



KONICA MINOLTA

# **SERVICE MANUAL**

FIELD SERVICE

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# KONICA MINOLTA FAX 2900 KONICA MINOLTA FAX 3900



# 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 “△ DANGER”, “△ WARNING”, and “△ 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.

- △ 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:



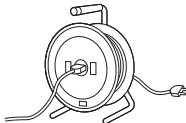

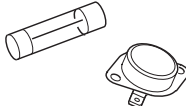

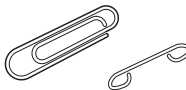

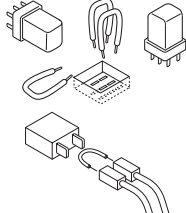


- |  |   |  |  |
|--|---|--|--|
|  :Precaution when servicing the product.  |  General precaution  |  Electric hazard            |  High temperature   |
|  :Prohibition when servicing the product. |  General prohibition |  Do not touch with wet hand |  Do not disassemble |
|  :Direction when servicing the product.   |  General instruction |  Unplug                     |  Ground/ Earth      |

## SAFETY WARNINGS

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

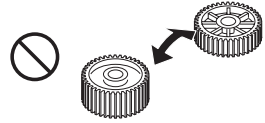
Konica Minolta brand products are renowned for their high reliability. This reliability is achieved through high-quality design and a solid service network.

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.

 <b>DANGER: PROHIBITED ACTIONS</b>	
<ul style="list-style-type: none"> <li>Using any cables or power cord not specified by KMBT.</li> </ul>	 
<ul style="list-style-type: none"> <li>Using any fuse or thermostat not specified by KMBT. Safety will not be assured, leading to a risk of fire and injury.</li> </ul>	 
<ul style="list-style-type: none"> <li>Disabling fuse functions or bridging fuse terminals with wire, metal clips, solder or similar object.</li> </ul>	 
<ul style="list-style-type: none"> <li>Disabling relay functions (such as wedging paper between relay contacts)</li> </ul>	 
<ul style="list-style-type: none"> <li>Disabling safety functions (interlocks, safety circuits, etc.) Safety will not be assured, leading to a risk of fire and injury.</li> </ul>	
<ul style="list-style-type: none"> <li>Making any modification to the product unless instructed by KMBT</li> </ul>	

## DANGER: PROHIBITED ACTIONS

- Using parts not specified by KMBT



## 2. 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

#### WARNING: Wall Outlet

- Check that mains voltage is as specified. Plug the power cord into the dedicated wall outlet with a capacity greater than the maximum power consumption.

If excessive current flows in the wall outlet, fire may result.

- If two or more power cords can be plugged into the wall outlet, the total load must not exceed the rating of the wall outlet.

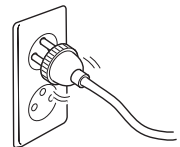
If excessive current flows in the wall outlet, fire may result.



#### WARNING: Power Plug and Cord

- Make sure the power cord is plugged in the wall outlet securely.

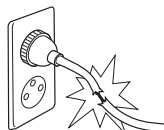
Contact problems may lead to increased resistance, overheating, and the risk of fire.



## WARNING: Power Plug and Cord

- 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.



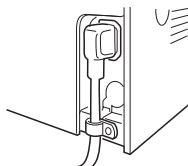
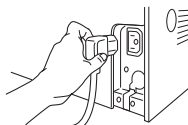
- When using the power cord (inlet type) that came with this product, be sure to observe the following precautions:

- a. Make sure the connector is securely inserted in the inlet on the rear panel of the product.

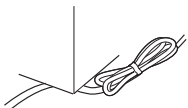
Secure the cord with a fixture properly.

- b. If the power cord or sheath is damaged, replace with a new power cord (with plugs on both ends) specified by KMBT.

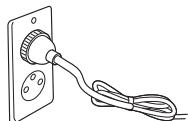
If the power cord (inlet type) is not connected to the product securely, a contact problem may lead to increased resistance, overheating, and risk of fire.



- Check whether the power cord is not stepped on or pinched by a table and so on.  
Overheating may occur there, leading to a risk of fire.

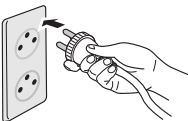


- Do not bundle or tie the power cord.  
Overheating may occur there, leading to a risk of fire.



- 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.

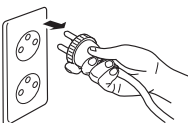


- Do not insert the power plug into the wall outlet with a wet hand.  
The risk of electric shock exists.



- When unplugging the power cord, grasp the plug, not the cable.

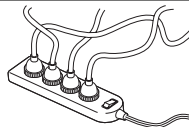
The cable may be broken, leading to a risk of fire and electric shock.



**⚠ WARNING: Wiring**

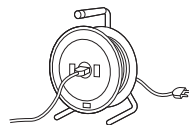
- Never use multi-plug adapters to plug multiple power cords in the same outlet.

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.

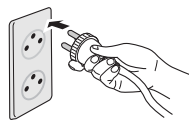
Do not use an extension cable reel with the cable taken up. Fire may result.

**⚠ WARNING: Ground connection**

- Check whether the product is grounded properly.

If current leakage occurs in an ungrounded product, you may suffer electric shock while operating the product.

Connect power plug to grounded wall outlet.

**2. Installation Requirements****⚠ WARNING: Prohibited Installation Place**

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

A risk of fire exists.



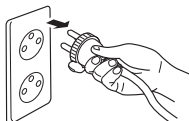
- Do not place the product in a place exposed to water such as rain.

A risk of fire and electric shock exists.

**⚠ WARNING: When not using product for a long time**

- 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.



### CAUTION: 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



### CAUTION: Fixing

- Be sure to lock the caster stoppers.

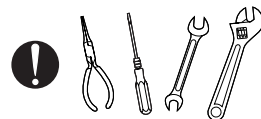
In the case of an earthquake and so on, the product may slide, leading to a injury.



### CAUTION: Inspection before Servicing

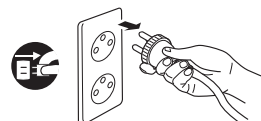
- Before conducting an inspection, read all relevant documentation (service manual, technical notices, etc.) and proceed with the inspection following the prescribed procedure, using only the prescribed tools. Do not make any adjustment not described in the documentation.

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



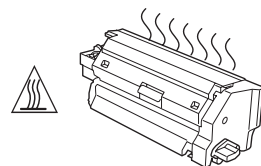
- Before conducting an inspection, be sure to disconnect the power plugs from the product and options.

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.

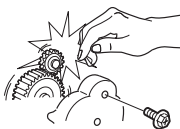
You may get burnt.



## **WARNING: Work Performed with the product Powered**

- 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.



## **WARNING: Safety Checkpoints**

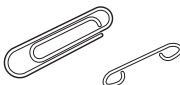
- Check the exterior and frame for edges, burrs, and other damages.

The user or CE may be injured.



- 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.



- Check wiring for squeezing and any other damage.

Current can leak, leading to a risk of electric shock or fire.



- Carefully remove all toner remnants and dust from electrical parts and electrode units such as a charging corona unit.

Current can leak, leading to a risk of product trouble or fire.



- Check high-voltage cables and sheaths for any damage.

Current can leak, leading to a risk of electric shock or fire.



- 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.





## WARNING: Safety Checkpoints

- 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.



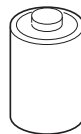
- Do not remove the cover of the write unit. Do not supply power with the write unit shifted from the specified mounting position.

The laser light can enter your eye, leading to a risk of loss of eyesight.



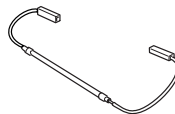
- When replacing a lithium battery, replace it with a new lithium battery specified in the Parts Guide Manual. Dispose of the used lithium battery using the method specified by local authority.

Improper replacement can cause explosion.



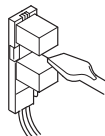
- After replacing a part to which AC voltage is applied (e.g., optical lamp and fixing lamp), be sure to check the installation state.

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).



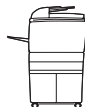
- Make sure the wiring cannot come into contact with sharp edges, burrs, or other pointed parts.

Current can leak, leading to a risk of electric shock or fire.



- 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.



× pcs?



## WARNING: HANDLING OF CONSUMABLE

- 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.

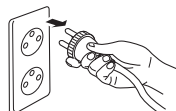


- Never throw the used cartridge and toner into fire.  
You may be burned due to dust explosion.



## CAUTION: 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.

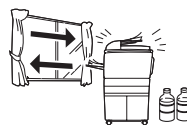


- Use only a small amount of cleaner at a time and take care not to spill any liquid. If this happens, immediately wipe it off.

A risk of fire exists.



- When using any solvent, ventilate the room well.  
Breathing large quantities of organic solvents can lead to discomfort.



### **3. MEASURES TO TAKE IN CASE OF AN ACCIDENT**

1. 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. CONCLUSION**

1. Safety of users and customer engineers depends highly on accurate maintenance and administration. Therefore, safety can be maintained by the appropriate daily service work conducted by the customer engineer.
2. When performing service, each product on the site must be tested for safety. The customer engineer must verify the safety of parts and ensure appropriate management of the equipment.

## 5. 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.



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# GENERAL

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# 1. SPECIFICATIONS

## 1-1. Main Unit

Type	: Desktop
Original scanning system	: Scanning in main scanning direction with a CIS (Contact Image System) sensor.
Photo conductor type	: OPC (Organic Photo conductor)
Copying system	: Electrostatic dry Powdered image transfer to plain paper with laser
Copy Resolution	: 600 dpi × 600 dpi
Paper feed-in system	: 2-Way system (Tray1 and Bypass Tray) *3-Way system is possible if optional PF-125 (Tray2) is installed.
Exposure system	: Unit scanning slit exposure
Developing system	: FMT (Fine Micro Toning) single component developing
Drum-charging system	: Rotating brush with pre-charge film
Image transfer system	: Roller transfer
Paper separation system	: Curvature separation + Charge Neutralizing needle
Fusing system	: Heat roller
Max. Original size	: Up to Legal size
Memory Capacity	: STD: 16 MB (48 MB Maximum with 32 MB Option Memory: KONICA MINOLTA FAX 3900 only)

### Copy Medium

Paper source		Tray1	Tray2	Bypass Tray
Type	Plain paper (60 to 90 g/m <sup>2</sup> ) (16 to 24 lb.)	○	○	○
	Recycled paper (60 to 90 g/m <sup>2</sup> ) (16 to 24 lb.)	○	○	○
	Special paper (91 to 163 g/m <sup>2</sup> ) (24 to 43 lb.)	○	—	○
	Transparencies	○	—	○
	Label sheets	○	—	○
	Envelopes	○	—	○
Dimension	Maximum (width × length)	216 × 356 mm	A4 L, Letter L	216 × 356 mm
	Minimum (width × length)	105 × 148 mm		105 × 148 mm

### NOTE

The dimension for Tray2 is fixed at A4L or Letter L.

Copy speed : 16 copies/minute (at full size and 600 dpi × 600 dpi, with ADF)  
(copies/min.)  
Continuous print speed : More than 16 sheets/minute (with plain A4 L or Letter L paper)  
(sheets/min.)  
Warm-up time : Less than 25 seconds (at a room temperature of 23 °C and at  
the rated voltage)

#### Zoom Ratios

		Metric Size	(Inch Size)
Fixed	Full size	×1.00	×1.00
	Enlargement	×1.15	×1.29
		×1.41	×1.54
		×2.00	×2.00
	Reduction	×0.81	×0.78
		×0.70	×0.64
		×0.50	×0.50
Variable	×0.50 to ×2.00 (in ×0.01 increments)		

Fusing temperature : 200 °C

#### Power /Current Consumption (main unit only)

Voltage	Maximum power consumption
110 V-127 V	770 W-890 W
220 V-240 V	814 W-888 W

Power source : 110 V-127 V, 220 V-240 V 50/60 Hz  
Dimensions : Width....416 mm  
Depth....419 mm  
Height...408 mm  
Weight : 12 kgs  
Original type : Plain paper: c (13-32 lb.)  
Width: 148 to 216 mm; length: 140 to 1000 mm  
Original capacity : Maximum 50 sheets (60-80 g/m²)  
Registration : Center  
Original loading orientation : Face up  
Scan speed : 2.5 sec (plain A4 L, with standard mode of original feeding)

Original types	Possible problems
Originals bound with staples or paper clips	Incorrect paper take-up, damaged originals or drive malfunctions due to jammed paper clips
Originals bound with glue	Incorrect paper take-up or damaged originals
Folded, torn or extremely wrinkled originals	Incorrect paper take-up or damaged originals
Curled originals (more than 10 mm from front edge)	Paper misfeeds due to folded or skewed originals

## 1-2. GDI Printer Function

RAM	: Share with main unit.
Interfaces	: USB Revision 1.1 (except for Windows 95 and Windows NT)
Printer Language	: GDI
Fonts	: Windows
Supported Operating Systems	: Windows XP (SP1 or later)/Windows 2000 (SP3 or later)/ Windows Me/Windows 98 Second Edition
Web Browser	: Internet Explorer 4.0 or later

## 1-3. FAX Function

### General

Compatibility	: Super G3/ G3/ ECM (Error correction mode)
Scanning Resolution	: STD: 204 × 98 (3.85 lines/mm) Fine: 204 × 196 (7.7 lines/mm) Super Fine: 204 × 392 (15.4 lines/mm)
Line	: PSTN/PBX
Data Transmission Rate	: 33.6 kbps (V.34 JBIG)
Coding Method	: MH/ MR/ MMR/ JBIG *JBIG (KONICA MINOLTA FAX 3900 ONLY)
Scanning Area	: Sheet through scanning Maximum 208 mm
Transmission Speed	: 4 second: KONICA MINOLTA FAX 2900 3 second: KONICA MINOLTA FAX 3900 *ITUT NO.1, A4 size Normal resolution without header
Internet fax	: Enable (KONICA MINOLTA FAX 3900 only)

### Dialing

Direct dialing	: Entering the fax number directly using the 10-Key Pad.
One touch dial	: 32keys: KONICA MINOLTA FAX 2900 64keys: KONICA MINOLTA FAX 3900
Speed dial	: 100 fax numbers: KONICA MINOLTA FAX 2900 200 fax numbers: KONICA MINOLTA FAX 3900
Group dial	: 32 groups: KONICA MINOLTA FAX 2900 64 groups: KONICA MINOLTA FAX 3900
Program dial	: NO/4 keys (No. 61,62,63,64)
Other dialing	: Pause insert, Phone Book dial, On-hook dial, Automatic redial, Redial, Chain dial, Combination dial

## Transmission

- Transmission mode : ADF TX, Memory TX, Batch TX, Broadcast TX,  
Confidential Mailbox TX,  
F code TX (SubAddress TX, SID TX), Forward TX  
Manual TX, Polling TX, Quick Memory TX, Book TX,  
Relay initiate TX, Reservation TX, Timer TX,
- TX resolution mode/ TX  
image mode : Standard (204 dpi × 98 dpi),  
Fine (204 dpi × 196 dpi),  
Super fine (204 dpi × 392 dpi),  
Standard + halftone (204 dpi × 98 dpi),  
Fine + halftone (204 dpi × 196 dpi),  
Super fine + halftone (204 dpi × 392 dpi)

## Receiving

- Receiving mode : Auto RX, Closed network RX, Confidential Mailbox RX,  
Inward Polling RX, Manual RX, Memory RX, Substitute RX,
- RX resolution : 204 dpi × 98 dpi, 204 dpi × 196 dpi, 204 dpi × 392 dpi,  
406 dpi × 392 dpi
- Max. recording paper  
size : A4/ Legal

## Report

- : Activity report, Back up RAM error report,  
G3 protocol monitor report, Memory image print,  
Power failure report, Reservation report, RX result report,  
Service report, TX result report,

## List

- : Key setting list, Machine status list, Memory data list,  
One-touch dial list, Service data list, Speed dial list,

## Other Features

- : Automatic paper selection, Backup of memory,  
Confirmation of communication result, Daylight saving time,  
Date/Time setting, Display of destination station, Footer,  
Header, Package reception printing, Pause insert,  
Quick memory printing, Remote monitor, RX print cancel,  
RX printing mode (100 % reception/ Reception print mode/  
Cut mode), Separate print, Smoothing, Speaker, Time zone,  
Tone signal transmission, TX cancel, RX cancel

## 1-4. Network Function (KONICA MINOLTA FAX 3900 only)

Interface	: Ethernet 10/100Base T /TX (RJ-45)
Data format	: MIME, Base64
Content Type	: Multi-part/Mixed (text/plain, image/tiff)
I-FAX Communication Protocol	: TX: SMTP RX: POP3
I-FAX Data Format	: E-Mail Format: MIME Attached File format: TIFF-F
I-FAX Cording method	: Transmission: MH Reception: MH, MR, MMR, JBIG
I-FAX TX resolution	: 204 dpi × 98 dpi 204 dpi × 196 dpi
I-FAX RX resolution	: 204 dpi × 98 dpi 204 dpi × 196 dpi 204 dpi × 392 dpi 200 dpi × 100 dpi 200 dpi × 200 dpi
Scan to E-Mail / Scan to FTP Communication Protocol	: E-Mail TX: SMTP FTP TX: FTP
Scan to E-Mail / Scan to FTP Data Format	: E-Mail Format: MIME Attached File format: TIFF, PDF
Scan to E-Mail / Scan to FTP Cording method	: MH, MR, MMR, JPEG (For Color and Gray mode, fixed at JPEG)
Scan to E-Mail / Scan to FTP resolution	: 150 dpi × 150 dpi 300 dpi × 300 dpi 600 dpi × 600 dpi

## **2. PRECAUTIONS FOR INSTALLATION**

### **2-1. Installation Site**

To ensure utmost safety and avoid breakdown, this machine should NOT be used in a place:

- Where it will be subjected to extremely high or low temperature or humidity.
- Where it will be subjected to sudden fluctuations in either temperature or humidity.
- Which is exposed to direct sunlight.
- Which is in the direct air stream of an air conditioner, heater, or ventilator.
- Which has poor ventilation or is dusty.
- Which does not have a stable, level floor or where it will receive undue vibration.
- Which is near any kind of heating device.
- Which is near volatile flammables (thinner, gasoline, etc.).
- Where it may be splashed with water and electric leakage is likely to occur.
- Which puts the operator in the direct stream of exhaust from this machine.
- Where ammonia gas might be generated.

### **2-2. Power Source**

- If any other electrical equipment is sourced from the same power outlet, make sure that the capacity of the outlet is not exceeded.
- Use a power source with little voltage fluctuation.
- Never connect by means of a multiple socket any other appliances or machines to the outlet being used for this machine.
- Ensure that this machine does not ride on the power cord or communications cable of other electric equipment, and that it does not become wedged into or underneath the mechanism.
- Make the following checks at frequent intervals:
  - \* Is the power plug abnormally hot?
  - \* Are there any cracks or scrapes in the cord?
  - \* Has the power plug been inserted fully into the outlet?
  - \* Does something, including this machine itself, ride on the power cord?

---

Use an outlet with a capacity of 110/120/127 V, or 220-240 V.

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### **3. PRECAUTIONS FOR USE**

#### **3-1. To Ensure this Machine is Used in an Optimum Condition**

- Never place a heavy object on this machine or subject this machine to shocks.
- Insert the power plug all the way into the outlet.
- Do not attempt to remove any panel or cover that is secured while this machine is in a print cycle.
- Do not turn OFF this machine while it is in a print cycle.
- Provide good ventilation if this machine is to be used for a long time in a narrow room.
- Never use flammable sprays near this machine.
- If this machine becomes inordinately hot or produces abnormal noise, immediately turn it OFF and unplug it.
- Do not turn ON the power switch at the same time that you plug the power cord into the outlet.
- When unplugging the power cord, do not pull on the cord; hold the plug and pull it out.
- Do not bring any magnetized object near this machine.
- Do not place a vase or vessel containing water on this machine.
- Be sure to turn OFF the power switch at the end of the workday or upon power failure.
- Use care not to drop paper clips, staples, or other small pieces of metal into this machine.

#### **3-2. Operating Environment**

The operating environmental requirements of this machine are as follows.

- Temperature: 10 to 30 °C
- Humidity: 15 to 85 %
- Rate of temperature change: 10 °C/h
- Rate of humidity change: 20 % Rh/h

#### **3-3. Power Requirements**

The power source voltage requirements are as follows.

- Voltage fluctuation: AC110 V - AC127 V -10 %, +6 % (Copying performance assured)  
AC 220 V - AC 240 V  $\pm$ 10 % (Copying performance assured)  
  
AC 110 V - AC 127 V -10 %, +6 % (Paper feeding performance assured)  
AC 220 V - AC 240 V  $\pm$ 10 % (Paper feeding performance assured)
- Frequency fluctuation: 50/60 Hz  $\pm$  3 Hz

## 4. HANDLING OF THE CONSUMABLES

Before using any consumables, always read the label on its container carefully.

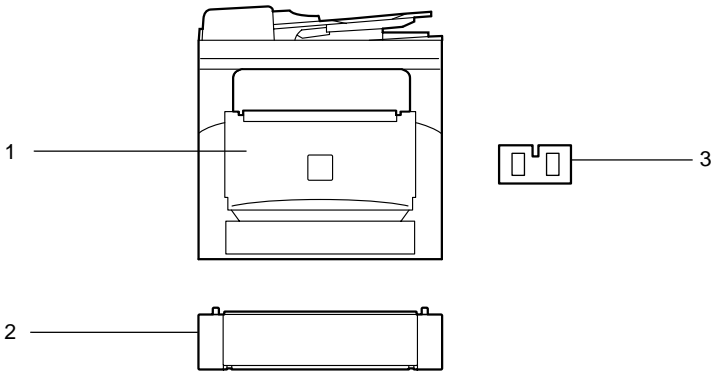
- Paper can easily damp. To prevent absorption of moisture, store paper in a place with little moisture.
- Keep consumables out of the reach of children.
- Do not touch the PC Drum with bare hands.
- The same sized paper is of two kinds, short grain and long grain. Short grain paper should only be fed through this machine crosswise, while long grain paper should only be fed lengthwise. The wrapper of the paper is properly marked.
- If your hands become soiled with toner, wash them with soap and water.
- Do not throw away any used consumables. They are to be collected.
- Do not burn, bury in the ground, or throw into the water any consumables.
- Do not store consumables in a place which:
  - \* Is hot and humid.
  - \* Is subject to direct sunlight.
  - \* Has an open flame nearby.

## 5. MISCELLANEOUS PRECAUTIONS

Use the following precautions when performing service jobs for the machine that uses a laser.

- When a service job needs to be performed in the laser beam path, such as when working around the Print Head Unit or PC Drum, be sure first to unplug the power cord of the machine from the outlet.
- If the service job requires that the power cord be left plugged in, observe the following precautions:
  1. Take off your watch, ring, and any other reflective object and wear laser protective goggles.
  2. Keep users away from the job site.
  3. Do not bring a highly reflective tool into the laser beam path during the service job.

# 6. PARTS IDENTIFICATION



4980G502AA

- 1. Main Unit KONICA MINOLTA FAX 2900/  
KONICA MINOLTA FAX 3900
- 2. Paper Feed Cassette PF-125
- 3. Expansion memory 32-5 (32 MB):  
KONICA MINOLTA FAX 3900 only



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# MAINTENANCE














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# 1. MAINTENANCE SCHEDULE

- To ensure that this machine produces good printed pages and to extend its service life, it is recommended that the maintenance jobs described in this schedule be carried out as instructed.

PM Parts		Clean	Replace	Ref. Page in This Manual
Main Unit	Paper Take-Up Roll	When a paper take-up failure occurs	Replace when a paper take-up failure occurs	 E-3
	Image Transfer Roller	—	50 k	 E-4
	Drum Cartridge	—	16 k	 E-7
	Toner Cartridge	—	4.3 k (Minimum Specification)	 E-5
			5.0 k (Average)	
	Fusing Unit	—	50 k	 E-7
ADF	Take-Up Roll	10 k	50 k	 E-10
	Pick-Up Roller		—	 E-11
	Registration Roller			 E-12
	Transport Roller			 E-12
	Exit Roller			 E-12
	Shading Roller			 E-14
	CIS			 E-14
	Paper Separator Pad		30 k	 E-13

\* Replace: Average number of prints during intermittent printing (2 pages/job)

## NOTES

- $k = 1,000$  printed pages
- As a rule, the Drum Cartridge and Toner Cartridge are to be replaced by the user.
- The contents of the Maintenance List are subject to change without notice.
- For the part numbers, see Parts Manual and Parts Modification Notice.

## 1-1. Guidelines for Life Specifications Values by Unit

- The life specifications value represents the number of printed pages produced or figures equivalent to it when given conditions (see the Table given below) are met. It can be more or less depending on how each individual machine is used.

Print Conditions	
Job type	2P/J
Paper size	A4 L/Letter L
B/W ratio	B/W 6 %

### (1) Life Specifications Values

Unit name	Life value	Detection
Toner Cartridge	4.3 k (Minimum Specification)	The remaining amount of toner is detected. A "TONER EMPTY" error is detected according to this value.
	5.0 k (Average)	

## 2. REPLACEMENT/CLEANING OF PARTS

### (1) Cleaning of the Paper Take-Up Roller

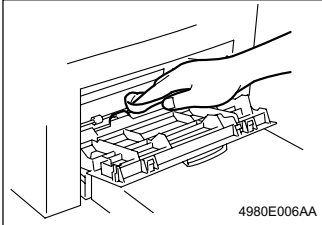
1. Remove the Imaging Cartridge.

 E-5

---

#### NOTE

- The Imaging Cartridge is the Drum Cartridge, to which the Toner Cartridge is mounted.
- 

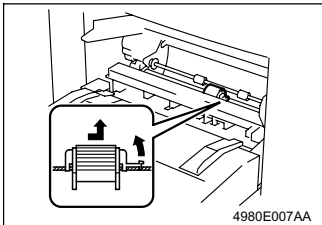


2. Using a soft cloth, wipe the surface of the Paper Take-Up Roller clean of dirt.

### (2) Replacement of the Paper Take-Up Roller

1. Remove the Imaging Cartridge.

 E-5

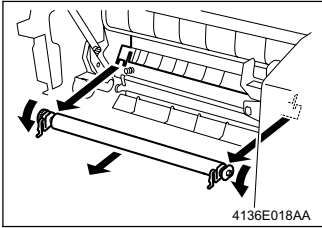


2. Remove the Paper Take-Up Roller.

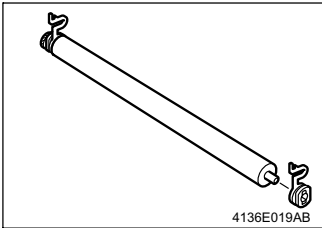
### (3) Replacement of the Image Transfer Roller

1. Remove the Imaging Cartridge.

 E-5



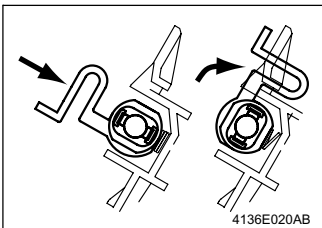
2. Place the levers of the bushings (white) on the right and left ends of the Image Transfer Roller toward this side and remove the Image Transfer Roller from the Image Transfer Roller holder.



3. Pull out the bushings on the right and left ends, and the gear, from the Image Transfer Roller removed from its holder. Install the bushings and the gear to the new Image Transfer Roller.

#### NOTES

- Do not touch, or dirty with chemicals or toner, the surface of the Image Transfer Roller, as indentations in and dirt on the surface of the Image Transfer Roller adversely affect the quality of the printed image.
- When handling the Image Transfer Roller, hold onto the shaft and bushings of the roller.
- Do not place a new Image Transfer Roller directly on the floor or other surface.

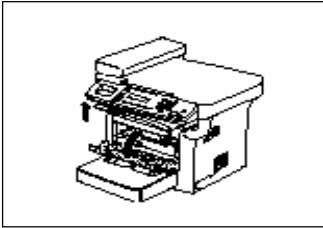


4. Insert the new Image Transfer Roller into the Image Transfer Roller holder and place the levers of the bushings into the original upward positions.

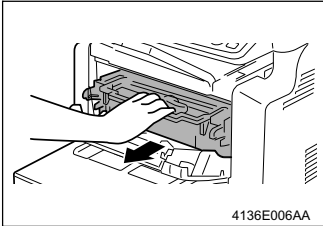
### 3. REPLACEMENT OF UNITS

#### (1) Replacement of the Toner Cartridge

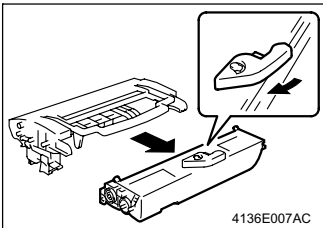
##### <Removal Procedures>



1. Lift up the Exit Tray and remove it.
2. Open the Front Door.



3. Remove the Imaging Cartridge.



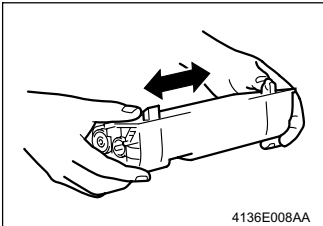
4. Pull the lever of the Toner Cartridge in the direction shown in the illustration and disconnect the Toner Cartridge from the Drum Cartridge.

---

##### **NOTE**

- If the Drum Cartridge is to be placed on a floor or similar place, use care to prevent toner from scattering around.
- 

##### <Installation Procedures>

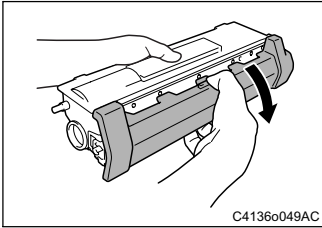


1. Take out a new Toner Cartridge and shake it in the horizontal direction sufficiently so that toner is agitated.

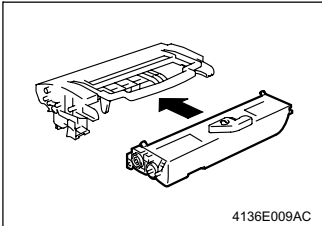
---

##### **NOTE**

- Placing the Toner Cartridge in an upright position or shaking it vigorously will spill toner.
-



2. Remove the protective cover from the Toner Cartridge.

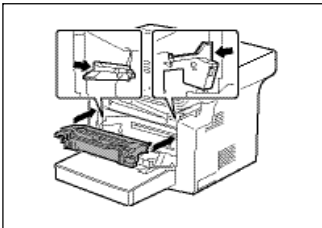


3. Install the new Toner Cartridge to the Drum Cartridge.

---

**NOTE**

- Insert the Toner Cartridge along the guide provided on the Drum Cartridge side and make sure that the Toner Cartridge is not tilted when inserted.
- 



4. Install the Imaging Cartridge in this machine.

---

**NOTE**

- Insert the Imaging Cartridge along the guide provided on this machine side. Ensure that the Imaging Cartridge is not slid obliquely.
- 

5. Close the Front Door.

---

**Precautions for Replacing the Toner Cartridge**

- Different types of Toner Cartridges are available for different regions. Therefore, check the Toner Cartridge type before replacing it.

<Toner Cartridge Types for Each Region>

US & Canada: Toner Cartridge 101 C

Europe: Toner Cartridge 101 A

Other regions: Toner Cartridge 101 B

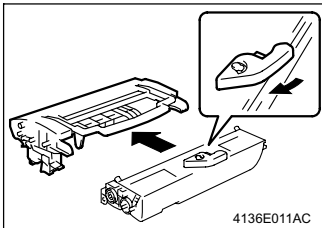
---

## (2) Replacement of the Drum Cartridge

### <Removal Procedures>

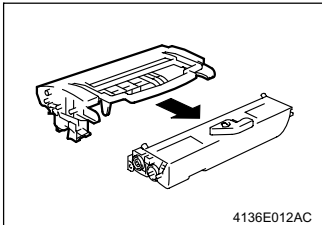
1. Remove the Imaging Cartridge.

 **E-5**



2. Pull the lever of the Toner Cartridge in the direction shown in the illustration and disconnect the Drum Cartridge.

### <Installation Procedures>

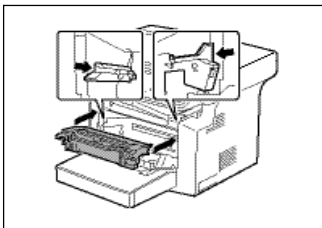


1. Mount the Toner Cartridge to a new Drum Cartridge.

---

#### **NOTE**

- Insert the Toner Cartridge along the guide provided on the new Drum Cartridge side and make sure that the Toner Cartridge is not tilted when inserted.
- 



2. Install the Imaging Cartridge in this machine.

---

#### **NOTE**

- Insert the Imaging Cartridge along the guide provided on this machine side. Ensure that the Imaging Cartridge is not slid obliquely.
- 

3. Close the Front Door.

---

#### **NOTE**

- After replacing the Drum Cartridge, be sure to reset the I/C counter in the Service Mode.
- 

## (3) Replacement of the Fusing Unit

---

#### **NOTE**

- Immediately after turning off this machine, the area around the Fusing Unit is extremely hot. Therefore, in order to reduce the risk of burns, wait until the unit has cooled down before performing any operation.
- 

### <Removal Procedures>

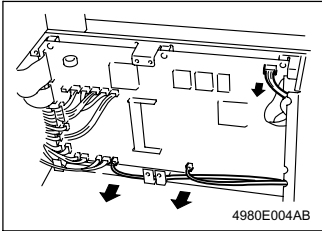
1. Remove the Rear Cover.

 **D-7**

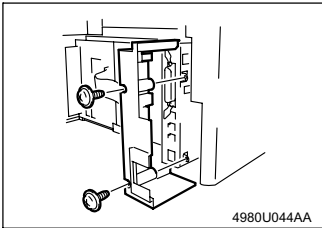
2. Remove the Network Card Board. (KONICA MINOLTA FAX 3900 only)

**D-11**

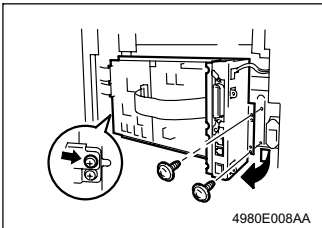
3. Remove the Network Control Unit Board.



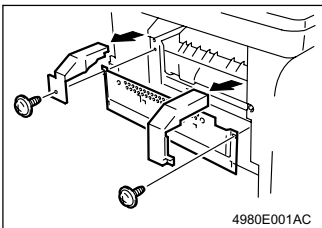
4. Unplug three connector on the Controller/  
Mechanical Control Board.



5. Remove the two screws, and then remove the  
Left Rear Cover.



6. Remove the three screws, and then remove the  
Circuit Board and Metal Bracket.



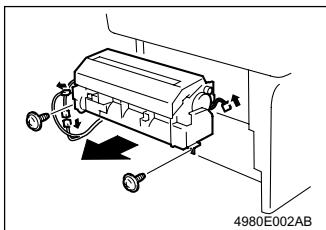
7. Remove the Upper Left Cover.

8. Remove the two screws, and then remove the  
Upper Right Cover and Protective Metal Bracket.

---

**NOTE**

- The Protective Metal Bracket is tightened together with the Upper Right Cover.
-

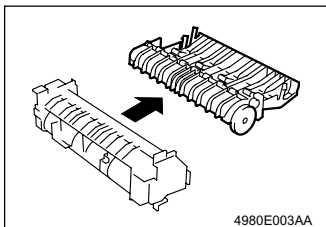


9. Remove two screws, unplug three connectors, and remove the Fusing Unit.

---

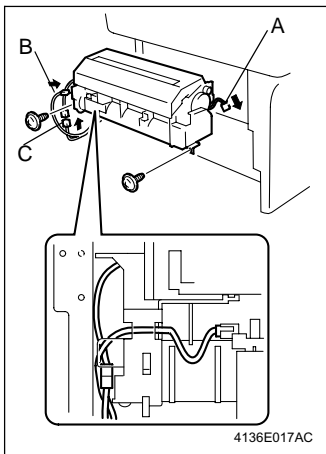
**NOTE**

- The surfaces around the Fusing Unit are very hot. Use utmost care not to touch any surfaces other than the Fusing Unit.
- 



10. Remove the Fusing Unit.

<Installation Procedures>



1. Connect connector A.
2. Mount the Fusing Unit in this machine and secure it in position by tightening the two screws.
3. Connect connectors B and C.

---

**NOTE**

- When installing the Fusing Unit, route the harness as shown in the illustration and make sure that no part of the harness is wedged between the Fusing Unit and this machine.
- 

---

**NOTE**

- When replacing a part comprising the Fusing Unit individually to correct an image problem or a defective part, see "Disassembly of the Fusing Unit" of DIS/REASSEMBLY, ADJUSTMENT".

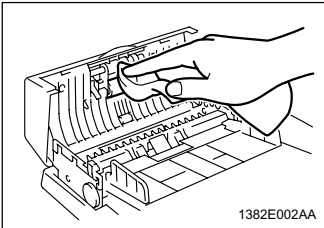
 **D-29**

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## 4. REPLACEMENT OF DOCUMENT FEEDER

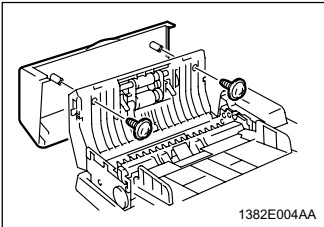
### (1) Cleaning of the Take-Up Roll

1. Open the Document Feeder Cover.

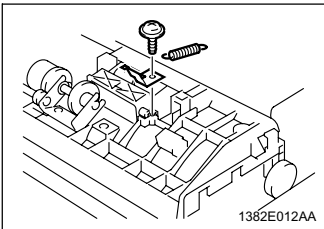


2. Using a soft cloth, wipe clean the surface of the Take-Up Roller.

### (2) Replacement of the Take-Up Roll



1. Open the Document Feeder Cover.
2. Remove the two screws, and then remove the Document Feeder Cover.

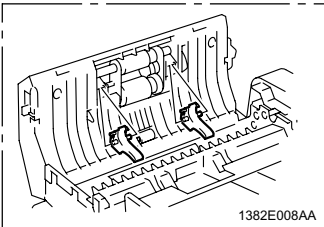


3. Remove the screw, and then remove the mounting plate and spring.

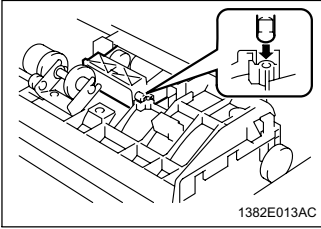
---

**NOTE**

- Be extremely careful not to lose the spring.
- 

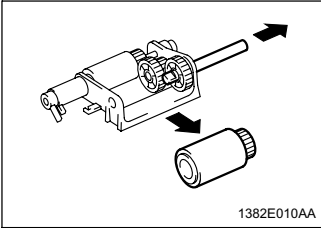


4. Remove the two Document Stoppers.



#### **NOTE**

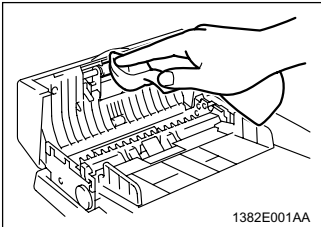
- When installing the Pick-Up Roller/Paper Take-Up Roller Assy., make sure that the notch in the shaft of the Take-Up Roller is positioned on the top.



5. Remove the Take-Up Roller.

### **(3) Cleaning of the Pick-Up Roller**

1. Open the Document Feeder Cover.

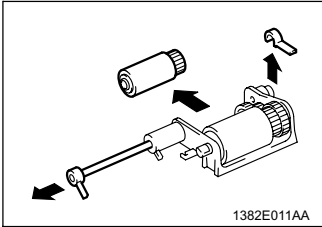


2. Using a soft cloth, wipe clean the surface of the Pick-Up Roller.

#### (4) Removal of the Pick-Up Roller

1. Remove the Pick-Up Roller/Take-Up Roller Assy.

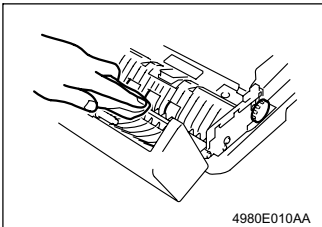
 **D-10**



2. Remove the Pick-Up Roller.

#### (5) Cleaning of the Registration Rollers

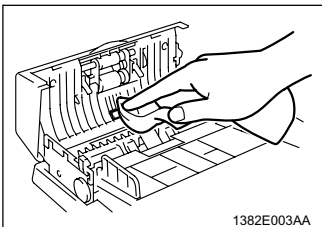
1. Open the Document Feeder Cover.



2. Use a soft cloth to wipe clean the Registration Rollers.

#### (6) Cleaning of the Transport Roller

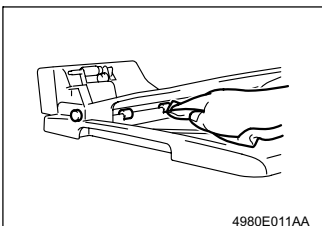
1. Open the Document Feeder Cover.



2. Using a soft cloth, wipe clean the surface of the Transport Roller.

#### (7) Cleaning of the Exit Roller

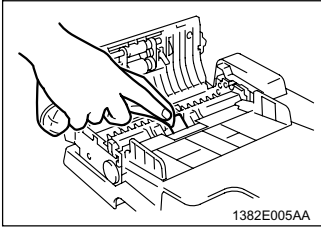
1. Open the Document Feeder Cover.



2. Use a soft cloth to wipe clean the Exit Roller.

## (8) Cleaning of the Paper Separator Pad

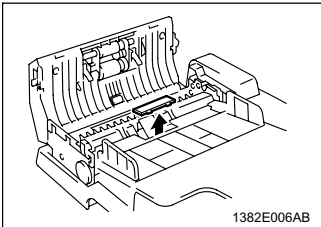
1. Open the Document Feeder Cover.



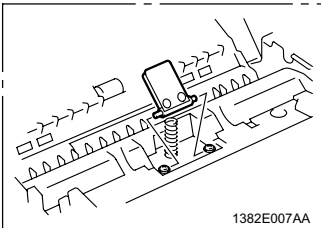
2. Using a soft cloth, wipe clean the surface of the Paper Separator Pad.

## (9) Removal of the Paper Separator Pad

1. Open the Document Feeder Cover.



2. Remove the Paper Separator Cover.



3. Loosen the two screws, and then remove the Paper Separator Pad.

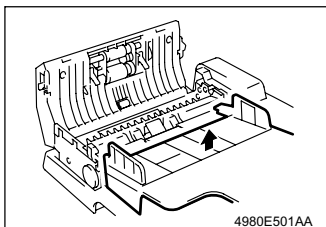
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### NOTE

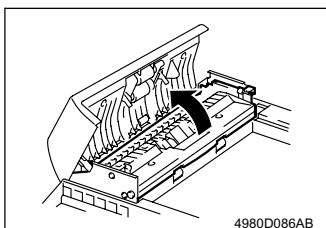
- Be extremely careful not to lose the spring on the Paper Separator Pad.
-

## (10) Cleaning of the CIS and Shading roller

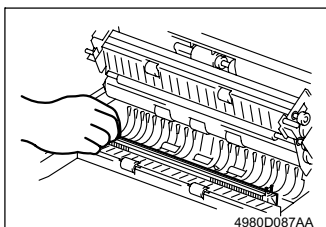
1. Open the Document Feeder Cover.



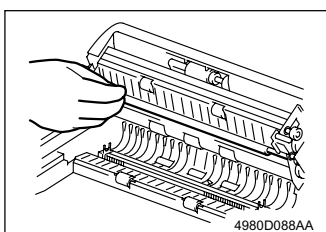
2. Remove the exit tray.



3. Open the ADF Assy.



4. Using a soft cloth, wipe clean the surface of the CIS Glass.



5. Using a soft cloth, wipe clean the surface of the Shading roller.

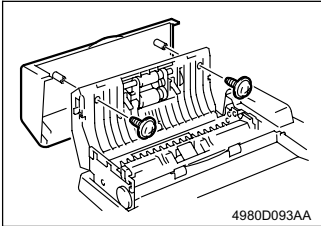
## (11) Removal of the CIS

---

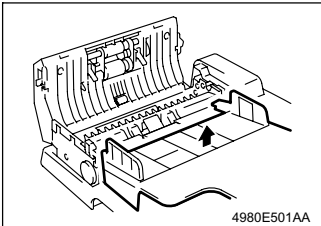
### NOTE

- Whenever the CIS is to be replaced, be sure to replace also the polyester film.
- 

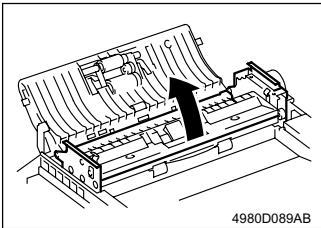
1. Open the Document Feeder Cover.



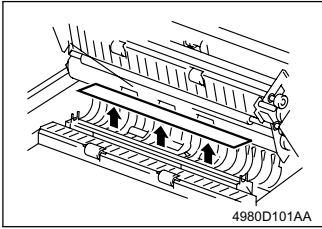
2. Remove the two screws, and then remove the Document Feeder Cover.



3. Remove the exit tray.



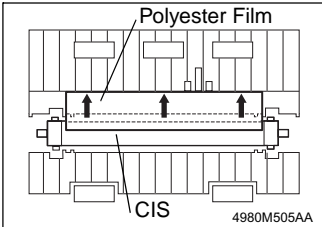
4. Open the ADF Assy.



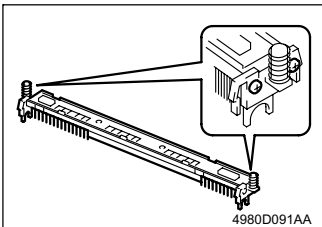
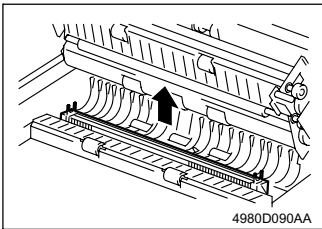
5. Peel off the film.

#### NOTES

- Whenever the CIS is to be replaced, be sure to replace also the polyester film.
- Affix the polyester film after the CIS has been installed.
- When affixing the polyester film, make sure that it is correctly aligned with the reference position shown in the illustration.
- Make sure that the polyester film, when affixed, is free from folds, skew, or any other defects.

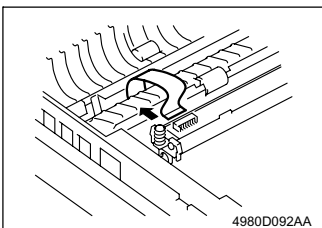


6. Take out the CIS.



#### NOTE

Do not lose two springs.



7. Remove the Flat Cable from the CIS.

#### NOTE

After replacing the CIS, be sure to adjust the Shading Level in the Service Mode.

 S-70

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# DIS/REASSEMBLY, ADJUSTMENT

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# 1. SAFETY INFORMATION

## 1-1. Laser Safety

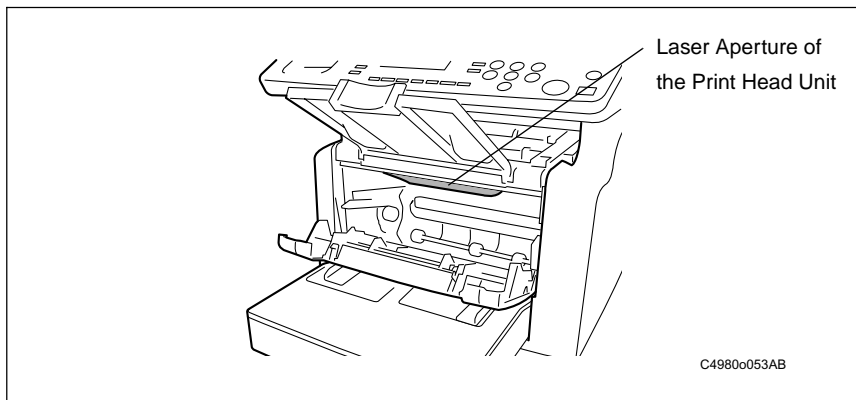
- This is a digital machine certified as a class 1 laser product. There is no possibility of danger from a laser, provided the machine is serviced according to the instruction in this manual.

## 1-2. Internal Laser Radiation

Semiconductor laser	
Maximum power of the laser diode	15 mW
Maximum average radiation power (*)	36.903 $\mu$ W
Wavelength	770-800 nm

\*: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 SERVICE ITEM. Therefore, the print head unit should not be opened under any circumstances.



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

- This machine is certified as a Class I 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 to page D-4 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 sikkerheds kravene.

Halvlederlaser	
Laserdiodens højeste styrke	15 mW
Bølgelængden	770-800 nm

## Finland, Sweden

### **VARO!**

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

LOUKAN 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

### **WARNING!**

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

### **WARNING!**

Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

## Norway

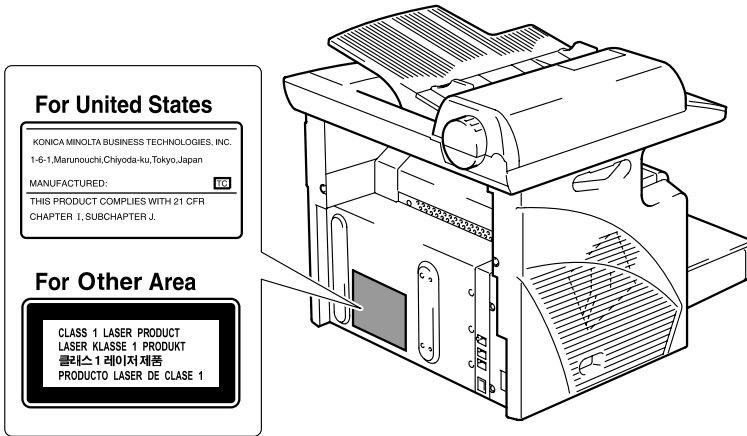
### **ADVERSEL**

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

Halvleder laser	
Maksimal effekt till laserdiode	15 mW
Bølgelengde	770-800 nm

### 1-3. Laser Safety Label

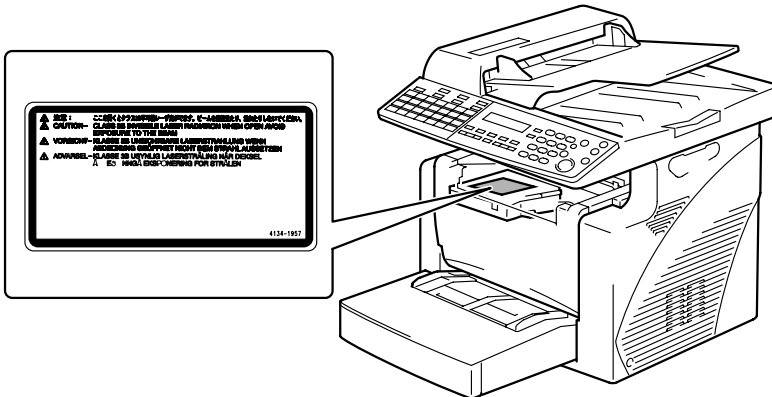
- A laser safety labels is attached to the outside of the machine as shown below.



4980D095AA

### 1-4. Laser Caution Label

- A laser caution label is attached to the inside of the machine as shown below.



4980D094AA

### **1-5. 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 print head and PC Drum, be sure first to turn this machine OFF.
- If the job requires that this machine 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.

[manuals4you.com](http://manuals4you.com)

## 2. PRECAUTIONS FOR DISASSEMBLY/ADJUSTMENTS

### 2-1. Parts That Must Not be Touched

#### (1) Red Painted Screws

Purpose of Application of Red Paint

Red painted screws show that the assembly or unit secured can only be adjusted or set at the factory and shall not be readjusted, set, or removed in the field.

If it becomes unavoidably necessary to disassemble any of these assemblies and units, disassembly may be done provided that the conditions permitting reassembly are met.

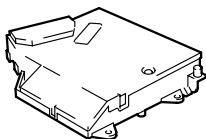
Note also that when two or more screws are used on the part in question, only one representative screw may be marked with red paint.

#### (2) Variable resistors on board

Do not turn the variable resistors on boards for which no adjusting instructions are given in ADJUSTMENT.

#### (3) Other Screws not Marked with Red Paint

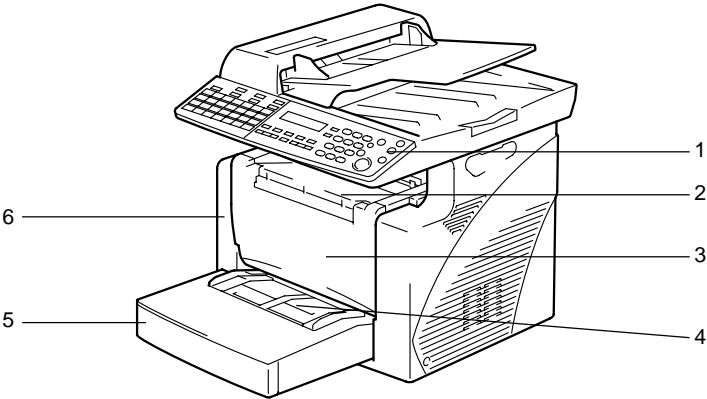
#### PH Unit



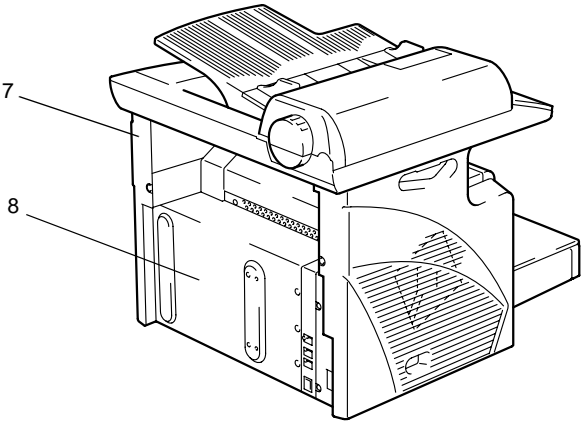
4980D014AA

### 3. DISASSEMBLY/REASSEMBLY

#### 3-1. Identification of Exterior Parts and Removal Procedures for Them (Main unit)



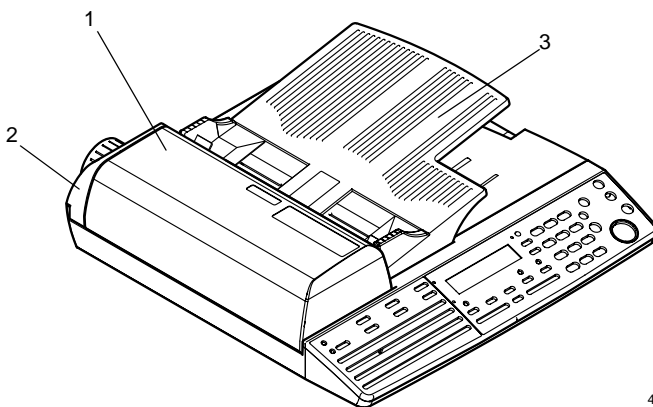
4980D099AA



4980D100AA

No.	Name	Removal Procedure
1	Control Panel	Remove the three screws, unplug the connector and the flat cable, and remove the Control Panel. <b>D-12</b>
2	Exit tray	While pressing out one side, remove the Exit tray.
3	Front Door	Open the Front Door. → While pressing in one side, remove the Front Door.
4	Bypass Tray	–
5	Tray1	Hold down the main unit with one hand and pull Tray1 off toward you.
6	Left Cover	Open the Front Door. → Remove the three screws, unhook the eight tabs, and remove the Left Cover.
7	Right Cover	Open the Front Door. → Remove the four screws, unhook the five tabs, and remove the Right Cover.
8	Rear Cover	Remove the four screws, and remove the Rear Cover.

### 3-2. Identification of Exterior Parts and Removal Procedures for Them (Automatic Document unit)



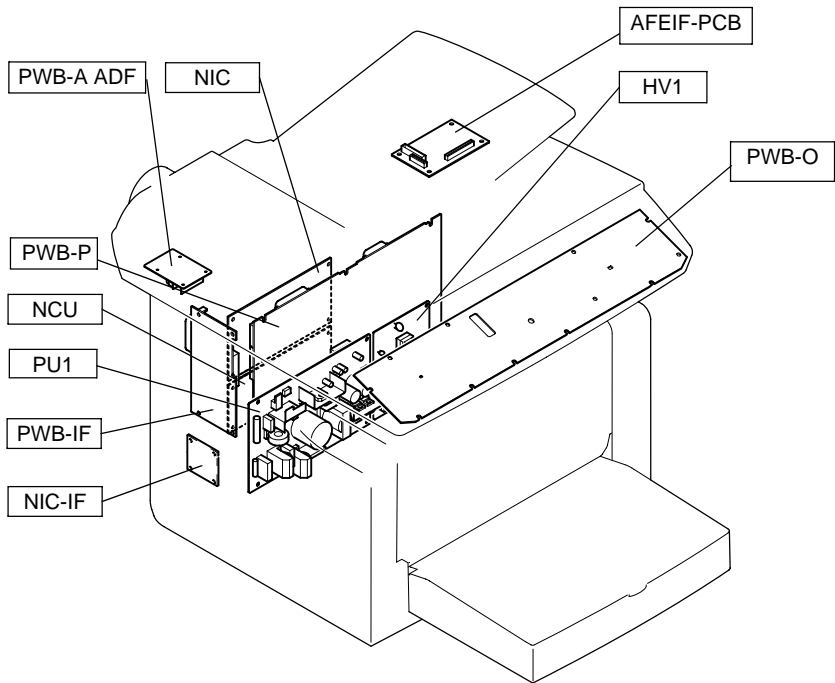
4980D096AA

No.	Name	Removal Procedure
1	Document Feeder Cover	Open the Document Feeder Cover. → Remove the two screws. → Remove the Document Feeder Cover.
2	ADF Motor Cover	ADF Motor Cover Remove the two screws. → Remove the ADF Motor Cover.
3	Document Feeder Tray	Remove the Document Feeder Tray.









### 3-3. Removal of Circuit Boards and Other Electrical Components

#### NOTES

- When removing a circuit board or other electric component, refer to the precautions for handling PWBs and follow the corresponding removal procedures.
- The removal procedures given in the following paragraphs omit the removal of the component in question from a connector or a PWB support.
- Where it is absolutely necessary to touch the ICs and other electric components on the board, be sure to ground your body.



4980D098AA

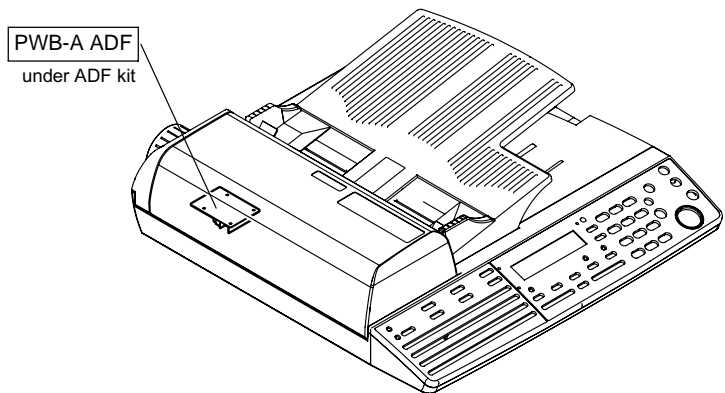
Symbol	Name	Removal Procedures
AFEIF-PCB	Analog Front End Interface Board	 D-22
PWB-P	Controller/Mechanical Control Board	 D-12
PWB-O	Control Panel	 D-12
PWB-IF	Interface Board	 D-13
PWB-A ADF	Automatic Document Feeder Control Board	 D-22
PU1	Power Unit	 D-15
HV1	High Voltage Unit	 D-18
NCU	Network Control Unit Board	 D-11

### 3-4. Removal of Circuit Boards and Other Electrical Components (Automatic Document Feeder)



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**NOTES**

- When removing a circuit board, refer to the precautions for handling printed circuit boards and follow the corresponding removal procedures.
  - The following removal procedures omit the removal of the applicable component from connectors and circuit board supports.
  - When it is necessary to touch ICs and other electrical components on the circuit board, be sure to first ground yourself.
- 



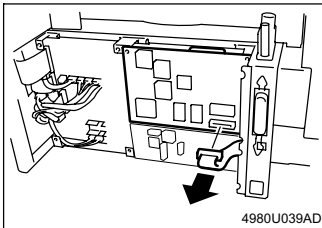
4980D097AA

Symbol	Name	Removal Procedure
PWB-A ADF	Automatic Document Feeder Control Board	 <b>D-21</b>
AFEIF-PCB	Analog Front End Interface Board	 <b>D-14</b>

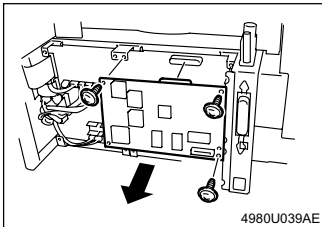
## (1) Removal of the Network Interface Card Board (for KONICA MINOLTA FAX 3900 only)

### <Removal Procedures>

1. Remove the Rear Cover.



2. Disconnect the connector from the Network Interface Card Board.



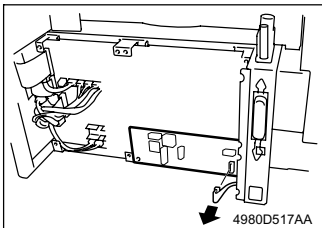
3. Remove three screws.

4. Remove the Network Interface Card Board.

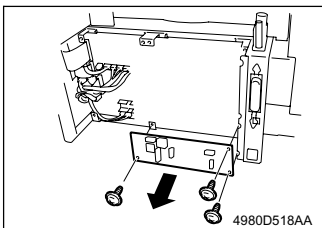
## (2) Removal of the Network Control Unit Board

### <Removal Procedures>

1. Remove the Rear Cover.



2. Disconnect all connectors from the Network Control Unit Board.



3. Remove three screws.

4. Remove the Network Control Unit Board.

### (3) Removal of the Controller/Mechanical Control Board

<Removal Procedures>

1. Remove the Rear Cover.

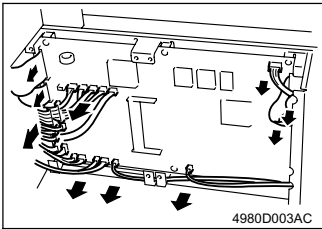
 **D-7**

2. Remove the Network Interface Card Board. (KONICA MINOLTA FAX 3900 only)

 **D-11**

3. Remove the Network Control Unit Board.

 **D-11**

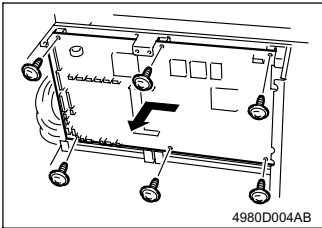


4. Disconnect all connectors and flat cables from the Controller/Mechanical Control Board.

---

#### NOTE

- Use utmost care not to snap off the flat cable.
- 

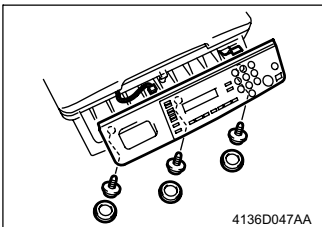


5. Remove six screws.
6. Remove the Controller/Mechanical Control Board.

### (4) Removal of the Control Panel

1. Remove the Exit tray.

 **D-7**



2. Remove the Rubber cap, then remove the three screws.
3. Unplug one connector and one flat cable.
4. Remove the Control Panel.

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#### NOTE

- Use utmost care not to snap off the flat cable.
-

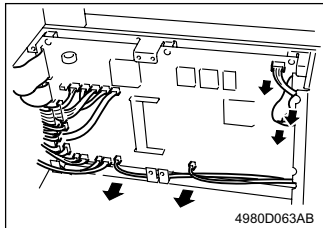
**(5) Removal of the Interface Board**

1. Remove the Rear Cover.

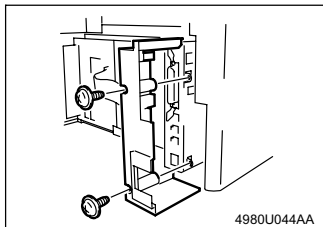
 **D-7**

2. Remove the Network Control Unit Board.

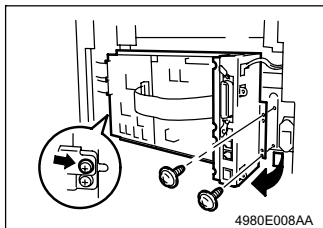
 **D-11**



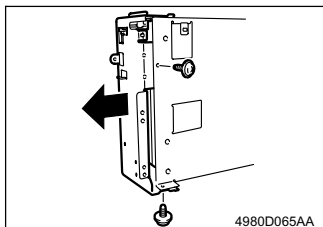
3. Unplug the five connectors on the Controller/  
Mechanical Control Board.



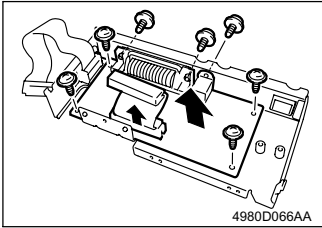
4. Remove the two screws.  
5. Remove the Left Rear Cover.



6. Remove the three screws.  
7. Remove the Circuit Board and Metal Bracket.



8. Remove the two screws.  
9. Remove the Protective Metal Bracket for the  
Interface Board.



10. Remove the seven screws.
11. Remove the Interface Board.

## (6) Removal of the Plate NIC Board (KONICA MINOLTA FAX 3900 only)

1. Remove the Rear Cover.

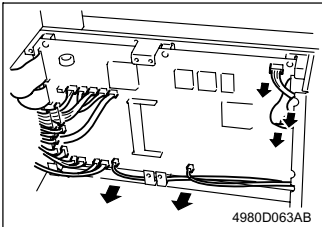
**D-7**

2. Remove the Network Interface Card Board. (KONICA MINOLTA FAX 3900 only)

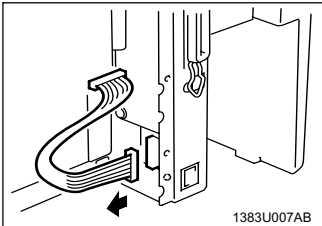
**D-11**

3. Remove the Network Control Unit Board.

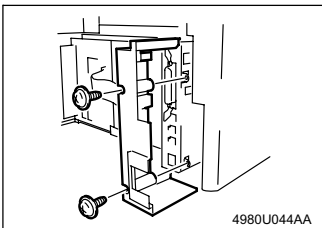
**D-11**



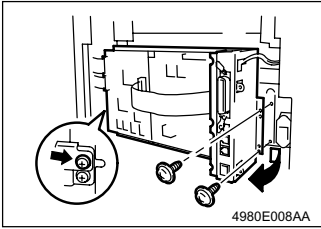
4. Unplug the five connectors on the Controller/  
Mechanical Control Board.



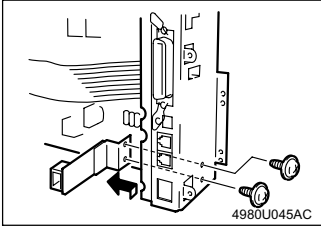
5. Unplug the connector on the Plate NIC Board.



6. Remove the two screws.
7. Remove the Left Rear Cover.



8. Remove the three screws.
9. Remove the Circuit Board and Metal Bracket.



10. Remove the two screws.
11. Remove the Plate NIC Board.

## (7) Removal of the Power Unit

1. Remove the Right Cover.

D-7

2. Remove the Left Cover.

D-7

3. Remove the Rear Cover.

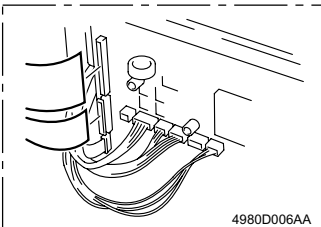
D-7

4. Remove the Network Interface Card Board. (KONICA MINOLTA FAX 3900 only)

D-11

5. Remove the Network Control Unit Board.

D-11



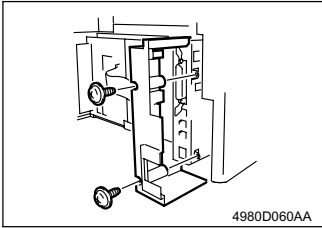
6. Unplug the two flat cables from the Controller/  
Mechanical Control Board.

### NOTE

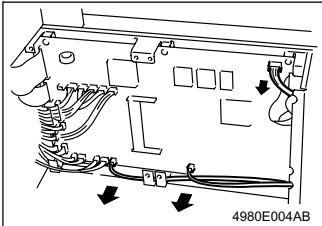
- Use utmost care not to snap off the flat cable.

7. Remove the ADF Unit.

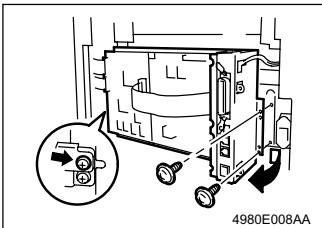
D-19



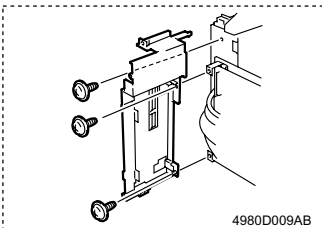
8. Remove the two screws.
9. Remove the Left Rear Cover.



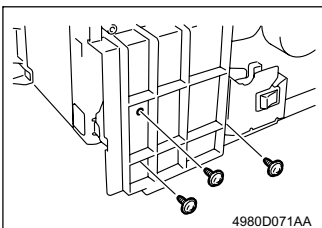
10. Unplug three connectors on the Controller/  
Mechanical Control Board.



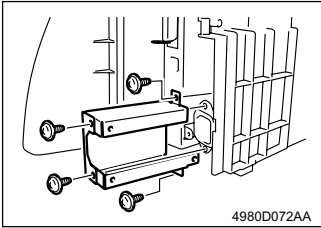
11. Remove the three screws.
12. Remove the Circuit Board and Metal Bracket.



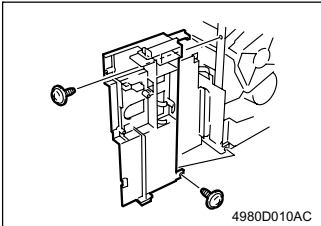
13. Remove the three screws.
14. Unhook the tab, and then remove the Right Rear  
Frame.



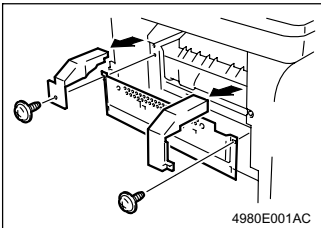
15. Remove the three screws from the Left Rear  
Frame.



16. Remove the four screws.
17. Remove the Metal Bracket.



18. Remove the two screws.
19. Unhook the tab, and then remove the Left Rear Frame.

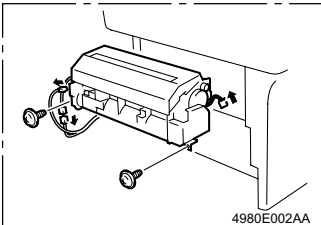


20. Remove the Upper Left Cover.
21. Remove the two screws.
22. Remove the Upper Right Cover and Protective Metal Bracket.

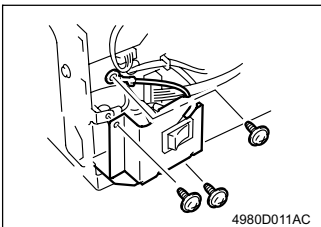
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**NOTE**

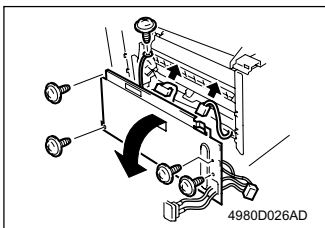
- *The Protective Metal Bracket is tightened together with the Upper Right Cover.*
- 



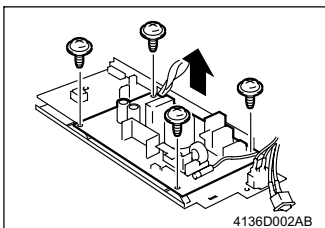
23. Remove the two screws.
24. Unplug the three connectors.
25. Remove the Fusing Unit Assy.



26. Remove three screws.
27. Remove the Power Switch stay.
28. Remove the Power Switch.



29. Remove four screws.
30. Disconnect three connectors.
31. Remove the Power Unit Assy.

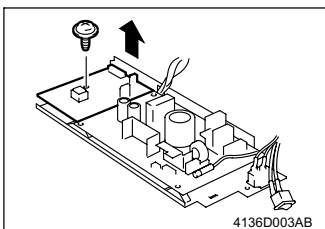


32. Remove four screws.
33. Remove the Power Unit.

## (8) Removal of the High Voltage Unit

1. Remove the Power Unit Assy.

 **D-15**



2. Remove one screw.
3. Remove the High Voltage Unit.

### 3-5. Removal of Units

#### (1) Removal of the ADF Unit

1. Remove the Left Cover.

 **D-7**

2. Remove the Right Cover.

 **D-7**

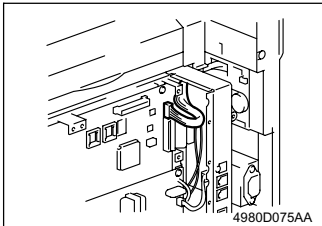
3. Remove the Rear Cover.

 **D-7**

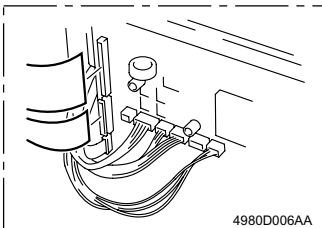
4. Remove the Network Interface Card Board (for KONICA MINOLTA 3900 only).

 **D-11**

5. Remove the Document Feeder Unit



6. Unplug the connector PI-104 on the Controller / Mechanical Control Board.

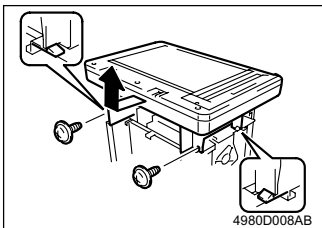


7. Unplug the two flat cables from the Controller/ Mechanical Control Board.

---

#### **NOTE**

- Be extremely careful not to break the flat cables.
- 



8. Remove the two screws.
9. Unhook the two tabs, and then remove the ADF Unit.

#### (2) Removal of the PH Unit

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#### **NOTES**

- NEVER attempt to replace the PH Unit with power being supplied to this machine. Doing that could lead to exposure to the laser beam, resulting in blindness
  - NEVER attempt to disassemble or adjust the PH Unit. Doing that could lead to exposure to the laser beam, resulting in blindness.
-

1. Remove the ADF Unit.

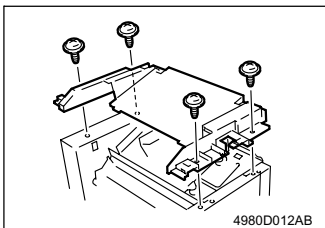
 **D-19**

2. Remove the Fusing Unit.

 **E-7**

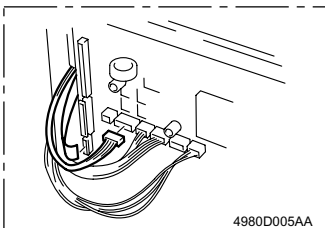
3. Remove the Exit tray.

 **D-7**



4. Remove the four screws.

5. Unhook the two tabs, and then remove the Upper Cover.

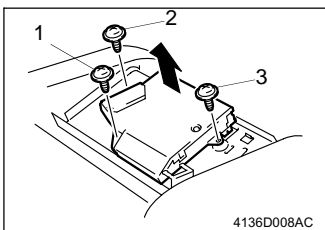


6. Disconnect one flat cable and one connector from the Controller/Mechanical Control Board.

---

**NOTE**

- Use utmost care not to snap off the flat cable.
- 



7. Remove three screws.

8. Remove the PH Unit.

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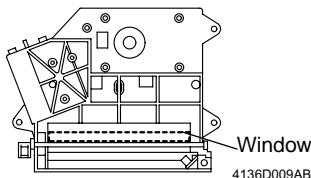
**NOTE**

- When reinstalling the PH Unit, tighten the screws in the numerical order shown in the illustration.
- 

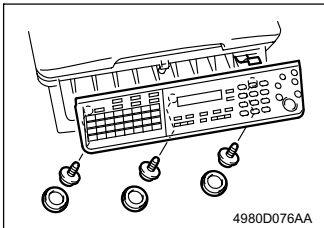
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**Precautions for Removal/Reinstallation of the PH Unit**

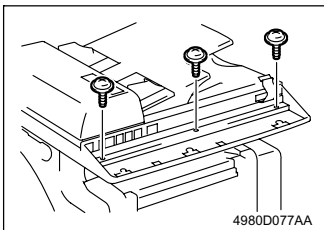
- NEVER touch the window on the backside of the PH Unit. A dirty window can cause an image problem.



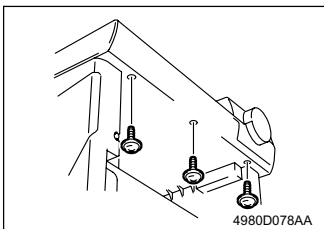
### (3) Removal of the Document Feeder Unit



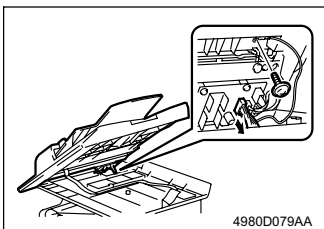
1. Remove the three screw caps.
2. Remove the three screws, and remove one connector and the control panel.
3. Lift up the control panel be slowly and carefully.
4. Remove the flat cable from the control panel.
5. Remove the control panel.



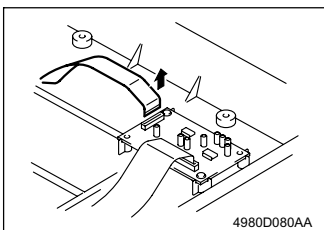
6. Remove the three screws.



7. Remove the three screws, and lift the document feed unit be slowly and carefully.



8. Unplug the P104 connector on the Document Feeder Control Board.
9. Remove the screw, and remove the Earth cable.

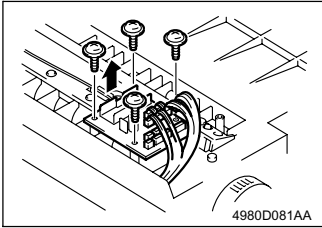


10. Remove the flat cable (P603) from the AFEIF Board.
11. Remove the document feed unit.

#### (4) Removal of the Automatic Document Feeder Control Board

1. Remove the document feed unit.

 D-21

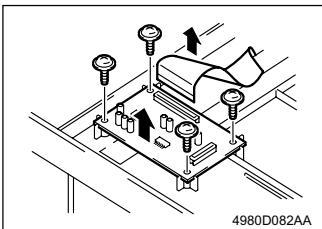


2. Unplug six connectors on the document control board.
3. Remove four screws.
4. Remove the document control board.

#### (5) Removal of the AFEIF Board

1. Remove the document feed unit.

 D-21

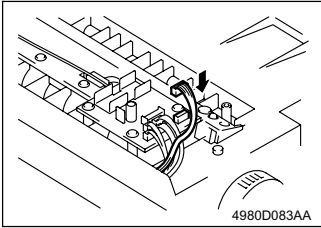


2. Remove the flat cable from the AFEIF Board.
3. Remove four screws.
4. Remove the AFEIF Board.

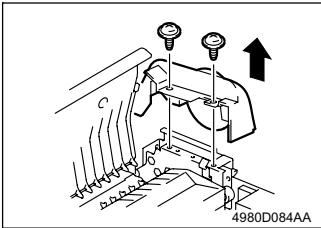
## (6) Removal of the Document Feeder Main Motor

1. Remove the document feed unit.

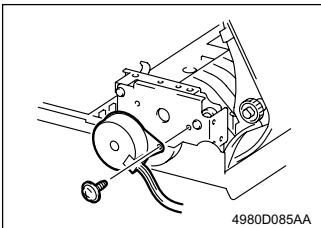
 D-21



2. Remove the connector PA01 on the Automatic Document Feeder Control Board.



3. Open the document feeder Cover.
4. Remove the two screws, and then remove the ADF motor cover.

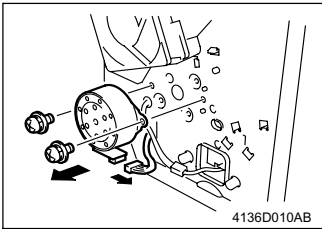


5. Remove the two screws, and then remove the ADF motor.

### 3-6. Disassembly of the Main Drive Section

#### (1) Removal of the Main Motor

1. Remove the Left Cover.



2. Disconnect one connector.
3. Remove two screws.
4. Remove the Main Motor.

#### (2) Removal of the Paper Empty Sensors

1. Remove the Imaging Cartridge.
2. Remove the Front Door.

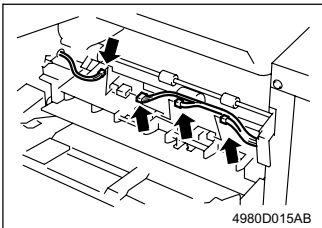
---

#### NOTE

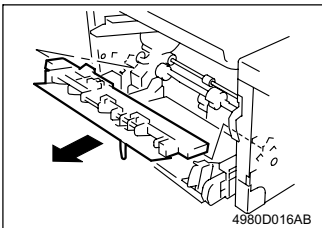
- The Imaging Cartridge is the Drum Cartridge, to which the Toner Cartridge is mounted.
- 

3. Remove the Left and Right Covers.

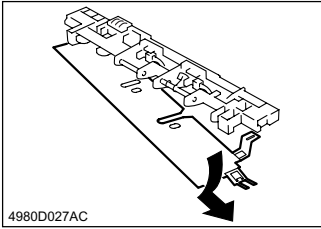
 **D-7**



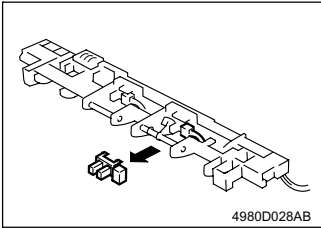
4. Remove the four connectors from the Paper Take-Up Upper Guide Assy.



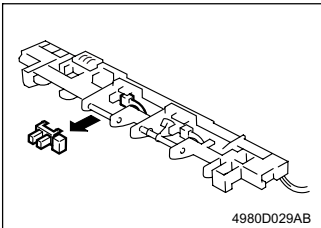
5. Unhook the two tabs, and then remove the Paper Take-Up Upper Guide Assy.



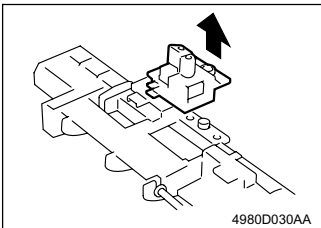
6. Unhook two tabs and remove the tray.



7. Remove the Multi purpose Tray Paper Empty Sensor.



8. Remove the Multiple Bypass Tray Paper Empty Sensor.

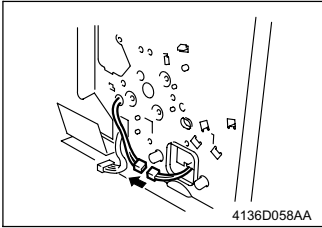


9. Remove the Toner Empty detection sensor.

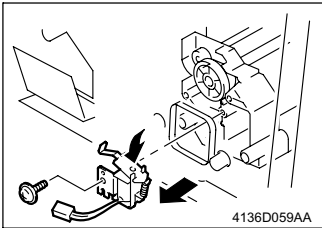
### (3) Removal of the Paper Take-Up Solenoid

1. Remove the Left Cover.

 D-7



2. Disconnect one connector of the Paper Take-Up Solenoid.

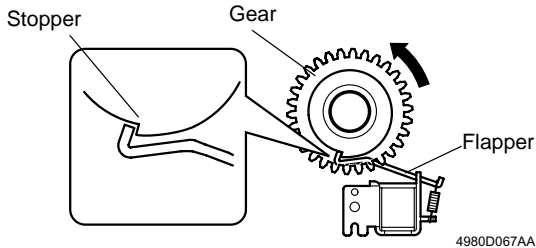


3. Remove one screw.
4. Remove the Paper Take-Up Solenoid.

---

#### ***Precautions for Installation of the Paper Take-Up Solenoid***

1. Mount the Paper Take-Up Solenoid and tighten one screw.
2. Turn the gear in the direction of the arrow shown below so that the flapper of the Paper Take-Up Solenoid catches the stopper of the gear.



#### (4) Removal of the Paper Take-Up Clutch Gear

1. Remove the Fusing Unit.

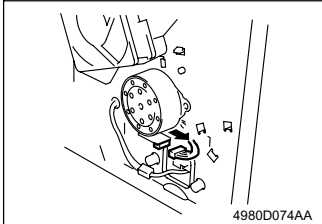
 E-7

2. Remove the Power Unit.

 D-15

3. Remove the Paper Take-Up Upper Guide Assy.

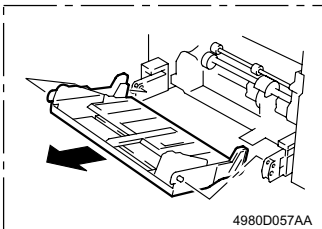
 D-24



4. Disconnect one connector and remove the Cooling Fan Motor 2.

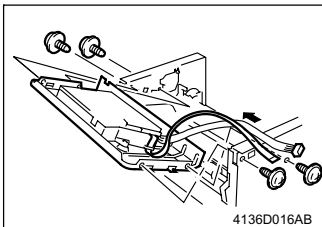
5. Disconnect one connector of the Main Motor.

 D-24



6. Remove the Paper Lifting Plate Assy.

7. Remove two springs.



8. Disconnect one connector and one flat cable from the Controller/Mechanical Control Board.

#### **NOTE**

- Use utmost care not to snap off the flat cable.

9. Remove the Top Cover.

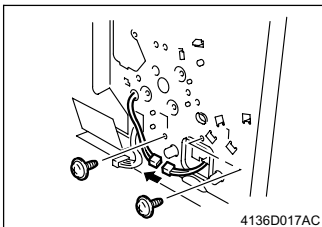
10. Remove four screws.

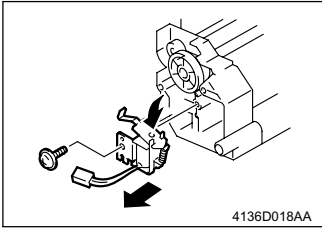
11. Remove the PH Base Plate Assy.

12. Disconnect one connector of the Paper Take-Up Solenoid.

13. Remove two screws.

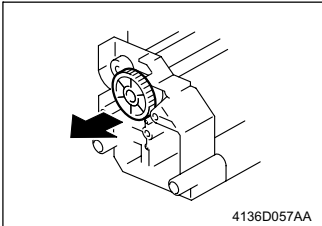
14. Remove the Left Frame.





15. Remove one screw.

16. Remove the Paper Take-Up Solenoid.

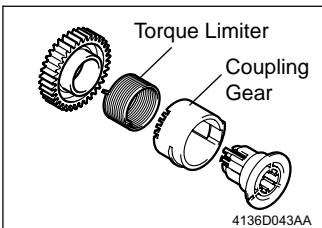


17. Unhook two tabs and remove the Paper Take-Up Clutch Gear.

## (5) Removal of the Torque Limiter

1. Remove the Paper take up Clutch Gear.

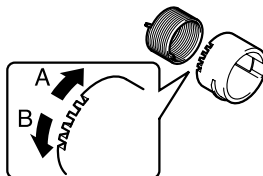
D-27



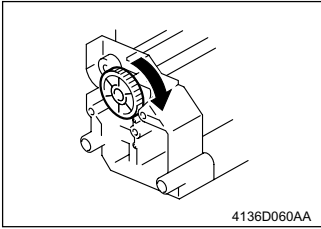
2. Unhook three tabs and take apart the Paper Take-Up Clutch Gear then, remove the Torque Limiter.

### **Precautions for Installation of the Torque Limiter**

Coupling Gear has five dent for adjustment the Take-up Roller position. When Torque Limiter is replaced, adjust the set position of the Coupling Gear so that the Take-up Roller becomes level. The procedure is as follow.

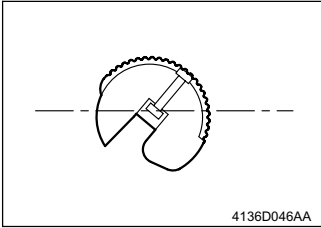


4136D044AA

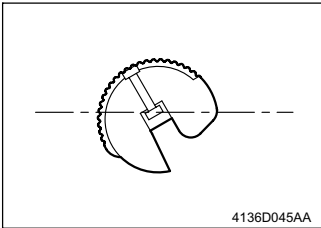


After setting replaced Paper Take-Up Clutch Gear (Torque Limiter) to the shaft, Rotate the Paper Take-Up Clutch Gear by hand (Need to be released Solenoid Flapper).

Look at the stop position of the Take-Up Roller from Clutch Gear side.



1. When the Roller is lent to clockwise, move the coupling Gear to A direction.



2. When the Roller is lent to counter clockwise, move the coupling Gear to B direction.

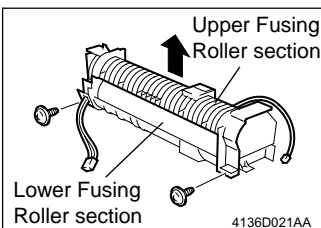
## (6) Disassembly of the Fusing Unit

### NOTE

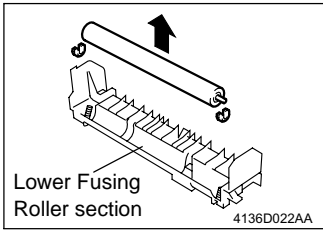
- The Fusing Unit is extremely hot immediately after the Power Switch has been turned OFF. Allow a sufficient time to let it cool down before starting the procedure to prevent burn.

1. Remove the Fusing Unit.

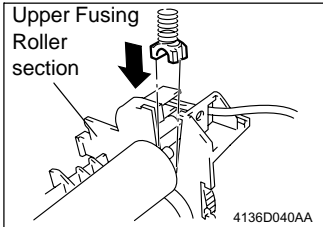
 E-7



2. Remove the two screws.
3. Remove the Fusing Unit is divided into the Upper Fusing Roller section and Lower Fusing Roller section.



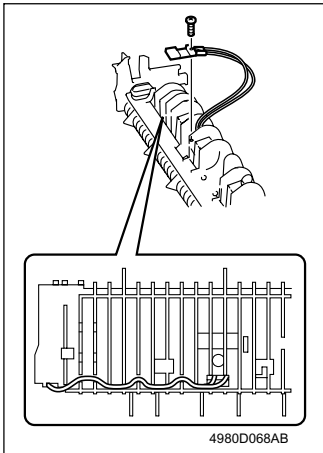
4. Remove two bushings and the Pressure Roller.




