

# DNP

## SERVICE MANUAL

CARD PRINTER

---

---

### CX-D80



# SPECIFICATION

<b>CX-D80</b>	
<b>Specifications</b>	
Recording system	Dye sublimation retransfer
Paper feed mode	Automatic
Recording density	300 dpi
Reproduction gradation	256 levels each for Y, M and C 2 levels for Resin K
Interface	USB 2.0 (Hi-Speed/Full-Speed) Ethernet (100BASE-TX/10BASE-T)
Operating environment conditions	Temperature: 15°C to 30°C (When peel-off ink, UV ink is used: 17 °C to 28 °C) Humidity: 35 % to 70 % No condensation (When peel-off ink, UV ink is used: 35 % to 60 %)
Storage environment conditions	<Printer unit> Temperature: -15°C to 55°C Humidity: 20 % to 80 % <Printing media (retransfer film or ink ribbon) /card> Temperature: 5 °C to 25 °C Humidity: 40 % to 60 %
Power supply	AC 100 V - 120 V, 50 Hz/60 Hz AC 220 V - 240 V, 50 Hz/60 Hz
Current consumption	3.5 A (100 V system) 1.6 A (200 V system)
Power consumption	310 W (maximum power when all options are installed)
Mass	Mass approx. 13.5 kg (single-sided printer, including bend remedy unit)
Dimensions	343 mm x 335 mm x 322 mm (W x H x D)
<b>Accessories</b>	
Please check to ensure that the printer accessories are in place when unpacking the product package.	
<ul style="list-style-type: none"> <li>• CD-ROM× 1</li> <li>• Instruction Manual× 1</li> <li>• Read Me First × 1</li> <li>• Power Cord (2 m)× 2</li> <li>• Cleaning Card× 1</li> <li>• Card Stacker× 1</li> <li>• USB 2.0 Cable (2 m) × 1</li> <li>• Gloves× 1</li> <li>• Card Pickup× 1</li> </ul>	
<b>Products Sold Separately</b>	
To purchase these items, please consult our authorized dealers. Use the retransfer film or ink ribbon within half a year after purchase.	
YMCK (1000 frames/roll) Set	Model: CY-P340A-DN
YMCKP (750 frames/roll) Set	Model: CY-P35PA-DN
Ink Ribbon (YMCKK) 750 frames/roll	Model: CY-35K-75D
Ink Ribbon (YMCKU) 750 frames/roll	Model: CY-35U-75D
Retransfer Film 1000 frames/roll	Model: CY-3RA-100
Cleaning Kit	Model: CX210-CKIT1 Magnetic Head Cleaning Card (5 Pcs), Cotton Swab (5 Large and 5 Small), Cleaning Wipes (1 Box)
Cleaning Card, Model	CX210-CC1 10 Pcs/Set

# SECTION 1 PRECAUTION

## 1.1 SAFETY PRECAUTIONS

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

### 1.1.1 Precautions during Servicing

- (1) Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.
- (2) Parts identified by the  $\Delta$  symbol and shaded (  ) parts are critical for safety. Replace only with specified part numbers.

#### NOTE :

**Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.**

- (3) Fuse replacement caution notice.  
Caution for continued protection against fire hazard.  
Replace only with same type and rated fuse(s) as specified.
- (4) Use specified internal wiring. Note especially:
  - Wires covered with PVC tubing
  - Double insulated wires
  - High voltage leads
- (5) Use specified insulating materials for hazardous live parts. Note especially:
  - Insulation Tape
  - PVC tubing
  - Spacers
  - Insulation sheets for transistors
  - Barrier
- (6) When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

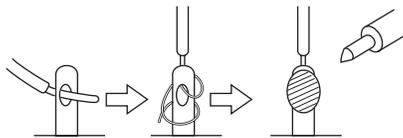


Fig.1-1-1

- (7) Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)
- (8) Check that replaced wires do not contact sharp edged or pointed parts.
- (9) When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

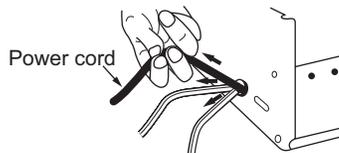


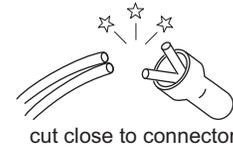
Fig.1-1-2

- (10) Also check areas surrounding repaired locations.
- (11) Products using cathode ray tubes (CRTs) In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the

cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

- (12) Crimp type wire connector In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

- **Connector part number** :E03830-001
- **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
- **Replacement procedure**
  - a) Remove the old connector by cutting the wires at a point close to the connector. Important : Do not reuse a connector (discard it).



cut close to connector

Fig.1-1-3

- b) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

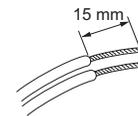


Fig.1-1-4

- c) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

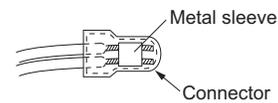


Fig.1-1-5

- d) As shown in Fig.1-1-6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

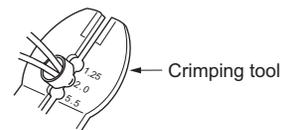


Fig.1-1-6

- e) Check the four points noted in Fig.1-1-7.

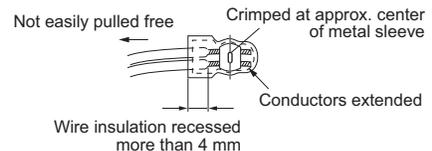


Fig.1-1-7

- (13) **Battery replacement caution notice.**  
**CAUTION RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECTIVE TYPE.**  
**DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.**

### 1.1.2 Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

#### (1) Insulation resistance test

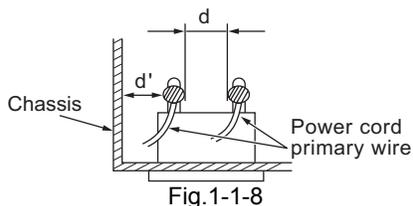
Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

#### (2) Dielectric strength test

Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See Fig.1-1-11 below.

#### (3) Clearance distance

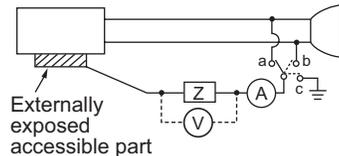
When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See Fig.1-1-11 below.



#### (4) Leakage current test

Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).

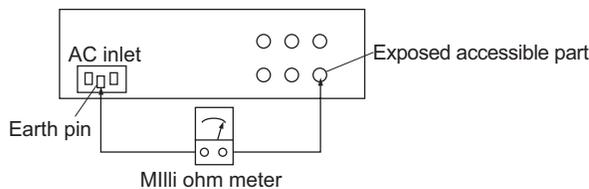
Measuring Method : (Power ON) Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See Fig.1-1-9 and following Fig.1-1-12.



#### (5) Grounding (Class 1 model only)

Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.). Measuring Method:

Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See Fig.1-1-10 and grounding specifications.



#### Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	$Z \leq 0.1 \text{ ohm}$
Europe & Australia	$Z \leq 0.5 \text{ ohm}$

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	$R \geq 1 \text{ M}\Omega/500 \text{ V DC}$	AC 1 kV 1 minute	$d, d' \geq 3 \text{ mm}$
100 to 240 V			AC 1.5 kV 1 minute	$d, d' \geq 4 \text{ mm}$
110 to 130 V	USA & Canada	$1 \text{ M}\Omega \leq R \leq 12 \text{ M}\Omega/500 \text{ V DC}$	AC 1 kV 1 minute	$d, d' \geq 3.2 \text{ mm}$
110 to 130 V 200 to 240 V	Europe & Australia	$R \geq 10 \text{ M}\Omega/500 \text{ V DC}$	AC 3 kV 1 minute (Class II) AC 1.5 kV 1 minute (Class I)	$d \geq 4 \text{ mm}$ $d' \geq 8 \text{ mm}$ (Power cord) $d' \geq 6 \text{ mm}$ (Primary wire)

Fig.1-1-11

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	$1 \text{ k}\Omega$	$i \leq 1 \text{ mA rms}$	Exposed accessible parts
110 to 130 V	USA & Canada	$0.15 \mu\text{F}$ and $1.5 \text{ k}\Omega$	$i \leq 0.5 \text{ mA rms}$	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	$2 \text{ k}\Omega$	$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Antenna earth terminals
		$50 \text{ k}\Omega$	$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Other terminals

Fig.1-1-12

#### NOTE :

These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

## SECTION 2

### SPECIFIC SERVICE INSTRUCTIONS

#### 2.1 MODEL NAME

Model name of printers

CX-D80\*1 \*2

Basic Structure

*1 *2	Convey Unit	Bend Remedy Unit
SR	Single Side	Yes
D	Dual Side (With Flipper Unit)	No
DR	Dual Side (With Flipper Unit)	Yes

CX-D80SR: Single Side with Bend Remedy Unit

CX-D80D : Single Side without Bend Remedy Unit

CX-D80DR : Dual Side with Bend Remedy Unit

#### 2.2 Model name of built in option units. (Sell separately)

Product name	Description	Remarks	Appended goods
CF-7BR	Bend Remedy Unit	Remedy the bend of card after retransfer	<ul style="list-style-type: none"> <li>• Pressurized spring ASSY</li> <li>• Fixed screw</li> <li>• Model label</li> </ul>
CF-7MGS	MG Encoding Unit (ISO)	In accordance with ISO7810, 7811/2 MG stripe card Only for dual side model (built in flip unit)	<ul style="list-style-type: none"> <li>• Connection wire</li> <li>• Fixed screw</li> <li>• Model label</li> </ul>
CF-7CRW	Standard Contact IC R/W	In accordance with ISO7816 IC card PC/SC, USB connect R/W When it is installed to the printer, USB or Ethernet is selectable	<ul style="list-style-type: none"> <li>• IC contact cable</li> <li>• USB Cable</li> <li>• Fixed screw</li> <li>• Model label</li> </ul>
CF-7CCS	ISO Contact IC Case	In accordance with ISO7816 IC card Coupled with the ISO MG encoding unit.	<ul style="list-style-type: none"> <li>• Option bracket</li> <li>• GND wire</li> <li>• Drive board</li> <li>• Contact label</li> <li>• Fixed screw</li> <li>• Model label</li> </ul>
CF-7CB	Parts set for installing Contactless IC R/W Set	Please refer CX-D80 contact IC built-in Specification	<ul style="list-style-type: none"> <li>• Model label</li> </ul>

#### 2.3 Life time of each parts

##### 2.3.1 About thermal head

120,000 passes

(Approximately equivalent to 30,000 prints by using 4 colors, YMCK ink ribbon)

The life time of thermal head is defined as the time period when the heating element of the thermal head is broken caused by wearing off the surface protective material.

##### 2.3.2 Life time

###### • Durable parts

	Life time to exchange
1) Heater :	2,000 Hours
2) Thermal Head :	120,000 passes
3) Motor (DC motor) :	100,000 panels
4) Heat Roller :	100,000 panels
5) Belt :	100,000 panels

###### • Consumable parts

Life time to exchange is estimated based on enforcing daily maintenance.

	Life time to exchange
1) Fan Filter :	about 1 year
2) Cleaning Roller :	about 1 year

