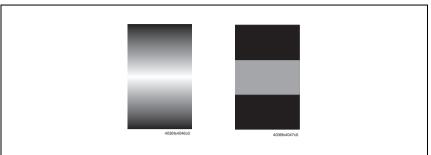
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Adjustment	The printer is being operated at	YES	Adjust the image with [IMAGE ADJ PRAM]
	/Setting	high altitude.	TES	→ [SERVICE MENU]-[ALIGN- MENT]-[IMAGE ADJ PRAM]
2	Print unit	Are there scratches or lines evi- dent on photo conductor surface?	YES	Change the print unit.
3		Is the outside dirty?	YES	Clean.
4	PH unit	Is the window surface dirty?	YES	Clean.
5	T ())	Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
6	Transfer belt	Is the terminal dirty?	YES	Clean.
7		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
8		Has the problem been eliminated through the checks of steps up to 7?	NO	Change the transfer belt unit. Change the PH unit. Change High voltage unit /1. Change High voltage unit /2.

16.1.4 Uneven density in CD

A. Typical faulty images



Step	Section	Check item	Result	Action
1	Adjustment /Setting	The printer is being operated at high altitude.	YES	Adjust the image with [IMAGE ADJ PRAM]. → [SERVICE MENU]-[ALIGN- MENT]-[IMAGE ADJ PRAM]
2	Print unit	Are there scratches or lines evi- dent on photo conductor surface?	YES	Change the print unit.
3		Is the outside dirty?	YES	Clean.
4		Is the contact on the rail of the Transfer belt in good contact with the mating part?	NO	Check or correct contact.
5		Is the transfer belt dirty with fin- gerprints or oil?	YES	Clean.
6	Transfer belt	Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
7		Is the terminal dirty?	YES	Clean.
8		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
9		Has the problem been eliminated through the checks of steps up to 8?	NO	Change the transfer belt. Change high voltage unit /1. Change high voltage unit /2.

16.1.5 Low image density

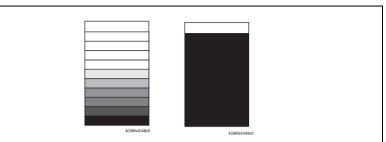
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Adjustment /Setting	The printer is being operated in the climate such as dry or highly humid.	YES	Adjust the image with [TRANS- FER POWER] → [SERVICE MENU]-[ALIGN- MENT]-[TRANSFER POWER]
2	Print unit	Is the outside dirty?	YES	Clean.
3	PH unit	Is the window surface dirty?	YES	Clean.
4	Transfer belt	Is the contact on the rail of the transfer belt in good contact with the mating part?	NO	Check or correct contact.
5		Is the terminal dirty?	YES	Clean.
6	Media	Is the media damp?	YES	Replace the media with media that has just been unwrapped.
7	IDC sensor board /Re, IDC sensor board /Fr	Is the sensor dirty?	YES	Clean.
8		Has the problem been eliminated through the checks of steps up to 7?	NO	Change the print unit. Change the transfer belt. Change the PH unit. Change the IDC sensor board. Change the MFP board. Change high voltage unit /1. Change high voltage unit /2.

16.1.6 Gradation reproduction failure

A. Typical faulty images



Step	Section	Check item	Result	Action
1	Print unit	Is the outside dirty?	YES	Clean.
2	PH unit	Is the window surface dirty?	YES	Clean.
3	IDC sensor board /Re, IDC sensor board /Fr	Is the sensor dirty?	YES	Clean.
4		Has the problem been eliminated through the checks of steps up to 3?	NO	Change the print unit. Change the PH unit. Change the IDC sensor board. Change high voltage unit /1. Change high voltage unit /2.

16.1.7 Foggy background

A. Typical faulty Images

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Step	Section	Check item	Result	Action
1	Adjustment	The Printer is being operated in the climate such as dry or highly	YES	Adjust the image with [TRANS- FER POWER]
	/Setting	humid.	123	→ [SERVICE MENU]-[ALIGN- MENT]-[TRANSFER POWER]
2		Are there scratches or lines evi- dent on photo conductor surface?	YES	Change the print unit.
3		Is the outside dirty?	YES	Clean.
4	Print unit	Is the connector or contact termi- nal between each print unit and PH unit connected properly?	NO	Clean the contact terminal or reconnect the connector.
5		Is the developing bias contact ter- minal in good contact?	NO	Clean the contact terminal or check the terminal position.
6	PH unit	Is the window surface dirty?	YES	Clean.
7	IDC sensor board /Re, IDC sensor board /Fr	Is the sensor dirty?	YES	Clean.
8		Has the problem been eliminated through the checks of steps up to 7?	NO	Change the PH unit. Change the IDC sensor board.

16.1.8 Poor color reproduction

A. Typical faulty images



Step	Section	Check item	Result	Action
1	Media	Is the media damp?	YES	Replace the media with media that has just been unwrapped.
2	Transfer belt	Is the terminal dirty?	YES	Clean.
3	IDC sensor board /Re, IDC sensor board /Fr	Is the sensor dirty?	YES	Clean.
4		Has the problem been eliminated through the checks of steps up to 3?	NO	Change the transfer belt. Change the IDC sensor board. Change the MFP board. Change high voltage unit /1. Change high voltage unit /2.