---

**Precautions for Installation of Bushings**

- Make sure that the slits in the bushing are properly aligned with the rib of the Fusing Unit.
- 



5. Remove one screw and the Thermistor.

---

**NOTE**

- When reinstalling the Thermistor, route the harness as shown in the illustration.
-

## 4. ADJUSTMENTS

### 4-1. Electrical/Image Adjustment

#### (1) Accessing the Service Mode

1. Press the Utility key.
2. Press the following keys in order to enter the Service mode.  
Utility → Stop → 0 → 0 → Stop → 0 → 1

---

#### NOTE

- *Be sure to keep the access procedure for the Service mode from any unauthorized persons not involved with service operations.*
- 

#### (2) Accessing the “ADJUST” Menu

1. Enter the Service mode.
2. Press the Zoom Select key to select the “ADJUST” menu.

#### (3) Printing a Test Pattern

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#### NOTES

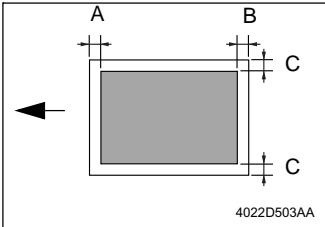
*Print a test pattern when making the following adjustments.*

- *Printer's main scanning & sub-scanning registration adjustments*
  - *Scanner's main scanning & sub-scanning registration adjustments*
  - *Scanner's zoom ratio adjustment*
  - *Leading edge tilt adjustment*
  - *Automatic Document Feeder sub-scanning zoom ratio adjustment*
  - *Automatic Document Feeder main scanning & sub-scanning registration adjustments*
- 

1. Enter the Service mode.
2. Press the Density Select key to select the function.
3. Select “PRINT TEST PATTERN” → “TEST PATTERN 1”.
4. Press the Start key to begin printing the test pattern.

**(4) Margin Adjustment (Leading Edge/Trailing Edge/Both Sides)**

<Requirement>



- Specify the amount erased at the leading edge (width of A), trailing edge (width of B), and both sides (width of C) of the paper.
- Default setting: 4 mm

Mode	Function Item	Setting Range
Service's Choice	Leading Edge Erase Trailing Edge Erase Vertical Edge Erase	0 to 5 1 increment = 1 mm

***Perform this adjustment in the following cases.***

- *When the user requests a smaller margin*

<Adjustment Procedure>

1. Enter Service's Choice in the Service mode.
2. Select "LEADING EDGE ERASE".
3. Specify the setting.

***Setting Overview***

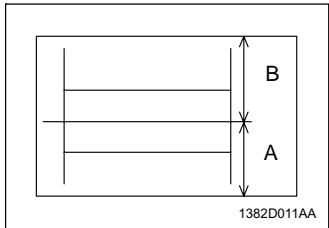
*To reduce the margin..... Decrease the setting.*

*To increase the margin..... Increase the setting.*

4. Specify settings for the "TRAILING EDGE ERASE" and the "VERTICAL EDGE ERASE" functions in the same way.

(5) Printer's Main Scanning Registration Adjustment

<Requirement>



- Adjust the amount that widths A and B in the printed test pattern are shifted so that the following specification is met.

Specification	Mode	Function Item	Setting Range
$0 \pm 2.0 \text{ mm}$	"ADJUST" menu	PRN MAIN REGIST	60 to 140 1 increment = 0.1 mm

**Perform this adjustment in the following cases.**

- After the PH Unit has been replaced

<Adjustment Procedure>

1. Print the test pattern.
2. Check the amount that widths A and B in the test pattern are shifted.  
If the shift is out of specification, adjust it according to the following procedure.
3. Enter the "ADJUST" menu in the Service mode.

4. Change the setting.

If the width of A is less than the width of B..... Increase the setting.

If the width of B is less than the width of A..... Decrease the setting.

\* If the shift cannot be adjusted to within the specification with a single adjustment, perform the adjustment again to change the setting.

5. Press the Yes key to apply the setting.

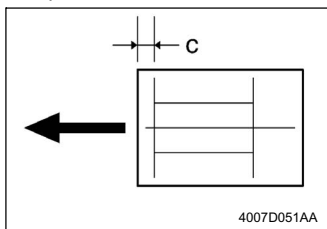
**NOTE**

If the Stop key is pressed, instead of the Yes key, the main screen is displayed and the setting returns to that before it was changed.

6. Print a test pattern again and check it.

## (6) Printer's Sub-Scanning Registration Adjustment

### <Requirement>



- Adjust the width of C in the printed test pattern so that the following specification is met.

Specification	Mode	Function Item	Setting Range
20 ± 2.5 mm	"ADJUST" menu	PRN SUB REGIST	87 to 113 1 increment = 0.46 mm

---

### **Perform this adjustment in the following cases.**

- After the PH Unit has been replaced
  - After the printer's main scanning registration adjustment has been performed
- 

### <Adjustment Procedure>

1. Print the test pattern.
2. Check that the width of C in the test pattern meets the specification.

If the width of C is out of specification, adjust it according to the following procedure.

3. Enter the "ADJUST" menu in the Service mode.
4. Change the setting.

If the width of C in the test pattern is longer than the specified width..... Increase the setting.

If the width of C in the test pattern is shorter than the specified width..... Decrease the setting.

\* If the shift cannot be adjusted to within the specification with a single adjustment, perform the adjustment again to change the setting.

5. Press the Yes key to apply the setting.

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### **NOTE**

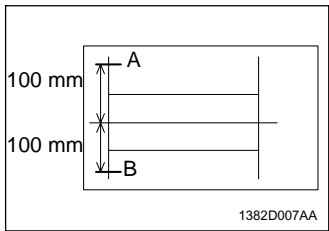
If the Stop key is pressed, instead of the Yes key, the main screen is displayed and the setting returns to that before it was changed.

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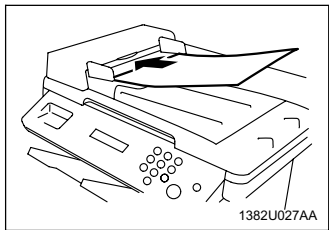
6. Print a test pattern again and check it.

**(7) Leading Edge Tilt Adjustment**

1. Print the test pattern.



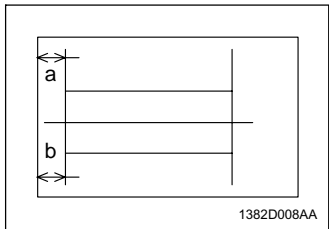
2. Draw lines 100 mm (A and B) from the center of the test pattern, as shown in the illustration.



3. Load the test pattern into the Automatic Document Feeder, and then print five single-sided copies.

**NOTE**

- *The test pattern should be positioned vertically.*

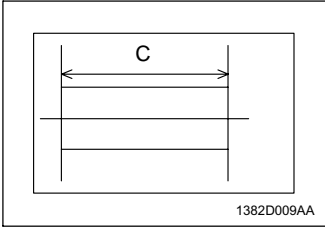


4. Measure the lengths a and b on the copies of the test pattern and, if there is a large shift, adjust it according to the following procedure.

Standard values of a and b =  $\pm 1.0$  mm

**(8) Automatic Document Feeder Sub-Scanning Zoom Ratio Adjustment**

<Reference>



- Adjust the length of C in the copy of the test pattern so that the following specification is met.

Zoom Ratio	Specification	Mode	Function	Setting Range
Full Size (100%)	200 ± 0.5 mm	"ADJUST" menu	ADF SUB ZOOM	95 to 105 1 increment = 0.4%

<Adjustment Procedure>

1. Print the test pattern.
2. Enter the "ADJUST" menu in the Service mode.
3. Load the test pattern into the Automatic Document Feeder and make a test copy.

**NOTE**

- The test pattern should be positioned vertically.
- Use A4 L or Letter L paper loaded into Tray 1 to make the test copy.

4. If the length of C in the copy of the test pattern is not the same as the length of C in the test pattern, adjust it according to the following procedure.
5. Change the setting.

If the width of C in the test pattern is longer than the specified width . . . . .

Decrease the setting.

If the width of C in the test pattern is shorter than the specified width . . . . .

Increase the setting.

\* If the shift cannot be adjusted to within the specification with a single adjustment, perform the adjustment again to change the setting.

6. Press the Yes key to apply the setting.

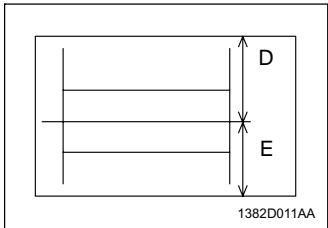
**NOTE**

If the Stop key is pressed, instead of the Yes key, the main screen is displayed and the setting returns to that before it was changed.

Load the test pattern into the Automatic Document Feeder again, make another test copy, and check it.

(9) Automatic Document Feeder Main-Scanning Registration Adjustment

<Reference>



- Adjust the amount that widths D and E in the copy of the test pattern are shifted so that the following specification is met.

Specification	Mode	Function	Setting Range
0 ± 2.0 mm	“ADJUST” menu	ADF MAIN REGIST	90 to 110 1 increment = 0.5 mm

**NOTE**

- Perform this adjustment after the Automatic Document Feeder sub-scanning zoom ratio adjustment.

<Adjustment Procedure>

1. Print the test pattern.
2. Enter the “ADJUST” menu in the Service mode.
3. Load the test pattern into the Automatic Document Feeder and make a test copy.

**NOTES**

- The test pattern should be positioned vertically.
- Use A4 L or Letter L paper loaded into Tray 1 to make the test copy.

4. Fold the copy of the test pattern in half, and then check if the fold aligns with the center-line.

If they are not aligned, adjust it according to the following procedure.

5. Change the setting.

If D is shorter . . . . . Decrease the setting.

If E is shorter . . . . . Increase the setting.

\* If the shift cannot be adjusted to within the specification with a single adjustment, perform the adjustment again to change the setting.

6. Press the Yes key to apply the setting.

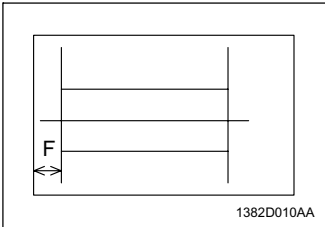
**NOTE**

If the Stop key is pressed, instead of the Yes key, the main screen is displayed and the setting returns to that before it was changed.

Load the test pattern into the Automatic Document Feeder again, make another test copy, and check it.

(10) Automatic Document Feeder Sub-Scanning Registration Adjustment

<Reference>



- Adjust the width of F in the copy of the test pattern so that the following specification is met.

Specification	Mode	Function	Setting Range
20 ± 3.0 mm	“ADJUST” menu	ADF SUB REGIST	90 to 110 1 increment = 0.5 mm

Perform this adjustment in the following cases.

- After the Scanner Assy. has been replaced
- After the printer's main scanning & sub-scanning registration adjustments and the scanner's sub-scanning zoom ratio adjustment have been performed

<Adjustment Procedure>

1. Print the test pattern.
2. Enter the “ADJUST” menu in the Service mode.
3. Load the test pattern into the Automatic Document Feeder and make a test copy.

**NOTES**

- *The test pattern should be positioned vertically.*
- *Use A4 L or Letter L paper loaded into Tray 1 to make the test copy.*

4. Check that the width of F in copy of the test pattern meets the specification.

If the width of F is out of specification, adjust it according to the following procedure.

5. Change the setting.

If the width of F in the test pattern is longer than the specified width . . . . .

Increase the setting.

If the width of F in the test pattern is shorter than the specified width . . . . .

Decrease the setting.

- \* If the shift cannot be adjusted to within the specification with a single adjustment, perform the adjustment again to change the setting.

6. Press the Yes key to apply the setting.

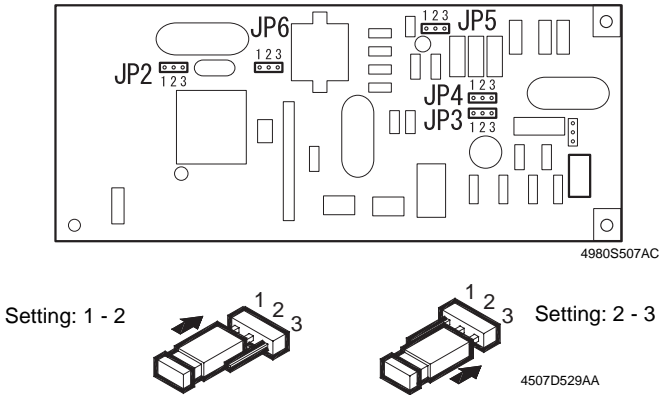
**NOTE**

*If the Stop key is pressed, instead of the Yes key, the main screen is displayed and the setting returns to that before it was changed.*

*Load the test pattern into the Automatic Document Feeder again, make another test copy, and check it.*

4-2. Adjustment of Jumper Switches on the NCU Board

- Make the correct settings of the jumper switches at six places on the NCU Board according to the applicable marketing area.
- When the NCU Board has been replaced, check that the jumper switches are set as shown below.



\* Country Classification Jumper Switch Setting

Type	Jumper Switch	Setting	Country
STD (UL)/ (Others)	JP2	1 - 2	STD (UL): Canada, South America, Taiwan, U.S A.
	JP3	1 - 2	
	JP4	1 - 2	STD (Others): Bahrain, Baltic, Croatia, Hong Kong, Iran, Kuwait, Malaysia, New Zealand, Poland, Qatar, Romania, Russia, Singapore, Slovakia, Slovenia, Ukraine, Others.
	JP5	1 - 2	
	JP6	1 - 2	
TBR-21	JP2	2 - 3	Austria, Belgium, Cyprus, Czech, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Netherlands, Norway, Sweden, Switzerland, U.K.,
	JP3	2 - 3	
	JP4	2 - 3	
	JP5	2 - 3	
	JP6	2 - 3	
China	JP2	only 1	China
	JP3	1 - 2	
	JP4	1 - 2	
	JP5	1 - 2	
	JP6	2 - 3	

## 5. MISCELLANEOUS

### 5-1. Updating the Firmware

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#### NOTES

- *The TWAIN driver must already be installed on the host computer to be used for updating the firmware.*
  - *If the GDI printer driver or TWAIN driver is not installed, follow the procedure described below to install the driver.*
  - *If the driver is already installed, skip to "Procedure for Updating the Firmware" and update the firmware.*
- 

#### (1) Installing the GDI Printer Driver/ TWAIN Driver Using Plug and Play

<For Windows XP>

1. Start up the host computer, and then insert the CD-ROM into the CD-ROM drive.
2. Turn on this machine.
3. Use a USB cable to connect this machine to the host computer.
4. In the "Found New Hardware Wizard" dialog box, select "Install from a list or specific location [Advanced]", and then click the [Next] button.
5. Below "Search for the best driver in these locations.", select "Include this location in the search", and then click the [Browse] button.
6. Specify "\\Corresponding\_language\WinXP" on the CD-ROM, and then click the [OK] button.
7. Click the [Next] button, and then click the [Finish] button.
8. When the "Found New Hardware Wizard" dialog box appears again, repeat steps 4 through 7 to install all drivers.

<For Windows 2000>

1. Start up the host computer, and then insert the CD-ROM into the CD-ROM drive.
2. Turn on this machine.
3. Use a USB cable to connect this machine to the host computer.
4. In the "Install Hardware Device Drivers" dialog box, select "Search for a suitable driver for my device (recommended)", and then click the [Next] button.
5. In the "Locate Driver Files" dialog box, select "Specify a location", and then click the [Next] button.
6. Click the [Browse...] button, specify "\\Corresponding\_language\Win2K" on the CD-ROM, and then click the [OK] button.
7. Click the [OK] button, and then continue following the instructions in the dialog boxes that appear until the "Completing the Found New Hardware Wizard" dialog box appears.
8. Click the [Finish] button.
9. When the "Found New Hardware Wizard" dialog box appears again, repeat steps 4 through 8 to install all drivers.

<For Windows Me/98>

1. Start up the host computer, and then insert the CD-ROM into the CD-ROM drive.
2. Turn on this machine.
3. Use a USB cable to connect this machine to the host computer.
4. In the "Install Hardware Device Drivers" dialog box, click the [Next] button, select "Search for a suitable driver for my device (recommended)", and then click the [Next] button again.
5. Select "Specify a location", and then click the [Browse...] button.
6. Specify "\\Corresponding\_language\\Win9X" on the CD-ROM, and then click the [OK] button.
7. Click the [OK] button, and then continue following the instructions in the dialog boxes that appear until the "Completing the Found New Hardware Wizard" dialog box appears.
8. Click the [Finish] button.
9. When the "Found New Hardware Wizard" dialog box appears again, repeat steps 4 through 8 to install all drivers.

## (2) Procedure for Upgrading the Firmware (Engine firmware/ FAX firmware)

### NOTES

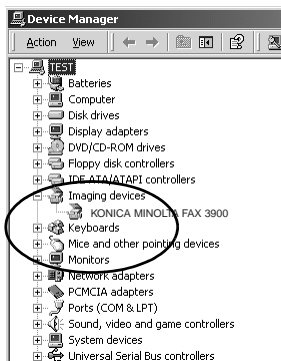
- The engine firmware, Copier firmware, and FAX firmware can be upgraded by using the following procedure.
- For the upgrading procedure of NIC firmware, see “Procedure for Upgrading the Firmware (NIC Firmware/ KONICA MINOLTA FAX 3900 only).”

 **D-45**

1. Turn on this machine.
2. Start up the host computer (Windows 98 or later).
3. Copy the “Update Software” folder and “Update” file to drive C. (Copy them into the highest directory on drive C.)
4. Use a USB cable to connect this machine to the host computer. (Wait until the hardware is detected.)
5. Display the “System Properties” dialog box (“Properties” for “My Computer”), click the “Hardware” tab, click the [Device Manager] button, select “Imaging devices”, and then check that “KONICA MINOLTA FAX XXXX (machine type)” has been added.

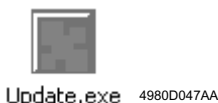


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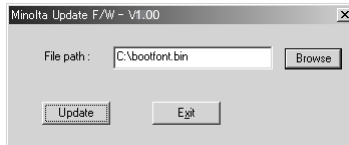
6. Double-click “Update” file in the “Update Software” folder.  
The “A3S/A4S Update F/W-V1.XX” dialog box appears.



7. Click the [Browse] button, and then select "Update" file, which was copied onto drive C in step 3.

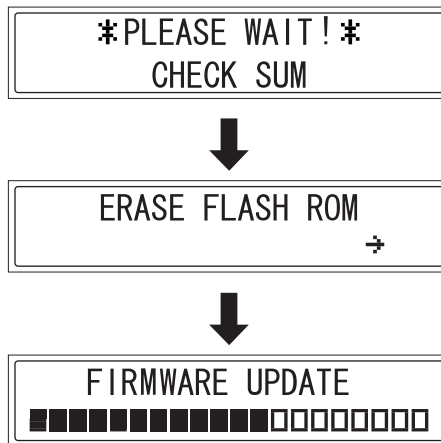
**NOTE**

- The software identifies the type of firmware. Select the "Update" file of the engine firmware, GDI firmware, or FAX firmware and click the "Browse" button.



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- Click the [Update] button. The transfer of firmware data begins. (Wait until the transfer of data is finished.)
- Check the firmware update status in the display.



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**NOTE**

- *Do not turn this machine off or on while the screen shown above is displayed.*

10. Check that the following message appears in the display to indicate that the updating of the firmware is complete.



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11. Click the [OK] button, and then quit the “A3S/A4S Update F/W-V1.XX” application.



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12. Turn this machine off, then on again.

## 5-2. Procedure for Upgrading the Firmware (NIC Firmware/ KON-ICA MINOLTA FAX 3900 only)

1. Connect the Plate NIC Board and PC with the network by using the RJ45 network cables.
2. Start up the [MS-DOS prompt] or [Command prompt] of PC.
3. Input "ftp", and then input the [IP address].  
**C:\>ftp XXX.XXX.XXX.XXX**

---

### NOTE

*Confirm with the user's system administrator or network administrator on the IP address.*

---

4. Press the "Enter" key.
5. Check that the following message is displayed, and that the PC has been connected with the NIC (Network Interface Card Board).  
**Connected\_to\_XXX.XXX.XXX.XXX**  
**220\_NET+ARM\_FTP\_SERVER\_1.0\_ready**  
**USER(XXX.XXX.XXX.XXX:(none)):**
6. Press the "Enter" key.

---

### NOTE

*In case of using the Windows XP, type "(none)" and press the "Enter" key.*

**USER(XXX.XXX.XXX.XXX:(none)):(none)**

---

7. Check that the following message is displayed, and that you could log on to the Network Interface Card Board through the PC.  
**230\_User\_none\_logged\_in.**
8. Input "bin". (Data transfer is switched to the binary mode.)
9. Press the "Enter" key.  
**ftp>bin**
10. The following messages is displayed.  
**200\_Type\_set\_to\_1.**
11. Type "put" and then the location and name of the update file.  
**ftp>put X:\XXX.bin**
12. Press the "Enter" key. (Wait to a while until data transfer is completed.)
13. Check that the following message is displayed, and data has been properly transferred to the NIC from the PC.  
**200\_PORT\_command\_OK**  
**150\_About\_to\_open\_data\_connection.**  
**226\_Transfer\_complete.**  
**ftp: xxxbytes\_sent\_in\_xxxSeconds\_xxKbytes/sec.**
14. Type "get flash" and press the Enter key. (Wait to a while until data transfer is completed.)  
**ftp>get flash**
15. The following messages will appear.  
**200\_PORT\_command\_OK**  
**150\_About\_to\_open\_data\_connection.**  
**226\_Transfer\_complete**  
**ftp: xxxbytes\_received\_in\_xxxSeconds\_xxKbytes/sec.**
16. Input "quit", and then press the "Enter" key.  
**ftp>quit**  
**221 Goodbye.**

17. Input "type flash".

**C:\>type flash**

18. Check that the firmware has been updated properly using the following messages that should appear.

**step 1: Command format is correct**

**step 2: Program's header is right**

**step 4: Flash ROM erase OK**

**step 5: Flash ROM write OK**

**step 6: Program complete**

19. Input "exit", and then press the "Enter" key.

**C:\>exit**

20. Check that you exit the [MS-DOS prompt] or [Command prompt] of PC.

21. Delete the "flash" file created in drive C of the PC.

22. Press the main power switch for this machine OFF/ON to restart this machine.

```
C:\>ftp XXX.XXX.XXX.XXX
Connected to XXX.XXX.XXX.XXX
220 NET+ARM FTP SERVER X.X ready
USER(XXX.XXX.XXX.XXX:(none)):
230 User none logged in.
ftp>bin
200 Type set to I.
ftp>put X:\XXX.bin
200 PORT command OK.
150 About to open data connection.
226 Transfer complete
ftp: xxxbytes sent in xxxSeconds xxxKbytes/sec.
ftp>get flash
200 PORT command OK.
150 About to open data connection.
226 Transfer complete.
ftp: xxxbytes received in xxxSeconds xxxKbytes/sec.
ftp>quit
221 Goodbye

C:\>type flash
step 1 : Command format is correct
step 2 : Program's header is right
step 4 : Flash ROM erase OK
step 5 : Flash ROM write OK
step 6 : Program complete
C:\>exit
```

### 5-3. Remedy for a Failed Updating of the Firmware

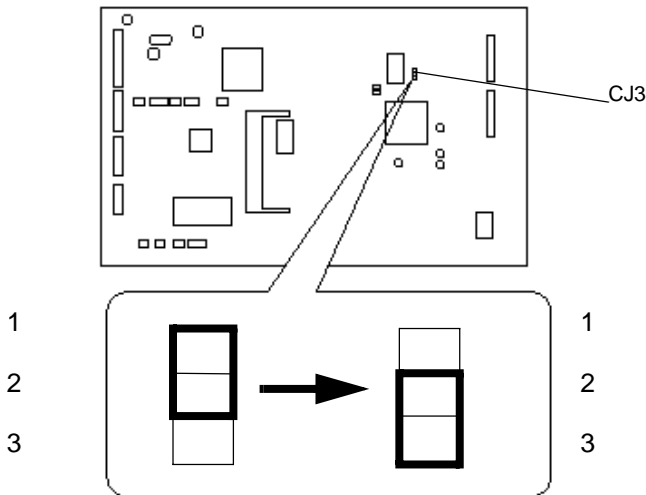
1. Turn off this machine.
2. Remove the USB cable connecting this machine to the host computer.
3. Remove the Rear Cover.

#### D-7

4. Remove the NIC Board. (KONICA MINOLTA FAX 3900 only)

#### D-11

5. Change the settings for jumper switches CJ3 on the Controller/Mechanical Control Board from "1-2" to "2-3".



6. Use a USB cable to connect this machine to the host computer.
7. Start up the host computer.
8. Turn on this machine. The following message appears in the display.

**WAIT PROGRAM!!  
UPDATE F/W NOW**

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9. Perform steps 6 through 10 of "Procedure for Upgrading the Firmware" to update the firmware.
10. Check that the following message appears in the display to indicate that the updating of the firmware has been completed correctly.

**FIRMWARE UPDATE OK  
MACHINE POWER OFF/ON**

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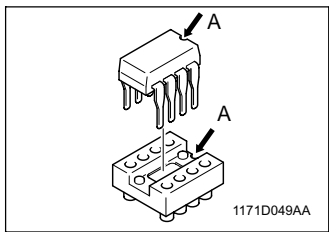
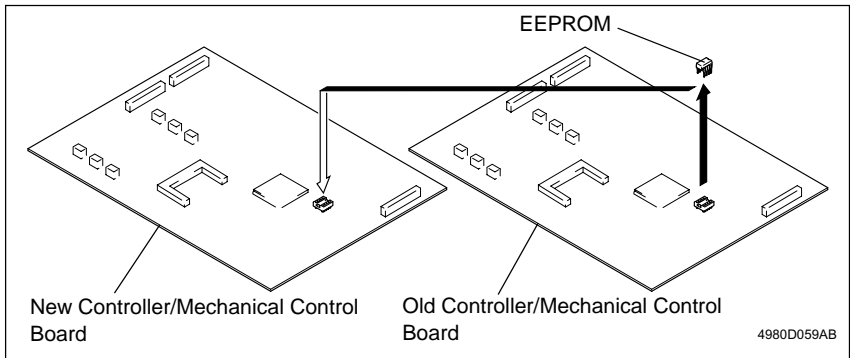
11. Turn off this machine.
12. Change the settings for jumper switches CJ3 on the Controller/Mechanical Control Board from "2-3" to "1-2". (Return them to their default settings.)
13. Install the NIC Board. (only when the optional NIC Board is mounted)
14. Install the Rear Cover.
15. Turn on this machine.

## 5-5. Moving the EEPROM

**NOTE**

- After the Controller/Mechanical Control Board (PWB-P) is replaced, be sure to move the EEPROM from the old Controller/Mechanical Control Board to the new one.

Remove the EEPROM (U39) from the old Controller/Mechanical Control Board, and then attach it to the new Controller/Mechanical Control Board.



**NOTE**

- Be sure to install the EEPROM (U39) so that notch A faces the correct direction.



---

# CONTROL PANEL/SERVICE MODE DESCRIPTIONS

---

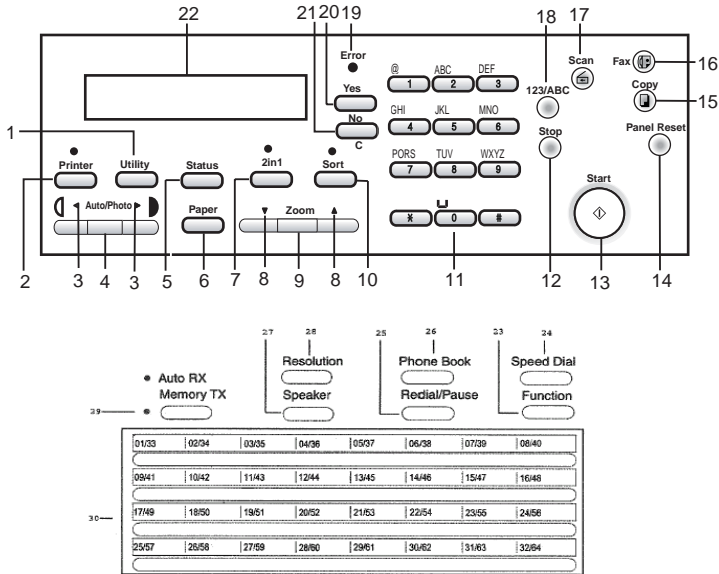




# 1. CONTROL PANEL DESCRIPTIONS

## 1-1. Names of Control Panel Parts and Their Functions

(For KONICA MINOLTA FAX 3900)



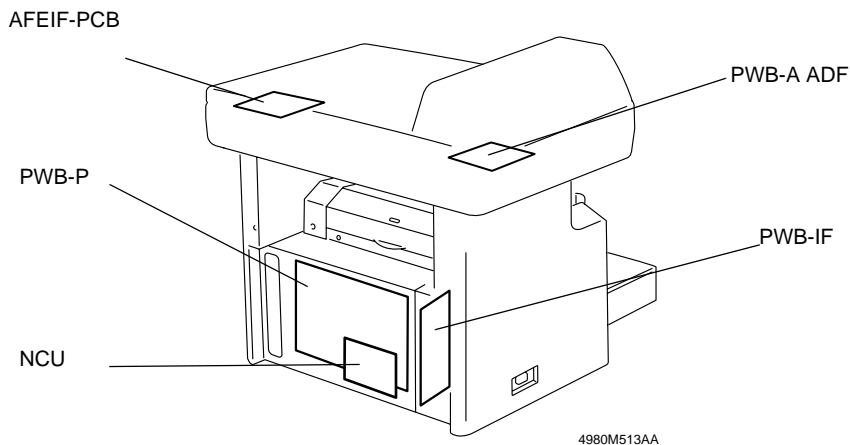
No.	Key Name	Function
1	Utility key	Press to enter Utility mode.
2	Printer key	Press to enter Printer mode.
3	< / > key	<ul style="list-style-type: none"><li>Press to adjust the image density.</li><li>Press to specify the various settings.</li></ul>
4	Auto/ Photo key	Press to change the image density mode.
5	Status key	Press to view the counters and transmission results. In addition, the list of settings specified for each function and the reports can be printed.
6	Paper key	Press to select the paper tray that contains the desired paper.
7	2in1 key	Press to select the 2in1 function. (For KONICA MINOLTA FAX 3900 only)
8	▲/ ▼ key	<ul style="list-style-type: none"><li>Press to change the zoom ratio in the range between × 0.50 and × 2.00 in × 0.01 increments.</li><li>Press to scan through the various settings and information, in order.</li><li>Press to specify the various settings.</li></ul>
9	Zoom key	Press to select a zoom ratio from among those fixed ratios available as standard.

No.	Key Name	Function
10	Sort key	Press to select the sort function.
11	10-Key Pad	Use to enter the number of copies to be made and any other numeric data. Use to enter text such as a name.
12	Stop key	<ul style="list-style-type: none"> <li>• Press to stop a print cycle.</li> <li>• Press to stop a scanning sequence.</li> <li>• The indicator flashes in orange when the machine is brought to a pause or in a print cycle.</li> </ul>
13	Start key	<ul style="list-style-type: none"> <li>• Press to start a scanning or print cycle.</li> <li>• Press to specify the various settings.</li> <li>• The indicator lights up in green when the machine can accept print jobs.</li> </ul>
14	Panel Reset key	Press to reset all print functions and settings to their defaults.
15	Copy key	Press to enter Copy mode. The indicator lights up in green to indicate that the machine is in Copy mode.
16	Fax key	Press to enter Fax mode. The indicator lights up in green to indicate that the machine is in Fax mode.
17	Scan key	Press to enter Scan mode. The indicator lights up in green to indicate that the machine is in Scan mode. (Available only when the Internet Fax & Network Scan Kit is installed.) (For KONICA MINOLTA FAX 3900 only)
18	123/ ABC key	Press to switch the function of the 10-Key Pad between typing in numbers and typing in letters.
19	Error lamp	The indicator lights up in orange if an error or malfunction occurs.
20	Yes key	<ul style="list-style-type: none"> <li>• Press to validate the setting just made.</li> <li>• Press to specify the various settings.</li> </ul>
21	No/ C key	<ul style="list-style-type: none"> <li>• Press to reset the number of copies to "1".</li> <li>• Press to clear the various settings.</li> <li>• Press to return to the previous screen.</li> <li>• Press to specify the various settings.</li> </ul>
22	Display	Shows the number of copies to be made, the zoom ratio, and other settings.

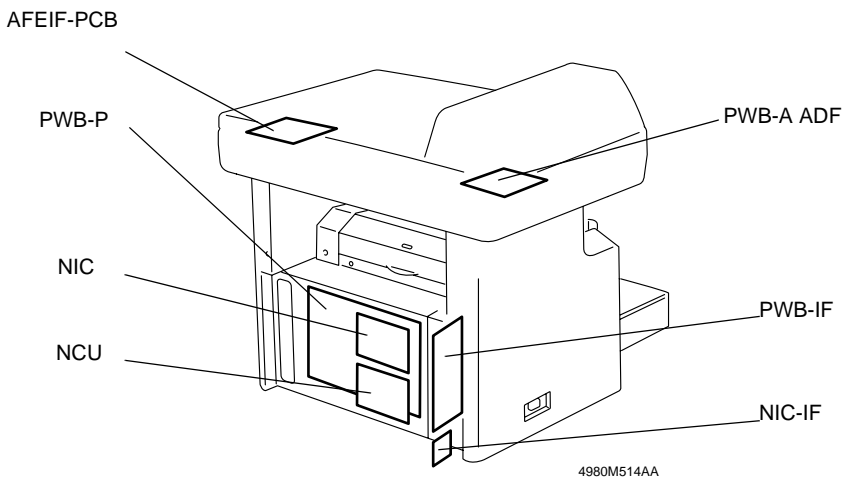
No.	Key Name	Function
23	Function key	<p>Used to select a function.</p> <ul style="list-style-type: none"> <li>BROADCAST (broadcast transmission), TIMER TX (timer transmission), MAILBOX TX (mailbox transmission), PRINT MAILBOX RX (retrieve mailbox faxes), POLLING TX (polling transmission), POLLING RX (polling reception), RELAY INITIATE (relay initiation transmission), CANCEL RESERV. (cancel queued job), TX MODE (transmission mode), Internet fax reception (with the Internet Fax &amp; Network Scan Kit installed)</li> </ul> <p>*Internet fax reception : For KONICA MINOLTA FAX 3900 only.</p>
24	Speed Dial key	Use to dial previously programmed fax numbers represented by 3-digit numbers.
25	Redial/Pause key	<p>Re-dials the last number called.</p> <p>During dialing, use to generate a pause when transferring from an internal to an external line or receiving information services.</p>
26	Phone Book key	Use to display the information programmed for one-touch dialing, group dialing and speed dialing.
27	Speaker key	<ul style="list-style-type: none"> <li>Press to answer the call.</li> <li>Press again to hang up.</li> </ul>
28	Resolution key	Use to select the image quality (transmission resolution).
29	Memory TX lamp	Lights up when the memory transmission function is selected.
30	One-touch Dial key	Used to dial previously programmed fax numbers.

## 2. FUNCTIONS OF SWITCHES AND PARTS ON PWBs

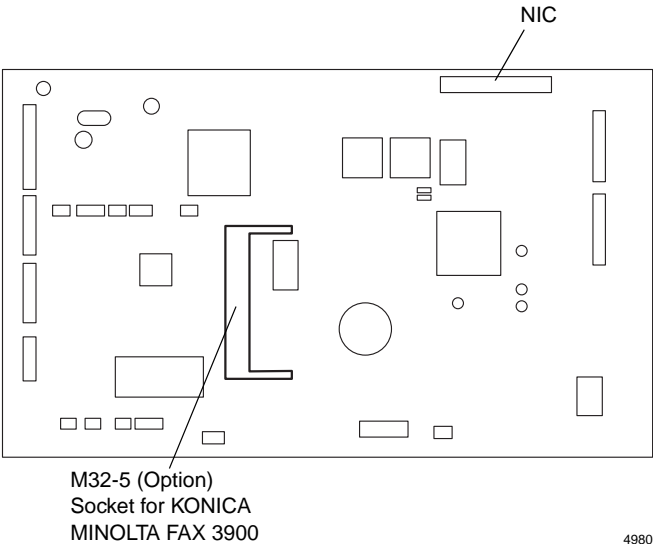
### 2-1. Circuit Board Locations (KONICA MINOLTA FAX 2900)



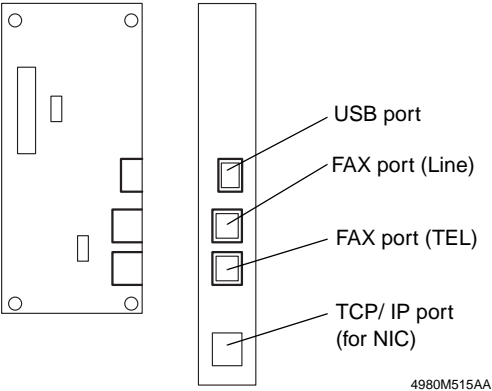
### 2-2. Circuit Board Locations (KONICA MINOLTA FAX 3900)



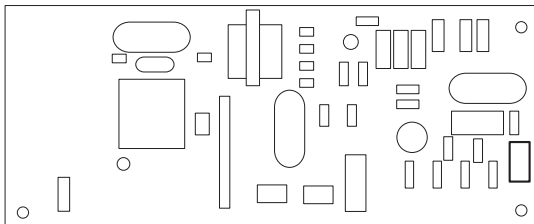
**2-3. PWB-P (Controller/Mechanical Control Board)**



**2-4. PWB-IF (Interface Board)**

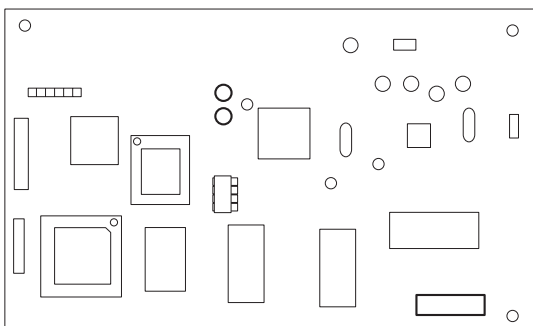


**2-5. NCU (Network Control Unit Board)**



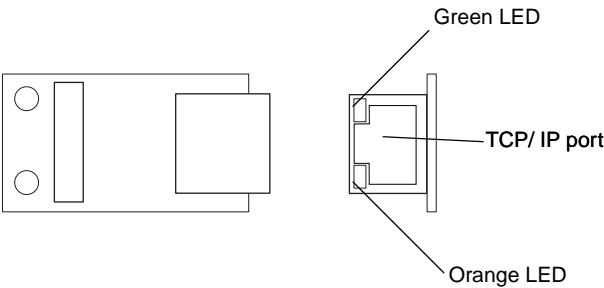
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**2-6. NIC (Network Interface Card Board)  
(For KONICA MINOLTA FAX 3900)**



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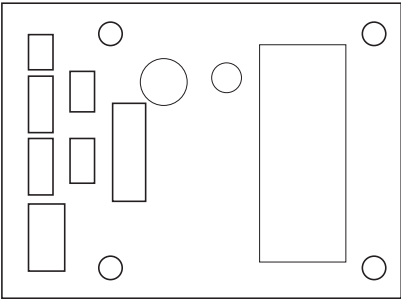
**2-7. NIC-IF (Plate NIC Board)**  
**(For KONICA MINOLTA FAX 3900)**



**(1) LED status display list**

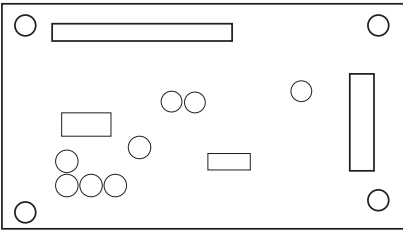
LED		Status
Green LED (Green)	ON	This is lit when network cable is connected correctly. If this LED is not lit, check the connection again, even if this machine appears to be connected correctly. If this LED is not lit when both ends are connected correctly, the network cable may be damaged.
Orange LED (Orange)	ON	<ul style="list-style-type: none"><li>This LED blinks when data is being transferred.</li></ul>

**2-8. PWB-A ADF Board**



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**2-9. AFEIF Board**

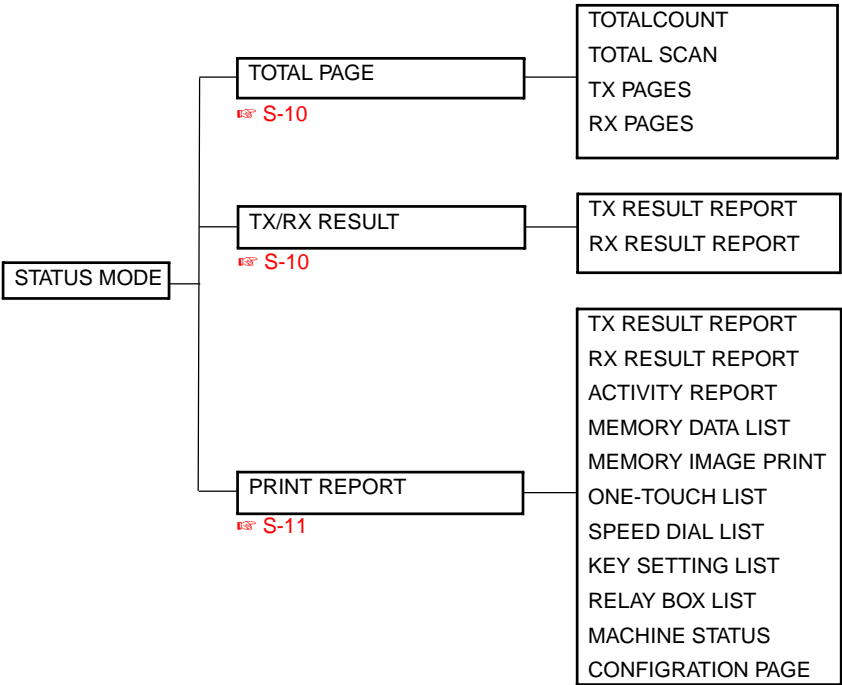


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### 3. STATUS MODE

- The total number of pages printed and scanned since this machine was installed can be checked.
- Results of 60 past faxes sent and received and counter information are displayed on the LCD, and various reports are printed.
- The reports and the lists are printed.

#### 3-1. Status Mode Function Tree



## 3-2. Status Mode Setting Procedure

<Procedure>

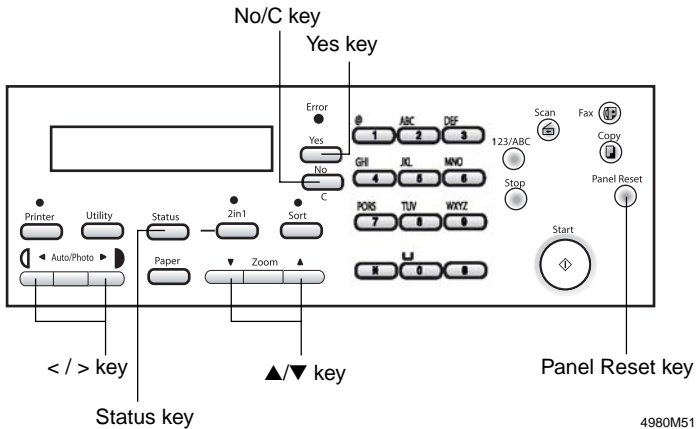
1. Press the **Status** key.
2. The first Status screen appears.

<Exiting Procedure>

- Press the **Panel Reset** key.

<Changing the Status Mode Functions>

1. Press the **▲/▼** key or **</>** key to select the desired function.
2. Press the **Yes** key to apply the setting.
3. To return to the previous screen, press the **No/ C** key.



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## (1) Total Page

No.	Function	Purpose	Setting Details/Precautions
1	TOTAL COUNT	Displays the total number of pages printed since this machine was installed.	<ol style="list-style-type: none"><li>1. Press the Status key.</li><li>2. Press the Yes key.</li><li>3. Press the ▼ and ▲ keys to check the "TOTAL COUNT", "TOTAL SCAN", "TX PAGES" or "RX PAGES" values.</li></ol>
2	TOTAL SCAN	Displays the total number of pages scanned since this machine was installed. However, the scanned number of pages in copy are not included.	
3	TX PAGES	Displays the total number of pages faxed since this machine was installed.	
4	RX PAGES	Displays the total number of pages received since this machine was installed.	

## (2) TX/ RX Result

No.	Function	Purpose	Setting Details/Precautions
1	TX RESULT REPORT	Displays the transmission result report.	<ol style="list-style-type: none"><li>1. Press the Status key twice.</li><li>2. Press the Yes key.</li><li>3. Press the ▼ and ▲ keys to display the desired transmission results to check them.<ul style="list-style-type: none"><li>• In the transmission result screen, "TX" indicates sent faxes, and "RX" indicates received ones.</li><li>• To print the transmission result report, press the Start key. After the transmission result report is printed, the main screen appears.</li><li>• If the No key is pressed twice while the transmission results are displayed, the main screen appears.</li></ul></li></ol>
2	RX RESULT REPORT	Displays the reception result report.	

(3) Print Report

No.	Function	Purpose	Setting Details/Precautions
1	TX RESULT REPORT ☞ S-12	Prints the transmission result report.	<ol style="list-style-type: none"><li>1. Press the Status key 3 times.</li><li>2. Press the Yes key.</li><li>3. Press the ▼ and ▲ keys to select the report/list that you wish to print, and then press the Yes key. After the specified report/list is printed, the main screen appears again.</li></ol> <hr/> <b>NOTE</b> <i>The reception/transmission result reports can be checked on screen. For details on viewing the transmission result, refer to "TX/RX Result".</i> ☞ S-10 <hr/>
2	RX RESULT REPORT ☞ S-12	Prints the reception result report.	
3	ACTIVITY REPORT ☞ S-12	Prints the transmission/reception result report.	
4	MEMORY DATA LIST ☞ S-12	Prints the list of documents stored in the memory.	
5	MEMORY IMAGE PRINT ☞ S-13	Prints the reduced image of the first page of the document stored in the memory.	
6	ONE-TOUCH LIST ☞ S-13	Prints the recipients programmed in the one-touch dial keys.	
7	SPEED DIAL LIST ☞ S-13	Prints the recipients programmed for the speed dial numbers.	
8	KEY SETTING LIST ☞ S-13	Prints the settings specified for one-touch dial keys.	
9	RELAY BOX LIST ☞ S-14	Prints the recipients programmed in the relay dial keys.	
10	MACHINE STATUS LIST ☞ S-15	Prints the current machine status.	
11	CONFIGURATION PAGE ☞ S-17	Prints the current machine configuration.	

- TX result report (example)

TX RESULT REPORT									
NAME:ABC 123 TEL:1234567 DATE:Dec.01.2003 15:12									
SESSION	FUNCTION	No.	DESTINATION STATION	DATE	TIME	PAGE	DURATION	MODE	RESULT
0001	TX	001	AAA NEWYORK 012345678	JAN.23	17:43	010	00:02'21"	G3	OK

- RX result report (example)

RX RESULT REPORT									
NAME:ABC 123 TEL:1234567 DATE:Dec.01.2003 15:12									
SESSION	FUNCTION	No.	DESTINATION STATION	DATE	TIME	PAGE	DURATION	MODE	RESULT
0069	RX	001	AAA NEWYORK 012345678	JAN.22	20:07	010	00:01'12"	G3	OK

- Activity report (example)

ACTIVITY REPORT									
NAME:ABC 123 TEL:1234567 DATE:Dec.01.2003 15:12									
NO.	SESSION	DATE	TIME	TX/RX	DESTINATION STATION	PAGE	DURATION	MODE	RESULT
01	0034	JAN.22	20:07	TX---	AAA NEWYORK 012345678	010	00:01'12"	G3 -2.4	OK
02	0048	JAN.23	14:20	---RX	ZZZ LONDON 876543210	001	00:00'45"	G3 -2.4	OK

- Memory data list (example)

MEMORY DATA LIST					
NAME:ABC 123 TEL:1234567 DATE:Dec.01.2003 15:12					
SESSION	FUNCTION	TIME	NO.	DESTINATION STATION	PAGE
0077	TX	16:03	001	DELLY OFFICE	001

- Memory image print (example)

MEMORY IMAGE

MEMORY IMAGE PRINT

NAME:ABC 123  
TEL:1234567  
DATE:Dec.01.2003 15:12

SESSION	FUNCTION	NO.	DESTINATION STATION	DATE	TIME	PAGE
0077	TX	001	DELLY OFFICE	JAN.26	16:03	001

- One-touch list (example)

ONE TOUCH LIST

NAME:ABC 123  
TEL:1234567  
DATE:Dec.01.2003 15:12

OT-NO.	DESTINATION STATION	DESTINATION NUMBER	BATCH TIME	SPEED	SET DATE
OP-01	AMSTERDAM OFFICE	0P09876543		33.6	JAN.20.2001

- Speed dial list (example)

SPEED DIAL LIST

NAME:ABC 123  
TEL:1234567  
DATE:Dec.01.2003 15:12

SP-NO.	DESTINATION STATION	DESTINATION NUMBER	SPEED	SET DATE
SP-001	SYDNEY OFFICE	0P111222333444	33.6	JAN.26.2004

- Key setting list (example)

KEY SETTING LIST

NAME:ABC 123  
TEL:1234567  
DATE:Dec.01.2003 15:12

KEY-NO.	TIMER	FUNCTION	NO.	DESTINATION STATION		
OT-01		APORO OFFICE	01	OT-01	J.B 999888777666	SUB:1234

- Relay BOX list (example)

<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">RELAY BOX LIST</div>			
NAME:ABC 123 TEL:1234567 DATE:Dec.01.2003 15:12			
RELAY BOX	RELAY BOX SETTING	NO.	RELAY BROADCAST LOCATION
BOX-00	RELAY REPORT RELAY ID =1111 RELAY PW = 111	01	OT-01 4733112

- Machine status list (Page1: example)

NAME:ABC 123	MACHINE STATUS LIST	
TEL:1234567		
DATE:Dec.01.2004 15:12		
..MACHINE SETTING..		
AUTO RESET (min.)	OFF	
ENERGY SAVE MODE (min.)	15	
DENSITY	MODE 1	
PRINT DENSITY	LIGHT <div style="display: inline-block; width: 20px; height: 10px; background: linear-gradient(to right, lightgray, lightgray, black, lightgray, lightgray);"></div> DARK	
LCD CONTRAST	LIGHT <div style="display: inline-block; width: 20px; height: 10px; background: linear-gradient(to right, lightgray, lightgray, black, lightgray, lightgray);"></div> DARK	
BUZZER VOLUME	LOW	
INITIALMODE	COPY	
..PAPER SOURCE SETTING..		
	TRAY 1 A4L CONTINUOUS	TRAY 2 A4L CONTINUOUS
..COPY SETTING..		
PAPER PRIORITY	TRAY 1	
DENSITY PRIORITY	AUTO DENSITY	
DENSITY LEVEL (AUTO)	LIGHT <div style="display: inline-block; width: 20px; height: 10px; background: linear-gradient(to right, black, black, lightgray, lightgray, lightgray);"></div> DARK	
DENSITY LEVEL (MANUAL)	LIGHT <div style="display: inline-block; width: 20px; height: 10px; background: linear-gradient(to right, lightgray, lightgray, black, lightgray, lightgray);"></div> DARK	
OUTPUT PRIORITY	NON	
TRAY1 A4L CONTINUOUS		
TRAY2 A4L		
..FAX REGISTRATION..		
ONE TOUCH OR GROUP DIAL	00/64 RESERVED	
SPEED DIAL	000/200 RESERVED	
PROGRAM DIAL	(61) NONE (62) PROGRAM (63) PROGRAM (64) PROGRAM	
BATCH TX	00/64	
MAIL BOX	(01) ID= NONE	(02) ID= NONE
	(03) ID= NONE	(04) ID= NONE
	(05) ID= NONE	
RELAY BOX	(00) ID= NONE	(01) ID= NONE
	(02) ID= NONE	(03) ID= NONE
	(04) ID= NONE	(05) ID= NONE
	(06) ID= NONE	(07) ID= NONE
	(08) ID= NONE	(09) ID= NONE
..TX OPERATIONS..		
SCAN CONTRAST	LIGHT <div style="display: inline-block; width: 20px; height: 10px; background: linear-gradient(to right, lightgray, lightgray, black, lightgray, lightgray);"></div> DARK	
RESOLUTION	STANDARD	
DEFAULT TX	MEMORY TX	
HEADER	ON	
..RX OPERATIONS..		
MEMORY RX MODE	OFF	
NO. OF RINGS	2	
RIDUCTION RX	ON	
RX PRINT	MEMORY RX	
RX MODE	AUTO RX	
FORWARD	ON(PRINT)	
FOOTER	OFF	
SELECT TRAY	TRAY1 :ENABLE	
CLOSED NETWORK	OFF	

• Machine status list (Page2: example)

NAME:ABC 123  
TEL:1234567  
DATE:Dec.01.2004 15:12

..COMM SETTING..

LINE MONITOR	LOW
PSTN/PBX	PSTN

..REPORTING..

ACTIVITY REPORT	ON
RESERVATION REPORT	OFF
TX RESULT REPORT	OFF
RX RESULT REPORT	OFF

..INITIAL USER DATA..

DATE AND TIME	JAN.27.2004 10:00 +00:00
USER FAX NUMBER	0P1234567890
USER NAME	AAABBBCCC DDDEEE

..NETWORK SETTING..

IP ADDRESS	111.222.333.444
SUBNET MASK	555.666.777.888
GATEWAY	999.000.111.222

..E-MAIL SETTING 1..

SENDER NAME	
E-MAIL ADDRESS	aaa@bbb.com
SMTP SERVER	333.444.555.666
SMTP PORT NO.	77
SMTP TIMEOUT(sec.)	60
TEXT INSERT	OFF
DEFAULT SUBJECT	from aaa

..E-MAIL SETTING 2..

POP3 SERVER	888.999.000.111
POP3 PORT NO.	888
POP3 TIMEOUT(sec.)	60
POP3 ACCCOUNT	aaa
POP3 PASSWORD	****
AUTO RECEPTION(min.)	OFF
REPLAY ADDRESS	ccc@bbb.com
HEADER PRINT	ON

..SCANNER SETTING..

RESOLUTION	300X300
IMAGE FORMAT	TIFF
CODING METHOD	MH

..OTHER STATUS..

TX/RX TOTAL PAGES	TX	000000	RX	000000
USER COUNTER	TOTAL COUNTER	000000		
	SCAN COUNTER	000000		

- Configuration page (example)

KONICA MINOLTA FAX 3900

Printer Configuration Page

Printer Information

Printer F/W: 100

Maser F/W: 100

Total Count: 000000

Paper Size Count: 000000

Printer Configuration

Printer Memory: 16Mbytes

TRAY 1: A4

TRAY 2: A4

Bypass: Installed

Network: Ethernet

Network Setting

Network Firmware: 100

Network Address: 00:00:00:00:00:00

Network Speed: AUTO

TCP/IP Network Information

Protocol Address: 000.000.000.000

Subnetmask: 000.000.000.000

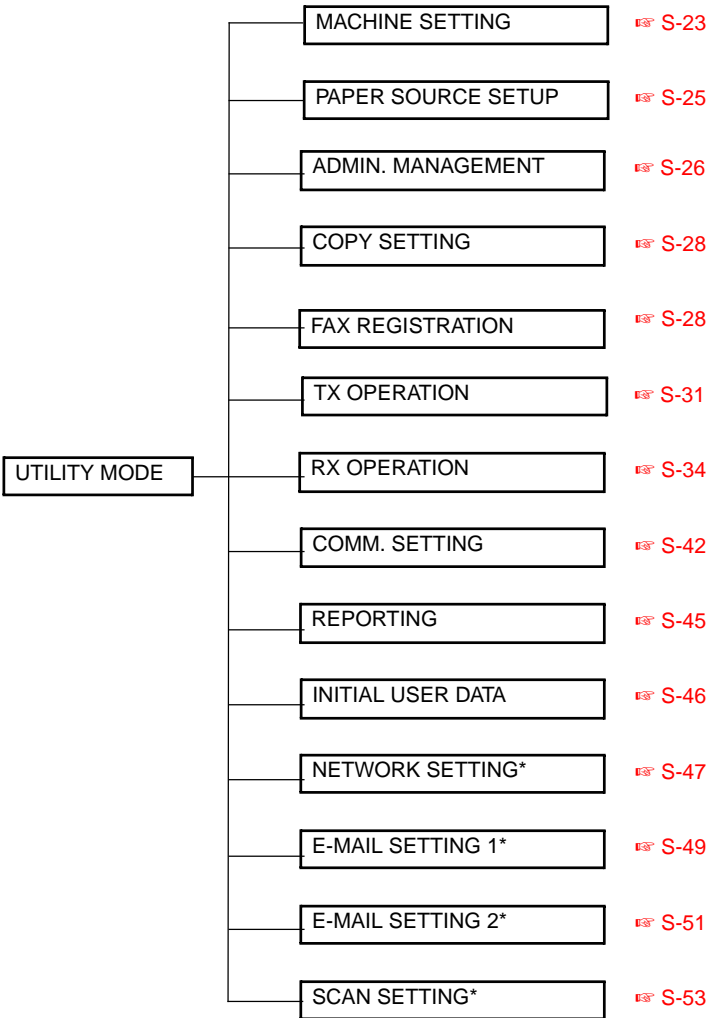
Default Gateway: 000.000.000.000

IPP HTTP://000.000.000.000:000//ipp.cgi

# 4. UTILITY MODE

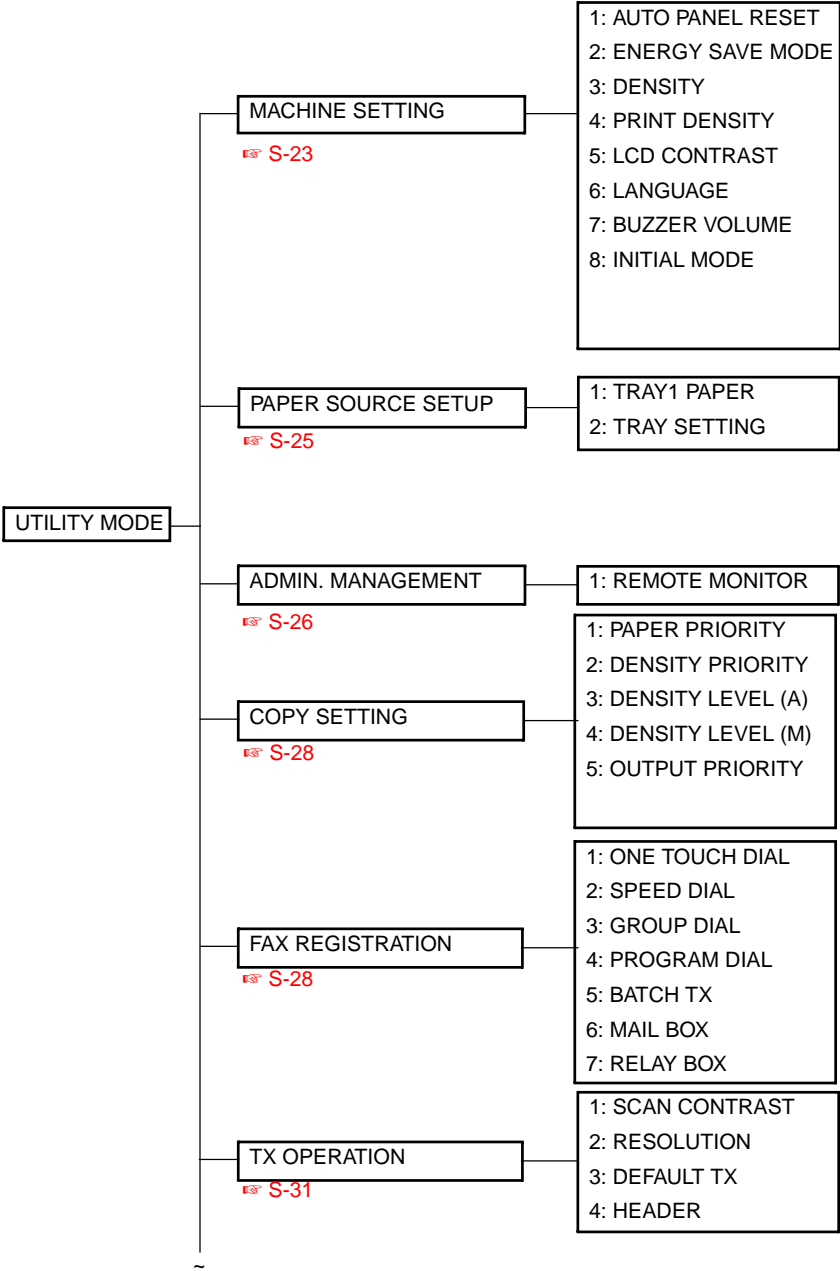
- This mode is used to set various machine functions.

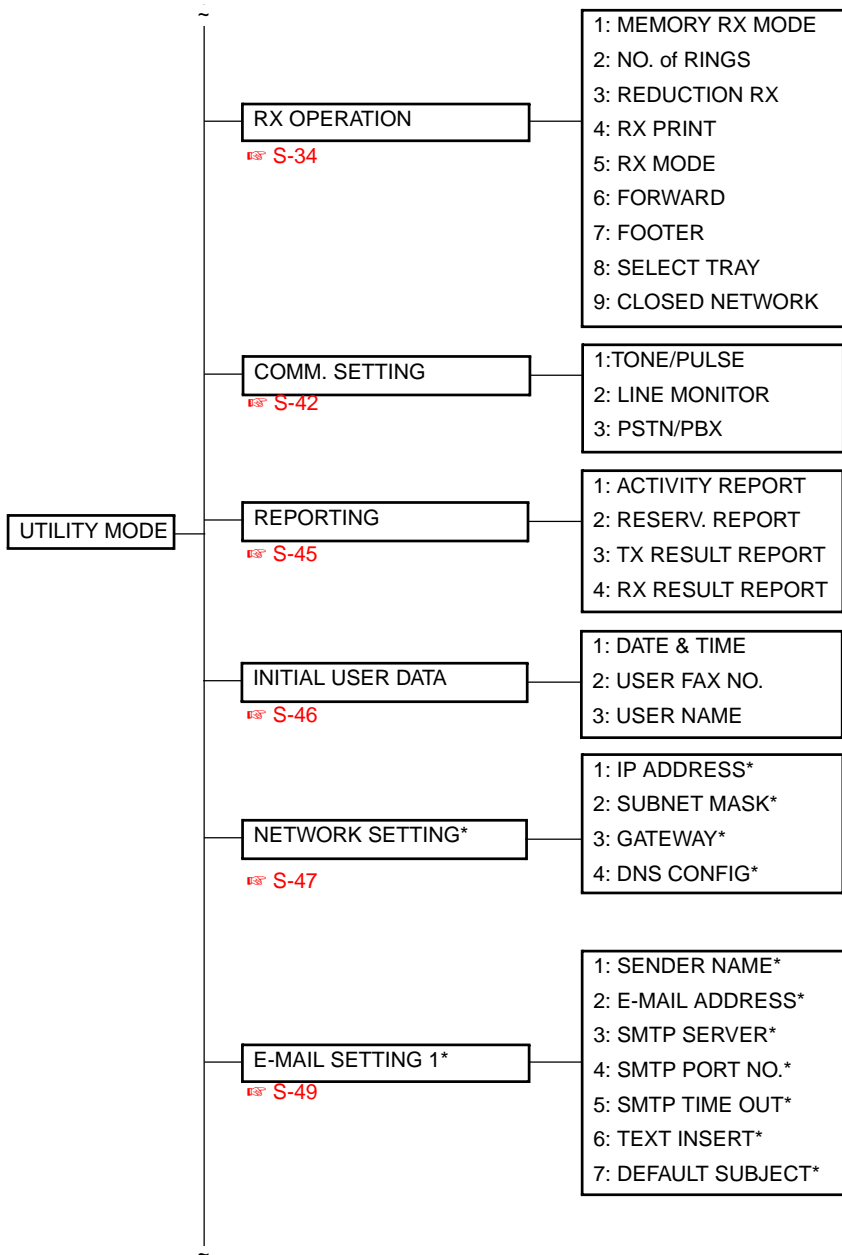
## 4-1. Utility Mode Function Tree (Outline)



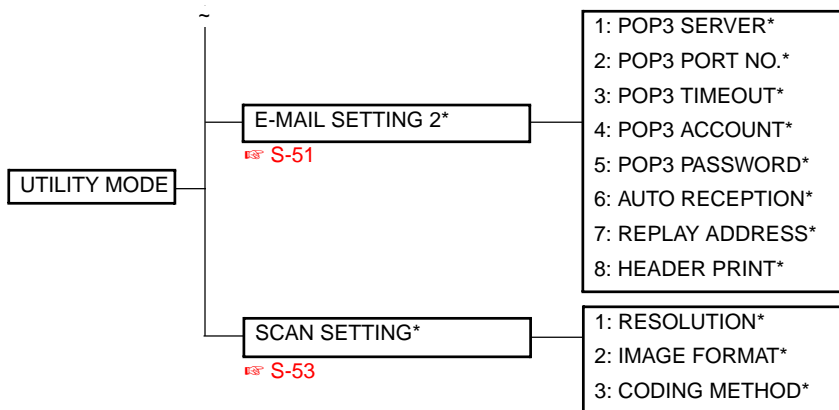
\*: Available only KONICA MINOLTA FAX 3900.

4-2. Utility Mode Function Tree (Details)





\*: Available only KONICA MINOLTA FAX 3900.



\*: Available only KONICA MINOLTA FAX 3900.

### 4-3. Utility Mode Setting Procedure

<Procedure>

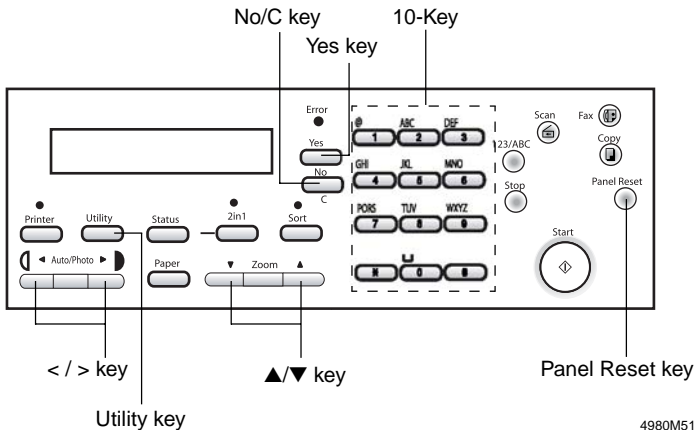
1. Press the **Utility** key.
2. The first Utility mode screen appears.

<Exiting Procedure>

- Press the **Panel Reset** key.

<Changing the Settings for Utility Mode Functions>

1. Press the **▲/▼** key, **</>** key or the **10-Key** Pad to select the desired function.
2. Press the **▲/▼** key, **</>** key or the **10-Key** Pad to select the desired setting.
3. Press the **Yes** key to apply the setting.
4. To return to the previous screen, press the **No/ C** key.



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### (1) Machine Setting

- Various settings for the machine's operating environment can be specified.

No.	Function	Purpose	Setting Details/Precautions
1	AUTO PANEL RESET	To specify the time until the auto panel reset operation is performed after a copy cycle has been completed or after the last key operation.	<ul style="list-style-type: none"><li>• The default setting is 1 minute.</li><li>• OFF</li><li>• ON: 0.5 1 2 3 4 5</li></ul>
2	ENERGY SAVE MODE	To specify the time until the machine enters Energy Save mode after a copy cycle has been completed or after the last key operation.	<ul style="list-style-type: none"><li>• The default setting is <b>15 minutes</b>.</li></ul> <p>The length of time can be set between 1 and 240 minutes.</p>
3	DENSITY	To specify the scanning density	<ul style="list-style-type: none"><li>• The default setting is "MODE1".</li><li>• <b>MODE 1:</b> For a lighter copy density in order to reduce the appearance of spots in copies</li><li>• <b>MODE 2:</b> For printing copies with the same density as the document</li></ul>
4	PRINT DENSITY	To specify the default print density.	<ul style="list-style-type: none"><li>• The default setting is "0".</li></ul> <p>The setting range is -3 to +3.</p>
5	LCD CONTRAST	To specify the brightness of the display.	<ul style="list-style-type: none"><li>• The default setting is "0".</li></ul> <p>The setting range is -1 to +2.</p>

No.	Function	Purpose	Setting Details/Precautions																								
6	LANGUAGE	To specify the language of screens.	<ul style="list-style-type: none"><li>• The default setting is “ENGLISH”.</li><li>• The language setting are divided into Type 1 and Type 2.</li><li>• The Type 1 languages are the standard.</li></ul> <p style="text-align: center;">&lt;Available Languages&gt;</p> <table><tr><td>Type1</td><td></td></tr><tr><td><b>ENGLISH</b></td><td>GERMAN</td></tr><tr><td>FRENCH</td><td>ITALIAN</td></tr><tr><td>DANISH</td><td>DUTCH</td></tr><tr><td>SPANISH</td><td>NORWEGIAN</td></tr><tr><td>SWEDISH</td><td>FINNISH</td></tr><tr><td>TURKISH</td><td>PORTUGUESE</td></tr></table> <p style="text-align: center;">Type2</p> <table><tr><td><b>ENGLISH</b></td><td>GERMAN</td></tr><tr><td>FRENCH</td><td>CZECH</td></tr><tr><td>HUNGARIAN</td><td>POLISH</td></tr><tr><td>ROMANIAN</td><td>LITHUANIAN</td></tr><tr><td>SLOVAKIAN</td><td></td></tr></table>	Type1		<b>ENGLISH</b>	GERMAN	FRENCH	ITALIAN	DANISH	DUTCH	SPANISH	NORWEGIAN	SWEDISH	FINNISH	TURKISH	PORTUGUESE	<b>ENGLISH</b>	GERMAN	FRENCH	CZECH	HUNGARIAN	POLISH	ROMANIAN	LITHUANIAN	SLOVAKIAN	
Type1																											
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FRENCH	CZECH																										
HUNGARIAN	POLISH																										
ROMANIAN	LITHUANIAN																										
SLOVAKIAN																											
7	BUZZER VOLUME	To set the volume of alarms and the beep sounded when a key is pressed.	<ul style="list-style-type: none"><li>• The default setting is “LOW”.</li><li>• HIGHT <b>LOW</b> OFF</li></ul>																								
8	INITIAL MODE	To set the mode (Copy mode or Fax mode) that the machine starts up in or returns to after the Control Panel is reset.	<ul style="list-style-type: none"><li>• The default setting is FAX.</li><li>• <b>FAX</b> COPY</li></ul>																								


## (2) Paper source setting

- Various settings for the paper tray can be specified.

No.	Function	Purpose	Setting Details/Precautions
1	TRAY1 PAPER	To specify the type and size of paper loaded into Tray1.	<ul style="list-style-type: none"><li>• The default settings are "PLAIN" in addition to "A4 L" or "LT".</li></ul> <p>&lt;Procedure&gt;</p> <ol style="list-style-type: none"><li>1. Select the paper type. <b>PLAIN</b> OHP CARD ENVELOPE</li><li>2. Select the paper size. A5 B5 A4 FLS 16K HL LT LG</li></ol> <hr/> <p><b>NOTE</b> <i>If "OHP" is selected as the paper type, only "A4" and "LT" are available as paper sizes.</i></p> <hr/> <ol style="list-style-type: none"><li>3. To specify a custom paper size, type in the size.</li></ol>
2	TRAY SETTING	To specify whether or not auto tray switching is enabled for each paper tray.	<ul style="list-style-type: none"><li>• The default setting is "CONTINUOUS".</li></ul> <p>FIXED      <b>CONTINUOUS</b></p>

**(3) Admin. management**

- Various functions for controlling the use of the machine can be set.
- In order to set an “ADMIN. MANAGEMENT” function, the administrator number (ADMIN. NO.) must be entered.

 **S-80** “Service mode/ Admin. registration”.

ADMIN. NO= \_ \_ \_ \_ \_

No.	Function	Purpose	Setting Details/Precautions
1	REMOTE MONITOR	<ul style="list-style-type: none"><li>• To set the access right when monitoring a user machine from a remote location on the Tech. Rep. side.</li><li>• RSD is used for remote monitoring.</li></ul>	<ul style="list-style-type: none"><li>• The default setting is “OFF”. <b>LIMITED    FULL    OFF</b></li><li>• <b>LIMITED:</b> Access right with limited functions. Detailed settings made in the user machine can be monitored. It is, however, not possible to change the user setting or upgrade firmware.</li><li>• <b>FULL:</b> Access right with no restrictions. In addition to being able to monitor the detailed settings made in the user machine, the Tech. Rep. can change user settings and upgrade firmware. When “FULL” is selected, the “Remote Monitoring Password” screen will appear.<div><b>PASSWORD=</b>_ _ _ _ _ <b>OK=</b>YES</div><p>The Administrator of the user machine sets a 4-digit (0000 to 9999) “Remote Monitoring Password”. This password is necessary for Remote Monitoring and must be obtained in advance from the Administrator of the user machine.</p></li><li>• <b>OFF:</b> Access is prohibited. Remote Monitoring is disabled.</li></ul>

---

## NOTES

< Precautions for Changing the Setting of ADMIN. MANAGEMENT/REMOTE MONITOR>  
If the user machine setting has been changed from "LIMITED" to "FULL" or vice versa while RSD (Remote Setup Diagnostic) communication is established, perform the following operations:

- Temporarily disconnect the communication and re-execute "Remote Connect."
- Press the "Disconnect" key to disconnect the communication.



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- The specific changes made in the setting of REMOTE MONITOR are not validated unless the connection is made again.

< Precautions for Using the RSD (Remote Setup Diagnostic)>

- When a connection is established with a local machine using the RSD, the following message appears on the Display and no operations can be made from the "Control Panel" of the local machine. Neither the PC print nor Scanner function can be accepted.

**\*PLEASE WAIT!\*  
ADMINISTERED BY PC**

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- No connection can be made with the RSD during operation from the "Control Panel" of the local machine. Make the connection while no operations are performed on the local machine.
  - As is the case with the RSD, operations from the "Control Panel" of the local machine, PC print, and Scanner function are not accepted while a connection is being established with the local machine using the LSD (Local Setup Diagnostic) and PageScope Web Connection/Admin. mode.
  - As is the case with the RSD, no connection can be made with LSD and PageScope Web Connection/Admin. mode during operation from the "Control Panel" of the local machine. Make the connection while no operations are performed on the local machine.
-

#### (4) Copy setting

- The default settings for each copy function can be specified.

No.	Function	Purpose	Setting Details/Precautions
1	PAPER PRIORITY	To specify the paper tray that is given priority.	<ul style="list-style-type: none"><li>• The default setting is "TRAY1".</li></ul> <b>TRAY1</b> TRAY2
2	DENSITY PRIORITY	To specify the image density setting that is selected when the machine is turned on or the Panel Reset key is pressed.	<ul style="list-style-type: none"><li>• The default setting is "AUTO".</li></ul> <b>AUTO</b> MANUAL      PHOTO
3	DENSITY LEVEL (A)	To specify the default density level when the Auto setting is selected.	<ul style="list-style-type: none"><li>• The default setting is "NORMAL (0)".</li></ul> The setting range is -1 to +1.
4	DENSITY LEVEL (M)	To specify the default density level when manually setting the image density.	<ul style="list-style-type: none"><li>• The default setting is "NORMAL (0)".</li></ul> The setting range is -4 to +4.
5	OUTPUT PRIORITY	To specify the default finishing setting.	<ul style="list-style-type: none"><li>• The default setting is "NON".</li></ul> <b>NON</b> SORT

#### (5) FAX registration

- From the "FAX REGISTRATION" menu, various settings can be specified in order to take advantage of this machine's many fax functions.

No.	Function	Purpose	Setting Details/Precautions
1	ONE-TOUCH DIAL	This function can be used to program one-touch dial keys with fax numbers, allowing the recipient to be specified easily and accurately without the need to manually enter the number using the 10-Key Pad. This dialing method is convenient for programming numbers where faxes are frequently sent to.	KONICA MINOLTA FAX 2900: A maximum of 32 fax numbers can be programed.  KONICA MINOLTA FAX 3900: A maximum of 64 fax numbers can be programed  The contents of registration. <ul style="list-style-type: none"><li>• Destination name: 20characters.</li><li>• Dial No.: 30 digits.</li><li>• Sub address: 20 digits.</li><li>• SID: 20 digits.</li><li>• Modem speed: 33.6 kbps/ 14.4kbps/ 9.6 kbps</li><li>• Registered data: Automatically.</li></ul>
















No.	Function	Purpose	Setting Details/Precautions
2	SPEED DIAL	<p>This function can be used to program speed dial numbers with fax numbers, allowing the recipient to be specified easily and accurately without the need to manually enter the number using the 10-Key Pad.</p>	<p>KONICA MINOLTA FAX 2900: A maximum of 100 fax numbers (001 to 100) can be programmed.</p> <p>KONICA MINOLTA FAX 3900: A maximum of 200 fax numbers (001 to 200) can be programmed.</p> <p>The contents of registration.</p> <ul style="list-style-type: none"> <li>• Destination name: 20characters.</li> <li>• Dial No.: 30 digits.</li> <li>• Sub address: 20 digits.</li> <li>• SID: 20 digits.</li> <li>• Modem speed: 33.6 kbps/ 14.4kbps/ 9.6 kbps</li> <li>• Registered data: Automatically.</li> </ul>
3	GROUP DIAL	<p>KONICA MINOLTA FAX 2900: This function can be used to program a single one-touch dial key with a maximum of 32 different fax numbers as one group.</p> <p>KONICA MINOLTA FAX 3900: This function can be used to program a single one-touch dial key with a maximum of 64 different fax numbers as one group.</p> <p>Programming a one-touch dial key with a group of fax numbers is convenient when documents are frequently sent to a set group of multiple recipients.</p>	<p>The contents of registration.</p> <ul style="list-style-type: none"> <li>• Group name: 20characters.</li> <li>• Information of destination station: The contents of one-touch or speed dial.</li> </ul>

No.	Function	Purpose	Setting Details/Precautions																		
4	PROGRAM DIAL	This function can be used to program one-touch dial keys (No. 61 to 64) with fax numbers and a transmission/reception function (such as timer transmission or polling reception), allowing that function to be carried out by pressing just the corresponding one-touch dial key. (KONICA MINOLTA FAX 3900 only)	If one-touch dial keys have been programmed with fax numbers and a transmission/reception function, that function can be carried out by pressing just the corresponding one-touch dial key.																		
			The function of registration																		
			<table><tr><td>Function No.</td><td>Function</td><td>Description</td></tr><tr><td>1</td><td>BROADCAST</td><td>Up to 50 detection</td></tr><tr><td>2</td><td>TIMER TX</td><td>-</td></tr><tr><td>3</td><td>MAIBOX TX</td><td>-</td></tr><tr><td>6</td><td>POLLING RX</td><td>Up to 50 detection</td></tr><tr><td>7</td><td>RELEY INITIATE</td><td>-</td></tr></table>	Function No.	Function	Description	1	BROADCAST	Up to 50 detection	2	TIMER TX	-	3	MAIBOX TX	-	6	POLLING RX	Up to 50 detection	7	RELEY INITIATE	-
			Function No.	Function	Description																
			1	BROADCAST	Up to 50 detection																
			2	TIMER TX	-																
			3	MAIBOX TX	-																
6	POLLING RX	Up to 50 detection																			
7	RELEY INITIATE	-																			
5	BATCH TX	This function can be used to specify the batch transmission setting (transmission time) for a one-touch dial key programmed with recipient fax numbers, so multiple documents can be stored in the memory and sent out together at the specified time.	<p>If the batch transmission setting (transmission time) is specified for a one-touch dial key programmed with recipient fax numbers, multiple documents can be stored in the memory and sent out together at the specified time.</p> <p>A one-touch dial key must first be programmed with the fax number of the recipient for the batch transmission.</p> <p>Cannot set for e-mail address.</p>																		
6	MAIL BOX	This function can be used to specify mailbox IDs in order to receive faxes with mailbox reception only if the mailbox ID sent by the caller matches the mailbox ID set on this machine.	<p>Mailbox IDs must first be specified in order to receive faxes with mailbox reception only if the mailbox ID sent by the caller matches the mailbox ID set on this machine.</p> <p>A mailbox ID cannot be the same as a relay box ID.</p> <p>Setting value: 0000 to 9999</p> <p>Password: Setting range 0 to 9999, or none.</p>																		

No.	Function	Purpose	Setting Details/Precautions
7	RELAY BOX	In case relay initiate are carried out, the relay box ID (SUB) and password (SID) which are registered by the relay side are specified, and a document is transmitted. Password is omissible.	Choose 0-9 Group, than input ID and PASSWORD, Destination station: 50 (one-touch dial, speed dial, group dial). A mailbox ID cannot be the same as a mailbox ID.  Setting value: 0000 to 9999  Password: Setting range 0 to 9999, or none.

**(6) TX operation**

- From the "TX OPERATION" menu, various functions for sending faxes can be set.

No.	Function	Purpose	Setting Details/Precautions												
1	SCAN CONTRAST	This function can be used to set the default scanning contrast level to one of five settings between “LIGHT” and “DARK”. For dark-colored paper (media), select a setting towards “LIGHT”. For faint or colored text, select a setting toward “DARK”.	• The default setting is “0”.												
			<table><tr><th>Setting value</th><th>Description</th></tr><tr><td>-2</td><td></td></tr><tr><td>-1</td><td></td></tr><tr><td>0</td><td></td></tr><tr><td>+1</td><td></td></tr><tr><td>+2</td><td></td></tr></table>	Setting value	Description	-2		-1		0		+1		+2	
			Setting value	Description											
			-2												
			-1												
			0												
			+1												
+2															
4#B05502AA 4#B05506AA															

4980SS02AA - 4980SS06AA

No.	Function	Purpose	Setting Details/Precautions										
2	RESOLUTION	This function can be used to set the default scanning resolution (image quality) to one of the following: “Standard”, “Fine”, “Super Fine”, “Half Tone + Standard”, “Half Tone + Fine” or “Half Tone + Super Fine”.	<ul style="list-style-type: none"><li>• The default setting is “STD”.</li><li>• The resolution when transmission image mode is Text.</li></ul> <table><tr><th>Setting value</th><th>Description</th></tr><tr><td><b>STD</b></td><td><b>Standard</b></td></tr><tr><td>FINE</td><td>Fine</td></tr><tr><td>S/F</td><td>Super Fine</td></tr><tr><td>H/T</td><td>Half Tone: to the resolution when transmission image mode is half-tone.</td></tr></table>	Setting value	Description	<b>STD</b>	<b>Standard</b>	FINE	Fine	S/F	Super Fine	H/T	Half Tone: to the resolution when transmission image mode is half-tone.
			Setting value	Description									
<b>STD</b>	<b>Standard</b>												
FINE	Fine												
S/F	Super Fine												
H/T	Half Tone: to the resolution when transmission image mode is half-tone.												
			<ul style="list-style-type: none"><li>• The resolution when transmission image mode is Half-Tone.</li></ul> <table><tr><th>Setting value</th><th>Description</th></tr><tr><td><b>STD</b></td><td><b>Half Tone + Standard</b></td></tr><tr><td>FINE</td><td>Half Tone + Fine</td></tr><tr><td>S/F</td><td>Half Tone + Super Fine</td></tr></table>	Setting value	Description	<b>STD</b>	<b>Half Tone + Standard</b>	FINE	Half Tone + Fine	S/F	Half Tone + Super Fine		
Setting value	Description												
<b>STD</b>	<b>Half Tone + Standard</b>												
FINE	Half Tone + Fine												
S/F	Half Tone + Super Fine												
3	DEFAULT TX	This function can be used to set the default transmission mode to “MEM.TX” or “ADF TX”.	<ul style="list-style-type: none"><li>• The default setting is “MEM.TX”.</li></ul> <table><tr><th>Setting value</th><th>Description</th></tr><tr><td><b>MEM.TX</b></td><td><b>Memory Transmission</b></td></tr><tr><td>ADF TX</td><td>ADF Transmission.</td></tr></table>	Setting value	Description	<b>MEM.TX</b>	<b>Memory Transmission</b>	ADF TX	ADF Transmission.				
Setting value	Description												
<b>MEM.TX</b>	<b>Memory Transmission</b>												
ADF TX	ADF Transmission.												

No.	Function	Purpose	Setting Details/Precautions						
4	HEADER	This function can be used to set the default setting ("ON" or "OFF") for adding the header (date sent, sender's name and fax number, etc.) when sending faxes.	The default setting is "ON".						
			<table><tr><th>Setting value</th><th>Description</th></tr><tr><td>ON</td><td>Add header</td></tr><tr><td>OFF</td><td>No header</td></tr></table>	Setting value	Description	ON	Add header	OFF	No header
			Setting value	Description					
ON	Add header								
OFF	No header								
<p>The contents of registration.</p> <ul style="list-style-type: none"><li>• TX data and time.</li><li>• Transmitter's own name.</li><li>• Transmitter's own tel number.</li><li>• Session number.</li><li>• Page number.</li><li>• Total page number (only displayed by use the memory TX job).</li></ul> <p>It is selectable by soft switch to transmit only pages which have failed to transmit, if communication error occurs on the way transmitting document. In this case, page number on Header Print is continued from the page number of the document successfully transmitted.</p> <p>Whether user setting is allowed or not is selectable with Soft switch.</p> <p>For North America, Header print is set ON, and setting change to OFF by the user is not allowed.</p> <p>Attaching Header Print: Image within 4 mm (1/4 in) top margin of transmitting document is not transmitted and Header print data is attached.</p>									

## (7) RX operation

- From the "RX OPERATION" menu, various functions for receiving faxes can be set.

No.	Indication on LCD
1	MEMORY RX MODE
2	No. of RINGS
3	REDUCTION RX
4	RX PRINT
5	RX MODE
6	FORWARD
7	FOOTER
8	SELECT TRAY
9	CLOSED NETWORK

### 1. MEMORY RX MODE

- This function can be used to set whether to allow ("ON") memory reception or not ("OFF"). In cases when confidential faxes are being received, the received document can be stored in the memory and printed at a specified time or when memory reception is set to "OFF". A password can be set to specify the starting time or ending time of memory reception, or to cancel the function. The set starting time and ending time are valid every day until memory reception is turned off.
- The default setting is "OFF".

Setting value	Description
ON	Enable memory RX mode
OFF	<b>Disable memory RX mode</b>

## 2. No. of RINGS

- This function can be used to set the number of rings between 1 and 16 until the call is answered.
- The default setting is “2” (marketing area: standard).
- Depend on soft switch setting of marketing area.

Setting value	Description	Setting value	Description
1	Once	9	9 times
2	<b>Twice</b>	10	10 times
3	3 times	11	11 times
4	4 times	12	12 times
5	5 times	13	13 times
6	6 times	14	14 times
7	7 times	15	15 times
8	8 times	16	16 times

---

### NOTE

*A fax to be received is canceled and the machine becomes unable to receive it if the setting of “No. of RINGS” is made longer than the setting of “CNG duration after dialing.”*

*Be sure to make the “No. of RINGS” setting to a value shorter than the “CNG duration after dialing” setting.*

 **S-126 SOFT SWITCH/ #21/ Bit No. 6-7: CNG duration after dialing**

---

### 3. REDUCTION RX

- This function can be used to set whether documents longer than the paper are printed reduced ("ON"), split ("OFF"), or discarded ("CUT"). However, when sending a document more than 24 mm (1 inch) longer than the paper, "CUT" is not available. (In this case, the document is split.)
- The default setting is "ON".

Setting value	Description
<b>ON</b>	<b>Reduction print mode</b>
OFF	100 % RX mode
CUT	Cut mode

- Reduction print mode  
It reduces (only the FD direction) and prints so that receiving data will in a recording paper.

Reco- ding paper size	Footer	Length of received image	Printing
A4	OFF	Less than 289 mm	1 page with 100 %
		290 mm to 385 mm	1 page with (289 mm / image length)% reduction
		386 mm to 570 mm	Divide into 2 pages with 100 %
		571 mm to 851 mm	Divide into 3 pages with 100 %
		852 mm or more	Divide into 3 pages (or more) with 100 %
	ON	Less than 285 mm	1 page with 100 %
		286 mm to 381 mm	1 page with (285 mm / image length)% reduction
		382 mm to 562 mm	Divide into 2 pages with 100 %
		563 mm to 839 mm	Divide into 3 pages with 100 %
		840 mm or more	Divide into 3 pages (or more) with 100 %
Letter	OFF	Less than 271 mm	1 page with 100 %
		272 mm to 387 mm	1 page with (271 mm / image length)% reduction
		388 mm to 534 mm	Divide into 2 pages with 100 %
		535 mm to 797 mm	Divide into 3 pages with 100 %
		798 mm or more	Divide into 3 pages (or more) with 100 %
	ON	Less than 267 mm	1 page with 100 %
		268 mm to 381 mm	1 page with (267 mm / image length)% reduction
		382 mm to 526 mm	Divide into 2 pages with 100 %
		527 mm to 785 mm	Divide into 3 pages with 100 %
		786 mm or more	Divide into 3 pages (or more) with 100 %

Recording paper size	Footer	Length of received image	Printing
Legal	OFF	Less than 347 mm	1 page with 100 %
		348 mm to 385 mm	1 page with (347 mm / image length)% reduction
		386 mm to 686 mm	Divide into 2 pages with 100 %
		687 mm to 1025 mm	Divide into 3 pages with 100 %
		1,026 mm or more	Divide into 3 pages (or more) with 100 %
	ON	Less than 343 mm	1 page with 100 %
		344 mm to 381 mm	1 page with (343 mm / image length)% reduction
		382 mm to 678 mm	Divide into 2 pages with 100 %
		679 mm to 1013 mm	Divide into 3 pages with 100 %
		1,014 mm or more	Divide into 3 pages (or more) with 100 %

- 100 % RX mode

All receiving data is divided into 2 pages or more, and is printed.

Recording paper size	Footer	Length of received image	Printing
A4	OFF	Less than 289 mm	1 page
		290 mm to 570 mm	Divide into 2 pages
		571 mm to 851 mm	Divide into 3 pages
		852 mm or more	Divide into 4 pages or more
	ON	Less than 285 mm	1 page
		286 mm to 562 mm	Divide into 2 pages
		563 mm to 839 mm	Divide into 3 pages
		840 mm or more	Divide into 4 pages or more
Letter	OFF	Less than 271 mm	1 page
		272 mm to 534 mm	Divide into 2 pages
		535 mm to 797 mm	Divide into 3 pages
		798 mm or more	Divide into 4 pages or more
	ON	Less than 267 mm	1 page
		268 mm to 526 mm	Divide into 2 pages
		527 mm to 785 mm	Divide into 3 pages
		786 mm or more	Divide into 4 pages or more

Recording paper size	Footer	Length of received image	Printing
Legal	OFF	Less than 348 mm	1 page
		349 mm to 688 mm	Divide into 2 pages
		689 mm to 1,028 mm	Divide into 3 pages
		1,029 mm or more	Divide into 4 pages or more
	ON	Less than 344 mm	1 page
		345 mm to 680 mm	Divide into 2 pages
		681 mm to 1,016 mm	Divide into 3 pages
		1,017 mm or more	Divide into 4 pages or more

- Cut mode

The data that is larger than 1-page record area is cut and not recorded (to 18 mm).