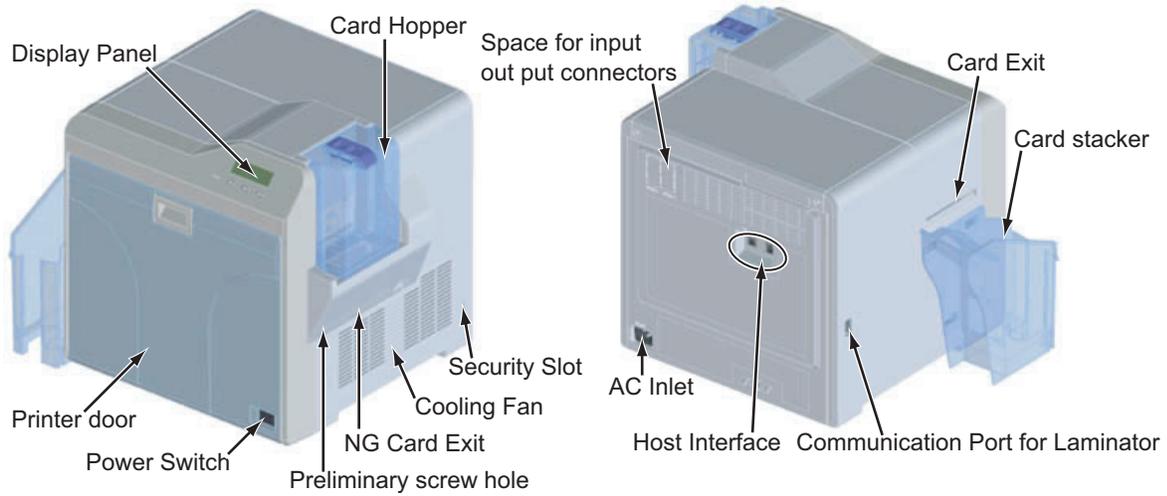
###### • Life time for mechanism

100,000 cards printing for dual side printing with standard maintenance

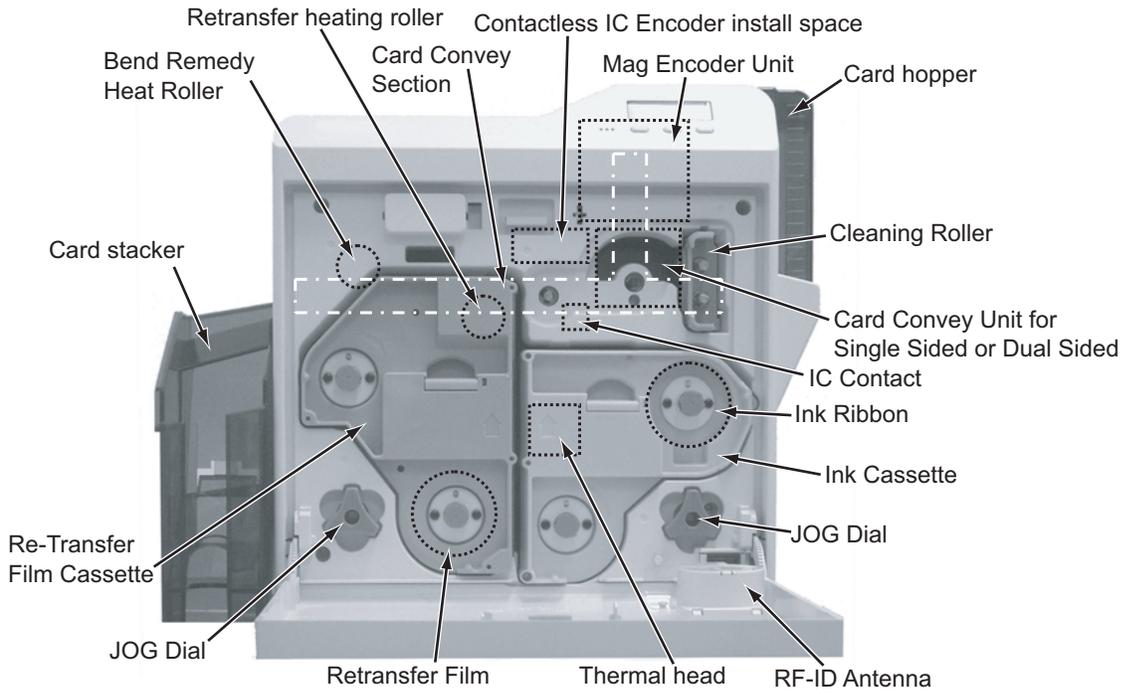
###### • MTBF exclude life time parts is more than 12,000 hours

## 2.4 Name and functions of parts

### 2.4.1 Exterior



### 2.4.2 Internal mechanism

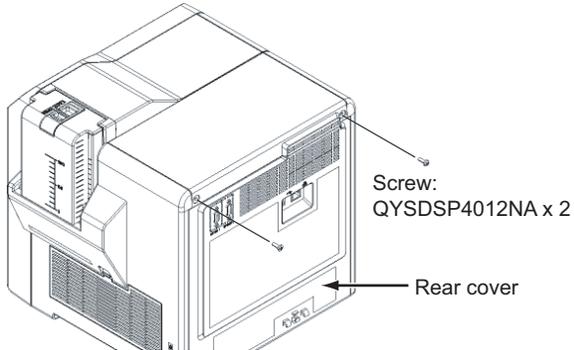


## 2.5 ATTACHING THE SEPARATELY SOLD PARTS

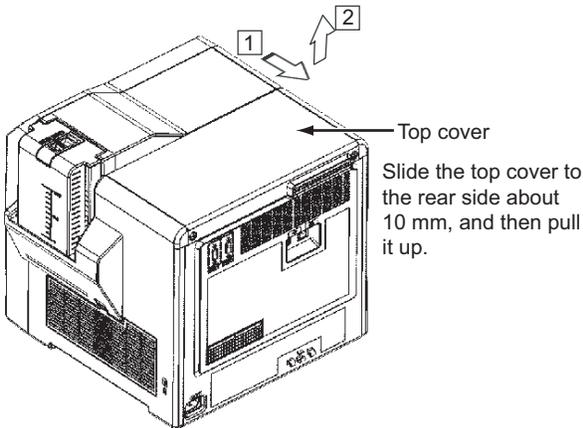
### 2.5.1 Preparation

Before connecting the separately sold parts, remove the top cover and the rear cover to pull open the MAIN Board.

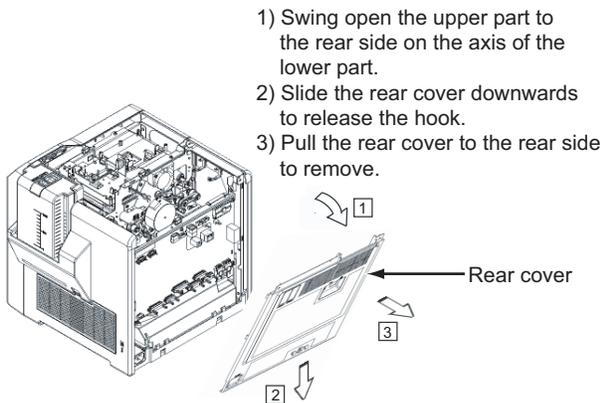
- (1) Remove the two screws attaching from the rear side of the main unit.



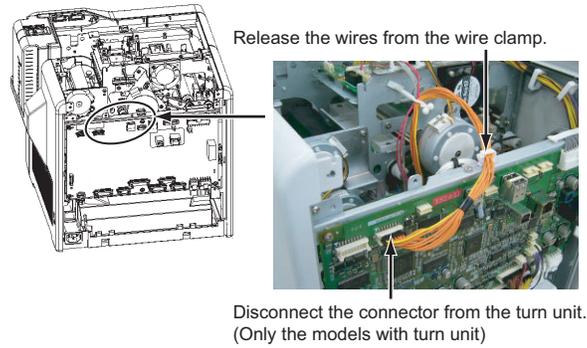
- (2) Remove the top cover by sliding it to the direction of the arrow.



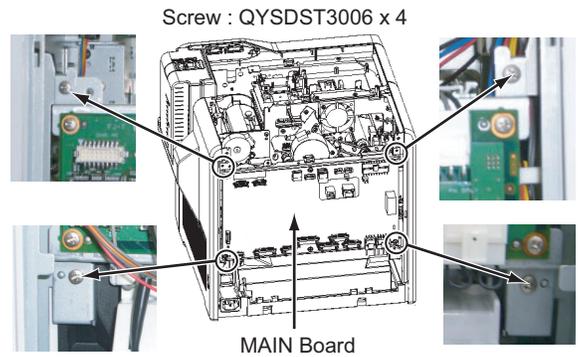
- (3) Remove the rear cover by pulling it open to the rear side.



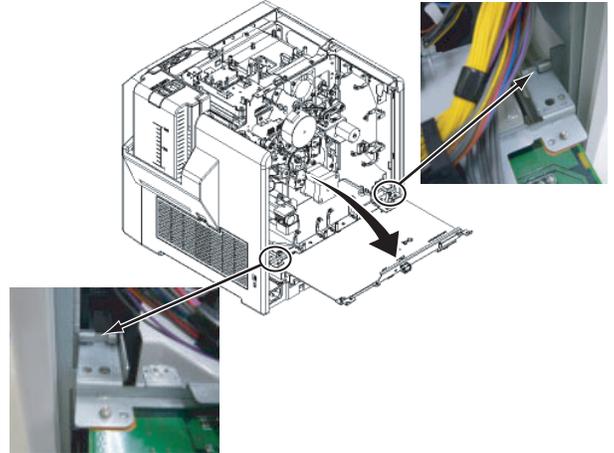
- (4) Disconnect the wire connected to the MAIN Board.