16.1.9 Void areas, white spots

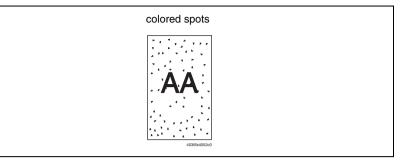
A. Typical faulty images

void areas	white spots
ABCDE ABCDE ABCDE ABCDE ABCDE ABCDE	

Step	Section	Check item	Result	Action
1	Adjustment	Thick or special media is being	YES	Adjust the image with [TRANS- FER POWER.]
	/Setting	used.	TES	→ [SERVICE MENU]-[ALIGN- MENT]-[TRANSFER POWER]
2	Print unit	Are there scratches or lines evi- dent on photo conductor surface?	YES	Change the print unit.
3		Is the outside dirty?	YES	Clean.
4		Is the transfer belt dirty with fin- gerprints, oil, or other foreign mat- ter?	YES	Clean.
5	Transfer belt	Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
6		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
7		Is the ground terminal connected properly?	NO	Correct.
8	Media path	Is there a foreign matter on the media path?	YES	Remove foreign matter.
9		Is the fusing entrance guide plate dirty or scratched?	YES	Clean or change.
10		Has the problem been eliminated through the checks of steps up to 9?	NO	Change the transfer belt.

16.1.10 Colored spots

A. Typical faulty images



Step	Section	Check item	Result	Action
1		Are the spots in a single color?	YES	Change the print unit.
2	Print unit	Are there scratches or lines evi- dent on photo conductor surface?	YES	Change the print unit.
3		Is the transfer belt dirty with fin- gerprints, oil, or other foreign mat- ter?	YES	Clean.
4	Transfer belt	Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
5		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
6	Media path	Is there a foreign matter on the media path?	YES	Remove foreign matter.
7	Fuser unit	Is the fusing roller dirty or scratched?	YES	Change the fuser unit.
8		Has the problem been eliminated through the checks of steps up to 7?	NO	Change the transfer belt.

16.1.11 Blurred image

A. Typical faulty images

blurred in	age
ABCI	E
ABCI	
ABCI	
ABCI	E
a	1664031c0

Step	Section	Check item	Result	Action
1	PH unit	Is the window surface dirty?	YES	Clean.
2	Print unit	Is the outside dirty?	YES	Clean.
3		Has the problem been eliminated through the checks of steps up to 2?		Change the print unit. Change the PH unit.

16.1.12 Blank copy, black copy

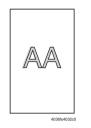
A. Typical faulty images

blank print	black print	
4036fs4038c0	4036fs4039c0	

Step	Section	Check item	Result	Action
1	Image check	Does a blank print occur?	YES	Check the PH unit connector for proper connection.
2		Is the coupling of the print unit drive mechanism installed prop- erly?	NO	Check or correct drive transmit- ting coupling or change the print unit.
3	Print unit	Is the charge corona voltage con- tact or photo conductor ground contact of the print unit connected properly?	NO	Check, clean, or correct the con- tact.
4	High voltage unit/1, High voltage unit/2	Is the connector corrected prop- erly?	NO	Reconnect.
5		Has the problem been eliminated through the checks of steps up to 4?	NO	Change high voltage unit /1. Change high voltage unit /2. Change the MFP board. Change the PH unit.

16.1.13 Incorrect color image registration

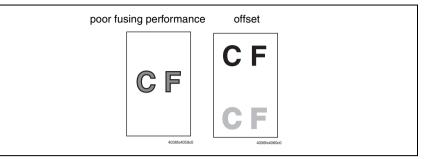
A. Typical faulty images



Step	Section	Check item	Result	Action
1		Is the transfer belt dirty with fin- gerprints, oil, or other foreign mat- ter?	YES	Clean.
2	Transfer belt	Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
3		Is the drive coupling to the machine dirty?	YES	Clean.
4		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
5	- Print unit	Is the print unit installed in posi- tion?	NO	Reinstall the print unit.
6		Is the photo conductor scratched?	YES	Change the print unit.
7		Has the problem been eliminated through the checks of steps up to 6?	NO	Change the transfer belt. Change the PH unit. Change the MFP board.

16.1.14 Poor fusing performance, offset

A. Typical faulty images

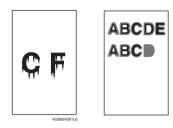


Step	Section	Check item	Result	Action
1	Media	Does the media being used con- form to specifications?	NO	Change the media.
2		Has the problem been eliminated through the check of step 1?	NO	Change the fuser unit. Change the MFP board.