Recording paper size	Footer	Length of received image	Printing
A4	OFF	Less than 289 mm	1 page
		290 mm to 313 mm	Print into 1 page. 1 mm to 24 mm of end is cut.
		314 mm to 570 mm	Divide into 2 pages
		571 mm to 594 mm	Divide into 2 pages. 1 mm to 24 mm of end is cut.
		595 mm to 851 mm	Divide into 3 pages
		852 mm or more	Divide into 3 pages (or more). 1 mm to 24 mm of end is cut.
	ON	Less than 285 mm	1 page
		286 mm to 309 mm	Print into 1 page. 1 mm to 24 mm of end is cut.
		310 mm to 562 mm	Divide into 2 pages
		563 mm to 586 mm	Divide into 2 pages. 1 mm to 24 mm of end is cut.
		587 mm to 839 mm	Divide into 3 pages
		840 mm or more	Divide into 3 pages (or more). 1 mm to 24 mm of end is cut.

Recording paper size	Footer	Length of received image	Printing
Letter	OFF	Less than 271 mm	1 page
		272 mm to 295 mm	Print into 1 page. 1 mm to 24 mm of end is cut.
		296 mm to 534 mm	Divide into 2 pages
		535 mm to 558 mm	Divide into 2 pages. 1 mm to 24 mm of end is cut.
		559 mm to 797 mm	Divide into 3 pages
		798 mm or more	Divide into 3 pages (or more). 1 mm to 24 mm of end is cut.
	ON	Less than 267 mm	1 page
		268 mm to 291 mm	Print into 1 page. 1 mm to 24 mm of end is cut.
		292 mm to 526 mm	Divide into 2 pages
		527 mm to 550 mm	Divide into 2 pages. 1 mm to 24 mm of end is cut.
		510 mm to 785 mm	Divide into 3 pages
		786 mm or more	Divide into 3 pages (or more). 1 mm to 24 mm of end is cut.
Legal	OFF	Less than 347 mm	1 page
		348 mm to 371 mm	Print into 1 page. 1 mm to 24 mm of end is cut.
		372 mm to 686 mm	Divide into 2 pages
		687 mm to 710 mm	Divide into 2 pages. 1 mm to 24 mm of end is cut.
		711 mm to 1,025 mm	Divide into 3 pages
		1,026 mm or more	Divide into 3 pages (or more). 1 mm to 24 mm of end is cut.
	ON	Less than 343 mm	1 page
		344 mm to 367 mm	Print into 1 page. 1 mm to 24 mm of end is cut.
		368 mm to 678 mm	Divide into 2 pages
		679 mm to 702 mm	Divide into 2 pages. 1 mm to 24 mm of end is cut.
		703 mm to 1,113 mm	Divide into 3 pages
		1,014 mm or more	Divide into 3 pages (or more). 1 mm to 24 mm of end is cut.

#### 4. RX PRINT

- This function can be used to set whether the fax is only printed after all document pages have been received ("MEMORY RX") or printing begins as soon as the first page of the document is received ("PRINT RX").
- The default setting is "MEMORY RX".

Setting value	Description
<b>MEMORY RX</b>	<b>Printed after all document pages have been received.</b>
PRINT RX	Printing begins as soon as the first page of the document is received.

#### 5. RX MODE

- This function can be used to set the reception mode to automatic reception ("AUTO RX") or manual reception ("MANUAL RX").
- Automatic reception:  
Automatically begins receiving after the set number of rings.
- Manual reception:  
Does not automatically receive the fax. Reception begins after making a connection by picking up the telephone receiver or pressing the Speaker key, then pressing the Start key.
- The default setting is "AUTO RX".

Setting value	Description
<b>AUTO RX</b>	<b>Automatic reception</b>
MANUAL RX	Manual reception

#### 6. FORWARD

- This function can be used to set whether or not the received document is forwarded.
- Forward ("ON"):  
The received document is forwarded to the specified fax number or \*e-mail address.
- Forward and print ("ON (PRINT)"):   
The received document is printed by this machine at the same time that it is forwarded to the specified fax number or \*e-mail address.
- Do not forward ("OFF"): The document is not forwarded.
- The default setting is "OFF".

\* KONICA MINOLTA FAX 3900 only.

Setting value	Description
ON	Add forward
<b>OFF</b>	<b>No forward</b>

## 7. FOOTER

- This function can be used to set whether or not the reception information (RX data and time, RX management number, RX page number, Transmitter's ID) is printed at the bottom of each received document.
- The default setting is "OFF".

Setting value	Description
ON	Add footer
<b>OFF</b>	<b>No footer</b>

- Attaching footer print:

When Footer is selected ON, it is printed at the end of printable area. 4mm line area from the end of printable area is kept for printing Footer. It should be attached on Footer area regardless of image length. If the received image is divided into 2 pages or more, Footer is printed in the specified location of all the recording sheets of paper printed.

- Image data area:

The received image data is printed on the area except for 12mm from recording paper size. (No printable area: 8mm (1/3 in) + Footer area: 4mm (1/4 in)) The following table is the image printable area of each recording paper size due to setting of Footer Print.

Paper length		Footer off	Footer on	
		Image data area	Image data area	Footer area
A4	297 mm	289 mm	285 mm	+4 mm (1/4 in)
Letter	279 mm	271 mm	267 mm	+4 mm (1/4 in)
Legal	356 mm	348 mm	344 mm	+4 mm (1/4 in)

## 8. SELECT TRAY

- This function can be used to select which paper tray can be used to supply paper when printing received documents or transmission reports. (A paper tray that cannot be used for supplying paper can also be specified.) This function is only available when an optional paper tray is installed.

Setting value	Description	Default
Tray 1 Enable/ Disable	Tray 1	<b>Enable</b>
Tray 2 Enable/ Disable	Tray 2	<b>Enable</b>

- A non-equipped cassette is not displayed.

When setting value is determined, reception setting of utility menu is indicated. This setting has effect on RX print and Report print.

## 9. CLOSED NETWORK

- This function can be used to set whether or not the fax is received if the sender's fax number does not match the fax number programmed in this machine's one-touch dial keys.
- The default setting is "OFF".

Setting value	Description
ON	Enable closed network reception
OFF	<b>Disable closed network reception</b>

## (8) Comm. setting

- From the "COMM.SETTING" menu, various functions are available for specifying communication settings.

No.	Function	Purpose	Setting Details/Precautions											
1	TONE/PULSE	This function can be used to specify the dialing system. If this function is not correctly set to the type not be sent. Select the correct setting after checking which type of dialing system is used by your telephone line.	<ul style="list-style-type: none"><li>• There are two types of telephone dialing systems: tone dialing (PB) and pulse dialing (DP10pps or DP20pps). Faxes cannot be sent if this machine is not set to the system used by your telephone line. Select the correct setting after checking which type of dialing system is used.</li><li>• The default setting is “TONE”.</li></ul> <table><tr><th colspan="2">Setting value</th><th>Description</th></tr><tr><td colspan="2">TONE</td><td>Tone line</td></tr><tr><td rowspan="2">PULSE</td><td>10 PPS</td><td>Pulse line of 10 pps</td></tr><tr><td>20 PPS</td><td>Pulse line of 20 pps</td></tr></table>	Setting value		Description	TONE		Tone line	PULSE	10 PPS	Pulse line of 10 pps	20 PPS	Pulse line of 20 pps
Setting value		Description												
TONE		Tone line												
PULSE	10 PPS	Pulse line of 10 pps												
	20 PPS	Pulse line of 20 pps												

No.	Function	Purpose	Setting Details/Precautions			
2	LINE MONI- TOR	This function can be used to set the volume when monitoring communication to “HIGH”, “LOW” or “OFF”.	• Period of monitor sound.			
			Usual TX/ RX (Start)	Pressing Start key following pressing ten-key.		
				Pressing Start key following pressing Speed dial.		
				Pressing One-touch key.		
				Pressing Redial key.		
			Usual TX/ RX (End)	After receiving V21 signal.		
			Using Speaker key (Start)	Just after pressing Speaker key.		
			Using Speaker key (End)	Just after pressing Speaker key		
			Set- ting value	Line monitor volume		
				Usual TX/ RX	Usual SPEAKER key	
				HIGH	High	High
				LOW	Low	Low
OFF	Off	Low				

No.	Function	Purpose	Setting Details/Precautions						
3	PSTN/ PBX	This function can be used to set whether the connected telephone wiring is a public switched telephone network (PSTN) or a private branch exchange (PBX). For a PBX system, the outside line access number (or extension number) must be specified.	<ul style="list-style-type: none"><li>• The connected wiring system can be set to either PSTN (Public Switched Telephone Network) or PBX (Private Branch Exchange). For a PBX system, the outside line access number (or extension number) must be specified. The outside line access number (or extension number) is programmed in the [#] key.</li><li>• The default setting is “PSTN”.</li></ul> <table><tr><th>Setting value</th><th>Description</th></tr><tr><td><b>PSTN</b></td><td><b>Public Switched Telephone Network</b></td></tr><tr><td>PBX</td><td>Private Branch Exchange</td></tr></table>	Setting value	Description	<b>PSTN</b>	<b>Public Switched Telephone Network</b>	PBX	Private Branch Exchange
Setting value	Description								
<b>PSTN</b>	<b>Public Switched Telephone Network</b>								
PBX	Private Branch Exchange								

## (9) Reporting

- From the “REPORTING” menu, various functions are available for specifying which reports are automatically printed.

No.	Function	Purpose	Setting Details/Precautions
1	ACTIVITY REPORT	Every 60 transmissions/receptions, a report can be printed to show the results of the transmissions/receptions. This function can be used to set whether the report is printed automatically when the 60th transmission/ reception is reached.	The default setting is “ <b>ON</b> ”.
2	RESERV. REPORT	If multiple recipients are specified for transmission, such as with broadcast transmission and polling reception, a report can be printed to show specified settings. This function can be used to set whether this report is printed automatically.	The default setting is “ <b>OFF</b> ”.
3	TX RESULT REPORT	This function can be used to set whether the report showing the result of a transmission is printed automatically after the transmission is finished.	The default setting is “ <b>OFF</b> ”.
4	RX RESULT REPORT	This function can be used to set whether the report showing the result of a reception is printed automatically after mailbox reception is finished. (If regular reception is not finished normally, a report will always be printed, regardless of the selected setting.)	The default setting is “ <b>OFF</b> ”.

## (10) Initial user data

- Various settings for the machine's user data can be specified.

No.	Indication on LCD
1	DATE&TIME
2	USER FAX No.
9	USER NAME

### 1. Date & Time

Setting value	Description
Hour	00 to 23
Minute	00 to 59
Year	00 to 99 (2000 to 2099 will be meant)
Month	01 to 12
Day	01 to 28, 29, 30, 31
Time Zone	-12 hour to +12hour, interval: 30 minute.

### 2. USER FAX No.

- User fax number is set to TSI (Transmitting Station Identification), CSI (Called Subscriber Identification) during communication. A symbol is printed on header and Status list, but only figure is set to TSI, CSI signal. This is checked with the communication permission ID registered at destination station in case of Closed network.
- Max. 20 digits. The characters which can be inputted are "numbers from 0 to 9", "Space", "+" and "-"

### 3. User name

- The User Name is used for the indication of destination station at the time of the communication between same models.
- Maximum 32 digits character can be inputted.

(11) Network setting

- Depending on the network environment in which the machine is located, there may be some restrictions on the network functions that the machine can use. Make the network settings to suit the functions and environment required for customer's location. The network settings can be specified from the control panel or using the administrator mode of PageScope Web Connection.

No.	Function	Purpose	Setting Details/Precautions
1	IP ADDRESS	<p>This function is used to specify the IP address for the copier.</p> <hr/> <p><b>NOTES</b></p> <ul style="list-style-type: none"><li>Available only KONICA MINOLTA FAX 3900.</li><li>Please consult customer's network administrator for information about the IP address to use.</li></ul> <hr/>	<ul style="list-style-type: none"><li>The default setting is "AUTO".</li></ul> <p><b>AUTO SPECIFY</b></p> <ul style="list-style-type: none"><li>If AUTO is selected, the IP address is automatically acquired from the DHCP server.</li></ul> <hr/> <p><b>NOTES</b></p> <ul style="list-style-type: none"><li><i>AUTO is only enabled if there is a DHCP server available on the network.</i></li><li><i>When IP address cannot be acquired from the DHCP server, IP address is acquired by the "Auto-IP function".</i></li><li><i>When AUTO is selected, there is no need to set the subnet mask or gateway setting. When using a fixed IP address, IP Address in NVRAM must be selected for PageScope Web Connection.</i></li><li><i>Select this option from the "TCP/IP Configuration" menu on the "Network" tab.</i></li></ul> <hr/> <ul style="list-style-type: none"><li>If SPECIFY is selected, the screen for entering the IP address appears.</li></ul>

No.	Function	Purpose	Setting Details/Precautions
2	SUBNET MASK	<p>This function is used to specify the subnet mask value for the network.</p> <hr/> <p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>Available only KONICA MINOLTA FAX 3900.</li> <li>Please consult customer's network administrator for information about the subnet mask to use.</li> </ul> <hr/>	<ul style="list-style-type: none"> <li>Setting LAN connect to WAN the net mask address.</li> </ul> <hr/> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>If Auto is selected for "1 IP Address/Auto," the items of "2 Subnet mask" and "3 Gateway" are automatically set. Key entry is therefore disabled for "2 Subnet mask" and "3 Gateway."</li> </ul> <hr/>
3	GATEWAY	<p>This function is used to specify the default gateway (IP address) of a router on the network.</p> <hr/> <p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>Available only KONICA MINOLTA FAX 3900.</li> <li>Please consult customer's network administrator for information about the gateway to use.</li> </ul> <hr/>	<ul style="list-style-type: none"> <li>Setting LAN address.</li> </ul> <hr/> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>If Auto is selected for "1 IP Address/Auto," the items of "2 Subnet mask" and "3 Gateway" are automatically set. Key entry is therefore disabled for "2 Subnet mask" and "3 Gateway."</li> </ul> <hr/>
4	DNS CONFIG.	<p>This function is used to enable or disable the DNS (Domain Name System) setting. If there is a DNS server on your network, enter the IP address of the DNS server. *If the DNS server is located within your local network, select Enable. If you are using the DNS server of an Internet service provider (ISP) or some other DNS server located outside your local network, select Disable.</p> <hr/> <p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>Available KONICA MINOLTA FAX 3900.</li> <li>Please consult customer's network administrator for details.</li> </ul> <hr/>	<ul style="list-style-type: none"> <li>The default setting is "DISABLE".</li> <li><b>DISABLE    ENABLE</b></li> <li>If DISABLE is selected, the NETWORK SETTING screen appears.</li> <li>If ENABLE is selected, the screen for entering the IP address of the DNS server appears.</li> </ul>

## (12) E-mail setting 1

- Available only KONICA MINOLTA FAX 3900.
- Depending on the network environment in which the machine is located, there may be some restrictions on the network functions that the machine can use. Make the network settings to suit the functions and environment required for customer's location. The network settings can be specified from the control panel or using the administrator mode of PageScope Web Connection.

No.	Function	Purpose	Setting Details/Precautions
1	SENDER NAME	This function is used to specify the sender's name.	Up to 20 characters can be entered for the sender name.
2	E-MAIL ADDRESS	<div>This function is used to specify the e-mail address of the sender.</div> <hr/> <div><b>NOTE</b> Please consult customer's network administrator for information about the e-mail address to use.</div> <hr/>	<ul style="list-style-type: none"><li>• Up to 64 characters can be entered for the sender address.</li><li>• If customer does not receive e-mail on the copier, enter the e-mail address of the customer's administrator.</li></ul>
3	SMTP SERVER	<div>This function is used to enter the IP address or host name of an SMTP server.</div> <hr/> <div><b>NOTE</b> Please consult customer's network administrator for information about the IP address to use.</div> <hr/>	<ul style="list-style-type: none"><li>• Up to 64 characters can be entered for the host name.</li><li>• The DNS settings must have been specified before specifying the host name for the SMTP server.</li></ul>
4	SMTP PORT NO.	<div>This function is used to enter the port number (1 to 65535) for the SMTP server.</div> <hr/> <div><b>NOTE</b> Please consult customer's network administrator for information about the port number to use.</div> <hr/>	<ul style="list-style-type: none"><li>• The port number can be set between 1 and 65535.</li><li>• Normally, port number 25 is used.</li></ul>
5	SMTP TIME-OUT	This function is used to specify the length of time (in seconds) before the connection to the SMTP server times out. (30 to 300 seconds)	<ul style="list-style-type: none"><li>• The default setting is "60".</li><li>• The time out period can be between 30 and 300 seconds.</li></ul>

No.	Function	Purpose	Setting Details/Precautions
6	TEXT INSERT	This function is used to specify whether or not to insert text explaining that an image has been attached to an e-mail message, when sending scan data as an E-mail attachment.	<ul style="list-style-type: none"> <li>The default setting is "OFF".</li> </ul> <p style="text-align: center;"><b>ON                      OFF</b></p> <ul style="list-style-type: none"> <li>ON: If ON is selected, the following text is inserted in the e-mail message.</li> </ul> <hr/> <p><b><i>Image data (TIFF format) has been attached to the E-mail. We recommend you use a program like "Imaging for Windows" to view the file.</i></b></p> <hr/> <ul style="list-style-type: none"> <li>OFF: If OFF is selected, a blank e-mail message will be sent.</li> </ul>
7	DEFAULT SUBJECT	This function is used to specify the default subject line, when sending scan data as an e-mail attachment.	Up to 20 characters can be entered for the default subject.

### (13) E-mail setting 2

- Available only KONICA MINOLTA FAX 3900.
- Depending on the network environment in which the machine is located, there may be some restrictions on the network functions that the machine can use. Make the network settings to suit the functions and environment required for customer's location. The network settings can be specified from the control panel or using the administrator mode of PageScope Web Connection.

No.	Function	Purpose	Setting Details/Precautions
1	POP3 SERVER	<p>This function is used to enter the IP address or host name of an POP3 server.</p> <hr/> <p><b>NOTE</b> Please consult customer's network administrator for information about the IP address to use.</p> <hr/>	<ul style="list-style-type: none"><li>• Up to 64 characters can be entered for the host name.</li><li>• The DNS settings must have been specified before specifying the host name for the POP3 server.</li></ul>
2	POP3 PORT NO.	<p>This function is used to enter the port number (1 to 65535) for the POP3 server.</p> <hr/> <p><b>NOTE</b> Please consult customer's network administrator for information about the port number to use.</p> <hr/>	<ul style="list-style-type: none"><li>• The port number can be set between 1 and 65535.</li><li>• Normally, port number 110 is used.</li></ul>
3	POP3 TIME-OUT	<p>This function is used to specify the length of time (in seconds) before the connection to the POP3 server times out. (30 to 300 seconds)</p>	<ul style="list-style-type: none"><li>• The default setting is "60".</li><li>• The time out period can be between 30 and 300 seconds.</li></ul>
4	POP3 ACCOUNT	<p>This function is used to enter the account name used to log on to the POP3 server.</p> <hr/> <p><b>NOTE</b> Please consult customer's network administrator for information about the account name to use.</p> <hr/>	<p>Up to 64 characters can be entered for the account name.</p>

No.	Function	Purpose	Setting Details/Precautions
5	POP3 PASS-WORD	<p>This function is used to enter the password associated with the account name used to log in to the POP3 server.</p> <hr/> <p><b>NOTE</b> Please consult customer's network administrator for information about the password to use.</p> <hr/>	Up to 32 characters can be entered for the password.
6	AUTO RECEPTION	This function is used to specify the time interval (in minutes) for checking E-mail, when Auto Reception is enabled. (0 minutes: OFF, 1 to 60 minutes)	<ul style="list-style-type: none"> <li>The default setting is "OFF". <b>ON                  OFF</b></li> <li>If ON is selected, the screen used to specify the time interval for checking e-mail appears. The time interval for automatically checking for new e-mail can be set between 1 minute and 60 minutes. The default setting is "15 minutes".</li> <li>If OFF is selected, the E-MAIL SETTING 2 screen appears again.</li> </ul>
7	REPLAY ADDRESS	This function is used to enter the e-mail address to be used when sending notification of an error, if an error occurs while receiving an Internet fax.	<ul style="list-style-type: none"> <li>Up to 64 characters can be entered for the reply address.</li> <li>Normally, the reply address is set to the e-mail address of the customer's administrator.</li> </ul>
8	HEADER PRINT	This function is used to specify whether or not to print header information when printing E-mails that have been received.	<ul style="list-style-type: none"> <li>The default setting is "OFF". <b>ON                  OFF</b></li> <li>ON: Printing cover page &amp; attachment file.</li> <li>OFF: Only printing attachment file.</li> </ul>

#### (14) Scan setting

- Available only KONICA MINOLTA FAX 3900.
- The scan settings can be specified from the control panel or using the administrator mode of PageScope Web Connection.

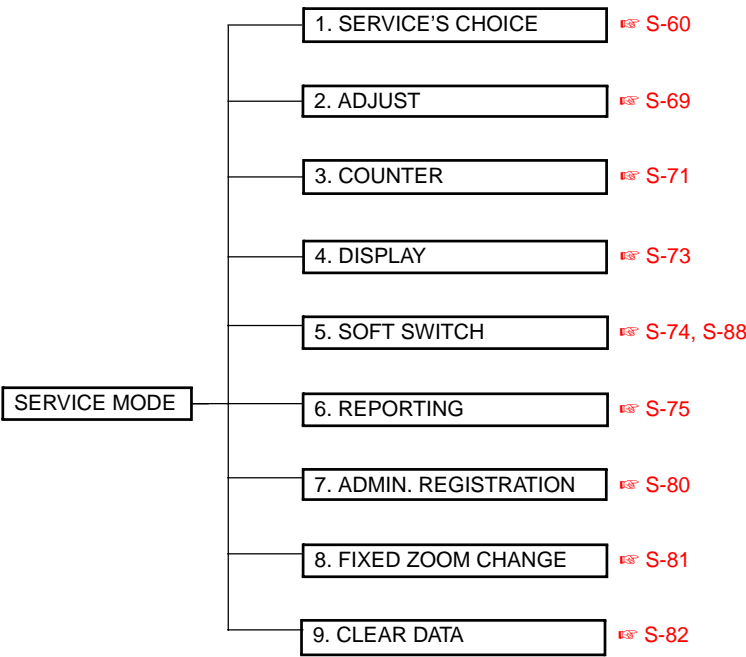
No.	Function	Purpose	Setting Details/Precautions
1	RESOLUTION	The default settings for resolution used by the Scan to E-mail and Scan to Server (FTP) functions can be specified.	<ul style="list-style-type: none"><li>• The default setting is “300 x 300”.  150 x 150    <b>300 x 300</b> 600 x 600</li><li>• 150 dpi x 150 dpi: Normal resolution for text documents containing standard sized text.</li><li>• 300 dpi x 300 dpi: Higher resolution for text documents containing small characters or fine print, such as a newspaper article.</li><li>• 600 dpi x 600 dpi: Highest resolution for scanning photographs and other images</li></ul>
2	IMAGE FORMAT	The default settings for data format used by the Scan to E-mail and Scan to Server (FTP) functions can be specified.	<ul style="list-style-type: none"><li>• The default setting is “TIFF”.  <b>TIFF</b>        PDF</li><li>• TIFF: Tagged Image File Format, The image is not compressed. Images are clearer than the image data of the PDF form.</li><li>• PDF: Portable Document Format, The image is compressed. The data size becomes small compared with the image data of the TIFF form.</li></ul>

No.	Function	Purpose	Setting Details/Precautions
3	CODING METHOD	The default settings for coding method, used by the Scan to E-mail and Scan to Server (FTP) functions can be specified.	<ul style="list-style-type: none"> <li>The default setting is "MH".</li> </ul> <p><b>MH</b>    MR    MMR</p> <ul style="list-style-type: none"> <li>MH: Modified Huffman.</li> <li>MR: Modified Read, 50% faster than MH.</li> <li>MMR: Modified Modified Read, 50% faster than MR.</li> </ul>

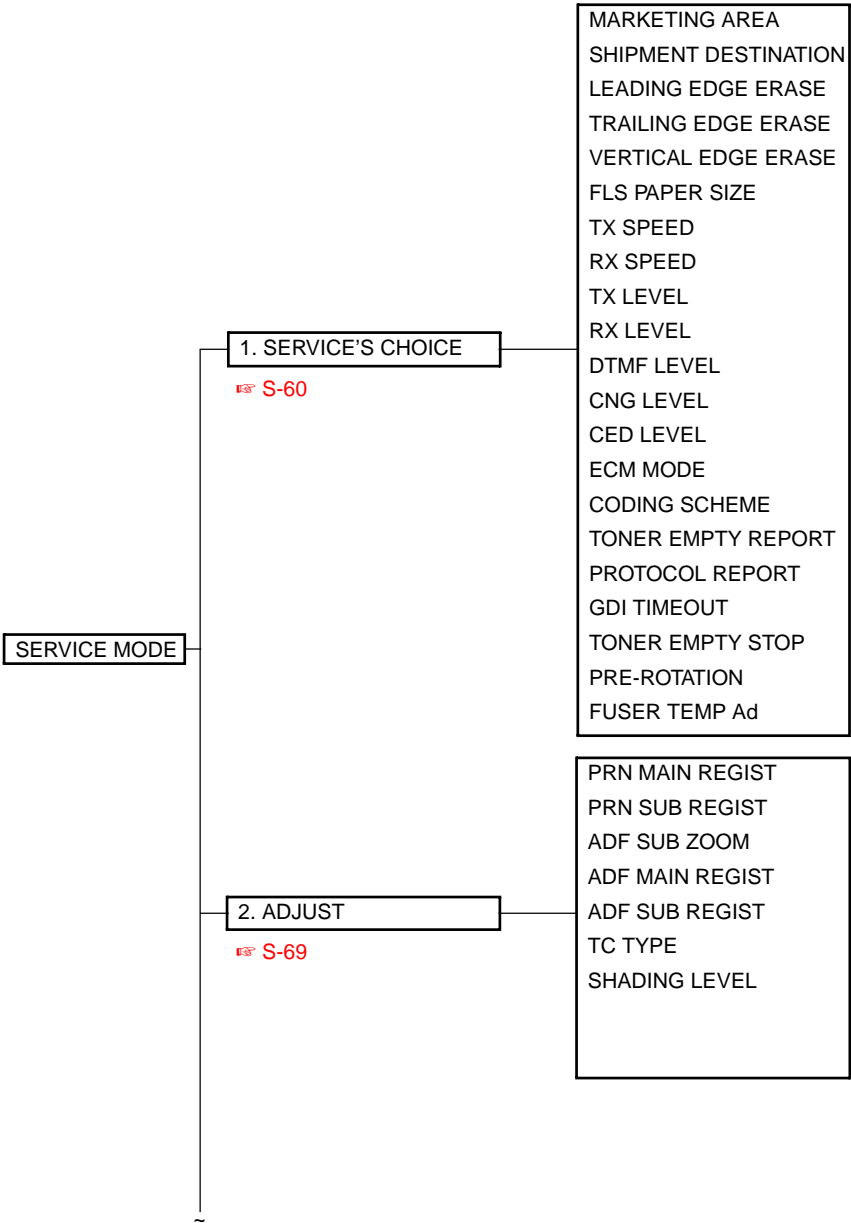
# 5. SERVICE MODE

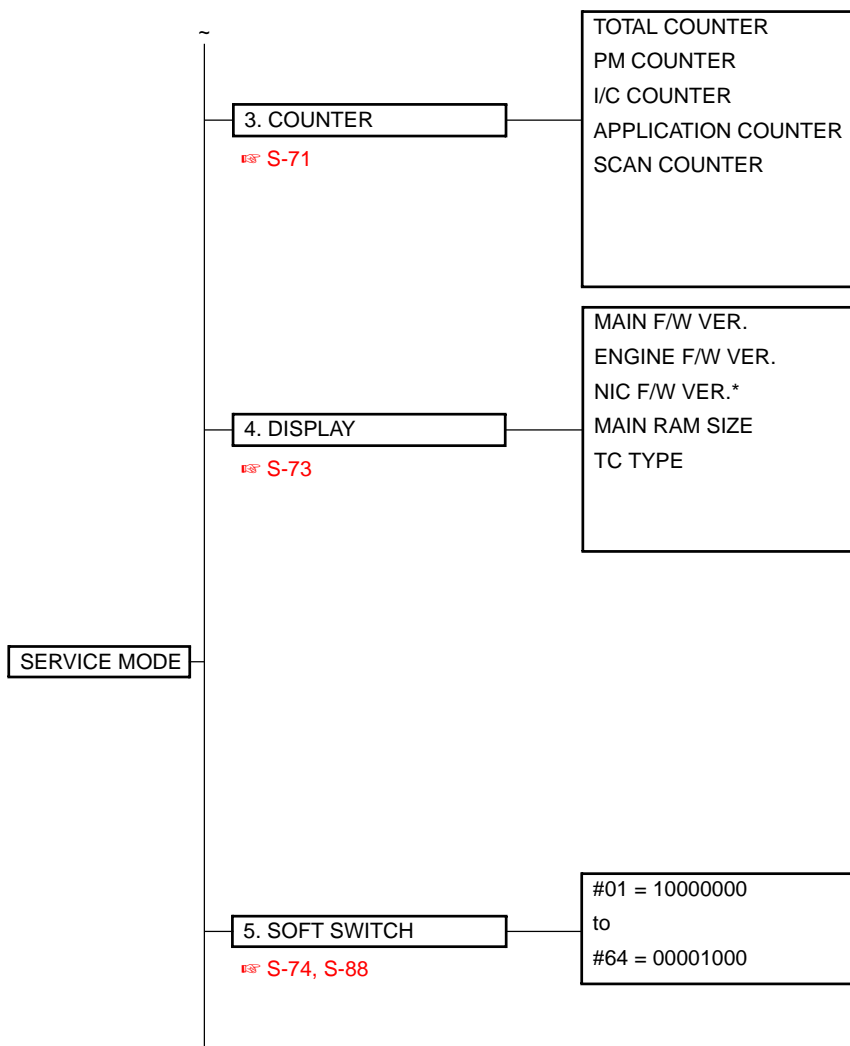
- This mode is used to check, specify, adjust and register service functions.

## 5-1. Service Mode Function Tree (Outline)

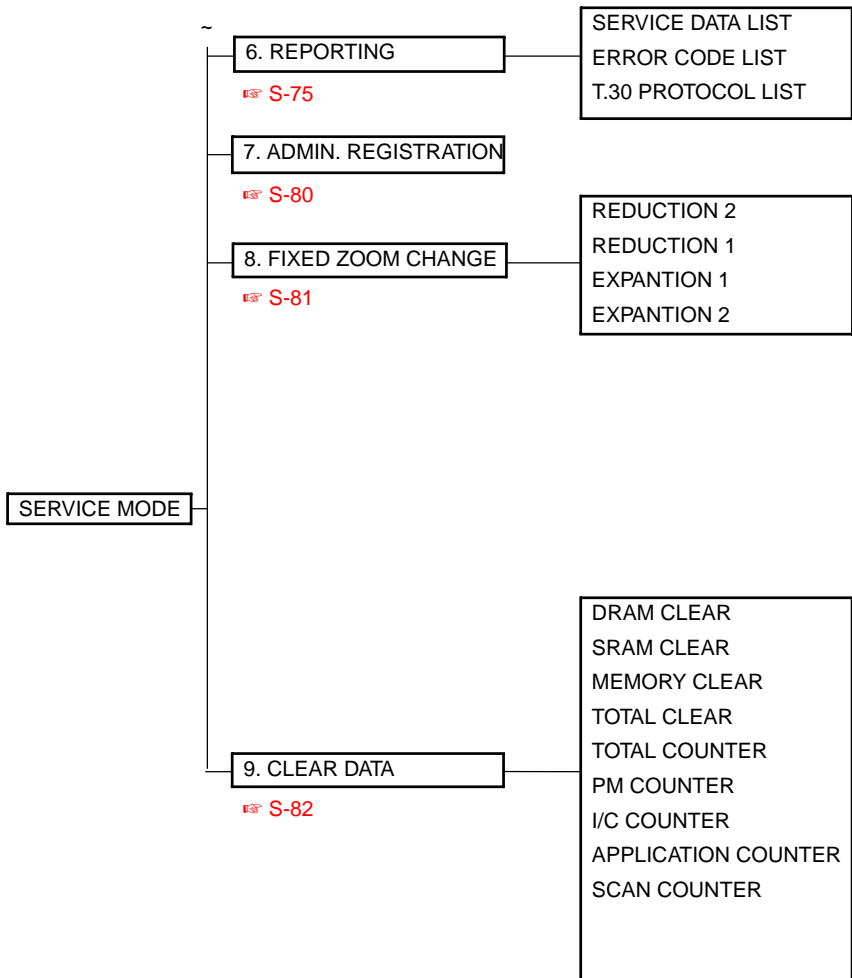


5-2. Service Mode Function Tree (Details)





\*: Available only for the KONICA MINOLTA FAX 3900.



### 5-3. Service Mode Setting Procedure

---

**NOTE**

- Be sure to keep the access procedure for the Service mode from any unauthorized persons not involved with service operations.
- 

(1)<Procedure>

1. Press the Utility key.
2. Press the following keys in this order to enter the Service mode.  
Stop → 0 → 0 → Stop → 0 → 1
3. The first Service mode screen appears.

(2)<Exiting Procedure>

- Press the Panel Reset key.

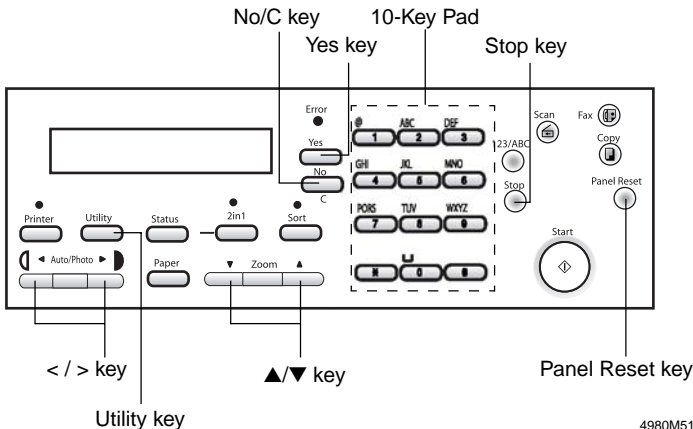
(3)<Changing the Settings for Service Mode Functions>

1. Press the ▲/ ▼ key to select the desired function.
2. Press the ▲/ ▼ key, < / > key or the 10-Key Pad to select the desired setting.
3. Press the Yes key to apply the setting.
4. To return to the previous screen, press the No/C key.

---

**NOTE**






















- In order for the settings for the Service mode functions to be changed, the machine must be turned off, then on again.
- 



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## 5-4. Service's Choice Functions

- The following counters can be shown on display.



No.	Indication on LCD	
1	MARKETING AREA	 S-61
2	SHIPMENT DESTINATION	 S-62
3	LEADING EDGE ERASE	 S-63
4	TRAILING EDGE ERASE	 S-63
5	VERTICAL EDGE ERASE	 S-63
6	FLS PAPER SIZE	 S-64
7	TX SPEED	 S-64
8	RX SPEED	 S-64
9	TX LEVEL	 S-64
10	RX LEVEL	 S-65
11	DTMF LEVEL	 S-65
12	CNG LEVEL	 S-65
13	CED LEVEL	 S-65
14	ECM MODE	 S-66
15	CODING SCHEME	 S-66
16	TONER EMPTY REPORT	 S-66
17	PROTOCOL REPORT	 S-67
18	GDI TIMEOUT	 S-67
19	TONER EMPTY STOP	 S-68
20	PRE-ROTATION	 S-68
21	FUSER TEMP Ad. (Fuser temperature adjust)	 S-68

## (1) Marketing Area

- Set the marketing area.
- If you change the marketing area, the soft switch (1-64) will change automatically.

### NOTES

- If you change the marketing area, the following items are cleared (initialization).  
Before change the marketing area, be sure to record the setting values that are to be change the marketing area.
- After change the marketing area has been executed, make necessary entries of data again based on the setting values recorded.

Function		Default Setting
Utility mode/ Machine setting/ Buzzer volume	 S-23	Low
Utility mode/ Admin. management/ Remote monitor	 S-26	Limited

- According to the following table, the machines that are installed in the West Europe Area select "West Europe" in the "Marketing Area" function. Do not select each country.

Marketing area	Country
Setting in accordance with each country	Australia, China, Germany, Israel, Japan, Korea, New Zealand, The Philippines, Saudi Arabia, South Africa, Taiwan.
Asia	Bahrain, Baltic, Hong Kong, Indonesia, Kuwait, Malaysia, Oman, Poland, Qatar, Romania, Russia, Slovakia, Slovenia, Thailand, U. A. E., Ukraine.
Singapore	Singapore (remark: with DTS default setting).
U.S.A	U. S. A., Canada.
West Europe	Austria, Belgium, Cyprus, Czech, Denmark, Finland, France, Greece, Hungary, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom.

## MARKETING AREA Setting Procedure

Use the one touch key to select any number from 1 to 15.

One Touch	Marketing area	One Touch	Marketing area
1	STANDARD (Factory use only)	9	NETHERLANDS
2	U.S.A.	10	FINLAND
3	TAIWAN	11	DENMARK
4	SPAIN	12	SWITZERLAND
5	ITALY	13	IRELAND
6	BELGIUM	14	PORTUGAL
7	NORWAY	15	SOUTH AFRICA
8	SWEDEN	-	-

Use the [Up] or [Down] key to select the number.

No.	Marketing area	No.	Marketing area
16	GREECE	33	POLAND
17	ISRAEL	34	ROMANIA
18	AUSTRIA	35	RUSSIA
19	GERMANY	36	SINGAPORE
20	FRANCE	37	MALAYSIA
21	UNITED KINGDOM	38	HONG KONG
22	AUSTRALIA	39	PHILIPPINES
23	CHINA	40	THAILAND
24	NEW ZEALAND	41	INDONESIA
25	KOREA	42	OMAN
26	CZECH	43	UAE
27	SLOVAK	44	QATAR
28	HUNGARY	45	BAHRAIN
29	UKRAINE	46	KUWAIT
30	BALTIC	47	SAUDI ARABIA
31	WEST EUROPE	48	JAPAN
32	SLOVENIJA	-	-

### (2) Shipment Destination

- To switch the fixed zoom ratios and paper sizes according to the selected marketing area.

No.	Description	Default
0	METRIC	<input type="radio"/>
1	INCH	<input type="radio"/>

### (3) Leading Edge Erase

- To change the laser emission timing to adjust the width of the image area that is erased at the leading edge.
- When the PH unit has been replaced.

Setting value	Default
0 mm	
1 mm	
2 mm	
3 mm	
<b>4 mm</b>	○
5 mm	

### (4) Trailing Edge Erase

- To change the laser emission timing to adjust the width of the image area that is erased at the trailing edge.
- When the PH unit has been replaced.

Setting value	Default
0 mm	
1 mm	
2 mm	
3 mm	
<b>4 mm</b>	○
5 mm	

### (5) Vertical Edge Erase

- Erase the rear and front edges of the image.

Setting Value	Default
0 mm	
1 mm	
2 mm	
3 mm	
<b>4 mm</b>	○
5 mm	

#### (6) FLS Paper Size

- To specify the paper size for foolscap.
- When the FLS paper size has been changed.
- Upon setup

Setting Value	Contents	Default
0	330 × 203 (mm)	
<b>1</b>	<b>330 × 210 (mm)</b>	<input type="radio"/>
2	330 × 216 (mm)	
3	330 × 206 (mm)	

#### (7) TX Speed

- Transmit start speed setting. Choose the mode from among the following. Default is V.34 33600.

Mode	Speed	Default
<b>V.34</b>	<b>33600, 31200, 28800, 26400, 24000, 21600, 19200, 16800</b>	<input type="radio"/>
V.17	14400, 12000, 9600, 7200	
V.29	9600, 7200	
V.27	4800, 2400	

#### (8) RX Speed

- Reception start speed setting. Choose the mode from among the following. Default is V.34 33600.

Mode	Speed	Default
<b>V.34</b>	<b>33600, 31200, 28800, 26400, 24000, 21600, 19200, 16800</b>	<input type="radio"/>
V.17	14400, 12000, 9600, 7200	
V.29	9600, 7200	
V.27	4800, 2400	

#### (9) TX Level

- PSK/FSK signal output level.

Setting Value	Default
-2 dBm	
-3 dBm to -8 dBm	
<b>-9 dBm</b>	<input type="radio"/>
-10 dBm to -16 dBm	
-17 dBm	

**(10) RX Level**

- Reception sensitivity level.

Setting Value	Default
-36 dBm	
-37 dBm to -42 dBm	
<b>-43 dBm</b>	<input type="radio"/>
-44 dBm to -48 dBm	
-49 dBm	

**(11) DTMF Level**

- Dual tone output level.

Setting Value	Default
-2 dBm	
-3 dBm to -8 dBm	
<b>-9 dBm</b>	<input type="radio"/>
-10 dBm to -16 dBm	
-17 dBm	

**(12) CNG Level**

- Calling tone output level.

Setting Value	Default
-2 dBm	
-3 dBm to -10 dBm	
<b>-11 dBm</b>	<input type="radio"/>
-12 dBm to -16 dBm	
-17 dBm	

**(13) CED Level**

- Answer tone output level.

Setting Value	Default
-2 dBm	
-3 dBm to -10 dBm	
<b>-11 dBm</b>	<input type="radio"/>
-12 dBm to -16 dBm	
-17 dBm	

#### (14) ECM Mode

- Select error correction mode.

Setting Value	Description	Default
<b>ON</b>	<b>When an error occurs during communication, re-send the frame where the error occurs.</b>	<input type="radio"/>
OFF	Any error is ignored during communication.	

#### (15) Coding Scheme

- Select compression method in TX/ RX mode.

Setting Value	Description	Default
<b>JBIG</b>	<b>The most complex compression method that generates the smallest code than any of following ones.</b>	<input type="radio"/>
MMR	A compression method.	<input checked="" type="radio"/> *1
MR	A compression method.	
MH	The simplest compression method.	

\*1: KONICA MINOLTA FAX 2900: The default of "Coding method" is "MMR".

#### (16) Toner Empty Report

- Select to generate a report to a specific destination when toner empty status occurs in the engine.

Setting Value	Description	Default
<b>OFF</b>	<b>Not to generate report.</b>	<input type="radio"/>
ON	<ul style="list-style-type: none"><li>• Generate a report to report destination.</li><li>• If "ON" is selected, select generate report and send to remote side when toner runs out.</li><li>• Enter the telephone number for which the report is to be produced. Fax number specifications: An up-to-20-digit number that may consist of "0-9", "*", "#", "pause", and "space". (0-9, #, *, pause, _)</li><li>• The report will generate after 20 minutes, 24 hours, 48 hours, or 72 hours after the event has occurred or until the condition is gone.</li></ul>	

- Toner empty report (example)

<div>SERVICE REPORT</div>	
NAME:ABC 123 TEL:1234567 DATE:Dec.01.2003 15:12	
The Fax's following conditions were appears, the machine may be can not work correctly, the Fax already send a report to your dealer automatically. They will contact with you soon.	
Toner status	: Empty

(17) Protocol Report

- Print communication report. Choose one from among the following.

Setting Value	Description	Default
OFF	Disable T.30 communication report.	<input type="radio"/>
ON	Print T.30 communication report.	
ON (ERROR)	Print T.30 communication report when an error occurs.	

T.30 communication report (example: V.17 communication)

 S-79, S-160

NAME: ABC  
TEL:886 3 4733507  
DATE: APR.10'97 12:20

PROTOCOL MONITOR REPORT

SESSION	FUNCTION	NO	DESTINATION STATION	DATE	TIME	PAGE	MODE	RESULT
0001	TX	01	ABC 22345678901234567890	DEC. 02	15:00	008	ECM- 12	OK

TX	RX
NSF	
CSI	
DIS	
	NSS
	DCS

DATA															
FF 03 20 00 00 00 00 00 00 00 00 00 00 00 00 00 00															
FF 03 40 00 00 00 00 00 00 00 00 00 00 00 00 00 00															
FF 13 40 00 00 00 00 00															
FF 03 00 00 00 00 00 00 00 00 00 00 00 00															
FF 03 00 00 00 00 00 00 00 00 00															

(18) GDI Time out

To specify the time for GDI time out

Setting Value	Description	Default
0	5 sec	
1	10 sec	
2	20 sec	
3	30 sec	
4	40 sec	
5	50 sec	
6	60 sec	<input type="radio"/>

### (19) Toner Empty Stop

- To select if copy operations are stopped when the toner becomes empty.

Setting Value	Description	Default
<b>ON</b>	<b>Toner empty stop is enabled.</b>	<input type="radio"/>
ON (FAX)	Toner empty stop is enabled only for FAX functions.	
OFF	Toner empty stop is disabled. If "OFF" is selected, operations are not stopped when the toner becomes empty	

### (20) Pre-rotation

- To select if the pre-rotation operation for the Fusing Roller is performed when the Start key is pressed.

Setting Value	Description	Default
<b>OFF</b>	<b>Pre-rotation disabled.</b> <b>If "OFF" is selected, the length of time until the first copy can be printed is shorter.</b>	<input type="radio"/>
ON	Pre-rotation enabled.	

### (21) Fuser Temp Ad.

- To specify the fusing temperature when using plain paper (more than 186 mm).
- When a fusing failure has occurred.

Setting Value	Description	Default
<b>OFF</b>	<b>Normal temperature.</b>	<input type="radio"/>
ON	High temperature.	

5-5. Adjust Function

- The following counters can be shown on display.

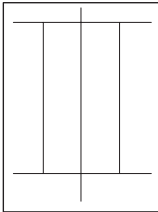
No.	Indication on LCD
1	PRN MAIN REGIST
2	PRN SUB REGIST
3	ADF SUB ZOOM
4	ADF MAIN REGIST
5	ADF SUB REGIST
6	TC TYPE
7	SHADING LEVEL

(1) Adjust

Precautions for making test copies with functions from the “ADJUST” menu

- The test pattern should be positioned vertically.
- Use paper loaded into Tray1 to make the test copy.

TEST PATTERN 1



4980S530AA

Function		Purpose	Setting Details/Precautions
PRN MAIN REGIST	TEST COPY	To vary and adjust the print start position in the main scanning direction.	Press the Start key to begin printing the test page.
	ADJUST	<ul style="list-style-type: none"><li>• If the image on the copy deviates in the CD direction</li><li>• When the PH unit has been replaced</li></ul>	<ul style="list-style-type: none"><li>• The setting range is 60 (-40 mm) to 140 (+40 mm).</li><li>• (1 increment = 0.1 mm)</li><li>• The default setting is “100”.</li></ul>
PRN SUB REGIST	TEST COPY	To vary and adjust the print start position in the sub-scanning direction.	Press the Start key to begin printing the test page.
	ADJUST	<ul style="list-style-type: none"><li>• If the image on the copy deviates in the FD direction</li><li>• When the PH unit has been replaced</li></ul>	<ul style="list-style-type: none"><li>• The setting range is 87 (-5.98 mm) to 113 (+5.98 mm).</li><li>• (1 increment = 0.46 mm)</li><li>• The default setting is “100”.</li></ul>

Function		Purpose	Setting Details/Precautions
ADF SUB ZOOM	TEST COPY	To adjust for variations in the accuracy of ADF and their mounting accuracy by varying the scanning zoom ratio in the sub-scanning direction.	Press the Start key to begin printing the test page.
	ADJUST		<ul style="list-style-type: none"> <li>• The setting range is 95 (-2.0 %) to 105 (+2.0 %).</li> <li>• (1 increment = 0.4%)</li> <li>• The default setting is “<b>100</b>”.</li> </ul>
ADF MAIN REGIST	TEST COPY	To adjust for variations in the accuracy of ADF and their mounting accuracy by varying the scanning start position in the main scanning direction.	Press the Start key to begin printing the test page.
	ADJUST		<ul style="list-style-type: none"> <li>• The setting range is 90 (-5.0 mm) to 110 (+5.0 mm).</li> <li>• (1 increment = 0.5 mm)</li> <li>• The default setting is “<b>100</b>”.</li> </ul>
ADF SUB REGIST	TEST COPY	To adjust for variations in the accuracy of ADF and their mounting accuracy by varying the scanning start position in the sub-scanning direction.	Press the Start key to begin printing the test page.
	ADJUST		<ul style="list-style-type: none"> <li>• The setting range is 90 (-5.0 mm) to 110 (+5.0 mm).</li> <li>• (1 increment = 0.5 mm)</li> <li>• The default setting is “<b>100</b>”.</li> </ul>
SHAD- ING LEVEL	ADJUST	Save the Shading value. When the shading page is unclear then machine execute the shading will get wrong value, in this time can use the save shading.	<ul style="list-style-type: none"> <li>• This function is the same with shading level of the Image Sensor by using A4 size white sheet of paper in case of following condition.</li> </ul>



**5-6. Counter Function**



- The following counters can be shown on display.

No.	Indication on LCD
1	TOTAL COUNTER
2	PM COUNTER
3	I/C COUNTER
4	APPLICATION COUNTER
5	SCAN COUNTER

**(1) Counter**

- The counter values can be displayed.

Function	Purpose	Setting Details/Precautions
TOTAL COUNTER	To display the total number of pages used.	<p>COPY: Number of copies printed PRINT: Number of computer printouts printed</p> <ul style="list-style-type: none"><li>• Test prints made in Service mode to check the operation are not counted.</li></ul>
PM COUNTER	To display the number of times that PM parts are used.	<ul style="list-style-type: none"><li>• To clear the counter data, use the functions on the “CLEAR DATA” menu of Service mode.</li></ul> <p> <b>S-82</b></p>
I/C COUNTER	To display the total number of times that the Drum Cartridge has been used.	<ul style="list-style-type: none"><li>• To clear the counter data, use the functions on the “CLEAR DATA” menu of Service mode.</li></ul> <p> <b>S-82</b></p>

Function	Purpose	Setting Details/Precautions
APPLICATION COUNTER	To display the number of pages used with each application.	<p>COPY PRINT : Number of copies printed.</p> <p>FAX RX PRINT : Number of Fax reception printed.</p> <p>REPORT PRINT : Number of Report printed.</p> <p>PC PRINT : Number of computer printouts printed</p> <p>FAX TX PAGE : Number of Fax transmitting pages.</p> <p>MAIL TX PAGE : Number of Mail transmitting pages.</p> <ul style="list-style-type: none"> <li>To clear the counter data, use the functions on the "CLEAR DATA" menu of Service mode.</li> </ul> <p> <b>S-82</b></p>
SCAN COUNTER	To display the number of scans made.	<p>MONOCHROME: Number of monochrome scans</p> <p>COLOR: Number of color scans</p> <ul style="list-style-type: none"> <li>Scans made while making copies are not counted.</li> <li>To clear the counter data, use the functions on the "CLEAR DATA" menu of Service mode.</li> </ul> <p> <b>S-82</b></p>

5-7.      **Display Function**

(1)    **Display**

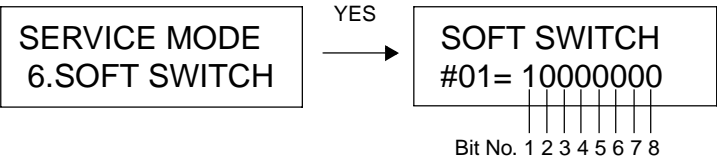
- Various information can be displayed.

Function	Purpose	Setting Details/Precautions	
MAIN F/W VER.	To display the version of the main firmware.		
ENGINE F/W VER.	To display the version of the engine firmware.		
NIC F/W VER.	To display the version of the engine firmware. When NIC is not connected, it is not displayed.		
MAIN RAM SIZE	To display the size of the main memory.		
TC TYPE	To specify the type of Toner Cartridge that should be installed in the main unit.  • Once the type of Toner Cartridge is specified, “TC TYPE” on the “ADJUST” menu cannot be set again.  <Types of Toner Cartridges> • Europe: Toner Cartridge 101 A • Others: Toner Cartridge 101 B • North/ South America: Toner Cartridge 101 C	• The default setting differs depending on the marketing area.	
		Toner Cartridge Type	Setting
		(No Toner Cartridge)	0
		(Not Used)	1
		A	2
		B	3
		(Not Used)	4
		C	5
		(Not Used)	6
		(Not Used)	7
		(Not Used)	8
		(Not Used)	9
		(Not Used)	10
		(Not Used)	11

5-8.      **Soft Switch Function**

- Refer to the chapter of soft switch for the explanation of soft switch.

 **S-88**






- KEY DEFINITION FOR SOFT SWITCH

Key	Definition
▼	Soft Switch Number Forward.
▲	Soft Switch Number Backward.
YES	Update Soft Switch by current setting.
NO/STOP	Exit Soft Switch setting
ONE TOUCH	<ul style="list-style-type: none"><li>• 1 - 32 of the soft switch numbers uses and selects an one-touch key.</li><li>• 33 - 64 of the soft switch numbers uses and selects ↓ key.</li></ul>

## 5-9. Reporting

- The following list is selected, and press YES key.
- After service mode ends, the list is automatically printed.

No.	Indication on LCD	
1	SERVICE DATA LIST	 S-75
2	ERROR CODE LIST	 S-78
3	T.30 PROTOCOL LIST	 S-79

### (1) Service Data List

- Print service data list report and Error log history list.
- Service Data list includes the following items:

1. Report title
2. Soft switch list: Soft switch is displayed by HEX No.  
example)

When the setting of SOFT SWITCH #01 is 0000 0001 (Bit No. 8765 4321)", it is written as 2 0".

Hex-binary conversion list		HEX															
		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Bit no.	4 (8)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	3 (7)	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1
	2 (6)	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1
	1 (5)	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

3. Communication history and counter
4. Mailbox ID & Password
5. RX in memory password
6. Admin. password
7. Section number password
8. ROM ID

- Error log history list includes the following items:

No.	Item	Description
1	Index	Index number from 0 - 9999
2	Error	Error code number
3	Maker	NSF frame maker code
4	Tell.	Remote side or TX side telephone number for that transaction

1. Service Data List (example)

SERVICE DATA LIST		example)	
NAME:ABC 123		SW01 = Hex 01 = 0000 0001	
TEL:1234567		Bit no. = 8 7 6 5 4 3 2 1	
DATE:Dec.01.2003 15:12		Bit No.8 = 0 Bit No.4 =0	
MARKETING AREA=STANDARD		Bit No.7 = 0 Bit No.3 =0	
SHIPMENT DESTINATION= METRIC		Bit No.6 = 0 Bit No.2 =0	
		Bit No.5 = 0 Bit No.1 =1	
-- SOFT SWITCH --			
SW01-SW16	01 20 80 0C 00 00 07 61 00 81 00 80 10 00 01 03		
SW17-SW32	00 00 68 00 80 06 00 00 00 28 00 A7 14 68 00 00		
SW33-SW48	C0 82 10 8A 00 C1 00 08 00 00 00 04 00 06 00 89		
SW49-SW64	01 00 00 00 00 B0 00 00 00 00 00 21 0F 00 80 10		
--COMMUNICATION HISTORY & COUNTER --			
000000: ECM RX TIME		000000: ECM TX TIME	
000001: G3 RX TIME		000000: G3 RX PAGE	
000000: V.17 14.4K		000000: V.17 12K	
000000: V.17 9.6K		000000: V.17 7.2K	
000000: V.29 9.6K		000000: V.29 7.2K	
000000: V.27 4.8K		000001: V.27 2.4K	
000000: G3 TX TIME		000000: G3 TX PAGE	
000000: V.17 14.4K		000000: V.17 12K	
000000: V.33 14.4K		000000: V.33 12K	
000000: V.17 9.6K		000000: V.17 7.2K	
000000: V.29 9.6K		000000: V.29 7.2K	
000000: V.27 4.8K		000000: V.27 2.4K	
000007: V.34 RX TIME		000007: V.34 RX PAGE	
000002: 33.6K		000005: 31.2K	
000000: 28.8K		000000: 26.4K	
000000: 24.0K		000000: 21.6K	
000000: 19.2K		000000: 16.8K	
000000: 9.6K		000000: 7.2K	
000000: 4.8K		000000: 2.4K	
000001: V.34 TX TIME		000015: V.34 TX PAGE	
000001: 33.6K		000006: 31.2K	
000000: 28.8K		000000: 26.4K	
000000: 24.0K		000000: 21.6K	
000000: 19.2K		000000: 16.8K	
000000: 9.6K		000000: 7.2K	
000000: 4.8K		000000: 2.4K	
000007: JBIG TX TIME		000007: JBIG RX TIME	
000000: TOTAL COUNTER			
000000: COPY PRINT		000000: FAX PRINT	
000000: REPORT PRINT		000000: PC PRINT	
-- MAILBOX ID & PW --			
NO.1 ID=	PW=	NO.2 ID=	PW=
NO.4 ID=	PW=	NO.5 ID=	PW=

SERVICE DATA LIST	
NAME:ABC 123	
TEL:1234567	
DATE:Dec.01.2003 15:12	
-- ADJUST --	
PRINT MAIN REGIST: 77	PRN: SUB REGIST
CCD MAIN ZOOM: 100	CCD: SUB ZOOM
CCD MAIN REGIST: 100	CCD SUB REGIST: 100
ADF SUB ZOOM: 100	
ADF MAIN REGIST: 100	ADF SUB REGIST: 100
SERIAL NUMBER: 12345678	CUSTOMER ID: 1
TC TYPE: 1	000000: G3 TX PAGE
RX IN MEMORY:	
ADMIN.PASSWORD: 000000	
MAIN RAM SIZE: 16MB	
PCL RAM SIZE: 0MB	
-- ROM ID --	
01/01/2004 v1.00-0	

2. Error Log History List (example)

The following table is the error log history. The table keeps the last 40 records only.

ERROR LOG HISTORY LIST			
Index	Error	Maker	Tell
0001:	0070	49EE	88634733507
0002:	00A0	49EE	
0003:	0070	0000	
0004:	0070	0000	
0005:	0070	0000	
0006:	0070	0000	
0007:	0070	0000	
0008:	0070	0000	
0009:	0070	0000	
0010:	0070	0000	
0011:	0070	0000	
0012:	0070	0000	
0013:	0070	0000	
0014:	0070	0000	
0015:	0070	0000	
0016:	0070	0000	123
0017:	0070	0000	
0018:	0070	0000	
0019:	0020	49EE	
0020:	0070	0000	
		↓	↓
		NSF signal 3rd. and 4th byte	Keep 20 digits of TSI or CSI

## (2) Error Code List

- Print out error code as following table. (example)

 T-39 “Error code”

ERROR CODE LIST					
CODE		ERROR TIMES		CODE	
0001	00000000	0002	00000000	0003	00000000
0004	00000000	0005	00000000	0006	00000000
0007	00000000	0008	00000000	0009	00000000
000A	00000000	000B	00000000	000C	00000000
000D	00000000	000E	00000000	000F	00000000
0010	00000000	0011	00000000	0012	00000000
0013	00000000	0014	00000000	0015	00000000
0016	00000000	0017	00000000	0018	00000000
0019	00000000	001A	00000000	001B	00000000
001C	00000000	001D	00000000	001E	00000000
001F	00000000	0020	00000000	0021	00000000
0022	00000000	0023	00000000	0024	00000000
0025	00000000	0026	00000000	0027	00000000
0028	00000000	0029	00000000	002A	00000000
002B	00000000	002C	00000000	002D	00000000
002E	00000000	002F	00000000	0030	00000000
0031	00000000	0032	00000000	0033	00000000
0034	00000000	0035	00000000	0036	00000000
0037	00000000	0038	00000000	0039	00000000
003A	00000000	003B	00000000	003C	00000000
003D	00000000	003E	00000000	003F	00000000
0040	00000000	0041	00000000	0042	00000000
0043	00000000	0044	00000000	0045	00000000
0046	00000000	0047	00000000	0048	00000000
0049	00000000	004A	00000000	004B	00000000
004C	00000000	004D	00000000	004E	00000000
004F	00000000	0050	00000000	0051	00000000
0052	00000000	0053	00000000	0054	00000000
0055	00000000	0056	00000000	0057	00000000
0058	00000000	0059	00000000	005A	00000000
005B	00000000	005C	00000000	005D	00000000
005E	00000000	005F	00000000	0060	00000000
0061	00000000	0062	00000000	0063	00000000
0064	00000000	0065	00000000	0066	00000000
0067	00000000	0068	00000000	0069	00000000
006A	00000000	006B	00000000	006C	00000000
006D	00000000	006E	00000000	006F	00000000
0070	00000002	0071	00000000	0072	00000008
0073	00000000	0074	00000000	0075	00000000
0076	00000000	0077	00000000	0078	00000017
0079	00000000	007A	00000000	007B	00000000
007C	00000000	007D	00000000	007E	00000000
007F	00000000	0080	00000000	0081	00000000
0082	00000000	0083	00000001	0084	00000000
0085	00000000	0086	00000000	0087	00000000
0088	00000000	0089	00000000	008A	00000000
008B	00000000	008C	00000000	008D	00000000
008E	00000000	008F	00000000	0090	00000000
0091	00000001	0092	00000000	0093	00000000
0094	00000000	0095	00000000	0096	00000000
0097	00000000	0098	00000000	0099	00000000
009A	00000000	009B	00000000	009C	00000000
009D	00000000	009E	00000000	009F	00000000
00A0	00000024	00A1	00000000	00A2	00000000
00A3	00004558	00A4	00000002	00A5	00000000
00A6	00000000	00A7	00000006	00A8	00000000
00A9	00000001	00AA	00000000	00AB	00000000
00AC	00000000	00AD	00000000	00AE	00000000
00AF	00000000	00B0	00000000	00B1	00000000
00B4	00000000	00B3	00000000	00B4	00000000
00B5	00000000	00B6	00000000	00B7	00000000
00B8	00000000	00B9	00000000	00BA	00000000
00BB	00000000	00BC	00000000	00BD	00000000
00BE	00000000	00BF	00000000	00C0	00000000
00C1	00000000	00C2	00000000	00C3	00000000
00C4	00000000	00C5	00000000	00C6	00000000
00C7	00000000	00C8	00000000	00C9	00000000
00CA	00000000	00CB	00000000	00CC	00000000
00CD	00000000	00CE	00000000	00CF	00000000
00D0	00000000	00D1	00000000	00D2	00000000
00D3	00000000	00D4	00000000	00D5	00000000
00D6	00000000	00D7	00000000	00D8	00000000
00D9	00000000	00DA	00000000	00DB	00000000
00DC	00000000	00DD	00000000	00DE	00000000
00DF	00000000	00E0	00000000	00E1	00000000
00E2	00000000	00E3	00000000	00E4	00000000
00E5	00000000	00E6	00000000	00E7	00000000
00E8	00000000	00E9	00000000	00EA	00000000
00E9	00000000	00EA	00000000	00EB	00000000
00EE	00000000	00EF	00000000	00F0	00000000
00F1	00000000	00F2	00000000	00F3	00000000
00F4	00000000	00F5	00000000	00F6	00000000
00F7	00000000	00F8	00000000	00F9	00000000
00FA	00000000	00FB	00000000	00FC	00000000
00FD	00000000	00FE	00000006	00FF	00000002

(3) T.30 Protocol List

- Print out T.30 or V8 protocol after communication.
1. SESSION NUMBER
  2. FUNCTION NAME
  3. DESTINATION NAME/TELEPHONE NUMBER
  4. COMMUNICATION DATE & TIME
  5. TOTAL PAGE NUMBER FOR THIS SESSION
  6. COMMUNICATION SPEED AND ECM MODE
  7. COMMUNICATION RESULT
  8. T.30 COMMAND SENT BY LOCAL FAX
  9. T.30 COMMAND RECEIVED FROM REMOTE FAX
  10. T.30 FRAME THAT INCLUDES ADDRESS & CONTROL & DATA

V.17 Communication (example)

 S-67, S-160

PROTOCOL MONITOR REPORT

NAME: ABC  
TEL:886 3 4733507  
DATE: APR.10'97 12:20

SESSION	FUNCTION	NO	DESTINATION STATION	DATE	TIME	PAGE	MODE	RESULT
0001	TX	01	ABC 22345678901234567890	DEC.02	15:00	008	ECM-12	OK

TX	RX	DATA
NSF		FF 03 20 00
CSI		FF 03 40 00
DIS		FF 13 40 00 00 00 00 00 00
	NSS	FF 03 00
	DCS	FF 03 00
	TCF	00 00
CFR		FF 13 84
	PIX	DATA PHASE
	EOP	FF 13 BF 2F 00 00 41
MCF		FF 13 8C
	DCN	FF 13 FB

NAME: ABC  
TEL:886 3 4733507  
DATE: APR.10'97 12:20

PROTOCOL MONITOR REPORT

SESSION	FUNCTION	NO	DESTINATION STATION	DATE	TIME	PAGE	MODE	RESULT
0001	TX	01	ABC 22345678901234567890	DEC.02	15:00	008	ECM-12	OK

TX	RX	DATA
ANS		
JM	CM	
NSF	CJ	
CSI	NSS	FF 03 20 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
DIS	DCS	FF 03 40 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	TCF	FF 13 80 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	PIX	FF 03 20 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
	EOP	FF 13 83 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
CFR		FF 13 84
	DCN	
MCF		FF 13 BF 2F 00 00 41
		FF 13 8C
		FF 13 FB

V.8 PROTOCOL DUMP

TRAINING PHASE


DATA PHASE

5-10. Admin. Registration (Administrator number registration)

- The administrator number (0 to 999999) required for the Administrator mode of Utility is programmed or changed.

1. Remote monitor

Setting value	Description	Default
LIMITED	Enable remote monitor function limitedly	
FULL	Enable remote monitor function fully	
OFF	Disable remote monitor function	<input type="radio"/>

 S-26 "Utility mode/ Admin. management/ Remote monitor".

5-11. Fixed zoom change

- The fixed zoom ratios can be changed.

No.	Indication on LCD
1	Reduction 2
2	Reduction 1
3	Expansion 1
4	Expansion 2

<Procedure>

1. Select the fixed zoom ratio that you wish to change.
2. Use the 10-Key Pad to type in the desired fixed zoom ratio.

Default fixed zoom ratios and setting ranges according to marketing area

(1) <Metric>




Setting Name	Initial fixed zoom ratio	Setting Range
Reduction 2	70%	51% to 70%
Reduction 1	81%	71% to 99%
Expansion 1	115%	101% to 140%
Expansion 2	141%	141% to 199%

(2) <Inch>

Setting Name	Initial fixed zoom ratio	Setting Range
Reduction 2	64%	51% to 64%
Reduction 1	78%	65% to 99%
Expansion 1	129%	101% to 153%
Expansion 2	154%	154% to 199%

## 5-12. Clear Data

- Each type of data can be cleared.

No.	Indication on LCD	
1	DRAM CLEAR	
2	SRAM CLEAR	 S-83
3	MEMORY CLEAR	 S-85
4	TOTAL CLEAR	 S-87
5	TOTAL COUNTER	
6	PM COUNTER	
7	I/C COUNTER	
8	APPLICATION COUNTER	
9	SCAN COUNTER	

### (1) DRAM clear

- To clear the settings for the functions listed at the right and return the functions to their default settings.
- Clear all data in the memory file and free all memory to 100%, the user data are not affected. But only clear DRAM data on PWB-P.

---

#### **NOTE**

*Not include DRAM data on NIC.*

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## (2) SRAM clear

- To clear the settings for the functions listed at the right and return the functions to their default settings.
- The following items are cleared (initialization).


















### NOTES













- Before executing "SRAM CLEAR," be sure to record the setting values that are to be initialized through "SRAM CLEAR."
- For the record of the setting values, it is a good idea to have reports and lists printed.

 **S-11 "Status mode/ Print report"**

 **S-75 "Service mode/ Reporting"**

- Some setting values are not included any of these reports or lists. Be sure to make a note of them separately.
- After "SRAM CLEAR" has been executed, make necessary entries of data again based on the setting values recorded.

MODE	Initialized Items		Default	Report/ List	
UTILITY MODE	MACHINE SETTING	BUZZAR VOLUM	LOW	MACHINE STATUS LIST	 <b>S-11</b>  <b>S-15</b>
	ADMIN. MANAGE- MENT	REMOTE MONITOR	OFF	None	None
	FAX REGISTRATION	ONE TOUCH DIAL SPEED DIAL GROUP DIAL PROGRAM DIAL BATCH TX MAIL BOX RELAY BOX	None None None None None None None	ONE TOUCH LIST SPEED DIAL LIST KEY SETTING LIST MACHINE STATUS LIST	 <b>S-11</b>  <b>S-13</b>  <b>S-15</b>
	TX OPERATION	SCAN CONTRAST RESOLUTION DEFAULT TX HEADER	0 STD MEM. TX ON	MACHINE STATUS LIST	 <b>S-11</b>  <b>S-15</b>
	RX OPERATION	MEMORY RX MODE NO. of RINGS REDUCTION RX RX PRINT RX MODE FORWARD FOOTER SELECT TRAY CLOSED NETWORK\	OFF 2 ON MEMORY RX AUTO RX OFF OFF ENABLE OFF	MACHINE STATUS LIST	 <b>S-11</b>  <b>S-15</b>
	COMM. SETTING	LINE MONITOR PSTN/ PBX	LOW PSTN	MACHINE STATUS LIST	 <b>S-11</b>  <b>S-16</b>
	REPORTING	ACTIVITY REPORT RESERV. REPORT TX RESULT REPORT RX RESULT REPORT	ON OFF OFF OFF	MACHINE STATUS LIST	 <b>S-11</b>  <b>S-16</b>
	INITIAL USER DATA	DATE & TIME USER FAX NO. USER NAME	None None None	MACHINE STATUS LIST	 <b>S-11</b>  <b>S-16</b>
	NETWORK SETTING	IP ADDRESS SUBNET MASK GATE WAY DNS CONFIG	AUTO None None DISABLE	MACHINE STATUS LIST	 <b>S-11</b>  <b>S-16</b>

MODE	Initialized Items		Default	Report/ List	
UTILITY MODE	E-MAIL SETTING 1	SENDER NAME E-MAIL ADDRESS SMTP SERVER SMTP TIMEOUT TEXT INSERT DEFAULT SUBJECT	None None None 60 OFF None	MACHINE STATUS LIST	 S-11  S-16
	E-MAIL SETTING 2	POP3 SERVER POP3 PORT NO. POP3 TIMEOUT POP3 ACCOUNT POP3 PASSWORD AUTO RECEPTION REPLAY ADDRESS HEADER PRINT	None None None None None OFF None OFF	MACHINE STATUS LIST	 S-11  S-16
	SCAN SETTING	RESOLUTION IMAGE FORMAT CODING METHOD	300 X 300 TIFF MH	MACHINE STATUS LIST	 S-11  S-16
TX/RX Result (Activity Data)			None	TX RESULT REPORT RX RESULT REPORT ACTIVITY REPORT	 S-11  S-12
Image Data of DRAM memory file			None	MEMORY DATA LIST MEMORY IMAGE PRINT	 S-11  S-12
SERVICE MODE	SERVICE'S CHOICE	MARKETING AREA	STANDARD	SERVICE DATA LIST	 S-75  S-76
		TX SPEED RX SPEED TX LEVEL RX LEVEL DTMF LEVEL CNG LEVEL CED LEVEL ECM MODE CODING SCHEME PROTOCOL REPORT	V.34 V.34 -3 dBm to -8 dBm -37 dBm to -42 dBm -9 dBm -11 dBm -11 dBm ON JBIG OFF	None	None


### (3) Memory clear

- To clear the settings for the functions listed at the right and return the functions to their default settings.
- The following items are cleared (initialization).
















#### NOTES

- Before executing "SRAM CLEAR," be sure to record the setting values that are to be initialized through "SRAM CLEAR."
- For the record of the setting values, it is a good idea to have reports and lists printed.

 **S-11 "Status mode/ Print report"**

 **S-75 "Service mode/ Reporting"**

- Some setting values are not included any of these reports or lists. Be sure to make a note of them separately.
- After "SRAM CLEAR" has been executed, make necessary entries of data again based on the setting values recorded.

MODE	Initialized Items		Default		Report/ List	
UTILITY MODE	MACHINE SETTING	AUTO PANEL RESET ENERGY SAVE MODE DENSITY(ADF) DENSITY(BOOK) PRINT DENSITY LCD CONTRAST BUZZER VOLUME INITIAL MODE	1 15MIN. MODE1 MODE1 0 0 LOW COPY		MACHINE STATUS LIST	 S-11  S-15
	PAPER SOURCE SETUP	TRAY1 PAPER	METRIC A4L/ PLAIN	INCH LETTER/ PLAIN	MACHINE STATUS LIST	 S-11  S-15
		TRAY SETTING	CONTINUOUS			
	ADMIN. MANAGE- MENT	REMOTE MONITOR	OFF		None	None
	COPY SETTING	PAPER PRIORITY DENSITY PRIORITY DENSITY LEVEL(A) DENSITY LEVEL(M) OUTPUT PRIORITY	TRAY1 AUTO 0 0 NON		MACHINE STATUS LIST	 S-11  S-15
	FAX REGISTRATION	ONE TOUCH DIAL SPEED DIAL GROUP DIAL PROGRAM DIAL BATCH TX MAIL BOX RELAY BOX	None None None None None None None		ONE TOUCH LIST SPEED DIAL LIST KEY SETTING LIST MACHINE STATUS LIST	 S-11  S-13  S-15
	TX OPERATION	SCAN CONTRAST RESOLUTION DEFAULT TX HEADER	0 STD MEM. TX ON		MACHINE STATUS LIST	 S-11  S-15
	RX OPERATION	MEMORY RX MODE NO. of RINGS REDUCTION RX RX PRINT RX MODE FORWARD FOOTER SELECT TRAY CLOSED NETWORK\	OFF 2 ON MEMORY RX AUTO RX OFF OFF ENABLE OFF		MACHINE STATUS LIST	 S-11  S-15
	COMM. SETTING	LINE MONITOR PSTN/ PBX	LOW PSTN		MACHINE STATUS LIST	 S-11  S-16

MODE	Initialized Items		Default		Report/ List	
UTILITY MODE	REPORTING	ACTIVITY REPORT RESERV. REPORT TX RESULT REPORT RX RESULT REPORT	ON OFF OFF OFF		MACHINE STATUS LIST	S-11 S-16
	INITIAL USER DATA	DATE & TIME USER FAX NO. USER NAME	None None None		MACHINE STATUS LIST	S-11 S-16
	NETWORK SETTING	IP ADDRESS SUBNET MASK GATE WAY DNS CONFIG	AUTO None None DISABLE		MACHINE STATUS LIST	S-11 S-16
	E-MAIL SETTING 1	SENDER NAME E-MAIL ADDRESS SMTP SERVER SMTP TIMEOUT TEXT INSERT DEFAULT SUBJECT	None None None 60 OFF None		MACHINE STATUS LIST	S-11 S-16
	E-MAIL SETTING 2	POP3 SERVER POP3 PORT NO. POP3 TIMEOUT POP3 ACCOUNT POP3 PASSWORD AUTO RECEPTION REPLAY ADDRESS HEADER PRINT	None None None None None OFF None OFF		MACHINE STATUS LIST	S-11 S-16
	SCAN SETTING	RESOLUTION IMAGE FORMAT CODING METHOD	300 X 300 TIFF MH		MACHINE STATUS LIST	S-11 S-16
SERVICE MODE	SERVICE'S CHOICE	MARKETING AREA	STANDARD		SERVICE DATA LIST	S-75 S-76
		TX SPEED RX SPEED TX LEVEL RX LEVEL DTMF LEVEL CNG LEVEL CED LEVEL ECM MODE CODING SCHEME PROTOCOL REPORT	V.34 V.34 -3 dBm to -8 dBm -37 dBm to -42 dBm -9 dBm -11 dBm -11 dBm ON JBIG OFF	None	None	None
	ADJUST	PRN MAIN REGIST PRN SUB REGIST ADF SUB ZOOM ADF MAIN REGIST ADF SUB REGIST	100 100 100 100 100		SERVICE DATA LIST	S-75 S-76
	ADMIN. REGISTRATION		000000		SERVICE DATA LIST	S-75 S-76
	FIXED ZOOM CHANGE	REDUCTION 2 REDUCTION 1 EXPANTION 1 EXPANTION 2	METRIC 70% 81% 115% 141%	INCH 64% 78% 129% 154%	None	None

**(4) Total clear**

- The following counter are cleared (initialization).

PM counter	I/C counter	Application counter
Scan counter		

---

**NOTES**

- After the “TOTAL CLEAR” function is performed, turn the machine off, then on again.
  - The clearance of “TOTAL COUNTER” can not be performed.
- 

**(5) TOTAL counter (clear)**

- To clear the TOTAL COUNTER value.

**(6) PM counter (clear)**

- To clear the PM COUNTER value.

**(7) I/C counter (clear)**

- To clear the I/C COUNTER value.

**(8) Application counter (clear)**

- To clear the APPLICATION COUNTER value.

**(9) Scan counter (clear)**

- To clear the SCAN COUNTER value.

<Exiting Procedure>

- Press the Panel Reset key.

# 6. SOFT SWITCH SET

## 6-1. Description

- This machine is provided with a total of 64 soft switches used for making various adjustments. The initial values can be changed, defined to comply with the requirements unique to each individual country.

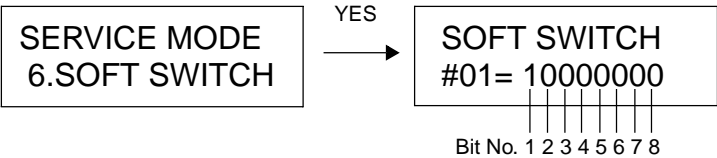
☞ S-106, S-110

- The initial settings of the soft switches can be changed according to the marketing area. The settings can be changed when:  
The marketing area code is set in the Service mode.  
The marketing area code is set using the RSD utility software.  
SRAM is cleared using the Service mode. In this case, the initial settings are determined according to the current marketing area code.

☞ S-89, S-90

- The bit status can be changed by the following methods:  
1. Use Soft Switch available as a Service Mode function.

☞ S-59 "Service mode", S-74 "Soft switch function"




Hex-binary conversion list		HEX															
		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Bit no.	4 (8)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	3 (7)	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1
	2 (6)	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1
	1 (5)	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

2. Use the RSD software function.

6-2. Default setting

(1) Country for each Marketing area

NOTES

- A different country may be applicable depending on the communications standard.
  - The marketing area settings can be set using the service's choice of service mode.
-  **S-61**
- According to the following table, the machines that are installed in the West Europe Area select "West Europe" in the "Marketing Area" function. Do not select each country.

Marketing area	Country
Setting in accordance with each country	Australia, China, Germany, Israel, Japan, Korea, New Zealand, The Philippines, Saudi Arabia, South Africa, Taiwan.
Asia	Bahrain, Baltic, Hong Kong, Indonesia, Kuwait, Malaysia, Oman, Poland, Qatar, Romania, Russia, Slovakia, Slovenia, Thailand, U. A. E., Ukraine.
Singapore	Singapore (remark: with DTS default setting).
U.S.A	U. S. A., Canada.
West Europe	Austria, Belgium, Cyprus, Czech, Denmark, Finland, France, Greece, Hungary, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom.