- (5) Remove the four screws attaching the brackets that fix the MAIN Board.



- (6) Pull open the MAIN Board, and hook the two brackets at the bottom of the MAIN Board to the frame of the main unit.



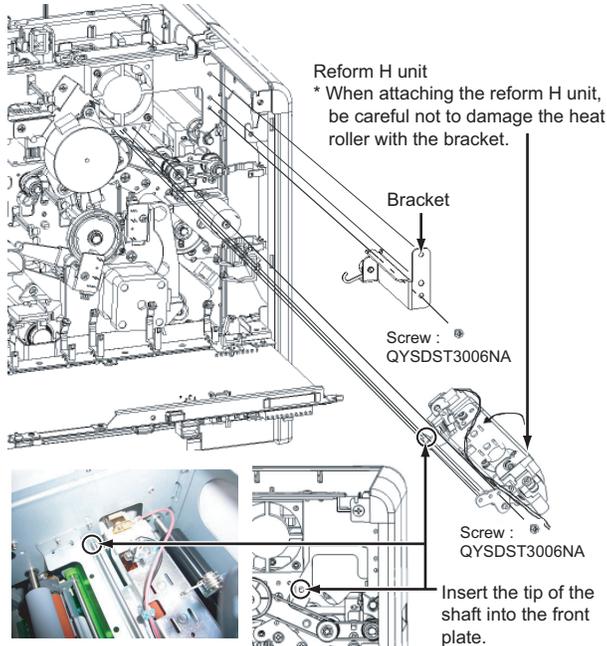
- Be careful not to catch wires in between.

## 2.5.2 Attaching the reform H unit

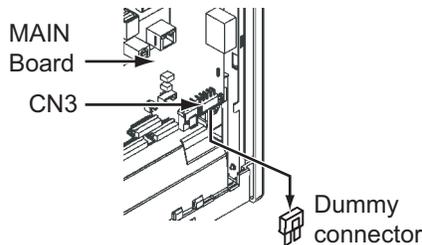
### Note:

After mounting the reform H unit, be sure to check the relevant item referring to "2.3 Check details after mounting separately sold parts".

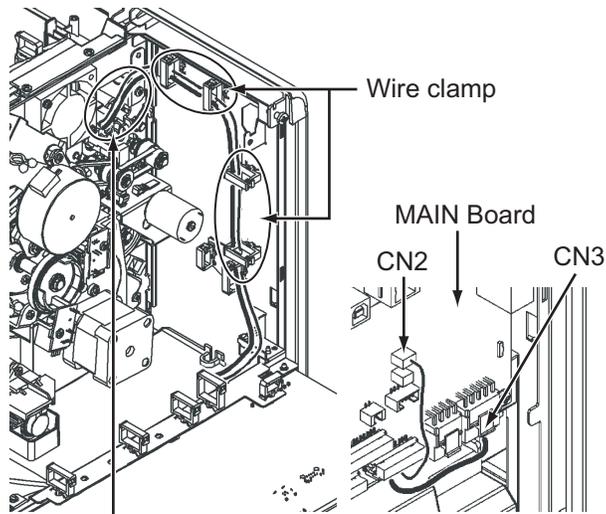
- (1) Insert the reform H unit, and fix it with a screw.
- (2) Fix the bracket with an attaching screw.



- (3) Remove the dummy connector connected to the CN3 on the MAIN Board. (Only when attaching the reform H unit)



- (4) Guide the wires from the reform H unit through the wire clamps as shown in the drawing, and then connect the wires to the MAIN Board.



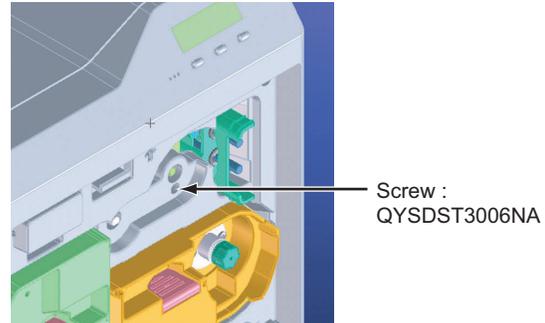
As the reform H unit moves up and down during operation, be sure to allow about 1 to 2 cm wire slack.

## 2.5.3 Attaching the IC contact unit

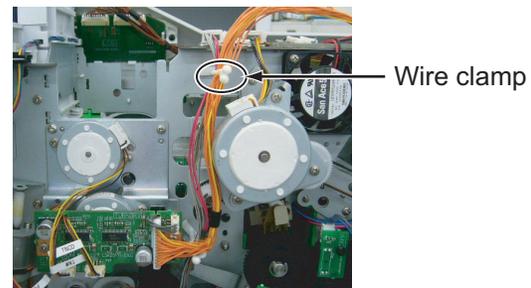
### Note:

After mounting the IC contact unit, be sure to check the relevant item referring to "2.3 Check details after mounting separately sold parts".

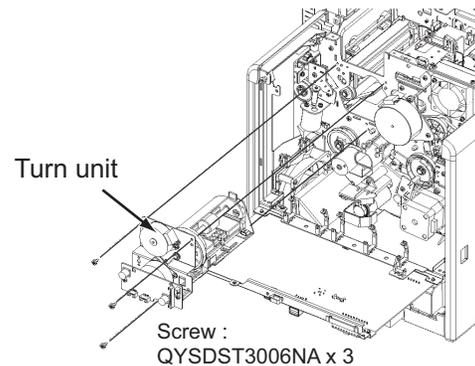
- (1) Remove the screw attaching the turn unit from the front side of the main unit.



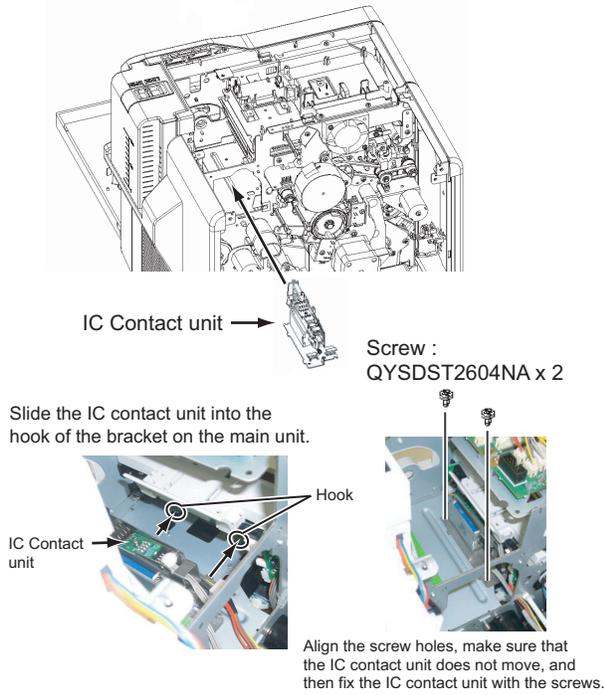
- (2) Remove the wires, which come from the turn unit, from the wire clamp.