16.1.15 Brush effect, blurred image

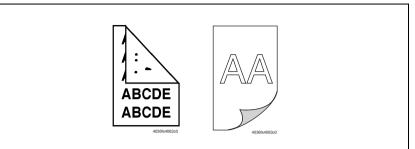
A. Typical faulty images

brush effect4036fs/1087ecDithlagelia2



16.1.16 Back marking

A. Typical faulty images



Step	Section	Check item	Result	Action
1	Media path	Is there a foreign matter on the media path?	YES	Remove the foreign matter.
2	Fuser unit	Is the fusing entrance guide plate dirty or scratched?	YES	Clean or change.
3		Is the fusing roller scratched or dirty?	YES	Change the fuser unit.
4	Transfer belt	Is the transfer belt dirty with fin- gerprints, oil, or other foreign mat- ter?	YES	Clean.
5		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
6		Has the problem been eliminated through the checks of steps up to 5?	NO	Change the transfer belt. Change the fuser unit. Change high voltage unit /1. Change high voltage unit /2.

16.1.17 Uneven pitch

A. Typical faulty images

4138Is4507c0

Step	Section	Check item	Result	Action
1	Toner cartridge	Is the toner cartridge for each color of toner installed in posi- tion?	NO	Reinstall.
2	PH unit	Is the PH unit secured in position with the fixing screw?	NO	Secure it in position.
3	Print unit	Is the drive mechanism of the print unit dirty or damaged?	YES	Clean or change the print unit.
4	i init dint	Is the photo conductor dirty, scratched, or worn?	YES	Change the print unit.
5	Transfer roller	Are the transfer roller and drive mechanism dirty, scratched, deformed, or worn?	YES	Change the transfer roller.
6	Fuser unit	Are the rollers and drive mecha- nism of the fuser unit dirty, scratched, deformed, or worn?	YES	Change the fuser unit.
7	Driving unit	During color printing, this symp- tom happens with 0.5 mm pitches.	YES	Change the driving unit.
8		Has the problem been eliminated through the checks of steps up to 7?	NO	Change the transfer belt.

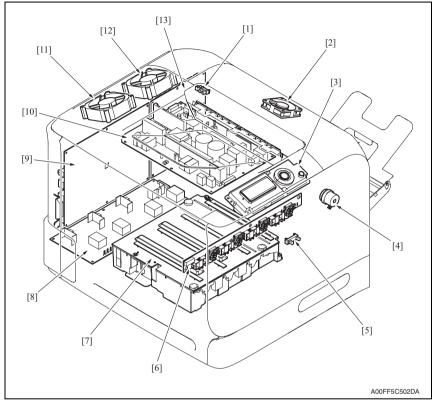
16.1.18 No print cycles can be run as commanded via the network

Step	Section	Check item	Result	Action
1	PRCB	Is the ethernet cable connected properly?	NO	Reinstall.
2		Are the network address and other data input correctly?	NO	Retype.
3	Control panel/ MENU	Is the [INTERFACE MENU]-[ETH- ERNET]-[SPEED/DUPLEX] set- ting made correctly according to the network environment being used?	NO	Reset.
4	PRCB	Is the PRCB connector con-	NO	Reinstall.
4	FNUB	nected properly?	YES	Change the PRCB.

Appendix

17. Parts layout drawing

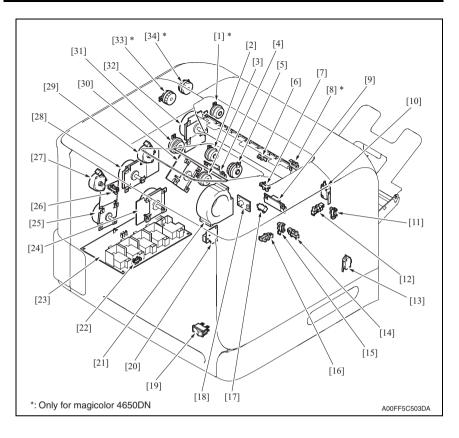
17.1 Main body



- [1] Media full sensor (PS24)
- [2] Duplex cooling fan motor (FM4)
- [3] Operation board (OB)
- [4] 2nd image transfer pressure/retraction clutch (CL5)
- [5] Waste toner sensor (PS11)
- [6] Toner level sensor board (TLSB)
- [7] PH unit

- [8] High voltage unit/2 (HV2)
- [9] Print control board (PRCB)
- [10] DC power supply (DCPU)
- [11] DC power supply fan motor (FM1)
- [12] Fusing fan motor (FM2)
- [13] MFP board (MFPB)

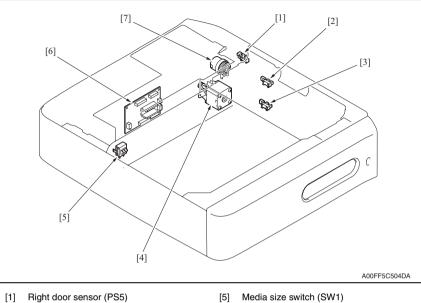
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- [1] Duplex transport roller clutch (CL13) *
- [2] Tray1 media feed clutch
- [3] Tray2 media feed clutch
- [4] IDC sensor board/Re (IDCSB/R)
- [5] Registration roller clutch (CL3)
- [6] 2nd image transfer retraction position sensor (PS10)
- [7] Media loop sensor (PS6)
- [8] Duplex transport sensor (PS26) *
- [9] IDC sensor board/Fr (IDCSB/F)
- [10] Front door switch (SW2)
- [11] Right door sensor (PS21)
- [12] Front door sensor (PS22)
- [13] Right door switch (SW3)
- [14] Tray1 media empty sensor (PS3)
- [15] Registration sensor (PS4)
- [16] Tray2 media empty sensor (PS1)
- [17] OHP sensor (PS7)