## 6-3. Default soft switch setting for each market area 1

Soft switch No.	Marketing area																															
	Standard (Initial setting)								Asia								Australia								Austria							
	Bit No.								Bit No.								Bit No.								Bit No.							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
# 01	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
# 02	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0
# 03	0	1	1	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	1	1	0	1	1	0	0	0	1	1
# 04	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0
# 05	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	1	0	1	0	0	1	1	1	1
# 06	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0
# 07	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	1
# 08	1	0	0	0	0	1	1	0	1	0	0	0	0	1	1	0	0	0	0	0	1	1	1	0	0	0	0	1	1	1	1	1
# 09	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0
# 10	1	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	1	1	0	1	0	1	0	1	1	1	1	0	1	1	1
# 11	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
# 12	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
# 13	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1
# 14	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
# 15	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
# 16	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0
# 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 19	0	0	0	1	0	1	1	0	0	1	1	0	0	1	1	0	0	0	0	1	0	1	1	1	1	1	0	1	0	1	1	0
# 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 21	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0
# 22	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	1	0	0	0	0	0
# 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 26	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0
# 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 28	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0	1	1	1	1	0	1	0	1	1	1	1	1	0	1	0	1	0
# 29	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0
# 30	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	1	0	1	1	0	0
# 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 33	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	1	0	0
# 34	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
# 35	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0
# 36	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1
# 37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Soft switch No.	Marketing area																																		
	Standard (Initial setting)								Asia								Australia								Austria										
	Bit No.								Bit No.								Bit No.								Bit No.										
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8			
# 38	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	1		
# 39	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0		
# 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 46	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	
# 47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 48	1	0	0	1	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	1	0	0	1	0	0	0	1	
# 49	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
# 50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 54	0	0	0	1	0	1	0	1	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	1	0	0	0	0	1	0	1	0	1	0	1
# 55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
# 60	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	
# 61	1	1	1	1	0	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	0	
# 62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 63	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
# 64	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	

## 6-4. Default soft switch setting for each market area 2

Soft switch No.	Marketing area																																
	Belgium								China								Czech								Denmark								
	Bit No.								Bit No.								Bit No.								Bit No.								
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	
# 01	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
# 02	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
# 03	0	1	1	0	0	0	0	1	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	1	1	0	1	1	0	0	0	1	1
# 04	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0
# 05	0	1	0	1	0	0	0	1	1	1	0	0	1	0	0	1	1	0	1	0	1	0	0	1	1	0	1	0	0	1	0	1	1
# 06	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0	1
# 07	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1
# 08	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1
# 09	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0
# 10	1	1	1	1	0	1	1	1	1	1	1	1	0	1	0	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1
# 11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
# 12	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
# 13	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	1	0	1	0	0	1
# 14	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
# 15	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
# 16	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
# 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 19	1	1	0	1	0	1	1	0	0	0	0	1	0	1	1	0	1	1	0	1	0	1	1	0	1	1	0	1	0	1	1	0	0
# 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 21	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0
# 22	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0
# 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 26	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0
# 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 28	1	1	1	0	1	0	1	0	1	1	1	0	0	1	0	1	1	1	0	1	0	1	0	1	0	1	1	1	0	1	0	1	0
# 29	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0
# 30	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0
# 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 33	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
# 34	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
# 35	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	1
# 36	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0
# 37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Soft switch No.	Marketing area																																	
	Belgium								China								Czech								Denmark									
	Bit No.								Bit No.								Bit No.								Bit No.									
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8		
# 38	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	1	
# 39	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
# 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 46	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0
# 47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 48	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	1	0	0	1	0	0	0	1	1
# 49	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
# 50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 54	0	0	0	1	0	1	0	1	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	1
# 55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 59	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
# 60	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0
# 61	1	1	1	1	0	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	0
# 62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 63	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1
# 64	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## 6-5. Default soft switch setting for each market area 3

Soft switch No.	Marketing area																																
	Finland								France								Germany								Greece								
	Bit No.								Bit No.								Bit No.								Bit No.								
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	
# 01	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
# 02	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
# 03	0	1	1	0	0	0	0	1	1	0	1	1	0	0	0	1	1	0	1	1	0	0	0	1	1	0	1	1	0	0	0	1	1
# 04	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0
# 05	0	1	0	1	0	0	0	1	1	0	1	0	1	0	0	1	1	1	0	0	1	0	0	1	1	0	1	0	0	1	0	1	1
# 06	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0	1
# 07	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1
# 08	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	0	1	1	1	1	0	0	0	1	1	1	1
# 09	0	0	1	0	1	0	1	0	1	0	0	1	0	1	0	1	0	0	0	1	0	1	1	1	0	0	0	1	0	1	0	1	0
# 10	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1
# 11	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
# 12	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	
# 13	0	0	1	0	1	0	0	1	0	0	1	0	1	0	0	1	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1
# 14	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0
# 15	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
# 16	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0
# 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 19	1	1	0	1	0	1	1	0	1	1	0	1	0	1	1	0	0	0	0	1	0	1	1	0	1	1	1	0	1	0	1	1	0
# 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 21	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	
# 22	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0
# 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 26	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0
# 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 28	1	1	1	0	1	0	1	0	1	0	1	1	0	1	0	1	0	1	1	1	0	0	1	0	1	1	1	1	0	1	0	1	0
# 29	0	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	0
# 30	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	1	0	0	0	1	0	1	1	1	0
# 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 33	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
# 34	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
# 35	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1		
# 36	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	
# 37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Soft switch No.	Marketing area																																		
	Finland								France								Germany								Greece										
	Bit No.								Bit No.								Bit No.								Bit No.										
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8			
# 38	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	1		
# 39	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0		
# 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 46	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	
# 47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 48	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	
# 49	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
# 50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 54	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	0	1	0	1	0	1	0	1
# 55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 59	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
# 60	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	
# 61	1	1	1	1	0	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	0	
# 62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 63	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	
# 64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

## 6-6. Default soft switch setting for each market area 4

Soft switch No.	Marketing area																															
	Ireland								Israel								Italy								Japan							
	Bit No.								Bit No.								Bit No.								Bit No.							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
# 01	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
# 02	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0
# 03	0	1	1	0	0	0	0	1	1	0	1	0	0	0	0	0	1	0	1	1	0	0	0	0	1	1	0	1	0	0	0	0
# 04	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0
# 05	0	1	0	1	0	0	0	1	1	1	0	0	1	0	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	1	0	0
# 06	1	1	1	1	0	0	0	1	0	1	1	1	0	0	0	1	0	1	1	1	1	0	0	1	0	1	1	1	0	0	1	0
# 07	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0
# 08	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	1	0	0	0	0	1	1	1	1	1	1	0	0	0	0	1	1
# 09	0	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	0	0
# 10	1	1	1	1	0	1	1	1	1	0	0	0	0	1	0	1	1	1	1	1	0	1	1	1	1	1	0	0	0	0	1	0
# 11	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 12	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
# 13	0	0	1	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	1	0	0	0	1	0	0	0
# 14	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0
# 15	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
# 16	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0
# 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 19	1	1	0	1	0	1	1	0	0	0	0	1	0	1	1	0	1	1	0	1	0	1	1	0	0	0	0	1	0	1	1	0
# 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 21	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1
# 22	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0
# 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 26	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	0
# 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 28	1	1	1	0	1	0	1	0	1	1	1	0	0	1	0	1	1	1	1	0	1	0	1	0	1	0	1	1	1	0	0	1
# 29	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0
# 30	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0
# 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 33	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
# 34	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
# 35	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1
# 36	0	1	0	1	0	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	1
# 37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Soft switch No.	Marketing area																																	
	Ireland								Israel								Italy								Japan									
	Bit No.								Bit No.								Bit No.								Bit No.									
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8		
# 38	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	1	
# 39	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
# 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 46	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0
# 47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 48	1	0	0	1	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
# 49	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
# 50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 54	0	0	0	1	0	1	0	1	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	1
# 55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 59	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 60	1	0	0	0	0	1	0	0	1	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0
# 61	1	1	1	1	0	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	0
# 62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 63	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	
# 64	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	

## 6-7. Default soft switch setting for each market area 5

Soft switch No.	Marketing area																																
	Korea								Netherlands								New Zealand								Norway								
	Bit No.								Bit No.								Bit No.								Bit No.								
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	
# 01	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
# 02	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	
# 03	0	1	1	0	0	0	0	1	0	1	1	0	0	0	1	1	0	1	1	0	0	0	1	1	0	1	1	0	0	0	1	1	
# 04	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	
# 05	1	0	0	1	0	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	1	0	1	1	1	0	1	0	1	0	0	1	
# 06	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0	
# 07	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1	1	0	0	0	0	1	0	0	0	1	0	0	0	1	
# 08	1	1	0	0	0	1	1	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	1	1
# 09	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	
# 10	1	0	0	0	0	1	0	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	1	
# 11	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	
# 12	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	
# 13	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	
# 14	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
# 15	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
# 16	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	
# 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 19	0	0	0	1	0	1	1	0	1	1	0	1	0	1	1	0	0	0	0	1	0	1	1	0	1	1	0	1	0	1	1	0	
# 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 21	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	
# 22	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	
# 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 26	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	
# 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 28	1	1	1	0	0	1	0	1	1	1	1	0	1	0	1	0	1	1	1	0	0	1	0	1	1	1	1	0	1	0	1	0	
# 29	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	
# 30	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	
# 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 33	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	
# 34	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
# 35	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	
# 36	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	
# 37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Soft switch No.	Marketing area																																	
	Korea								Netherlands								New Zealand								Norway									
	Bit No.								Bit No.								Bit No.								Bit No.									
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8		
# 38	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	1	
# 39	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
# 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 46	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0
# 47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 48	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	1	0	0	1	0	0	0	1	1
# 49	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
# 50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 54	0	0	0	1	0	1	0	1	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	1
# 55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 59	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
# 60	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	
# 61	1	1	1	1	0	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	
# 62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 63	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
# 64	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	

## 6-8. Default soft switch setting for each market area 6

Soft switch No.	Marketing area																																
	Philippine								Portugal								Saudi Arabia								Singapore								
	Bit No.								Bit No.								Bit No.								Bit No.								
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	
# 01	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
# 02	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	
# 03	0	1	1	0	0	0	0	0	1	0	1	1	0	0	0	1	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	0	
# 04	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	
# 05	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	1	1	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	
# 06	1	1	1	1	0	0	0	1	0	1	1	1	0	0	0	1	0	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	
# 07	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	
# 08	1	0	0	0	0	1	1	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	1	1	0	1	0	0	0	1	1	
# 09	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 10	1	0	0	0	0	1	0	1	1	1	1	1	0	1	1	1	1	1	0	0	0	0	1	0	1	1	1	0	0	0	1	0	
# 11	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	
# 12	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	
# 13	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	
# 14	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	
# 15	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
# 16	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	
# 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 19	0	0	0	1	0	1	1	0	1	1	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0	1	1	0	1	0	1	1	
# 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 21	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	
# 22	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	
# 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 26	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	0	
# 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 28	1	1	1	0	0	1	0	1	1	1	1	0	1	0	1	0	1	1	1	0	0	1	0	1	1	1	1	1	0	0	1	0	1
# 29	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	
# 30	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	
# 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 33	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	
# 34	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	
# 35	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	
# 36	0	1	0	1	0	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	
# 37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Soft switch No.	Marketing area																																		
	Philippine								Portugal								Saudi Arabia								Singapore										
	Bit No.								Bit No.								Bit No.								Bit No.										
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8			
# 38	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	1		
# 39	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0		
# 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 46	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	
# 47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
# 48	1	0	0	1	0	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	
# 49	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
# 50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 54	0	0	0	1	0	1	0	1	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	1	
# 55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 59	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
# 60	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	
# 61	1	1	1	1	0	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	0	1	1	1	1	0	0	0	0	0
# 62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 63	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	
# 64	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	

## 6-9. Default soft switch setting for each market area 7

Soft switch No.	Marketing area																															
	South africa								Spain								Sweden								Switzerland							
	Bit No.								Bit No.								Bit No.								Bit No.							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
# 01	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
# 02	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
# 03	0	1	1	0	0	0	0	1	0	1	1	0	0	0	1	1	0	1	1	0	0	0	1	1	0	1	1	0	0	0	1	1
# 04	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0
# 05	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	1	1	0	1	0	1	0	0	1	1	0	1	0	0	1	1	1
# 06	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0
# 07	0	1	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1
# 08	1	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1
# 09	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0
# 10	1	0	0	0	0	1	0	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1
# 11	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
# 12	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
# 13	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	1	0	0	1	0	1	0	0	1	0	0	1	0	1	0	0	1
# 14	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
# 15	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
# 16	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0
# 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 19	0	1	0	1	0	1	1	0	1	1	0	1	0	1	1	0	1	1	0	1	0	1	1	0	1	1	0	1	0	1	1	0
# 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 21	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	0
# 22	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0
# 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 26	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0
# 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 28	1	1	1	0	0	1	0	1	1	1	1	0	1	0	1	0	1	1	1	0	1	0	1	0	1	1	1	0	1	0	1	0
# 29	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0
# 30	0	0	0	1	0	1	1	1	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	1	0	1	1	0	0
# 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 33	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
# 34	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
# 35	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0
# 36	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1
# 37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0












Soft switch No.	Marketing area																																	
	South africa								Spain								Sweden								Switzerland									
	Bit No.								Bit No.								Bit No.								Bit No.									
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8		
# 38	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	1	0	0	0	0	1	1	1	
# 39	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
# 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 46	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0
# 47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
# 48	1	0	0	1	0	0	0	1	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1
# 49	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
# 50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 54	0	0	0	1	0	1	0	1	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	1
# 55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 59	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
# 60	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0
# 61	1	1	1	1	0	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	0
# 62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 63	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1
# 64	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## 6-10. Default soft switch setting for each market area 8

Soft switch No.	Marketing area																																
	Taiwan								United kingdom								U.S.A.								West europe								
	Bit No.								Bit No.								Bit No.								Bit No.								
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	
# 01	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
# 02	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
# 03	0	1	1	0	0	0	0	0	1	0	1	1	0	0	0	1	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	1	1
# 04	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0
# 05	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	1
# 06	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0	1	1	1	1	0	0	1	0	1	0	1	1	1	0	0	1	0
# 07	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1
# 08	1	0	0	0	0	1	1	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	1	1	0	0	0	0	1	1	1	1
# 09	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
# 10	1	0	0	0	0	1	0	1	1	1	1	1	0	1	1	1	1	1	0	0	0	0	1	0	1	1	1	1	1	0	1	1	1
# 11	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
# 12	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
# 13	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1
# 14	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 15	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 16	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 19	1	1	0	1	0	1	1	0	1	1	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0	1	1	0	1	0	1	1	0
# 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 21	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
# 22	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
# 23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 26	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0
# 27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 28	1	1	1	0	0	1	0	1	1	1	1	0	1	0	1	0	1	1	1	0	0	1	0	1	0	1	1	1	0	1	0	1	0
# 29	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0
# 30	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	0	0
# 31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 33	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0
# 34	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 35	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0
# 36	0	1	0	1	0	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1
# 37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Soft switch No.	Marketing area																							
	Taiwan								United kingdom								U.S.A.							
	Bit No.								Bit No.								Bit No.							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
# 38	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1
# 39	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
# 40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 46	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0
# 47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 48	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1	1	0	0	1	0	0	0	1
# 49	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
# 50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 54	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	1
# 55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 59	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0
# 60	1	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0
# 61	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	0	0
# 62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
# 63	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
# 64	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

## 6-11. Soft Switch List

Switch No.	Bit No.	Designation	Page No.
# 01	2/1	V.34 CI signal byte number reserved	 S-110
# 02	8/7	Time between phase C to phase D signal in V.17	 S-111
	6	Header TX selection open to user	
	3/2	Transmit RTN signal level criteria	
	1	Sent N.G page	
# 03	8	Send out NSF frame with station ID	 S-112
	7	Number of pause within phone number	
	6	Re-dial prohibit for NO ANSWER	
	4/3/2/1	RX level setting	
# 04	4	Visible alarm for RTN signal	 S-113
	3	Audible alarm or RTN signal	
	1	Polarity change detection	
# 05	8/7	Push Button on/off Timing (PB)	 S-114
	6/5	Relation between dialed No. and No. of dial pulse	
	4/3/2/1	Dial pulse make ratio select (MR)	
# 06	8/7	Ring on time to ignore ring off time at 1st cycle	 S-115
	4/3	Ring off time at 1 st. cycle to approve incoming ring	
	2/1	Pulse cycle to approve ring frequency	
# 07	8	Dial tone or busy tone detection	 S-115
	7	PSTN/ PBX setting	
	6	PBX dial tone detect	
	5	Dial mode select	
	4/3/2/1	Tx level select for PSK/ FSK	
# 08	8	Sending RTN signal level	 S-116
	7	Detect busy tone after dialing	
	6	Sending CED signal after connection	
	4/3/2/1	Redial interval	
# 09	8/7	Ringer frequency detection	 S-117
	5	TSI/ CSI Append "+"	
	2/1	Time from RX DIS signal to send DCS signal	
# 10	8	Print out RTN page report	 S-118
	7	Confirmation report result field	
	6/5	Get gap time between digit for pulse dial	
	4	RX PIP T.30 command after send out MPS command	
	3	Received DIS signal within reception	
	2	Transmission time limitation	
	1	Audio alarm after communication fail	
# 11	7	Detect dial tone after pre-fix number	 S-119
	6	Pulse dial allowed to select	
	5	Protocol signal display mode	
	1	DTMF high frequency dB value	

Switch No.	Bit No.	Designation	Page No.
# 12	8	ECM Mode capability	☞ S-119
	7/6	V.34 fall back level for V.34 TX.	
	5	Send CTC after 4th PPR	
	3	Send EOR after lowest speed	
	2/1	TCF transmission timing after DCS	
# 13	8	MR capability for G3	☞ S-120
	7/6	Delay time between transaction	
	5	Super fine printing capability for receiving	
	4	Disable ultra fine capability in RX mode	
	3	DTS mode (Der Telefax Standard)	
	2	Send DTC signal if RX DIS signal in polling RX mode	
# 14	6	Memory size level to RX	☞ S-121
	3/2/1	Time between V.34 ANSam signal and FSK DIS signal	
# 15	1	Remote side no document to be polled	☞ S-121
# 16	2/1	Fax communication coding method	☞ S-122
# 17	6	CED frequency	☞ S-122
	5/4/3	Pause between off hook and CED signal	
	2/1	Inactivity timer [T5]	
# 18	6/5	G3 mode training quality level	☞ S-123
	4/3/2/1	Redefine re-dial attempts counter	
# 19	8/7/6/5	CNG signal level	☞ S-124
	4/3/2/1	DTMF high frequency level	
# 20	5/4/3/2/1	Redefine redial interval	☞ S-125
# 21	8	NSS signal before DCS	☞ S-126
	7/6	CNG duration after dialing (T1)	
	5	T4 timer	
	3	DIS signal length	
	2/1	Increase default T1 timing during calling	
# 22	8	Detect busy tone before dial	☞ S-127
	7	Regard dial tone as busy tone after dialing	
	6	Check busy tone method	
	4/3/2/1	CED signal output level	
# 23	-	Reserved	☞ S-127
# 24	-	Reserved	☞ S-128
# 25	4/3	Flash key time in ON hook key dial	☞ S-128
# 26	8/7	Dial tone detection time before disconnected	☞ S-129
	6/5/4/3/2/1	Dial tone insensitivity	
# 27	4/3/2/1	Immunity for dial tone receiver	☞ S-130
# 28	8/7/6/5	Time to dial after dial tone on the line	☞ S-131
	4/3/2/1	CED duration time within calling period	
# 29	5/4/3/2/1	Time to dial after size the line when dial tone detected	☞ S-132
# 30	8/7	Pause delay time within digit	☞ S-133
	6/5/4/3/2/1	Signal tone sensitivity after dial for busy tone	
# 31	-	Reserved	☞ S-134
# 32	-	Reserved	☞ S-134

Switch No.	Bit No.	Designation	Page No.
# 33	7	V.17 echo protection tone	☞ S-135
	6	V.29 echo protection tone	
	5	Compromise equalize enable (CEQ) in the transmit path (TCEQ)	
	4	Compromise equalize enable (CEQ) in the receiver path (RCEQ)	
# 34	2	Password capability in DIS/ DTC frame	☞ S-135
# 35	8/7	Dial tone table switch time	☞ S-136
	6/5/4	Dial tone frequency upper range index	
	3/2/1	Dial tone frequency low range index	
# 36	8	Re-dial attempts continue fall counter	☞ S-137
	4/3/2/1	Re-dial attempts fail limitation counter	
# 37	8	Polling TX type for V.34 modem	☞ S-138
	7	Auto dial learning for V.34 modem	
	6/5/4	RX start symbol rate for V.34 modem	
	3/2/1	TX start symbol rate for V.34 modem	
# 38	8	Fine tone of 33.6 kbps/ 33.2 kbps receiving speed for V.34 modem	☞ S-139
	7	Set/ reset V.34 transmit level deviation	
	6/5	V.34 flag number between ECM frame	
	4	Phase 2 guard tone power level (V.34)	
	1	V.8/ V.34 capability	
# 39	8	Disable V.34 TX for V.34 modem	☞ S-139
	7	Disable V.34 RX for V.34 modem	
	6/5	Flags number in ECM frame for V.34 modem	
	4	Manual TX mode for V.34 modem	
	3	Switch from V.17 to V.34 if DIS bit 6 set after received DIS	
	2/1	Delay time in primary channel for V.34 transmit after CFR or MCF signal	
# 40	8/7/6	V.17 RX start speed	☞ S-140
	3/2/1	V.34 RX start speed	
# 41	8/7/6/5	V.17 TX start speed	☞ S-141
	3/2/1	V.34 TX start speed	
# 42	-	Reserved	☞ S-142
# 43	-	Reserved	☞ S-142
# 44	-	Reserved	☞ S-142
# 45	6	Closed network	☞ S-143
	5	Call transfer	
	4	No. of call transfer	
# 46	8	Delight savings timer	☞ S-144
	4	RX print	
	3	Default TX mode	
	2	Header for FAX TX	
	1	Print model name	
# 47	6	RX mode	☞ S-144
	5	Footer	

Switch No.	Bit No.	Designation	Page No.
# 48	8	Activity report	☞ S-145
	7	Reservation report	
	6	TX result report	
	5	RX result report	
	4	TX/ RX error report	
	3	Error report for I-FAX and network scanner	
	2	Error mail (I-FAX)	
	1	Broadcast report	
# 49	6	Print RX mailbox report method	☞ S-146
	5	Redial method if communication fail	
	4/3/2/1	No. of ring	
# 50	8	Transmit or cancel after time out in "Memory TX"	☞ S-146
# 51	4/3	T30 monitor report selection	☞ S-147
	2	Send "un-sent page mode" for memory transmission	
# 52	-	Reserved	☞ S-147
# 53	-	Reserved	☞ S-148
# 54	8	Report/ LCD date/ time type	☞ S-148
	7/6	Report/ LCD date/ time format	
	5/4	Memory near full capacity for black/ white scanning	
	3/2	Memory near full capacity for color scanning	
# 55	-	Reserved	☞ S-149
# 56	-	Reserved	☞ S-149
# 57	-	Reserved	☞ S-149
# 58	8	Time out from OSK to FSK delay time	☞ S-150
# 59	6/5/4/3/2/1	Time between GMT (Greenwich Mean Time)	☞ S-151
# 60	6	Quick memory TX	☞ S-154
	5	B4/ A3 declaration for Ledger	
	4	The width of TX Ledger (8k)	
	3	Print mailbox RX image even if password is not correct	
	2	Off hook alarm after communication	
	1	Display destination selection within TX phase C	
# 61	4/3/2/1	Max. No. of ring	☞ S-155
# 62	-	Reserved	☞ S-155
# 63	8	# key definition in PBX mode	☞ S-155
	1	TX result report with image	
# 64	6	Print RX error report on RX side if no FAX signal is detected	☞ S-156
	5	10 pps & 20 pps selectable by user	

6-12. Soft Switch definition

(1) SOFT SWITCH: #01

Bit No.	Designation	Function	Initial Setting																				
			Bit	HEX																			
8	Reserved	Reserved	0	0																			
7	Reserved	Reserved	0																				
6	Reserved	Reserved	0																				
5	Reserved	Reserved	0																				
4	Reserved	Reserved	0																				
3	Reserved	Reserved	0	1																			
2	V.34 CI signal byte number reserved	<table><tr><td>Byte number</td><td>30 bytes</td><td><b>9 bytes</b></td><td>15 bytes</td><td>60 bytes</td></tr><tr><td>Bit 2</td><td>0</td><td><b>0</b></td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td><b>1</b></td><td>0</td><td>1</td></tr></table>					Byte number	30 bytes	<b>9 bytes</b>	15 bytes	60 bytes	Bit 2	0	<b>0</b>	1	1	Bit 1	0	<b>1</b>	0	1	0	
Byte number		30 bytes	<b>9 bytes</b>		15 bytes	60 bytes																	
Bit 2		0	<b>0</b>		1	1																	
Bit 1		0	<b>1</b>		0	1																	
1							1																

## (2) SOFT SWITCH: #02

Bit No.	Designation	Function	Initial Setting																
			Bit	HEX															
8	Time between phase C to phase D signal in V.17  Example: Image -->EOP	<table><tr><td>RX Insensitivity</td><td>70 ms</td><td>120 ms</td><td>180 ms</td><td>60 ms</td></tr><tr><td>Bit 8</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 7</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	RX Insensitivity	70 ms	120 ms	180 ms	60 ms	Bit 8	0	0	1	1	Bit 7	0	1	0	1	0	2
RX Insensitivity			70 ms	120 ms	180 ms	60 ms													
Bit 8			0	0	1	1													
Bit 7	0	1	0	1															
7	0																		
6	Header TX selec- tion open to user	0: No 1: <b>Yes</b>	1																
5	Reserved	Reserved	0	0															
4	Reserved	Reserved	0																
3	Transmit RTN signal level criteria	<table><tr><td>Percentage of error line</td><td>10 %</td><td>15 %</td><td>20 %</td><td>25 %</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Percentage of error line		10 %	15 %	20 %	25 %	Bit 3	0	0	1	1	Bit 2	0	1	0	1	0
Percentage of error line			10 %		15 %	20 %	25 %												
Bit 3			0		0	1	1												
Bit 2	0	1	0	1															
2	0																		
1	Sent N.G page	0: <b>Send N.G page and up to 3 times for that page</b> 1: Not re-send that N.G page for G3 mode	0																

- Bit 1: If this bit is set to '0', N.G indicates our side detected RTN signal from other end. In this case machine can re-send the same page up to three or just one time, and this use for G3 mode only.
- Bit 2-3: In G3 mode, if error line for each page meets the criteria setting, receiving machine will send RTN signal, in this case, some machine will re-send the same page again. The retry times depend on transmission side.
- Bit 6: If this bit is set to '0', the header select function can not be changed by user, only changeable by serviceman in service mode.

### (3) SOFT SWITCH: #03

Bit No.	Designation	Function	Initial Setting																																									
			Bit	HEX																																								
8	Send out NSF frame with station ID	1: <b>Yes</b> 0: No	1	8																																								
7	Number of pause within phone number	0: <b>No limitation</b> 1: Max. up to 2 “P” within inputted telephone number	0																																									
6	Re-dial prohibit for NO ANSWER	0: <b>Continue to dial</b> 1: Not allowed to re-dial if no any FAX signal or detected busy tone after dialing	0																																									
5	Reserved	Reserved	0																																									
4	RX level setting	<table><tr><td>RX level (dB)</td><td>-49</td><td>-48</td><td>-47</td><td>-46</td><td>-45</td><td>-44</td><td><b>-43</b></td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td><b>0</b></td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td><b>1</b></td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td><b>1</b></td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td><b>0</b></td></tr></table>	RX level (dB)	-49	-48	-47	-46	-45	-44	<b>-43</b>	Bit 4	0	0	0	0	0	0	<b>0</b>	Bit 3	0	0	0	0	1	1	<b>1</b>	Bit 2	0	0	1	1	0	0	<b>1</b>	Bit 1	0	1	0	1	0	1	<b>0</b>	0	6
RX level (dB)			-49	-48	-47	-46	-45	-44	<b>-43</b>																																			
Bit 4			0	0	0	0	0	0	<b>0</b>																																			
Bit 3			0	0	0	0	1	1	<b>1</b>																																			
Bit 2			0	0	1	1	0	0	<b>1</b>																																			
Bit 1			0	1	0	1	0	1	<b>0</b>																																			
3			1																																									
2	1																																											
1	<table><tr><td>RX level (dB)</td><td>-42</td><td>-41</td><td>-40</td><td>-39</td><td>-38</td><td>-37</td><td>-36</td></tr><tr><td>Bit 4</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td></tr><tr><td>Bit 1</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	RX level (dB)	-42	-41	-40	-39	-38	-37	-36	Bit 4	0	1	1	1	1	1	1	Bit 3	1	0	0	0	0	1	1	Bit 2	1	0	0	1	1	0	0	Bit 1	1	0	1	0	1	0	1	0		
		RX level (dB)	-42	-41	-40	-39	-38	-37	-36																																			
		Bit 4	0	1	1	1	1	1	1																																			
		Bit 3	1	0	0	0	0	1	1																																			
		Bit 2	1	0	0	1	1	0	0																																			
		Bit 1	1	0	1	0	1	0	1																																			
<table><tr><td>RX level (dB)</td><td colspan="2">Reserved</td></tr><tr><td>Bit 4</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td></tr></table>	RX level (dB)	Reserved		Bit 4	1	1	Bit 3	1	1	Bit 2	1	1	Bit 1	0	1																													
	RX level (dB)	Reserved																																										
	Bit 4	1	1																																									
	Bit 3	1	1																																									
	Bit 2	1	1																																									
	Bit 1	0	1																																									

- Bit 8: If this bit is set to 1, the answer machine will send the machine name (which is that set in INITIAL USER DATA of Utility Mode) by NSF frame after connection.
- Bit 7: Can input Pause key to insert pause time between digits, this can put more than one "P" at the end of access telephone number during calling to other parties by using PBX system.

(4) SOFT SWITCH: #04

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Visible alarm for RTN signal	0: No <b>1: Yes - display message while sending / receiving RTN signal (RTN= Return To Negative).</b>	1	C
3	Audible alarm for RTN signal	0: No <b>1: Yes - alarm for sending or receiving RTN signal.</b>	1	
2	Reserved	Reserved	0	
1	Polarity change detection	<b>0: Not to detect phase reverse during dialing &amp; calling</b> 1: Detect line phase reverse during dialing & calling	0	

- Bit 3: The alarm lasts for 3 seconds after a negative signal is detected in G3 mode.
- Bit 4: The display message will stay put on the LCD for 3 seconds or until next incoming T30 signal.

(5) SOFT SWITCH: #05

Bit No.	Designation	Function	Initial Setting										
			Bit	HEX									
8	Push button on/off timing (PB)	Timing (ms)	ON	100	70	70	90	0	0				
7			OFF	140	70	140	90						
		Bit 8		0	0	1	1						
		Bit 7		0	1	0	1						
6	Relation between dialed No. and No. of dial pulse							0	0				
5		# 1	1	2	9	Reserved							
		# 2	2	3	8								
		# 3	3	4	7								
		# 4	4	5	6								
		# 5	5	6	5								
		# 6	6	7	4								
		# 7	7	8	3								
		# 8	8	9	2								
		# 9	9	10	1								
		# 0	10	1	10								
Bit 6		0	0	1	1								
Bit 5		0	1	0	1								
4	Dial pulse make ratio select (MR)	PPS	20	20	20	Reserved	16	16	16	Reserved	1	A	
3		MR(%)	33	40	30		33	40	30		0		
2		Bit 4	0	0	0	0	0	0	0	0	1		
1		Bit 3	0	0	0	0	1	1	1	1			
		Bit 2	0	0	1	1	0	0	1	1			
		Bit 1	0	1	0	1	0	1	0	1			
		PPS	10	10	10	10	Reserved						
		MR(%)	33	40	30	32							
		Bit 4	1	1	1	1	1	1	1	1			
		Bit 3	0	0	0	0	1	1	1	1			
		Bit 2	0	0	1	1	0	0	1	1			
Bit 1		0	1	0	1	0	1	0	1				

(6) SOFT SWITCH: #06

Bit No.	Designation	Function	Initial Setting																
			Bit	HEX															
8	Ring on time to ignore ring off time at 1st cycle	<table><tr><td>Time</td><td>50 ms</td><td>100 ms</td><td>150 ms</td><td>800 ms</td></tr><tr><td>Bit 8</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 7</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Time	50 ms	100 ms	150 ms	800 ms	Bit 8	0	0	1	1	Bit 7	0	1	0	1	0	4
Time		50 ms	100 ms	150 ms	800 ms														
Bit 8		0	0	1	1														
Bit 7	0	1	0	1															
7	1																		
6	Reserved	Reserved	0																
5	Reserved	Reserved	0																
4	Ring off time at 1 st. cycle to approve incoming ring	<table><tr><td>Time</td><td>100 ms</td><td>250 ms</td><td>500 ms</td><td>1000 ms</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Time	100 ms	250 ms	500 ms	1000 ms	Bit 4	0	0	1	1	Bit 3	0	1	0	1	1	F
Time		100 ms	250 ms	500 ms	1000 ms														
Bit 4		0	0	1	1														
Bit 3	0	1	0	1															
3	1																		
2	Pulse cycle to approve ring frequency	<table><tr><td>Cycle</td><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Cycle	1	2	3	4	Bit 2	0	0	1	1	Bit 1	0	1	0	1	1	
Cycle	1	2	3	4															
Bit 2	0	0	1	1															
Bit 1	0	1	0	1															
1	1																		

(7) SOFT SWITCH: #07

Bit No.	Designation	Function	Initial Setting																																														
			Bit	HEX																																													
8	Dial tone or busy tone detection	<b>0: Disable</b> 1: Enable - Detect dial tone before dial	0	0																																													
7	PSTN/PBX setting	<b>0: PSTN</b> 1: PBX - Select PBX line type	0																																														
6	PBX dial tone detect	<b>0: Not to detect dial tone before pre-fix number</b> 1: Detect dial tone before the pre-fix number in PBX mode	0																																														
5	Dial mode select	<b>0: DTMF - PB</b> 1: Pulse - DP	0																																														
4	Tx level select for PSK/FSK	<table><tr><th>Level (dBm)</th><th>-17</th><th>-16</th><th>-15</th><th>-14</th><th>-13</th><th>-12</th><th>-11</th><th>-10</th></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Level (dBm)	-17	-16	-15	-14	-13	-12	-11	-10	Bit 4	0	0	0	0	0	0	0	0	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	1	8
Level (dBm)		-17	-16	-15	-14	-13	-12	-11	-10																																								
Bit 4		0	0	0	0	0	0	0	0																																								
Bit 3		0	0	0	0	1	1	1	1																																								
Bit 2		0	0	1	1	0	0	1	1																																								
Bit 1		0	1	0	1	0	1	0	1																																								
3		<table><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table>	Bit 4	0	0	0	0	1	1	1	1	0																																					
Bit 4		0	0	0	0	1	1	1	1																																								
2		<table><tr><td>Bit 3</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr></table>	Bit 3	0	0	1	1	0	0	1	1	0																																					
Bit 3		0	0	1	1	0	0	1	1																																								
1	<table><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	0																													
	Bit 2	0	0	1	1	0	0	1	1																																								
	Bit 1	0	1	0	1	0	1	0	1																																								
	<table><tr><th>Level (dBm)</th><th>-9</th><th>-8</th><th>-7</th><th>-6</th><th>-5</th><th>-4</th><th>-3</th><th>-2</th></tr><tr><td>Bit 4</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Level (dBm)	-9	-8	-7	-6	-5	-4	-3	-2	Bit 4	1	1	1	1	1	1	1	1		Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1		
	Level (dBm)	-9	-8	-7	-6	-5	-4	-3	-2																																								
Bit 4	1	1	1	1	1	1	1	1																																									
Bit 3	0	0	0	0	1	1	1	1																																									
Bit 2	0	0	1	1	0	0	1	1																																									
Bit 1	0	1	0	1	0	1	0	1																																									

**(8) SOFT SWITCH: #08**

Bit No.	Designation	Function	Initial Setting																																												
			Bit	HEX																																											
8	Sending RTN signal level	0: (Normal, Fine)=(12,24) continue error line 1: (Normal, Fine)=(6,12) continue error line	0	6																																											
7	Detect busy tone after dialing	0: Not to detect 1: Detect busy tone after dialing	1																																												
6	Sending CED signal After connection	0: Not to send 1: Send CED signal before DIS signal after connection	1																																												
5	Reserved	Reserved	0																																												
4	Redial Interval	<table><tr><td rowspan="9">Auto dial interval</td><td>1, 1, 1, 1, 10, 1, 1, 1.</td><td>3, 3, 15, 3, 3.</td><td>1, 15.</td><td>3, 3.</td><td>1, 3.</td><td>1, 3.</td><td>1, 3.</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Auto dial interval	1, 1, 1, 1, 10, 1, 1, 1.	3, 3, 15, 3, 3.	1, 15.	3, 3.	1, 3.	1, 3.	1, 3.	Bit 4	0	0	0	0	0	0	0	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	0	1
Auto dial interval				1, 1, 1, 1, 10, 1, 1, 1.	3, 3, 15, 3, 3.	1, 15.	3, 3.	1, 3.	1, 3.	1, 3.																																					
				Bit 4	0	0	0	0	0	0	0																																				
				Bit 3	0	0	0	0	1	1	1	1																																			
				Bit 2	0	0	1	1	0	0	1	1																																			
				Bit 1	0	1	0	1	0	1	0	1																																			
				3	0																																										
				2	0																																										
				1	1																																										
			0	0																																											
0	0																																														
0	0																																														
0	0																																														
0	0																																														
0	0																																														

- Bit 8: If error line above definition, machine will send RTN signal instead of MCF signal. This will cause the other party to send the same page again.

(9) SOFT SWITCH: #09

Bit No.	Designation	Function	Initial Setting																
			Bit	HEX															
8	Ringer frequency detection	<table><tr><td>Ringer frequency range</td><td>10 to 75 Hz</td><td>20 to 57.5 Hz</td><td>20 to 75 Hz</td><td>10 to 75 Hz</td></tr><tr><td>Bit 8</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 7</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Ringer frequency range	10 to 75 Hz	20 to 57.5 Hz	20 to 75 Hz	10 to 75 Hz	Bit 8	0	0	1	1	Bit 7	0	1	0	1	0	0
Ringer frequency range		10 to 75 Hz	20 to 57.5 Hz	20 to 75 Hz	10 to 75 Hz														
Bit 8		0	0	1	1														
Bit 7		0	1	0	1														
7	0																		
6	Reserved	Reserved	0																
5	TSI/CSI append "+"	0: Not append "+" before send out TSI/CSI 1: Automatically insert "+"	0																
4	Reserved	Reserved	0	0															
3	Reserved	Reserved	0																
2	Time from RX DIS signal to send DCS signal	<table><tr><td>Description</td><td>70 ms</td><td>120 ms</td><td>180 ms</td><td>240 ms</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Description		70 ms	120 ms	180 ms	240 ms	Bit 2	0	0	1	1	Bit 1	0	1	0	1	0
Description		70 ms	120 ms		180 ms	240 ms													
Bit 2	0	0	1	1															
Bit 1	0	1	0	1															
1	0																		

- Bit 5: When this bit is set to "1", the "+" character will be placed in the first position on CSI and TSI command.

**(10) SOFT SWITCH: #10**

Bit No.	Designation	Function	Initial Setting																
			Bit	HEX															
8	Print out RTN page report	0: Not to Print <b>1: Print Out RTN page report after transaction for TX/RX RTN signal</b>	1	A															
7	Confirmation report result field	<b>0: Print “OK”</b> 1: Print “NG” in case of sending or receiving RTN signal	0																
6	Get gap time between digit for pulse dial	<table border="1"><thead><tr><th>Value</th><th>550 ms</th><th>650 ms</th><th><b>750 ms</b></th><th>850 ms</th></tr></thead><tbody><tr><td>Bit 6</td><td>0</td><td>0</td><td><b>1</b></td><td>1</td></tr><tr><td>Bit 5</td><td>0</td><td>1</td><td><b>0</b></td><td>1</td></tr></tbody></table>	Value		550 ms	650 ms	<b>750 ms</b>	850 ms	Bit 6	0	0	<b>1</b>	1	Bit 5	0	1	<b>0</b>	1	1
Value			550 ms		650 ms	<b>750 ms</b>	850 ms												
Bit 6	0	0	<b>1</b>	1															
Bit 5	0	1	<b>0</b>	1															
5	0																		
4	RX PIP T.30 command after send out MPS command	<b>0: Send DCS at current speed</b> 1: Return to Tx phase B waiting for DIS signal	0	1															
3	Received DIS signal within reception	<b>0: Repeat sending DIS/DTC again until time out</b> 1: Disconnected after sending DCN signal	0																
2	Transmission time limitation	<b>0: No any limitation until document jam</b> 1: Limit to 8 minutes from data phase	0																
1	Audio alarm after communication fail	0: Not to alarm after transaction fail <b>1: Alarm 3 seconds after disconnected</b>	1																

- Bit 8: If this bit set to 1, machine will print out confirmation report after each transaction for TX/RX RTN signal.
- Bit 7: If this bit is set to 1, the result field will show "NG" instead of "OK" in the confirmation report and activity report or checking the result on the LCD.
- Bit 2: For Manual Tx only.

(11) SOFT SWITCH: #11

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Detect dial tone after pre-fix number	0: No 1: Yes	0	
6	Pulse dial allowed to select	0: Yes 1: Not allowed	0	
5	Protocol signal display mode	0: Not to display 1: Display V8 or T30 command within communication.	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	DTMF high frequency dB value	0: Base on SW19 (1-4) 1: High 1dB	0	

- Bit 6: If this bit is set to 1, not allowed user to select Pulse dial, and this function open for serviceman to change.
- Bit 7: Bit set to 1, LCD will show the command between each party.

(12) SOFT SWITCH: #12

Bit No.	Designation	Function	Initial Setting																
			Bit	HEX															
8	ECM mode capability	<b>1: Yes</b> 0: No - also disable V.34 modem capability	1	8															
7	V.34 fall back level for V.34 TX.	<table><tr><td>Counter</td><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>Bit 7</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 6</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Counter		1	2	3	4	Bit 7	0	0	1	1	Bit 6	0	1	0	1	0
Counter		1	2		3	4													
Bit 7		0	0		1	1													
Bit 6	0	1	0	1															
6			0																
5	Send CTC after 4th PPR	<b>0: Send CTC (Continue To Correct)</b> 1: Send EOR (End Of Transmission)	0	0															
4	Reserved	Reserved	0																
3	Send EOR after lowest speed	<b>0: Send DCN (Redial)</b> 1: Send EOR_xxx (Germany PTT)	0																
2	TCF transmission timing after DCS	<table><tr><td>Description</td><td>70 ms</td><td>80 ms</td><td>90 ms</td><td>100 ms</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Description		70 ms	80 ms	90 ms	100 ms	Bit 2	0	0	1	1	Bit 1	0	1	0	1	0
Description		70 ms	80 ms		90 ms	100 ms													
Bit 2	0	0	1	1															
Bit 1	0	1	0	1															
1			0																

- Bit 1- 2: Delay time from FSK mode to PSK mode, this is used for G3 mode only, V.34 does not need this setting.
- Bit 6-7: If level reads “1”, machine. Will go down to next lower speed for next data phase.

**(13) SOFT SWITCH: #13**

Bit No.	Designation	Function	Initial Setting																
			Bit	HEX															
8	MR capability for G3	0: <b>Yes</b> 1: No	0	1															
7	Delay time between transaction	<table><tr><th>Description</th><th>20 sec</th><th>60 sec</th><th>120 sec</th><th>240 sec</th></tr><tr><td>Bit 7</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 6</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Description		20 sec	60 sec	120 sec	240 sec	Bit 7	0	0	1	1	Bit 6	0	1	0	1	0
Description		20 sec	60 sec		120 sec	240 sec													
Bit 7		0	0		1	1													
Bit 6	0	1	0	1															
6			0																
5	Super fine printing capability for receiving	0: No. 1: <b>Yes</b>	1																
4	Disable ultra fine capability in RX mode	0: <b>No.</b> 1: Yes	0	0															
3	DTS mode (Der Telefax Standard)	0: <b>No</b> 1: Yes	0																
2	Send DTC signal if RX DIS signal in polling RX mode	1: No -send DIS again 0: <b>Yes</b>	0																
1	Reserved	Reserved	0																

- Bit 7 - 6: If set to 1, the time between each transaction will become longer, in this case machine will wait more time before start to dial next transaction.
- Bit 4: The resolution definition:
  - Standard R8 x 3.85 lines/mm
  - Fine R8 x 7.7 lines/mm
  - Super fine R8 x 15.4 line/mm,
  - Ultra fine R8 x 15.4 lines/mm.

(14) SOFT SWITCH: #14

Bit No.	Designation	Function	Initial Setting																																					
			Bit	HEX																																				
8	Reserved	Reserved	0	0																																				
7	Reserved	Reserved	0																																					
6	Memory size level To RX	1: Up to 128 KB <b>0: Based on system configuration</b>	0																																					
5	Reserved	Reserved	0																																					
4	Reserved	Reserved	0																																					
3	Time between V.34 ANSam signal and FSK DIS signal	<table><tr><td>Timer</td><td>50 ms</td><td>60 ms</td><td><b>70 ms</b></td><td>80 ms</td><td>100 ms</td><td>120 ms</td><td>140 ms</td><td>160 ms</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td><b>0</b></td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td><b>1</b></td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td><b>0</b></td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Timer	50 ms	60 ms	<b>70 ms</b>	80 ms	100 ms	120 ms	140 ms	160 ms	Bit 3	0	0	<b>0</b>	0	1	1	1	1	Bit 2	0	0	<b>1</b>	1	0	0	1	1	Bit 1	0	1	<b>0</b>	1	0	1	0	1	0	2
Timer			50 ms	60 ms	<b>70 ms</b>	80 ms	100 ms	120 ms	140 ms	160 ms																														
Bit 3			0	0	<b>0</b>	0	1	1	1	1																														
Bit 2			0	0	<b>1</b>	1	0	0	1	1																														
Bit 1	0	1	<b>0</b>	1	0	1	0	1																																
2	1																																							
1	0																																							

- Bit 6: If set to 1, machine will become manual RX mode if available memory size less than 128 K (manual RX mode: Press “Speaker” key and “Start” key, then machine can start receiving).

(15) SOFT SWITCH: #15

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	
3	Reserved	Reserved	0	1
2	Reserved	Reserved	0	
1	Remote side no document to be polled	0: Not to generate error report document to be polled	1	
		<b>1: Generate error report after communication end</b>		

# (16) SOFT SWITCH: #16

Bit No.	Designation	Function	Initial Setting																
			Bit	HEX															
8	Reserved	Reserved	0	0															
7	Reserved	Reserved	0																
6	Reserved	Reserved	0																
5	Reserved	Reserved	0																
4	Reserved	Reserved	0	3															
3	Reserved	Reserved	0																
2	Fax communication coding method	<table><tr><td>Coding method</td><td>MMR*1</td><td>MR</td><td>MH</td><td>JBIG</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Coding method		MMR*1	MR	MH	JBIG	Bit 2	0	0	1	1	Bit 1	0	1	0	1	1
Coding method			MMR*1		MR	MH	JBIG												
Bit 2			0		0	1	1												
Bit 1	0	1	0	1															
1			1																

\*1: KONICA MINOLTA FAX 2900: The default of "Coding method" is "MMR". (Bit No. 1:0, Bit No. 2:0, HEX:0)

# (17) SOFT SWITCH: #17

Bit No.	Designation	Function	Initial Setting																					
			Bit	HEX																				
8	Reserved	Reserved	0	0																				
7	Reserved	Reserved	0																					
6	CED frequency	0: 2100 Hz 1: 1100 Hz	0																					
5	Pause between off hook and CED signal	<table><tr><td>Time (T=)</td><td>1.8 sec to 2.5 sec</td><td>T+ 100 ms</td><td>T+ 200 ms</td><td>T+ 300 ms</td></tr><tr><td>Bit 5</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Time (T=)	1.8 sec to 2.5 sec	T+ 100 ms	T+ 200 ms	T+ 300 ms	Bit 5	0	0	0	0	Bit 4	0	0	1	1	Bit 3	0	1	0	1	0	0
Time (T=)			1.8 sec to 2.5 sec	T+ 100 ms	T+ 200 ms	T+ 300 ms																		
Bit 5			0	0	0	0																		
Bit 4			0	0	1	1																		
Bit 3			0	1	0	1																		
4			0																					
3			0																					
			0																					
			0																					
			0																					
2	0																							
	0																							
	0																							
	0																							
1	0																							
	0																							
	0																							
	0																							

- T5: 60 ± 5 sec in ITU-T standard

(18) SOFT SWITCH: #18

Bit No.	Designation	Function	Initial Setting																																																													
			Bit	HEX																																																												
8	Reserved	Reserved	0	0																																																												
7	Reserved	Reserved	0																																																													
6	G3 mode training quality level	<table><tr><th>Definition</th><th>Level1</th><th>Level2</th><th>Level3</th><th>Level4</th></tr><tr><td>Bit 6</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 5</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Definition		Level1	Level2	Level3	Level4	Bit 6	0	0	1	1	Bit 5	0	1	0	1	0																																													
Definition		Level1	Level2	Level3	Level4																																																											
Bit 6		0	0	1	1																																																											
Bit 5	0	1	0	1																																																												
5			0																																																													
4	Redefine re-dial attempts counter	<table><tr><th>Counter</th><th>0</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td></tr></table>	Counter	0	1	2	3	4	5	6	7	8	9	10	Bit 4	0	0	0	0	0	0	0	0	1	1	1	Bit 3	0	0	0	0	1	1	1	1	0	0	0	Bit 2	0	0	1	1	0	0	1	1	0	0	1	Bit 1	0	1	0	1	0	1	0	1	0	1	0	0	0
Counter		0	1	2	3	4	5	6	7	8	9	10																																																				
Bit 4		0	0	0	0	0	0	0	0	1	1	1																																																				
Bit 3		0	0	0	0	1	1	1	1	0	0	0																																																				
Bit 2		0	0	1	1	0	0	1	1	0	0	1																																																				
Bit 1		0	1	0	1	0	1	0	1	0	1	0																																																				
3			0																																																													
2			0																																																													
1			<table><tr><th>Counter</th><th colspan="5">Reserved</th></tr><tr><td>Bit 4</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Counter	Reserved					Bit 4	1	1	1	1	1	Bit 3	0	1	1	1	1	Bit 2	1	0	0	1	1	Bit 1	1	0	1	0	1	0																														
		Counter	Reserved																																																													
	Bit 4	1	1	1	1	1																																																										
	Bit 3	0	1	1	1	1																																																										
	Bit 2	1	0	0	1	1																																																										
Bit 1	1	0	1	0	1																																																											

- Bit 1-4: The redial attempt times will follow bit 1- 4, if these bits are not all setting “0”. Otherwise the redial attempt times will follow bit 1 to 4 on SW08.
- Bit 5-6: Level 4 training check phases is most severe than level 3, 2, 1. Level 4 can keep lowest RX speed communication than level 3, 2, 1 when poor line condition.

**(19) SOFT SWITCH: #19**


Bit No.	Designation	Function	Initial Setting												
			Bit	HEX											
8	CNG signal level	Level (dBm)	-17	-16	-15	-14	-13	-12	-11	-10	0	6			
7		Bit 8	0	0	0	0	0	0	0	0	0		1		
6		Bit 7	0	0	0	0	1	1	1	1	1		1		
5		Bit 6	0	0	1	1	0	0	1	1	1		0		
		Bit 5	0	1	0	1	0	1	0	1	1				
		Level (dBm)	-9	-8	-7	-6	-5	-4	-3	-2					
		Bit 8	1	1	1	1	1	1	1	1					
		Bit 7	0	0	0	0	1	1	1	1					
		Bit 6	0	0	1	1	0	0	1	1					
		Bit 5	0	1	0	1	0	1	0	1					
		4	DTMF high frequency level	Level (dBm)	-17	-16	-15	-14	-13	-12	-11			-10	1
3		Bit 4		0	0	0	0	0	0	0	0		0		
2		Bit 3		0	0	0	0	1	1	1	1		0		
1		Bit 2		0	0	1	1	0	1	1	1		1	0	
		Bit 1		0	1	0	1	0	1	0	1				
	Level (dBm)	-9		-8	-7	-6	-5	-4	-3	-2					
	Bit 4	1		1	1	1	1	1	1	1					
	Bit 3	0		0	0	0	1	1	1	1					
	Bit 2	0		0	1	1	0	0	1	1					
	Bit 1	0		1	0	1	0	1	0	1					

(20) SOFT SWITCH: #20

Bit No.	Designation	Function	Initial Setting																																																																															
			Bit	HEX																																																																														
8	Reserved	Reserved	0	0																																																																														
7	Reserved	Reserved	0																																																																															
6	Reserved	Reserved	0																																																																															
5	Redefine redial interval  Redefine redial interval over default setting that is based on soft SW #08 bit 1~4	<table><tr><td>Interval (min)</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td></tr><tr><td>Bit 5</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Interval (min)	0	1	2	3	4	5	6	7	8	9	10	11	Bit 5	0	0	0	0	0	0	0	0	0	0	0	0	Bit 4	0	0	0	0	0	0	0	1	1	1	1	1	Bit 3	0	0	0	0	1	1	1	1	0	0	0	0	Bit 2	0	0	1	1	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	0	1	0	1	0	0
Interval (min)		0	1	2	3	4	5	6	7	8	9	10	11																																																																					
Bit 5		0	0	0	0	0	0	0	0	0	0	0	0																																																																					
Bit 4		0	0	0	0	0	0	0	1	1	1	1	1																																																																					
Bit 3		0	0	0	0	1	1	1	1	0	0	0	0																																																																					
Bit 2		0	0	1	1	0	0	1	1	0	0	1	1																																																																					
Bit 1		0	1	0	1	0	1	0	1	0	1	0	1																																																																					
4		<table><tr><td>Interval (min)</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td></tr><tr><td>Bit 5</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 4</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td></tr></table>	Interval (min)	12	13	14	15	16	17	18	19	20	Bit 5	0	0	0	0	1	1	1	1	1	Bit 4	1	1	1	1	0	0	0	0	0	Bit 3	1	1	1	1	0	0	0	0	1	Bit 2	0	0	1	1	0	0	1	1	0	Bit 1	0	1	0	1	0	1	0	1	0	0																			
Interval (min)		12	13	14	15	16	17	18	19	20																																																																								
Bit 5		0	0	0	0	1	1	1	1	1																																																																								
Bit 4	1	1	1	1	0	0	0	0	0																																																																									
Bit 3	1	1	1	1	0	0	0	0	1																																																																									
Bit 2	0	0	1	1	0	0	1	1	0																																																																									
Bit 1	0	1	0	1	0	1	0	1	0																																																																									
3	<table><tr><td>Interval (min)</td><td colspan="12">Reserved</td></tr><tr><td>Bit 5</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>1</td></tr></table>	Interval (min)	Reserved												Bit 5	1	1	1	1	1	1	1	1	1	1	1	1	Bit 4	0	0	0	1	1	1	1	1	1	1	1	1	Bit 3	1	1	1	0	0	0	0	1	1	1	1	1	Bit 2	0	1	1	0	0	1	1	0	0	1	1	1	Bit 1	1	0	1	0	1	0	1	0	1	0	1	1	0		
Interval (min)	Reserved																																																																																	
Bit 5	1	1	1	1	1	1	1	1	1	1	1	1																																																																						
Bit 4	0	0	0	1	1	1	1	1	1	1	1	1																																																																						
Bit 3	1	1	1	0	0	0	0	1	1	1	1	1																																																																						
Bit 2	0	1	1	0	0	1	1	0	0	1	1	1																																																																						
Bit 1	1	0	1	0	1	0	1	0	1	0	1	1																																																																						
2																																																																																		
1																																																																																		

**(21) SOFT SWITCH: #21**

Bit No.	Designation	Function	Initial Setting																
			Bit	HEX															
8	NSS signal before DCS	0: Not to send NSS signal if remote side is same model <b>1: Send NSS signal if remote side is same model</b>	1	C															
7	CNG duration after dialing (T1)	<table><tr><td>Duration</td><td>40 sec</td><td>60 sec</td><td><b>70 sec</b></td><td>120 sec</td></tr><tr><td>Bit 7</td><td>0</td><td>0</td><td><b>1</b></td><td>1</td></tr><tr><td>Bit 6</td><td>0</td><td>1</td><td><b>0</b></td><td>1</td></tr></table>	Duration		40 sec	60 sec	<b>70 sec</b>	120 sec	Bit 7	0	0	<b>1</b>	1	Bit 6	0	1	<b>0</b>	1	1
Duration		40 sec	60 sec		<b>70 sec</b>	120 sec													
Bit 7	0	0	<b>1</b>		1														
Bit 6	0	1	<b>0</b>	1															
6	0																		
5	T4 timer	<b>0: 3.0 sec – Normal case</b> 1: 4.5 sec	0																
4	Reserved	Reserved	0																
3	DIS signal length	<b>0: Normal length (bit 1 to 64)</b> 1: 4 bytes DIS command – bit 1 to 32 only	0																
2	Increase default T1 timing during calling	<table><tr><td>Descr ption</td><td><b>T1 sec</b></td><td>T1+ 30 sec</td><td>T1+ 40 sec</td><td>T1+60 sec</td></tr><tr><td>Bit 7</td><td><b>0</b></td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 6</td><td><b>0</b></td><td>1</td><td>0</td><td>1</td></tr></table>	Descr ption	<b>T1 sec</b>	T1+ 30 sec	T1+ 40 sec	T1+60 sec	Bit 7	<b>0</b>	0	1	1	Bit 6	<b>0</b>	1	0	1	0	0
Descr ption		<b>T1 sec</b>	T1+ 30 sec	T1+ 40 sec	T1+60 sec														
Bit 7		<b>0</b>	0	1	1														
Bit 6	<b>0</b>	1	0	1															
1	0																		

- Bit 1-2: T1 indicates the calling time after dialing, can adjust the T1 time longer by changing the default value. The default T1 timer depends on each country regulation.
- Bit 3: Some old machines can not accept DIS command over 4 bytes, and every time will become fail. In this case you can set this bit to 1. If this bit is set to 1, JBIG and V8 capability will be disabled automatically.
- Bit 6-7: A fax to be received is canceled and the machine becomes unable to receive it if the setting of "No. of RINGS" is made longer than the setting of "CNG duration after dialing." Be sure to make the "No. of RINGS" setting to a value shorter than the "CNG duration after dialing" setting.  
 **S-35** Utility Mode/ RX operation/ No. of RINGS
- Bit 8: Sender machine's name will show on the other party's LCD or print on the report if remote side is the same model.

(22) SOFT SWITCH: #22

Bit No.	Designation	Function	Initial Setting																																														
			Bit	HEX																																													
8	Detect busy tone before dial	1: Check busy tone within dial tone detection <b>0: Not to check</b>	0	0																																													
7	Regard dial tone as busy tone after dialing	1: Yes - Check dial tone after dialing <b>0: No</b>	0																																														
6	Check busy tone method	<b>0: Measure tone by input energy over threshold</b> 1: By PTT regulation tone frequency	0																																														
5	Reserved	Reserved	0																																														
4	CED signal output level	<table><tr><td>Level (dBm)</td><td>-17</td><td>-16</td><td>-15</td><td>-14</td><td>-13</td><td>-12</td><td>-11</td><td>-10</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Level (dBm)	-17	-16	-15	-14	-13	-12	-11	-10	Bit 4	0	0	0	0	0	0	0	0	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	0	6
Level (dBm)		-17	-16	-15	-14	-13	-12	-11	-10																																								
Bit 4		0	0	0	0	0	0	0	0																																								
Bit 3		0	0	0	0	1	1	1	1																																								
Bit 2		0	0	1	1	0	0	1	1																																								
Bit 1		0	1	0	1	0	1	0	1																																								
3		<table><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table>	Bit 4	0	0	0	0	1	1	1	1	1																																					
Bit 4		0	0	0	0	1	1	1	1																																								
2		<table><tr><td>Bit 3</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr></table>	Bit 3	0	0	1	1	0	0	1	1	1																																					
Bit 3		0	0	1	1	0	0	1	1																																								
1		<table><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr></table>	Bit 2	0	0	1	1	0	0	1	1	0																																					
		Bit 2	0	0	1	1	0	0	1	1																																							
	<table><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Bit 1	0	1	0	1	0	1	0	1																																							
	Bit 1	0	1	0	1	0	1	0	1																																								
	<table><tr><td>Level (dBm)</td><td>-9</td><td>-8</td><td>-7</td><td>-6</td><td>-5</td><td>-4</td><td>-3</td><td>-2</td></tr></table>	Level (dBm)	-9	-8	-7	-6	-5	-4	-3	-2																																							
Level (dBm)	-9	-8	-7	-6	-5	-4	-3	-2																																									
<table><tr><td>Bit 4</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table>	Bit 4	1	1	1	1	1	1	1	1																																								
Bit 4	1	1	1	1	1	1	1	1																																									
<table><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table>	Bit 3	0	0	0	0	1	1	1	1																																								
Bit 3	0	0	0	0	1	1	1	1																																									
	<table><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr></table>	Bit 2	0	0	1	1	0	0	1	1																																							
Bit 2	0	0	1	1	0	0	1	1																																									
	<table><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Bit 1	0	1	0	1	0	1	0	1																																							
Bit 1	0	1	0	1	0	1	0	1																																									

(23) SOFT SWITCH: #23

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Reserved	Reserved	0	

**(24) SOFT SWITCH: #24**

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Reserved	Reserved	0	

**(25) SOFT SWITCH: #25**

Bit No.	Designation	Function	Initial Setting					
			Bit	HEX				
8	Reserved	Reserved	0	0				
7	Reserved	Reserved	0					
6	Reserved	Reserved	0					
5	Reserved	Reserved	0					
4	Flash key time in ON hook key dial	Flash time	100 ms	80 ms	60 ms	50 ms	0	0
3		Bit 4	0	0	1	1	0	
		Bit 3	0	1	0	1		
2	Reserved	Reserved	0					
1	Reserved	Reserved	0					

(26) SOFT SWITCH: #26

Bit No.	Designation	Function	Initial Setting																																																																																				
			Bit	HEX																																																																																			
8	Dial tone detection time before disconnected	<table><tr><td>Time</td><td>10 sec</td><td>15 sec</td><td>20 sec</td><td>25 sec</td></tr><tr><td>Bit 8</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 7</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Time	10 sec	15 sec	20 sec	25 sec	Bit 8	0	0	1	1	Bit 7	0	1	0	1	0	2																																																																				
Time		10 sec	15 sec	20 sec	25 sec																																																																																		
Bit 8		0	0	1	1																																																																																		
Bit 7	0	1	0	1																																																																																			
7	<table><tr><td>Bit 6</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 5</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></table>	Bit 6	0	0	1	1	Bit 5	0	0	0	0	0																																																																											
Bit 6	0	0	1	1																																																																																			
Bit 5	0	0	0	0																																																																																			
6	Dial tone insensitivity (0 dBm to -40 dBm)	<table><tr><td>Level (dBm)</td><td>0</td><td>-1</td><td>-2</td><td>-3</td><td>-4</td><td>-5</td><td>-6</td><td>-7</td><td>-8</td><td>-9</td><td>-10</td></tr><tr><td>Bit 6</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 5</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td></tr></table>	Level (dBm)	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	Bit 6	0	0	0	0	0	0	0	0	0	0	0	Bit 5	0	0	0	0	0	0	0	0	0	0	0	Bit 4	0	0	0	0	0	0	0	0	1	1	1	Bit 3	0	0	0	0	1	1	1	1	0	0	0	Bit 2	0	0	1	1	0	0	1	1	0	0	1	Bit 1	0	1	0	1	0	1	0	1	0	1	0	1
Level (dBm)		0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10																																																																											
Bit 6		0	0	0	0	0	0	0	0	0	0	0																																																																											
Bit 5		0	0	0	0	0	0	0	0	0	0	0																																																																											
Bit 4		0	0	0	0	0	0	0	0	1	1	1																																																																											
Bit 3		0	0	0	0	1	1	1	1	0	0	0																																																																											
Bit 2		0	0	1	1	0	0	1	1	0	0	1																																																																											
Bit 1		0	1	0	1	0	1	0	1	0	1	0																																																																											
5		<table><tr><td>Level (dBm)</td><td>-11</td><td>-12</td><td>-13</td><td>-14</td><td>-15</td><td>-16</td><td>-17</td><td>-18</td><td>-19</td><td>-20</td></tr><tr><td>Bit 6</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 5</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 4</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>Bit 2</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td></tr><tr><td>Bit 1</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td></tr></table>	Level (dBm)	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20	Bit 6	0	0	0	0	0	0	0	0	0	0	Bit 5	0	0	0	0	0	1	1	1	1	1	Bit 4	1	1	1	1	1	0	0	0	0	0	Bit 3	0	1	1	1	1	0	0	0	0	1	Bit 2	1	0	0	1	1	0	0	1	1	0	Bit 1	1	0	1	0	1	0	1	0	1	0	0							
Level (dBm)		-11	-12	-13	-14	-15	-16	-17	-18	-19	-20																																																																												
Bit 6		0	0	0	0	0	0	0	0	0	0																																																																												
Bit 5		0	0	0	0	0	1	1	1	1	1																																																																												
Bit 4		1	1	1	1	1	0	0	0	0	0																																																																												
Bit 3		0	1	1	1	1	0	0	0	0	1																																																																												
Bit 2		1	0	0	1	1	0	0	1	1	0																																																																												
Bit 1		1	0	1	0	1	0	1	0	1	0																																																																												
4		<table><tr><td>Level (dBm)</td><td>-21</td><td>-22</td><td>-23</td><td>-24</td><td>-25</td><td>-26</td><td>-27</td><td>-28</td><td>-29</td><td>-30</td></tr><tr><td>Bit 6</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 5</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td></tr><tr><td>Bit 1</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td></tr></table>	Level (dBm)	-21	-22	-23	-24	-25	-26	-27	-28	-29	-30	Bit 6	0	0	0	0	0	0	0	0	0	0	Bit 5	1	1	1	1	1	1	1	1	1	1	Bit 4	0	0	0	1	1	1	1	1	1	1	Bit 3	1	1	1	0	0	0	0	1	1	1	Bit 2	0	1	1	0	0	1	1	0	0	1	Bit 1	1	0	1	0	1	0	1	0	1	0	1							
Level (dBm)		-21	-22	-23	-24	-25	-26	-27	-28	-29	-30																																																																												
Bit 6		0	0	0	0	0	0	0	0	0	0																																																																												
Bit 5		1	1	1	1	1	1	1	1	1	1																																																																												
Bit 4		0	0	0	1	1	1	1	1	1	1																																																																												
Bit 3		1	1	1	0	0	0	0	1	1	1																																																																												
Bit 2		0	1	1	0	0	1	1	0	0	1																																																																												
Bit 1		1	0	1	0	1	0	1	0	1	0																																																																												
3		<table><tr><td>Level (dBm)</td><td>-31</td><td>-32</td><td>-33</td><td>-34</td><td>-35</td><td>-36</td><td>-37</td><td>-38</td><td>-39</td><td>-40</td></tr><tr><td>Bit 6</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 5</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 4</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>Bit 3</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td></tr><tr><td>Bit 2</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td></tr><tr><td>Bit 1</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td></tr></table>	Level (dBm)	-31	-32	-33	-34	-35	-36	-37	-38	-39	-40	Bit 6	0	1	1	1	1	1	1	1	1	1	Bit 5	1	0	0	0	0	0	0	0	0	0	Bit 4	1	0	0	0	0	0	0	0	0	1	Bit 3	1	0	0	0	0	1	1	1	1	0	Bit 2	1	0	0	1	1	0	0	1	1	0	Bit 1	1	0	1	0	1	0	1	0	1	0	0							
Level (dBm)	-31	-32	-33	-34	-35	-36	-37	-38	-39	-40																																																																													
Bit 6	0	1	1	1	1	1	1	1	1	1																																																																													
Bit 5	1	0	0	0	0	0	0	0	0	0																																																																													
Bit 4	1	0	0	0	0	0	0	0	0	1																																																																													
Bit 3	1	0	0	0	0	1	1	1	1	0																																																																													
Bit 2	1	0	0	1	1	0	0	1	1	0																																																																													
Bit 1	1	0	1	0	1	0	1	0	1	0																																																																													
2	<table><tr><td>Level (dBm)</td><td>-41 dBm to -50 dBm</td></tr><tr><td>Bit 1 to 6</td><td>Setting disable</td></tr></table>	Level (dBm)	-41 dBm to -50 dBm	Bit 1 to 6	Setting disable	0																																																																																	
Level (dBm)	-41 dBm to -50 dBm																																																																																						
Bit 1 to 6	Setting disable																																																																																						
1													0	8																																																																									

(27) SOFT SWITCH: #27

Bit No.	Designation	Function	Initial Setting																																														
			Bit	HEX																																													
8	Reserved	Reserved	0	0																																													
7	Reserved	Reserved	0																																														
6	Reserved	Reserved	0																																														
5	Reserved	Reserved	0																																														
4	Immunity for dial tone receiver	<table><tr><td>Level (dBm)</td><td>0</td><td>-1</td><td>-2</td><td>-3</td><td>-4</td><td>-5</td><td>-6</td><td>-7</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Level (dBm)	0	-1	-2	-3	-4	-5	-6	-7	Bit 4	0	0	0	0	0	0	0	0	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	0	0
Level (dBm)		0	-1	-2	-3	-4	-5	-6	-7																																								
Bit 4		0	0	0	0	0	0	0	0																																								
Bit 3		0	0	0	0	1	1	1	1																																								
Bit 2		0	0	1	1	0	0	1	1																																								
Bit 1		0	1	0	1	0	1	0	1																																								
3		<table><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table>	Bit 4	0	0	0	0	1	1	1	1	0																																					
Bit 4		0	0	0	0	1	1	1	1																																								
2		<table><tr><td>Bit 3</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr></table>	Bit 3	0	0	1	1	0	0	1	1	0																																					
Bit 3		0	0	1	1	0	0	1	1																																								
1	<table><tr><td>Bit 2</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Bit 2	0	1	0	1	0	1	0	1	0																																						
	Bit 2	0	1	0	1	0	1	0	1																																								
	<table><tr><td>Level (dBm)</td><td>-8</td><td>-9</td><td>-10</td><td>-11</td><td>-12</td><td>-13</td><td>-14</td><td>-15</td></tr><tr><td>Bit 4</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Level (dBm)	-8	-9	-10	-11	-12	-13	-14	-15		Bit 4	1	1	1	1	1	1	1	1	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1		
	Level (dBm)	-8	-9	-10	-11	-12	-13	-14	-15																																								
	Bit 4	1	1	1	1	1	1	1	1																																								
Bit 3	0	0	0	0	1	1	1	1																																									
Bit 2	0	0	1	1	0	0	1	1																																									
Bit 1	0	1	0	1	0	1	0	1																																									

- Bit 1-4: Line input energy must be lower this level before dialing.

(28) SOFT SWITCH: #28

Bit No.	Designation	Function	Initial Setting																																																			
			Bit	HEX																																																		
8	Time to dial after dial tone on the line	<table><tr><td>Time (ms)</td><td>0</td><td>100</td><td>200</td><td>300</td><td>400</td><td>500</td><td>600</td><td>700</td></tr><tr><td>Bit 8</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 7</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 6</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 5</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Time (ms)	0	100	200	300	400	500	600	700	Bit 8	0	0	0	0	0	0	0	0	Bit 7	0	0	0	0	1	1	1	1	Bit 6	0	0	1	1	0	0	1	1	Bit 5	0	1	0	1	0	1	0	1	1	A					
Time (ms)		0	100	200	300	400	500	600	700																																													
Bit 8		0	0	0	0	0	0	0	0																																													
Bit 7		0	0	0	0	1	1	1	1																																													
Bit 6		0	0	1	1	0	0	1	1																																													
Bit 5		0	1	0	1	0	1	0	1																																													
7		<table><tr><td>Bit 8</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></table>	Bit 8	0	0	0	0	0	0	0	0	0																																										
Bit 8		0	0	0	0	0	0	0	0																																													
6		<table><tr><td>Bit 7</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 6</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 5</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Bit 7	0	0	0	0	1	1	1	1	Bit 6	0	0	1	1	0	0	1	1	Bit 5	0	1	0	1	0	1	0	1	1																								
Bit 7		0	0	0	0	1	1	1	1																																													
Bit 6		0	0	1	1	0	0	1	1																																													
Bit 5		0	1	0	1	0	1	0	1																																													
5		<table><tr><td>Time (ms)</td><td>800</td><td>900</td><td>1000</td><td>1100</td><td>1200</td><td>1300</td></tr><tr><td>Bit 8</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 7</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 6</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td></tr><tr><td>Bit 5</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Time (ms)	800	900	1000	1100	1200	1300	Bit 8	1	1	1	1	1	1	Bit 7	0	0	0	0	1	1	Bit 6	0	0	1	1	0	0	Bit 5	0	1	0	1	0	1	0																
		Time (ms)	800	900	1000	1100	1200	1300																																														
		Bit 8	1	1	1	1	1	1																																														
	Bit 7	0	0	0	0	1	1																																															
	Bit 6	0	0	1	1	0	0																																															
	Bit 5	0	1	0	1	0	1																																															
	<table><tr><td>Time (ms)</td><td>1400</td><td>1500</td></tr><tr><td>Bit 8</td><td>1</td><td>1</td></tr><tr><td>Bit 7</td><td>1</td><td>1</td></tr><tr><td>Bit 6</td><td>1</td><td>1</td></tr><tr><td>Bit 5</td><td>0</td><td>1</td></tr></table>	Time (ms)	1400	1500	Bit 8	1	1	Bit 7	1	1	Bit 6	1	1	Bit 5	0	1																																						
	Time (ms)	1400	1500																																																			
	Bit 8	1	1																																																			
	Bit 7	1	1																																																			
	Bit 6	1	1																																																			
	Bit 5	0	1																																																			
4	CED duration time within calling period	<table><tr><td>Time (ms)</td><td>0</td><td>100</td><td>200</td><td>300</td><td>400</td><td>500</td><td>600</td><td>700</td><td>800</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td></tr></table>	Time (ms)	0	100	200	300	400	500	600	700	800	Bit 4	0	0	0	0	0	0	0	0	1	Bit 3	0	0	0	0	1	1	1	1	0	Bit 2	0	0	1	1	0	0	1	1	0	Bit 1	0	1	0	1	0	1	0	1	0	0	7
Time (ms)		0	100	200	300	400	500	600	700	800																																												
Bit 4		0	0	0	0	0	0	0	0	1																																												
Bit 3		0	0	0	0	1	1	1	1	0																																												
Bit 2		0	0	1	1	0	0	1	1	0																																												
Bit 1		0	1	0	1	0	1	0	1	0																																												
3		<table><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr></table>	Bit 4	0	0	0	0	0	0	0	0	1	1																																									
Bit 4		0	0	0	0	0	0	0	0	1																																												
2		<table><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td></tr></table>	Bit 3	0	0	0	0	1	1	1	1	0	Bit 2	0	0	1	1	0	0	1	1	0	Bit 1	0	1	0	1	0	1	0	1	0	1																					
Bit 3		0	0	0	0	1	1	1	1	0																																												
Bit 2	0	0	1	1	0	0	1	1	0																																													
Bit 1	0	1	0	1	0	1	0	1	0																																													
1	<table><tr><td>Time (ms)</td><td>900</td><td>1000</td><td>1100</td><td>1200</td><td>1300</td><td>1400</td><td>1500</td></tr><tr><td>Bit 4</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Time (ms)	900	1000	1100	1200	1300	1400	1500	Bit 4	1	1	1	1	1	1	1	Bit 3	0	0	0	1	1	1	1	Bit 2	0	1	1	0	0	1	1	Bit 1	1	0	1	0	1	0	1	1												
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	Bit 4	1	1	1	1	1	1	1																																														
	Bit 3	0	0	0	1	1	1	1																																														
	Bit 2	0	1	1	0	0	1	1																																														
	Bit 1	1	0	1	0	1	0	1																																														

- Bit 1-4: The CED duration time level for automatic transmission.

(29) SOFT SWITCH: #29

Bit No.	Designation	Function	Initial Setting																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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5	Time to dial after size the line when dial tone detected  (Unit = 200 ms)	<table><tr><td>Time (sec)</td><td>0</td><td>0.2</td><td>0.4</td><td>0.6</td><td>0.8</td><td>1.0</td><td>1.2</td><td>1.4</td><td>1.6</td><td>1.8</td></tr><tr><td>Bit 5</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Time (sec)	0	0.2	0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	Bit 5	0	0	0	0	0	0	0	0	0	0	Bit 4	0	0	0	0	0	0	0	0	1	1	Bit 3	0	0	0	0	1	1	1	1	0	0	Bit 2	0	0	1	1	0	0	1	1	0	0	Bit 1	0	1	0	1	0	1	0	1	0	1	1	4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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3		<table><tr><td>Time (sec)</td><td>4.0</td><td>4.2</td><td>4.4</td><td>4.6</td><td>4.8</td><td>5.0</td><td>5.2</td><td>5.4</td><td>5.6</td><td>5.8</td></tr><tr><td>Bit 5</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Time (sec)	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	Bit 5	1	1	1	1	1	1	1	1	1	1	Bit 4	0	0	0	0	1	1	1	1	1	1	Bit 3	1	1	1	1	0	0	0	0	1	1	Bit 2	0	0	1	1	0	0	1	1	0	0	Bit 1	0	1	0	1	0	1	0	1	0	1	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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2	<table><tr><td>Time (sec)</td><td>6.0</td><td>6.2</td></tr><tr><td>Bit 5</td><td>1</td><td>1</td></tr><tr><td>Bit 4</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td></tr></table>	Time (sec)	6.0	6.2	Bit 5	1	1	Bit 4	1	1	Bit 3	1	1	Bit 2	1	1	Bit 1	0	1	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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(30) SOFT SWITCH: #30

Bit No.	Designation	Function	Initial Setting														
			Bit	HEX													
8	Pause delay time within digits Ex. 002Pxxxxxx	Time	2.0 sec	<b>2.5 sec</b>	3.0 sec	3.5 sec	0	6									
7		Bit 8	0	<b>0</b>	1	1	1										
		Bit 7	0	<b>1</b>	0	1											
6	Signal tone sensitivity (dBm) after dial for busy tone	Level (dBm)	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	1	8		
5		Bit 6	0	0	0	0	0	0	0	0	0	0	0	0		0	
4		Bit 5	0	0	0	0	0	0	0	0	0	0	0	0		1	
3		Bit 4	0	0	0	0	0	0	0	0	0	1	1	1		0	
2		Bit 3	0	0	0	0	1	1	1	1	0	0	0	0		0	
1		Bit 2	0	0	1	1	0	0	1	1	0	0	1				
		Bit 1	0	1	0	1	0	1	0	1	0	1	0				
		Level (dBm)	-11	-12	-13	-14	-15	-16	-17	-18	-19	-20					
		Bit 6	0	0	0	0	0	0	0	0	0	0	0				
		Bit 5	0	0	0	0	0	1	1	1	1	1	1				
		Bit 4	1	1	1	1	1	0	0	0	0	0	0				
		Bit 3	0	1	1	1	1	0	0	0	0	0	1				
		Bit 2	1	0	0	1	1	0	0	1	1	1	0				
		Bit 1	1	0	1	0	1	0	1	0	1	0	1	0			
		Level (dBm)	-21	-22	-23	-24	-25	-26	-27	-28	-29	-30					
Bit 6		0	0	0	0	0	0	0	0	0	0	0	0				
Bit 5		1	1	1	1	1	1	1	1	1	1	1	1				
Bit 4		0	0	0	1	1	1	1	1	1	1	1	1				
Bit 3		1	1	1	0	0	0	0	1	1	1	1					
Bit 2		0	1	1	0	0	1	1	0	0	1						
Bit 1		1	0	1	0	1	0	1	0	1	0						
Level (dBm)		-31	-32	-33	-34	-35	-36	-37	-38	-39	<b>-40</b>						
Bit 6		0	1	1	1	1	1	1	1	1	1	<b>1</b>					
Bit 5		1	0	0	0	0	0	0	0	0	0	<b>0</b>					
Bit 4		1	0	0	0	0	0	0	0	0	0	<b>1</b>					
Bit 3	1	0	0	0	0	1	1	1	1	1	<b>0</b>						
Bit 2	1	0	0	1	1	0	0	1	1	1	<b>0</b>						
Bit 1	1	0	1	0	1	0	1	0	1	0	<b>0</b>						
Level (dBm)	-41 dBm to -50 dBm																
Bit 1 to 6	Setting disable																

**(31) SOFT SWITCH: #31**

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Reserved	Reserved	0	

**(32) SOFT SWITCH: #32**

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Reserved	Reserved	0	

(33) SOFT SWITCH: #33

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	4
7	V.17 echo protection tone	0: Off 1: <b>On</b>	1	
6	V.29 echo protection tone	0: <b>Off</b> 1: On	0	
5	Compromise equalize enable (CEQ) in the transmit path (TCEQ)	0: <b>No</b> 1: Yes	0	
4	Compromise equalize enable (CEQ) in the receiver path (RCEQ)	0: <b>No</b> 1: Yes	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Reserved	Reserved	0	

- Bit 4-5: V.17, V.29 and V.27 only

(34) SOFT SWITCH: #34

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	2
3	Reserved	Reserved	0	
2	Password capability in DIS/DTC frame	0: No 1: <b>Yes</b>	1	
1	Reserved	Reserved	0	

**(35) SOFT SWITCH: #35**

Bit No.	Designation	Function	Initial Setting																	
			Bit	HEX																
8	Dial tone table switch time	<table><tr><td>Time</td><td>300 ms</td><td>600 ms</td><td>1 sec</td><td>2 sec</td></tr><tr><td>Bit 8</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 7</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Time	300 ms	600 ms	1 sec	2 sec	Bit 8	0	0	1	1	Bit 7	0	1	0	1	1	9	
Time		300 ms	600 ms	1 sec	2 sec															
Bit 8		0	0	1	1															
Bit 7	0	1	0	1																
7	<table><tr><td>Bit 8</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 7</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Bit 8	0	0	1	1	Bit 7	0	1	0	1	0								
Bit 8	0	0	1	1																
Bit 7	0	1	0	1																
6	Dial tone frequency upper range index	<table><tr><td>Frequency range</td><td>375Hz to 462Hz</td><td>310Hz to 380Hz</td><td>462Hz to 580Hz</td></tr><tr><td>Bit 6</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 5</td><td>0</td><td>0</td><td>1</td></tr><tr><td>Bit 4</td><td>0</td><td>1</td><td>0</td></tr></table>	Frequency range	375Hz to 462Hz	310Hz to 380Hz	462Hz to 580Hz	Bit 6	0	0	0	Bit 5	0	0	1	Bit 4	0	1	0	0	0
Frequency range		375Hz to 462Hz	310Hz to 380Hz	462Hz to 580Hz																
Bit 6		0	0	0																
Bit 5		0	0	1																
Bit 4		0	1	0																
5		<table><tr><td>Frequency range</td><td>570Hz to 630Hz</td><td>300Hz to 370Hz</td><td>Reserved</td></tr><tr><td>Bit 6</td><td>0</td><td>1</td><td>1 1 1</td></tr><tr><td>Bit 5</td><td>1</td><td>0</td><td>0 1 1</td></tr><tr><td>Bit 4</td><td>1</td><td>0</td><td>1 0 1</td></tr></table>	Frequency range	570Hz to 630Hz	300Hz to 370Hz	Reserved	Bit 6	0	1	1 1 1	Bit 5	1	0	0 1 1	Bit 4	1	0	1 0 1	1	
Frequency range		570Hz to 630Hz	300Hz to 370Hz	Reserved																
Bit 6		0	1	1 1 1																
Bit 5		1	0	0 1 1																
Bit 4		1	0	1 0 1																
4		<table><tr><td>Frequency range</td><td>570Hz to 630Hz</td><td>300Hz to 370Hz</td><td>Reserved</td></tr><tr><td>Bit 6</td><td>0</td><td>1</td><td>1 1 1</td></tr><tr><td>Bit 5</td><td>1</td><td>0</td><td>0 1 1</td></tr><tr><td>Bit 4</td><td>1</td><td>0</td><td>1 0 1</td></tr></table>	Frequency range	570Hz to 630Hz	300Hz to 370Hz	Reserved	Bit 6	0	1	1 1 1	Bit 5	1	0	0 1 1	Bit 4	1	0	1 0 1	0	
		Frequency range	570Hz to 630Hz	300Hz to 370Hz	Reserved															
		Bit 6	0	1	1 1 1															
		Bit 5	1	0	0 1 1															
		Bit 4	1	0	1 0 1															
See Bit 1 to 3																				
(This upper range value must be higher than lower range value that defined in bit 1 to 3)																				
3	Dial tone frequency Low range index	<table><tr><td>Frequency range</td><td>375Hz to 462Hz</td><td>310Hz to 380Hz</td><td>462Hz to 580Hz</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td></tr></table>	Frequency range	375Hz to 462Hz	310Hz to 380Hz	462Hz to 580Hz	Bit 3	0	0	0	Bit 2	0	0	1	Bit 1	0	1	0	0	
Frequency range		375Hz to 462Hz	310Hz to 380Hz	462Hz to 580Hz																
Bit 3		0	0	0																
Bit 2		0	0	1																
Bit 1		0	1	0																
2		<table><tr><td>Frequency range</td><td>375Hz to 462Hz</td><td>310Hz to 380Hz</td><td>462Hz to 580Hz</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td></tr></table>	Frequency range	375Hz to 462Hz	310Hz to 380Hz	462Hz to 580Hz	Bit 3	0	0	0	Bit 2	0	0	1	Bit 1	0	1	0	0	
Frequency range		375Hz to 462Hz	310Hz to 380Hz	462Hz to 580Hz																
Bit 3		0	0	0																
Bit 2		0	0	1																
Bit 1		0	1	0																
1	<table><tr><td>Frequency range</td><td>570Hz to 630Hz</td><td>300Hz to 370Hz</td><td>Reserved</td></tr><tr><td>Bit 3</td><td>0</td><td>1</td><td>1 1 1</td></tr><tr><td>Bit 2</td><td>1</td><td>0</td><td>0 1 1</td></tr><tr><td>Bit 1</td><td>1</td><td>0</td><td>1 0 1</td></tr></table>	Frequency range	570Hz to 630Hz	300Hz to 370Hz	Reserved	Bit 3	0	1	1 1 1	Bit 2	1	0	0 1 1	Bit 1	1	0	1 0 1	0		
	Frequency range	570Hz to 630Hz	300Hz to 370Hz	Reserved																
	Bit 3	0	1	1 1 1																
	Bit 2	1	0	0 1 1																
	Bit 1	1	0	1 0 1																
See Bit 1 to 3																				
(This upper range value must be higher than lower range value that defined in bit 1 to 3)																				

(36) SOFT SWITCH: #36

Bit No.	Designation	Function	Initial Setting																																														
			Bit	HEX																																													
8	Re-dial attempts continue fail counter	0: No any limitation 1: <b>limit up to bit 1 to 4</b>	1	8																																													
7	Reserved	Reserved	0																																														
6	Reserved	Reserved	0																																														
5	Reserved	Reserved	0																																														
4	Re-dial attempts fail limitation counter	<table><tr><td>Counter</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Counter	0	1	2	3	4	5	6	7	Bit 4	0	0	0	0	0	0	0	0	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	1	6
Counter		0	1	2	3	4	5	6	7																																								
Bit 4		0	0	0	0	0	0	0	0																																								
Bit 3		0	0	0	0	1	1	1	1																																								
Bit 2		0	0	1	1	0	0	1	1																																								
Bit 1		0	1	0	1	0	1	0	1																																								
3		<table><tr><td>Counter</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td></tr><tr><td>Bit 4</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Counter	8	9	10	11	12	13	14	15	Bit 4	1	1	1	1	1	1	1	1	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	0	
Counter		8	9	10	11	12	13	14	15																																								
Bit 4	1	1	1	1	1	1	1	1																																									
Bit 3	0	0	0	0	1	1	1	1																																									
Bit 2	0	0	1	1	0	0	1	1																																									
Bit 1	0	1	0	1	0	1	0	1																																									
2																																																	
1																																																	

- Bit 8: The redial fail counter will plus 1 for each auto dialing, unless user interruption or after finish communication. If the counter is over the setting in bit 1~4 and Bit set to 1, then the machine will stop redial unless user interruption or enter the communication phase.

**(37) SOFT SWITCH: #37**

Bit No.	Designation	Function	Initial Setting																																																										
			Bit	HEX																																																									
8	Polling TX type for V.34 modem	<b>0: V.34</b> 1: V.17	0	0																																																									
7	Auto dial learning for V.34 modem	<b>0: Yes- skip V.34 handshaking with remote side</b> 1: No - retry from V.8 handshake	0																																																										
6	RX start symbol rate for V.34 modem	<table><tr><td>Symbol rate</td><td><b>3429 sym/s</b></td><td>3200 sym/s</td><td>3000 sym/s</td><td>2800 sym/s</td><td>2400 sym/s</td></tr><tr><td>Max. speed</td><td><b>33.6 kbps</b></td><td>31.2 kbps</td><td>26.4 kbps</td><td>24.0 kbps</td><td>21.6 kbps</td></tr><tr><td>Bit 6</td><td><b>0</b></td><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>Bit 5</td><td><b>0</b></td><td>0</td><td>1</td><td>1</td><td>0</td></tr><tr><td>Bit 4</td><td><b>0</b></td><td>1</td><td>0</td><td>1</td><td>0</td></tr></table> <table><tr><td>Symbol rate</td><td colspan="4">Reserved</td></tr><tr><td>Max. speed</td><td colspan="4"></td></tr><tr><td>Bit 6</td><td>1</td><td>1</td><td>1</td><td colspan="2"></td></tr><tr><td>Bit 5</td><td>0</td><td>1</td><td>1</td><td colspan="2"></td></tr><tr><td>Bit 4</td><td>1</td><td>0</td><td>1</td><td colspan="2"></td></tr></table>	Symbol rate		<b>3429 sym/s</b>	3200 sym/s	3000 sym/s	2800 sym/s	2400 sym/s	Max. speed	<b>33.6 kbps</b>	31.2 kbps	26.4 kbps	24.0 kbps	21.6 kbps	Bit 6	<b>0</b>	0	0	0	1	Bit 5	<b>0</b>	0	1	1	0	Bit 4	<b>0</b>	1	0	1	0	Symbol rate	Reserved				Max. speed					Bit 6	1	1	1			Bit 5	0	1	1			Bit 4	1	0	1		
Symbol rate			<b>3429 sym/s</b>	3200 sym/s	3000 sym/s	2800 sym/s	2400 sym/s																																																						
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Bit 6			<b>0</b>	0	0	0	1																																																						
Bit 5			<b>0</b>	0	1	1	0																																																						
Bit 4			<b>0</b>	1	0	1	0																																																						
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Bit 6			1	1	1																																																								
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Bit 4	1	0	1																																																										
5	0																																																												
4	0																																																												
	TX start symbol rate for V.34 modem	<table><tr><td>Symbol rate</td><td><b>3429 sym/s</b></td><td>3200 sym/s</td><td>3000 sym/s</td><td>2800 sym/s</td><td>2400 sym/s</td></tr><tr><td>Max. speed</td><td><b>33.6 kbps</b></td><td>31.2 kbps</td><td>26.4 kbps</td><td>24.0 kbps</td><td>21.6 kbps</td></tr><tr><td>Bit 6</td><td><b>0</b></td><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>Bit 5</td><td><b>0</b></td><td>0</td><td>1</td><td>1</td><td>0</td></tr><tr><td>Bit 4</td><td><b>0</b></td><td>1</td><td>0</td><td>1</td><td>0</td></tr></table> <table><tr><td>Symbol rate</td><td colspan="4">Reserved</td></tr><tr><td>Max. speed</td><td colspan="4"></td></tr><tr><td>Bit 6</td><td>1</td><td>1</td><td>1</td><td colspan="2"></td></tr><tr><td>Bit 5</td><td>0</td><td>1</td><td>1</td><td colspan="2"></td></tr><tr><td>Bit 4</td><td>1</td><td>0</td><td>1</td><td colspan="2"></td></tr></table>	Symbol rate	<b>3429 sym/s</b>	3200 sym/s	3000 sym/s	2800 sym/s	2400 sym/s	Max. speed	<b>33.6 kbps</b>	31.2 kbps	26.4 kbps	24.0 kbps	21.6 kbps	Bit 6	<b>0</b>	0	0	0	1	Bit 5	<b>0</b>	0	1	1	0	Bit 4	<b>0</b>	1	0	1	0	Symbol rate	Reserved				Max. speed					Bit 6	1	1	1			Bit 5	0	1	1			Bit 4	1	0	1			0
			Symbol rate	<b>3429 sym/s</b>	3200 sym/s	3000 sym/s	2800 sym/s	2400 sym/s																																																					
			Max. speed	<b>33.6 kbps</b>	31.2 kbps	26.4 kbps	24.0 kbps	21.6 kbps																																																					
			Bit 6	<b>0</b>	0	0	0	1																																																					
			Bit 5	<b>0</b>	0	1	1	0																																																					
Bit 4	<b>0</b>	1	0	1	0																																																								
Symbol rate	Reserved																																																												
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Bit 6	1	1	1																																																										
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Bit 4	1	0	1																																																										
3	0																																																												
2	0																																																												
1	TX start symbol rate for V.34 modem	<table><tr><td>Symbol rate</td><td><b>3429 sym/s</b></td><td>3200 sym/s</td><td>3000 sym/s</td><td>2800 sym/s</td><td>2400 sym/s</td></tr><tr><td>Max. speed</td><td><b>33.6 kbps</b></td><td>31.2 kbps</td><td>26.4 kbps</td><td>24.0 kbps</td><td>21.6 kbps</td></tr><tr><td>Bit 6</td><td><b>0</b></td><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>Bit 5</td><td><b>0</b></td><td>0</td><td>1</td><td>1</td><td>0</td></tr><tr><td>Bit 4</td><td><b>0</b></td><td>1</td><td>0</td><td>1</td><td>0</td></tr></table> <table><tr><td>Symbol rate</td><td colspan="4">Reserved</td></tr><tr><td>Max. speed</td><td colspan="4"></td></tr><tr><td>Bit 6</td><td>1</td><td>1</td><td>1</td><td colspan="2"></td></tr><tr><td>Bit 5</td><td>0</td><td>1</td><td>1</td><td colspan="2"></td></tr><tr><td>Bit 4</td><td>1</td><td>0</td><td>1</td><td colspan="2"></td></tr></table>	Symbol rate	<b>3429 sym/s</b>	3200 sym/s	3000 sym/s	2800 sym/s	2400 sym/s	Max. speed	<b>33.6 kbps</b>	31.2 kbps	26.4 kbps	24.0 kbps	21.6 kbps	Bit 6	<b>0</b>	0	0	0	1	Bit 5	<b>0</b>	0	1	1	0	Bit 4	<b>0</b>	1	0	1	0	Symbol rate	Reserved				Max. speed					Bit 6	1	1	1			Bit 5	0	1	1			Bit 4	1	0	1			0
			Symbol rate	<b>3429 sym/s</b>	3200 sym/s	3000 sym/s	2800 sym/s	2400 sym/s																																																					
			Max. speed	<b>33.6 kbps</b>	31.2 kbps	26.4 kbps	24.0 kbps	21.6 kbps																																																					
			Bit 6	<b>0</b>	0	0	0	1																																																					
			Bit 5	<b>0</b>	0	1	1	0																																																					
	Bit 4	<b>0</b>	1	0	1	0																																																							
Symbol rate	Reserved																																																												
Max. speed																																																													
Bit 6	1	1	1																																																										
Bit 5	0	1	1																																																										
Bit 4	1	0	1																																																										

(38) SOFT SWITCH: #38

Bit No.	Designation	Function	Initial Setting															
			Bit	HEX														
8	Fine tune of 33.6 kbps/ 31.2 kbps receiving speed for V.34 modem	0: No - modem default setting 1: <b>Yes</b>	1	E														
7	Set/Reset V.34 transmit level deviation	0: Reset 1: <b>Set</b>	1															
6	V.34 flag number between ECM frame	<table border="1"><tr><td>Flags number</td><td>2</td><td>4</td><td>8</td><td>10</td></tr><tr><td>Bit 6</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 5</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Flags number		2	4	8	10	Bit 6	0	0	1	1	Bit 5	0	1	0	1
Flags number		2	4	8	10													
Bit 6	0	0	1	1														
Bit 5	0	1	0	1														
5			0															
4	Phase 2 guard tone power level (V.34)	0: <b>normal power level</b> 1: -7 db of normal power level	0	1														
3	Reserved	Reserved	0															
2	Reserved	Reserved	0															
1	V.8 /V.34 capability	0: No 1: <b>Yes</b>	1															

- Bit 8: This bit when set to 1 can get higher speed communication for V.34 under the same line condition.

(39) SOFT SWITCH: #39

Bit No.	Designation	Function	Initial Setting															
			Bit	HEX														
8	Disable V.34 TX for V.34 modem	<b>0: No</b> 1: Yes	0	0														
7	Disable V.34 RX for V.34 modem	<b>0: No</b> 1: Yes	0															
6	Flags number in ECM frame for V.34 modem	<table><tr><td>Flags number</td><td>1</td><td>2</td><td>3</td><td>4</td></tr><tr><td>Bit 6</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 5</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Flags number		1	2	3	4	Bit 6	0	0	1	1	Bit 5	0	1	0	1
Flags number	1	2	3	4														
Bit 6	0	0	1	1														
Bit 5	0	1	0	1														
5			0															
4	Manual TX mode for V.34 modem	<b>0: V.8 - start handshake from V.8</b> 1: V.17	0	1														
3	Switch from V.17 to V.34 if DIS bit 6 set after received DIS	<b>0: Yes - start V.8 handshaking. but only first time</b> 1: No - Continue start with V.17	0															
2	Delay time in primary channel for V.34 transmit after CFR or MCF signal	<table><tr><td>Delay time</td><td>100 ms</td><td>200 ms</td><td>300 ms</td><td>500 ms</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Delay time		100 ms	200 ms	300 ms	500 ms	Bit 2	0	0	1	1	Bit 1	0	1	0	1
Delay time	100 ms	200 ms	300 ms	500 ms														
Bit 2	0	0	1	1														
Bit 1	0	1	0	1														
1			1															

**(40) SOFT SWITCH: #40**

Bit No.	Designation	Function								Initial Setting				
										Bit	HEX			
8	V.17 RX start speed  select receiving start speed for V.17	Speed	V.17		V.17	V.17	V.17	V.17	0	0				
7			14400 bps		12200 bps	9600 bps	7200 bps	0						
			6		0	0	0	0	0					
5		Bit 8	0		0	0	0	0	0					
		Bit 7	0		0	0	0	0						
		Bit 6	0		0	1	1	1						
		Bit 5	0		1	0	1	1						
		Speed	V.29		V.29	V.27	V.27 ter	0						
			9600 bps		7200 bps	4800 bps	2400 bps							
			Bit 8		0	0	0			0				
		Bit 7		1	1	1	1							
		Bit 6		0	0	1	1							
		Bit 5		0	1	0	1							
		Speed	Reserved								0			
			Bit 8		1	1	1	1		1		1	1	
			Bit 7		0	0	0	0		1		1	1	1
			Bit 6		0	0	1	1		0		0	1	1
			Bit 5		0	1	0	1		0		1	0	1
4	Reserved	Reserved								0	0			
3	V.34 RX start speed	Speed	V.34		V.34	V.34	V.34	0						
2			33600 bps		31200 bps	28800 bps	26400 bps	0						
			Bit 3		0	0	0	0						
1		Bit 2	0		0	1	1	1	0					
		Bit 1	0		1	0	1	1						
		Speed	V.34		V.34	V.34	V.34	0						
			24000 bps		21600 bps	19200 bps	16800 bps							
			Bit 3		1	1	1			1				
		Bit 2		0	0	1	1							
		Bit 1		0	1	0	1							

(41) SOFT SWITCH: #41

Bit No.	Designation	Function				Initial Setting						
						Bit	HEX					
8	V.17 TX start speed  select receiving start speed for V.17	Speed	V.17	V.17	V.17	V.17	0	0				
7			14400 bps	12200 bps	9600 bps	7200 bps	0					
6							0					
5		Bit 8	0	0	0	0	0					
		Bit 7	0	0	0	0						
		Bit 6	0	0	1	1						
		Bit 5	0	1	0	1						
		Speed	V.29	V.29	V.27	V.27 ter						
			9600 bps	7200 bps	4800 bps	2400 bps						
			Bit 8	0	0	0			0			
			Bit 7	1	1	1			1			
			Bit 6	0	0	1			1			
		Bit 5	0	1	0	1						
		Speed	Reserved									
			Bit 8	1	1	1		1	1	1		
			Bit 7	0	0	0		0	1	1	1	
			Bit 6	0	0	1		1	0	0	1	1
			Bit 5	0	1	0		1	0	1	0	1
		4	Reserved	Reserved				0	0			
		3	V.34 TX start speed	Speed	V.34	V.34		V.34		V.34	0	
	2	33600 bps			31200 bps	28800 bps		26400 bps		0		
1	Bit 3	0			0	0	0					
	Bit 2	0		0	1	1						
	Bit 1	0		1	0	1						
	Speed	V.34		V.34	V.34	V.34						
24000 bps		21600 bps		19200 bps	16800 bps							
Bit 3		1		1	1	1						
Bit 2		0		0	1	1						
Bit 1		0		1	0	1						

**(42) SOFT SWITCH: #42**

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Reserved	Reserved	0	

**(43) SOFT SWITCH: #43**

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Reserved	Reserved	0	

**(44) SOFT SWITCH: #44**

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Reserved	Reserved	0	

(45) SOFT SWITCH: #45

Bit No.	Designation	Function	Initial Setting																																																
			Bit	HEX																																															
8	Reserved	Reserved	0	0																																															
7	Reserved	Reserved	0																																																
6	Closed network	0: OFF 1: ON	0																																																
5	Call transfer	0: OFF 1: ON	0																																																
4	No. of call transfer	<table><tr><td>Setting value (Times)</td><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Setting value (Times)	0	1	2	3	4	5	6	7	Bit 4	0	0	0	0	0	0	0	0	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	0	3		
Setting value (Times)			0	1	2	3	4	5	6	7																																									
Bit 4			0	0	0	0	0	0	0	0																																									
Bit 3			0	0	0	0	1	1	1	1																																									
Bit 2			0	0	1	1	0	0	1	1																																									
Bit 1			0	1	0	1	0	1	0	1																																									
3			0																																																
2			1																																																
1				<table><tr><td>Setting value (Times)</td><td>8</td><td>9</td><td colspan="6">Reserved</td></tr><tr><td>Bit 4</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Setting value (Times)	8	9	Reserved						Bit 4	1	1	1	1	1	1	1	1	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0		1	1
					Setting value (Times)	8	9	Reserved																																											
	Bit 4	1			1	1	1	1	1	1	1																																								
	Bit 3	0			0	0	0	1	1	1	1																																								
	Bit 2	0			0	1	1	0	0	1	1																																								
	Bit 1	0			1	0	1	0	1	0	1																																								

**(46) SOFT SWITCH: #46**

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Daylight savings timer	<b>0: No</b> 1: Yes	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	RX print	0: RX one page then print one page. (PRINT RX) <b>1: Start to print after receiving all pages. (MEMORY RX)</b>	1	A
3	Default TX mode	<b>0: Memory TX</b> 1: ADF TX	0	
2	Header for FAX TX	0: Off <b>1: On-Transmit header at top of each page.</b>	1	
1	Print model name on top of TX page if machine name not register	<b>0: No</b> 1: Yes	0	

- Bit 1: If machine name not registered, the model name will print at the top of each receiving page. The default is not printed.
- Bit 2: Some country such as U.S.A. PTT regulation, must send header at top of each page.