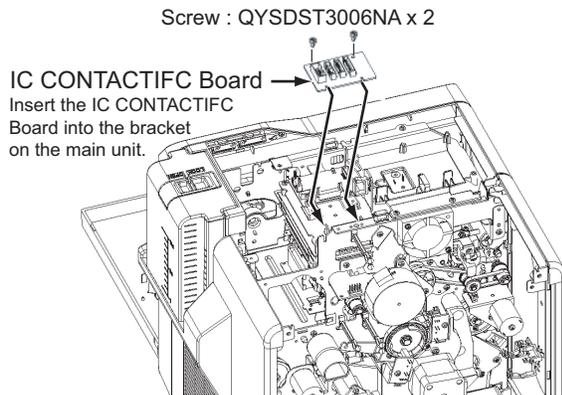
- (3) Remove the three screws attaching the turn unit, and then pull out the turn unit. (Only the models with turn unit)



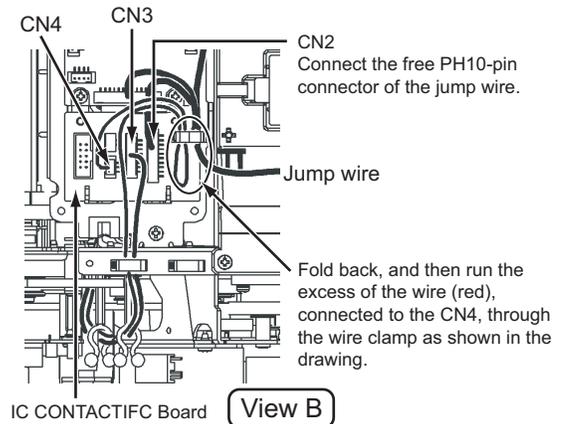
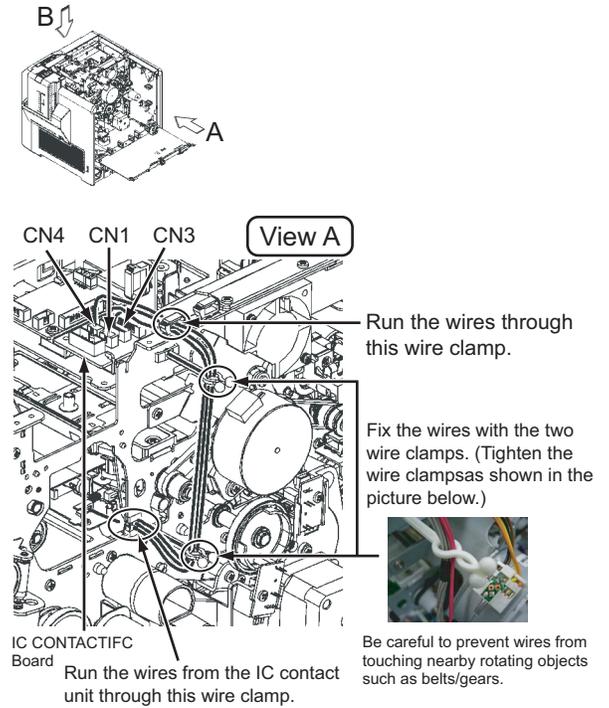
(4) Mount the IC contact unit.



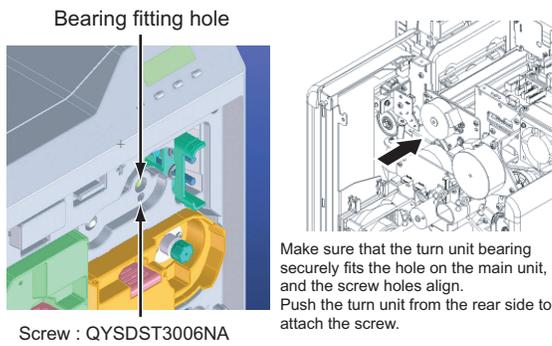
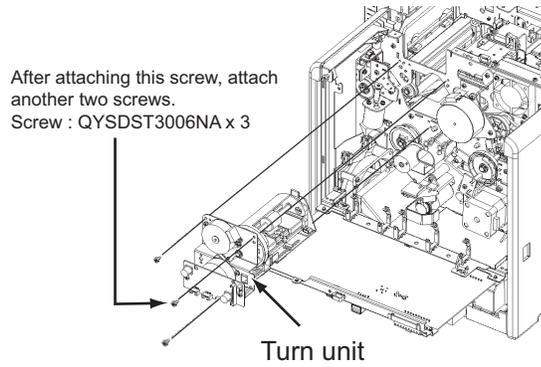
(5) Attach the IC CONTACTIFC Board.



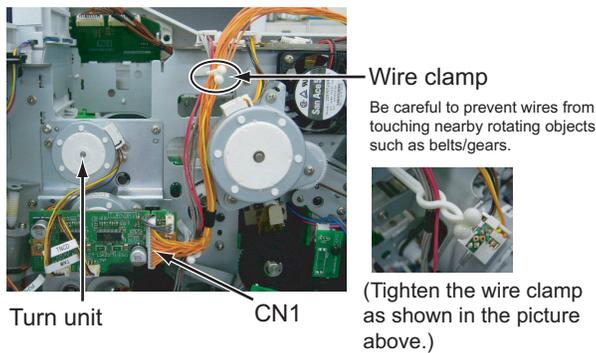
(6) Connect the wire from the IC contact unit following the drawing below.



(7) Reattach the turn unit.



(8) Connect the wires from the turn unit following the picture below.

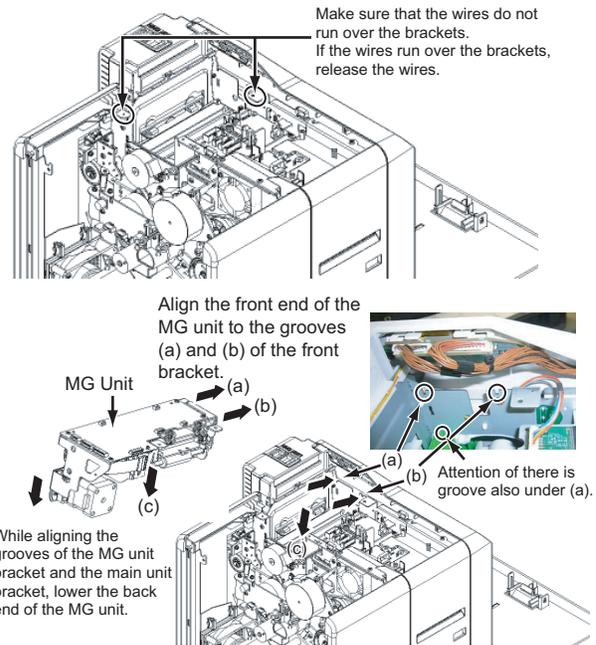


2.5.4 Attaching the MG unit

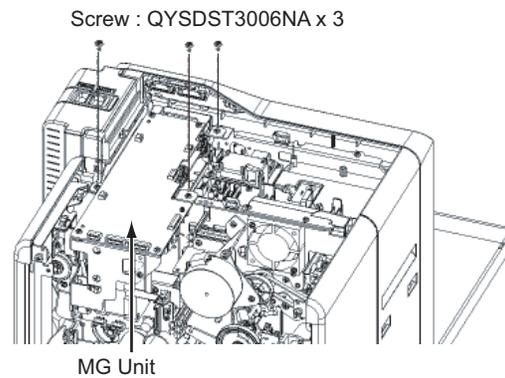
Note:

After mounting the MG unit, be sure to check the relevant item referring to "2.3 Check details after mounting separately sold parts".

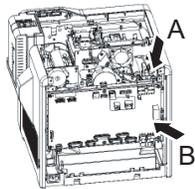
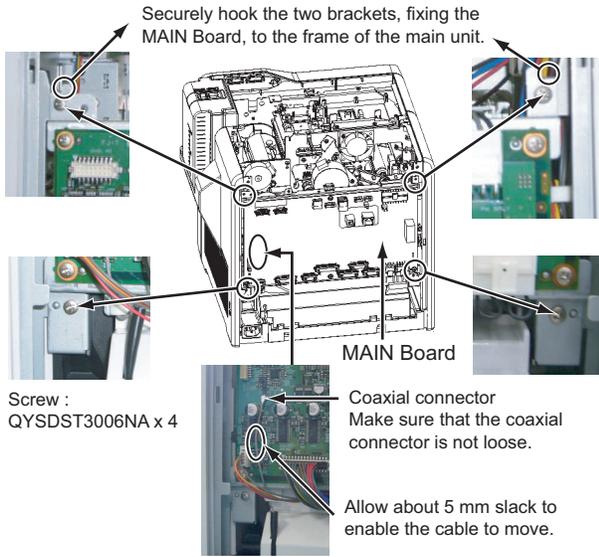
(1) Mount the MG unit.



(2) Fix the MG unit with the three screws.

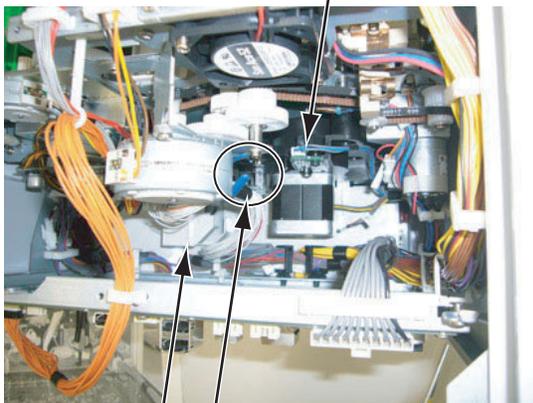


(3) Close back the MAIN Board to its original position, and fix the MAIN Board with the four screws.

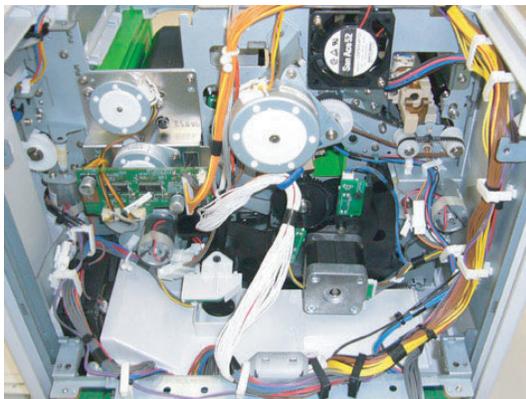


View A

The cam gear and the wire should be parted.



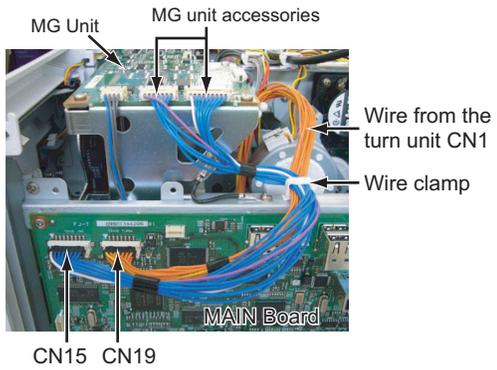
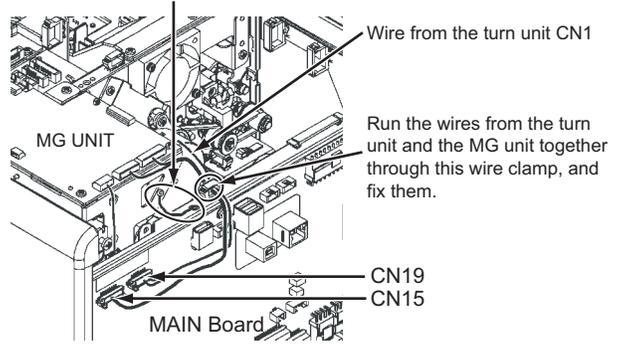
View B



Opened MAIN Board

(4) Connect the wires from the MG unit and the turn unit following the drawing below.

Connect the MG unit and the board bracket, and fix them with screws.  
Wire : QUB030-05HMHM-E  
Screw : QYSDST3006NA x 2

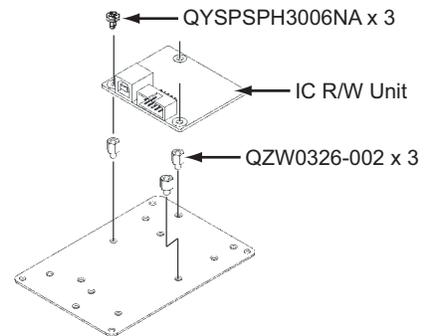


### 2.5.5 Attaching the IC R/W unit

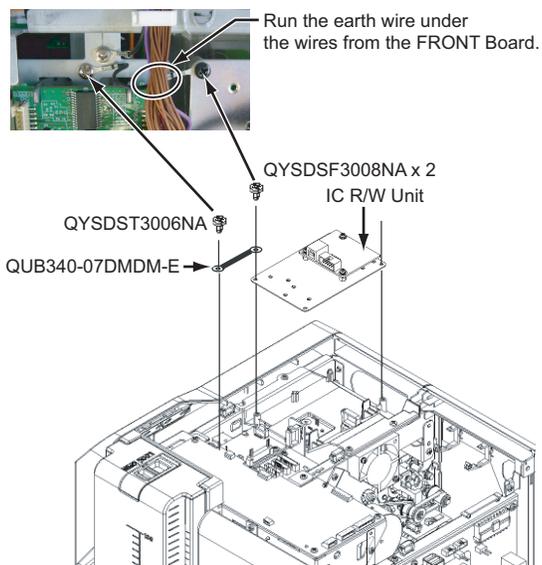
Note:

After mounting the IC R/W unit, be sure to check the relevant item referring to "2.3 Check details after mounting separately sold parts".