- [18] Temperature/ humidity sensor (TEM/HUMS)
- [19] Main power switch (SW1)
- [20] USB board (USBB)
- [21] Ozone ventilation fan motor (FM3)
- [22] Tray2 set switch (SW5)
- [23] High voltage unit/1 (HV1)
- [24] K developing motor (M5)
- [25] Color developing motor
- [26] 1st image transfer retraction position sensor (PS9)
- [27] Toner supply motor /Y, M (M6)
- [28] Color PC drum motor (M2)
- [29] Toner supply motor/C, K (M7)
- [30] Transport motor (M3)
- [31] 1st image transfer pressure/retraction clutch (CL4)
- [32] Fusing motor (M4)
- [33] Switchback roller reverse clutch (CL12) *
- [34] Switchback roller feed clutch (CL11) *

17.2 Lower feeder unit (option)

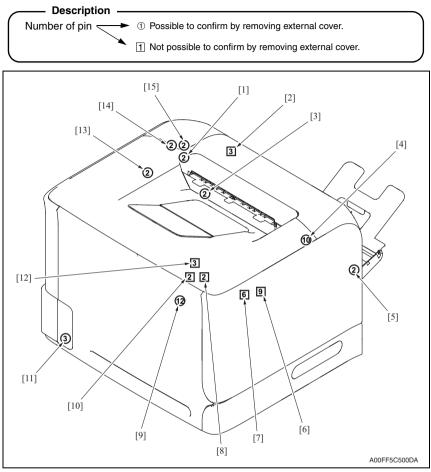


- [2] Media feed sensor (PS3)
- [3] Media empty sensor (PS1)
- Transport motor (M1) [4]

- Media size switch (SW1)
- [6] PC control board (PCCB)
- [7] Media feed clutch (CL1)

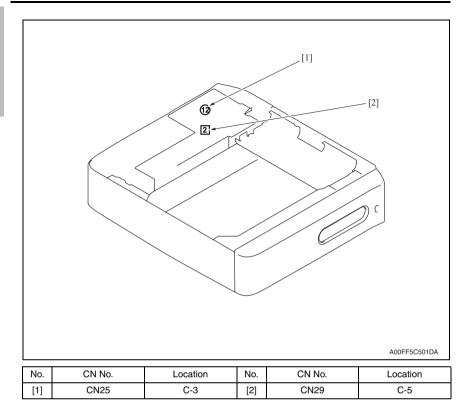
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18. Connector layout drawing



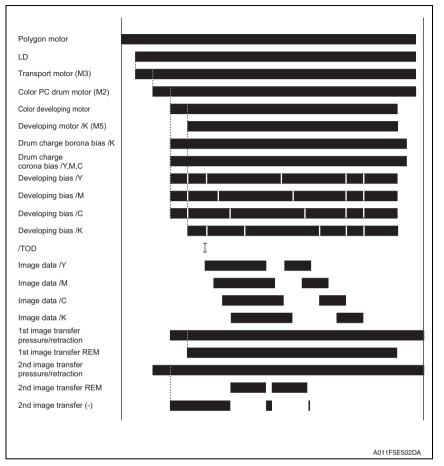
No.	CN No.	Location	No.	CN No.	Location
[1]	CN4	D-1	[9]	CN25	D-14
[2]	CN6	D-2	[10]	CN12	D-12
[3]	CN8	D-4	[11]	CN1	K-1
[4]	CN14	I-3	[12]	CN11	D-12
[5]	CN9	D-6	[13]	CN15	I-5
[6]	CN7	D-3 to 4	[14]	CN2	D-1
[7]	CN5	D-2	[15]	CN3	D-1
[8]	CN13	C-10			

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19. Timing chart

Color A4 2-print



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SERVICE MANUAL

FIELD SERVICE

Lower Feeder Unit

2007.11 KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. Ver. 1.0

Revision history

After publication of this service manual, the parts and mechanism may be subject to change for improvement of their performance.

Therefore, the descriptions given in this service manual may not coincide with the actual machine.

When any change has been made to the descriptions in the service manual, a revised version will be issued with a revision mark added as required.

Revision mark:

- To indicate clearly a section revised, show $\underline{\land}$ to the left of the revised section. A number within $\underline{\land}$ represents the number of times the revision has been made.
- To indicate clearly a section revised, show **A** in the lower outside section of the corresponding page.

A number within **A** represents the number of times the revision has been made.

NOTE

Revision marks shown in a page are restricted only to the latest ones with the old ones deleted.

- When a page revised in Ver. 2.0 has been changed in Ver. 3.0: The revision marks for Ver. 3.0 only are shown with those for Ver. 2.0 deleted.
- When a page revised in Ver. 2.0 has not been changed in Ver. 3.0: The revision marks for Ver. 2.0 are left as they are.