**(47) SOFT SWITCH: #47**

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Reserved	Reserved	0	
6	RX mode	<b>0: Auto RX mode</b> 1: Manual RX mode	0	
5	Footer	<b>0: Off</b> 1: On – Print footer information at each of received page	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Reserved	Reserved	0	

- Bit 5: The footer shows machine number, receiving time, remote side TSI number, session and page number.

(48) SOFT SWITCH: #48

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Activity report	0: No 1: <b>Yes</b>	1	8
7	Reservation report	0: <b>No</b> 1: Yes	0	
6	TX result report	0: <b>No</b> 1: Yes	0	
5	RX result report	0: <b>No</b> 1: Yes	0	
4	TX/ RX error report	0: No 1: <b>Yes</b>	1	9
3	Error report for I-FAX and network scanner	0: <b>No</b> 1: Yes	0	
2	Error mail (I-FAX)	If machine receives Error Mail (I-FAX), the mail is deleted or kept? 0: <b>Delete</b> 1: Keep	0	
1	Broadcast report	0: Not to print 1: <b>Print</b>	1	

- Bit 4: During communication have error in TX or RX and Bit 4 was set, the machine printed error report.
- Bit 2: If resetting (delete), the mail will be deleted on POP3 server. If setting (keep), the mail will be kept on POP3 server.

**(49) SOFT SWITCH: #49**

Bit No.	Designation	Function	Initial Setting																																														
			Bit	HEX																																													
8	Reserved	Reserved	0	0																																													
7	Reserved	Reserved	0																																														
6	Print RX mailbox report method	0: Based on RX RESULT REPORT setting 1: Always printing	0																																														
5	Redial method if communication fail	0: Redial again 1: Based on redial time interval	0																																														
4	No. of rings	<table><tr><td>No. of rings</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	No. of rings	1	2	3	4	5	6	7	8	Bit 4	0	0	0	0	0	0	0	0	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	0	1
No. of rings		1	2	3	4	5	6	7	8																																								
Bit 4		0	0	0	0	0	0	0	0																																								
Bit 3		0	0	0	0	1	1	1	1																																								
Bit 2		0	0	1	1	0	0	1	1																																								
Bit 1		0	1	0	1	0	1	0	1																																								
3		<table><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Bit 4	0	0	0	0	0	0	0	0	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	0										
Bit 4		0	0	0	0	0	0	0	0																																								
Bit 3	0	0	0	0	1	1	1	1																																									
Bit 2	0	0	1	1	0	0	1	1																																									
Bit 1	0	1	0	1	0	1	0	1																																									
2	<table><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Bit 4	0	0	0	0	1	1	1	1	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	0											
Bit 4	0	0	0	0	1	1	1	1																																									
Bit 3	0	0	0	0	1	1	1	1																																									
Bit 2	0	0	1	1	0	0	1	1																																									
Bit 1	0	1	0	1	0	1	0	1																																									
1	<table><tr><td>No. of rings</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td></tr><tr><td>Bit 4</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	No. of rings	9	10	11	12	13	14	15	16	Bit 4	1	1	1	1	1	1	1	1	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	1		
	No. of rings	9	10	11	12	13	14	15	16																																								
	Bit 4	1	1	1	1	1	1	1	1																																								
	Bit 3	0	0	0	0	1	1	1	1																																								
	Bit 2	0	0	1	1	0	0	1	1																																								
Bit 1	0	1	0	1	0	1	0	1																																									

**(50) SOFT SWITCH: #50**

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Transmit or cancel after time out in "Memory TX"	0: Cancel and print out 1: Transmission	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Reserved	Reserved	0	

- Bit 8: Can select cancel this job and print out report or start to send in case of time when memory full condition occurs

(51) SOFT SWITCH: #51

Bit No.	Designation	Function	Initial Setting																
			Bit	HEX															
8	Reserved	Reserved	0	0															
7	Reserved	Reserved	0																
6	Reserved	Reserved	0																
5	Reserved	Reserved	0																
4	T30 monitor report selection	<table><tr><td>Description</td><td>Not to print</td><td>Print report for each transaction</td><td>Print report while reporting error</td><td>Not used</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Description	Not to print	Print report for each transaction	Print report while reporting error	Not used	Bit 4	0	0	1	1	Bit 3	0	1	0	1	0	0
Description		Not to print	Print report for each transaction	Print report while reporting error	Not used														
Bit 4		0	0	1	1														
Bit 3	0	1	0	1															
3				0															
2	Send “un-sent page mode” for memory transmission	0: From error page 1: From start page		0															
1	Reserved	Reserved	0																

(52) SOFT SWITCH: #52

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Reserved	Reserved	0	

**(53) SOFT SWITCH: #53**

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Reserved	Reserved	0	

**(54) SOFT SWITCH: #54**

Bit No.	Designation	Function	Initial Setting																
			Bit	HEX															
8	Report/ LCD date/ time type	0: Digits format (example: 2003. 11. 19) <b>1: Alpha numeric format (example: 2003. NOV. 19)</b>	0	2															
7	Report/ LCD date/ time format	When bit No.8 is "1". <table><tr><td>Date/ Time</td><td>2003. NOV. 19</td><td>19. NOV. 2003</td><td><b>NOV. 19. 2003</b></td></tr><tr><td>Bit 7</td><td>0</td><td>0</td><td><b>1</b></td></tr><tr><td>Bit 6</td><td>0</td><td>1</td><td><b>0</b></td></tr></table>	Date/ Time		2003. NOV. 19	19. NOV. 2003	<b>NOV. 19. 2003</b>	Bit 7	0	0	<b>1</b>	Bit 6	0	1	<b>0</b>	0			
Date/ Time		2003. NOV. 19	19. NOV. 2003		<b>NOV. 19. 2003</b>														
Bit 7	0	0	<b>1</b>																
Bit 6	0	1	<b>0</b>																
6	When bit No.8 is "0". <table><tr><td>Date/ Time</td><td>2003. 11. 19</td><td>19. 11. 2003</td><td><b>11. 19. 2003</b></td></tr><tr><td>Bit 7</td><td>0</td><td>0</td><td><b>1</b></td></tr><tr><td>Bit 6</td><td>0</td><td>1</td><td><b>0</b></td></tr></table>	Date/ Time	2003. 11. 19	19. 11. 2003	<b>11. 19. 2003</b>	Bit 7	0	0	<b>1</b>	Bit 6	0	1	<b>0</b>	1					
Date/ Time	2003. 11. 19	19. 11. 2003	<b>11. 19. 2003</b>																
Bit 7	0	0	<b>1</b>																
Bit 6	0	1	<b>0</b>																
5	Memory near full capacity for black/ white scanning	<table><tr><td>Descrip- tion</td><td>48 KB</td><td><b>96 KB</b></td><td>176 KB</td><td>256 KB</td></tr><tr><td>Bit 5</td><td>0</td><td><b>0</b></td><td>1</td><td>1</td></tr><tr><td>Bit 4</td><td>0</td><td><b>1</b></td><td>0</td><td>1</td></tr></table>	Descrip- tion	48 KB	<b>96 KB</b>	176 KB	256 KB	Bit 5	0	<b>0</b>	1	1	Bit 4	0	<b>1</b>	0	1	0	8
Descrip- tion		48 KB	<b>96 KB</b>	176 KB	256 KB														
Bit 5	0	<b>0</b>	1	1															
Bit 4	0	<b>1</b>	0	1															
4	1																		
3	Reserved	Reserved	0																
2	Reserved	Reserved	0																
1	Reserved	Reserved	0																

(55) SOFT SWITCH: #55

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Reserved	Reserved	0	

(56) SOFT SWITCH: #56

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Reserved	Reserved	0	

(57) SOFT SWITCH: #57

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Reserved	Reserved	0	

**(58) SOFT SWITCH: #58**

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Time out from PSK to FSK delay time	0: 6 sec 1: 30 sec	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Reserved	Reserved	0	

- Bit 8: This is the delay time for PSK signal after sending MCF or PPR command. The timer depends on regulations of each country.

(59) SOFT SWITCH: #59 Part 1

Bit No.	Designation	Function	Initial Setting					
			Bit	HEX				
8	Reserved	Reserved	0	0				
7	Reserved	Reserved	0					
6	Time between GMT  GMT: Greenwich mean time	Time between mean time	Greenwich mean time + T				0	0
5			+00:00	+00:30	+01:00	+01:30	0	
4		Bit 6	0	0	0	0	0	
3		Bit 5	0	0	0	0	0	
2		Bit 4	0	0	0	0	0	
1		Bit 3	0	0	0	0	0	
		Bit 2	0	0	1	1	1	
		Bit 1	0	1	0	1	1	
		Time between mean time	Greenwich mean time + T				0	
			+02:00	+02:30	+03:00	+03:30		
		Bit 6	0	0	0	0		
		Bit 5	0	0	0	0		
		Bit 4	0	0	0	0		
		Bit 3	1	1	1	1		
		Bit 2	0	0	1	1		
Bit 1		0	1	0	1			
Time between mean time		Greenwich mean time + T						
		+04:00	+04:30	+05:00	+05:30			
Bit 6		0	0	0	0			
Bit 5		0	0	0	0			
Bit 4		1	1	1	1			
Bit 3		0	0	0	0			
Bit 2		0	0	1	1			
Bit 1		0	1	0	1			
Time between mean time		Greenwich mean time + T						
		+06:00	+06:30	+07:00	+07:30			
Bit 6		0	0	0	0			
Bit 5		0	0	0	0			
Bit 4		1	1	1	1			
Bit 3		1	1	1	1			
Bit 2		0	0	1	1			
Bit 1		0	1	0	1			
Time between mean time		Greenwich mean time + T						
		+08:00	+08:30	+09:00	+09:30			
Bit 6		0	0	0	0			
Bit 5	1	1	1	1				
Bit 4	0	0	0	0				
Bit 3	0	0	0	0				
Bit 2	0	0	1	1				
Bit 1	0	1	0	1				

**(60) SOFT SWITCH: #59 Part 2**

Bit No.	Designation	Function	Initial Setting																																									
			Bit	HEX																																								
8	Reserved	Reserved	0	0																																								
7	Reserved	Reserved	0																																									
6	Time between GMT  GMT: Greenwich mean time	<table><tr><td rowspan="2">Time between mean time</td><td colspan="4">Greenwich mean time + T</td></tr><tr><td>+08:00</td><td>+08:30</td><td>+09:00</td><td>+09:30</td></tr><tr><td>Bit 6</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 5</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Time between mean time		Greenwich mean time + T				+08:00	+08:30	+09:00	+09:30	Bit 6	0	0	0	0	Bit 5	1	1	1	1	Bit 4	0	0	0	0	Bit 3	0	0	0	0	Bit 2	0	0	1	1	Bit 1	0	1	0	1	0	0
Time between mean time				Greenwich mean time + T																																								
			+08:00	+08:30	+09:00	+09:30																																						
Bit 6			0	0	0	0																																						
Bit 5			1	1	1	1																																						
Bit 4			0	0	0	0																																						
Bit 3			0	0	0	0																																						
Bit 2			0	0	1	1																																						
Bit 1			0	1	0	1																																						
5			<table><tr><td rowspan="2">Time between mean time</td><td colspan="4">Greenwich mean time + T</td></tr><tr><td>+10:00</td><td>+10:30</td><td>+11:00</td><td>+11:30</td></tr><tr><td>Bit 6</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 5</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Time between mean time	Greenwich mean time + T				+10:00	+10:30	+11:00	+11:30	Bit 6	0	0	0	0	Bit 5	1	1	1	1	Bit 4	0	0	0	0	Bit 3	1	1	1	1	Bit 2	0	0	1	1	Bit 1	0	1	0	1	0	
Time between mean time					Greenwich mean time + T																																							
				+10:00	+10:30	+11:00	+11:30																																					
Bit 6		0		0	0	0																																						
Bit 5		1		1	1	1																																						
Bit 4		0		0	0	0																																						
Bit 3		1		1	1	1																																						
Bit 2		0		0	1	1																																						
Bit 1		0		1	0	1																																						
4		<table><tr><td rowspan="2">Time between mean time</td><td colspan="4">Greenwich mean time + T</td></tr><tr><td>+12:00</td><td>-00:30</td><td>-01:00</td><td>-01:30</td></tr><tr><td>Bit 6</td><td>0</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 5</td><td>1</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 4</td><td>1</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>		Time between mean time	Greenwich mean time + T				+12:00	-00:30	-01:00	-01:30	Bit 6	0	1	1	1	Bit 5	1	0	0	0	Bit 4	1	0	0	0	Bit 3	0	0	0	0	Bit 2	0	0	1	1	Bit 1	0	1	0	1	0	
Time between mean time					Greenwich mean time + T																																							
				+12:00	-00:30	-01:00	-01:30																																					
Bit 6			0	1	1	1																																						
Bit 5			1	0	0	0																																						
Bit 4			1	0	0	0																																						
Bit 3			0	0	0	0																																						
Bit 2			0	0	1	1																																						
Bit 1			0	1	0	1																																						
3			<table><tr><td rowspan="2">Time between mean time</td><td colspan="4">Greenwich mean time + T</td></tr><tr><td>-02:00</td><td>-02:30</td><td>-03:00</td><td>-03:30</td></tr><tr><td>Bit 6</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 5</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Time between mean time	Greenwich mean time + T				-02:00	-02:30	-03:00	-03:30	Bit 6	1	1	1	1	Bit 5	0	0	0	0	Bit 4	0	0	0	0	Bit 3	1	1	1	1	Bit 2	0	0	1	1	Bit 1	0	1	0	1	0	
Time between mean time					Greenwich mean time + T																																							
				-02:00	-02:30	-03:00	-03:30																																					
Bit 6		1		1	1	1																																						
Bit 5		0		0	0	0																																						
Bit 4		0		0	0	0																																						
Bit 3		1		1	1	1																																						
Bit 2		0		0	1	1																																						
Bit 1		0		1	0	1																																						
2		<table><tr><td rowspan="2">Time between mean time</td><td colspan="4">Greenwich mean time + T</td></tr><tr><td>-04:00</td><td>-04:30</td><td>-05:00</td><td>-05:30</td></tr><tr><td>Bit 6</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 5</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 4</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>		Time between mean time	Greenwich mean time + T				-04:00	-04:30	-05:00	-05:30	Bit 6	1	1	1	1	Bit 5	0	0	0	0	Bit 4	1	1	1	1	Bit 3	0	0	0	0	Bit 2	0	0	1	1	Bit 1	0	1	0	1	0	
Time between mean time					Greenwich mean time + T																																							
				-04:00	-04:30	-05:00	-05:30																																					
Bit 6			1	1	1	1																																						
Bit 5			0	0	0	0																																						
Bit 4			1	1	1	1																																						
Bit 3			0	0	0	0																																						
Bit 2			0	0	1	1																																						
Bit 1			0	1	0	1																																						

(61) SOFT SWITCH: #59 Part 3

Bit No.	Designation	Function	Initial Setting																																																																		
			Bit	HEX																																																																	
8	Reserved	Reserved	0	0																																																																	
7	Reserved	Reserved	0																																																																		
6	Time between GMT  GMT: Greenwich mean time	<table><tr><th rowspan="2">Time between mean time</th><th colspan="4">Greenwich mean time + T</th></tr><tr><th>-06:00</th><th>-06:30</th><th>-07:00</th><th>-07:30</th></tr><tr><td>Bit 6</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 5</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 4</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Time between mean time	Greenwich mean time + T				-06:00	-06:30	-07:00	-07:30	Bit 6	1	1	1	1	Bit 5	0	0	0	0	Bit 4	1	1	1	1	Bit 3	1	1	1	1	Bit 2	0	0	1	1	Bit 1	0	1	0	1	0	0																										
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Bit 4		1	1	1	1																																																																
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Bit 1		0	1	0	1																																																																
5		<table><tr><th rowspan="2">Time between mean time</th><th colspan="4">Greenwich mean time + T</th></tr><tr><th>-08:00</th><th>-08:30</th><th>-09:00</th><th>-09:30</th></tr><tr><td>Bit 6</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 5</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Time between mean time	Greenwich mean time + T				-08:00	-08:30	-09:00	-09:30	Bit 6	1	1	1	1	Bit 5	1	1	1	1	Bit 4	0	0	0	0	Bit 3	0	0	0	0	Bit 2	0	0	1	1	Bit 1	0	1	0	1	0																											
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4		<table><tr><th rowspan="2">Time between mean time</th><th colspan="4">Greenwich mean time + T</th></tr><tr><th>-10:00</th><th>-10:30</th><th>-11:00</th><th>-11:30</th></tr><tr><td>Bit 6</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 5</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Time between mean time	Greenwich mean time + T				-10:00	-10:30	-11:00	-11:30	Bit 6	1	1	1	1	Bit 5	1	1	1	1	Bit 4	0	0	0	0	Bit 3	1	1	1	1	Bit 2	0	0	1	1	Bit 1	0	1	0	1	0																											
Time between mean time		Greenwich mean time + T																																																																			
		-10:00	-10:30	-11:00	-11:30																																																																
Bit 6		1	1	1	1																																																																
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Bit 3	1	1	1	1																																																																	
Bit 2	0	0	1	1																																																																	
Bit 1	0	1	0	1																																																																	
3	<table><tr><th rowspan="2">Time between mean time</th><th colspan="4">Greenwich mean time + T</th></tr><tr><th>-12:00</th><th colspan="7">Reserved</th></tr><tr><td>Bit 6</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 5</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 4</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Time between mean time	Greenwich mean time + T				-12:00	Reserved							Bit 6	1	1	1	1	1	1	1	1	Bit 5	1	1	1	1	1	1	1	1	Bit 4	1	1	1	1	1	1	1	1	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	0
Time between mean time	Greenwich mean time + T																																																																				
	-12:00	Reserved																																																																			
Bit 6	1	1	1	1	1	1	1	1																																																													
Bit 5	1	1	1	1	1	1	1	1																																																													
Bit 4	1	1	1	1	1	1	1	1																																																													
Bit 3	0	0	0	0	1	1	1	1																																																													
Bit 2	0	0	1	1	0	0	1	1																																																													
Bit 1	0	1	0	1	0	1	0	1																																																													
2																																																																					
1																																																																					

- Bit1-6: This value must be entered correctly, or E-mail headers will be wrong. A good reference web site may be found at <http://greenwichmeantime.com>  
Available ranges are:12 to -12, in one hour increments. The default setting is zero.

**(62) SOFT SWITCH: #60**

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	2
7	Reserved	Reserved	0	
6	Quick memory TX	0: Ineffective 1: <b>Effective</b>	1	
5	B4/ A3 declaration for Ledger	0: <b>A3 size</b> 1: B4 size	0	
4	The width of TX Ledger (8k)	0: <b>A3 size</b> 1: B4 size	0	1
3	Print mailbox RX image even if password is not correct	0: <b>No</b> 1: Yes	0	
2	Off hook alarm after communication	0: <b>Alarm</b> 1: No alarm after communication	0	
1	Display destination selection within TX Phase C	0: Local Name or telephone number 1: <b>Display and report Remote telephone number</b>	1	

- Bit 3: If bit 3 is set to "1", machine will print out the incoming page even if password is not correct.

**(63) SOFT SWITCH: #61**

Bit No.	Designation	Function	Initial Setting																																														
			Bit	HEX																																													
8	Reserved	Reserved	0	0																																													
7	Reserved	Reserved	0																																														
6	Reserved	Reserved	0																																														
5	Reserved	Reserved	0																																														
4	Max. No. of rings	<table><tr><td>No. of rings</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	No. of rings	1	2	3	4	5	6	7	8	Bit 4	0	0	0	0	0	0	0	0	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	1	F
No. of rings		1	2	3	4	5	6	7	8																																								
Bit 4		0	0	0	0	0	0	0	0																																								
Bit 3		0	0	0	0	1	1	1	1																																								
Bit 2		0	0	1	1	0	0	1	1																																								
Bit 1		0	1	0	1	0	1	0	1																																								
3		<table><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Bit 4	0	0	0	0	0	0	0	0	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	1										
Bit 4		0	0	0	0	0	0	0	0																																								
Bit 3		0	0	0	0	1	1	1	1																																								
Bit 2		0	0	1	1	0	0	1	1																																								
Bit 1	0	1	0	1	0	1	0	1																																									
2	<table><tr><td>Bit 4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	Bit 4	0	0	0	0	1	1	1	1	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	1											
Bit 4	0	0	0	0	1	1	1	1																																									
Bit 3	0	0	0	0	1	1	1	1																																									
Bit 2	0	0	1	1	0	0	1	1																																									
Bit 1	0	1	0	1	0	1	0	1																																									
1	<table><tr><td>No. of rings</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td></tr><tr><td>Bit 4</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>Bit 2</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Bit 1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr></table>	No. of rings	9	10	11	12	13	14	15	16	Bit 4	1	1	1	1	1	1	1	1	Bit 3	0	0	0	0	1	1	1	1	Bit 2	0	0	1	1	0	0	1	1	Bit 1	0	1	0	1	0	1	0	1	1		
	No. of rings	9	10	11	12	13	14	15	16																																								
	Bit 4	1	1	1	1	1	1	1	1																																								
	Bit 3	0	0	0	0	1	1	1	1																																								
	Bit 2	0	0	1	1	0	0	1	1																																								
Bit 1	0	1	0	1	0	1	0	1																																									

(64) SOFT SWITCH: #62

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	0
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Reserved	Reserved	0	

(65) SOFT SWITCH: #63

Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	# key definition in PBX mode	0: default is internal <b>1: default is external</b>	1	8
7	Reserved	Reserved	0	
6	Reserved	Reserved	0	
5	Reserved	Reserved	0	
4	Reserved	Reserved	0	0
3	Reserved	Reserved	0	
2	Reserved	Reserved	0	
1	Tx Result report with image	<b>0: Yes</b> 1: No	0	

- Bit 8: if this bit set to “1”, the # key is used to access PSTN line instead of the pre-fix number which is dialed in front of the TEL No. If this bit set to 0, the pre-fix number is used automatically to access PSTN line when the TEL No. is dialed.
- Bit 1: If this bit set to “1”, the first page image will not append at the bottom of error report or OK report

**(66) SOFT SWITCH: #64**

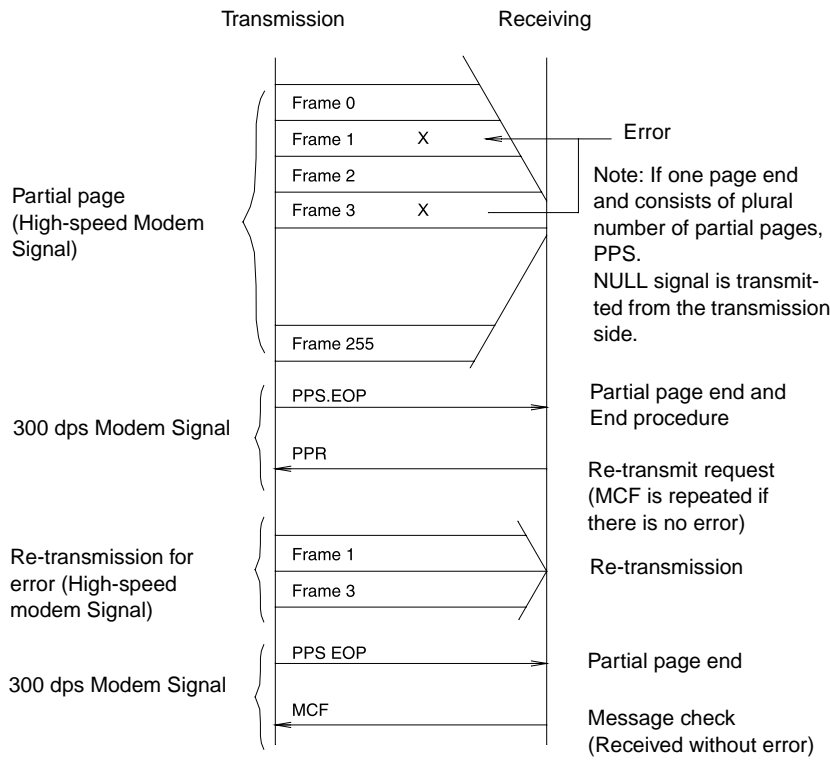
Bit No.	Designation	Function	Initial Setting	
			Bit	HEX
8	Reserved	Reserved	0	1
7	Reserved	Reserved	0	
6	Print RX error report on RX side if no FAX signal is detected	0: No 1: Yes	0	
5	10 PPS & 20 PPS selectable by user	0: No 1: <b>Yes</b>	1	
4	Reserved		0	0
3	Reserved		0	
2	Reserved		0	
1	Reserved		0	

- Bit 6: If this bit set to "1", Machine does not print a RX error report if no Fax signal from the other party is detected.
- Bit 5: Prevents user to change PPS if this bit set to "0".

# 7. FAX PROTOCOLS

## 7-1. G3 ECM (G3 Error Correction Mode)

- G3 ECM is the error correction system newly recommended by Consultative Committee of International Telephone & Telegraph of 1988.
  - By G3 ECM, documents are divided into blocks (called partial page) for transmission. If any error takes place in any frame (one partial page consists of 256 frames) on a partial page, the receiving party generates the retransmit request with erroneous frame numbers.
- Here is an example where frame 1 and frame 3 are subjected to error:

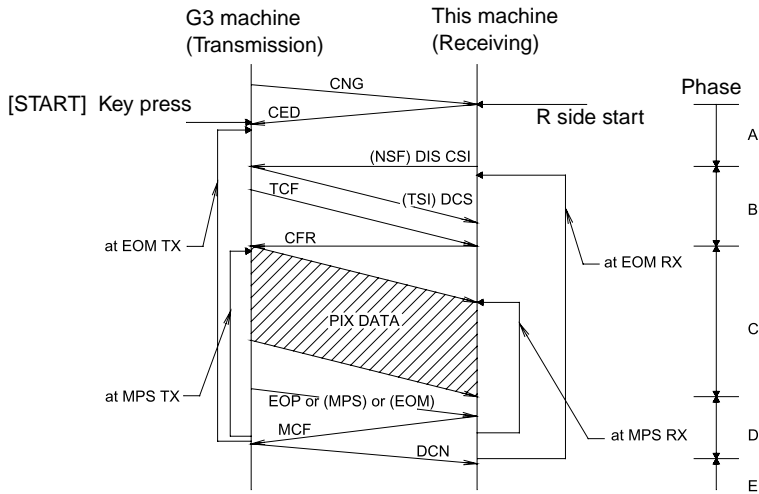
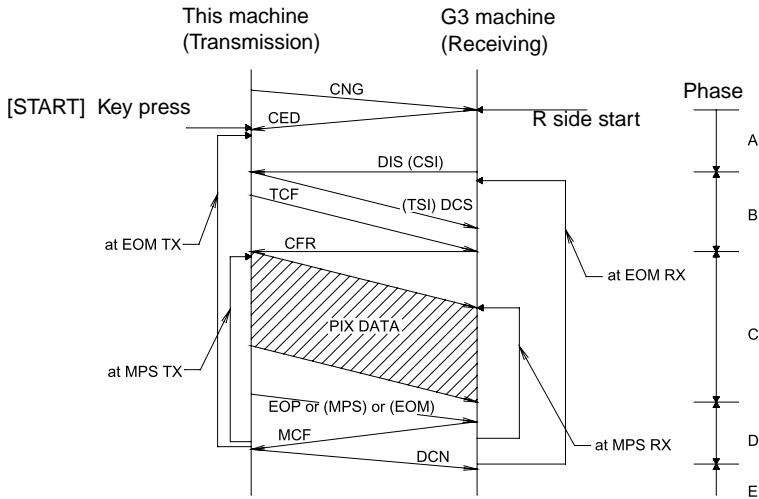


4507M501AA

7-2. Line Control

(1) Procedure of G3 mode communication

- Basic communications diagram of G3 mode.



4507M502AA

Drawing: Line Control

### 7-3. Table of reference code

Code	Function
CFR	Confirmation to Receive. 1850 Hz or 1650 Hz 3 sec.
CIG	Calling Station Identification.
CRP	Command Repeat.
CSI	Called Subscriber Identification.
DCN	Disconnect.
DCS	Digital Identification Signal.
DIS	Digital Transmit Command.
DTC	Digital Transmit Command.
EOM	End of Message. 1,100 Hz.
EOP	End of Procedure.
FTT	Failure to Train.
MCF	Message Confirmation. 1,650 Hz or 1,850 Hz.
MPS	Multi-Page Signal.
NCS	Non-Standard Facilities Command.
NCF	Non-Standard Facilities.
NSS	Non-Standard Facilities Set-up.
PIN	Procedural Interrupt Negative.
PIP	Procedural Interrupt Positive.
PRI-EOM	Procedure Interrupt-End of Message (COM).
PRI-MPS	Procedure Interrupt-Multi page Signal (MPS).
PRI-EOP	Procedure Interrupt-End of Procedure (EOP).
RTN	Retrain Negative.
RTP	Retrain Positive.
TSI	Transmitting Station Identification.

7-4. How to analyze the T30 protocol monitor

- DCS or DIS
- HEX Data as printed on page.
- ☞ S-67, S-79
- Example: V.17 Communication

PROTOCOL MONITOR REPORT

NAME: ABC  
TEL:886 3 4733507  
DATE: APR.23'04 12:20

SESSION	FUNCTION	NO	DESTINATION STATION	DATE	TIME	PAGE	MODE	RESULT
0001	TX	01	ABC 22345678901234567890	DEC.02	15:00	008	ECM-12	OK

TX	RX

DATA

FF 13 83 00 46 88 00...

FIF (Facsimile Information Field)

FCF (Facsimile Control Field)  
= 83: DCS, 80: DIS

Means Last Control Field.

Means address

- FIF (Facsimile Information Field)

HEX	1												2																			
	0				0				4				6				8				8				0				0			
Data Bit	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Bit No.	8	7	6	5	4	3	2	1	16	15	14	13	12	11	10	9	24	23	22	21	20	19	18	17	32	31	30	29	28	27	26	25
Note	<div>↑  </div>																															

- Hex-Binary Conversion List

Hex	Binary				Hex	Binary				Hex	Binary				Hex	Binary			
0	0	0	0	0	4	0	1	0	0	8	1	0	0	0	C	1	1	0	0
1	0	0	0	1	5	0	1	0	1	9	1	0	0	1	D	1	1	0	1
2	0	0	1	0	6	0	1	1	0	A	1	0	1	0	E	1	1	1	0
3	0	0	1	1	7	0	1	1	1	B	1	0	1	1	F	1	1	1	1

DIS (DTC)/ DCS Bit Allocation Table of FIF (Facsimile Information Field)

Bit No.	Designation	DIS/ DTC	DCS
1	"0"= Invalid "1"= Store-and-forward switching Internet fax simple mode		
2	Set to "0"		
3	"0"= Invalid "1"= Real-time Internet fax		
4	Set to "0"		
5	Set to "0"		
6	"0"= Invalid "1"= V.8 capabilities		Invalid
7	Flame size	"0" = 256 octets preferred "1"= 64 octets preferred	Invalid
8	Set to "0"		
9	"0"= Invalid "1"= Ready to transmit a facsimile document (polling)		Set to "0"
10	"0"= Invalid "1"= Receiver fax operation		

Bit No.	Designation	DIS/ DTC				DCS						
11	Data signalling rate	Bit No.		Data signalling rate		Bit No.		Data signalling rate				
12		14	13	12	11	14	13	12	11			
13		0	0	0	0	V.27 <i>ter</i> fall-back mode	0	0	0	0	2400 bit/s, rec. V.27 <i>ter</i>	
14		0	0	0	1	Rec. V.29	0	0	0	1	9600 bit/s, rec. V.29	
		0	0	1	0	Rec. V.27 <i>ter</i>	0	0	1	0	4800 bit/s, rec. V.27 <i>ter</i>	
		0	0	1	1	Rec. V.27 <i>ter</i> and V.29	0	0	1	0	7200 bit/s, rec. V.29	
		0	1	0	0	Not used	0	1	0	0	Invalid	
		0	1	0	1	Not used	0	1	0	1	Reserved	
		0	1	1	0	Reserved	0	1	1	0	Invalid	
		0	1	1	1	Reserved	0	1	1	1	Reserved	
		1	0	0	0	Not used	1	0	0	0	14,400 bit/s, rec. V.17	
		1	0	0	1	Not used	1	0	0	1	9,600 bit/s, rec. V.17	
		1	0	1	0	Reserved	1	0	1	0	12,000 bit/s, rec. V.17	
		1	0	1	1	Rec. V.27 <i>ter</i> , V.29, V33 and V.17	1	0	1	1	7,200 bit/s, rec. V.17	
		1	1	0	0	Not used	1	1	0	0	Reserved	
		1	1	0	1	Not used	1	1	0	1	Reserved	
		1	1	1	0	Reserved	1	1	1	0	Reserved	
		1	1	1	1	Reserved	1	1	1	1	Reserved	
		15	"0"= Invalid "1"= R8 × 7.7 lines/mm and/or 200 × 200 pels/25.4 mm									
		16	"0"= Invalid "1"= Two-dimensional coding capability					"0"= Invalid "1"= Two-dimensional coding				
17	Recording width capabilities	Bit No.		Data signalling rate		Bit No.		Data signalling rate				
18		18	17	0	0	18	17	0	0			
				Scan line length 215 mm ± 1%				Scan line length 215 mm ± 1%				
				Scan line length 215 mm ± 1% and scan line length 255 mm ± 1%				Scan line length 215 mm ± 1%				
				Scan line length 215 mm ± 1% and scan line length 255 mm ± 1% and scan line length 303 mm ± 1%				Scan line length 303 mm ± 1%				
	1	0	Invalid		1	1	Invalid					

Bit No.	Designation	DIS/ DTC				DCS																																																																								
19	Recording length capability	Bit No.	Recording length capability			Bit No.	Recording length capability																																																																							
20		20	19			20	19																																																																							
		0	0	A4 (297 mm)		0	0	A4 (297 mm)																																																																						
		0	1	A4 (297 mm) and B4 (364 mm)		0	1	B4 (364 mm)																																																																						
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		1	1	Invalid		1	1	Invalid																																																																						
21	<table><tr><td>Bit No.</td><td colspan="3">Minimum scan line time capability at the receive</td></tr><tr><td>23</td><td>22</td><td>21</td><td></td></tr><tr><td>0</td><td>0</td><td>0</td><td>20 ms at 3.85 1/mm: T 7.7 = T 3.85 20 ms</td></tr><tr><td>0</td><td>0</td><td>1</td><td>5 ms at 3.85 1/mm: T 7.7 = T 3.85</td></tr><tr><td>0</td><td>1</td><td>0</td><td>10 ms at 3.85 1/mm: T 7.7 = T 3.85 10 ms</td></tr><tr><td>0</td><td>1</td><td>1</td><td>20 ms at 3.85 1/mm: T 7.7 = 1/2 T 3.85</td></tr><tr><td>1</td><td>0</td><td>0</td><td>40 ms at 3.85 1/mm: T 7.7 = T 3.85 40 ms</td></tr><tr><td>1</td><td>0</td><td>1</td><td>40 ms at 3.85 1/mm: T 7.7 = 1/2 T 3.85</td></tr><tr><td>1</td><td>1</td><td>0</td><td>10 ms at 3.85 1/mm: T 7.7 = 1/2 T 3.85</td></tr><tr><td>1</td><td>1</td><td>1</td><td>0 ms at 3.85 1/mm: T 7.7 = T 3.85</td></tr></table>					Bit No.	Minimum scan line time capability at the receive			23	22	21		0	0	0	20 ms at 3.85 1/mm: T 7.7 = T 3.85 20 ms	0	0	1	5 ms at 3.85 1/mm: T 7.7 = T 3.85	0	1	0	10 ms at 3.85 1/mm: T 7.7 = T 3.85 10 ms	0	1	1	20 ms at 3.85 1/mm: T 7.7 = 1/2 T 3.85	1	0	0	40 ms at 3.85 1/mm: T 7.7 = T 3.85 40 ms	1	0	1	40 ms at 3.85 1/mm: T 7.7 = 1/2 T 3.85	1	1	0	10 ms at 3.85 1/mm: T 7.7 = 1/2 T 3.85	1	1	1	0 ms at 3.85 1/mm: T 7.7 = T 3.85	<table><tr><td>Bit No.</td><td colspan="3">Minimum scan line time</td></tr><tr><td>23</td><td>22</td><td>21</td><td></td></tr><tr><td>0</td><td>0</td><td>0</td><td>20 ms</td></tr><tr><td>0</td><td>0</td><td>1</td><td>5 ms</td></tr><tr><td>0</td><td>1</td><td>0</td><td>10 ms</td></tr><tr><td>1</td><td>0</td><td>0</td><td>40 ms</td></tr><tr><td>1</td><td>1</td><td>1</td><td>0 ms</td></tr></table>					Bit No.	Minimum scan line time			23	22	21		0	0	0	20 ms	0	0	1	5 ms	0	1	0	10 ms	1	0	0	40 ms	1	1	1	0 ms
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24	Extension field		"0"= Without "1"= With																																																																											
25	Reserved																																																																													
26	"0"= Invalid "1"= Un-compressed mode																																																																													
27	"0"= Invalid "1"= ECM																																																																													
28	Set to "0"					Frame size 0: 256 octets Frame size 1: 64 octets																																																																								
29	Set to "0"																																																																													
30	Set to "0"																																																																													
31	"0"= Invalid "1"= T.6 coding capability					"0"= Invalid "1"= T.6 coding enabled																																																																								
32	Extend field		"0"= Without "1"= With																																																																											
33	"0"= Invalid "1"= Field not valid capability																																																																													
34	"0"= Invalid "1"= Multiple selective polling capability					Set to "0"																																																																								

Bit No.	Designation	DIS/ DTC	DCS
35	"0"= Invalid "1"= Polling subaddress transmission (DTC) by Polled SubAddress (DIS)/PSA		Set to "0"
36	"0"= Invalid "1"= T.43 coding		
37	"0"= Invalid "1"= Plane interleave		
38	Set to "0"		
39	Set to "0"		
40	Extend field	"0"= Without "1"= With	
41	"0"= Invalid "1"= R8 x 15.4 lines/mm		
42	"0"= Invalid "1"= 300 x 300 pels/25.4 mm		
43	"0"= Invalid "1"= R16 x 15.4 lines/mm and/or 400 x 400 pels/25.4 mm		
44	"0"= Invalid "1"= Inch based resolution preferred		Resolution type selection "0"= metric based resolution "1"= inch based resolution
45	"0"= Invalid "1"= Metric based resolution preferred		Do not care
46	Minimum scan line time capability for higher resolutions.	"0": T 15.4 = T 7.7 "1": T 15.4 = 1/2 T 7.7	Do not care
47	"0"= Invalid "1"= Selective polling (DIS)/ Selective polling transmission (DTC)		Set to "0"
48	Extend field	0: Without 1: With	
49	"0"= Invalid "1"= Sub Addressing capability		"0"= Invalid "1"= Sub Addressing transmission
50	"0"= Invalid "1"= Password/ Sender Identification capability (DIS)/ Password transmission (DTC)		"0"= Invalid "1"= Sender Identification transmission
51	"0"= Invalid "1"= Ready to transmit a data file (polling)		Set to "0"
52	Set to "0"		
53	"0"= Invalid "1"= Binary File Transfer (BFT)		

Bit No.	Designation	DIS/ DTC	DCS
54	"0"= Invalid "1"= Document Transfer Mode (DTM)		
55	"0"= Invalid "1"= EDIFACT Transfer (EDI)		
56	Extend field	0: Without 1: With	
57	"0"= Invalid "1"= Basic Transfer Mode (BTM)		
58	Set to "0"		
59	"0"= Invalid "1"= Ready to transmit a character or mixed mode document (polling)		Set to "0"
60	"0"= Invalid "1"= Character mode		
61	Set to "0"		
62	"0"= Invalid "1"= Mixed mode		
63	Set to "0"		
64	Extend field	"0"= Without "1"= With	
65	"0"= Invalid "1"= Processable mode 26		
66	"0"= Invalid "1"= Digital network capability		
67	Duplex and half duplex capabilities	"0"= Half duplex operation only "1"= Duplex and half duplex operation	"0"= Half duplex operation only "1"= Duplex operation
68	"0"= Invalid "1"= JPEG coding		
69	"0"= Invalid "1"= Full color mode		
70	Set to "0"		"0"= Invalid "1"= Preferred Huffman tables
71	"0"= Invalid "1"= 12 bit/pixel/element		
72	Extend field	"0"= Without "1"= With	
73	"0"= Invalid "1"= No sampling (1:1:1)		
74	"0"= Invalid "1"= Nonstandard radiation light		
75	"0"= Invalid "1"= Nonstandard is mute range		

Bit No.	Designation	DIS/ DTC	DCS
76	"0"= Invalid "1"= North American Letter (215.9 mm x 279.4 mm) capacity		"0"= Invalid "1"= North American Letter (215.9 mm x 279.4 mm)
77	"0"= Invalid "1"= North American Legal (215.9 mm x 355.6 mm) capacity		"0"= Invalid "1"= North American Legal (215.9 mm x 355.6 mm)
78	"0"= Invalid "1"= Single layer sequential encoding, basic capacity		"0"= Invalid "1"= Single layer sequential encoding, basic
79	"0"= Invalid "1"= Single layer sequential encoding, optional L0 capacity		
80	Extend field	"0"= Without "1"= With	
81	"0"= Invalid "1"= HKM key management capacity		"0"= Invalid "1"= HKM key management selection
82	"0"= Invalid "1"= RSA key management capacity		"0"= Invalid "1"= RSA key management selection
83	"0"= Invalid "1"= Override mode capacity		"0"= Invalid "1"= Override mode function
84	"0"= Invalid "1"= HFX40 code capacity		"0"= Invalid "1"= HFX40 code selection
85	"0"= Invalid "1"= Alternative code number 2 capacity		"0"= Invalid "1"= Alternative code number 2 selection
86	"0"= Invalid "1"= Alternative code number 3 capacity		"0"= Invalid "1"= Alternative code number 3 selection
87	"0"= Invalid "1"= HFX40-1 hashing capacity		"0"= Invalid "1"= HFX40-1 hashing selection
88	Extend field	"0"= Without "1"= With	
89	"0"= Invalid "1"= Alternative hashing system number 2 capacity		"0"= Invalid "1"= Alternative hashing system number 2 selection
90	"0"= Invalid "1"= Alternative hashing system number 3 capacity		"0"= Invalid "1"= Alternative hashing system number 3 selection
91	Reserved		
92	"0"= Invalid "1"= T.44 (Mixed raster content) mode		
93	"0"= Invalid "1"= T.44 (Mixed raster content) mode		

Bit No.	Designation	DIS/ DTC	DCS
94	"0"= Invalid "1"= T.44 (Mixed raster content) mode		
95	"0"= Invalid "1"= Page length maximum strip size for T.44 (Mixed raster content)		
96	Extend field	"0"= Without "1"= With	
97	"0"= Invalid "1"= Color/mono-color multi-value 300 pixels x 300 pixels or 400 pixels x 400 pixels / 25.4 mm		
98	"0"= Invalid "1"= R4 x 3.85 lines/mm and/or 100 pixels x 100 pixels / 25.4 mm for color/mono-color multi-value		
99	"0"= Invalid "1"= Single phase C BFT negotiation capacity		
100	Set to "0"		
101	Set to "0"		
102	Set to "0"		
103	Set to "0"		
104	Extend field	"0"= Without "1"= With	



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# TROUBLESHOOTING

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# 1. INTRODUCTION

- This chapter contains the items required or used when troubleshooting various machine problems.

## 1-1. Electric Components Check Procedures

- The following procedures can be used to check to see if an electric component is fully operational when a paper misfeed or a malfunction occurs in this machine.

### (1) Sensors

Step	Check	Result	Action
1	Does the input signal to the Controller/Mechanical Control Board go from HIGH to LOW, or vice versa, when the sensor is blocked?	NO	Replace the sensor.
		YES	Replace the Controller/Mechanical Control Board.

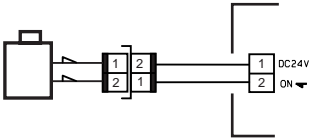
4025T520AA

4025T521AA

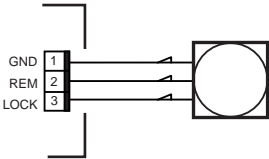
**(2) Switches**

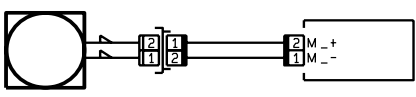
Step	Check	Result	Action
1	Does the input signal (NO) to the Controller/Mechanical Control Board go from LOW to HIGH when the switch is actuated?	NO	Replace the switch.
		YES	Replace the Controller/Mechanical Control Board.
<div><p>4025T523AB</p></div>			

**(3) Solenoids**

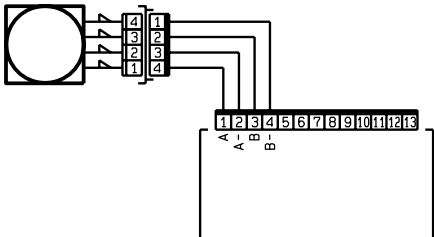
Step	Check	Result	Action
1	Does the output signal from the Controller/Mechanical Control Board go from HIGH to LOW when the solenoid is energized?	NO	Replace the Controller/Mechanical Control Board.
		YES	Replace the solenoid.
<div></div> <p>4025T522AA</p>			

(4) Motors

Step	Check	Result	Action
1	Is the LOCK signal of the Controller/Mechanical Control Board HIGH when this machine is in the standby state?	NO	Replace the Controller/Mechanical Control Board. Replace the motor.
2	Does the REM signal of the Controller/Mechanical Control Board go from HIGH to LOW when the motor is energized?	YES	Replace the motor.
		NO	Replace the Controller/Mechanical Control Board.
<div></div>			
4025T526AA			

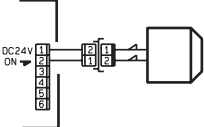
Step	Check	Result	Action
1	Does the input signal to the Controller/Mechanical Control Board go from HIGH to LOW when the motor is energized? (The input signal varies depending on the direction of rotation.)	YES	Replace the motor.
		NO	Replace the Controller/Mechanical Control Board.
<div><p>4025T525AA</p></div>			

Step	Check	Result	Action
1	Are the hookup connector of the motor and print jack on the Controller/Mechanical Control Board connected properly?	YES	Replace the motor or the Controller/ Mechanical Control Board.
		NO	Connect the connector or the print jack properly.



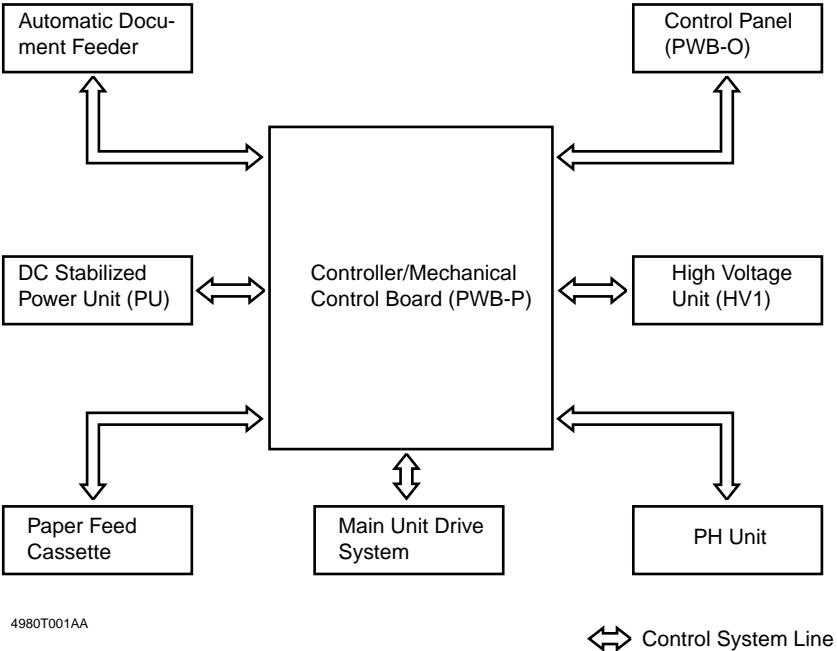
4025T527AA

### (5) Clutches

Step	Check	Result	Action
1	Does the output signal of the Controller/Mechanical Control Board go from HIGH to LOW when the clutch is energized?	NO	Replace the Controller/Mechanical Control Board.
		YES	Replace the clutch.
<div></div> <div>4025T528AA</div>			

1-2. Overall Control Configuration

- Understanding the overall control configuration will help perform the troubleshooting procedures for paper misfeeds, malfunctions, and image problems.



4980T001AA

## 2. PAPER MISFEED

### 2-1. Initial Check Items

- When a paper misfeed occurs in this machine, first make the following initial checks.

Check	Action
Does the paper meet product specifications?	Replace paper.
Is the paper curled, wavy, or damp?	Replace paper. Instruct user in correct paper storage.
Is the paper transport path deformed, dirty, or obstructed with foreign matter?	Clean the paper path and replace if necessary.
Are the Paper Separator Fingers dirty, deformed, or worn?	Replace Fusing Unit.
Is the roller dirty, deformed, or worn?	Clean the roller and replace if necessary.
Are Edge Guides at correct position to accommodate paper?	Slide the Edge Guides up against the edges of the paper stack.
Does the actuator operate correctly when checked?	Correct or replace the actuator.

---

#### ***Precautions for Clearing Misfeed***

- Reset the misfeed condition by opening and closing the Front Door after the misfeed has been cleared.*
- 

### 2-2. ADF Unit Initial Check Items

- When a paper misfeed occurs in this machine, first make the following initial checks.

Check	Action
Does the paper meet product specifications?	Replace paper.
Is the paper curled, wavy, or damp?	Replace paper. Instruct user in correct paper storage.
Is the paper transport path deformed, dirty, or obstructed with foreign matter?	Clean the paper path and replace if necessary.
Is the roller dirty, deformed, or worn?	Clean the roller and replace if necessary.
Are Edge Guides at correct position to accommodate paper?	Slide the Edge Guides up against the edges of the paper stack.
Does the actuator operate correctly when checked?	Correct or replace the actuator.

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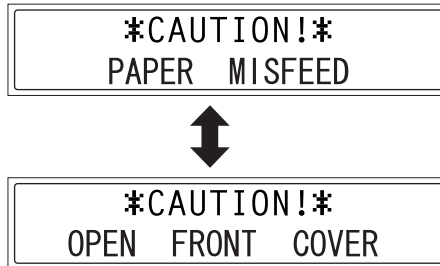
#### ***Precautions for Clearing Misfeed***

- Reset the misfeed condition by opening and closing the DOC Feed Cover after the misfeed has been cleared.*
-

### 2-3. Paper Misfeed Displays

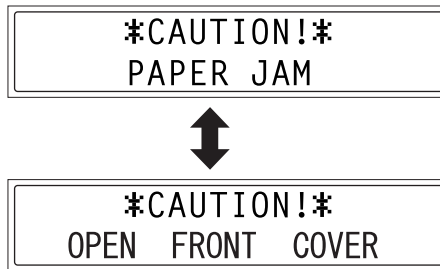
- The Error indicator lights up and a message appears in the display when a paper misfeed occurs.

<Paper Take-Up Section Misfeed>



4980P555DA

<Transport Section Misfeed>



4980P502DA

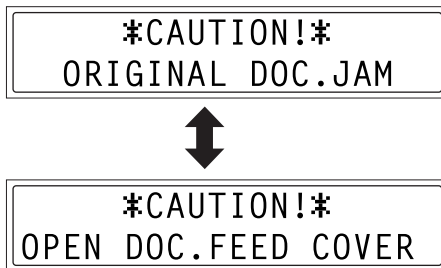
<Procedure for cancelling the misfeed display>

1. Open the appropriate covers, remove the misfed paper and any remaining paper, and then close the covers.
2. Open, then close the Front Door.

## 2-4. ADF Unit Paper Misfeed Displays

- The Error indicator lights up and a message appears in the display when a paper misfeed occurs.

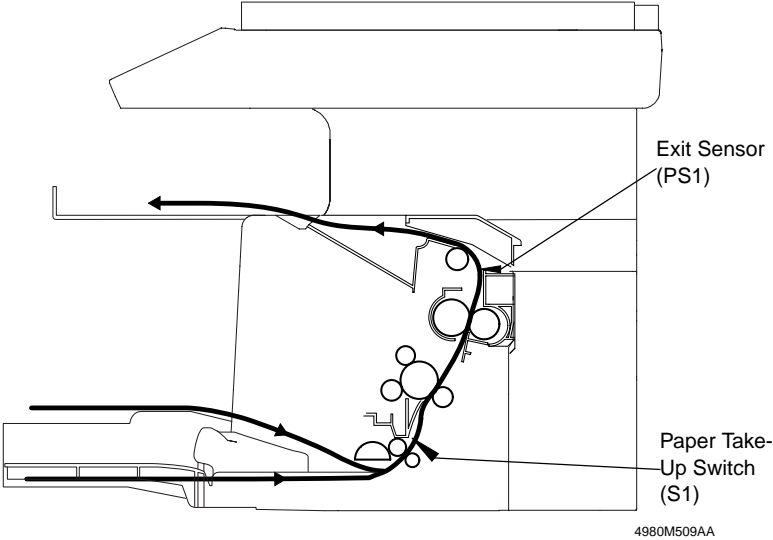
<Paper Take-Up Section Misfeed>



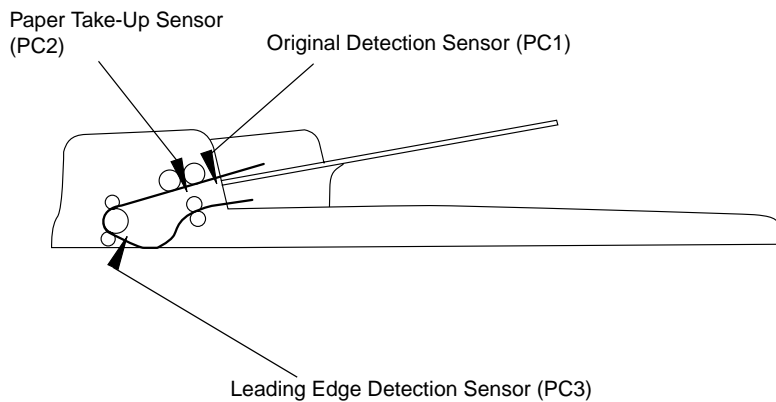
<Procedure for cancelling the misfeed display>

1. Open the appropriate covers, remove the misfeed paper and any remaining paper, and then close the covers.
2. Open, then close the DOC Feed Cover.

**2-5. Location of Misfeed Detection Sensors**



## 2-6. ADF Location of Misfeed Detection Sensors



2-7. Misfeed Detection Timing and Troubleshooting Procedures





(1) Paper Take-Up/Transport Misfeed

<Detection Timing>

Type	Description
MP tray Pick-up Jam	The Paper Take-Up Switch does not turn on after the predetermined period of time has elapsed after paper take-up began.
2nd tray Pick-up Jam	
Bypass tray Pick-up Jam	
Separator Jam	The Exit Sensor is not blocked after the predetermined period of time has elapsed after the Paper Take-Up Switch is turned on. The Paper Take-Up Switch is not turned off after the predetermined period of time has elapsed after the Paper Take-Up Switch is turned on.

<Troubleshooting Procedures>

Relevant Electrical Parts	
Paper Take-Up Switch (S1) Exit Sensor (PS1) Paper Take-Up Solenoid (SL1)	Controller/Mechanical Control Board (PWB-P)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electric Parts)
1	Initial checks	 T-6	—	—
2	SL1 solenoid check	 T-2	PWB-P MPJ3P-2	I-6 to 7
3	S1 switch check	 T-2	PWB-P MPJ10P-2	G-8 to 9
4	PS1 sensor check	 T-1	PWB-P MPJ8P-3	E to F-7 to 8
5	Replace PWB-P.	—	—	—




## (2) Fusing/Exit Misfeed

### <Detection Timing>

Type	Description
Fuser Jam	The Exit Sensor is not unblocked after the predetermined period of time has elapsed after the Paper Take-Up Switch is turned on.
Remains paper Jam 1	If all of the following conditions are met <ul style="list-style-type: none"><li>• The Front Door or Exit Cover is opened, then closed. (Or the machine is turned on.)</li><li>• The Paper Take-Up Switch is turned on or the Exit Sensor is blocked.</li></ul>
Remains paper Jam 2	
Paper exit jam	The Exit Sensor is unblocked slower than the predetermined period of time after the Paper Take-Up Switch is turned on.

### <Troubleshooting Procedures>

Relevant Electric Parts	
Paper Take-Up Switch (S1) Exit Sensor (PS1)	Controller/Mechanical Control Board (PWB-P)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electric Parts)
1	Initial check items	 T-6	—	—
2	S1 switch check	 T-2	PWB-P MPJ10P-2	G-8 to 9
3	PS1 sensor check	 T-1	PWB-P MPJ8P-3	E to F-7 to 8
4	Replace PWB-P.	—	—	—

### 3. PAPER MISFEED (Document Feeder Section)

#### 3-1. Misfeed Detection Timing and Troubleshooting Procedures





##### (1) The Original misfeeds

<Detection Timing>

Type	Description
ADF Jam	<ul style="list-style-type: none"><li>• The Paper Take-Up Sensor is not unblocked after the predetermined period of time has elapsed after document feeding began.</li><li>• The Paper Take-Up Sensor is not blocked after the predetermined period of time has elapsed after the Paper Take-Up Sensor is unblocked.</li><li>• The Exit Sensor is not unblocked after the predetermined period of time has elapsed after the Paper Take-Up Sensor is unblocked.</li><li>• The Exit Sensor is not blocked after the predetermined period of time has elapsed after the Paper Take-Up Sensor is blocked.</li></ul>
ADF remains paper jam	<p>If all of the following conditions are met</p> <ul style="list-style-type: none"><li>• The Automatic Document Feeder is in standby.</li><li>• The Document Feeder Cover is closed.</li><li>• The Original Detection Sensor is blocked.</li><li>• Either the Paper Take-Up Sensor or the Leading Edge Detection Sensor or both sensors are blocked.</li></ul>

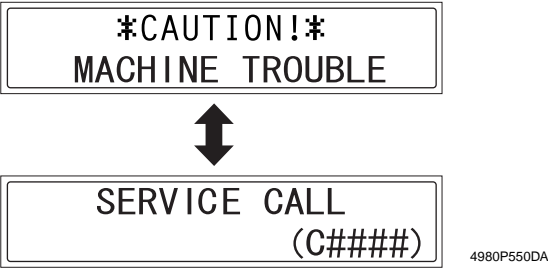
<Troubleshooting Procedures>

Relevant Electrical Parts	
Original Detection Sensor (PC1) Paper Take-Up Sensor (PC2) Leading Edge Detection Sensor (PC3)	Automatic Document Feeder Control Board (PWB-A ADF)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electrical Component)
1	Initial checks	 T-6	—	—
2	PC1 sensor check	 T-45	PWB-A ADF PA02A ADF-1	C~D-4~5
3	PC2 sensor check	 T-45	PWB-A ADF PA06A ADF-1	D~E-4~5
4	PC3 sensor check	 T-45	PWB-A ADF PA03A ADF-1	I-6~7
5	Replace PWB-A ADF.	—	—	—

# 4. MALFUNCTIONS/WARNING

- The CPU performs a self-diagnosis on the condition of the unit, and if a malfunction is detected, the warning appears alternately with the error code in the display.



<Procedure for cancelling a malfunction display>

- In the C05XX trouble, turn the machine off, then on with the STOP key held down.
- Except above, cancel the malfunction display by turning the machine off, then on again.

## 4-1. List of Malfunctions

Malfunction Code	Malfunction Name	Description
C0045	Fuser fan motor error	<ul style="list-style-type: none"><li>• The LOCK signal remains HIGH or LOW continuously for a predetermined period of time while the Cooling Fan Motor remains energized.</li></ul>
C0210	H. V. abnormal	<ul style="list-style-type: none"><li>• The Drum Charge Monitor Voltage (HVC_MON) signal falls outside a predetermined range at any time after the lapse of a predetermined period of time after the Power Switch has been turned ON.</li><li>• The Image Transfer Voltage Monitor signal (T_MON_V) and Image Transfer Current Monitor signal (T_MON_I) fall outside a corresponding predetermined range.</li></ul>

Malfunction Code	Malfunction Name	Description
C0500	Fuser warm up error	<ul style="list-style-type: none"> <li>• The voltage of the Thermistor remains low for a predetermined period of time when a warm-up cycle is started.</li> <li>• The temperature detected by the Thermistor remains lower than a reference value for a predetermined period of time for the period of time that begins 5 sec. after, and ends 9 sec. after, the start of the warm-up cycle (where the temperature detected by the Thermistor is 80 °C or less).</li> <li>• The temperature detected by the Thermistor does not increase for a 3-sec. period or more for the period of time that begins after the lapse of a predetermined period of time after the Fusing Roller Heater Lamp has been turned ON and ends when the lamp is turned OFF.</li> <li>• The Fusing Roller Heater Lamp remains ON for a 30-sec. period or more (except during the period through which the Main Motor remains energized).</li> </ul>
C0510	Fuser temperature low	<ul style="list-style-type: none"> <li>• The temperature detected by the Thermistor remains lower than the set temperature continuously for a predetermined period of time while the fusing temperature control is being provided. (The set temperatures are as follows: 140 °C during a print mode at 600 dpi; 70 °C during the standby mode.)</li> </ul>
C0520	Fuser overheat	<ul style="list-style-type: none"> <li>• The temperature detected by the Thermistor remains higher than 235 °C for a predetermined period of time while the fusing temperature control is being provided.</li> </ul>
C1200	ASIC memory abnormal	<ul style="list-style-type: none"> <li>• An error occurred while writing to or reading the SRAM on the Control Board (PWB-C).</li> </ul>
C1300	Polygon mirror motor error	<ul style="list-style-type: none"> <li>• The LOCK signal is not detected within a predetermined period of time that begins 1 sec. after the Polygon Motor has been energized.</li> <li>• No new LOCK signal is detected for a 1-sec. period that begins 1.5 sec. after the first LOCK signal was detected.</li> <li>• The LOCK signal is not detected for a continuous 0.5-sec. period in a state in which the Polygon Motor runs stably.</li> <li>• The LOCK signal remains ON for a continuous 5-sec. period or more when the Polygon Motor remains deenergized.</li> </ul>
C133B	Communication with option error	<ul style="list-style-type: none"> <li>• Communication could not be established with the Controller Control Board within 5 seconds while printing.</li> </ul>
C133C	Modem error	<ul style="list-style-type: none"> <li>• A malfunction occurred in the Modem.</li> </ul>
C133D	ROM checksum error	<ul style="list-style-type: none"> <li>• A malfunction occurred in the ROM.</li> </ul>

Malfunction Code	Malfunction Name	Description
C13F0	Laser error	<ul style="list-style-type: none"> <li>The laser output exceeds the upper limit value.</li> <li>The laser output remains lower than the lower limit value.</li> </ul>
C1468	EEPROM error	<ul style="list-style-type: none"> <li>An EEPROM not written with initial data was detected.</li> </ul>
C14A3	CIS LED malfunction	<ul style="list-style-type: none"> <li>The luminosity level of the CIS LED is not stabilized within the predetermined period of time.</li> </ul>

## 4-2. Malfunction Detection Timing and Troubleshooting Procedures





### (1) C0045: Fuser fan motor error

<Detection Timing>

Description
<ul style="list-style-type: none"> <li>The LOCK signal remains HIGH or LOW continuously for a predetermined period of time while the Cooling Fan Motor remains energized.</li> </ul>

<Troubleshooting Procedures>

Relevant Electric Parts	
Cooling Fan Motor (M2)	Controller/Mechanical Control Board (PWB-P) Power Unit (PU1)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electric Parts)
1	Check the Motor connectors for connection and correct as necessary.	 D-24	—	—
2	Check the fan for possible overload and correct as necessary.	—	—	—
3	M2 operation check	 T-3	PWB-P MPJ13P-1 to 3 (pulse)	G to H-5 to 6
4	M3 operation check	 T-3	PWB-P MPJ6P-1 to 3 (pulse)	E-9 to 10
5	Replace PWB-P.	 D-12	—	—

(2) C0210: H.V. abnormal

<Detection Timing>

Description
<ul style="list-style-type: none"><li>• The Drum Charge Monitor Voltage (HVC_MON) signal falls outside a predetermined range at any time after the lapse of a predetermined period of time after the Power Switch has been turned ON.</li><li>• The Image Transfer Voltage Monitor signal (T_MON_V) and Image Transfer Current Monitor signal (T_MON_I) fall outside a corresponding predetermined range.</li></ul>

<Troubleshooting Procedures>

Relevant Electric Parts	
Fusing Unit	Controller/Mechanical Control Board (PWB-P)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electric Parts)
1	Replace Fusing Unit.	E-7	—	—
2	Replace PWB-P.	D-12	—	—





### (3) C0500: Fuser warm up error

#### <Detection Timing>

Description
<ul style="list-style-type: none"><li>• The voltage of the Thermistor remains low for a predetermined period of time when a warm-up cycle is started.</li><li>• The temperature detected by the Thermistor remains lower than a reference value for a predetermined period of time for the period of time that begins 5 sec. after, and ends 9 sec. after, the start of the warm-up cycle (where the temperature detected by the Thermistor is 80 °C or less).</li><li>• The temperature detected by the Thermistor does not increase for a 3-sec. period or more for the period of time that begins after the lapse of a predetermined period of time after the Fusing Roller Heater Lamp has been turned ON and ends when the lamp is turned OFF.</li><li>• The Fusing Roller Heater Lamp remains ON for a 30-sec. period or more (except during the period through which the Main Motor remains energized).</li></ul>

#### <Troubleshooting Procedures>

Relevant Electric Parts	
Fusing Unit	Controller/Mechanical Control Board (PWB-P)
Thermistor (TH1)	Thermostat (TS1)
Fusing Roller Heater Lamp (H1)	Power Unit (PU1)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electric Parts)
1	Replace Thermistor (TH1).	 D-29	—	—
2	Replace Fusing Unit.	 E-7	—	—
3	Replace Controller/Mechanical Control Board (PWB-P).	 D-12	—	—
4	Replace Power Unit (PU1).	 D-15	—	—





(4) C0510: Fuser temperature low

<Detection Timing>

Description
<ul style="list-style-type: none"><li>The temperature detected by the Thermistor remains lower than the set temperature continuously for a predetermined period of time while the fusing temperature control is being provided. (The set temperatures are as follows: 140 °C during a print mode at 600 dpi; 70 °C during the standby mode.)</li></ul>

<Troubleshooting Procedures>

Relevant Electric Parts	
Fusing Unit	Controller/Mechanical Control Board (PWB-P)
Thermistor (TH1)	Thermostat (TS1)
Fusing Roller Heater Lamp (H1)	Power Unit (PU1)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electric Parts)
1	Replace Thermistor (TH1).	 D-29	—	—
2	Replace Fusing Unit.	 E-7	—	—
3	Replace Controller/Mechanical Control Board (PWB-P).	 D-12	—	—
4	Replace Power Unit (PU1).	 D-15	—	—





## (5) C0520: Fuser overheat

### <Detection Timing>

Description
<ul style="list-style-type: none"><li>The temperature detected by the Thermistor remains higher than 235 °C for a predetermined period of time while the fusing temperature control is being provided.</li></ul>

### <Troubleshooting Procedures>

Relevant Electric Parts	
Fusing Unit	Controller/Mechanical Control Board (PWB-P)
Thermistor (TH1)	Thermostat (TS1)
Fusing Roller Heater Lamp (H1)	Power Unit (PU1)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electric Parts)
1	Replace Thermistor (TH1).	 <b>D-29</b>	—	—
2	Replace Fusing Unit.	 <b>E-7</b>	—	—
3	Replace Controller/Mechanical Control Board (PWB-P).	 <b>D-12</b>	—	—
4	Replace Power Unit (PU1).	 <b>D-15</b>	—	—



**(6) C1200: ASIC memory abnormal**

## &lt;Detection Timing&gt;

Description
<ul style="list-style-type: none"> <li>An error occurred while writing to or reading the SRAM on the Control Board (PWB-C).</li> </ul>

## &lt;Troubleshooting Procedures&gt;

Relevant Electrical Components
Controller/Mechanical Control Board (PWB-P)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electric Parts)
1	Turn this machine off, then on again.	—	—	—
2	Check the connection of the memory on the PWB-P, and then correct it if necessary.	 <b>D-12</b>	—	—
3	Replace PWB-P.	 <b>D-12</b>	—	—



**(7) C1300: Polygon mirror motor error**

## &lt;Detection Timing&gt;

Description
<ul style="list-style-type: none"> <li>The LOCK signal is not detected within a predetermined period of time that begins 1 sec. after the Polygon Motor has been energized.</li> <li>No new LOCK signal is detected for a 1-sec. period that begins 1.5 sec. after the first LOCK signal was detected.</li> <li>The LOCK signal is not detected for a continuous 0.5-sec. period in a state in which the Polygon Motor runs stably.</li> <li>The LOCK signal remains ON for a continuous 5-sec. period or more when the Polygon Motor remains deenergized.</li> </ul>

## &lt;Troubleshooting Procedures&gt;

Relevant Electric Parts	
PH Unit Flat cable	Controller/Mechanical Control Board (PWB-P)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electric Parts)
1	Check cables for connection and correct as necessary.	—	—	—
2	Replace PH Unit.	 <b>D-19</b>	—	—
3	Replace PWB-P.	 <b>D-12</b>	—	—


## (8) C133B: Communication with option error

<Detection Timing>

Description
<ul style="list-style-type: none"><li>Communication could not be established with the Controller Control Board within 5 seconds while printing.</li></ul>

<Troubleshooting Procedures>

Relevant Electrical Components
Controller/Mechanical Control Board (PWB-P)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electric Parts)
1	Replace PWB-P.	 D-12	—	—


## (9) C133C: Modem error

<Detection Timing>

Description
<ul style="list-style-type: none"><li>A malfunction occurred in the Modem.</li></ul>

<Troubleshooting Procedures>

Relevant Electrical Components
Network Control Unit Board (NCU)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electric Parts)
1	Replace NCU.	 D-11	—	—

## (10) C133D: ROM checksum error

<Detection Timing>

Description
<ul style="list-style-type: none"><li>A malfunction occurred in the ROM.</li></ul>

<Troubleshooting Procedures>

Relevant Electrical Components
Controller/Mechanical Control Board (PWB-P)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electric Parts)
1	Replace PWB-P.	—	—	—



**(11) C13F0: Laser error**

<Detection Timing>

Description
<ul style="list-style-type: none"><li>• The laser output exceeds the upper limit value.</li><li>• The laser output remains lower than the lower limit value.</li></ul>

<Troubleshooting Procedures>

Relevant Electric Parts	
PH Unit Flat cable	Controller/Mechanical Control Board (PWB-P)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electric Parts)
1	Check cables for connection and correct as necessary.	—	—	—
2	Replace PH Unit.	 <b>D-19</b>	—	—
3	Replace PWB-P.	 <b>D-12</b>	—	—



**(12) C1468: EEPROM error**

<Detection Timing>

Description
<ul style="list-style-type: none"><li>• An EEPROM not written with initial data was detected.</li></ul>

<Troubleshooting Procedures>

Relevant Electric Parts	
Controller/Mechanical Control Board (PWB-P)	

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electric Parts)
1	Unplug, then plug in the power cord, and turn off this machine, then turn it on again.	—	—	—
2	Check the connection of the EEPROM on the PWB-P, and then correct it if necessary.	—	—	—
3	Replace PWB-P.	 <b>D-12</b>	—	—
4	Replace EEPROM.	 <b>D-49</b>	—	—



### (13) C14A3: CIS LED malfunction

#### <Detection Timing>

Description
<ul style="list-style-type: none"><li>The luminosity level of the CIS LED is not stabilized within the predetermined period of time.</li></ul>

#### <Troubleshooting Procedures>

Relevant Electric Parts	
CIS unit	Controller/Mechanical Control Board (PWB-P)

Step	Action	Ref. Page	WIRING DIAGRAM	
			Control Signal	Location (Electric Parts)
1	Check the connection of the connectors, and then correct them if necessary.	—	—	—
2	Replace PWB-P.	 <b>D-12</b>	—	—
3	Replace CIS Unit.	 <b>E-15</b>	—	—

5. MALFUNCTIONS RELATED TO POWER SUPPLY

5-1. Power is not Turned ON.

Relevant Electric Parts	
Controller/Mechanical Control Board (PWB-P)	Power Unit (PU1)

Step	Check	Wiring Diagram (Location)	Result	Action
1	Is the power cord plugged into the power outlet?	—	NO	Plug the power cord into the power outlet.
2	Is the power cord connected properly to this machine?	—	NO	Plug the power cord into this machine.
3	Is the Power Switch turned ON?	—	NO	Turn ON the Power Switch.
4	Are the fuses (F101 and F102) on the Power Unit conducting?	—	NO	Replace Power Unit (PU1).
		—	YES	Replace Controller/Mechanical Control Board (PWB-P).

## 6. IMAGE QUALITY PROBLEMS

### 6-1. Troubleshooting Image Quality Problems

- This chapter is divided into two parts: “Initial Checks” and “Troubleshooting for Specific Image Quality Problems”.
- If an image quality problem occurs, first go through the “Initial Checks” and, if the cause is still not identified, continue to “Troubleshooting for Specific Image Quality Problems”.


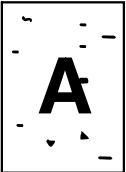
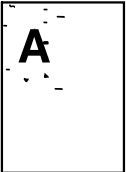
#### 6-2. Initial Checks

- Determine if the failure is attributable to a basic cause or causes.

Section	Step	Check	Result	Action
Installation site	1	The installation size complies with the requirements specified in “PRECAUTIONS FOR INSTALLATION” contained in the “GENERAL” section.	NO	Change the installation site.
Paper	2	The paper meets product specifications.	NO	Instruct the user to use recommended paper that meets product specifications.
	3	The paper is damp.	YES	Change the paper. Instruct the user on the correct methods for storing paper.
Original document	4	The document is not flat.	YES	Correct the document.
	5	Copies of a faint document (written in light pencil, etc.) are being made.	YES	Instruct the user to use a document with an appropriate image density.
	6	Copies of a highly transparent document (OHP transparencies, etc.) are being made.	YES	Instruct the user on how to copy transparent documents.
	7	The CIS is dirty.	YES	Clean the CIS.
PM parts	8	PM parts relating to image formation have reached the end of cleaning/replacement cycles.	YES	Clean or replace the PM parts.
Adjustments	9	There are adjustments that can improve image quality problems by being performed again.	YES	Perform the adjustment again.

6-3.      **Troubleshooting for Specific Image Quality Problems**

- Determine if the failure is attributable to the input system (Image Reading Section) or the output system (Engine section).

Check	Result		Cause
<p>Copy made at a reduced zoom ratio</p> <div><p>1177T03YA</p></div>	Full-size copy	<div><p>1177T04YA</p></div>	Input (image reading) system
	Reduced copy	<div><p>1177T05YA</p></div>	Output (printer) system

(1) Image reading system: Blank or black prints

<Sample of Image Quality Problem>



4011T035AA



4011T036AA

<Troubleshooting Procedures>d

Step	Check	Result	Action
1	Are there no bent connector pins on the cables connecting the control boards, are all connectors correctly plugged in, and are no cables broken?	NO	Correctly plug in the connectors. Replace connection cables.
2	Defective CIS.	YES	Replace the CIS.
3	Improper charging.	YES	Replace the HV1.
4	Defective PC Drum.	YES	Replace the Drum Cartridge.
5	Improper Print Head unit.	YES	Replace Print Head unit.
6	No Drum Cartridge.	YES	Install a Drum Cartridge.
7	No Toner Cartridge.	YES	Install a Toner Cartridge.

(2) Image reading system: Low image density

<Sample of Image Quality Problem>



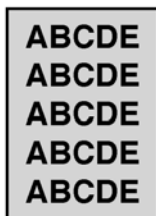
4011T003AA

<Troubleshooting Procedures>

Step	Check	Result	Action
1	Toner empty.	YES	Replace the Toner Cartridge.
2	Defective PC Drum	YES	Replace the Drum Cartridge.
3	Improper charging.	YES	Replace the HV1.
4	Poor image transfer.	YES	Replace the Image Transfer unit.
5	Improper Print Head unit.	YES	Replace Print Head unit.
6	Are there no bent connector pins on the cables connecting the control boards, are all connectors correctly plugged in, and are no cables broken?	NO	Correctly plug in the connectors. Replace connection cables.

**(3) Image reading system: Foggy background or rough image**

<Sample of Image Quality Problem>



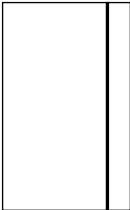
4011T004AA

<Troubleshooting Procedures>

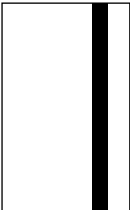
Step	Check	Result	Action
1	Does sunlight or any other extraneous light enter the machine?	YES	Protect the copier from extraneous light.
2	Is the document damaged or dirty?	YES	Replace the document.
3	Improper charging.	YES	Replace the HV1.
4	Defective PC Drum.	YES	Replace the Drum Cartridge.
5	Are there no bent connector pins on the cables connecting the control boards, are all connectors correctly plugged in, and are no cables broken?	NO	Correctly plug in the connectors. Replace connection cables.

(4) Image reading system: Black streaks or bands

<Sample of Image Quality Problem>



4011T017AA



4011T023AA

<Troubleshooting Procedures>

Step	Check	Result	Action
1	Is the document damaged or dirty?	YES	Replace the document.
2	Defective PC Drum.	YES	Replace the Drum Cartridge.
3	CIS is dirty.	YES	Clean the surface of CIS.
4	Defective CIS.	YES	Replace CIS.
5	Improper Fusing.	YES	Replace the Fusing unit.
6	Are there no bent connector pins on the cables connecting the control boards, are all connectors correctly plugged in, and are no cables broken?	NO	Correctly plug in the connectors. Replace connection cables.

(5) Image reading system: Black spots

<Sample of Image Quality Problem>



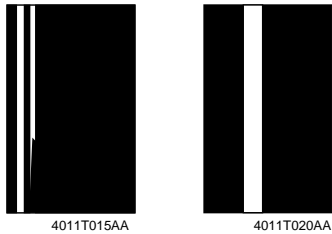
4011T521AA

<Troubleshooting Procedures>

Step	Check	Result	Action
1	Is the document damaged or dirty?	YES	Replace the document.
2	Scratch on the PC Drum.	YES	Replace the Drum Cartridge.
3	The problem has been eliminated after performing step 2.	NO	Replace the CIS Assy.

(6) Image reading system: Blank streaks or bands

<Sample of Image Quality Problem>

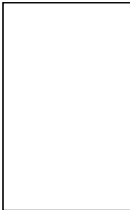


<Troubleshooting Procedures>

Step	Check	Result	Action
1	Defective Print head unit.	YES	Replace the Print head unit.
2	Defective the PC Drum.	YES	Replace the Drum Cartridge.
3	Defective CIS.	YES	Replace CIS.
4	Are there no bent connector pins on the cables connecting the control boards, are all connectors correctly plugged in, and are no cables broken?	NO	Correctly plug in the connectors. Replace connection cables.

(7) Printer system: Blank or black prints

<Typical Faulty Images>



4011T035AA



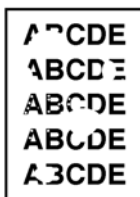
4011T036AA

<Troubleshooting Procedures>

Step	Check	Result	Action
1	Is a printed page blank?	YES	Check PH Unit connectors for proper connection.
2	Is the coupling of the drive mechanism of the Imaging Cartridge properly connected?	NO	Check coupling of drive mechanism for connection and correct as necessary, or replace Imaging Cartridge (Drum Cartridge, Toner Cartridge).
3	Is the drum charge voltage contact point or PC Drum ground contact point of the Imaging Cartridge properly connected?	NO	Check, clean, or correct contact point.
4	Is the High Voltage Unit (HV1) connector connected properly?	NO	Connect it properly.
5	Is the problem eliminated when step 4 was checked?	NO	Replace High Voltage Unit (HV1).
			Replace Controller/Mechanical Control Board (PWB-P).
			Replace PH Unit.

**(8) Printer system: Blank spots**

<Typical Faulty Image>



4011T008AA

<Troubleshooting Procedures>

Step	Check	Result	Action
1	Is paper damp?	YES	Replace paper for one just unwrapped.
2	Is the PC Drum scratchy?	YES	Replace Drum Cartridge.
3	Is there foreign matter on paper path?	YES	Remove foreign matter.
4	Is Image Transfer Roller dirty or scratchy?	YES	Replace Image Transfer Roller.
			Replace High Voltage Unit (HV1).
			Replace Controller/Mechanical Control Board (PWB-P).

**(9) Printer system: Smears on back**

<Typical Faulty Image>



4011T009AA

<Troubleshooting Procedures>

Step	Check	Result	Action
1	Is there foreign matter on paper path?	YES	Remove foreign matter.
2	Is Fusing Roller dirty or scratchy?	YES	Replace Fusing Unit (Fusing Roller).
3	Is Image Transfer Roller dirty or scratchy?	YES	Replace Image Transfer Roller.

(10) Printer system: Low image density

<Typical Faulty Image>



4011T003AA

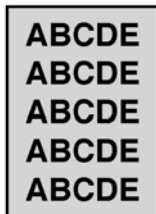
<Troubleshooting Procedures>

Step	Check	Result	Action
1	Is paper damp?	YES	Replace paper for one just unwrapped.
2	Is there toner left in Toner Cartridge?	NO	Replace Toner Cartridge.
3	Is PC Drum faulty (life)?	YES	Replace Drum Cartridge.
4	Is developing bias faulty?	YES	Replace High Voltage Unit (HV1). Replace Controller/Mechanical Control Board (PWB-P).
5	Is image transfer faulty?	YES	Replace Image Transfer Roller.
			Replace High Voltage Unit (HV1).
			Replace Controller/Mechanical Control Board (PWB-P).

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### (11) Printer system: Foggy background

<Typical Faulty Image>



4011T004AA

<Troubleshooting Procedures>

Step	Check	Result	Action
1	Is PC Drum scratchy?	YES	Replace Drum Cartridge.
2	Is developing bias contact terminal in good contact with the mating part?	NO	Clean contact terminal or check terminal position.
3	Is PH window dirty?	YES	Clean.
4	Is the problem eliminated after checks have been made up to step 3?	NO	Replace High Voltage Unit (HV1).
			Replace Controller/Mechanical Control Board (PWB-P).

### (12) Printer system: Blank streaks or bands

<Typical Faulty Images>



4011T015AA



4011T020AA

<Troubleshooting Procedures>

Step	Check	Result	Action
1	Is Image Transfer Roller dented, scratchy, or dirty?	YES	Replace Image Transfer Roller.
2	Is PC Drum scratchy or dirty?	YES	Replace Drum Cartridge.
3	Is Fusing Roller scratchy or dirty?	YES	Replace Fusing Unit (Fusing Roller).
4	Is PH window dirty?	YES	Clean.
5	Is the problem eliminated after checks have been made up to step 4?	NO	Replace Controller/Mechanical Control Board (PWB-P).

(13) Printer system: Black streaks or bands

<Typical Faulty Images>

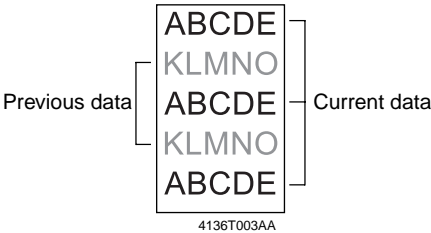


<Troubleshooting Procedures>

Step	Check	Result	Action
1	Is paper path dirty with toner?	YES	Clean.
2	Is PC Drum scratchy or dirty?	YES	Replace Drum Cartridge.
3	Is Fusing Roller scratchy or dirty?	YES	Replace Fusing Unit (Fusing Roller).
4	Is the problem eliminated after checks have been made up to step 3?	NO	Replace Controller/Mechanical Control Board (PWB-P).

(14) Printer system: Offset image

<Typical Faulty Image>



<Troubleshooting Procedures>

Step	Check	Result	Action
1	Is Fusing Roller faulty?	YES	Replace Fusing Unit (Fusing Roller).
2	Is Image Transfer Roller faulty?	YES	Replace Image Transfer Roller.

## 7. FAX ERROR

### 7-1. Communication Error

\*COMM.ERROR\*

(####)

4980P513AA

#### (1) Outline

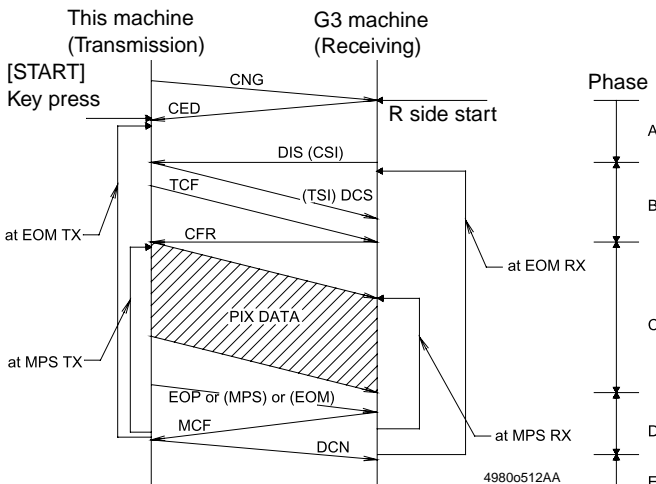
- Error caused by a problem of communication functioning. Five possible causes of errors are:
  1. Communication is discontinued by a machine error.
  2. Communication is discontinued by a machine trouble.
  3. Communication is discontinued by an error occurring at the destination station.
  4. Communication is discontinued by a protocol error.
  5. ADF Error on trouble.
- When communication is discontinued due to item 3 or 4, transmission is retried. In other case, transmission is canceled without retry.

#### (2) Error occurring during transmission

- The transmission error before "Phase-B" performs redial according to the redial interval of each country and the number of times.

The transmission error after "Phase-C" performs redial only one time. Transmission is canceled when an error occurs again. (can change in Soft SW)

When an error occurs by ADF TX, transmission is canceled without redial.





#### (3) Error occurring during reception

- Reception is canceled.

## 7-2. Error Code

### (1) Reception

Code	Possible Causes of Error.
0001	No G3 signal received within 35 sec. in manual receive mode.
0003	Received DIS after sending DIS signal.
0004	Received DCN after sending DTC signal.
0006	Detect busy tone within receiving phase B.
0009	Can not receive any signal within 35 sec. in manual polling mode.
0010	Received DCN signal after sending DTC signal in polling RX.
0011	Can not receive any correct response after sending three DTC signals.
0012	Remote side Password does not match in polling RX/our side no file to be polled.
0013	Can not receive carrier signal within 6 sec. after sending CFR in data phase C.
0014	Can not receive T.30 signal after sending FTT signal.
0015	Line polarity change within receiving phase B~D.
0016	Receive DCN signal after sending FTT signal.
0017	Can not receive any response from remote side after sending type of xxx_EOM signal.
0018	Can not detect energy within 6 sec. after sending FTT command.
0019	Received DCN signal after sending CFR signal.
001A	No energy on line over 6 sec. within phase C before any corrected ECM frame.
001D	Detect FSK signal, but did not receive any command within 6 sec.
001E	In phase C, have detected FSK signal, but did not receive any command within 6 sec.
0020	Can not correct frame within 6 sec., or in non-ECM mode, one decoding line over 6 sec.
0021	Remote-side disconnect at phase C (V.17).
0022	Owing to noise interference on the line, receiving side can't receive correct data within specified time (no ECM).
0023	<ul style="list-style-type: none"> <li>- Received "Remote monitoring password" error in RSD.</li> <li> <b>S-26</b> "Utility mode/ Admin.management/ Remote monitor".</li> <li> <b>S-80</b> "Service mode/ Admin. registration."</li> <li>- The Customer machine has updated the firmware now.</li> <li>- The Service Tech. Rep. updated remote machine firmware by RSD.</li> </ul>
0024	<ul style="list-style-type: none"> <li>- TX and RX machines both have different "machine ID (FAX model ID)" code in RSD.</li> <li>- The Customer machine has updated the firmware now.</li> <li>- The Service Tech. Rep. updated remote machine firmware by RSD</li> </ul>
0025	<ul style="list-style-type: none"> <li>- TX and RX machines have different "company ID (FAX machine maker ID)" code in RSD.</li> <li>- The Customer machine has updated the firmware now.</li> <li>- The Service Tech. Rep. updated remote machine firmware by RSD</li> </ul>

Code	Possible Causes of Error.
0026	- Remote monitor level error. Remote side can't access in RSD. - The Customer machine has updated the firmware now. - The Service Tech. Rep. updated remote machine firmware by RSD
0029	Mailbox password not programmed or matched for mailbox receiving.
002A	Line Problem
0030	Did not receive any signal within 6 sec.at phase D.
0031	Received incorrect signal at phase D (not EOP, MPS, EOM, DCS PPS_Q, PPS_Q, etc.).
0032	Did not receive carrier signal within 6 sec.after sending MCF. or RTP, RTN signal.
0033	Received DCN signal at phase D within pages (not last page).
003F	Remote side TSI not programmed in machine one touch or speed dial directory.
0040	Did not receive carrier signal within 6 sec. after sending CTR.
0041	Did not receive carrier signal within 6 sec. after sending PPR.
0042	Did not receive correct signal after sending RNR signal.
0043	Received incorrect signal at phase D in ECM mode.
0044	Did not receive carrier signal /FSK signal within 6 sec. after sending MCF in ECM mode.
0045	Did not receive any correct signal after sending RNR response with ERR signal.
0046	Receive incorrect signal when sending RNR response with ERR signal.
0047	Did not receive correct signal after sending ERR signal.
0048	Did not receive correct signal after receiving PPS_PRI_Q or PRI_Q, EOR_PRI_Q.
0049	Did not receive correct signal after sending PIP/PIN signal within 13 sec.
004A	Line energy over threshold lasts for 60 seconds after MCF and can not detect FSK or carrier signal in ECM mode.
004B	Can not detect correct FSK signal even though detected FSK tone within 6 sec.
004C	Command hand shake fail when V.34 RX.
004E	Receive DCN signal after sending DIS in V.34.
004F	Remote side disconnected after sending ANSam in V.8 phase.
0050	Did not receive any correct signal after sending CJ signal in V.8 phase.
0051	Did not receive phase C signal after phase B within 20 seconds in V.34.
0052	Did not receive phase D signal after phase C within 20 seconds in V.34.
0053	Modem disconnect after phase D in V.34.
0054	Remote side disconnected after phase D in V.8.
0055	Receive incorrect signal after sending DIS signal in V.34.
0056	Modem disconnect after sending CFR in V.34.
0057	Did not detect image signal within 6 seconds after sending CFR.
0058	Did not detect image signal within 6 seconds after modem enter to phase A in V.34.
005A	Modem can not detect any correct ECM frame within 3 minutes in phase C.