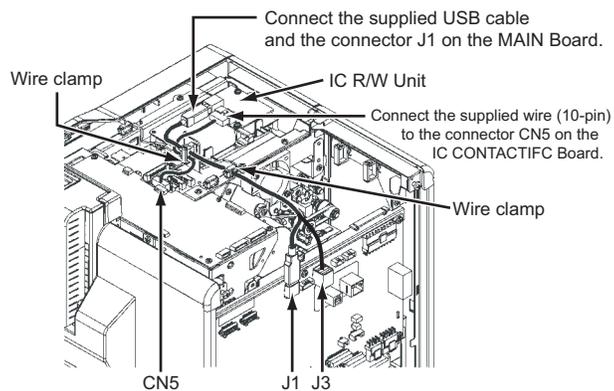
(1) Attach the IC R/W unit to the plate.



(2) Mount the IC R/W unit.



(3) Connect the wires from the IC R/W unit following the drawing below.



For direct connection of the IC R/W unit and a PC, connect to J3, not to J1.

Note that the IC R/W unit cannot be recognized on the status monitor in the J3 connection.

### 2.5.6 Attaching the top cover and the rear cover

- (1) Attach the top cover and the rear cover in the reverse procedure of disassembly.

## 2.6 Check details after mounting separately sold parts

Item		Check details			Required tools	
1	Reform H unit	The warpage of the printed card should be within the specs (1.5 mm).			Blank card	
2	IC Contact unit	Check the IC contact position mark using a blank card and a contact label. <ul style="list-style-type: none"> <li>• Service mode &gt; Offline Test &gt; Test the IC (Contact).</li> <li>• If the position is out of specs, Maintenance &gt; OffsetContact to adjust the position. (See 2.3.1 IC contact position adjustment)</li> </ul>			Blank card, Contact label	
		The card written with an application should be read by the reader. (Check in the USB and Ethernet connections)			Contact IC card Contact IC reader	
3	MG Unit	Service mode > Offline Test > test the MG. <ul style="list-style-type: none"> <li>• The test should be finished normally.</li> </ul>			MG card	
		The card written with an application should be read by the reader. <ul style="list-style-type: none"> <li>• There is no adjustment for an MG unit after mounting because MG units are shipped after being position adjusted. Check for normal operation only.</li> </ul>			MG reader	
4	Running after mounting the separately sold parts (For all separately sold parts)		Test for normal printing on about 10 cards <ul style="list-style-type: none"> <li>• Service mode &gt; Offline Test &gt; print</li> </ul>		Evaluation card	
Item	Item	Conditions & specs			Test point	
5	Safety test (for all separately sold parts)	Withstand voltage test	Timer	Leak current	Test voltage	(With the POWER SW: ON) GND C on the AC inlet in the drawing below   Bipolar B on the power cord in the drawing below   (With the POWER SW: ON) Screw A on the top left of the rear panel in the drawing below   GND C on the AC inlet in the drawing below
			2 to 3 sec.	10mA	AC1600±50V	
		Insulation resistance test	Test voltage		Insulation resistance value	
	DC 500V		100MΩ and over			
	Grounding continuity test	Timer	Test current	Spec value		
				3 to 4 sec.	AC25A	

The diagram shows the rear panel of the printer. Point A is a screw on the top left. Point B is the ground pin of a power cord. Point C is the ground pin of an AC inlet.

### 2.6.1 IC contact position adjustment

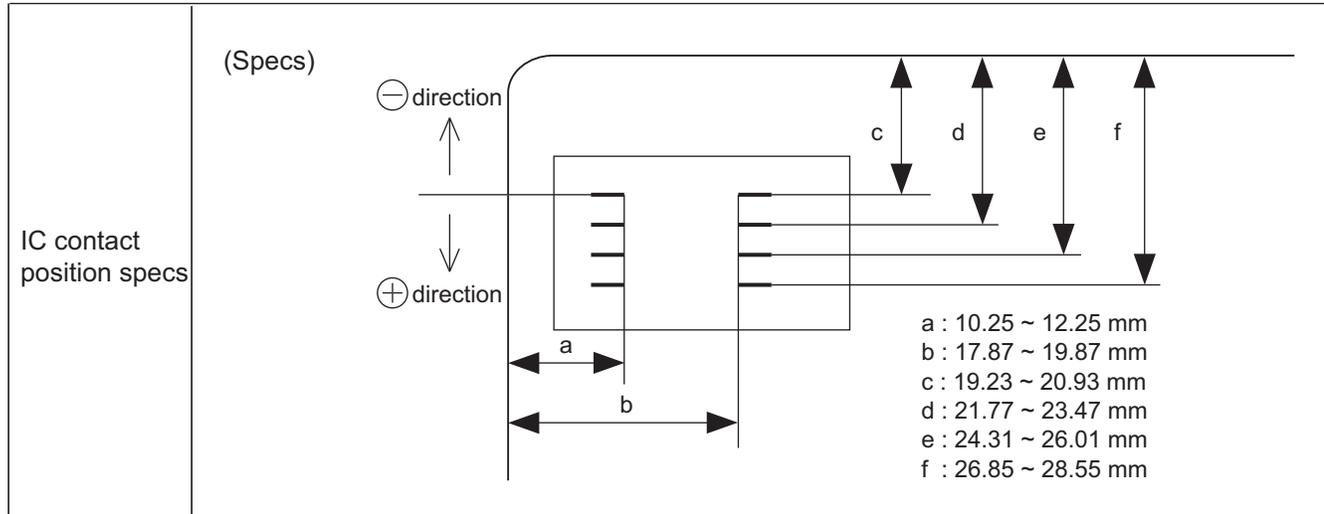
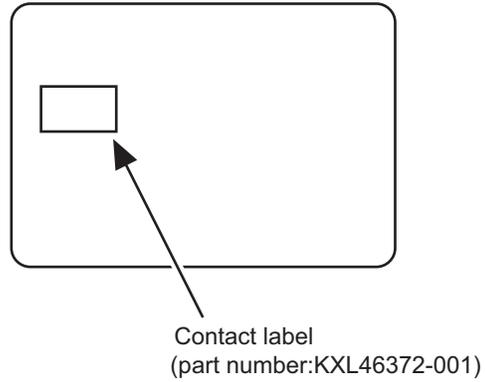
Apply a contact label (part number: KXL46372-001) on the IC chip of a contact IC card.

Select the IC contact test from "off line test" in the service mode to perform the test.

After the test, measure the IC contact position mark on the contact label using a vernier caliper to check if the position stays within the specs.