2007/11	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

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General

1. Product specifications

А. Туре

Name	Add-on 500-sheet media feed cassette
Туре	Front-loading type
Installation	Desk type
Media feeding system	Media separation by a small-diameter roller with torque limiter
Document alignment	Center

B. Media type

Media size	B5S(JIS)/Executive/LetterS/A4S/Letter Plus/G-Legal/Legal
Media type	 Plain paper: 60 to 90 g/m² (16 to 24 lb) Recycled paper: 60 to 90 g/m² (16 to 24 lb)
Capacity	500 sheets

C. Machine specifications

Power Requirements	DC 24 V \pm 10% (supplied from the main body)
	DC 5 V ± 5%
Max. Power Con- sumption	16 W
Dimensions	469 mm (W) × 536 mm (D) × 111.5 mm (H) 18.5 inch (W) × 21.0 inch (D) × 4.5 inch (H)
Weight	Approx. 6.5 kg (14.25 lb)

D. Operating environment

Temperature	10° to 35° C/50° to 95° F (with a fluctuation of 10° C/h (18° F/h))
Humidity	15% to 85% (with a fluctuation of 20%/h)

NOTE

• These specifications are subject to change without notice.

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Periodic check

A. Periodically replaced parts/cycleFeed roller: Every 300,000 prints

Replacing the feed roller

Maintenance procedure (periodic parts check)

Maintenance

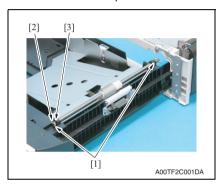
2.

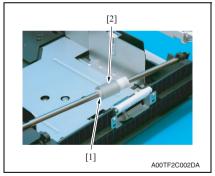
2.1

2.1.1

Lower Feeder Unit

B. Procedure1. Slide out tray 1.2. Lock the media lift plate.





3. Remove two C-rings [1] and remove the washer [2], and the bearing [3] at the front.

4. Remove the C-ring [1], and remove the feed roller [2].

З

3. Other

3.1 Disassembly/adjustment prohibited items

A. Paint-locked screws

NOTE

- To prevent loose screws, a screw lock in blue or green series color is applied to the screws.
- The screw lock is applied to the screws that may get loose due to the vibrations and loads created by the use of machine or due to the vibrations created during transportation.
- If the screw lock coated screws are loosened or removed, be sure to apply a screw lock after the screws are tightened.

B. Red-painted screws

NOTE

- The screws which are difficult to be adjusted in the field are painted in red in order to prevent them from being removed by mistake.
- Do not remove or loosen any of the red-painted screws in the field. It should also be noted that, when two or more screws are used for a single part, only one representative screw may be marked with the red paint.

C. Variable resistors on board

NOTE

- Do not turn the variable resistors on boards for which no adjusting instructions are given in Adjustment/Setting.
- D. Removal of PWBs

- When removing a circuit board or other electrical component, refer to "Handling of PWBs" and follow the corresponding removal procedures.
- The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.
- Where it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.

3.2 Disassembly/assembly list (other parts)

A. Disassembly/assembly parts list

No	Section	Part name	Ref. page
1	Exterior parts	Tray	P.6
2	Board and etc.	PC control board (PCCB)	P.6
3	Others	Media feed clutch (CL1)	P.8
4	Oulers	Transport motor (M1)	P.10

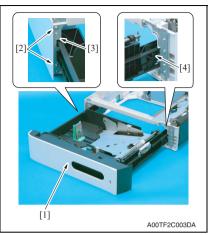
B. Cleaning parts list

No	Section	Part name	Ref. page
1	Media feed section	Feed roller	P.11

3.3 Disassembly/assembly procedure

3.3.1 Tray

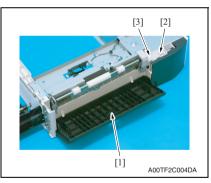
3. Other

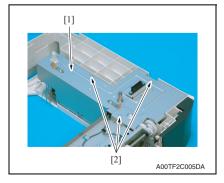


- 1. Slide out the tray [1].
- 2. Remove two screws [2], and remove the stopper [3].
- *3.* Pressing the tab [4], remove the tray [1].

3.3.2 PC control board (PCCB)

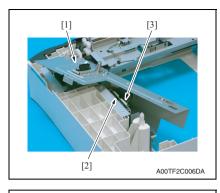
- 1. Remove the lower feeder unit from the machine.
- 2. Slide out the tray.

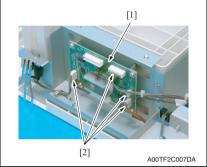


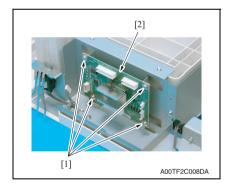


- Open the lower feeder unit right door [1].
- 4. Remove the screw [2], and remove the gear cover [3].

5. Remove three screws [2] from the PC control board protective cover [1].







- Slightly raise the PC control board protective cover [1] and, at the same time, disconnect the connector [3] from the PC control board [2].
- 7. Remove the PC control board protective cover [1].

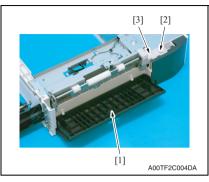
8. Disconnect all connectors [2] from the PC control board [1].