Code	Possible Causes of Error.
005B	Did not detect phase E signal after primary channel within 6 seconds.
005C	Detect busy tone within control channel after phase C.
005D	Remote-side disconnect at phase C (V.34).
005E	Did not detect control channel signal after received RCP frame within 6 seconds.
005F	Did not detect silence after sending JM signal for polling TX function.
0060	There are no bulletin files to be polled in V.34.
0061	Machine can not detect V.21 or V.8 signal within 35 seconds.
0062	Modem disconnect in phase D after our side sending out flag sequence in control channel.
0063	Did not receive any flag sequence in control channel within 6 seconds in phase D.
0064	Did not detect any control channel signal in phase D within 60 seconds even though energy still on the line.
0065	Did not detect any control channel signal within 60 seconds after detect silence in phase D.
0066	Did not receive T.30 signal or carrier signal after sending CFR in V.34.
0070	User presses stop key during receiving.
0071	Memory full during receiving.

## (2) Transmission

Code	Possible Causes of Error.
0080	Did not detect any G3 signal within 35 sec. specified by ITU-T in phase B.
0081	Received DTC signal in transmission phase.
0082	Transmitting unit receives a signal other than DIS or DTC. and DCN in phase B.
0083	Detected FSK signal, but did not receive any signal within 35 seconds.
0084	Detect DCN signal in phase B.
0085	Transmitting unit sending DCS 3 times consecutively, but each time receiver responds with DIS/DTC.
0086	Detected response signal other than DTC, DIS, FTT, DCN or CFR after sending DCS.
0087	Training attempt has failed because speed unit cannot adjust to low lower speed.
0088	Received DCN signal after sending out DCS signal.
0089	Remote side no mailbox function or not compatible.
008A	Remote side not enough memory for relay initiate.
008B	Receiver's protocol of DIS is received, but it is not compatible with our machine.
008C	Remote side not enough memory for relay initiate.
008D	Receiver's protocol of DIS is received, but remote side can't receive document temporary, may be run out of paper or other reason.
008E	Remote side CSI number not defined in machine one touch or speed dial directory.

Code	Possible Causes of Error.
008F	Modem not ready to receive V.34 data during 6 seconds after receiving CFR signal.
0090	Called side document not ready for our polling.
0091	Sending out DCS+TCF signal 3 times consecutively but no signal in response from receiver.
0092	Remote side disconnected during transmitting phase.
0093	Received DCN signal after sending out DCS signal for V.34.
0094	It is over 4 minutes to TX a ECM block (64K).
0095	Wrong ID number when Polling RX or Mail Box TX.
0099	Remote side disconnect after primary channel.
009A	Did not detect any signal after sending CI signal.
009C	Received DCN after sending DTC in V.34 polling RX.
009D	Remote side hang up before V.34 modem enters phase B state in V.34 polling RX.
009F	Did not receive any response from other side after sending PPS_EOM signal.
00A0	User stops or cancels transmission job.
00A1	Document JAM during transmission.
00AE	Did not finish V.8 procedure or detect V.21 signal after CM signal within 30 seconds.
00AF	Modem can not enter into control channel after TX side sends out RCP signal for V.34.
00B0	Did not receive any command after our side retry three DCS signal in V.34 TX.
00B1	Did not finish V.8 procedure or detect V.21 signal after ANSam signal within 35 seconds.
00B2	Did not detect phase B signal after our side sending CJ signal within 30 seconds.
00B3	Did not detect correct V.21 or JM signal after sending CM signal.
00B4	Did not detect correct phase B signal within 25 second after CM/JM signal exchange.
00B5	Did not detect phase C signal after phase B within 25 seconds.
00B6	Did not detect phase D signal within 25 seconds after CM/JM exchange.
00B7	Did not detect phase E signal after phase D within 30 seconds.
00B8	Remote side disconnect after our side sent DCS signal in V.34.
00B9	Receive T.30 signal other than DIS,DCS,CFR after sending DCS signal in V.34.
00BA	Did not receive correct signal after our side sent DTC signal in V.34.
00BB	Every time our side received DIS signal after sending DTC in V.34.
00BC	Modem not ready within 10 second after entering primary channel in V.34.
00BD	Can not detect correct V.21 or JM signal after detected FSK frequency.
00BE	Remote side no document to be polled after V8 handshaking.
00BF	Capability not match after V8 handshaking.
00C0	Remote side disconnect before entering primary channel in V.34.

Code	Possible Causes of Error.
00C1	At phase-D, transmitting unit sends out EOP 3 times consecutively, but receives no answer from receiving unit.
00C2	Remote side disconnect after sending out V.8 CM signal.
00C4	After sending MPS signal, the received signal is not one of MCF, RTN, PIP, PIN, RTP, DCN.
00C5	Received DCN signal after sending MPS signal.
00C9	At phase-D, sending MPS 3 times consecutively, but no answer from receiving unit.
00CA	After sending EOP signal, the received signal is not one of MCF, RTN, PIP, PIN, PRI-EOP, DCN.
00CB	After sending EOP signal, the received signal is DCN signal.
00CC	After sending EOM signal, the received signal is not one of MCF, RTN, PIP, PIN, RTP, DCN.
00CD	At phase-D, transmitting unit sends out EOM 3 times consecutively, but receives no answer.
00CE	At phase-D, transmitting unit sends out EOM, but receives DCN.
00CF	Received incorrect signal after sending DTC signal for V.34 polling.
00D0	Received ERR signal after sending EOR_NULL.
00D1	ECM TX received wrong command in phase D after PPS-EOP. (not PPR, MCF, PIP, PIN,.....).
00D2	Receive DCN after send command PPS-EOP signal.
00D3	Received DCN after sending PPS_NULL signal.
00D4	Received DCN after sending PPS_EOM signal.
00D8	Did not detect correct phase C signal for polling within 25 seconds.
00D9	Did not detect correct phase C signal after detecting silence after phase B.
00DA	Did not detect phase D signal within 30 seconds or remote side hang up over 6 seconds.
00DB	Did not receive any T.30 signal within 15 seconds in phase D.
00DC	Received T.30 signal in phase D other than DCS,DIS or DTC.
00DD	Remote side not the same model or no mailbox ID defined for mailbox TX.
00DE	Remote side no SUB capability in V.34.
00E0	At phase-D, transmitting unit sends out PPS_NULL 3 times consecutively but receives no answer.
00E1	Received incorrect response after sending PPS_NULL.
00E2	Did not receive any response in RR response procedure after sending PPS_NULL.
00E4	At phase-D, transmitting unit sends out PPS_MPS 3 times consecutively but no answer.
00E5	Received incorrect response after sending PPS_MPS.
00E6	Did not receive any response in RR response procedure after sending PPS_MPS.
00E7	Received DCN after sending PPS_MPS.

Code	Possible Causes of Error.
00E8	At phase-D, transmitting unit sends out PPS_EOP 3 times consecutively but no answer.
00E9	Receive PIN signal after sent last page three times.
00EA	Did not receive any response in RR response procedure after sending PPS_EOP.
00EB	At phase-D, transmitting unit sends out PPS_EOM 3 times consecutively but no answer.
00EC	Received incorrect response after sending PPS_EOM.
00ED	Did not receive any response in RR response procedure after sent out PPS_EOM.
00EE	At phase-D, transmitting unit sends out EOR_NULL 3 times consecutively but no answer.
00EF	Received incorrect response after sending EOR_NULL.
00F0	Did not receive any response procedure after sending EOR_NULL.
00F1	At phase-D, transmitting unit sends out EOR_MPS 3 times consecutively but no answer.
00F2	Received incorrect response after sending EOR_MPS.
00F3	Received ERR signal after sending EOR_MPS.
00F4	Did not receive any response in RR response procedure after sending EOR_MPS.
00F5	At phase-D, transmitting unit sends out EOR_EOP 3 times consecutively but no answer.
00F6	Received incorrect response after sending EOR_EOP.
00F7	After Received ERR, our side can not receive response after sending EOR_EOP command.
00F8	At phase-D, transmitting unit sends out EOR_EOM 3 times consecutively but no answer.
00F9	Received incorrect response after sending EOR_EOM.
00FA	Received ERR signal after sending EOR_EOM.
00FB	Did not receive any response in RR response procedure after sending EOR_EOM.
00FC	Did not receive any response after sending CTC.
00FD	Can't speed down to lower speed in ECM mode.
00FE	Memory full for transmission.
00FF	Redial all fail.

# 8. NETWORK ERROR

## 8-1. Troubleshooting Procedure Overview

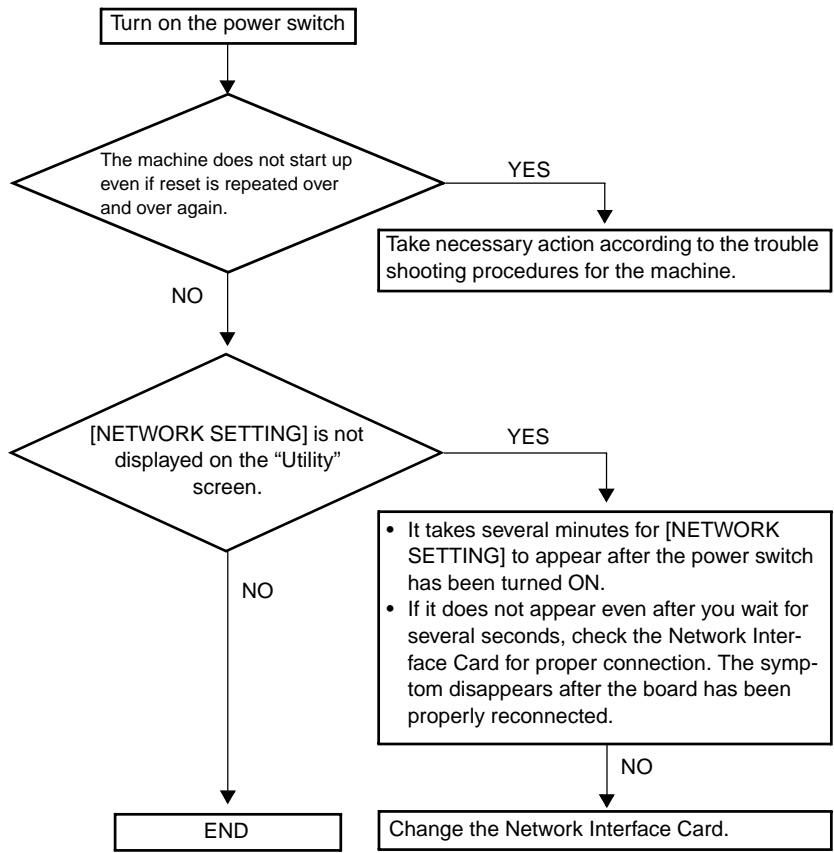
- If it is not possible to transfer data correctly with the various settings made on [NETWORK SETTING], the network or telephone line is probably defective.

**NOTE**

Network setting and line checks should be made by the network administrator (system administrator).

## 8-2. Troubleshooting Procedure Chart

1. If network settings are not correct, check them by following the flowchart below.



## 8-3. Main Error Messages and Their Remedies

Message	Cause	Remedy
*COMM.ERROR* XXXX SERVER	Communication is not possible because of some problem in the machine or the condition of the network or server.	Check the transmission results. Consult with the network administrator.
*CANNOT CONNECT* XXXX SERVER	A connection to the server cannot be established.	Check that the Ethernet cable is correctly connected. Check the "E-MAIL SETTING 1", "E-MAIL SETTING 2" and "NETWORK SETTING" settings. Consult with the network administrator.
*CANNOT GET IP* XXXX SERVER	The IP address could not be assigned by the DNS or DHCP server.	Consult with the network administrator.
*DISCONNECT* XXXX SERVER	The connection to the server was cut.	Consult with the network administrator.
*WRONG PASSWORD* XXXX SERVER	The password is incorrect, so the machine could not log onto the server.	For a POP3 server, check the "E-MAIL SETTING 2" setting. Consult with the network administrator.
*RECEIVE WRONG DATA*	An e-mail that cannot be printed by this machine was received. (For a file attachment in a format other than TIFF-F)	Ask the sender to send a TIFF-F file or text in the correct format.
*MEM.FULL/TX CANCEL*	While sending an e-mail, the size of the data for the scanned image has exceeded the capacity of the memory.	Retrieve all received e-mail stored in the memory.
*MEM.FULL/RX CANCEL* XXXX SERVER	While receiving an e-mail, the size of the data for the scanned image has exceeded the capacity of the memory.	Retrieve all received e-mail stored in the memory.
*FILE.FULL/TX CANCEL*	While sending an e-mail, the maximum of number of managed memory file is used.	Retrieve all received e-mail stored in the memory.
*FILE.FULL/RX CANCEL* XXXX SERVER	While receiving an e-mail, the maximum of number of managed memory file is used.	Retrieve all received e-mail stored in the memory.
*SERVER MEMORY FULL* SMTP SERVER	The memory of the SMTP server has become full while sending an e-mail.	Consult with the network administrator.
*FTP SERVER ERROR*	While uploading scan data, the data could not be correctly uploaded to the FTP server.	Please consult your network administrator for details.

## 8-4. Troubleshooting Functions

### Scan to E-Mail Transmission

No.	Condition	Cause	Action
1	Transmission is not possible.	The connections are incorrect.	Check the LED indicator on the hub, and check the connections.
		The settings necessary for the device are not registered.	Specify the necessary network settings.
		The LAN cable is damaged.	Replace the LAN cable.
2	Transmission is possible, but the image cannot be outputted at the recipient's terminal or computer.	The recipient's terminal is not able to handle the sent image.	Change the size, resolution and coding method so that they are supported by the recipient's terminal, and then try sending the data again.
		The document text was not inserted when the data was sent.	With some e-mail applications, if an e-mail is received containing no text and only an attached file, it may not be possible to open the attached file. Therefore, text should be inserted into the document that is sent.

### Internet Fax Transmission

No.	Condition	Cause	Action
1	Transmission is not possible.	The connections are incorrect.	Check the LED indicator on the hub, and check the connections.
		The settings necessary for the device are not registered.	Specify the necessary network settings.
		The LAN cable is damaged.	Replace the LAN cable.
2	An interruption in the transmission was specified, but the transmission was not interrupted.	It takes some time to interrupt an Internet fax transmission.	Wait until the transmission is interrupted.

## Internet Fax Reception

No.	Condition	Cause	Action
1	Reception is not possible.	The connections are incorrect.	Check the LED indicator on the hub, and check the connections.
		The setting to not automatically check for new e-mail messages has been specified.	Specify a time interval for automatically checking for new e-mail messages. Receive manually.
		The settings necessary for the device are not registered.	Specify the necessary network settings.
		The same POP3 user name is being used by a different e-mail application or another user.	Do not use the same POP3 user name that is used by a different e-mail application.
		The LAN cable is damaged.	Replace the LAN cable.
2	The data is received, but not printed.	An e-mail message with data of an incompatible format attached or with no data was received.	Ask the sender to send a TIFF-F file or text.
		The memory is full.	Print saved documents and reduce the amount of memory that is used, and then ask the sender to send the data again.
3	The same document is received many times.	Since the size of the mail is too large, the connection with the server times out while the data is being received.	Specify that the data be kept on the computer, and delete the corresponding e-mail messages from the server. Ask the sender to try sending e-mail messages of smaller sizes.
4	An interruption in the reception was specified, but the reception was not interrupted.	It takes some time to interrupt an Internet fax reception.	Wait until the transmission is interrupted.

## Direct Fax Sending (Gateway TX)

No.	Condition	Cause	Action
1	Data does not arrive at the copier.	The Unimessage Pro I-Net Portal settings are incorrect.	Check the Unimessage Pro I-Net Portal settings.
		Since the size of the received data is large, it cannot be received due to the server's limitations.	Reduce the size of the data, for example, by decreasing the number of pages, and then try sending again.
2	A fax cannot be sent from this copier.	The communication mode for gateway transmissions is incorrectly specified.	The "GATEWAY TX" parameter must be set to "ENABLE", and the communication mode must be set correctly.

## PageScope Light

No.	Condition	Cause	Action
1	A connection with PageScope Light cannot be established.	The IP address for the device is not specified correctly.	Specify the IP address.
		The URL setting in the Web browser is incorrect.	In the "Address" box, type the IP address of the specified device.
		The settings in the Web browser are incorrect.	Even though the device can be accessed, certain settings must be specified according to the network configuration in order to establish a connection. For details, contact your network administrator.
		If a proxy is specified with the browser and the IP address of this copier cannot be recognized by the proxy server, the PageScope Light window cannot be displayed.	Use the proxy settings in the browser to add the IP address of this copier to the list of exceptions that will not use the proxy server.
		The LAN cable is damaged.	Replace the LAN cable.
2	Could not login using Administrator mode.	Before this login, a different user name and password had been entered.	Once login is successful, that user name and password is saved in the browser until the browser is closed. Close the browser, and then start it up again.
3	The text in the window is disorganized.	The browser is too small.	Increase the size of the browser.
		An appropriate font size is not selected.	Specify an appropriate font size for the computer and browser.
4	Some deleted characters remain in the window.	Operations differ depending on the browser used.	Reload the browser window or rescan.

No.	Condition	Cause	Action
5	The number of digits in an input or display area and the number of characters that can be registered are different.	Depending on the browser, scroll within the input area. If this is not possible, this should not affect the actual setting operation, although it may be a problem for displaying.	—
6	Some characters cannot be specified or displayed.	Depending on the operating system, some characters cannot be specified or displayed.	—
7	Space characters cannot be specified or displayed.	Spaces entered at the end of words may be removed.	—
8	Entered data was erased when an error occurred while specifying settings.	Depending on the browser, settings that appear as “*”, such as passwords, may be erased.	—

## 8-5. List of Communication Error Codes

- The following error codes appear in TX Result Report, RX Result Report.

Error code	Description
0072	A connection to the SMTP server cannot be established.
0073	Communication is not possible because of some problem in the machine or the condition of the network or SMTP Server.
0074	The connection to the SMTP server was cut.
0075	The memory of the SMTP server has become full while sending an e-mail.
007B	The connection is disconnected during gateway transmission.
007C	A Direct fax that cannot be forward transmit by this machine was received. (For a file attachment in a format other than TIFF-F)
007D	While receiving a Direct fax, the size of the data for the scanned image has exceeded the capacity of the memory.
007E	While receiving a Direct fax, the maximum of number of managed memory file is used.
0096	The IP address could not be assigned by the DNS server.
0097	The IP address could not be assigned by the DNS server.
0098	The IP address could not be assigned by the DNS server.
009B	A connection to the DNS server cannot be established.
00a2	While receiving an e-mail, the maximum of number of managed memory file is used.
00a3	A connection to the POP3 server cannot be established.
00a4	The password is incorrect, so the machine could not log onto the POP3 server.
00a5	Communication is not possible because of some problem in the machine or the condition of the network or POP Server.
00a6	The connection to the POP3 server was cut.
00a7	An e-mail that cannot be printed by this machine was received. (For a file attachment in a format other than TIFF-F)
00a8	While receiving an e-mail, the size of the data for the scanned image has exceeded the capacity of the memory.
00A9	A connection to the FTP server cannot be established.
00AA	The password is incorrect, so the machine could not log onto the FTP server.
00AB	Communication is not possible because of some problem in the machine or the condition of the network or FTP Server.
00AC	The connection to the FTP server was cut.
00AD	The FTP server cannot store the data that is sent from the machine.

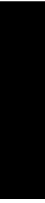


# PF-125

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## Service Manual

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# GENERAL

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# 1. SPECIFICATIONS

Name	: 2nd Paper Feed Cassette
Type of paper	: Plain and recycled paper: 60 to 90 g/m <sup>2</sup> (16 to 24 lb.)
Media sizes	: A4 L and Letter L
Paper capacity	: Maximum 500 sheets (80 g/m <sup>2</sup> ) (21 lb.)
Registration	: Center
Power source	: DC 24 V, DC 5 V (supplied by main unit)
Power consumption	: Less than 7 W
Dimension	: W:401 mm (15-3/4 in.) × D:615 mm (24-1/4 in.) × H:138 mm (5-1/2 in.)
Weight	: 4.3 kg (9-1/2 lb.)
Environment	: Same as the copier





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# DIS/REASSEMBLY, ADJUSTMENT


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# 1. MAINTENANCE SCHEDULE

- To ensure that this machine produces good printed pages and to extend its service life, it is recommended that the maintenance jobs described in this schedule be carried out as instructed.

PM Parts	Clean	Replace		Ref. Page in This Manual
		Continuous	Making one printed page per job	
Paper Take-Up Roll	When a paper take-up failure occurs	When a paper take-up failure occurs		 <b>D-2</b>

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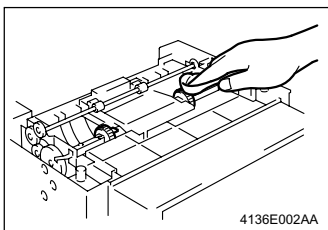
## NOTES

- *K = 1,000 printed pages*
  - *The contents of the Maintenance List are subject to change without notice.*
  - *For the part numbers, see Parts Manual and Parts Modification Notice.*
-

## 2. REPLACEMENT/CLEANING OF PARTS

### (1) Cleaning of the Paper Take-Up Roll

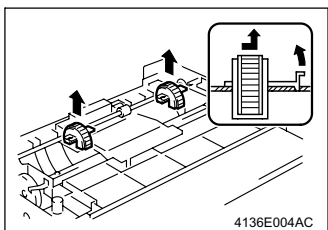
1. Raise the main unit to separate it from the Paper Feed Cassette.



2. Using a soft cloth, wipe clean the surface of the Paper Take-Up Roller.

### (2) Replacement of the Paper Take-Up Roll

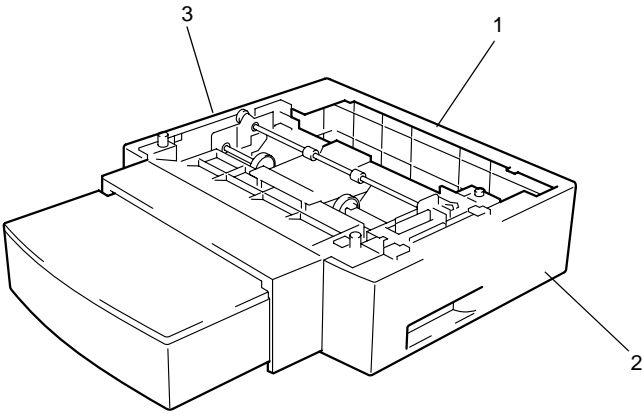
1. Raise the main unit to separate it from the Paper Feed Cassette.



2. Remove the Paper Take-Up Roller at the two points indicated.

### 3. DISASSEMBLY/REASSEMBLY

#### 3-1. Identification of Exterior Parts and Removal Procedures for Them



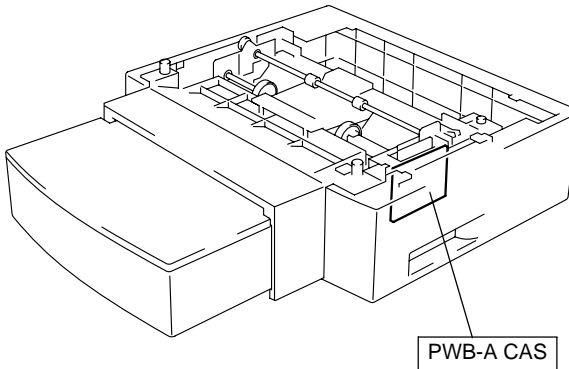
4516D001AA

No.	Name	Removal Procedure
1	Rear Cover	Remove the four screws. → Remove the Rear Cover.
2	Right Cover	Remove the Rear Cover. → Remove the two screws. → Remove the Right Cover.
3	Left Cover	Remove the Rear Cover. → Remove the two screws. → Remove the Left Cover.


### 3-2. Removal of Circuit Boards

#### NOTES

- When removing a circuit board, refer to the precautions for handling printed circuit boards and follow the corresponding removal procedures.
- The following removal procedures omit the removal of the applicable component from connectors and circuit board supports.
- When it is necessary to touch ICs and other electrical components on the circuit board, be sure to first ground yourself.



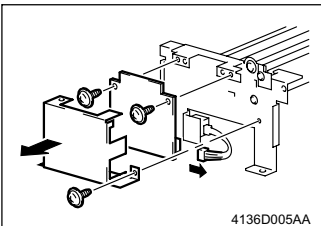
4516D002AA

Symbol	Name	Removal Procedure
PWB-A CAS	Paper Feed Cassette Control Board	 <b>D-4</b>

#### (1) Removal of the Paper Feed Cassette Control Board

1. Remove the Paper Feed Cassette Paper Take-Up Unit.

 **D-5**



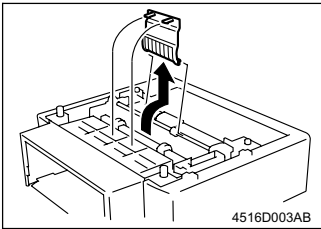
4136D005AA

2. Remove the screw, and then remove the cover.
3. Remove the two screws, unplug the connector, and then remove the Paper Feed Cassette Control Board.

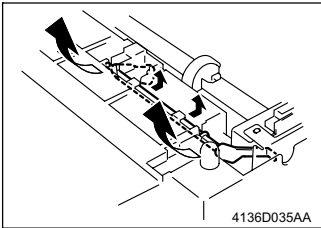
### 3-3. Disassembly

#### (1) Removal of the Paper Feed Cassette Paper Take-Up Unit

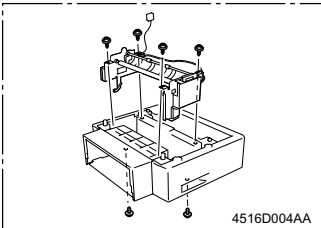
1. Raise the main unit to separate it from the Paper Feed Cassette.



2. Unhook the two tabs, and then remove the cover.



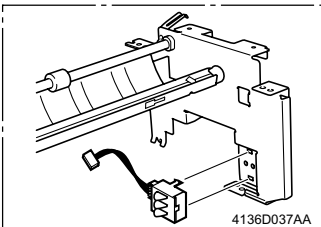
3. Remove the actuator.



4. Remove the six screws, unplug the two connectors, and then remove the Paper Feed Cassette Paper Take-Up Unit.

#### (2) Removal of the Paper Size Detecting Switch

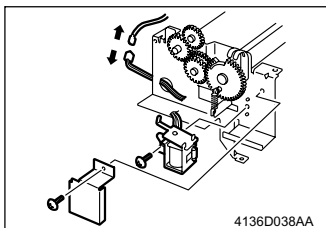
1. Remove the Paper Feed Cassette Paper Take-Up Unit.



2. Unplug the connector, and then remove the Paper Size Detecting Switch.

### (3) Removal of the Paper Feed Cassette Paper Take-Up Solenoid

1. Remove the Paper Feed Cassette Paper Take-Up Unit.



2. Remove the screw, and then remove the cover.

3. Remove the screw, unplug the connector, and then remove the Paper Feed Cassette Paper Take-Up Solenoid.





KONICA MINOLTA



KONICA MINOLTA

# **SERVICE MANUAL**

GENERAL

## **KONICA MINOLTA FAX 2900** **KONICA MINOLTA FAX 3900**

Includes PF-125



## 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 “ DANGER”, “ WARNING”, and “ 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.

 **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:

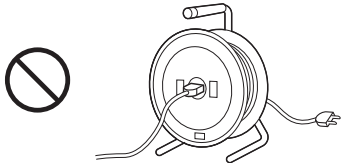
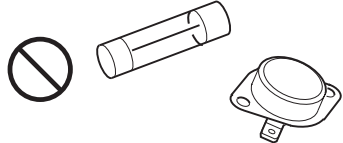
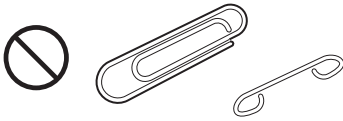
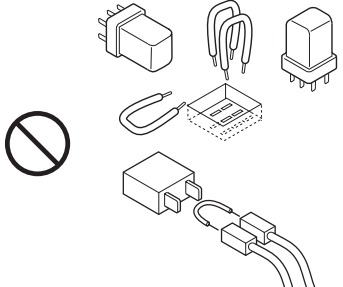


 :Precaution when servicing the product.	 General precaution	 Electric hazard	 High temperature
 :Prohibition when servicing the product.	 General prohibition	 Do not touch with wet hand	 Do not disassemble
 :Direction when servicing the product.	 General instruction	 Unplug	 Ground/ Earth

# SAFETY WARNINGS

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

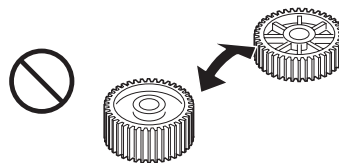
Konica Minolta brand products are renowned for their high reliability. This reliability is achieved through high-quality design and a solid service network.

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.

⚠ DANGER: PROHIBITED ACTIONS	
<ul style="list-style-type: none"> <li>Using any cables or power cord not specified by KMBT.</li> </ul>	
<ul style="list-style-type: none"> <li>Using any fuse or thermostat not specified by KMBT. Safety will not be assured, leading to a risk of fire and injury.</li> </ul>	
<ul style="list-style-type: none"> <li>Disabling fuse functions or bridging fuse terminals with wire, metal clips, solder or similar object.</li> </ul>	
<ul style="list-style-type: none"> <li>Disabling relay functions (such as wedging paper between relay contacts)</li> </ul>	
<ul style="list-style-type: none"> <li>Disabling safety functions (interlocks, safety circuits, etc.) Safety will not be assured, leading to a risk of fire and injury.</li> </ul>	
<ul style="list-style-type: none"> <li>Making any modification to the product unless instructed by KMBT</li> </ul>	

## DANGER: PROHIBITED ACTIONS

- Using parts not specified by KMBT



## 2. 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

#### WARNING: Wall Outlet

- Check that mains voltage is as specified. Plug the power cord into the dedicated wall outlet with a capacity greater than the maximum power consumption.

If excessive current flows in the wall outlet, fire may result.

- If two or more power cords can be plugged into the wall outlet, the total load must not exceed the rating of the wall outlet.

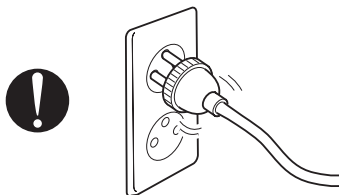
If excessive current flows in the wall outlet, fire may result.



#### WARNING: Power Plug and Cord

- Make sure the power cord is plugged in the wall outlet securely.

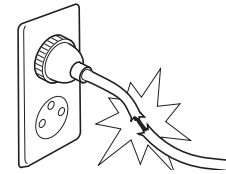
Contact problems may lead to increased resistance, overheating, and the risk of fire.



## WARNING: Power Plug and Cord

- 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.



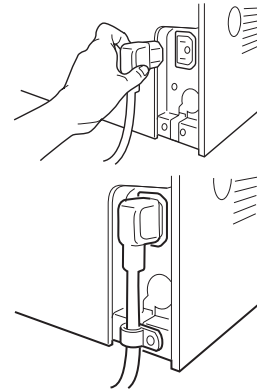
- When using the power cord (inlet type) that came with this product, be sure to observe the following precautions:

- a. Make sure the connector is securely inserted in the inlet on the rear panel of the product.

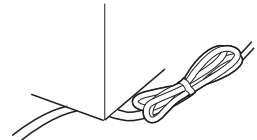
Secure the cord with a fixture properly.

- b. If the power cord or sheath is damaged, replace with a new power cord (with plugs on both ends) specified by KMBT.

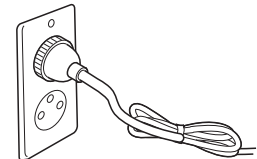
If the power cord (inlet type) is not connected to the product securely, a contact problem may lead to increased resistance, overheating, and risk of fire.



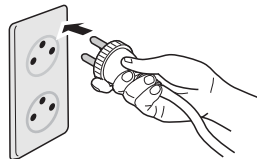
- Check whether the power cord is not stepped on or pinched by a table and so on.  
Overheating may occur there, leading to a risk of fire.



- Do not bundle or tie the power cord.  
Overheating may occur there, leading to a risk of fire.



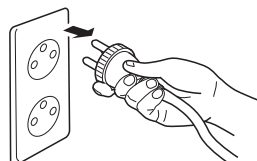
- Check whether dust is collected around the power plug and wall outlet.  
Using the power plug and wall outlet without removing dust may result in fire.



- Do not insert the power plug into the wall outlet with a wet hand.  
The risk of electric shock exists.



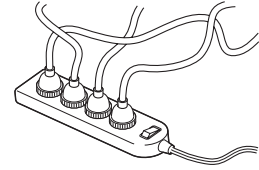
- When unplugging the power cord, grasp the plug, not the cable.  
The cable may be broken, leading to a risk of fire and electric shock.



### WARNING: Wiring

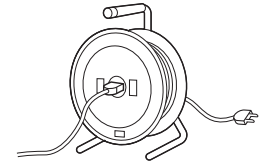
- Never use multi-plug adapters to plug multiple power cords in the same outlet.

If used, the risk of fire exists.



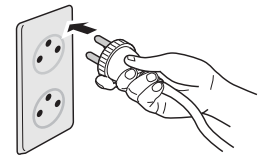
- When an extension cord is required, use a specified one. Current that can flow in the extension cord is limited, so using a too long extension cord may result in fire.

Do not use an extension cable reel with the cable taken up. Fire may result.



### WARNING: Ground connection

- Check whether the product is grounded properly. If current leakage occurs in an ungrounded product, you may suffer electric shock while operating the product. Connect power plug to grounded wall outlet.



## 2. Installation Requirements

### WARNING: Prohibited Installation Place

- 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.

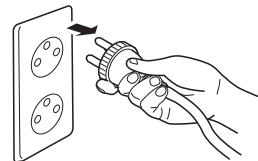
A risk of fire and electric shock exists.



### WARNING: When not using product for a long time

- 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.

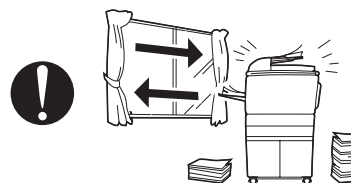


### CAUTION: Ventilation

- 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



### CAUTION: Fixing

- Be sure to lock the caster stoppers.

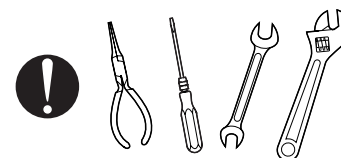
In the case of an earthquake and so on, the product may slide, leading to a injury.



### CAUTION: Inspection before Servicing

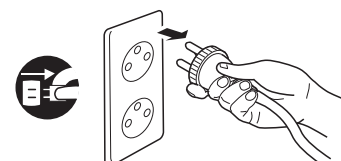
- Before conducting an inspection, read all relevant documentation (service manual, technical notices, etc.) and proceed with the inspection following the prescribed procedure, using only the prescribed tools. Do not make any adjustment not described in the documentation.

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

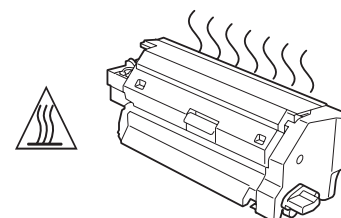


- Before conducting an inspection, be sure to disconnect the power plugs from the product and options.

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.

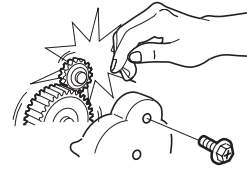


- The area around the fixing unit is hot.  
You may get burnt.



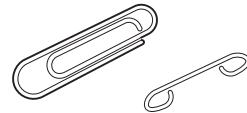
## WARNING: Work Performed with the product Powered

- 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.



## WARNING: Safety Checkpoints

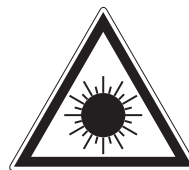
- Check the exterior and frame for edges, burrs, and other damages.  
The user or CE may be injured.
- Do not allow any metal parts such as clips, staples, and screws to fall into the product.  
They can short internal circuits and cause electric shock or fire.
- Check wiring for squeezing and any other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



## ! WARNING: Safety Checkpoints

- 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.



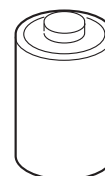
- Do not remove the cover of the write unit. Do not supply power with the write unit shifted from the specified mounting position.

The laser light can enter your eye, leading to a risk of loss of eyesight.



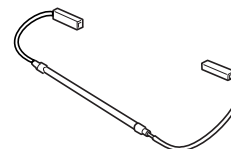
- When replacing a lithium battery, replace it with a new lithium battery specified in the Parts Guide Manual. Dispose of the used lithium battery using the method specified by local authority.

Improper replacement can cause explosion.



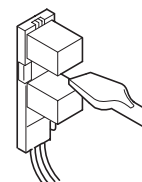
- After replacing a part to which AC voltage is applied (e.g., optical lamp and fixing lamp), be sure to check the installation state.

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.



- 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.



## WARNING: HANDLING OF CONSUMABLE

- 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.

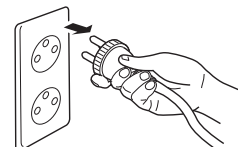


- Never throw the used cartridge and toner into fire.  
You may be burned due to dust explosion.



## CAUTION: 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.



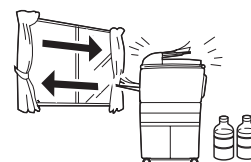
- Do not replace the cover or turn the product ON before any solvent remnants on the cleaned parts have fully evaporated.  
A risk of fire exists.



- 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.



### **3. MEASURES TO TAKE IN CASE OF AN ACCIDENT**

1. 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. CONCLUSION**

1. Safety of users and customer engineers depends highly on accurate maintenance and administration. Therefore, safety can be maintained by the appropriate daily service work conducted by the customer engineer.
2. When performing service, each product on the site must be tested for safety. The customer engineer must verify the safety of parts and ensure appropriate management of the equipment.

## 5. 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.



# INDEX (General)

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GENERAL

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MECHANICAL/ELECTRICAL

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# GENERAL

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# 1. SPECIFICATIONS

## 1-1. Main Unit

Type	: Desktop
Original scanning system	: Scanning in main scanning direction with a CIS (Contact Image System) sensor.
Photo conductor type	: OPC (Organic Photo conductor)
Copying system	: Electrostatic dry Powdered image transfer to plain paper with laser
Copy Resolution	: 600 dpi × 600 dpi
Paper feed-in system	: 2-Way system (Tray1 and Bypass Tray) *3-Way system is possible if optional PF-125 (Tray2) is installed.
Exposure system	: Unit scanning slit exposure
Developing system	: FMT (Fine Micro Toning) single component developing
Drum-charging system	: Rotating brush with pre-charge film
Image transfer system	: Roller transfer
Paper separation system	: Curvature separation + Charge Neutralizing needle
Fusing system	: Heat roller
Max. Original size	: Up to Legal size
Memory Capacity	: STD: 16 MB (48 MB Maximum with 32 MB Option Memory: KONICA MINOLTA FAX 3900 only)

### Copy Medium

Paper source		Tray1	Tray2	Bypass Tray
Type	Plain paper (60 to 90 g/m <sup>2</sup> ) (16 to 24 lb.)	○	○	○
	Recycled paper (60 to 90 g/m <sup>2</sup> ) (16 to 24 lb.)	○	○	○
	Special paper (91 to 163 g/m <sup>2</sup> ) (24 to 43 lb.)	○	—	○
	Transparencies	○	—	○
	Label sheets	○	—	○
	Envelopes	○	—	○
Dimension	Maximum (width × length)	216 × 356 mm	A4 L, Letter L	216 × 356 mm
	Minimum (width × length)	105 × 148 mm		105 × 148 mm

### NOTE

The dimension for Tray2 is fixed at A4L or Letter L.

Copy speed : 16 copies/minute (at full size and 600 dpi × 600 dpi, with ADF)  
(copies/min.)  
Continuous print speed : More than 16 sheets/minute (with plain A4 L or Letter L paper)  
(sheets/min.)  
Warm-up time : Less than 25 seconds (at a room temperature of 23 °C and at the rated voltage)

#### Zoom Ratios

		Metric Size	(Inch Size)
Fixed	Full size	×1.00	×1.00
		×1.15	×1.29
		×1.41	×1.54
	Enlargement	×2.00	×2.00
		×0.81	×0.78
		×0.70	×0.64
Variable	Reduction	×0.50	×0.50
		×0.50 to ×2.00 (in ×0.01 increments)	

Fusing temperature : 200 °C

#### Power /Current Consumption (main unit only)

Voltage	Maximum power consumption
110 V-127 V	770 W-890 W
220 V-240 V	814 W-888 W

Power source : 110 V-127 V, 220 V-240 V 50/60 Hz  
Dimensions : Width....416 mm  
Depth....419 mm  
Height...408 mm  
Weight : 12 kgs  
Original type : Plain paper: c (13-32 lb.)  
Width: 148 to 216 mm; length: 140 to 1000 mm  
Original capacity : Maximum 50 sheets (60-80 g/m<sup>2</sup>)  
Registration : Center  
Original loading orientation : Face up  
Scan speed : 2.5 sec (plain A4 L, with standard mode of original feeding)

Original types	Possible problems
Originals bound with staples or paper clips	Incorrect paper take-up, damaged originals or drive malfunctions due to jammed paper clips
Originals bound with glue	Incorrect paper take-up or damaged originals
Folded, torn or extremely wrinkled originals	Incorrect paper take-up or damaged originals
Curled originals (more than 10 mm from front edge)	Paper misfeeds due to folded or skewed originals

## 1-2. GDI Printer Function

RAM	: Share with main unit.
Interfaces	: USB Revision 1.1 (except for Windows 95 and Windows NT)
Printer Language	: GDI
Fonts	: Windows
Supported Operating Systems	: Windows XP (SP1 or later)/Windows 2000 (SP3 or later)/ Windows Me/Windows 98 Second Edition
Web Browser	: Internet Explorer 4.0 or later

## 1-3. FAX Function

### General

Compatibility	: Super G3/ G3/ ECM (Error correction mode)
Scanning Resolution	: STD: 204 × 98 (3.85 lines/mm) Fine: 204 × 196 (7.7 lines/mm) Super Fine: 204 × 392 (15.4 lines/mm)
Line	: PSTN/PBX
Data Transmission Rate	: 33.6 kbps (V.34 JBIG)
Coding Method	: MH/ MR/ MMR/ JBIG *JBIG (KONICA MINOLTA FAX 3900 ONLY)
Scanning Area	: Sheet through scanning Maximum 208 mm
Transmission Speed	: 4 second: KONICA MINOLTA FAX 2900 3 second: KONICA MINOLTA FAX 3900 *ITUT NO.1, A4 size Normal resolution without header
Internet fax	: Enable (KONICA MINOLTA FAX 3900 only)

### Dialing

Direct dialing	: Entering the fax number directly using the 10-Key Pad.
One touch dial	: 32keys: KONICA MINOLTA FAX 2900 64keys: KONICA MINOLTA FAX 3900
Speed dial	: 100 fax numbers: KONICA MINOLTA FAX 2900 200 fax numbers: KONICA MINOLTA FAX 3900
Group dial	: 32 groups: KONICA MINOLTA FAX 2900 64 groups: KONICA MINOLTA FAX 3900
Program dial	: NO/4 keys (No. 61,62,63,64)
Other dialing	: Pause insert, Phone Book dial, On-hook dial, Automatic redial, Redial, Chain dial, Combination dial

## Transmission

- Transmission mode : ADF TX, Memory TX, Batch TX, Broadcast TX,  
Confidential Mailbox TX,  
F code TX (SubAddress TX, SID TX), Forward TX  
Manual TX, Polling TX, Quick Memory TX, Book TX,  
Relay initiate TX, Reservation TX, Timer TX,
- TX resolution mode/ TX  
image mode : Standard (204 dpi × 98 dpi),  
Fine (204 dpi × 196 dpi),  
Super fine (204 dpi × 392 dpi),  
Standard + halftone (204 dpi × 98 dpi),  
Fine + halftone (204 dpi × 196 dpi),  
Super fine + halftone (204 dpi × 392 dpi)

## Receiving

- Receiving mode : Auto RX, Closed network RX, Confidential Mailbox RX,  
Inward Polling RX, Manual RX, Memory RX, Substitute RX,
- RX resolution : 204 dpi × 98 dpi, 204 dpi × 196 dpi, 204 dpi × 392 dpi,  
406 dpi × 392 dpi
- Max. recording paper  
size : A4/ Legal

## Report

- : Activity report, Back up RAM error report,  
G3 protocol monitor report, Memory image print,  
Power failure report, Reservation report, RX result report,  
Service report, TX result report,

## List

- : Key setting list, Machine status list, Memory data list,  
One-touch dial list, Service data list, Speed dial list,

## Other Features

- : Automatic paper selection, Backup of memory,  
Confirmation of communication result, Daylight saving time,  
Date/Time setting, Display of destination station, Footer,  
Header, Package reception printing, Pause insert,  
Quick memory printing, Remote monitor, RX print cancel,  
RX printing mode (100 % reception/ Reception print mode/  
Cut mode), Separate print, Smoothing, Speaker, Time zone,  
Tone signal transmission, TX cancel, RX cancel

#### 1-4. Network Function (KONICA MINOLTA FAX 3900 only)

Interface	: Ethernet 10/100Base T /TX (RJ-45)
Data format	: MIME, Base64
Content Type	: Multi-part/Mixed (text/plain, image/tiff)
I-FAX Communication Protocol	: TX: SMTP RX: POP3
I-FAX Data Format	: E-Mail Format: MIME Attached File format: TIFF-F
I-FAX Cording method	: Transmission: MH Reception: MH, MR, MMR, JBIG
I-FAX TX resolution	: 204 dpi × 98 dpi 204 dpi × 196 dpi
I-FAX RX resolution	: 204 dpi × 98 dpi 204 dpi × 196 dpi 204 dpi × 392 dpi 200 dpi × 100 dpi 200 dpi × 200 dpi
Scan to E-Mail / Scan to FTP Communication Protocol	: E-Mail TX: SMTP FTP TX: FTP
Scan to E-Mail / Scan to FTP Data Format	: E-Mail Format: MIME Attached File format: TIFF, PDF
Scan to E-Mail / Scan to FTP Cording method	: MH, MR, MMR, JPEG (For Color and Gray mode, fixed at JPEG)
Scan to E-Mail / Scan to FTP resolution	: 150 dpi × 150 dpi 300 dpi × 300 dpi 600 dpi × 600 dpi

## **2. PRECAUTIONS FOR INSTALLATION**

### **2-1. Installation Site**

To ensure utmost safety and avoid breakdown, this machine should NOT be used in a place:

- Where it will be subjected to extremely high or low temperature or humidity.
- Where it will be subjected to sudden fluctuations in either temperature or humidity.
- Which is exposed to direct sunlight.
- Which is in the direct air stream of an air conditioner, heater, or ventilator.
- Which has poor ventilation or is dusty.
- Which does not have a stable, level floor or where it will receive undue vibration.
- Which is near any kind of heating device.
- Which is near volatile flammables (thinner, gasoline, etc.).
- Where it may be splashed with water and electric leakage is likely to occur.
- Which puts the operator in the direct stream of exhaust from this machine.
- Where ammonia gas might be generated.

### **2-2. Power Source**

- If any other electrical equipment is sourced from the same power outlet, make sure that the capacity of the outlet is not exceeded.
- Use a power source with little voltage fluctuation.
- Never connect by means of a multiple socket any other appliances or machines to the outlet being used for this machine.
- Ensure that this machine does not ride on the power cord or communications cable of other electric equipment, and that it does not become wedged into or underneath the mechanism.
- Make the following checks at frequent intervals:
  - \* Is the power plug abnormally hot?
  - \* Are there any cracks or scrapes in the cord?
  - \* Has the power plug been inserted fully into the outlet?
  - \* Does something, including this machine itself, ride on the power cord?

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Use an outlet with a capacity of 110/120/127 V, or 220-240 V.

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### 3. PRECAUTIONS FOR USE

#### 3-1. To Ensure this Machine is Used in an Optimum Condition

- Never place a heavy object on this machine or subject this machine to shocks.
- Insert the power plug all the way into the outlet.
- Do not attempt to remove any panel or cover that is secured while this machine is in a print cycle.
- Do not turn OFF this machine while it is in a print cycle.
- Provide good ventilation if this machine is to be used for a long time in a narrow room.
- Never use flammable sprays near this machine.
- If this machine becomes inordinately hot or produces abnormal noise, immediately turn it OFF and unplug it.
- Do not turn ON the power switch at the same time that you plug the power cord into the outlet.
- When unplugging the power cord, do not pull on the cord; hold the plug and pull it out.
- Do not bring any magnetized object near this machine.
- Do not place a vase or vessel containing water on this machine.
- Be sure to turn OFF the power switch at the end of the workday or upon power failure.
- Use care not to drop paper clips, staples, or other small pieces of metal into this machine.

#### 3-2. Operating Environment

The operating environmental requirements of this machine are as follows.

- Temperature: 10 to 30 °C
- Humidity: 15 to 85 %
- Rate of temperature change: 10 °C/h
- Rate of humidity change: 20 % Rh/h

#### 3-3. Power Requirements

The power source voltage requirements are as follows.

- Voltage fluctuation: AC110 V - AC127 V -10 %, +6 % (Copying performance assured)  
AC 220 V - AC 240 V  $\pm$ 10 % (Copying performance assured)  
  
AC 110 V - AC 127 V -10 %, +6 % (Paper feeding performance assured)  
AC 220 V - AC 240 V  $\pm$ 10 % (Paper feeding performance assured)
- Frequency fluctuation: 50/60 Hz  $\pm$  3 Hz

## 4. HANDLING OF THE CONSUMABLES

Before using any consumables, always read the label on its container carefully.

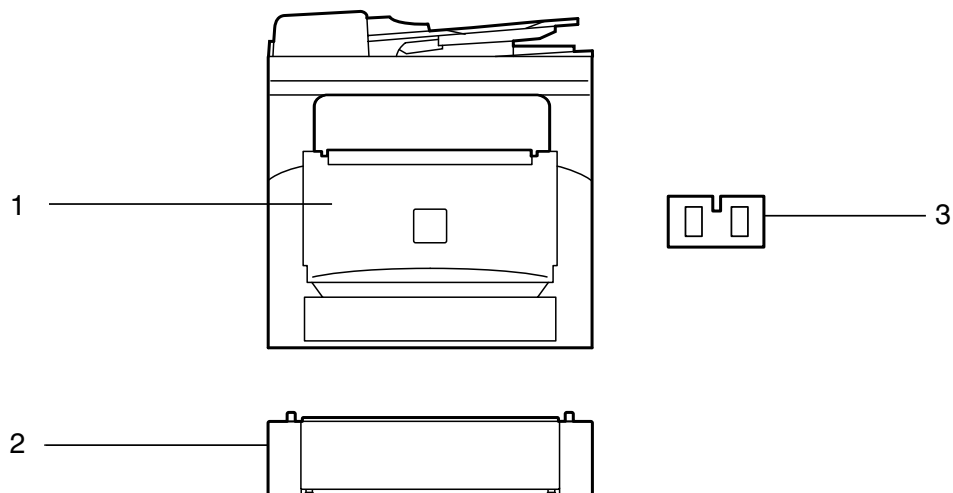
- Paper can easily damp. To prevent absorption of moisture, store paper in a place with little moisture.
- Keep consumables out of the reach of children.
- Do not touch the PC Drum with bare hands.
- The same sized paper is of two kinds, short grain and long grain. Short grain paper should only be fed through this machine crosswise, while long grain paper should only be fed lengthwise. The wrapper of the paper is properly marked.
- If your hands become soiled with toner, wash them with soap and water.
- Do not throw away any used consumables. They are to be collected.
- Do not burn, bury in the ground, or throw into the water any consumables.
- Do not store consumables in a place which:
  - \* Is hot and humid.
  - \* Is subject to direct sunlight.
  - \* Has an open flame nearby.

## 5. MISCELLANEOUS PRECAUTIONS

Use the following precautions when performing service jobs for the machine that uses a laser.

- When a service job needs to be performed in the laser beam path, such as when working around the Print Head Unit or PC Drum, be sure first to unplug the power cord of the machine from the outlet.
- If the service job requires that the power cord be left plugged in, observe the following precautions:
  1. Take off your watch, ring, and any other reflective object and wear laser protective goggles.
  2. Keep users away from the job site.
  3. Do not bring a highly reflective tool into the laser beam path during the service job.

## 6. PARTS IDENTIFICATION



4980G502AA

- |  |   |
|--|---|
| 1. Main Unit KONICA MINOLTA FAX 2900/<br>KONICA MINOLTA FAX 3900 | 3. Expansion memory 32-5 (32 MB):<br>KONICA MINOLTA FAX 3900 only |
| 2. Paper Feed Cassette PF-125                                    |   |



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# MECHANICAL/ ELECTRICAL

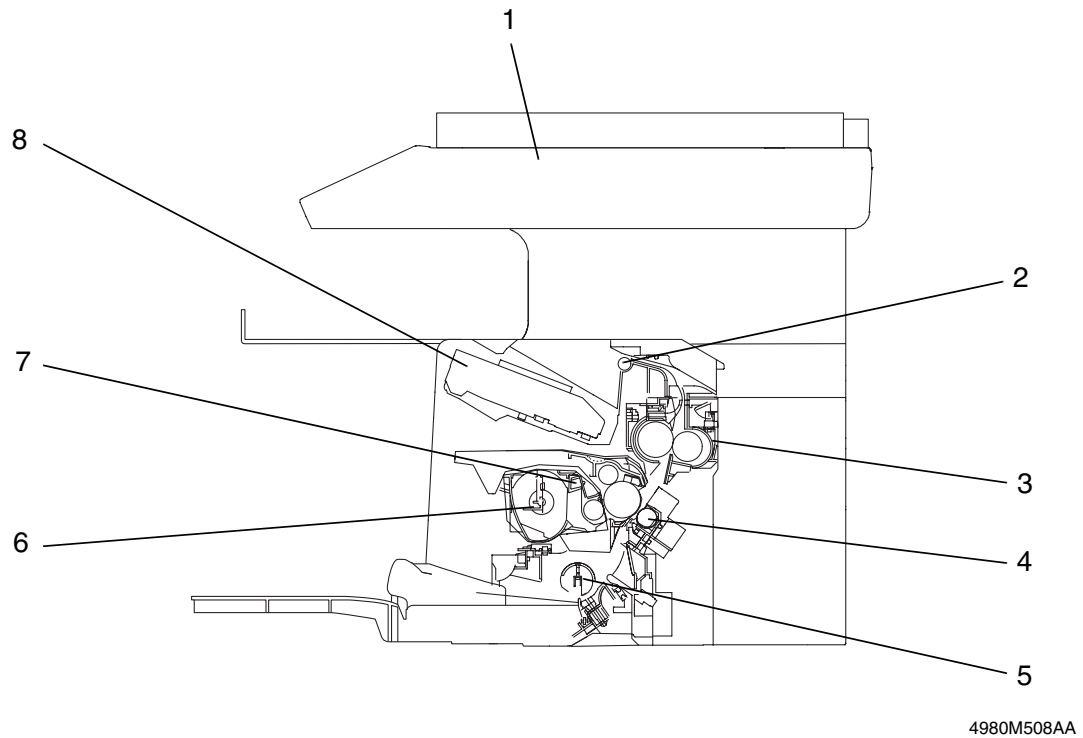
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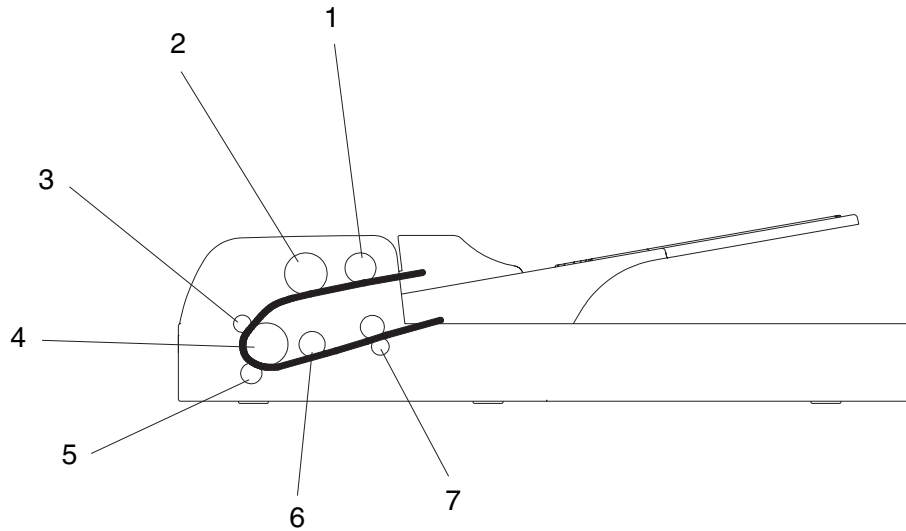
# 1. COMPONENTS LAYOUT

## 1-1. Main Unit



- |                                   |                         |
|-----------------------------------|-------------------------|
| 1: Automatic Document Feeder Unit | 5: Paper Take-Up Roller |
| 2: Exit Roller                    | 6: Toner Cartridge      |
| 3: Fusing Unit                    | 7: Drum Cartridge       |
| 4: Image Transfer Section         | 8: Print Head (PH) Unit |

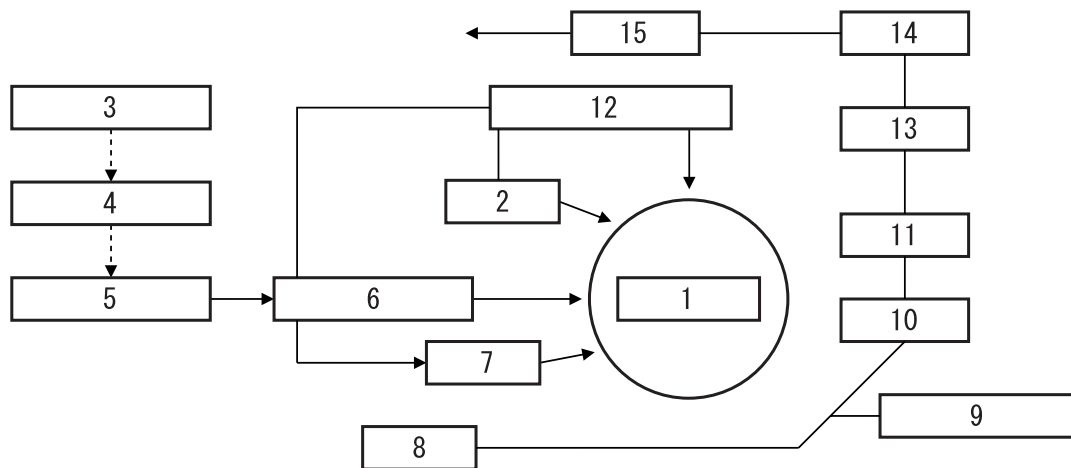
## 1-2. Automatic Document Feeder Unit



- 1: Pick-up Roller
- 2: ADF Roller
- 3: Transport Roller
- 4: Turning Roller

- 5: Pinch Roller
- 6: Shading Roller
- 7: Exit Roll Assy

## 2. COPY PROCESS



4980M018AC

### 1. PC Drum

- A photoconductive layer is formed on an aluminum tube and an electrostatic latent image is formed on this photoconductive layer.

### 2. PC Drum Charging

- Deposits a negative DC charge across the entire surface of the PC Drum.

### 3. Photoelectric Conversion

- The CIS converts the image data represented by light reflected off the original to a corresponding analog electric signal which, in turn, is output to the IR image processing section.

### 4. IR Image Processing

- The electric signal is converted to an 8-bit digital image signal (A/D conversion) which, in turn, goes through appropriate correction processes before being output to the PH image processing section.

### 5. PH Image Processing

- After going through correction processes, the digital image signal is converted to a corresponding electric signal (D/A conversion), based on which control is provided for turning ON or OFF the laser.

### 6. Laser Exposure

- The laser beam strikes the surface of the PC Drum, forming an electrostatic latent image.

### 7. Developing

- Toner negatively charged in the Developer Mixing Chamber is attracted onto the electrostatic latent image, changing it to a visible, developed image.
- A developing bias voltage ( $V_b$ ) is applied to the Sleeve Roller to prevent toner from being attracted onto those areas of the PC Drum that correspond to the background areas of the original.

#### 8. Paper Feed

- Paper is fed from Tray 1.

#### 9. Bypass Paper Feed

- Paper is fed from the Multiple Bypass Tray.

#### 10. Image Transfer

- A DC positive charge is applied to the Image Transfer Roller to transfer the visible image on the surface of the PC Drum onto the paper.

#### 11. Paper Separation

- The Charge Neutralizing Plate neutralizes any charge left on the paper.

#### 12. Recovery

- The residual toner on the surface of the PC Drum is temporarily recovered and is made into even finer particles during the print end sequence before being recovered at the Developing Unit.

#### 13. Paper Transport

- The paper is transported onto the Fusing Unit.

#### 14. Fusing

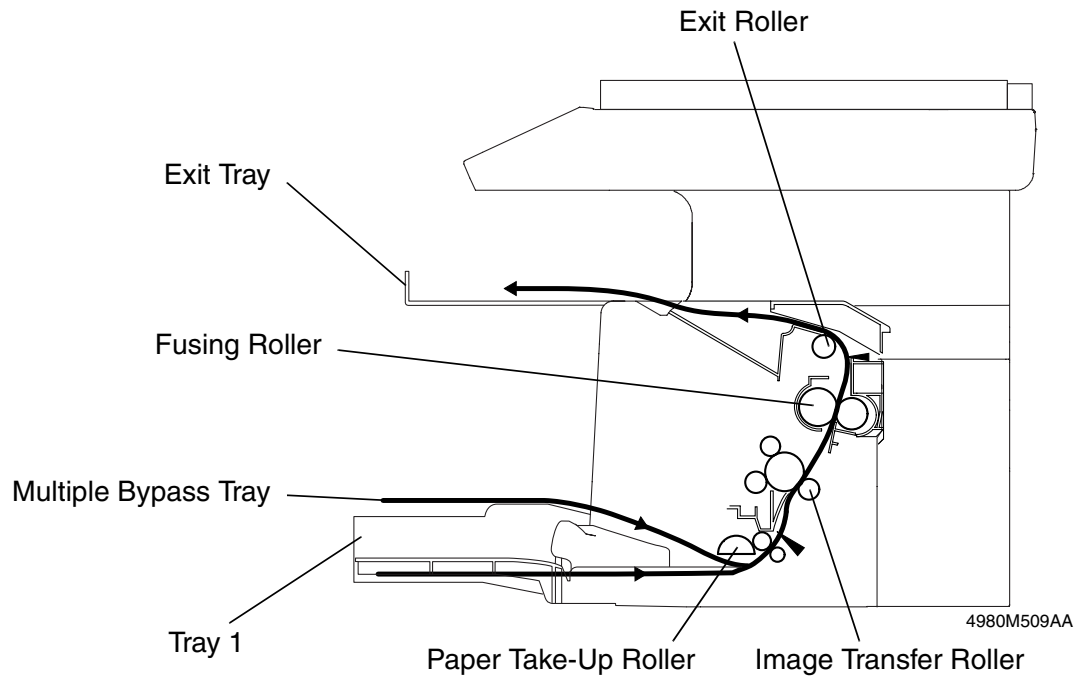
- The developed image is permanently fused to the paper by a combination of heat and pressure applied by the Right and Left Fusing Rollers.

#### 15. Paper Exit

- The paper is fed out onto the Exit Tray.

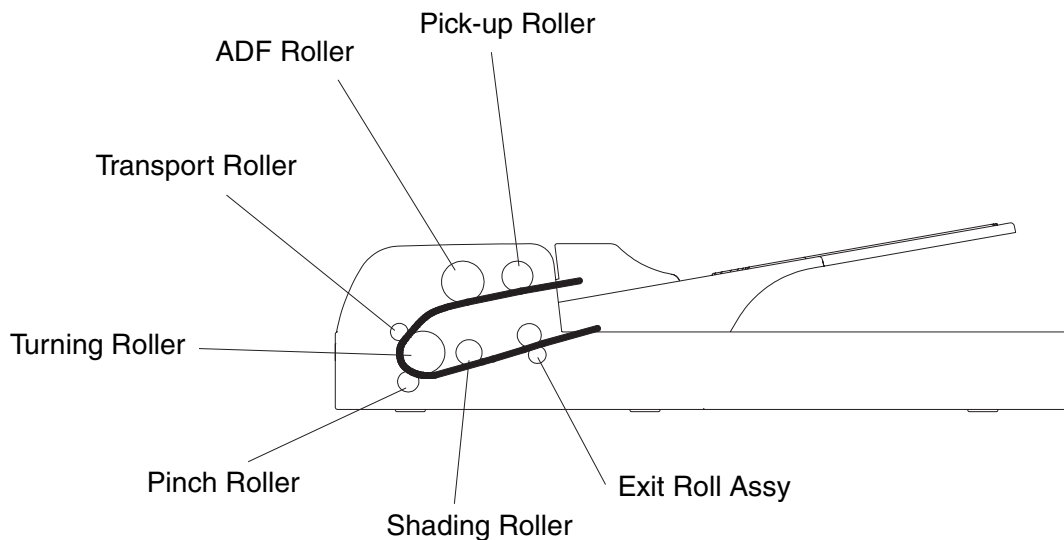
### 3. PAPER PATH

#### 3-1. Main Unit



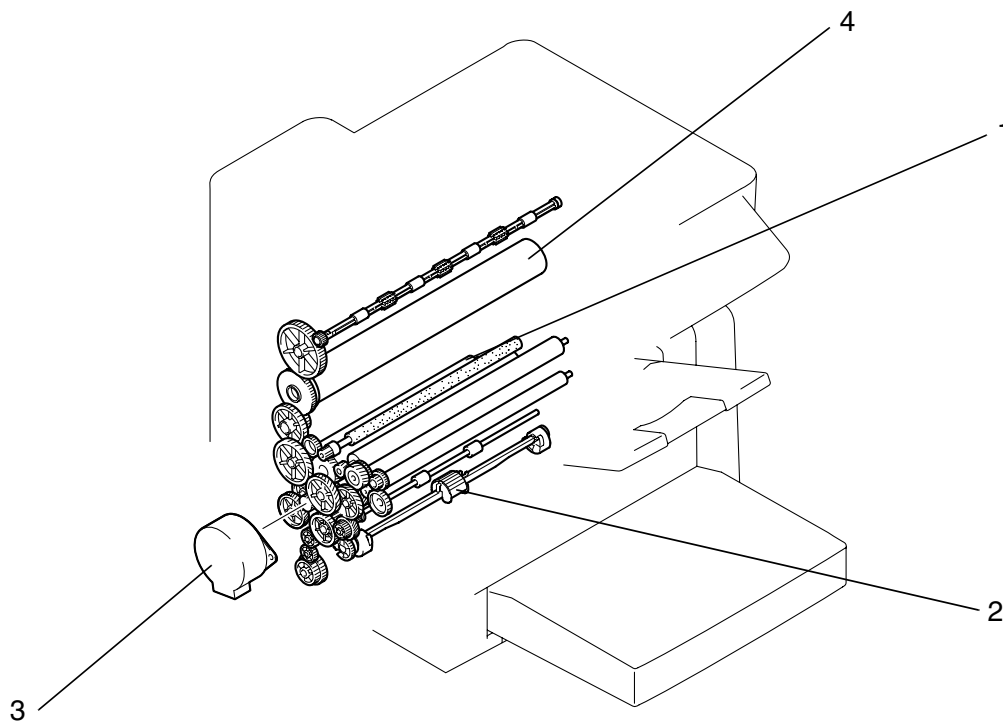
- The system employs a two-way paper supply system, in which paper is fed from either Tray 1 or the Multiple Bypass Tray.
- When the optional Paper Feed Cassette is mounted, the system offers a three-way paper supply system.
- The paper taken up and fed in by the Paper Take-Up Roll is transported through the machine by the Image Transfer Roller, Fusing Roller, and Exit Roller and fed out of the machine face down onto the Exit Tray.

#### 3-2. Automatic Document Feeder Unit



## 4. DRIVE SYSTEM

### 4-1. Main Unit

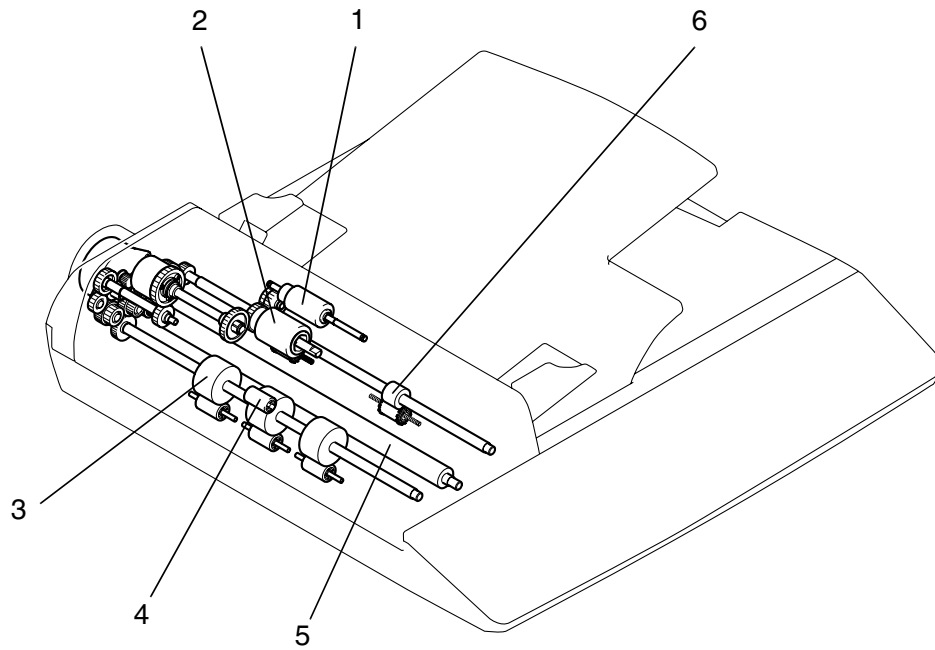


4980M503AA

1: Image Transfer Roller  
2: Paper Take-up Roller

3: Main Motor  
4: Fusing Roller

## 4-2. Automatic Document Feeder

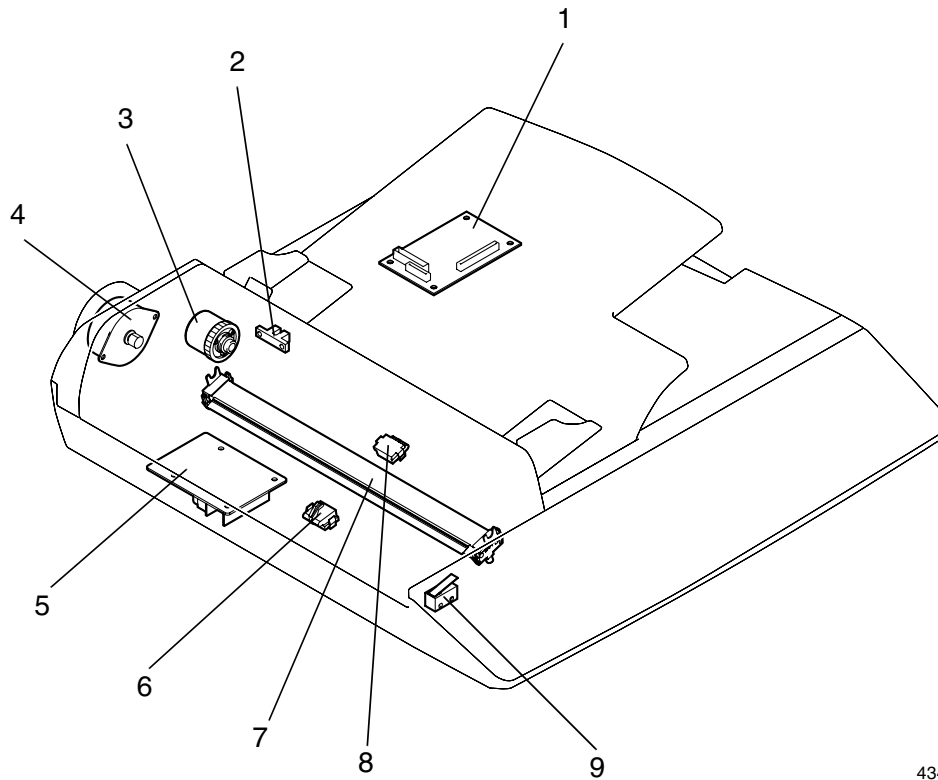


4344M003AA

- 1: Pick-up Roller
- 2: Take-up Roller
- 3: Registration Roller

- 4: Transport Roller
- 5: Shading Roller
- 6: Exit Roller

### 4-3. Electrical Parts Layout of Automatic Document Feeder

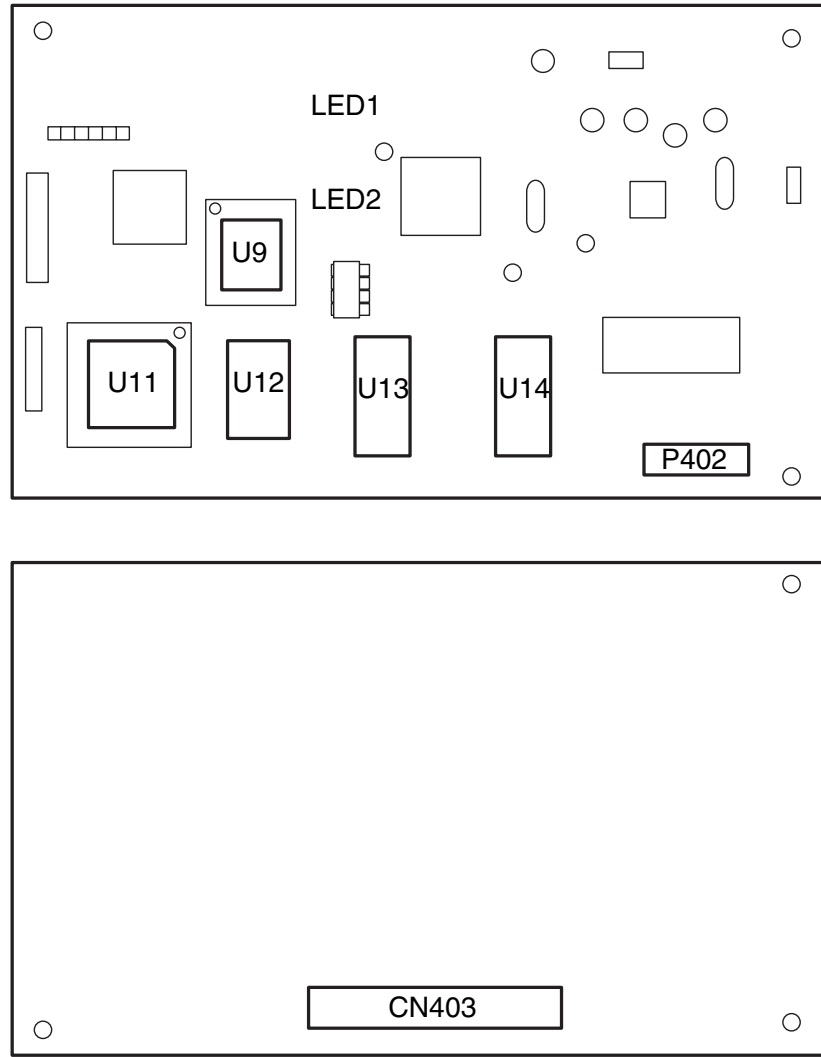


4344M006AA

- |                                  |                                      |
|----------------------------------|--------------------------------------|
| 1: AFEIF Board AFEIF PCB         | 6: Leading Edge Detection Sensor PC3 |
| 2: Original Detection Sensor PC1 | 7: CIS Assy                          |
| 3: Paper Take-Up Clutch CL1      | 8: Paper Take-Up Sensor PC2          |
| 4: ADF Main Motor M5             | 9: ADF door set switch S3            |
| 5: ADF Control Board PWB-A ADF   |                                      |

## 5. Electrical Components

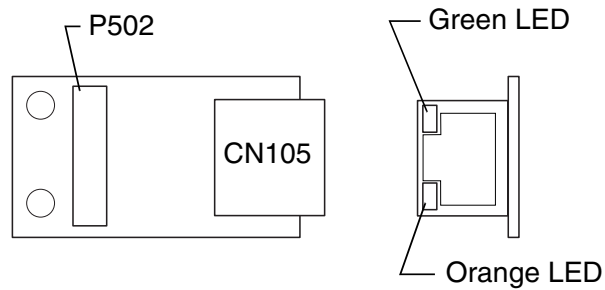
### 5-1. Network Interface Card (KONICA MINOLTA FAX 3900 only)



4980G510AA

U9	EEPROM
U11	Flash ROM (for Internet FAX & Network Scan)
U12	Flash ROM
U13	SDRAM
U14	SDRAM
P402	Hookup Connector (to Plate NIC Board)
P403	Hookup Connector (to PWB-P)

## 5-2. Plate NIC Board (KONICA MINOLTA FAX 3900 only)



4980G511AA

P502	Hookup Connector (to Network Interface Card)
CN105	Network Interface
Green LED	Network Interface Card status display.
Orange LED	Network Interface Card status display.

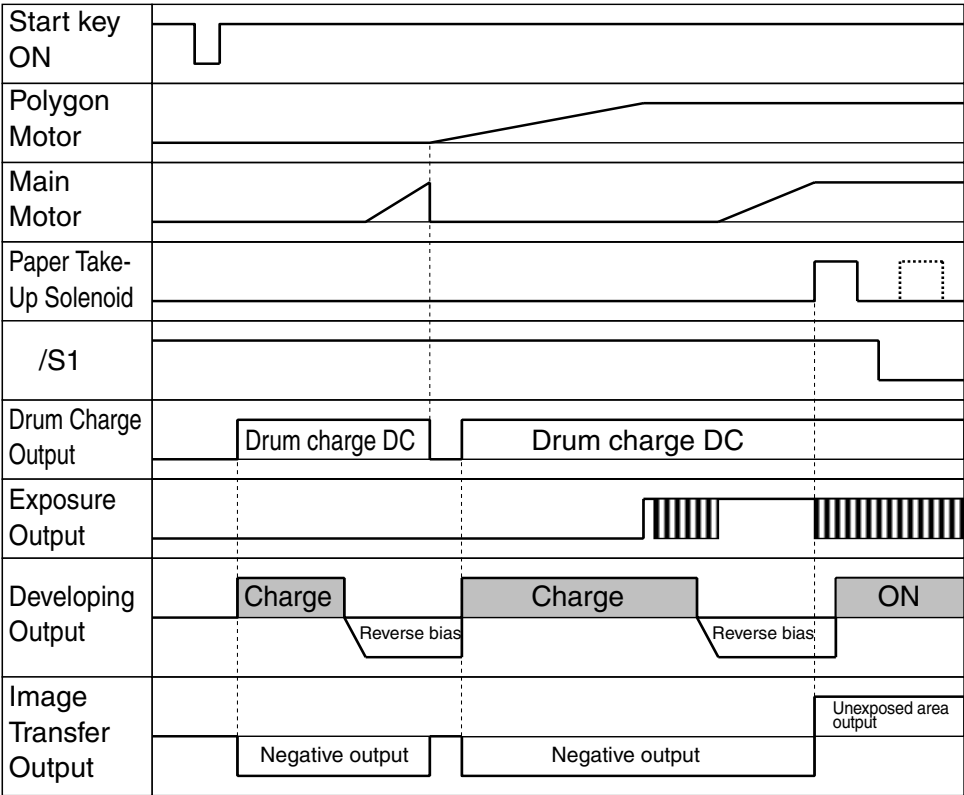
### (1) LED status display list

LEDs		Status
Green LED (Green)	ON	This is lit when the network cable is connected correctly. If this LED is not lit, check the connection again, even if the copier appears to be connected correctly. If this LED is not lit when both ends are connected correctly, the network cable may be damaged.
Orange LED (Orange)	ON	This LED blinks when data is being transfered.

# 6. OPERATING SEQUENCE

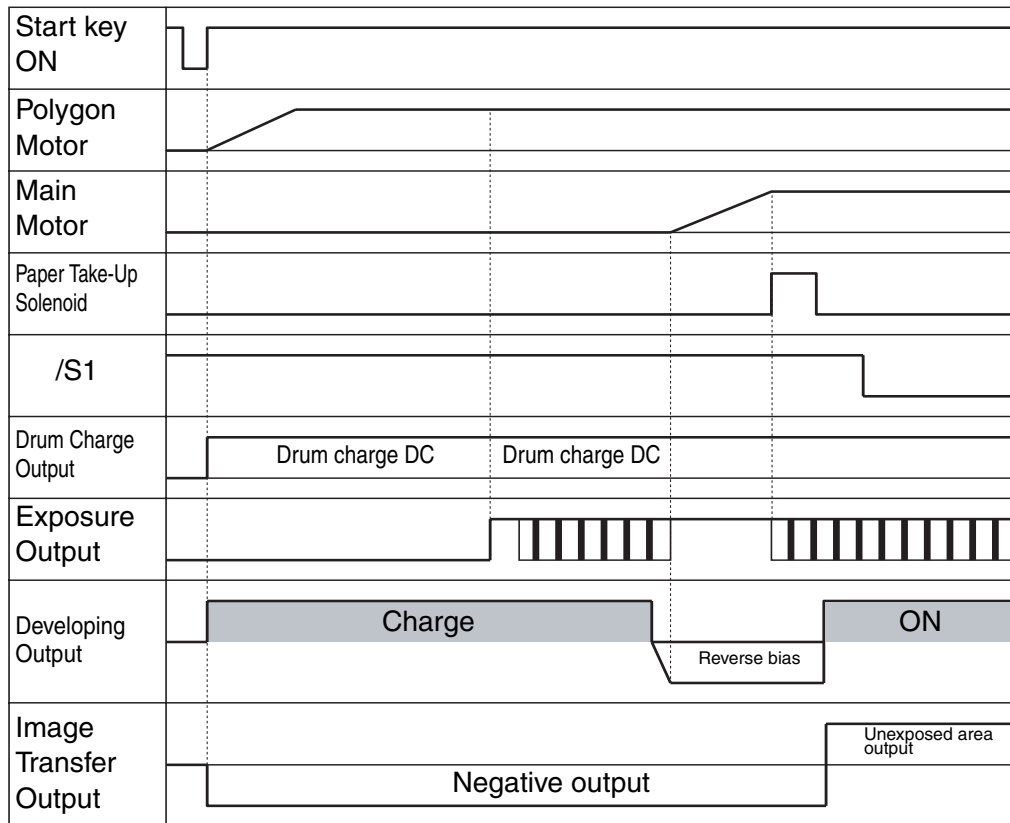
## 6-1. Print Start Sequence

(1) When the pre-start control is not provided



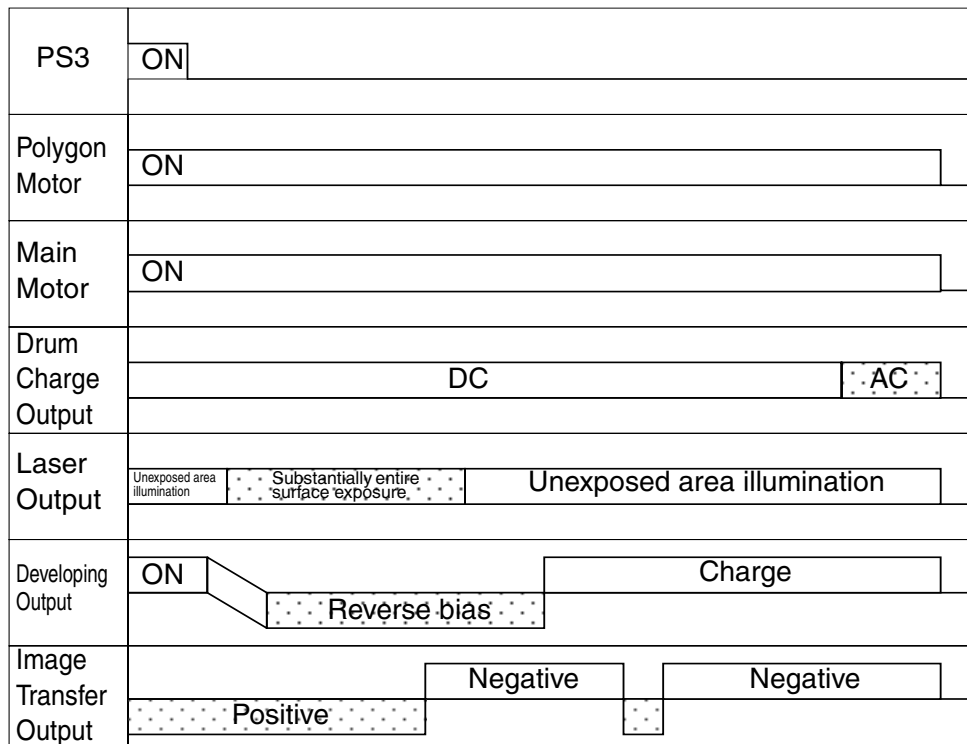
4980M013AB

(2) When the pre-start control is provided



4980M017AB

## 6-2. Print End Sequence

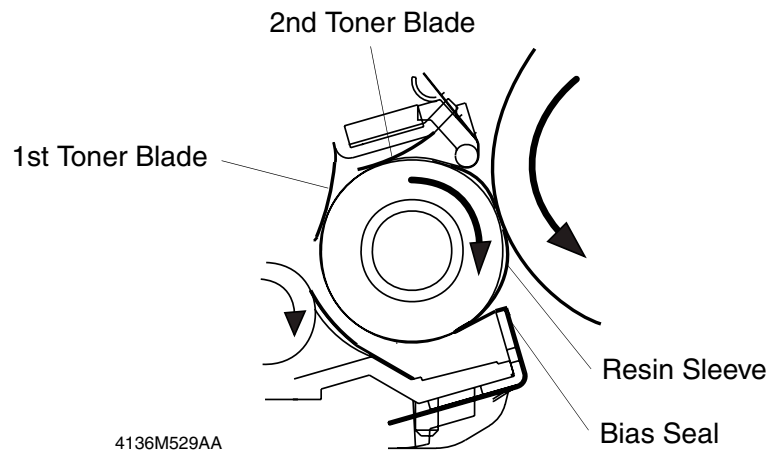
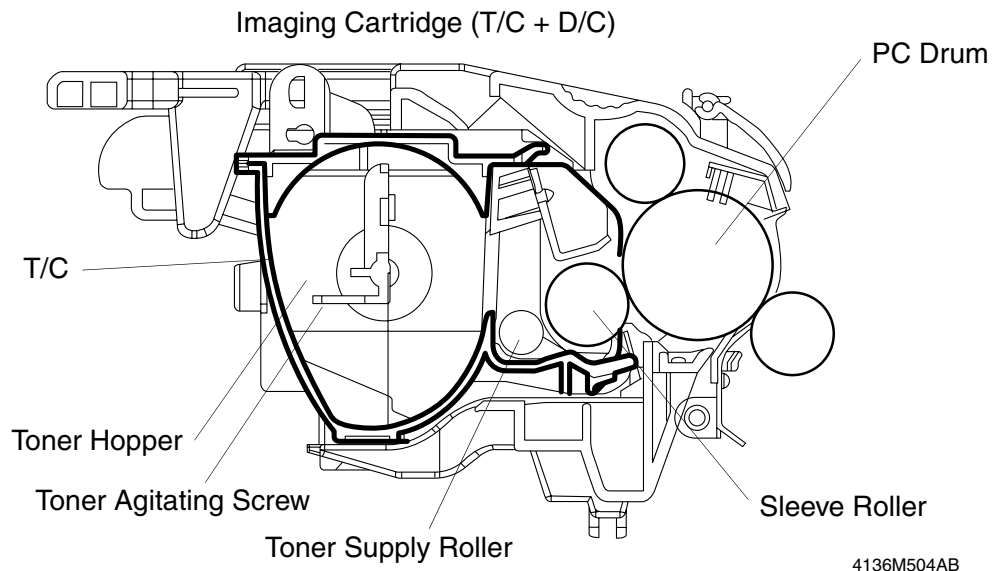


4980M014AA

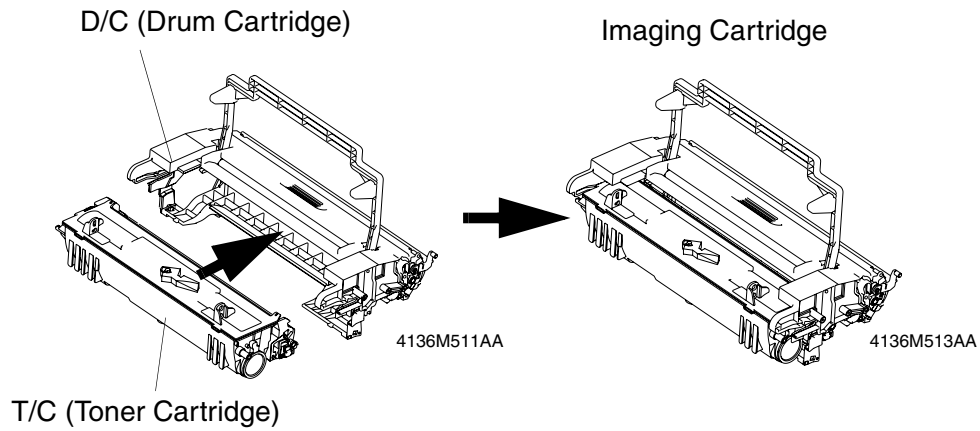
## 7. IC (IMAGING CARTRIDGE) SECTION

### 7-1. Overview

- The illustration below shows the construction of the Toner Cartridge and the Developing Unit.
- This machine adopts the single-component FMT (Fine Micro Toning) developing system.
- The Toner Agitating Screw conveys toner in the Toner Cartridge onto the Toner Supply Roller.
- The Toner Supply Roller transports the toner to the Sleeve Roller. The Resin Sleeve of the Sleeve Roller carries the toner onto the PC Drum to form a toner image on the latent image formed on the surface of the PC Drum.