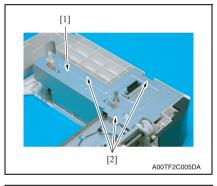
9. Remove four screws [1], and remove the PC control board [2].

3. Other

3.3.3 Media feed clutch (CL1)

- 1. Remove the lower feeder unit from the machine.
- 2. Slide out the tray.



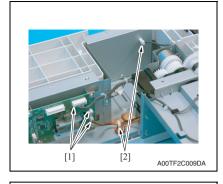


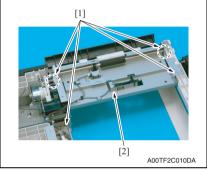
[1] [3] [2] [3] [2] [3] ADDTF2C006DA

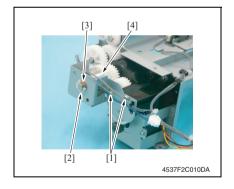
- 3. Open the lower feeder unit right door [1].
- 4. Remove the screw [2], and remove the gear cover [3].

5. Remove three screws [2] from the PC control board protective cover [1].

- Slightly raise the PC control board protective cover [1] and, at the same time, disconnect the connector [3] from the PC control board [2].
- 7. Remove the PC control board protective cover [1].





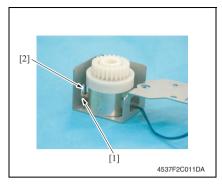


8. Disconnect three connectors [1], and remove the harness from two wire saddles [2].

9. Remove four screws [1], and remove the media feed drive assy [2].

10. Remove two screws [1], remove the C-ring [2] and bearing [3], and remove the media feed clutch [4].

Maintenance

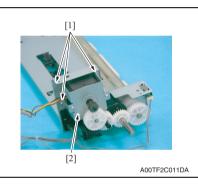


NOTE

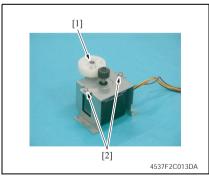
• When reinstalling the media feed clutch, make sure that the protrusion [1] on the media feed clutch fits into the locking slot [2].

3.3.4 Transport motor (M1)

1. Remove the media feed drive assy and media feed clutch. See P.8



 Remove three screws [1], and remove the transport motor assy [2].



- 3. Remove the gear [1].
- 4. Remove two screws [2], and remove the transport motor.

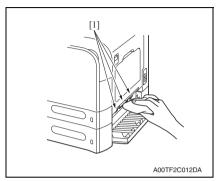
3.4 Cleaning procedure

NOTE

The alcohol used in this cleaning procedure is isopropyl alcohol.

3.4.1 Feed roller

1. Open the lower feeder unit right door.



2. Wipe the feed roller [1] clean of dirt using a cleaning pad dampened with alcohol.

Lower Feeder Unit

Lower Feeder Unit

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Adjustment / Setting

Adjustment/Setting

4. How to use the adjustment section

- "Adjustment/Setting" contains detailed information on the adjustment items and procedures for this machine.
- Throughout this "Adjustment/Setting," the default settings are indicated by " ".

Advance checks

Before attempting to solve the customer problem, the following advance checks must be made. Check to see if:

- The power supply voltage meets the specifications.
- The power supply is properly grounded.
- The machine shares the power supply with any other machine that draws large current intermittently (e.g., elevator and air conditioner that generate electric noise).
- The installation site is environmentally appropriate: high temperature, high humidity, direct sunlight, ventilation, etc.; levelness of the installation site.
- The original has a problem that may cause a defective image.
- The density is properly selected.
- The original glass, slit glass, or related part is dirty.
- Correct paper is being used for printing.
- The units, parts, and supplies used for printing (developer, PC drum, etc.) are properly replenished and replaced when they reach the end of their useful service life.
- Toner is not running out.

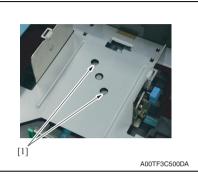
- To unplug the power cord of the machine before starting the service job procedures.
- If it is unavoidably necessary to service the machine with its power turned ON, use utmost care not to be caught in the scanner cables or gears of the exposure unit.
- Special care should be used when handling the fuser unit which can be extremely hot.
- The developing unit has a strong magnetic field. Keep watches and measuring instruments away from it.
- Take care not to damage the PC drum with a tool or similar device.
- Do not touch IC pins with bare hands.

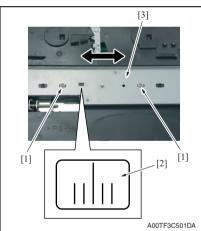
5. Mechanical adjustment

5.1 Registration adjustment

This adjustment must be made if:

- The printed image deviates in the CD direction.
- 1. Remove the tray. See P.6





2. Loosen two screws [1].

- 3. Loosen two screws [1].
- Watching the graduations [2] on the adjusting plate, move the edge guide plate [3] as necessary.

Adjustment range: ± 2.0 mm

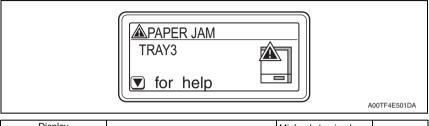
5. Tighten the four screws that have been loosened and mount the tray.

Troubleshooting

6. Jam display

6.1 Misfeed display

• When a media misfeed occurs, a message is displayed on the control panel.



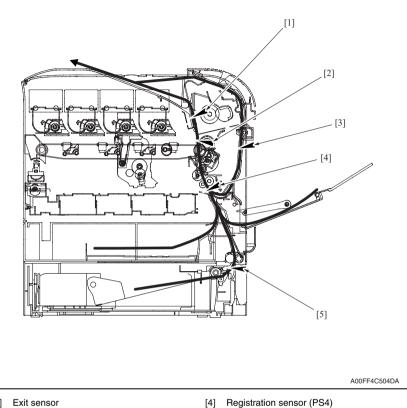
Display		Misfeed location	Misfeed clearing loca-	Ref. page
LCD1	LCD2	Misleed location	tion	nei. page
PAPER	TBAY 3	 Tray 3 media feed section 	Tray 3	P.18
JAM THAT'S		 Vertical transport section 	Tray 3 right side cover	P.19

6.2 Misfeed display resetting procedure

• Open the relevant cover, clear the sheet of misfed media, and close the cover.

6.3 Sensor layout

• For a system equipped with a lower feeder unit.



[5]

Media feed sensor (PS3)

- Exit sensor [1]
- Media loop sensor (PS6) [2]
- [3] Duplex transport sensor (PS26)

6.4 Solution

6.4.1 Initial check items

• When a media misfeed occurs, first check the following initial check items.

Check Item	Action
Does the media meet product specifications?	Change the media.
Is the media curled, wavy, or damp.	Change the media. Instruct the user in correct media storage requirements.
Is a foreign object present along the media path, or is the media path deformed or worn?	Clean or change the media path.
Are the rolls/rollers dirty, deformed, or worn?	Clean or change the defective roll/roller.
Are the Edge Guide and Trailing Edge Stop at the cor- rect position to accommodate media?	Set as necessary.
Are the actuators found operational as checked for cor- rect operation?	Correct or change the defective actuator.

Lower Feeder Unit

6.4.2 Misfeed at the tray 3 media feed section

A. Detection timing

Туре	Description
Detection of mis- feed at tray 3 media feed section	The media does not block the media feed sensor (PS3) even after the lapse of a given period of time after the media feed clutch (CL1) has turned ON.
Detection of media left at tray 3 media feed section	The media feed sensor (PS3) is not blocked when the main power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

B. Action

Relevant electrical parts		
Media feed sensor (PS3) Media feed clutch (CL1) Transport motor (M1)	PC control board (PCCB) MFP control board (MFPB)	

	p Action	WIRING DIAGRAM		
Step		Control Signal	Location (Electrical Com- ponent)	
1	Initial check items	_	—	
2	PS3 sensor check	PCCB PJ5PCCB-6 (ON)	B-3	
3	CL1 operation check	PCCB PJ6PCCB-2 (REM)	B-5	
4	M1 operation check	PCCB PJ3PCCB-1 to 4	B-5	
5	Change PCCB.	—		
6	Change MFPB.	—		

Lower Feeder Unit

6.4.3 Misfeed at the tray 3 vertical transport section

A. Detection timing

Туре	Description
Dotootion of fillo	The media does not block the registration sensor (PS4) even after the lapse of a given period of time after it has blocked the media feed sensor (PS3).
	The media does not unblock the media feed sensor (PS3) even after the lapse of a given period of time after it has blocked the media feed sensor (PS3).