- The Imaging Cartridge consists of a T/C (Toner Cartridge) and a D/C (Drum Cartridge) (see the illustration below).



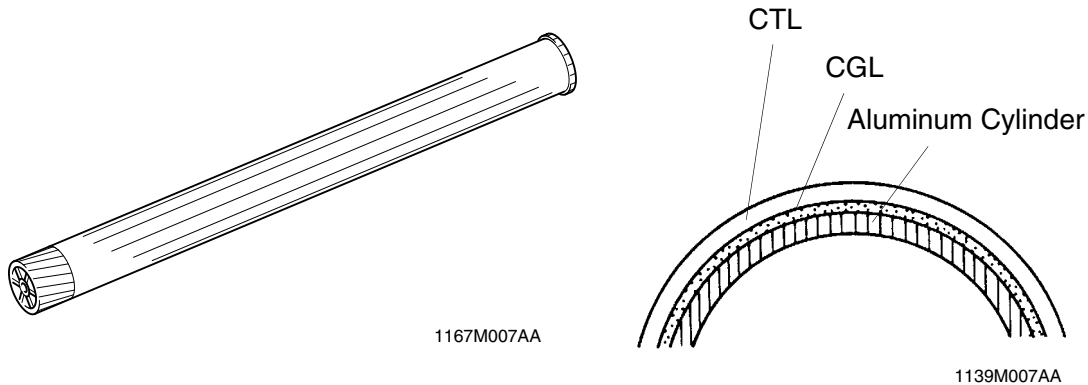
## 7-2. PC Drum

- The PC Drum used in this machine is the organic photoconductor (OPC) type.
- The drum consists of two layers - Charge Transport Layer (CTL) and the Charge Generating Layer (CGL) - applied to an aluminum alloy base (cylinder).

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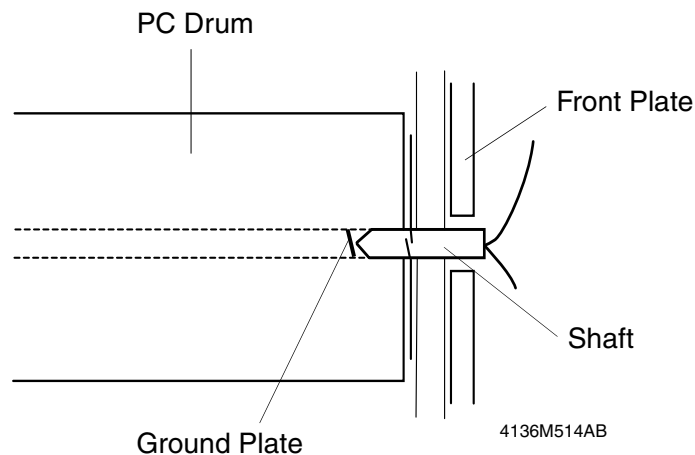
### **Handling Precautions:**

*The PC Drum of this type exhibits light fatigue after being exposed to light for a long time, which results in its sensitivity being changed. Therefore, always wrap the drum in the PC Drum Cloth or a soft cloth immediately after it has been removed from this machine. Use utmost care to prevent the surface of the PC Drum from being dirtied.*



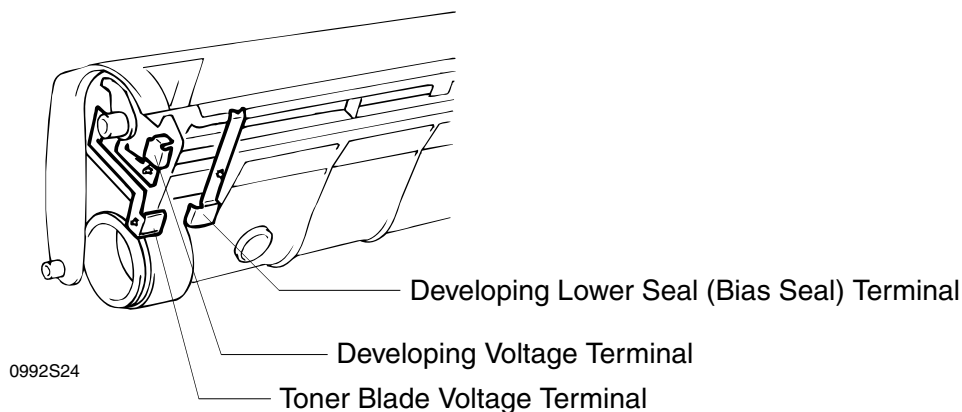
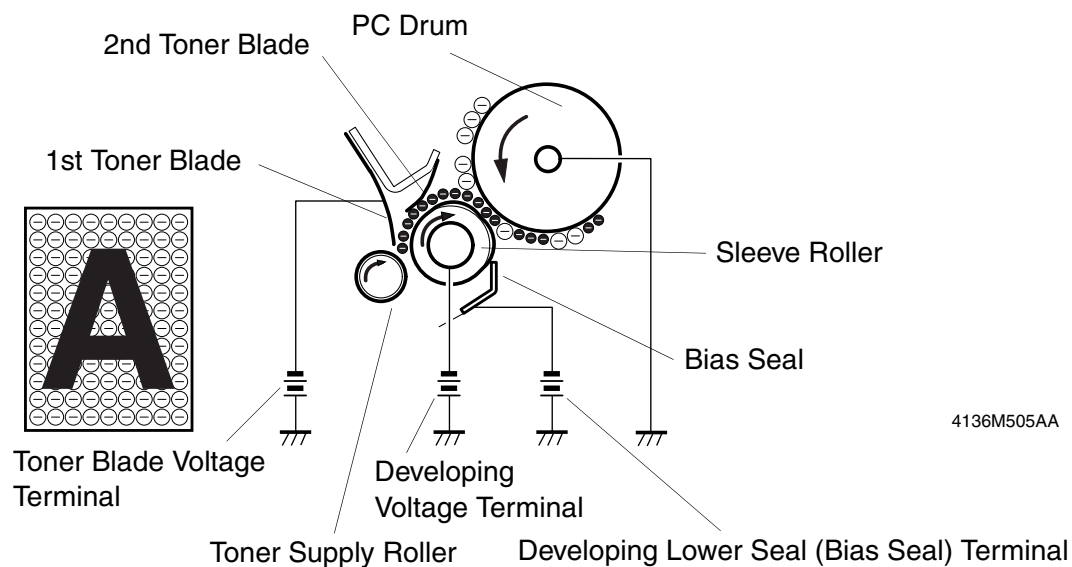
- 
- Grounding of the PC Drum

The ground contact point (Ground Plate) for the PC Drum is located inside the PC Drum at its front side. It is, at all times, in contact with the shaft of the front plate of the Imaging Cartridge. When the Imaging Cartridge is loaded in this machine, the set pin of the front plate of the Imaging Cartridge contacts a side plate on the machine side, thereby providing grounding. The potential on the surface of the PC Drum exposed to the laser beam is then grounded through the Ground Plate, shaft, and set pin to the frame of the machine.



### 7-3. Developing System

- The 1st Toner Blade located above the Sleeve Roller spreads a thin, even coat of toner over the Sleeve Roller.
- A negative charge is applied to the 2nd Toner Blade, which negatively charges the toner.
- The Sleeve Roller is negatively charged, which retains the toner thereon.
- The toner sticks to the area on the surface of the PC Drum that has been exposed to the laser beam.
- The Bias Seal on the underside of the Sleeve Roller separates toner, which has not been attracted onto the surface of the PC Drum, from the Sleeve Roller and returns it back to the Toner Hopper. The same bias as that applied to the Sleeve Roller is applied to this Bias Seal, thereby preventing toner from falling.
- The developing bias automatically adjusts the print image density over a range of seven steps through feedback control. A bias voltage, reversed from the developing bias, is applied before a print command is issued, before predrive, and during predrive, to prevent toner from sticking to the surface of the PC Drum.



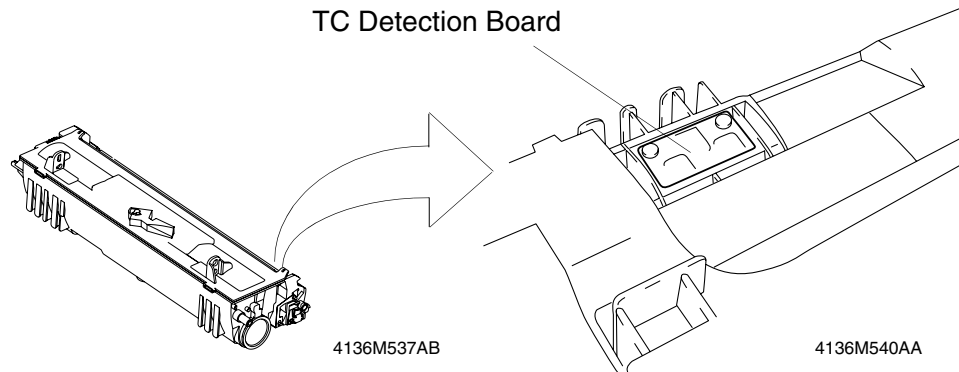
## 7-4. Detection of Toner Cartridge

### (1) Installation detection

- The Imaging Cartridge, when loaded in position, is detected as follows. At the completion of a warm-up cycle, the IC chip built into the Toner Cartridge (TC detection board) detects electrically whether or not the cartridge is loaded in position.

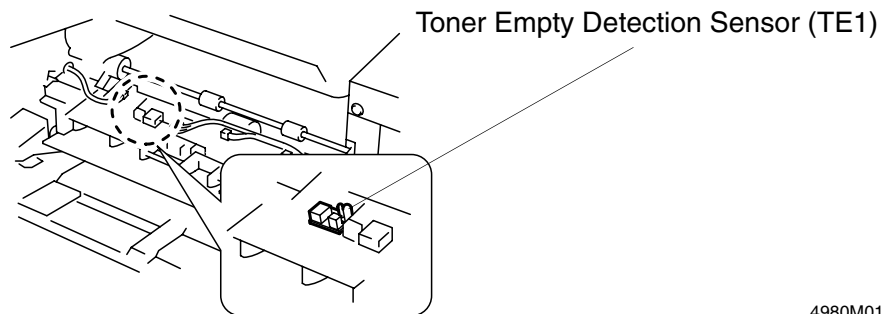
### (2) Interchangeability detection

- The built-in IC chip (TC detection board) detects the applicable marketing area of the Toner Cartridge when power is turned ON or when the Front Door is opened and closed.

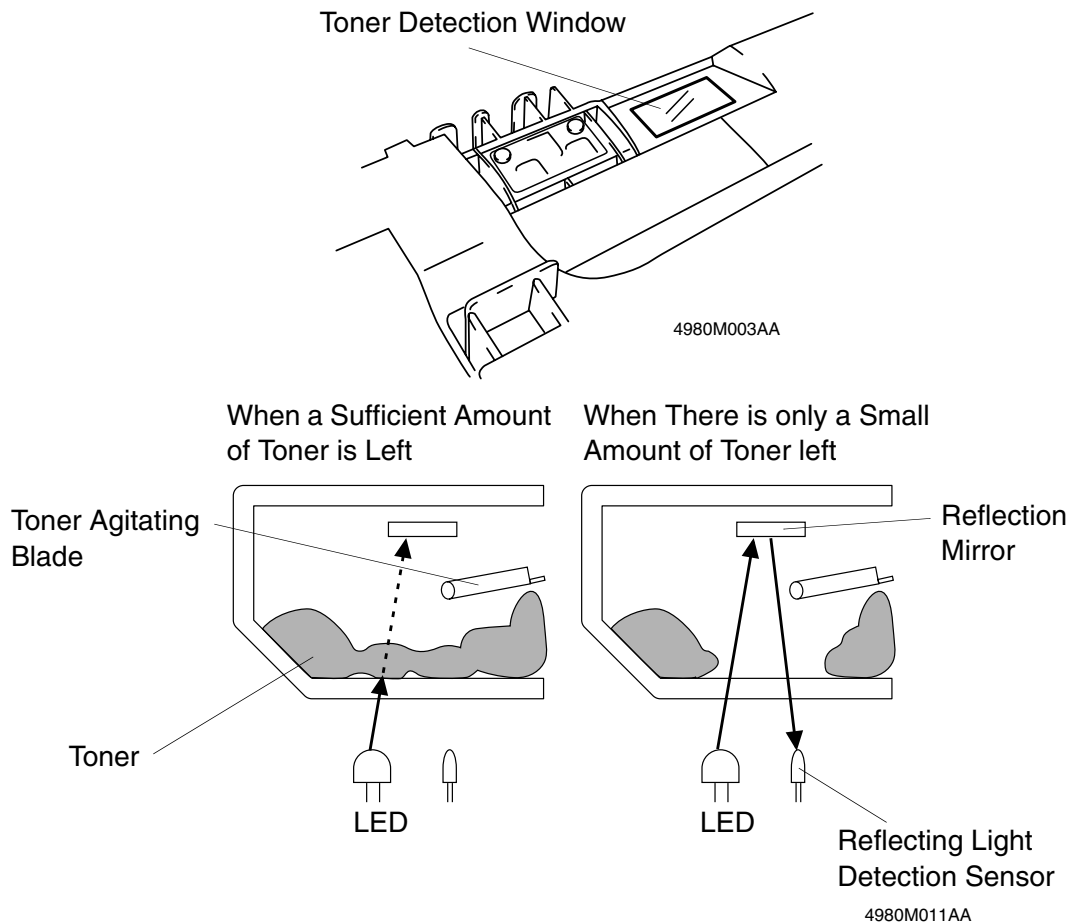


### (3) Toner Near Empty and Toner Empty Detection

- The Toner Empty Detection Sensor (TE1) detects the amount of toner still available for use.



- The Toner Empty Detection Sensor has an LED and a reflecting light detection sensor built into it. Light from the LED enters the toner detection window and is reflected off the Reflection Mirror located inside the Toner Cartridge. The reflecting light detection sensor detects this reflected light.



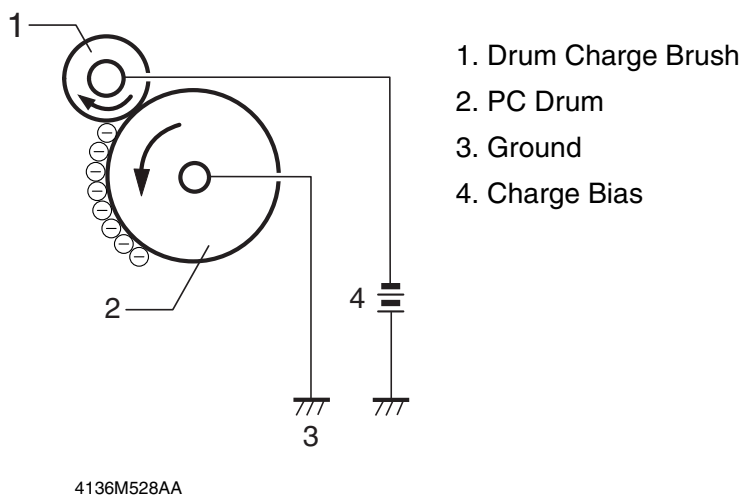
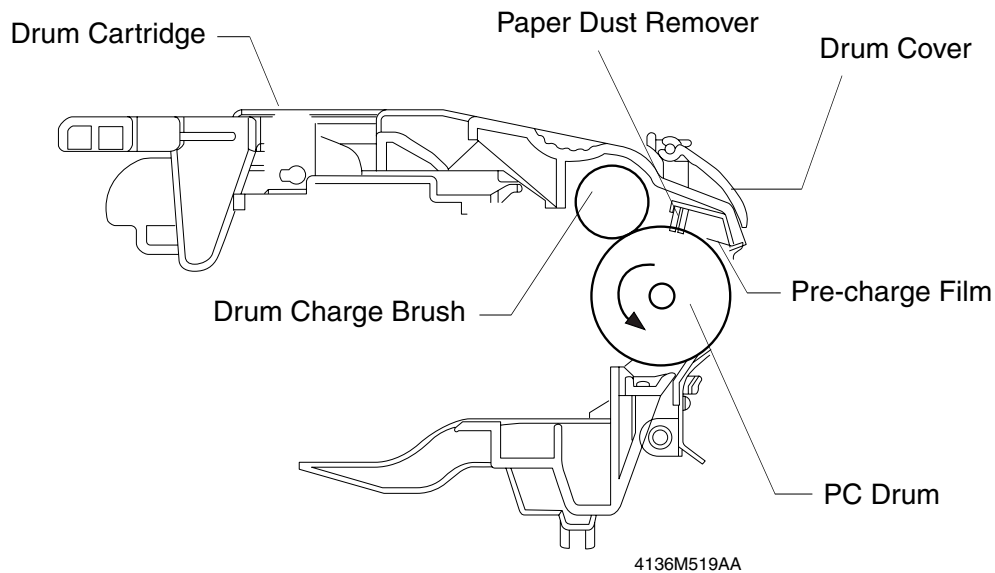
- The number of times, at which the input voltage to the reflecting light detection sensor exceeds a predetermined period of time, is counted. When this count reaches a predetermined value, a toner near empty or a toner empty condition is detected.
- The toner near empty or toner empty condition is reset when the Front Door is opened and closed.

Electrical Component	Control Signal	Blocked	Unblocked	WIRING DIAGRAM
TE1	PWB-P MPJ14-2	H	L	A-5

## 8. DRUM CHARGE

### (1) Overview

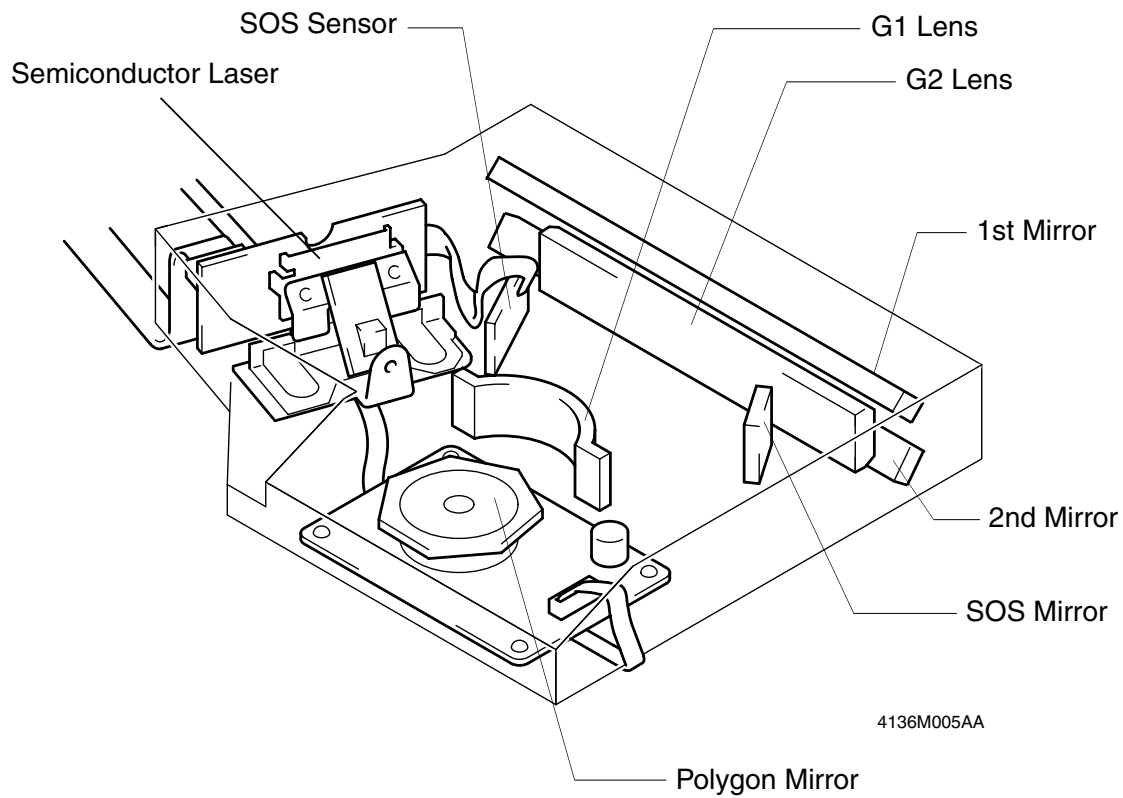
- The PC Drum is charged with static electricity before laser exposure.
- The Drum Charge Brush and the Pre-charge Film are used for charging.
- Since the Drum Charge Brush and the Pre-charge Film directly deposit charge on the PC Drum, they produce little ozone. Further the charging voltage is low and the deposited charge is even and stable across the surface of the PC Drum.
- The Pre-charge Film supplies a preliminary charge to the PC Drum prior to charging by the Drum Charge Brush, thereby increasing charging efficiency.



## 9. PRINT HEAD (PH)

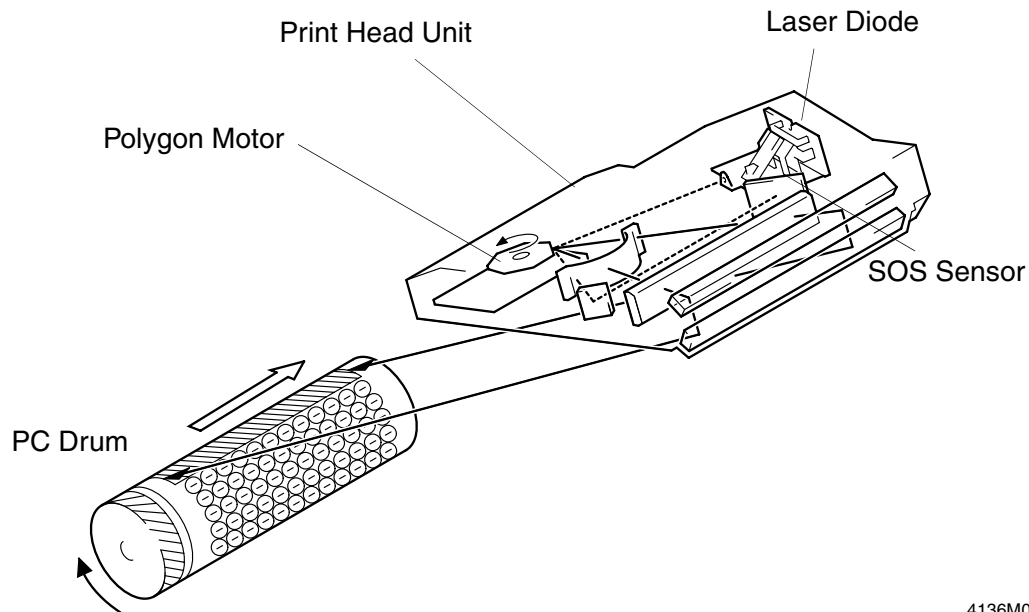
### 9-1. Construction

- The laser beam light emitted from the Print Head is used to scan the image as driven by the Polygon Motor.



## 9-2. Laser Exposure Process

- The laser beam light emitted from the Print Head is used to create an electrostatic latent image on the surface of the PC Drum.
- The following control is provided to correctly time image printing.

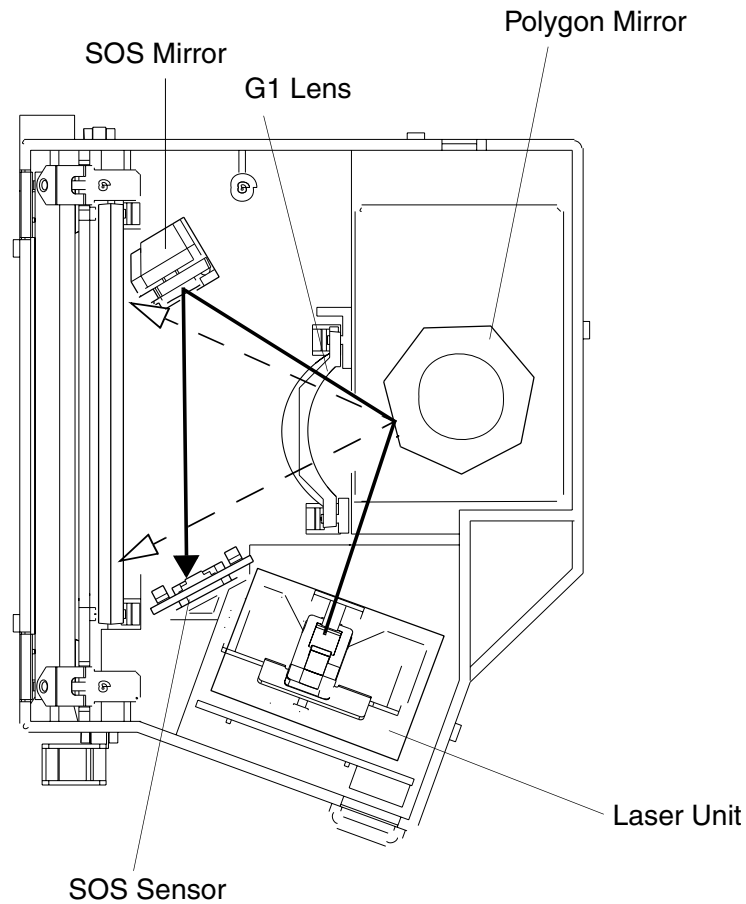


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- When the machine receives a PRINT signal, the Polygon Motor and the Main Motor start rotating and the paper is taken up and fed into the machine.
- The printing is started when the Controller/Mechanical Control Board sends a VIDEO signal to the Print Head a given period of time after the leading edge of the paper actuates the Paper Take-Up Switch (TOD signal).
- The print start position of a new line as shifted from the previous one is established by transmitting a VIDEO signal after the lapse of an appropriate period of time with reference to the SOS Sensor signal.
- The SOS Sensor provided in the PH ensures that the laser beam is emitted at the same timing for all lines in the main scanning direction.

### 9-3. Laser Emission Timing

- When a READY signal is detected a given period of time after the print command has been issued, the Controller/Mechanical Control Board outputs a laser ON signal.
- The laser ON signal makes a laser beam to be emitted and the laser beam travels to the Polygon Mirror, G1 Lens, and the SOS Mirror to eventually hit the SOS Sensor, which generates an SOS signal.
- The SOS signal determines the laser emission timing for each line in the main scanning direction.



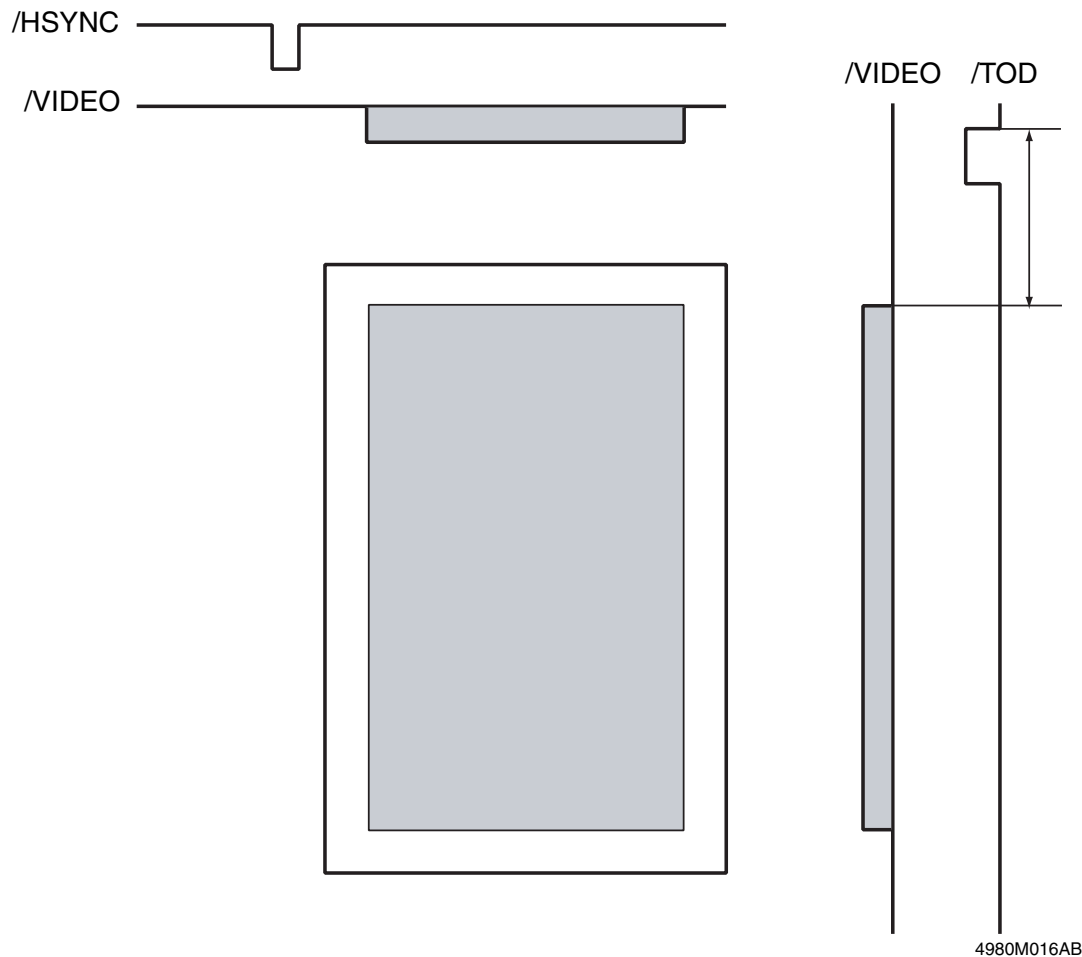
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### 9-3.Laser Emission Timing(1) Main scanning direction

- The print start position is determined by the main scanning print start signal (/HSYNC) output from the Controller/Mechanical Control Board and the width of the paper.
- The laser emission area is determined by the paper size.

#### (2) Sub-scanning direction

- The print start position is determined by the sub-scanning print start signal (/TOD) output from the Controller/Mechanical Control Board and the length of the paper.
- The laser emission area is determined by the paper size.

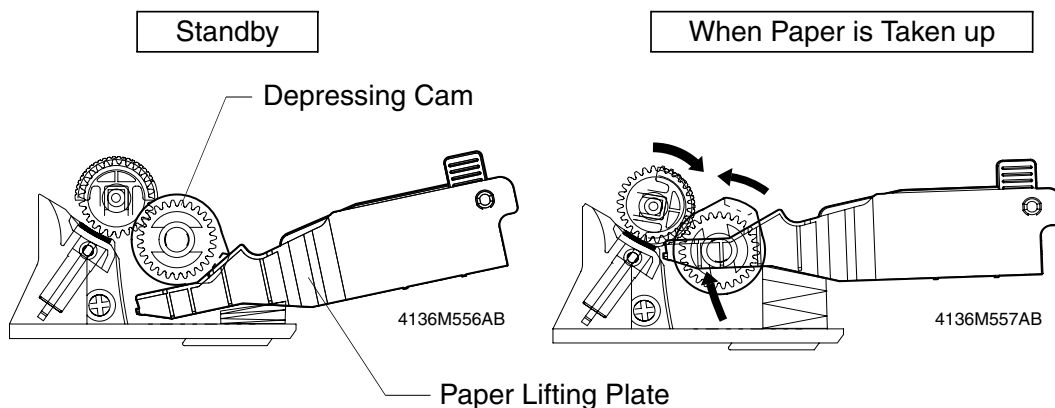
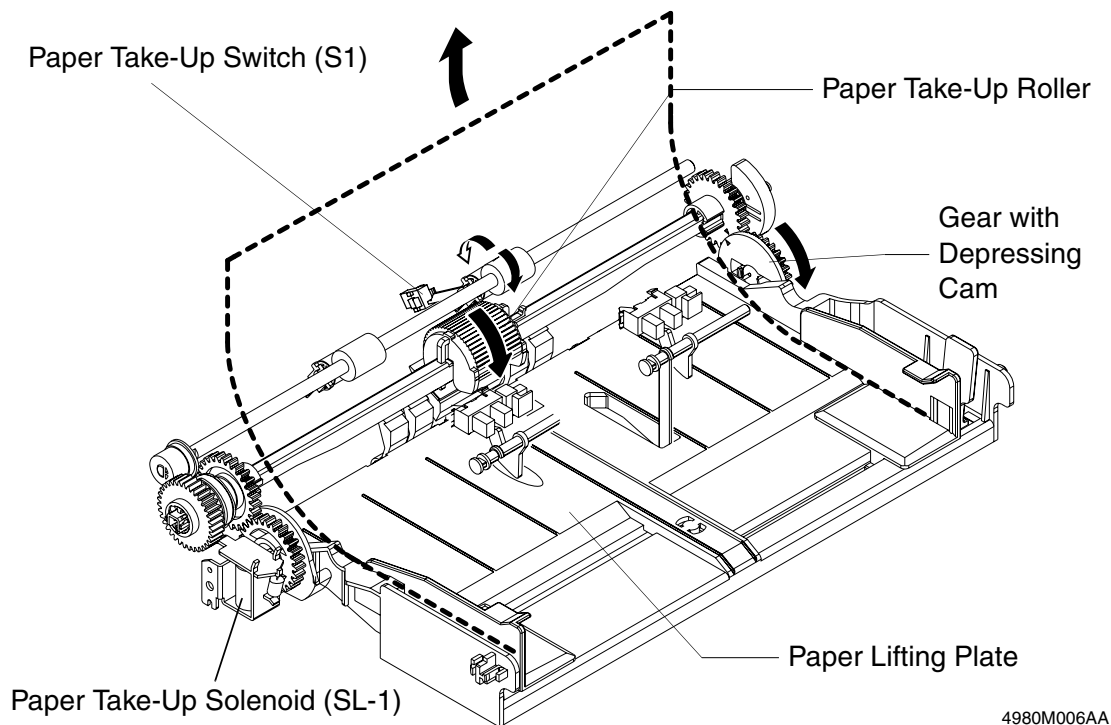


## 10. PAPER TAKE-UP SECTION

### 10-1. Tray 1

#### (1) Paper take-up mechanism

- When the Paper Take-Up Solenoid is energized, drive from the Main Motor is transmitted to the Paper Take-Up Roll through the Paper Take-Up Clutch, turning the Paper Take-Up Roller.
- At the same time, the Depressing Cam turns so as to raise the Paper Lifting Plate. Then, the top sheet of paper loaded in the tray is taken up and fed into the machine.
- The actual length of paper is detected based on the period of time through which the Paper Take-Up Switch remains actuated (or through which the paper moves past the switch) and the system speed. It is then determined whether or not the actual length matches the paper length specified on the controller.



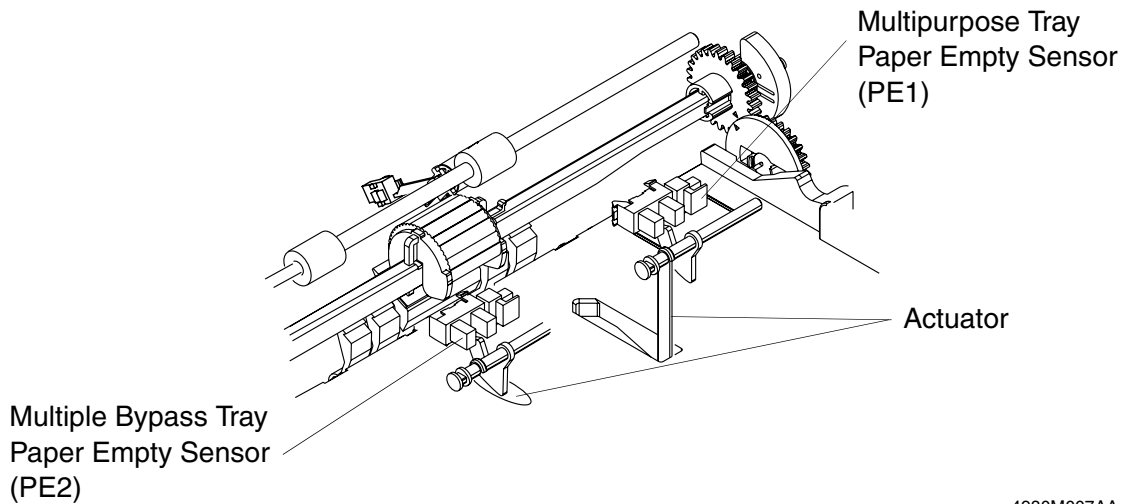
Electrical Parts	Control Signal	ON	OFF	WIRING DIAGRAM
S1	PWB-P MPJ10P-2	L	H	F-3
SL1	PWB-P MPJ3P-2	L	H	I-3

## (2) Double feed preventive mechanism

- A fixed paper separator pad is used to prevent the second and subsequent sheets of paper from being taken up and fed in with the first one.

## (3) Paper empty detection

- There are the Multipurpose Tray Paper Empty Sensor (PE1) and the Multiple Bypass Tray Paper Empty Sensor (PE2) provided on the upper part of Tray 1. They function to detect paper loaded in Tray 1 and the Multiple Bypass Tray, respectively.
- When there is a paper stack loaded in the tray, the actuator is raised to block the Paper Empty Sensor.
- When paper runs out, the actuator drops into the hole in the tray, unblocking the Paper Empty Sensor.



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Electrical Parts	Control Signal	Blocked	Unblocked	WIRING DIAGRAM
PE1	PWB-P MPJ12P-3	L	H	A-5
PE2	PWB-P MPJ15P-3	L	H	B-5

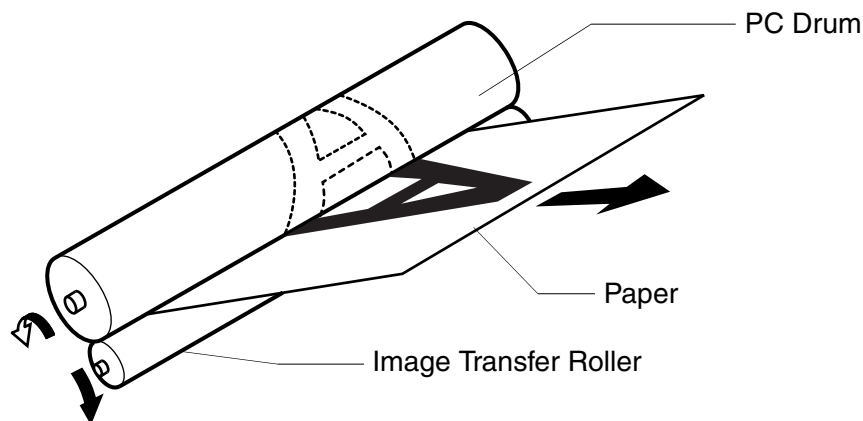
## (4) Paper take-up retry function

- To reduce the number of paper misfeeds as a result of a paper take-up failure, a paper take-up retry sequence is carried if the Paper Take-Up Switch is not actuated and deactivated within a predetermined period of time.
- This function is provided for paper take-up from any machine paper tray.

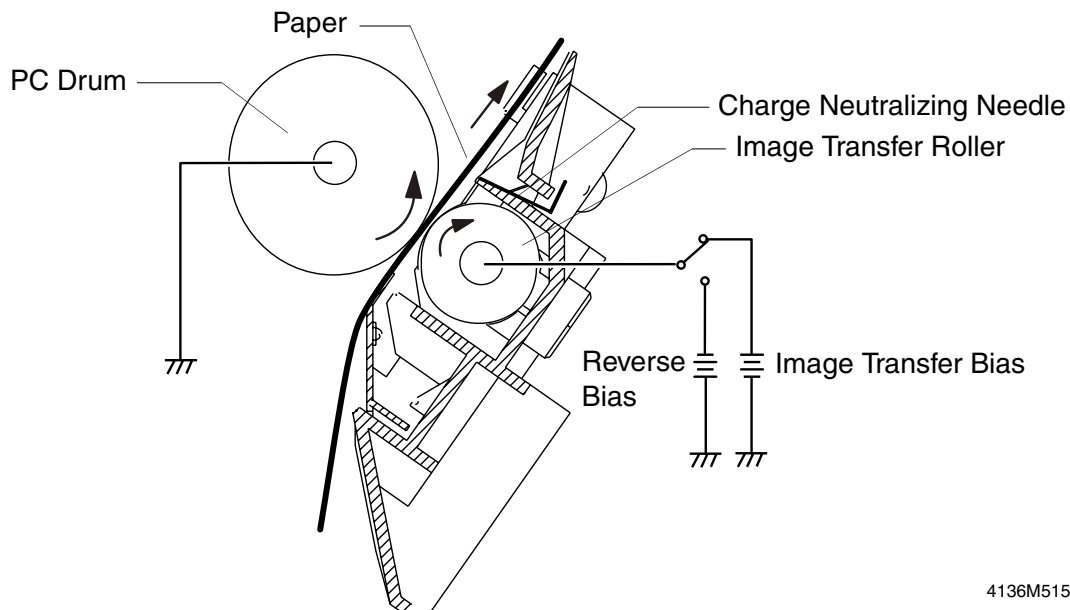
# 11. IMAGE TRANSFER

## 11-1. Overview

- The toner image formed on the surface of the PC Drum during the developing process is transferred onto the paper.
- This machine adopts the roller image transfer system, in which the Image Transfer Roller is used to transfer the image onto the paper.
- In the roller image transfer system, the paper is pinched between the PC Drum and the Image Transfer Roller at all times during the print cycle. This results in a very little amount of ozone being produced and there is a little chance of a double transferred image occurring.
- To clean the Image Transfer Roller, reverse bias is applied to the Image Transfer Roller.
- The cleaning sequence is carried out when the machine is started, a print command is issued, a print cycle is completed, and when the machine is started after a misfeed has been cleared.
- There is the Charge Neutralizing Needle installed for neutralizing the paper after image transfer.



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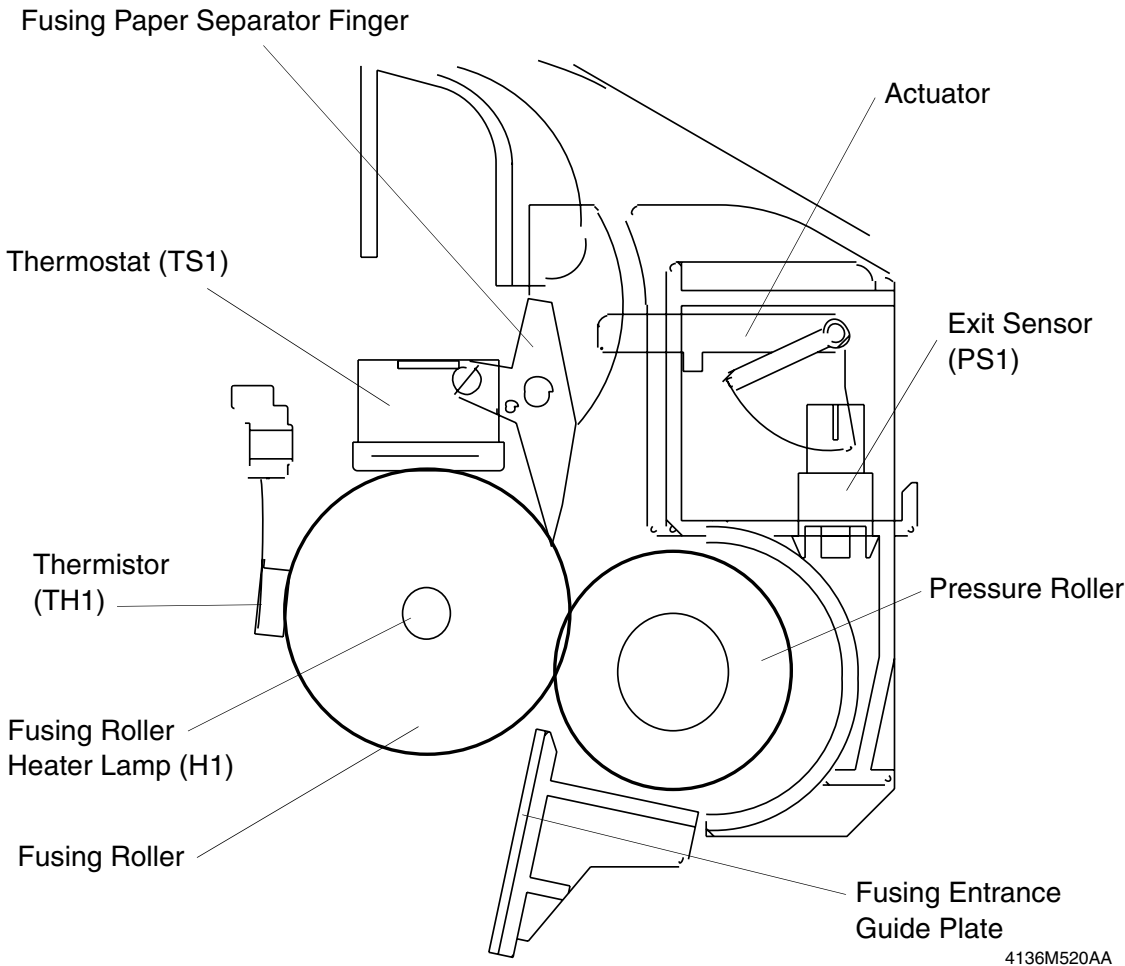


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# 12. FUSING UNIT

## 12-1. Overview

- The toner image transferred onto the paper is securely fixed to the paper.
- A heated roller system is used as the fusing system. The paper, to which the toner image has been transferred, is fed between the Fusing Roller heated by the Fusing Roller Heater Lamp and the Pressure Roller. This permanently fixes the toner image in the paper.



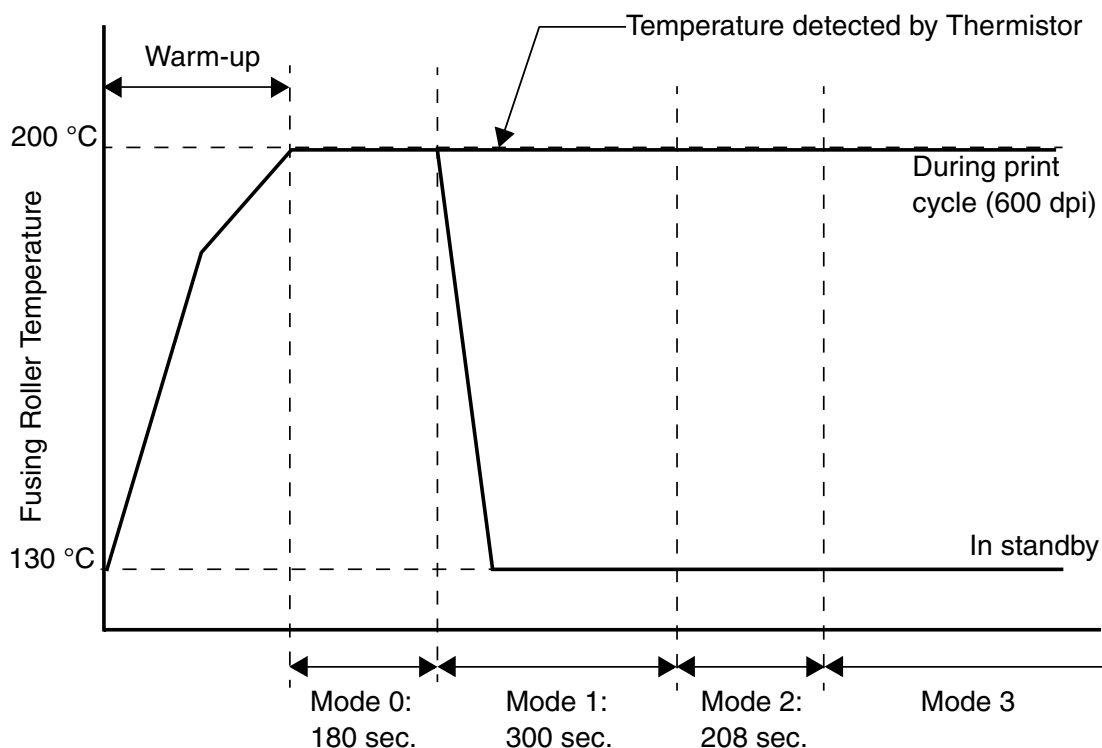
Electrical Parts	Control Signal	Blocked	Unblocked	WIRING DIAGRAM
PS1	PWB-P MPJ8P-3	L	H	F~G-2

Electrical Parts	Control Signal	Low temp. ↔ High temp.	WIRING DIAGRAM
TH1	PWB-P MPJ2P-1	Analog Input	F-2 to 3

Electrical Parts	Control Signal	ON	OFF	WIRING DIAGRAM
H1	PU-1 CN1PU-1-3	L	H	I-7

## 12-2. Fusing Temperature Control

### (1) Temperature changes (plain paper having a length of 186 mm or more)



		Thermistor-detected temperature at temperature control start		
		Less than 50 °C	50 °C to 125 °C	125 °C or more
Mode before temperature control	Power OFF, Front Door open/close	Mode 0	Mode 0	Mode 0
	Mode 0	Mode 1	Mode 2	Mode 3
	Mode 1		Mode 1	
	Mode 2		Mode 2	Mode 3
	Mode 3			

### (2) Temperature control

- The fusing temperature is increased to a predetermined level during the warm-up cycle.
- The warm-up control is provided when power is turned ON, the Front Door is opened and closed, and the Energy Save mode is canceled.
- In the standby state, the fusing temperature is set to a level (130 °C) lower than that during a print cycle, thereby cutting down power consumption.
- The temperature control mode when the control is resumed (when power is turned ON, the Front Door is opened and closed, or the Energy Save mode is canceled) is set according to the mode and the fusing temperature valid before the interruption.
- In the Energy Save mode, the Fusing Roller Heater Lamp is turned OFF to reduce power consumption.

### (3) Temperature control mode

The fusing temperature is controlled during a print cycle according to the period of time elapsed from the completion of the warm-up cycle.

- Mode 0

Mode 0 lasts for 3 min. If the temperature detected by the Thermistor is 50 °C or more when mode 0 is interrupted, the operation is switched to mode 1. Mode 1 starts when mode 0 is completed.

- Mode 1

Mode 1 lasts for 5 min. During this period, the printing temperature is gradually decreased. As the printing temperature is reduced down to a predetermined level, mode 1 is completed and mode 2 starts.

- Mode 2

Mode 2 lasts for 208 sec.

- Mode 3

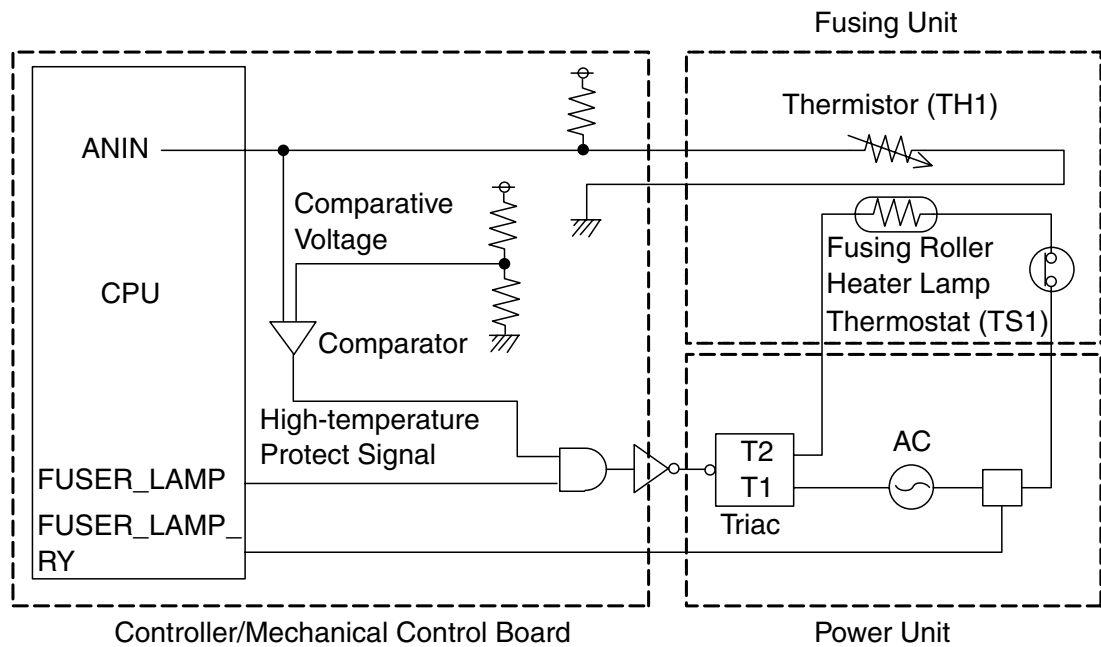
Mode 3 continues until the temperature control is interrupted (by opening and closing the Front Door, etc.).

### (4) Printing temperature by paper type in different temperature control modes

		Mode 0	Mode 1	Mode 2	Mode 3
Standby		200 °C	130 °C	130 °C	130 °C
Plain paper	186 mm or more	200 °C (standard)			
		215 °C → 200 °C (set in Tech. Rep. Mode) *1			
	Less than 186 mm	200 °C → 190 °C			
Thick paper, envelopes, postcards	186 mm or more	205 °C → 215 °C			
	Less than 186 mm	205 °C			
OHP		185 °C		185 °C → 175 °C	

\*1: Inferior fusing performance can at times result from plain paper (having a length of 186 mm or more) with the standard fusing temperature setting (200 °C). The “FUSER TEMP Ad” setting of Tech. Rep. Choice available from the Tech. Rep. Mode can therefore be used to set a higher fusing temperature.

## (5) Fusing temperature protect control



### <Soft protect>

- The comparator provided on the Controller/Mechanical Control Board is used as means for detecting an abnormally high temperature through software approach. If the temperature detected by the Thermistor (voltage value) is greater than the comparative temperature 235 °C (voltage value), the triac relay is turned OFF to shut down the output of the Heater Lamp.

### <Hard protect>

- As a protection should there be a software failure, the Thermostat is used to shut down current to the Heater Lamp when the temperature of the Fusing Roller becomes inordinately high.

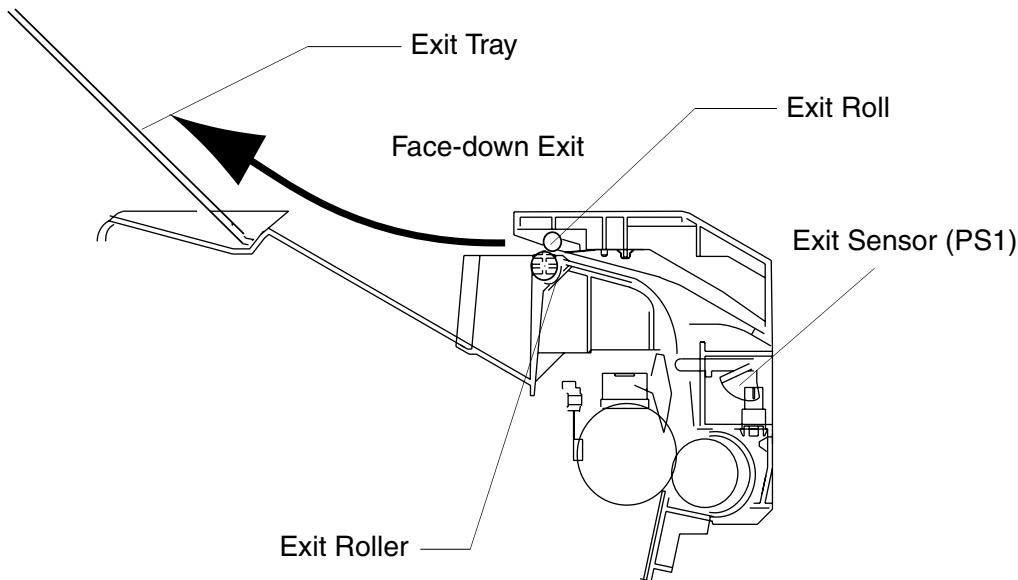
Electrical Component	Control Signal	Low temp. ◀▶ High temp.	WIRING DIAGRAM
TH1	PWB-P MPJ2P-1	Analog Input	F-2~3

Electrical Component	Control Signal	ON	OFF	WIRING DIAGRAM
H1	PU-1 CN1PU-1-3	L	H	I-7

# 13. PAPER EXIT

## 13-1. Paper Exit Mechanism

- The paper exit mechanism transports the paper that has been subjected to the fusing process onto the Exit Roller.
- The Exit Sensor detects not only a paper misfeed but also an open Upper Cover.



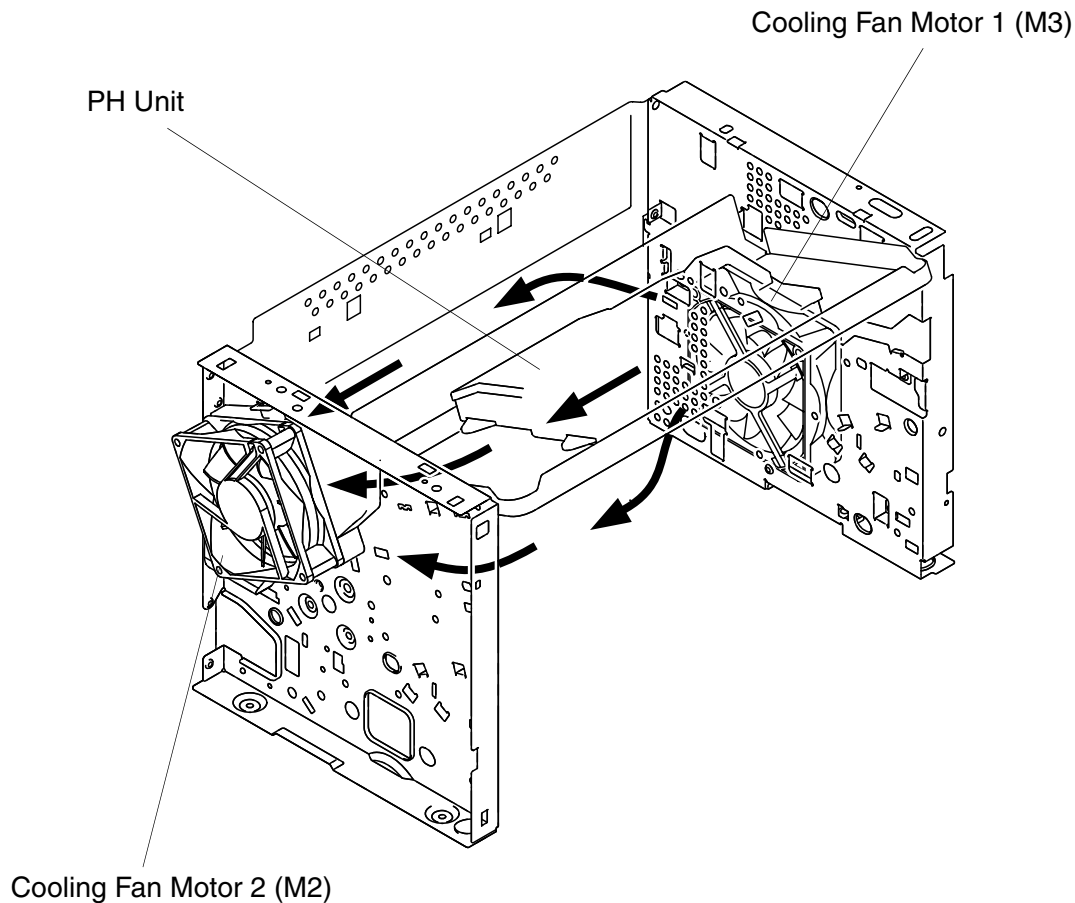
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Electrical Parts	Control Signal	Blocked	Unblocked	WIRING DIAGRAM
PS1	PWB-P MPJ8P-3	L	H	F to G-2

## 14. MISCELLANEOUS

### 14-1. Cooling of the Machine Interior

- The Cooling Fan Motors provided on the right and left frames of the machine draw outside air from the outside into the machine interior and discharge heat inside the machine out. It thereby prevents the temperature of the PH Unit and the machine interior from increasing.

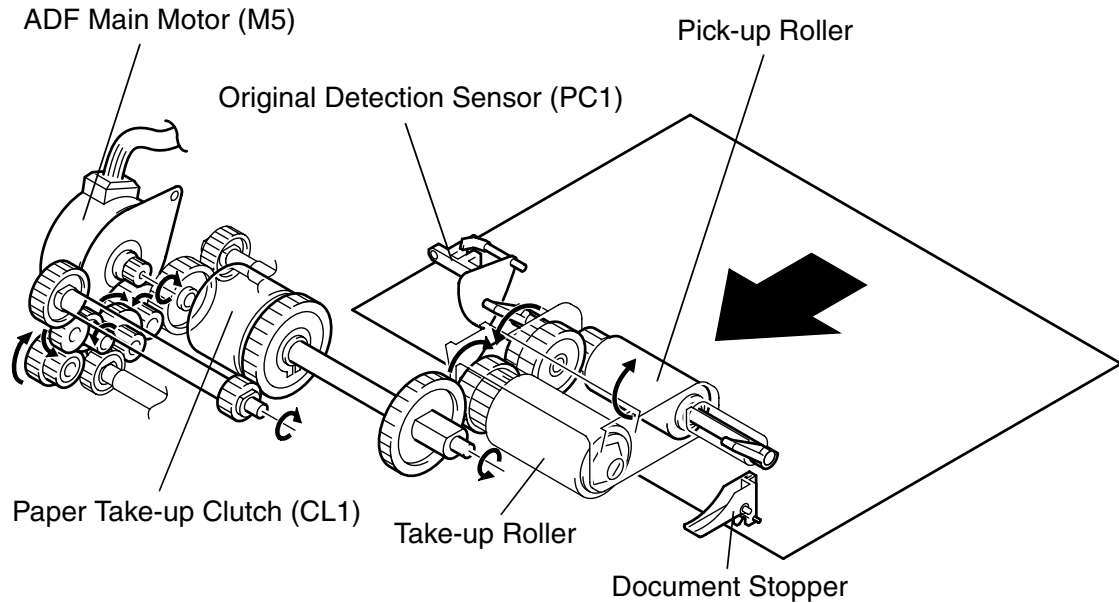


Electrical Parts	Control Signal	ON	OFF	WIRING DIAGRAM
M2	PWB-P MPJ13P-1 to 4	Pulse		I-3
M3	PWB-P MPJ6P-1 to 4	Pulse		I-3

# 15. Document Take-up

## (1) Document Take-up Mechanism

- The Original Detection Sensor detects a document that has been properly loaded in the Document Feeder.
- The Document Stopper establishes the leading edge position of the document loaded in the Document Feeder. The stopper is lowered in the standby state and raised when the document is taken up and fed in.
- The Document Stopper is raised and lowered in synchronism with the raising and lowering motion of the Pick-up Roller.
- The Pick-up Roller and Take-up Roller turn to take up and feed the original properly.
- The Pick-up Roller transports the original up to the Take-up Roller.
- The ADF Main Motor drives the Pick-up Roller and Take-up Roller through a gear train and the Paper Take-up Clutch.



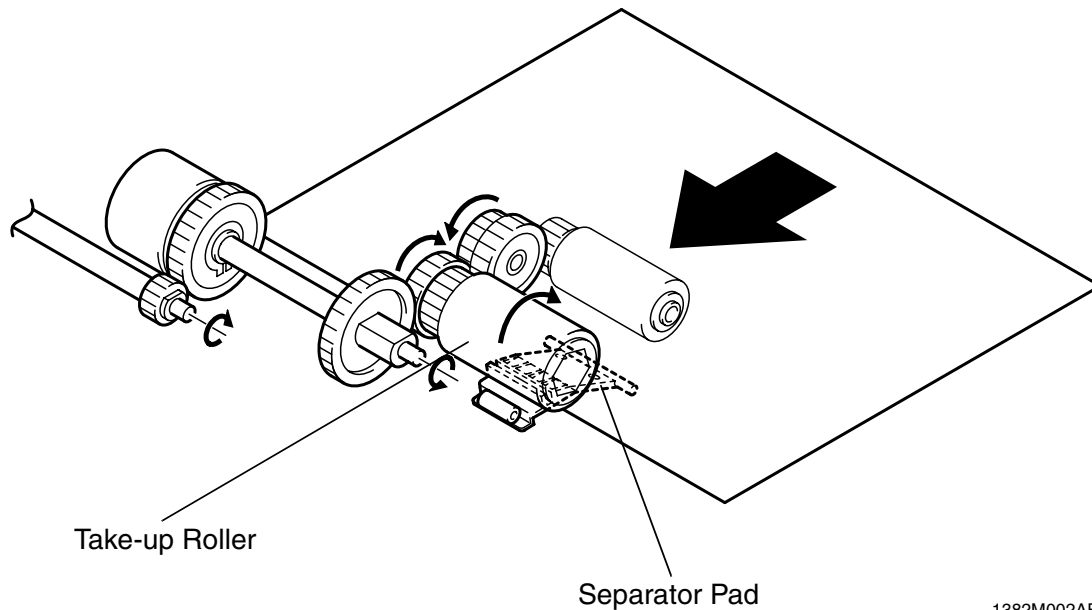
1382M001AC

Electrical Component	Control Signal	ON	OFF	WIRING DIAGRAM
M5	PWB-A ADF PA01OA AF-1~4	Pulse output		B-9
CL1	PWB-A ADF PA07A AF-2	L	H	C-9

Electrical Component	Control Signal	Blocked	Unblocked	WIRING DIAGRAM
PC1	PWB-A ADF PA02A AF-1	L	H	B-9

## (2) Document Separation Mechanism

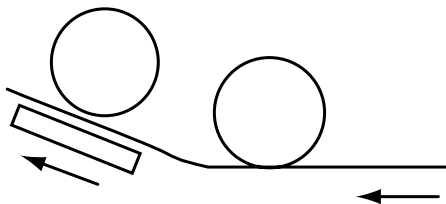
- Double feeding of paper is prevented using coefficient of friction between the Take-up Roller and Separator Pad.



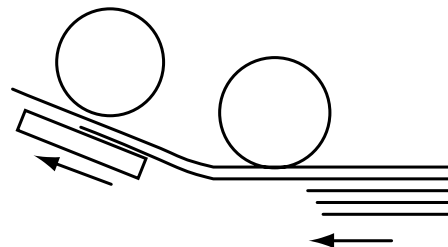
1382M002AB

- When one sheet of paper is taken up : The coefficient of friction on the front side of the sheet of paper taken up and fed through the space between the Take-up Roller and Separator Pad is same as that on the backside of the sheet of paper, allows the Take-up Roller to feed the paper.
- When two or more sheets of paper are taken up : The coefficient of friction between the paper and Separator Pad is greater than that between the sheets of paper, which allows only the top sheet of paper to be fed by the Take-up Roller.

When one sheet of paper is taken up



When two or more sheets of paper are taken up

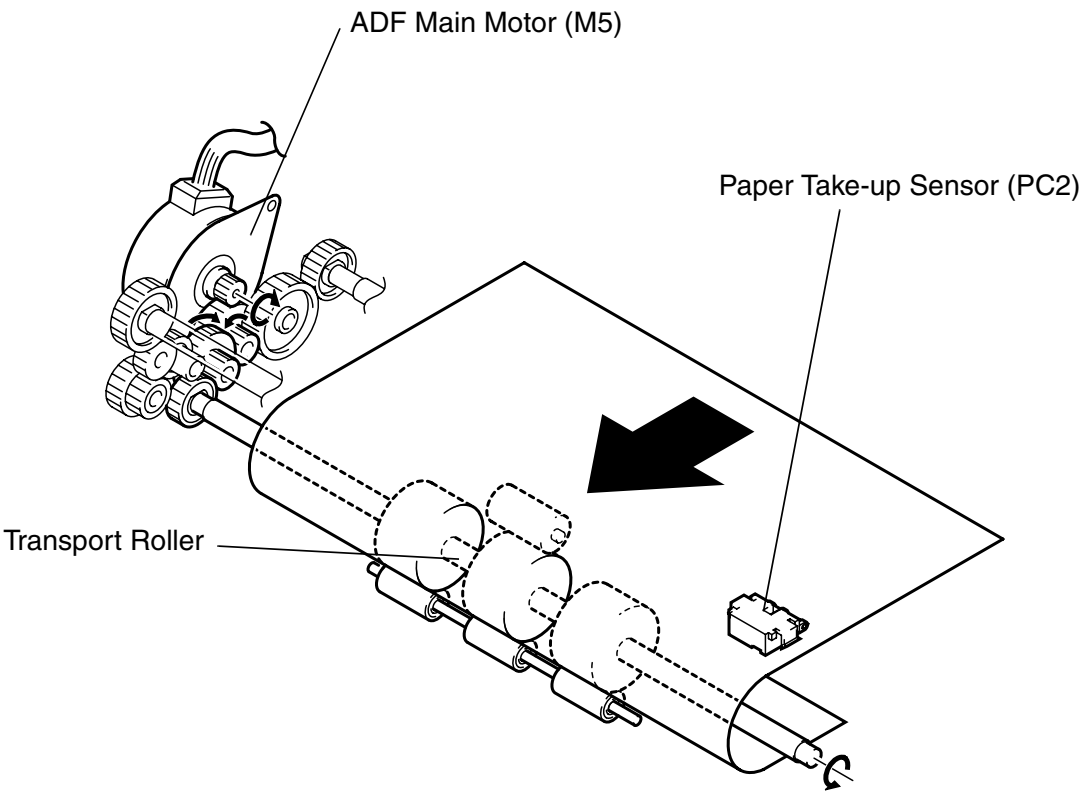


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# 16. Document Transport

## (1) Document transport mechanism

- The original that has been taken up blocks the Paper Take-up Sensor. The Transport Roller turns to transport the original up to the document scanning position of the machine.
- The ADF Main Motor drives the Transport Roller through a gear train



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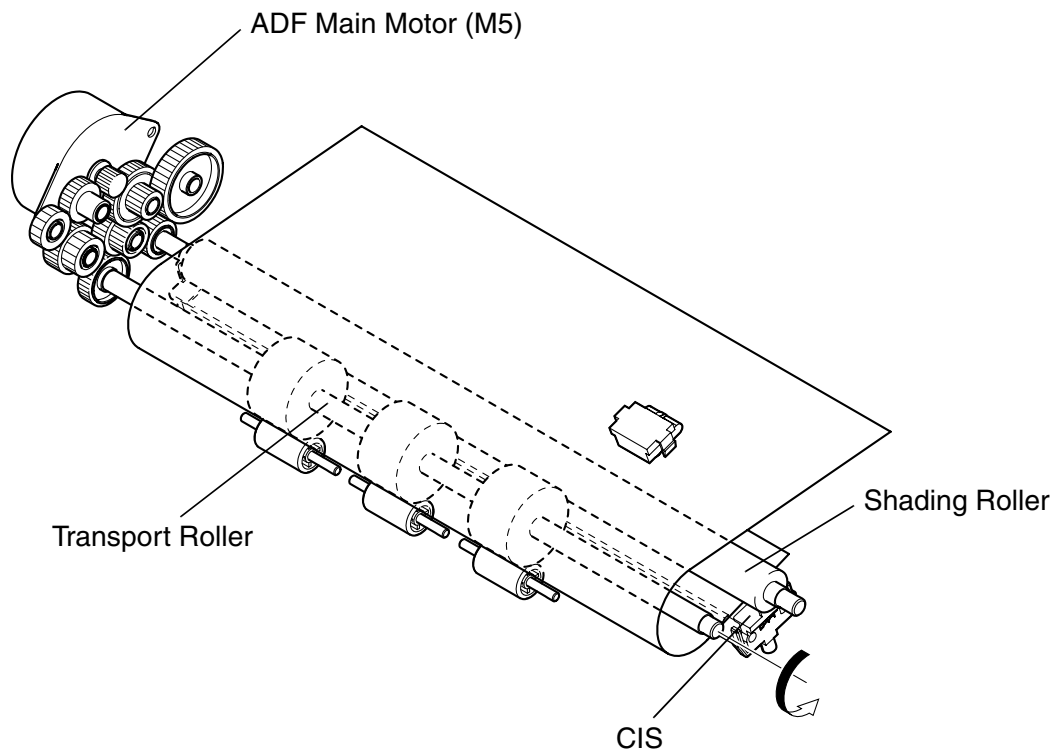
Electrical Component	Control Signal	ON	OFF	WIRING DIAGRAM
M5	PWB-A ADF PA01OA AF-1~4	Pulse output		B-9

Electrical Component	Control Signal	Blocked	Unblocked	WIRING DIAGRAM
PC2	PWB-A ADF PA06A AF-1	L	H	B-9

## 17. Image Reading

### 17-1. Image reading mechanism

- The Transport Roller turns to transport the original up to the document scanning position of the machine.
- The CIS reads the image of the original transported by the Transport Roller.
- The Shading Roller turns to transport the original up to the document exit position of the machine.
- The ADF Main Motor drives the Shading Roller through a gear train.



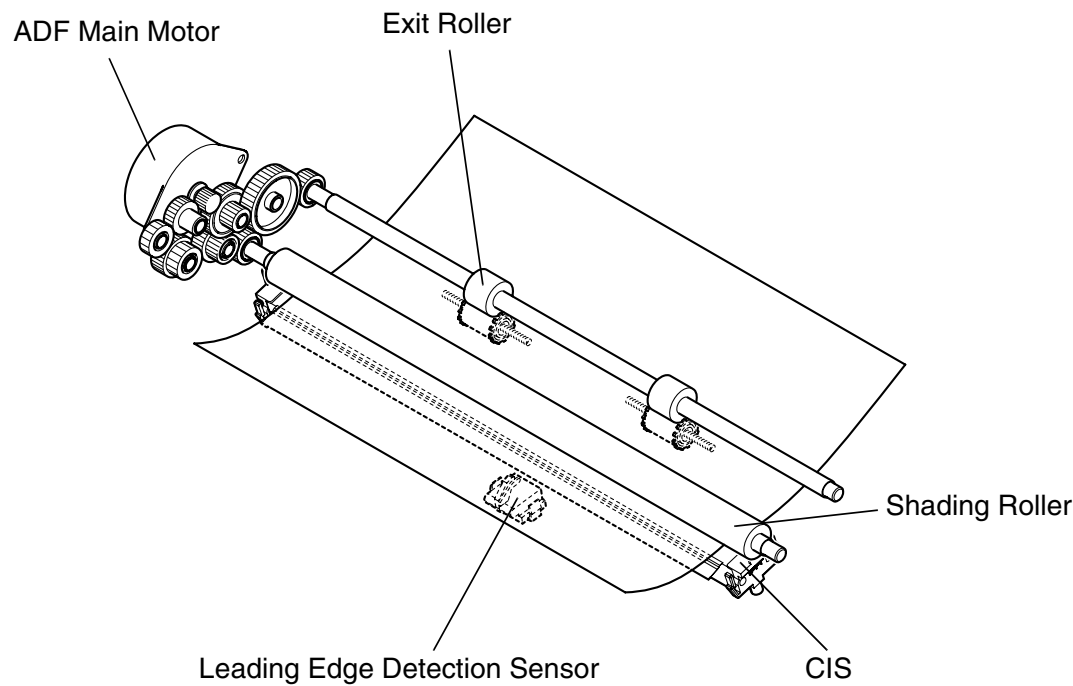
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Electrical Component	Control Signal	WIRING DIAGRAM
CIS	AFE IF P603-1~14	D-1

# 18. Document Exit

## (1) Document exit mechanism

- The Exit Roller turns to feed the original out of the Document Feeder. During this sequence, the original blocks the Leading Edge Detection Sensor and is fed onto the Document Exit Tray.
- The ADF Main Motor turns the Exit Roller through a gear train.

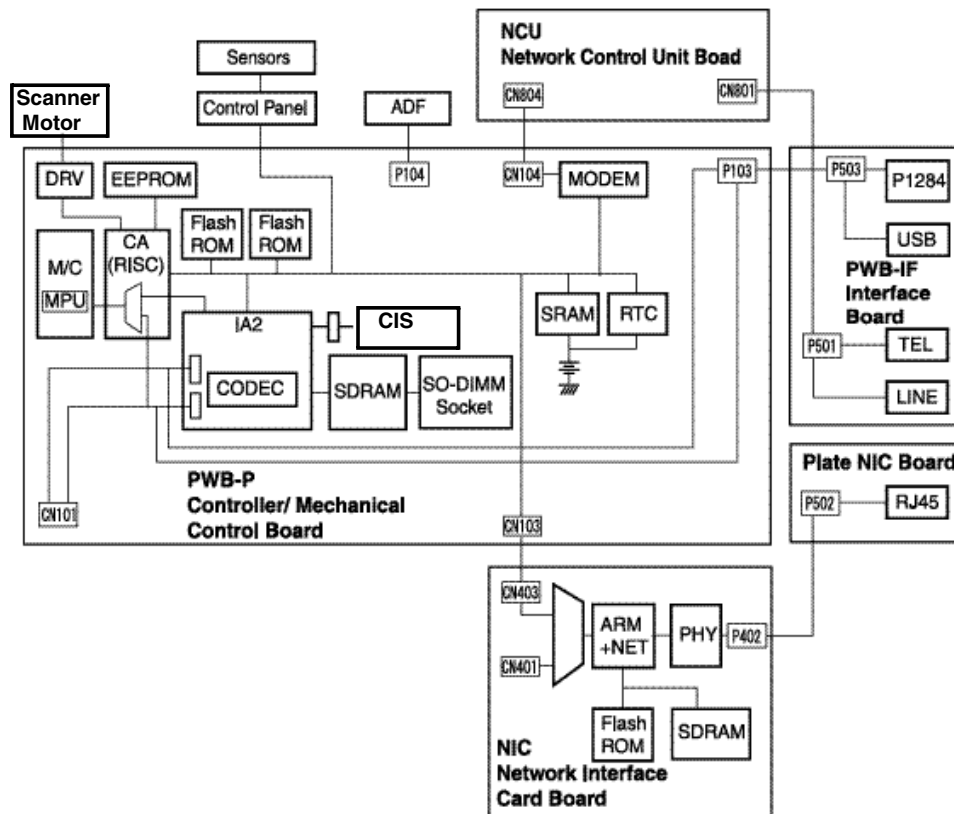


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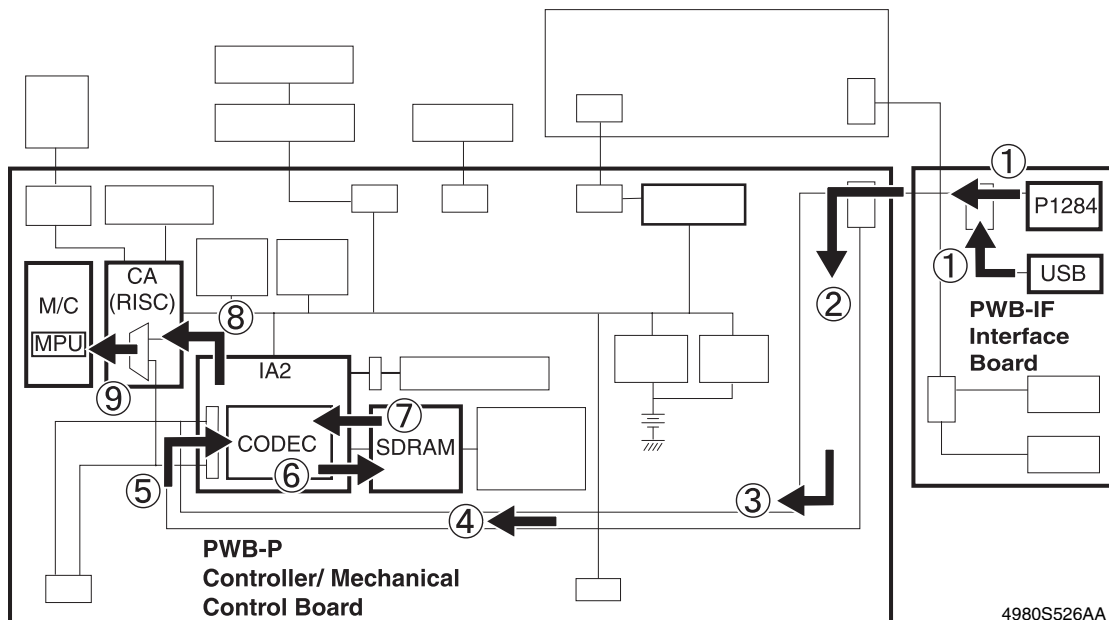
Electrical Component	Control Signal	ON	OFF	WIRING DIAGRAM
M5	PWB-A ADF PA01OA AF-1~4	Pulse output		B-9

Electrical Component	Control Signal	Blocked	Unblocked	WIRING DIAGRAM
PC3	PWB-A ADF PA03A AF-1	L	H	C-9

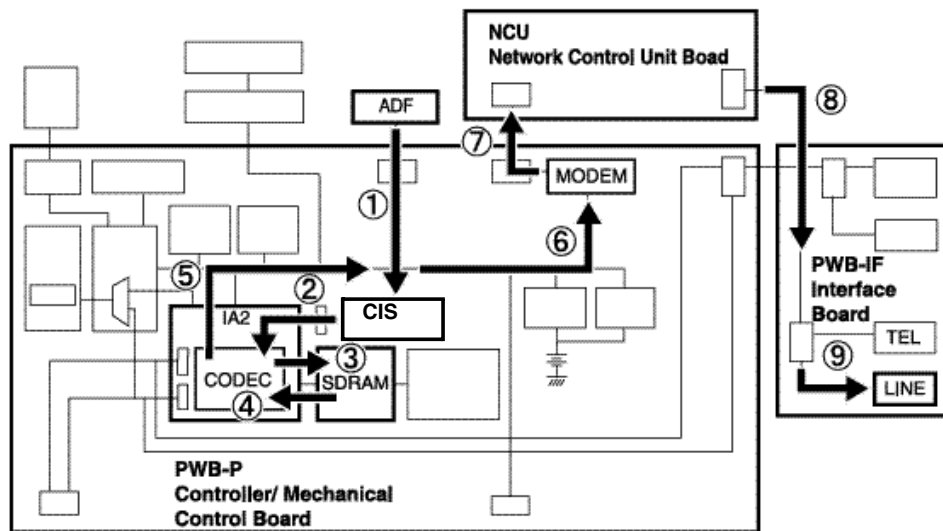
## 19. Data Flow Diagram



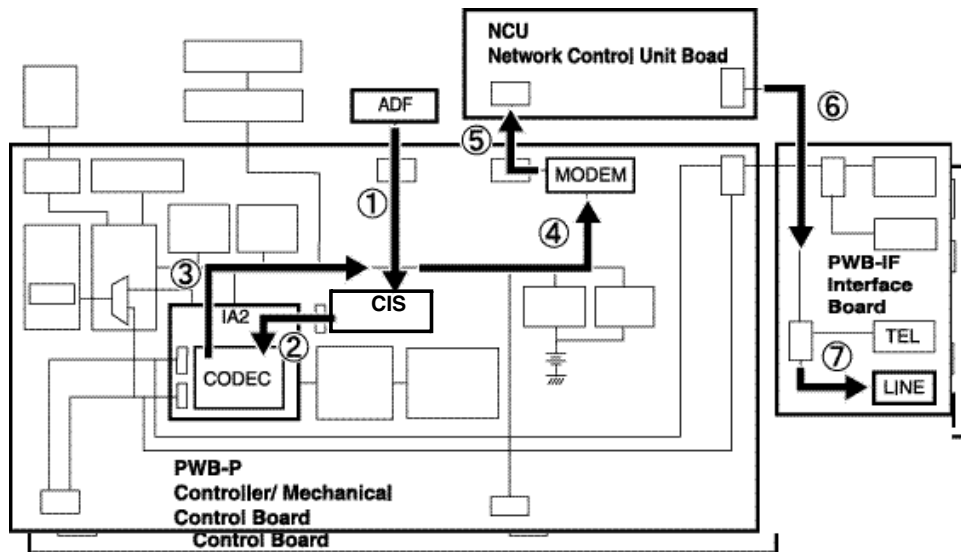
## 1. GDI Print Data Flow



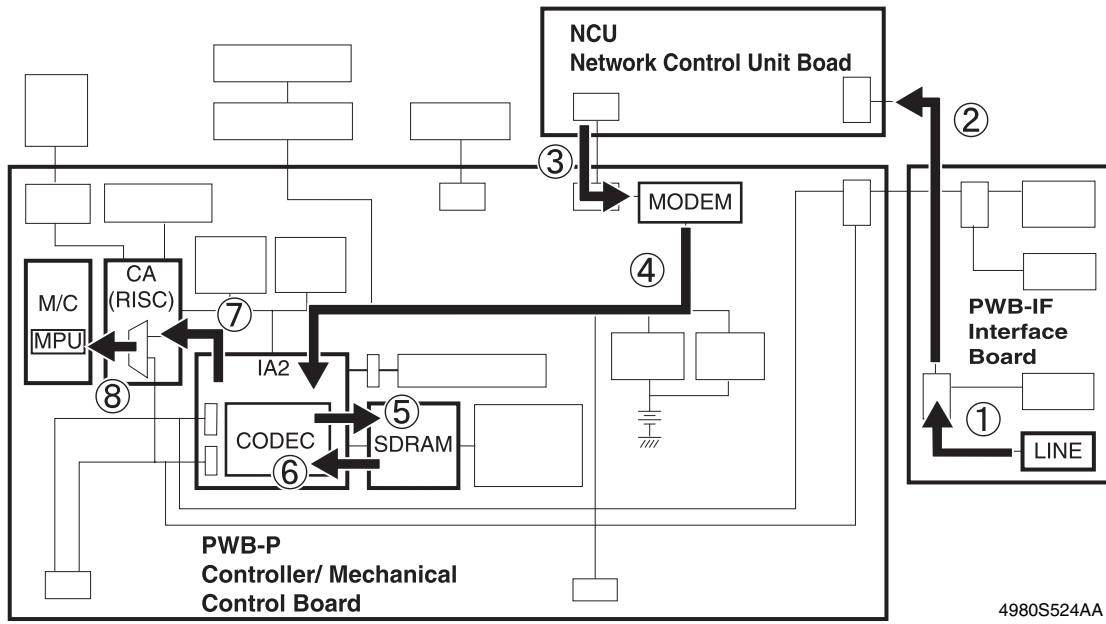
## 2. FAX: Memory TX Data Flow



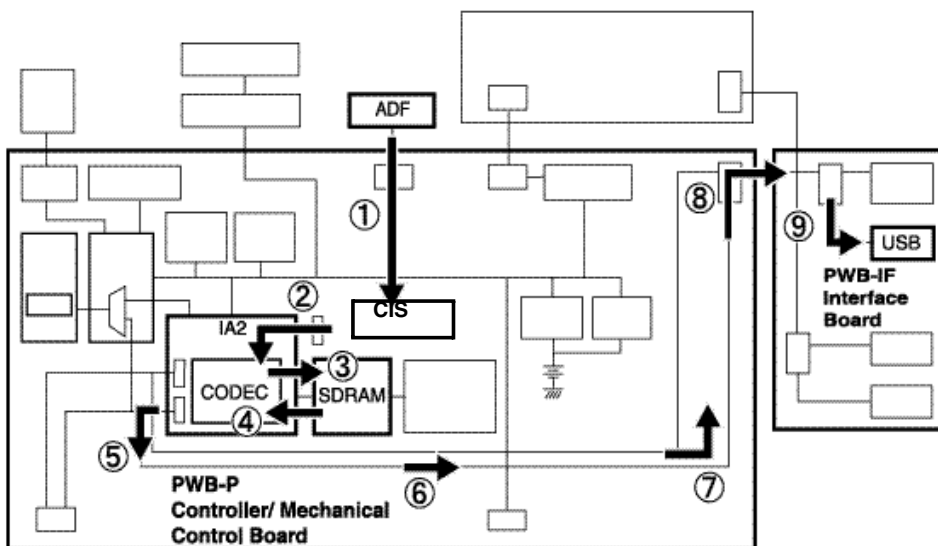
## 3. FAX: Hook TX Data Flow



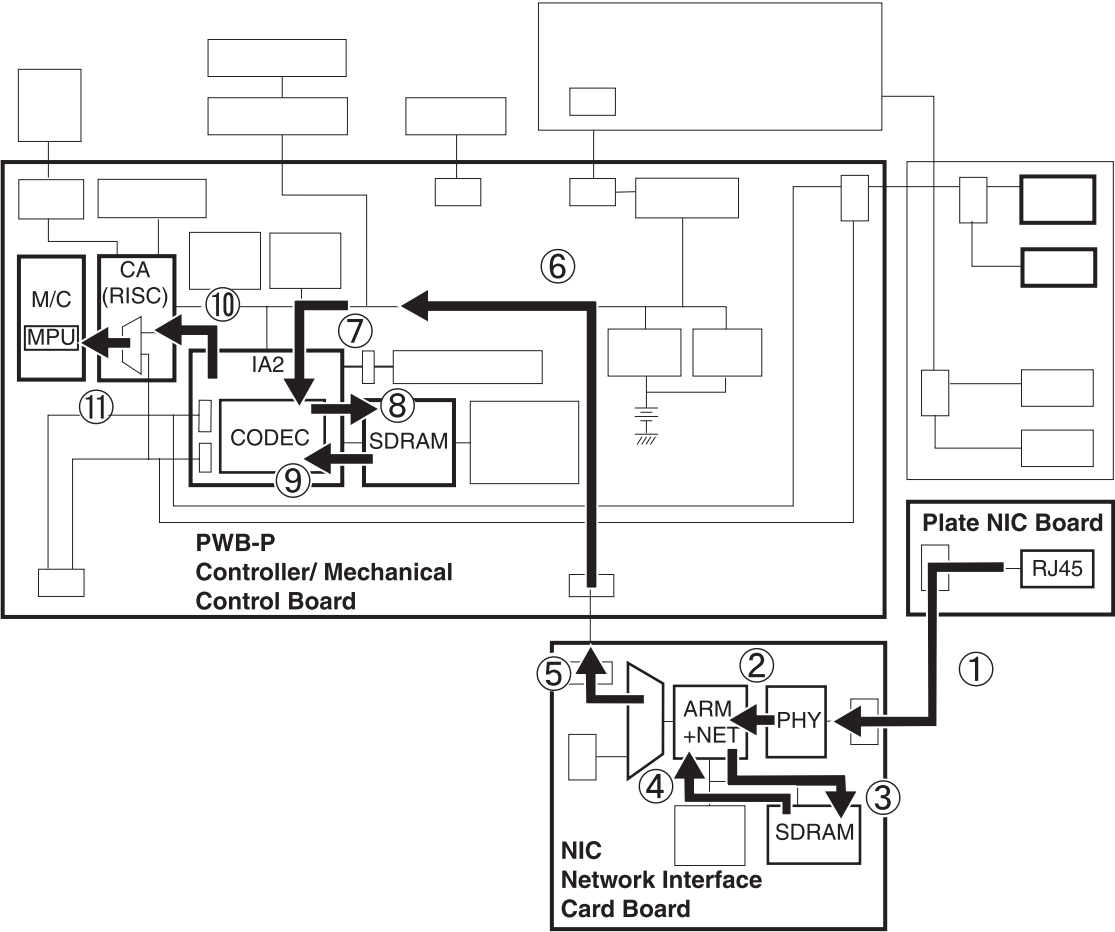
#### 4. FAX: RX and Print Data Flow



#### 5. TWAIN Scan Data Flow

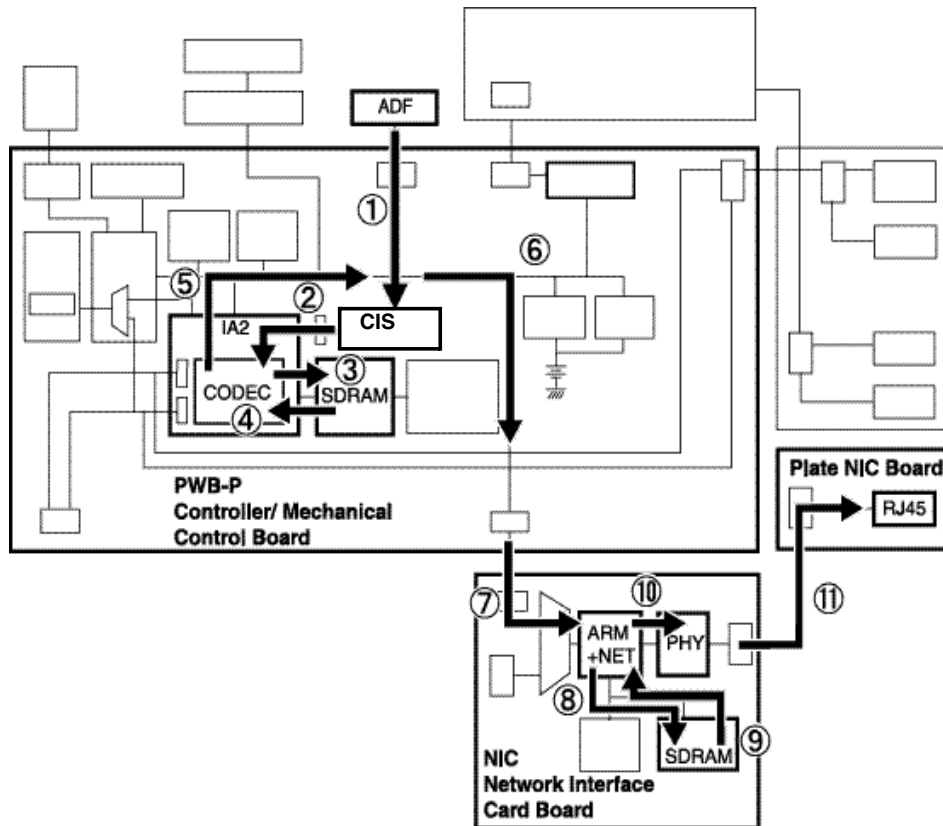


6. Network GDI Print Data Flow (KONICA MINOLTA FAX 3900 only)



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## 7. I-FAX Data Flow (KONICA MINOLTA FAX 3900 only)



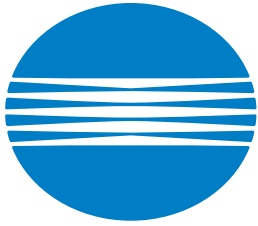
# PF-125

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## Service Manual

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KONICA MINOLTA

# *PARTS GUIDE MANUAL*

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OCTOBER 2004

## *KonicaMinolta Fax2900*

## *KonicaMinolta Fax3900*

KONICA MINOLTA BUSINESS TECHNOLOGIES, INC.