B. Action

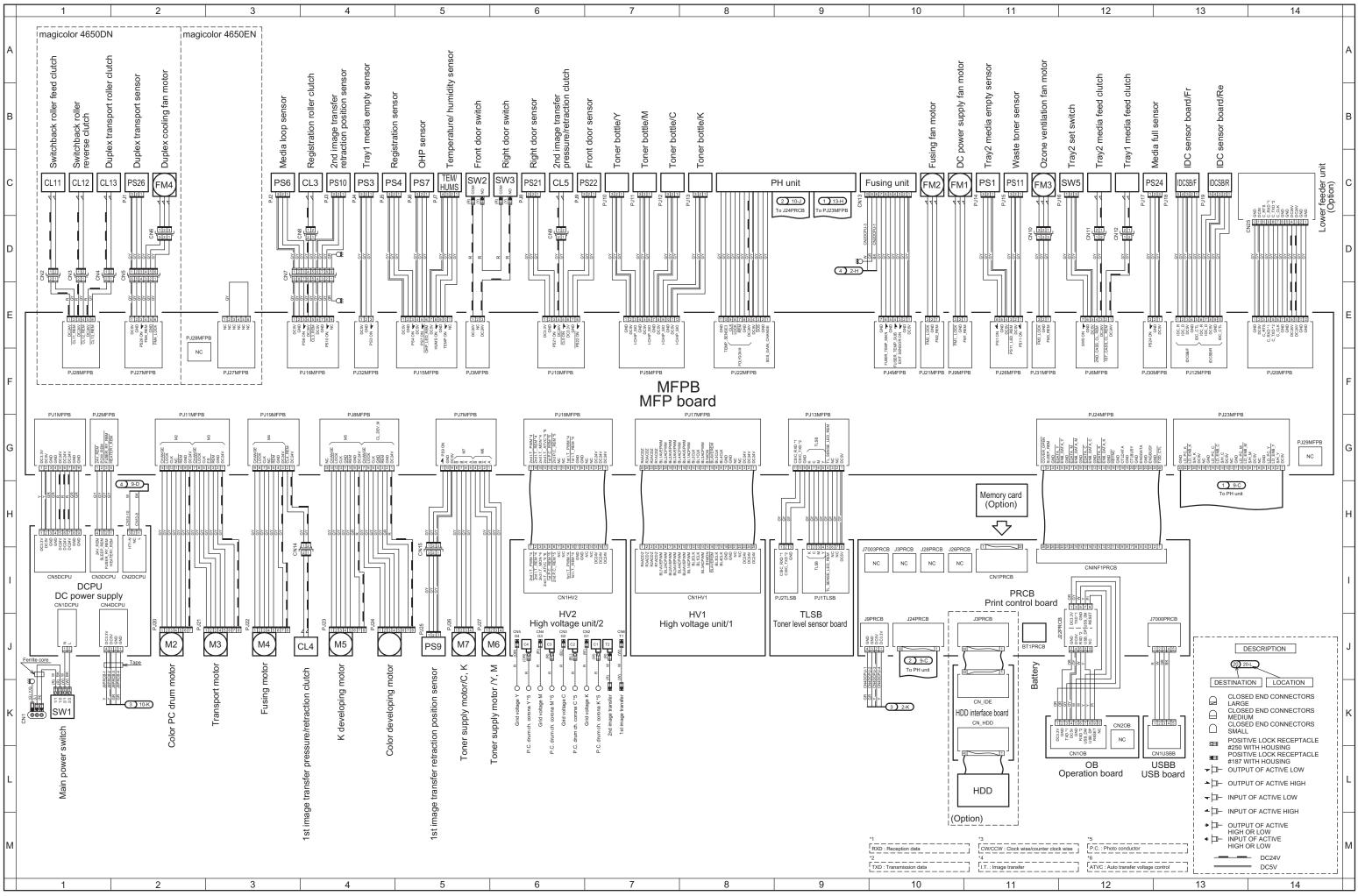
Relevant electrical parts			
Media feed sensor (PS3) PC control board (PCCB)			
Registration sensor (PS4)	MFP control board (MFPB)		
Transport motor (M1)			

	Action	WIRING DIAGRAM		
Step		Control Signal	Location (Electrical Compo- nent)	
1	Initial check items	—	—	
2	PS3 sensor check	PCCB PJ5PCCB-6 (ON)	B-3	
3	PS4 sensor check	MFPB PJ15MFPB-3 (ON)	magicolor 4650EN /4650DN C-4	
4	M1 operation check	PCCB PJ3PCCB-1 to 4	B-5	
5	Change PCCB.	_	—	
6	Change MFPB.	—	—	

19

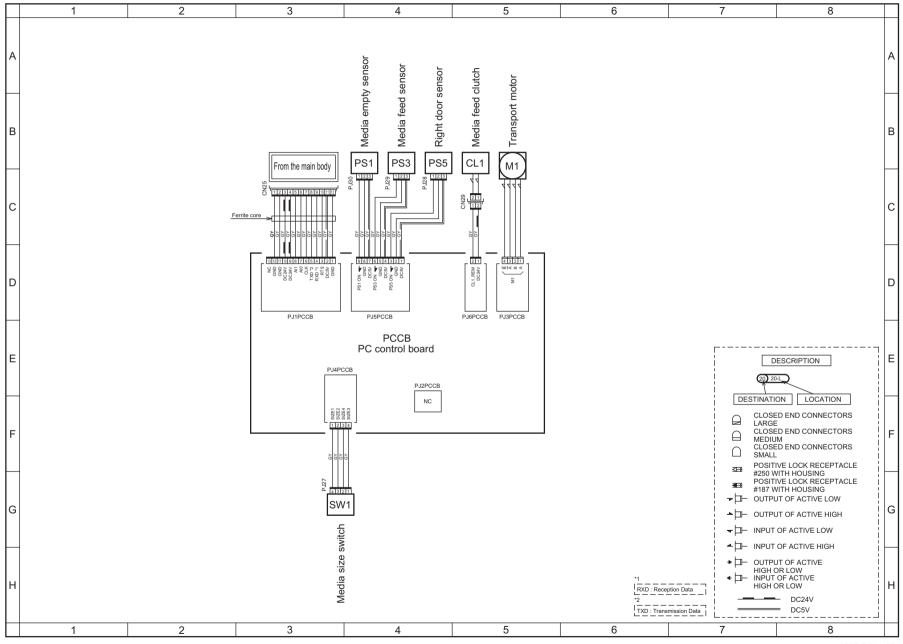
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magicolor 4650EN/4650DN Overall wiring diagram



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Lower feeder unit Overall wiring diagram

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