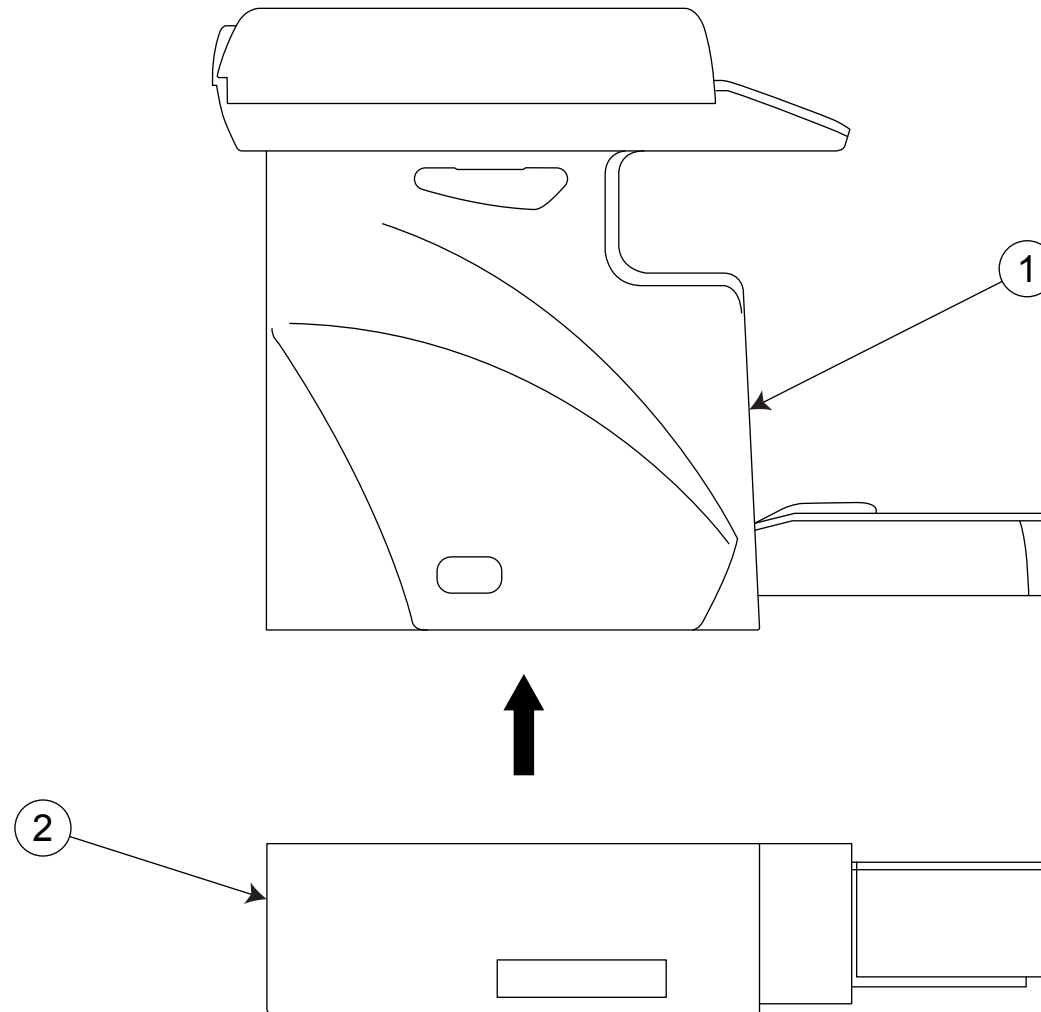
## INFORMATION FOR PARTS GUIDE MANUAL

To find correct Parts No., refer to the "HOW TO MAKE THE BEST USE OF THIS MANUAL" in the following page.

### HOW TO MAKE THE BEST USE OF THIS MANUAL

- 1 When you order, please check the proper figures beforehand that are on Our Parts Guide Manual, and order with the appropriate figures.
- 2 For screws, Nuts, Washers, retaining rings and Pins which are used in this model, one letter is shown on the Standard parts column of Parts list and exploded diagrams.
- 3 In order to maintain safety of the product, some specific parts composed of this product are set up as "essential safety parts".
- 4 The assigned parts number for the "essential safety parts" is indicated as "SP00-\*\*\*\*".  
When replacing these parts, follow precautions for disassembling and installing which are listed in the Service Manual.  
Do not use any parts that are not set up as
- 5 ♣ means that there are exclusive parts for each destination.  
Please check the appropriate destination when you order.
- 6 Revision Mark  
Marked as ▲ on the illustration shows that the revision has been made.
- 7 All rights reserved. (any reprints or quotations are prohibited.)  
Use of this parts guide manual should be strictly supervised to avoid disclosure of confidential information.

# SYSTEM OUTLINE

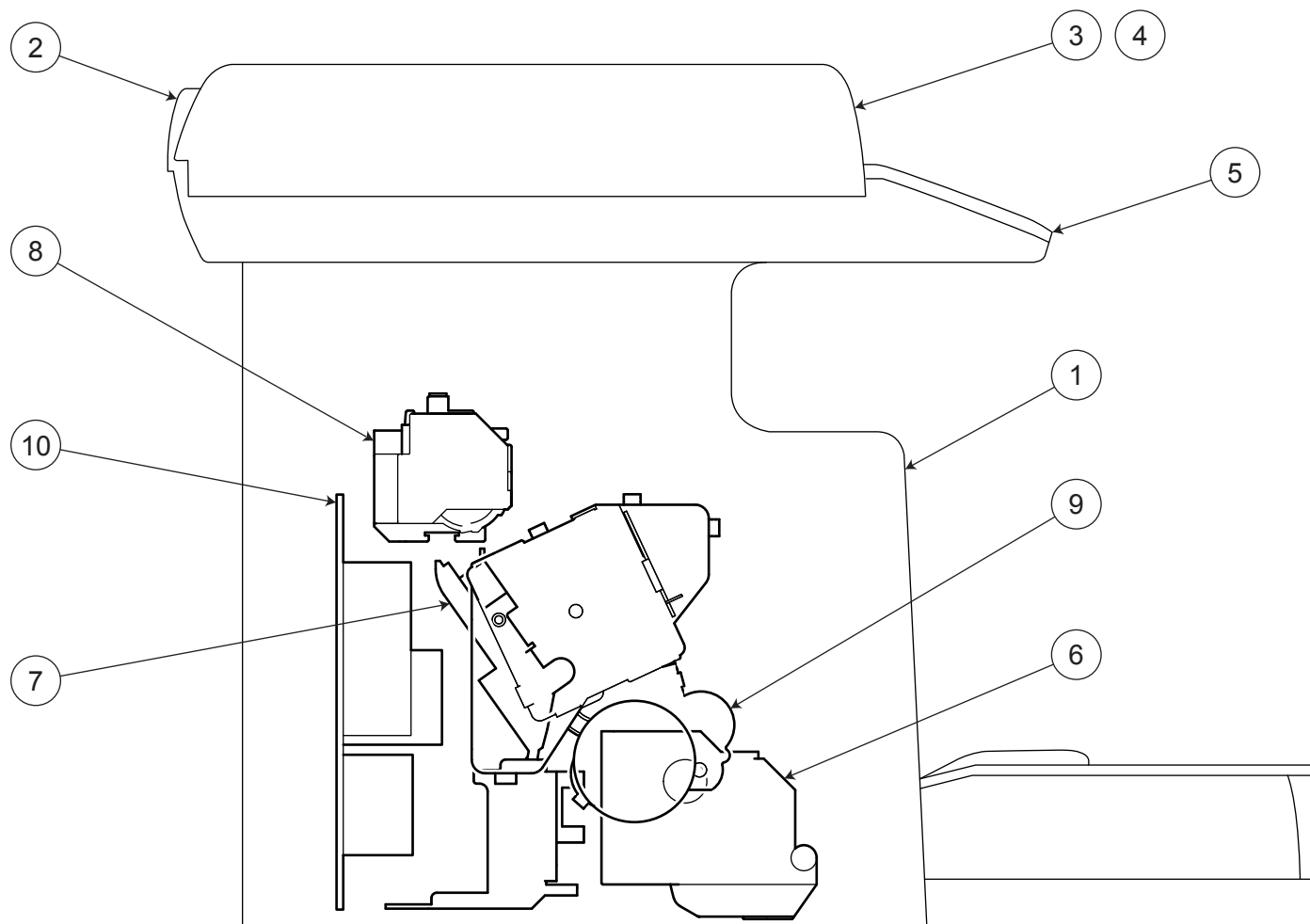


Konica Minolta FAX2900/3900

## GENERAL CONTENTS

No.	Description	Model
1	MAIN MACHINE	Konica Minolta Fax2900/3900
2	LOWER FEEDER UNIT	PF-125/KONICA PF-119

# DIAGRAMS OF MAIN PARTS SECTION



Konica Minolta FAX2900/3900

# CONTENTS

No.	DESCRIPTION	PAGE No.
1	EXTERNAL PARTS	P1 P2
2	EXTERNAL PARTS ADF	P3
3	PAPER TAKE-UP SECTION ADF	P4
4	DRIVE SECTION ADF	P5
5	OPERATION PANEL	P6
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1391 1006 01	3-11	1391 1057 01	5-5	4127 4106 01	8-6	4136 3006 01	7-2	4136 6301 02	8-12
1391 1007 01	4-19	1391 1058 01	4-12	4127 4107 01	8-28	4136 3009 02	7-3	4136 6702 01	9-13
1391 1008 01	5-22	1391 1059 01	1-1	4127 4108 01	8-3	4136 3013 01	11-12	4136 6751 01	8-21
1391 1009 01	1-3	1391 1060 01	1-5	4127 4109 01	8-7	4136 3014 02	7-8	4136 6804 01	11-22
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1391 1015 01	3-1	1391 1066 01	6-11	4136 0901 02	9-21	4136 3026 01	7-27	4136 7500 01	2-19
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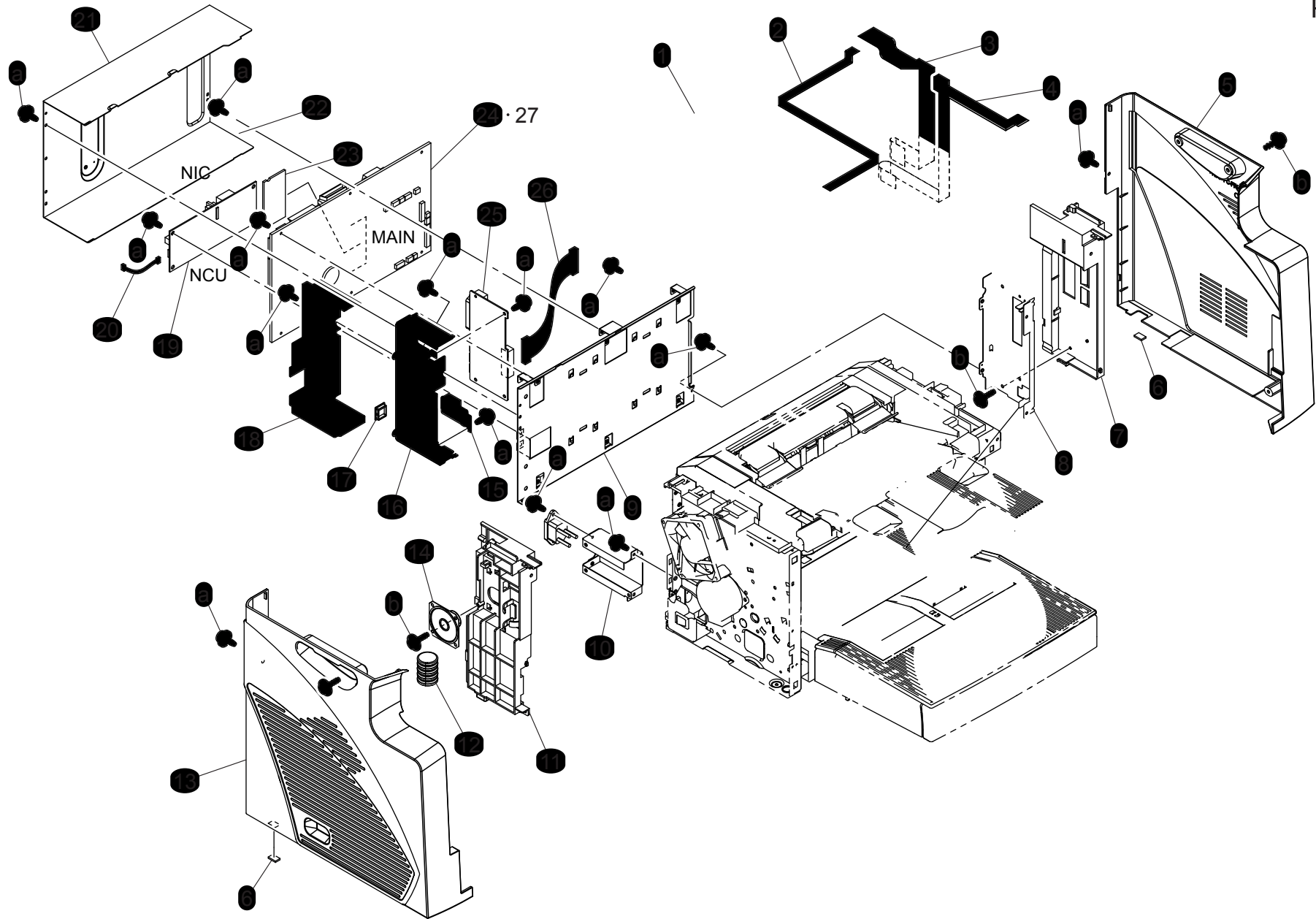
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# EXTERNAL PARTS

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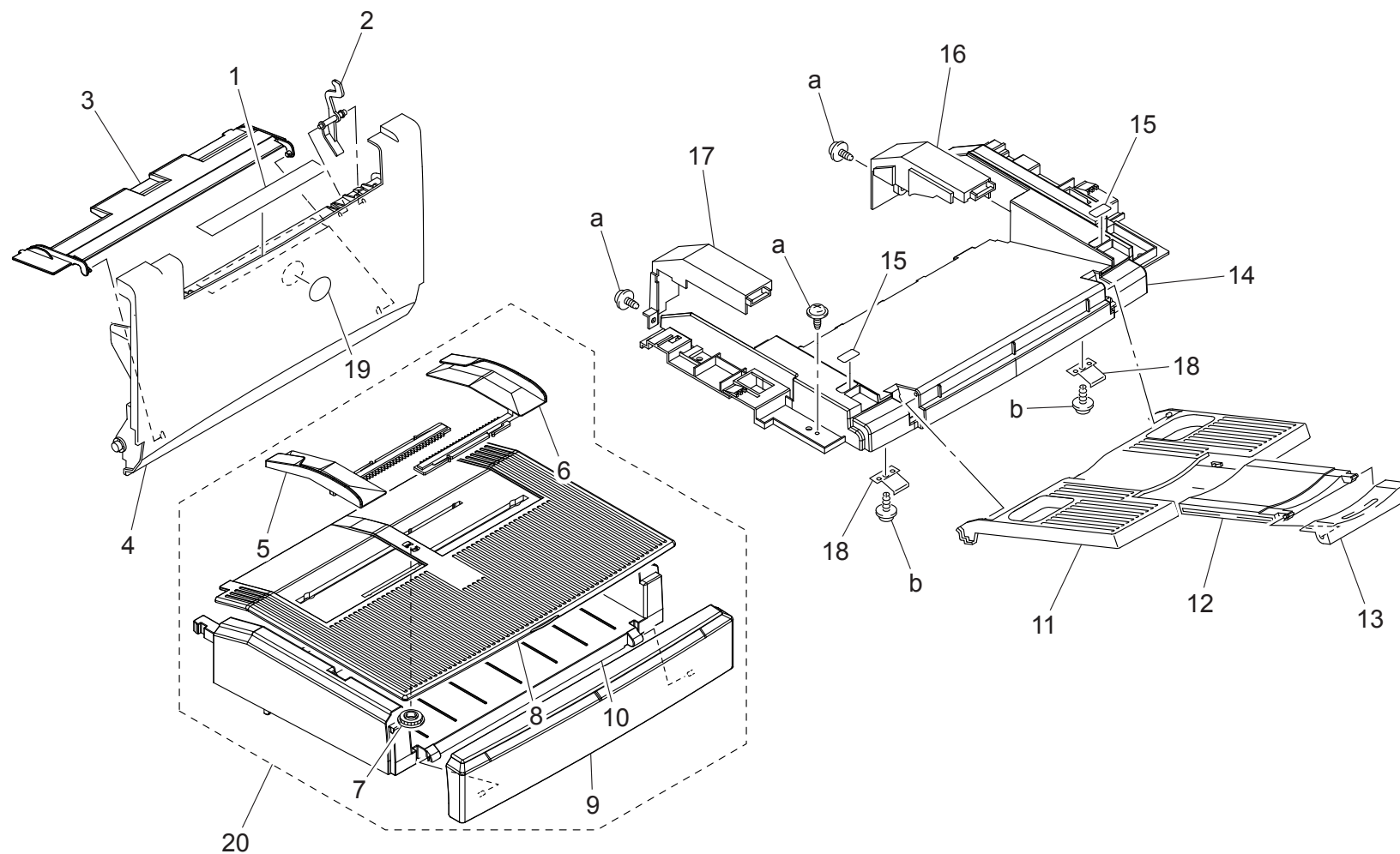


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## EXTERNAL PARTS

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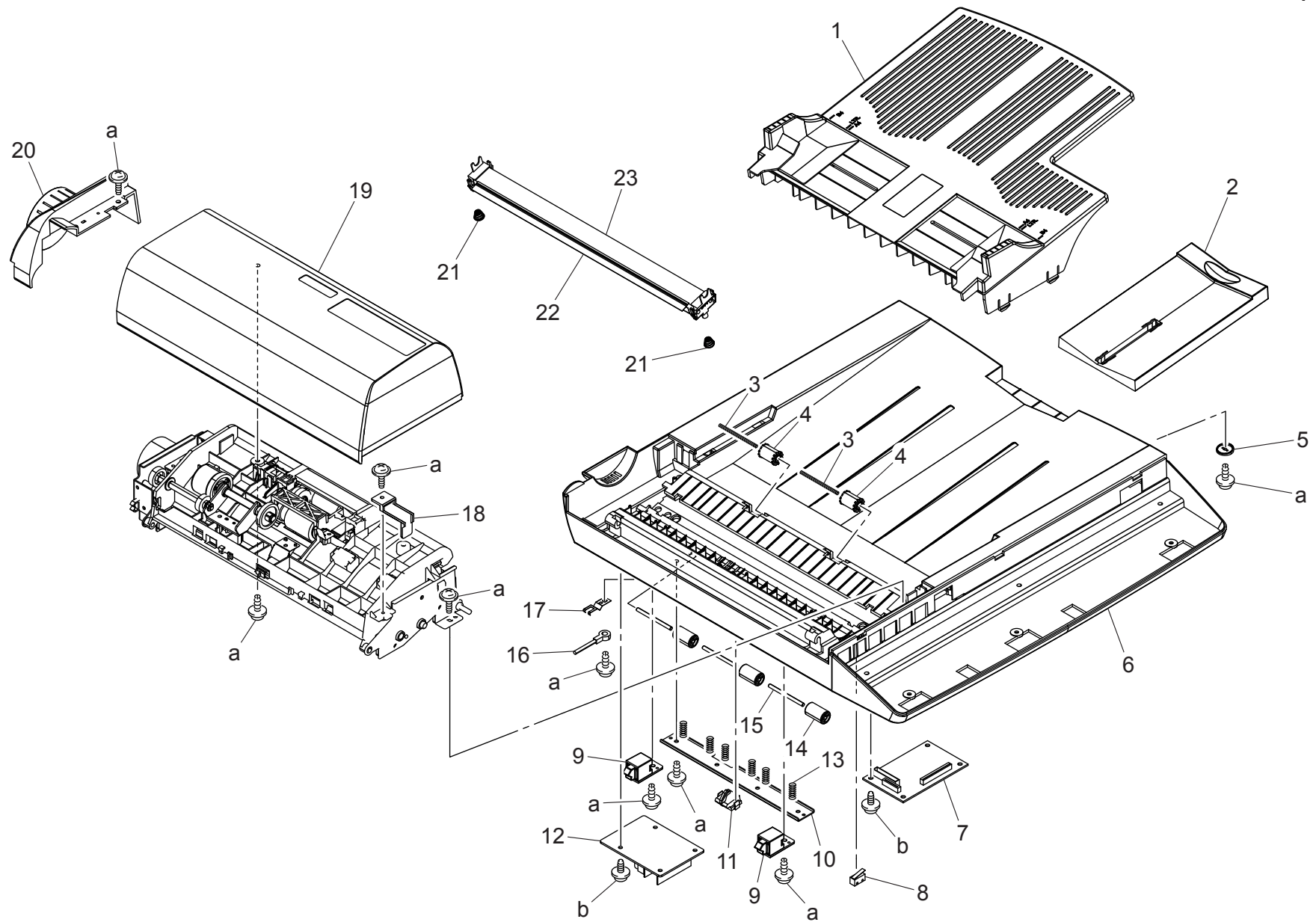
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1	1391 1059 01	FRAME		D	1	a-9735030814
2	1391 1010 01	WIRE HARNESS IF-A4 CIS		D	1	b-9739030814
3	1391 1009 01	WIRE HARNESS MAIN-IF		D	1	
4	1391 1011 01	WIRE HARNESS MAIN-PANEL		D	1	
5	1391 1060 01	RIGHT COVER		C	1	
6	1391 1035 01	RUBBER FOOT		D	2	
7	1391 1031 01	COVER		D	1	
8	4980 1143 01	SHIELD		D	1	
9	4980 1146 01	BRACKET		D	1	
10	4980 1145 01	BRACKET		D	1	
11	1391 1030 01	COVER		D	1	
12	4980 1022 01	BATTERY		D	1	
13	1391 1061 01	LEFT COVER		C	1	
14	4980 1023 01	SPEAKER ASSY		D	1	
15	4980 1139 01	PWB ASSY	(FAX3900)	D	1	
16	1391 1046 01	BRACKET		D	1	
17	4980 1164 01	COVER		D	1	
18	1391 1032 01	COVER		D	1	
19	1391 1014 01	PWB ASSY NCU		C	1	
20	1391 1002 01	WIRE HARNESS NCU-PLATE		D	1	
21	1391 1029 01	REAR COVER		D	1	
22	1391 1013 01	PWB ASSY NIC	(FAX3900)	C	1	
23	4980 1140 01	MEMORY ELEMENT ACCESSORY	(OPTION)	D	1	
24	1391 1020 01	PWB ASSY MAIN	(FAX3900)	I	1	
25	1391 1022 01	PWB ASSY		D	1	
26	4980 1162 01	WIRE HARNESS ASSY		D	1	
27	1391 1021 01	PWB ASSY MAIN	(FAX2900)	I	1	



## EXTERNAL PARTS

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Key	Parts No.or	Description	Destinations	Class	Qty.	Standard parts
1	4137 7302 01	LABEL JAM		D	1	a-9735030814
2	4136 1021 02	LEVER		D	1	b-9739030814
3	4136 1020 03	COVER		C	1	
4	4137 1033 01	FRONT COVER		C	1	
5	4137 3203 01	REGULATING PLATE		D	1	
6	4137 3202 01	REGULATING PLATE		D	1	
7	4127 3104 01	GEAR 14T		D	1	
8	4137 1009 01	COVER		D	1	
9	4137 1006 01	FRONT COVER		C	1	
10	4137 1008 01	TRAY		D	1	
11	4137 1007 03	TRAY		D	1	
12	4137 1017 03	TRAY		C	1	
13	4137 1018 01	TRAY		C	1	
14	4137 1001 14	TOP COVER		D	1	
15	4137 7301 01	LABEL		D	2	
16	4137 1011 01	UPPER RIGHT COVER		D	1	
17	4137 1012 02	UPPER LEFT COVER		D	1	
18	4137 1051 01	PLATE SPRING		C	2	
19	4136 7500 01	LABEL		D	1	
20	4137 0754 00	TRAY ASSY		S	1	



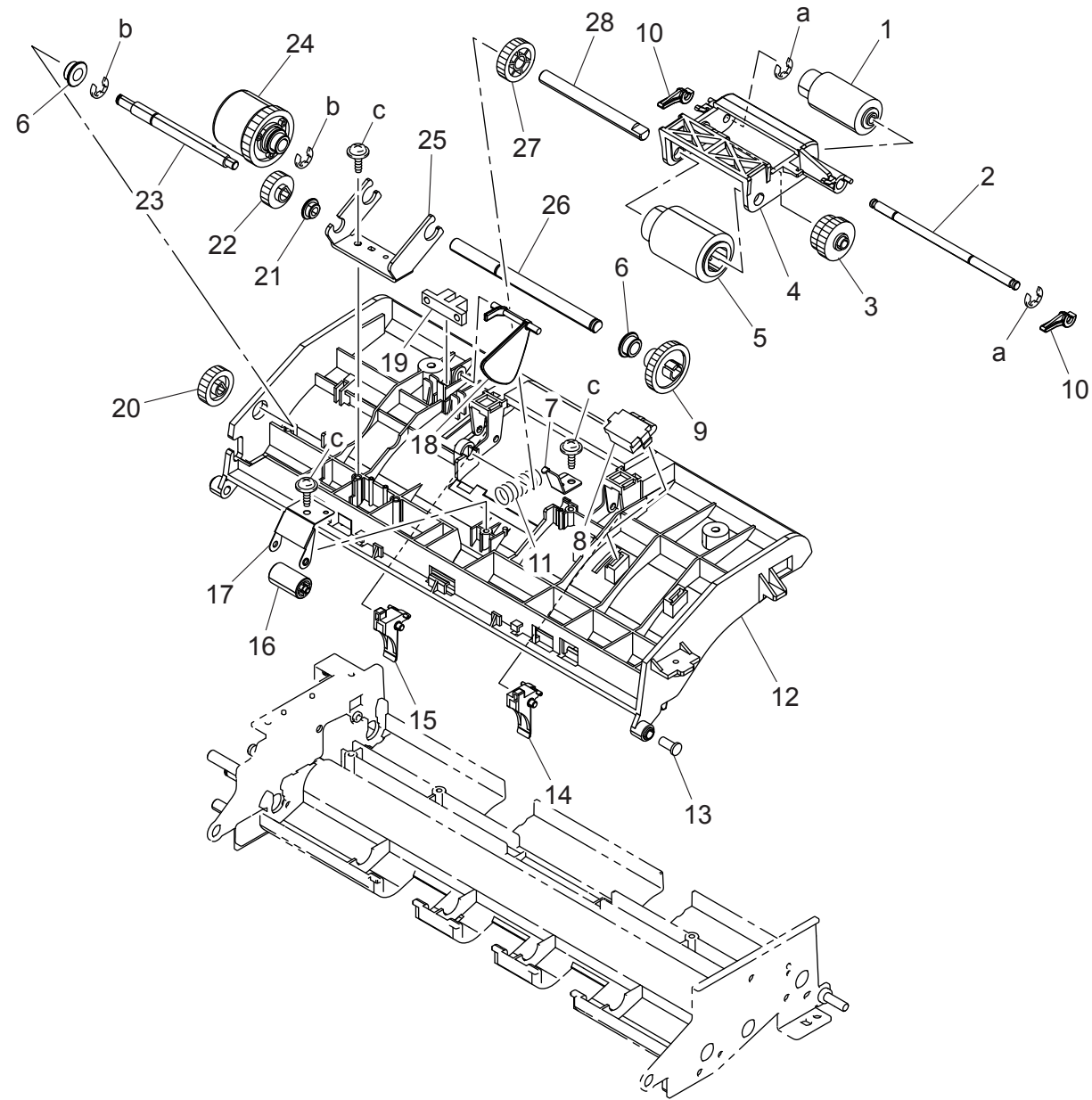
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Key	Parts No.or	Description	Destinations	Class	Qty.	Standard parts
1	1391 1015 01	TRAY ASSY		C	1	a-9739030814
2	1391 1065 01	TRAY		C	1	b-9735030814
3	1391 1044 01	PRESSURE SPRING		C	2	
4	1391 1041 01	ROLLER ASSY		C	2	
5	1391 1083 01	COLLAR		D	1	
6	1391 1055 01	FRAME		D	1	
7	1391 1026 01	PWB ASSY IF PCB		D	1	
8	1391 1003 01	MICRO-SWITCH		C	1	
9	1391 1019 01	STOPPER		C	2	
10	1391 1050 01	BRACKET		D	1	
11	1391 1006 01	MICRO-SWITCH		C	1	
12	1391 1025 01	PWB ASSY PCB		D	1	
13	1391 1093 01	PRESSURE SPRING		C	6	
14	1391 1040 01	ROLLER		C	3	
15	1391 1054 01	SHAFT		D	3	
16	1391 1097 01	WIRE HARNESS ASSY		D	1	
17	1391 1051 01	TERMINAL		D	1	
18	1391 1082 01	ARM		D	1	
19	1391 1063 01	UPPER COVER		C	1	
20	1391 1064 01	COVER		C	1	
21	1391 1092 01	PRESSURE SPRING		C	2	
22	1391 1098 01	POLYESTERFILM		D	1	
23	1391 1017 01	CIS ASSY		I	1	

# PAPER TAKE-UP SECTION ADF

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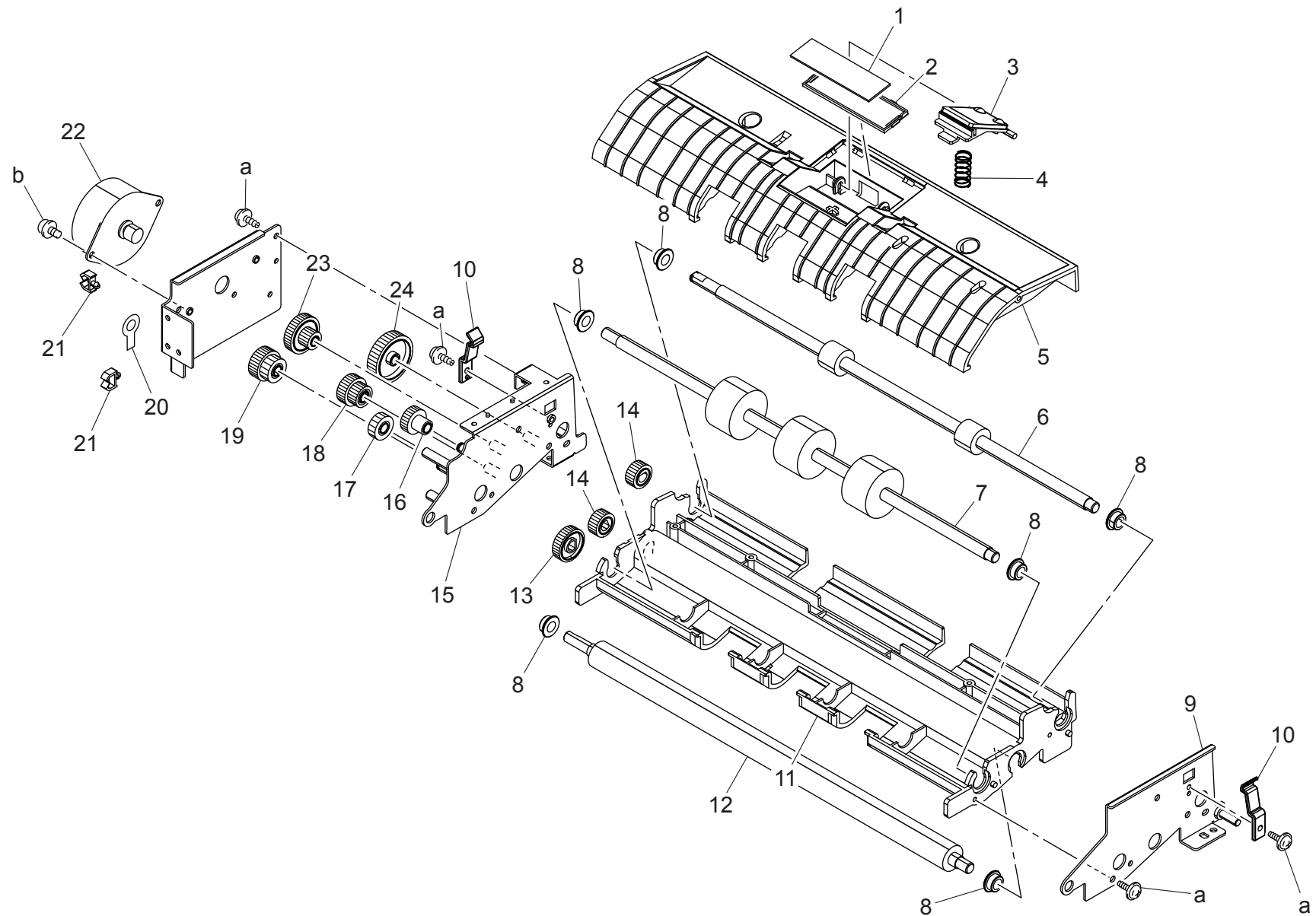


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## PAPER TAKE-UP SECTION ADF

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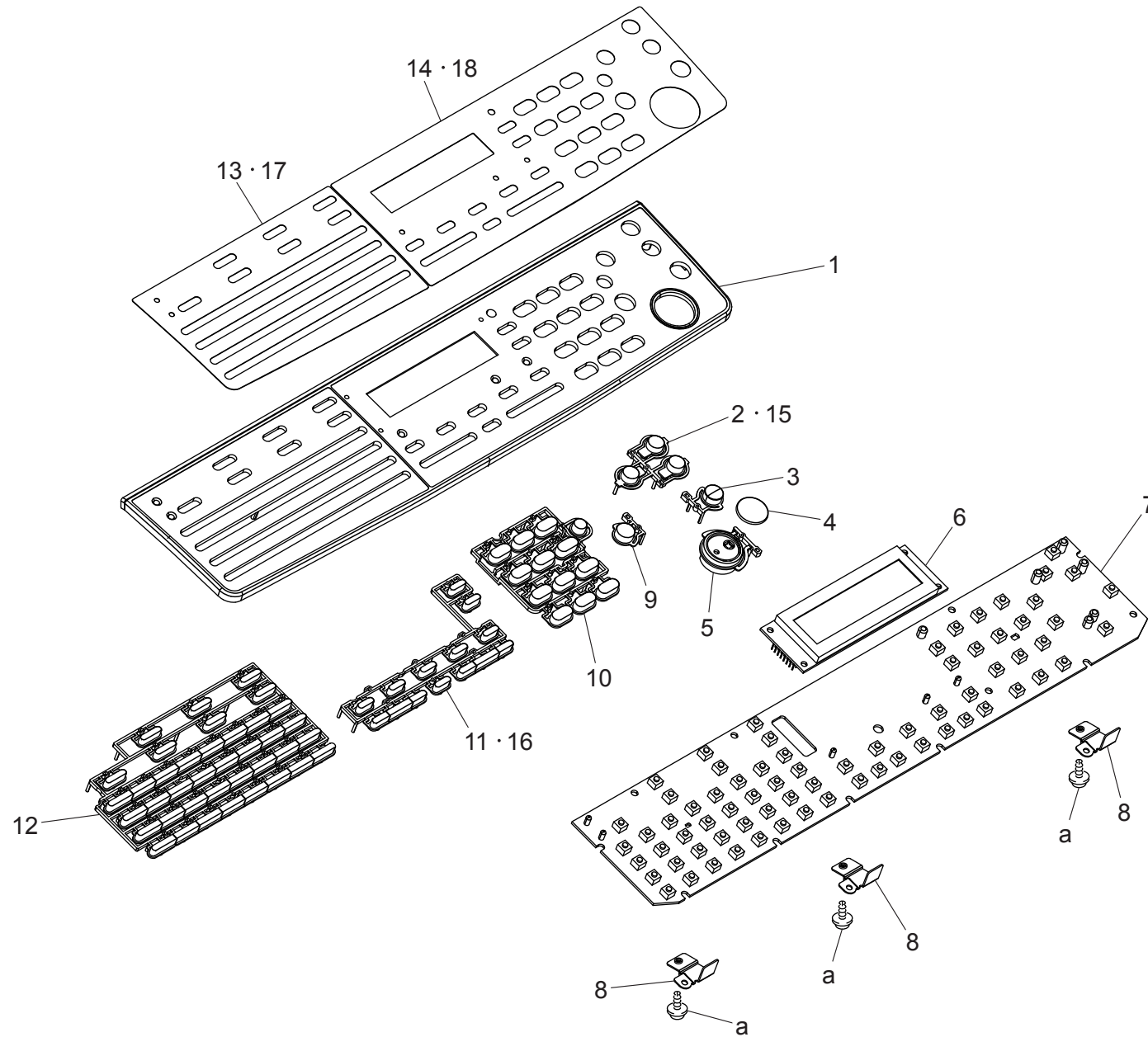
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1	1391 1043 01	ROLER		C	1	a-9721030014
2	4980 1061 01	SHAFT		D	1	b-9721050013
3	4647 1144 01	GEAR 23T		D	1	c-9739030814
4	1391 1036 01	HOLDER		C	1	
5	1391 1042 01	ROLLER ASSY		C	1	
6	4980 1065 01	BUSHING		C	2	
7	4980 1055 01	PLATE SPRING		D	1	
8	1391 1005 01	PHOTO INTERRUPTER		C	1	
9	1391 1075 01	GEAR 28T		C	1	
10	1391 1037 01	ARM		C	2	
11	4980 1056 01	TENSION SPRING		D	1	
12	1391 1058 01	BASE FRAME		D	1	
13	4980 1097 01	PIN		D	2	
14	1391 1038 01	SHUTTER		C	1	
15	1391 1039 01	SHUTTER		C	1	
16	1391 1033 01	ROLLER		C	1	
17	4980 1053 01	PLATE SPRING		D	1	
18	4980 1052 01	ACTUATOR		C	1	
19	1391 1007 01	PHOTO INTERRUPTER		C	1	
20	4980 1072 01	GEAR 20T		D	1	
21	4980 1064 01	BUSHING		C	1	
22	1391 1073 01	GEAR 18T		C	1	
23	1391 1052 01	SHAFT		D	1	
24	1391 1028 01	CLUTCH		C	1	
25	1391 1048 01	HOLDER		D	1	
26	1391 1053 01	SHAFT		D	1	
27	4647 1146 01	GEAR 19/23T		D	1	
28	4980 1062 01	SHAFT		D	1	



## DRIVE SECTION ADF

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Key	Parts No.or	Description	Destinations	Class	Qty.	Standard parts
1	4980 1075 01	SEPARATOR MEMBER		C	1	a-9739030814
2	4980 1074 01	HOLDER		D	1	b-9646030614
3	1391 1016 01	LEVER		B	1	
4	1391 1094 01	PRESSURE SPRING		C	1	
5	1391 1057 01	COVER		D	1	
6	1391 1089 01	ROLLER		C	1	
7	1391 1088 01	ROLLER		C	1	
8	4980 1065 01	BUSHING		C	6	
9	1391 1047 01	BRACKET		D	1	
10	1391 1034 01	HOOK		C	2	
11	1391 1056 01	FRAME		D	1	
12	1391 1090 01	ROLLER		C	1	
13	1391 1077 01	GEAR 35T		C	1	
14	1391 1074 01	GEAR 25T		C	2	
15	1391 1045 01	FRAME		D	1	
16	4980 1093 01	GEAR 26T		D	1	
17	4980 1091 01	GEAR 15T		D	1	
18	1391 1076 01	GEAR 30 22T		C	1	
19	4980 1090 01	GEAR 32 15T		D	1	
20	4272 1085 01	CABLE CLIP		D	1	
21	1391 1012 01	WIRE SADDLE		D	2	
22	1391 1008 01	MOTOR		C	1	
23	4980 1089 01	GEAR 40 18T		D	1	
24	1391 1078 01	GEAR 52T		C	1	

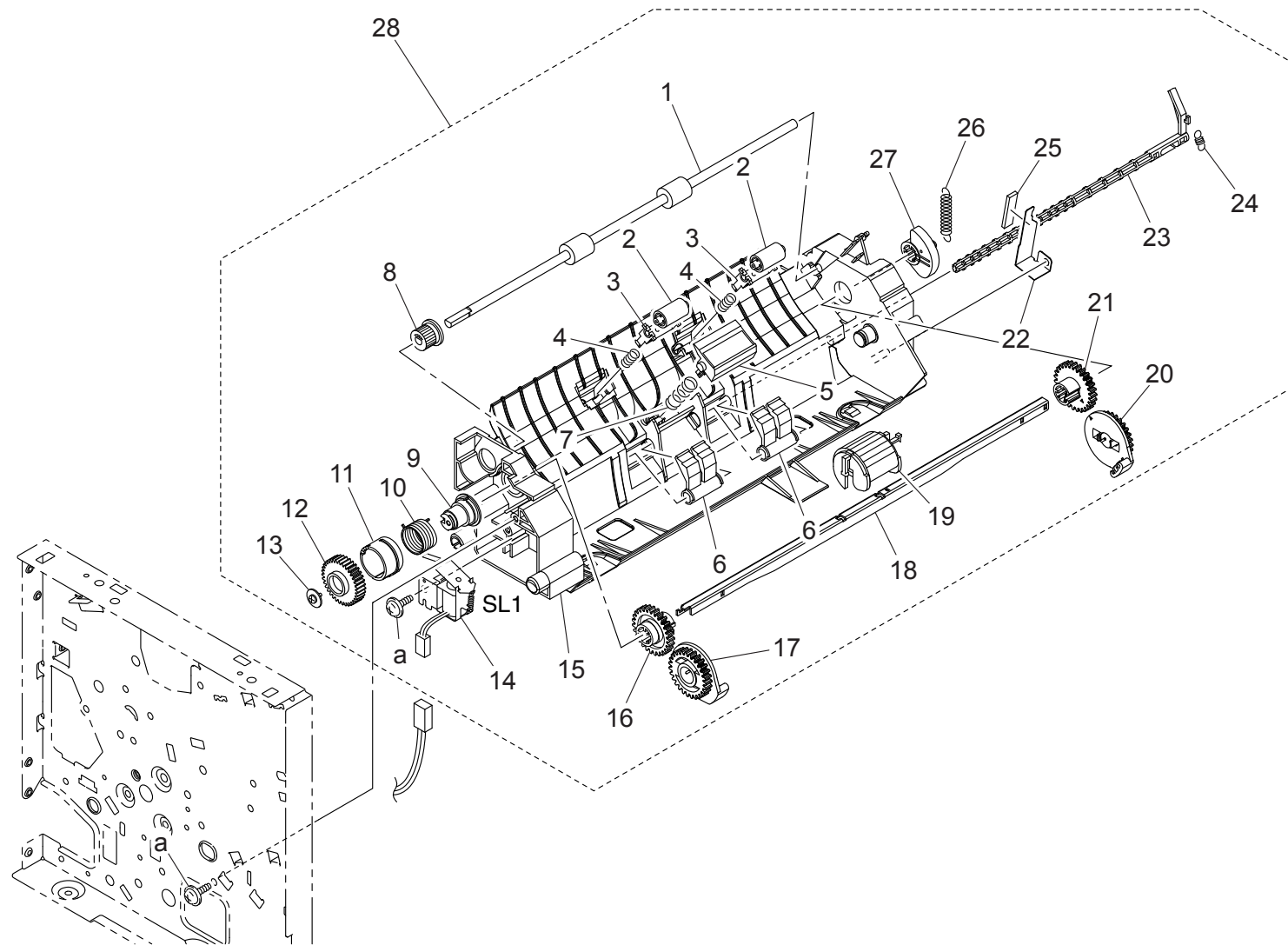


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# OPERATION PANEL

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Key	Parts No.or	Description	Destinations	Class	Qty.	Standard parts
1	1391 1062 01	COVER	(FAX3900)	C	1	a-9739030814
2	1391 1071 01	BUTTON		C	1	
3	1391 1079 01	BUTTON		C	1	
4	1391 1081 01	COVER		C	1	
5	1391 1070 01	BUTTON		C	1	
6	4501 1007 01	LCD ASSY		I	1	
7	1391 1023 01	PWB ASSY PANEL		I	1	
8	1391 1049 01	PLATE SPRING		D	3	
9	1391 1080 01	BUTTON		C	1	
10	1391 1069 01	BUTTON		C	1	
11	1391 1066 01	BUTTON	(FAX3900)	C	1	
12	1391 1068 01	BUTTON		C	1	
13	1391 1086 01	FACE SHEET-L	(FAX3900)	C	1	
14	1391 1084 01	FACE SHEET-R	(FAX3900)	C	1	
15	1391 1072 01	BUTTON	(FAX2900)	C	1	
16	1391 1067 01	BUTTON	(FAX2900)	C	1	
17	1391 1087 01	FACE SHEET-L	(FAX2900)	C	1	
18	1391 1085 01	FACE SHEET-R	(FAX2900)	C	1	



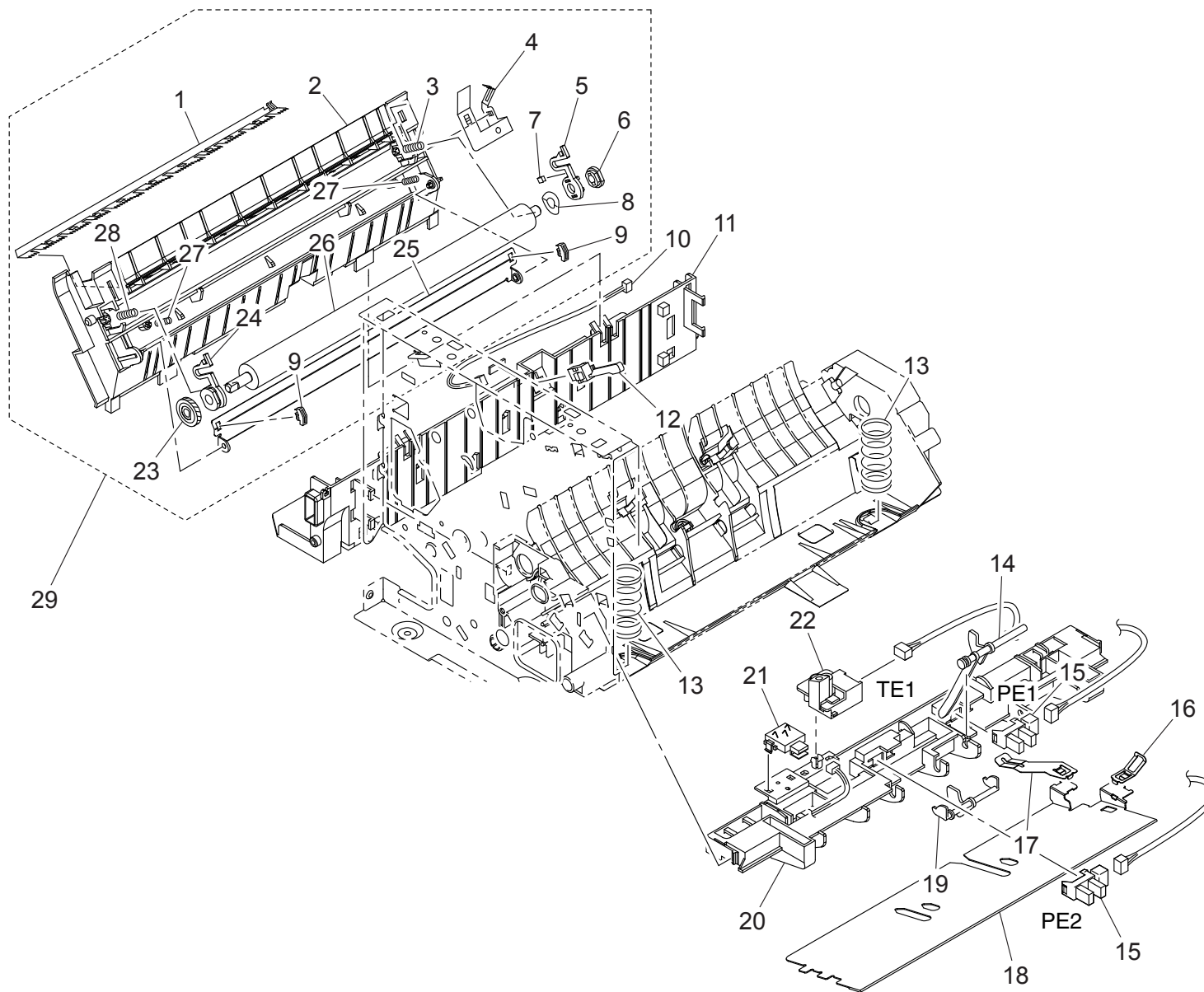
## PAPER TAKE-UP SECTION

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Key	Parts No.or	Description	Destinations	Class	Qty.	Standard parts
1	4136 3002 01	ROLLER		C	1	a-9739030814
2	4136 3006 01	ROLL		D	2	
3	4136 3009 02	HOLDER		D	2	
4	4136 3018 01	PRESSURE SPRING		D	2	
5	4136 0151 02	FRICTION SHEET ASSY		C	1	
6	4136 3022 01	STOPPER		D	2	
7	4127 3041 02	PRESSURE SPRING		C	1	
8	4136 3014 02	GEAR 14T		D	1	
9	4139 3018 03	DRUM		D	1	
10	4136 3037 01	TORSION SPRING		C	1	
11	4136 3038 01	RATCHET		D	1	
12	4136 3035 01	GEAR 35T		C	1	
13	4109 2003 01	SHOULDER SCREW		D	1	
14	9321 2300 11	SOLENOID		D	1	
15	4136 3501 04	GUIDE		D	1	
16	4136 3048 01	GEAR 27T		D	1	
17	4136 3044 01	CAM		D	1	
18	4136 3039 12	SHAFT		D	1	
19	4136 3001 01	ROLLER		C	1	
20	4136 3043 01	CAM		D	1	
21	4136 3047 01	GEAR 27T		D	1	
22	4136 3046 01	PLATE SPRING		D	1	
23	4136 3025 01	LEVER		D	1	
24	4136 3027 01	TENSION SPRING		C	1	
25	4136 3049 01	FRICTION SHEET		D	1	
26	4136 3045 01	TENSION SPRING		C	1	
27	4136 3026 01	CAM		D	1	
28	4136 0781 00	PAPER TAKE UP ASSY		S	1	

# PAPER TRANSPORT SECTION

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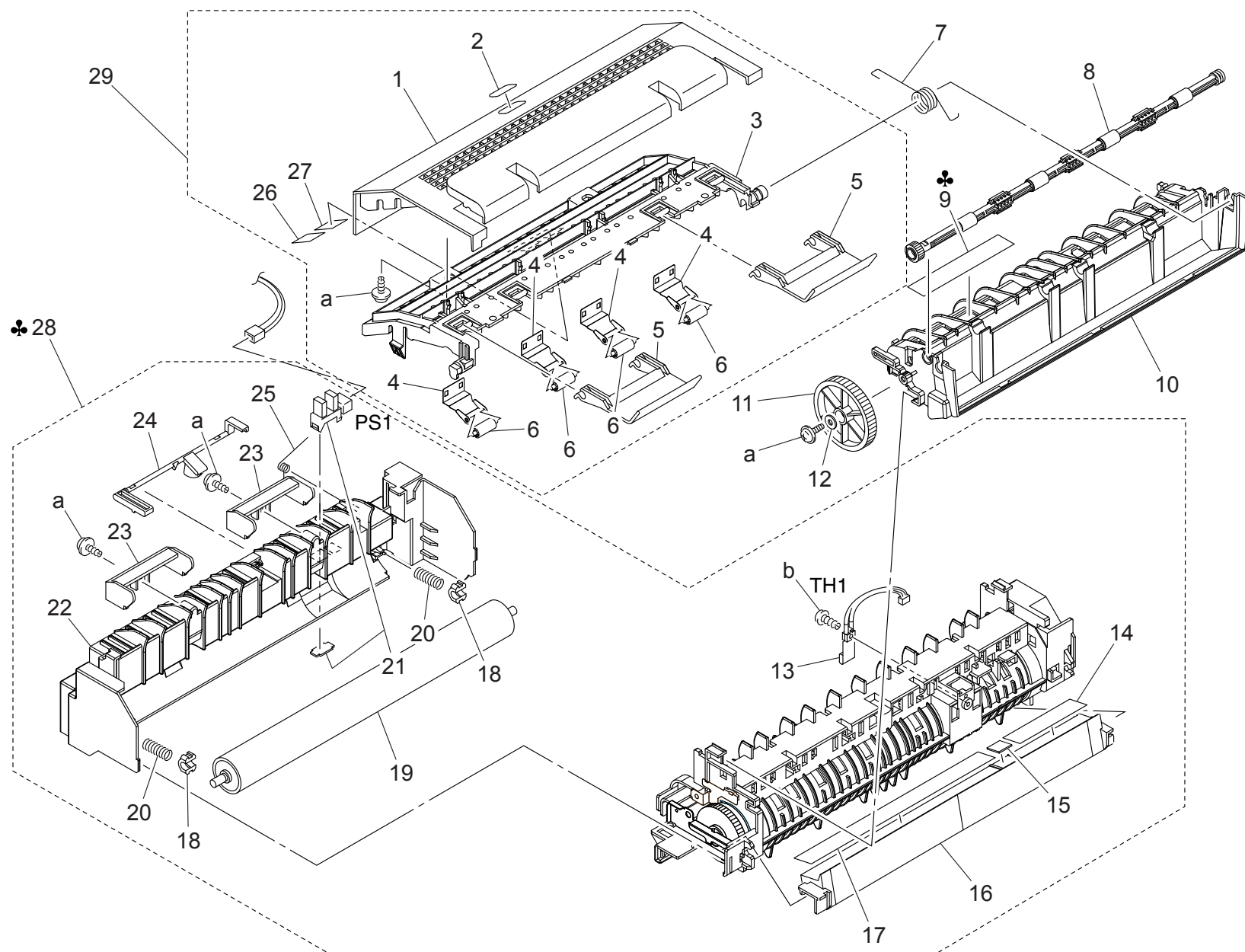
## PAPER TRANSPORT SECTION

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Key	Parts No.or	Description	Destinations	Class	Qty.	Standard parts
1	4136 4113 02	NEUTRALIZING NEEDLE		D	1	
2	4136 4102 04	HOLDER		D	1	
3	4127 4108 01	PRESSURE SPRING		C	1	
4	4136 4114 02	CONTACT		D	1	
5	4136 4105 01	BUSHING		C	1	
6	4127 4106 01	CONDUCTIVE MEMBER		C	1	
7	4127 4109 01	CUSHION		C	1	
8	4136 4106 01	SPACER		D	1	
9	4136 4133 01	SPACER		D	2	
10	4137 6808 01	WIRE HARNESS ASSY		D	1	
11	4136 4109 06	GUIDE		D	1	
12	4136 6301 02	MICRO-SWITCH		C	1	
13	4136 3016 02	PRESSURE SPRING		D	2	
14	4136 3021 01	ACTUATOR		C	1	
15	9335 1910 41	PHOTO INTERRUPTER		C	2	
16	4137 3204 01	EARTH GROUND		D	1	
17	4137 3205 01	EARTH GROUND		D	1	
18	4137 3201 01	TRAY		D	1	
19	4137 3221 01	ACTUATOR		C	1	
20	4137 3020 02	HOLDER		D	1	
21	4136 6751 01	CONNECTOR PIN		D	1	
22	4127 0113 01	PWB ASSY		D	1	
23	4127 4111 01	GEAR 21T		D	1	
24	4136 4104 01	BUSHING		C	1	
25	4136 4132 01	GUIDE PLATE		D	1	
26	4136 4103 01	TRANSFER ROLLER		A	1	
27	4127 4135 01	PRESSURE SPRING		C	2	
28	4127 4107 01	PRESSURE SPRING		C	1	
29	4137 0767 00	TRANSFER ASSY		S	1	

# FUSING UNIT

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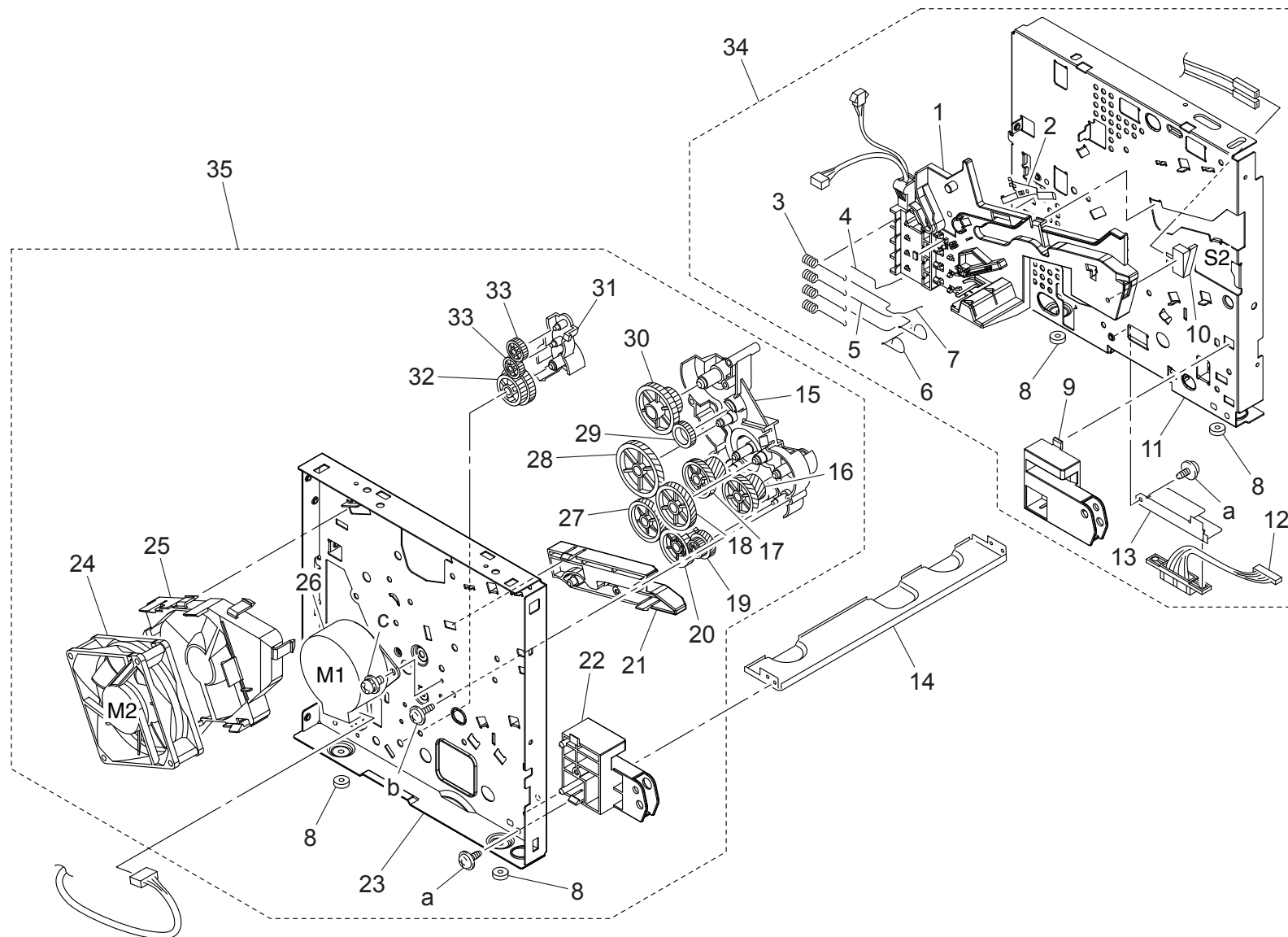


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## FUSING UNIT

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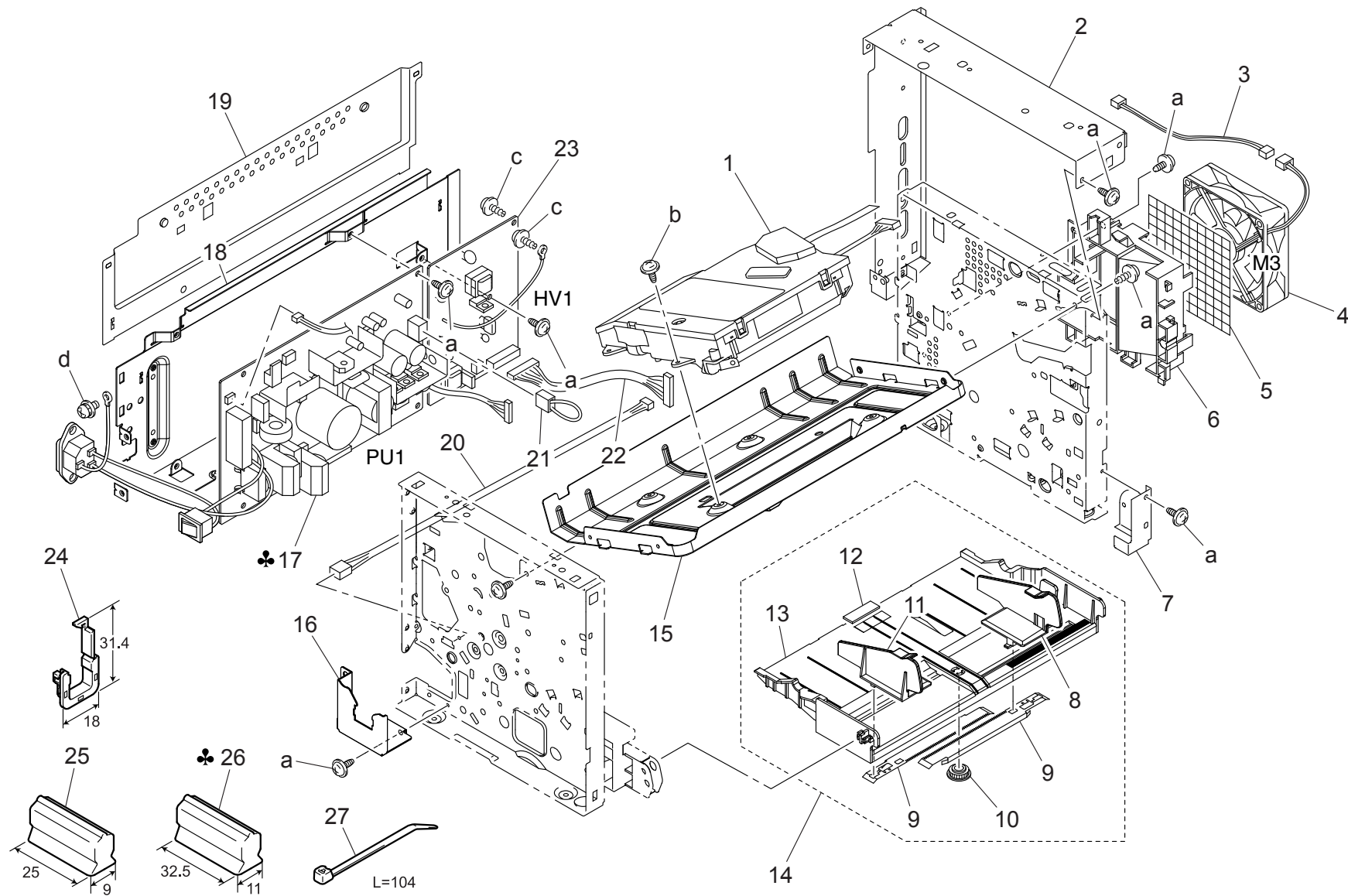
Key	Parts No.or	Description	Destinations	Class	Qty.	Standard parts
1	4137 1036 03	COVER		D	1	a-9739030814
2	4137 7301 01	LABEL CAUTION		D	1	b-9732031014
3	4137 1004 06	GUIDE		D	1	
4	4136 3709 02	SPRING		D	4	
5	4137 3763 01	LEVER		D	2	
6	4127 3707 01	ROLL		D	4	
7	4137 1024 02	TORSION SPRING		C	1	
8	4136 3730 03	ROLLER		C	1	
9	4137 7303 01	LABEL CAUTION	D F2 I	D	1	
9	4136 7321 01	LABEL CAUTION	B	D	1	
10	4137 1005 02	GUIDE		D	1	
11	4136 3714 01	GEAR 61T		C	1	
12	4111 2531 01	WASHER		D	1	
13	4136 6702 01	THERMISTOR		C	1	
14	4136 5599 01	SEAL		D	1	
15	4136 5531 01	BRUSH		D	1	
16	4136 5503 03	GUIDE		D	1	
17	4136 5598 01	SEAL		D	1	
18	4127 5571 01	BUSHING		B	2	
19	4136 5502 01	ROLLER		C	1	
20	4136 5517 02	PRESSURE SPRING		D	2	
21	4136 0901 02	PHOTO INTERRUPTER		C	1	
22	4136 5505 05	HOUSING		D	1	
23	4137 5545 02	GUIDE		D	2	
24	4136 5518 02	ACTUATOR		C	1	
25	4136 3716 01	TORSION SPRING		D	1	
26	4136 7325 02	LABEL HOT		D	1	
27	4136 7326 02	LABEL CAUTION		D	1	
28	4137 0752 00	FUSING UNIT 220V	D F2 I	A	1	
28	4137 0751 00	FUSING UNIT 120V	B	A	1	
29	4137 0755 00	GUIDE ASSY		S	1	



## DRIVE SECTION

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Key	Parts No.or	Description	Destinations	Class	Qty.	Standard parts
1	4136 2011 04	GUIDE		D	1	a-9735030814
2	4136 2012 02	EARTH GROUND		D	1	b-9739030814
3	4136 2008 03	CONTACT		D	4	c-9646030614
4	4136 2006 02	CONTACT		D	1	
5	4136 2010 02	CONTACT		D	1	
6	4136 2009 02	CONTACT		D	1	
7	4136 2007 01	CONTACT		D	1	
8	4136 2015 01	RUBBER FOOT		D	4	
9	4136 2018 02	HOLDER		D	1	
10	9331 2200 31	MICRO-SWITCH		C	1	
11	4136 2004 16	FRAME		D	1	
12	4137 6806 02	WIRE HARNESS ASSY		D	1	
13	4136 2102 01	BRACKET		D	1	
14	4136 2013 01	REINFORCE PLATE		D	1	
15	4136 2526 03	HOLDER		D	1	
16	4136 2504 01	GEAR 21/51T		D	1	
17	4136 2502 01	GEAR 19/48T		D	1	
18	4136 2503 01	GEAR 24/59T		D	1	
19	4136 2505 01	GEAR 32/18T		D	1	
20	4136 2506 01	GEAR 21/25/35T		D	1	
21	4136 2524 02	GUIDE		D	1	
22	4136 2019 03	HOLDER		D	1	
23	4136 2005 18	FRAME		D	1	
24	9313 1300 12	FAN MOTOR		C	1	
25	4136 2310 02	DUCT		D	1	
26	9314 1201 31	MOTOR		B	1	
27	4136 2501 01	GEAR 21/53T		D	1	
28	4136 2507 01	GEAR 28/70T		D	1	
29	4136 2508 01	GEAR 24T		D	1	
30	4136 2509 01	GEAR 23/48T		D	1	
31	4136 2527 01	HOLDER		D	1	
32	4136 2511 01	GEAR 25/27T		D	1	
33	4136 2510 01	GEAR 20T		D	2	
34	4137 0768 00	FRAME ASSY		S	1	
35	4137 0769 00	LEFT FRAME ASSY		S	1	



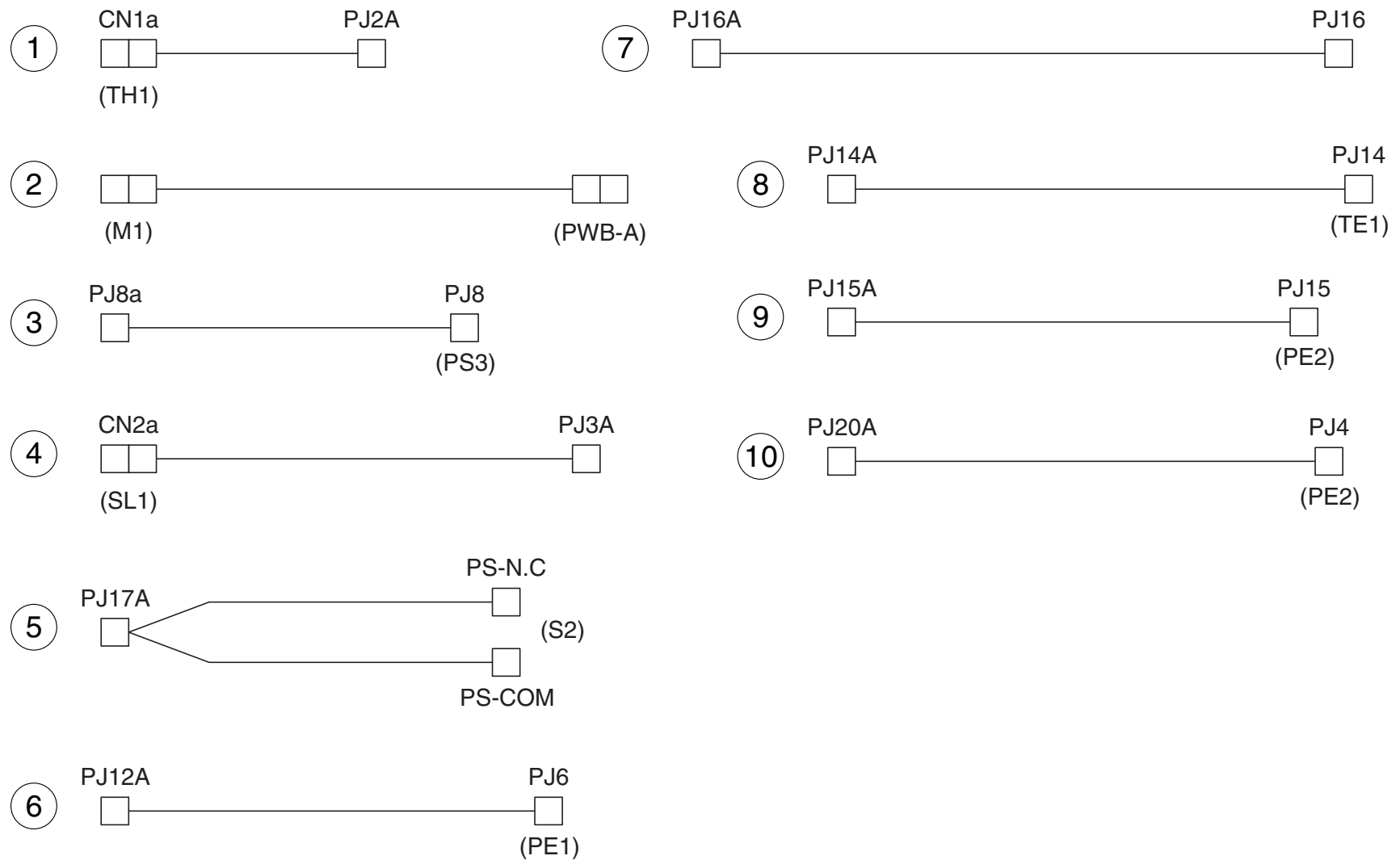
## ELECTRICAL COMPONENTS

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Key	Parts No.or	Description	Destinations	Class	Qty.	Standard parts
1	4137 0764 00	P/H ASSY		I	1	a-9735030814
2	4137 2006 02	REINFORCE PLATE		D	1	b-4154380401
3	4137 6827 02	WIRE HARNESS ASSY		D	1	c-9739030814
4	9313 1300 12	FAN MOTOR		C	1	d-9646030814
5	4137 2312 01	FILTER		D	1	
6	4137 2311 02	DUCT		D	1	
7	4137 2007 01	REINFORCE PLATE		D	1	
8	4137 3102 02	REGULATING PLATE		D	1	
9	4136 3101 01	RACK		D	2	
10	4127 3104 01	GEAR 14T		D	1	
11	4137 3103 01	REGULATING PLATE		D	1	
12	4136 3013 01	FRICTION SHEET		C	1	
13	4136 3005 04	LIFTING PLATE		D	1	
14	4137 0753 00	REGULATING PLATE ASSY		S	1	
15	4136 2001 02	BASE FRAME		D	1	
16	4136 2032 04	BRACKET		D	1	
17	4137 6202 02	POWER SUPPLY	D F2 I	I	1	
17	4137 6201 02	POWER SUPPLY	B	I	1	
18	4137 2302 02	FRAME		D	1	
19	4136 2055 04	FRAME		D	1	
20	4137 6812 01	WIRE HARNESS ASSY		D	1	
21	4137 6829 01	WIRE HARNESS ASSY		D	1	
22	4136 6804 01	WIRE HARNESS ASSY		D	1	
23	4136 6205 03	HV TRANSFORMER		I	1	
24	9384 2910 31	EDGE COVER		D	1	
25	9384 2300 11	EDGE COVER		D	2	
26	9384 2300 21	EDGE COVER	B	D	1	
27	9384 1311 11	CABLE TIE 104L		D	1	

# WIRING

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Konica Minolta FAX2900/3900

## WIRING

Key	Parts No.or	Description	Destinations	Class	Qty.	Standard parts
1	4136 6805 02	WIRE HARNESS ASSY		D	1	
2	4136 6810 03	WIRE HARNESS ASSY		D	1	
3	4137 6802 01	WIRE HARNESS ASSY		D	1	
4	4137 6803 02	WIRE HARNESS ASSY		D	1	
5	4137 6807 02	WIRE HARNESS ASSY		D	1	
6	4137 6809 01	WIRE HARNESS ASSY		D	1	
7	4137 6818 02	WIRE HARNESS ASSY		D	1	
8	4137 6824 03	WIRE HARNESS ASSY		D	1	
9	4137 6825 02	WIRE HARNESS ASSY		D	1	
10	4137 6828 02	WIRE HARNESS ASSY		D	1	

## DESTINATION

Destination No.		Destinations		V	H z	Model No.
A	A1	JAPAN		100	50/60	-
	A2	JAPAN				-
B		USA, CANADA		120	60	1391-311 1392-311
C		EUROPEAN TYPE		220-240	50	-
D	D1	S.E ASIA TYPE	THAILAND, SRILANKA, SINGAPORE, MALAYSIA, HONG KONG, PAKISTAN, INDIA, BANGLADESH, INDONESIA	220-240	50	1391-212 1392-212
	D3	OCEANIA TYPE	AUSTRALIA, NEW ZEALAND	220-240	50	1391-212 1392-212
E		PHILIPPINES		120	60	-
F	F1	SAUDI ARABIA		127	60	-
	F2	SAUDI ARABIA		220-240	60	1391-212 1392-212
G	G1	C.S AMERICA		220-240	50	-
	G2	C.S AMERICA		120	60	-
H		TAIWAN		110	60	-
I		JORDAN, LEBANON, SYRIA, SOUTH AFRICA, IRAQ, IRAN, N.YEMEN, CAMEROON, UAE, BAHRAIN, OMAN, QATAR, KUWAIT, KENYA, TUNISIA, IVORY COAST, MOROCCO		220-240	50	1391-212 1392-212
J		CHINA		220	50	-
K		KOREA		220	50/60	-

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# GENERAL

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# 1. SPECIFICATIONS

Name	: 2nd Paper Feed Cassette
Type of paper	: Plain and recycled paper: 60 to 90 g/m <sup>2</sup> (16 to 24 lb.)
Media sizes	: A4 L and Letter L
Paper capacity	: Maximum 500 sheets (80 g/m <sup>2</sup> ) (21 lb.)
Registration	: Center
Power source	: DC 24 V, DC 5 V (supplied by main unit)
Power consumption	: Less than 7 W
Dimension	: W: 401 mm (15-3/4 in.) × D: 615 mm (24-1/4 in.) × H: 138 mm (5-1/2 in.)
Weight	: 4.3 kg (9-1/2 lb.)
Environment	: Same as the copier

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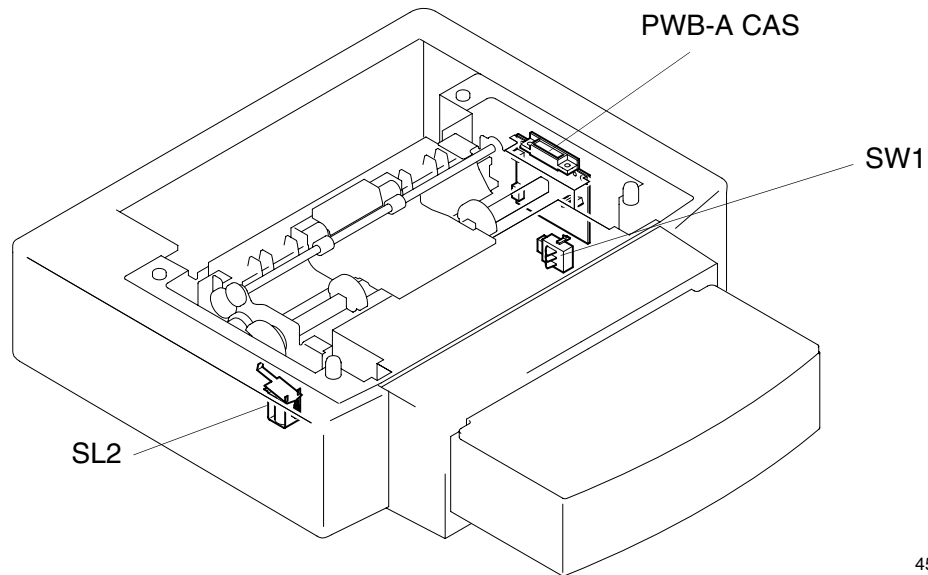
# MECHANICAL/ ELECTRICAL

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# 1. COMPONENTS LAYOUT

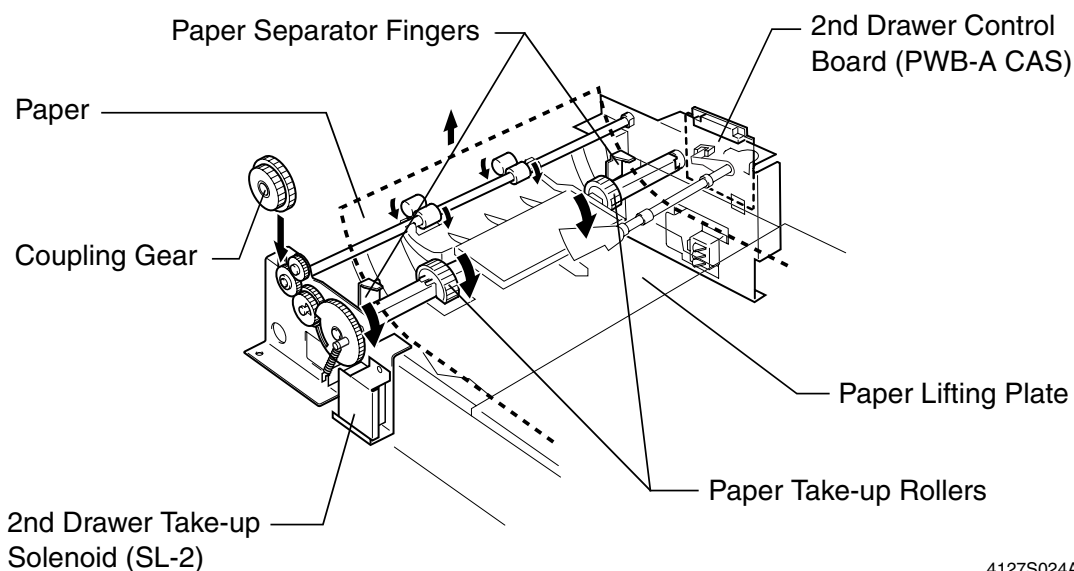


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SW1 : Cassette type Detecting Switch      SL2 : 2nd Drawer Take-up solenoid  
PWB-A CAS : 2nd Drawer Control Board

## 1-1. Paper Take-up Mechanism

- Because of no drive motor installed for the Paper Feed Cassette, drive from the Main Motor (M1) of the printer is transmitted to the cassette by way of a drive coupling gear for paper take-up and transport.
- Except that the Paper Separator Fingers are used for paper separation, the paper take-up mechanism is the same as that for Tray 1.
- The paper separation mechanism uses the Paper Separator Fingers provided in the cassette and the elasticity the paper has in its own right. It ensures that only one sheet of paper is taken up at one paper take-up sequence.
- The Paper Take-up Solenoid is controlled from the printer side by way of the control board of the optional Paper Feed Cassette.

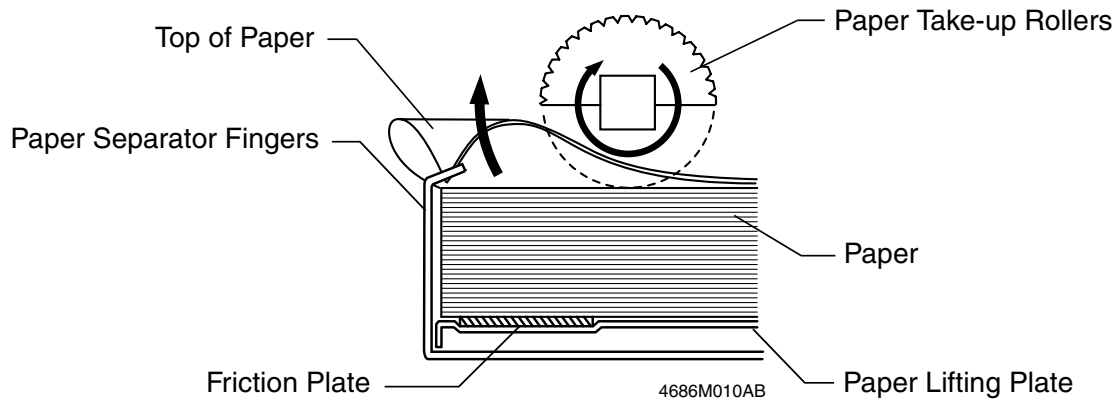


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Electrical Component	Control Signal	ON	OFF	WIRING DIAGRAM
SL2	PWB-A CAS MPJ22A CAS-2	L	H	E~F-5

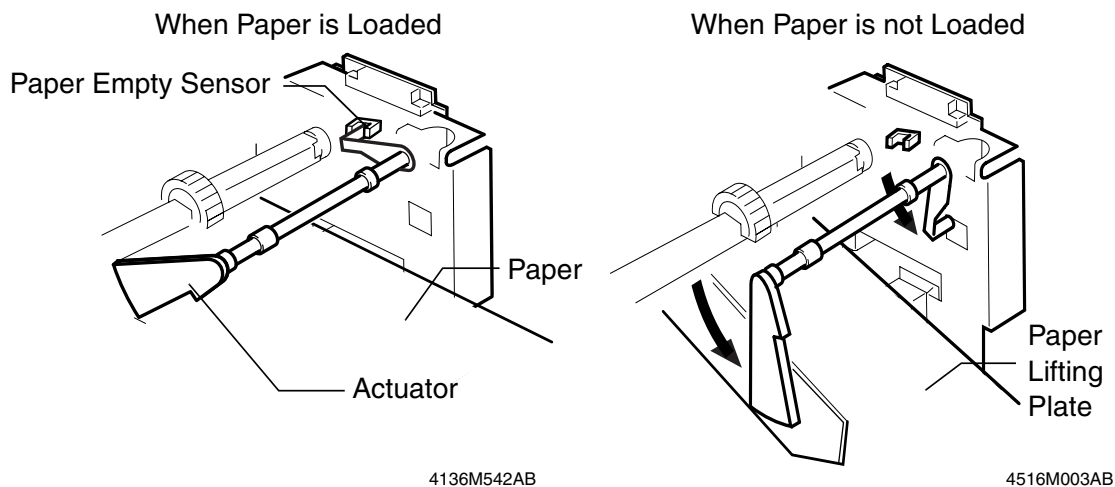
## 1-2. Paper Separating Mechanism

- A loop formed in the paper between the Separator Fingers and Paper Take-up Rollers. The turning force of the Paper Take-up Rollers overcomes the block of the Separator Fingers, causing the top of paper to ride over the fingers and be fed out of the tray into the copier.
- When there are only two sheets of left in the tray and if the friction force of the Paper Lifting Plate is low, the bottom sheets of paper is taken up and fed into the copier with the top sheets of paper. To prevent this situation from occurring, there is a Friction Plate provided on top of the Paper Lifting Plate.



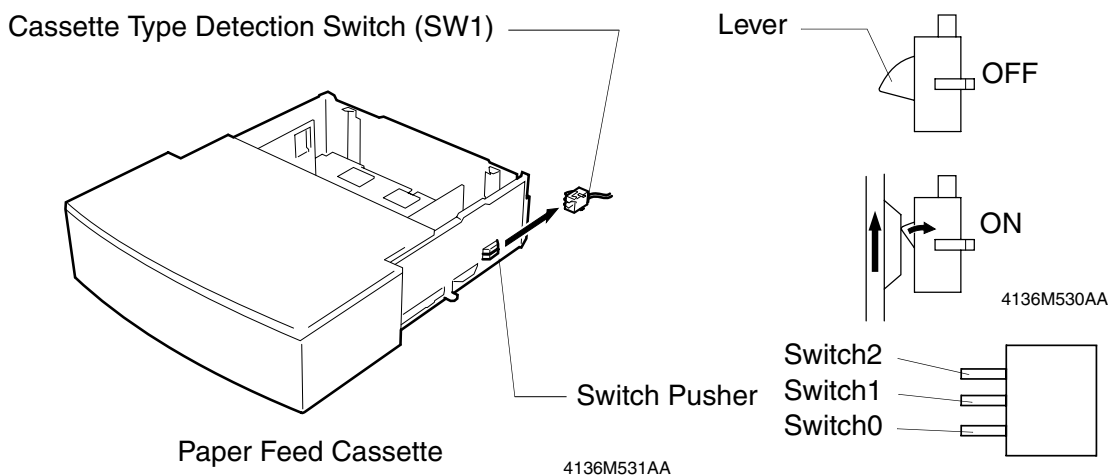
## 1-3. Paper Empty Detection

- There is a Paper Empty Sensor provided on the 2nd Drawer Control Board. It detects a paper empty condition of the cassette.
- When paper is loaded, the actuator is raised and blocks the sensor.
- If there is no paper loaded, the actuator drops in the hole in the Paper Lifting Plate, thus unblocking the sensor.



## 1-4. Cassette Type Detection

- The Paper Feed Cassette is provided with the Cassette Type Detection Switch.
- When the cassette is inserted into the printer, the switch pusher provided on the right-hand side of the cassette pushes the lever according to the paper size, turning ON the switch.
- The Cassette Type Detection Switch consists of three switches.  
The combination of these switches that turn either ON or OFF allows the printer to determine the cassette type (paper size).



Cassette Type Detection Switch Conditions

Cassette Type	Switch0	Switch1	Switch2
A4 L	OFF	OFF	ON
Letter L	OFF	ON	OFF

Electrical Component	Control Signal	ON	OFF	WIRING DIAGRAM
SW1	PWB-A CAS MPJ23A CAS-1,2,4	L	H	D~E-5





KONICA MINOLTA