If the position does not stay within the specs, correct the position in the "OffsetContact" mode in the service mode.

When the position is corrected, turn off the power and turn it on again before testing the IC contact.



### 2.6.2 Optional installed label

When installing optional unit after shipping from JVC, mark corresponding column of option built-in label and stick model label attached with optional unit to secure traceability.

Model label attached with option (ex. CF-7MGS)

NOTE) Stick the small label on the printer rear after installation of this option unit.

CF-7MGS xxxxxxxx  
 CF-7MGS xxxxxxxx

CF-7MGS Magnetic Encoder (ISO)

Stick model label

Mark corresponding column

Rear side

Installed option label

Optional installed label

Single-sided	<input type="checkbox"/>	Option S/No.	
Double-sided	<input type="checkbox"/>		
Unit Built-in	<input checked="" type="checkbox"/>		
Bend Remedy	<input type="checkbox"/>		← For CF-7BR
Magnetic Encoder	<input checked="" type="checkbox"/> ISO <input type="checkbox"/> JIS		← For CF-7MGS
Contact IC Enc. Case	<input type="checkbox"/>		← For CF-7CCS
Contact IC Enc. R/W	<input type="checkbox"/>		← For CF-7CRW
Non-Contact IC Enc. R/W	<input type="checkbox"/>		← For CF-7CB

LS42255-001A

Stick attached model label with CF-7CB when installing Contact less IC R/W by using CF-7CB (Parts set for Contact less IC R/W installation)

## SECTION 3 DISASSEMBLY

Before disassembly, be sure to turn OFF the power and unplug the power cord.

### 3.1 Removing the covers (See figure 1 to figure 4)

(1) Remove the two screws **A** attaching the top cover unit.



Fig.1

(2) Slide the top cover unit to the rear side, then remove the top cover unit.



Fig.2

(3) Pull the rear cover unit open to the rear side, then remove the rear cover unit.



Fig.3

(4) Remove the two screws **C** attaching the side cover U-R and side cover U-L, then remove the side cover U-R and side cover U-L.



Fig.4

(2) Remove the two screws **D** attaching the cover, then remove the cover.



Fig.6

### 3.2 Removing the front panel unit (See figure 5 to figure 12)

(1) Remove the Media F CA unit, the Ink F CA unit, and the CL Roller unit.

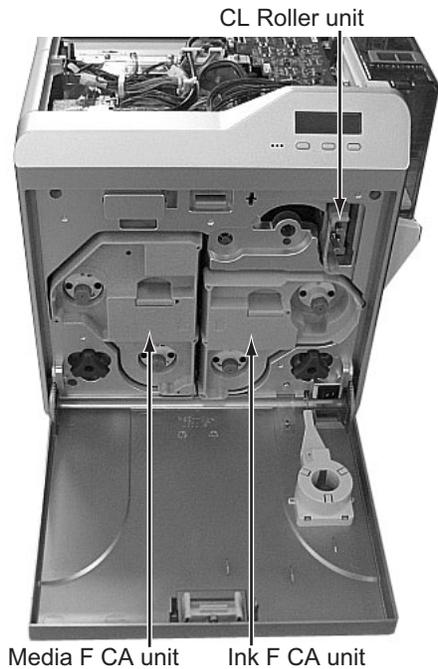


Fig.5

(3) Remove the four screws **E** attaching the front panel unit.  
 • Be careful not to break the cable.

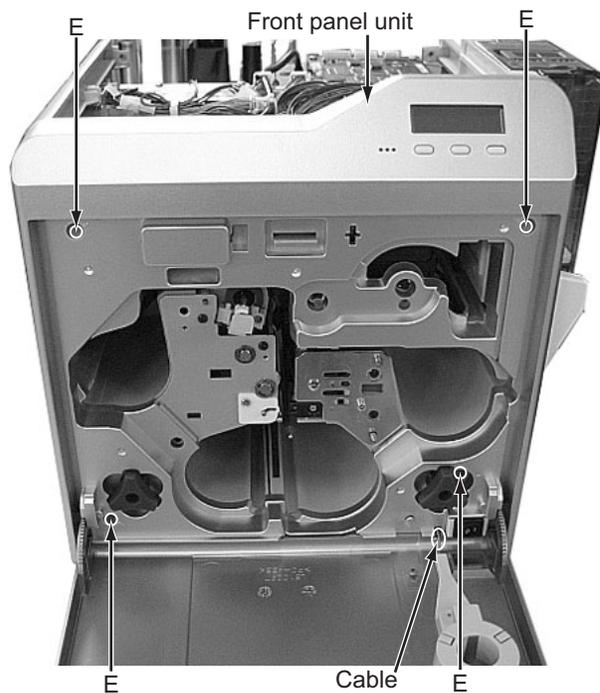
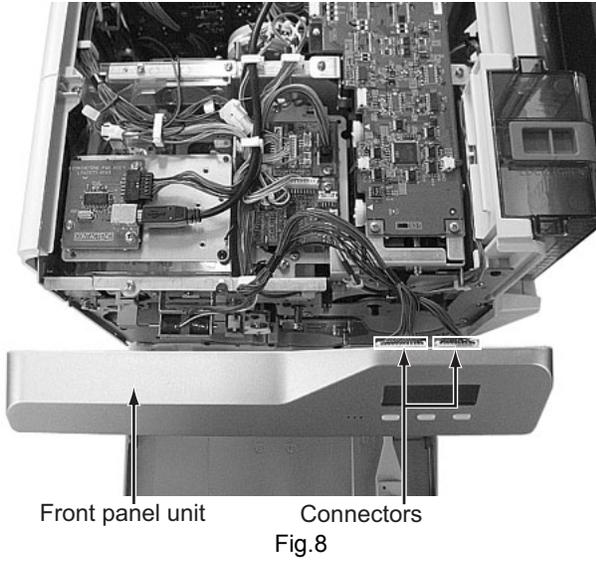
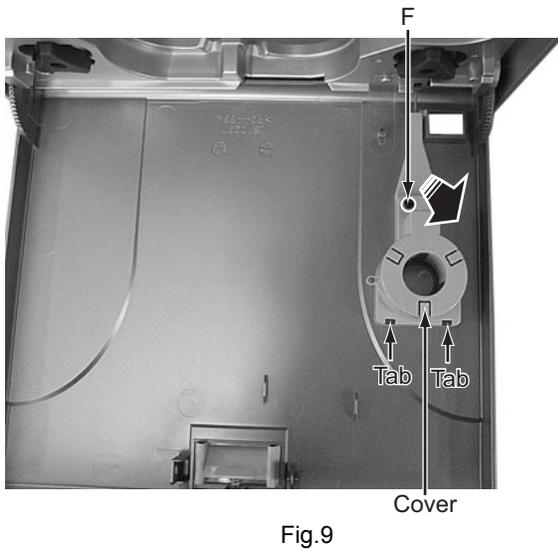


Fig.7

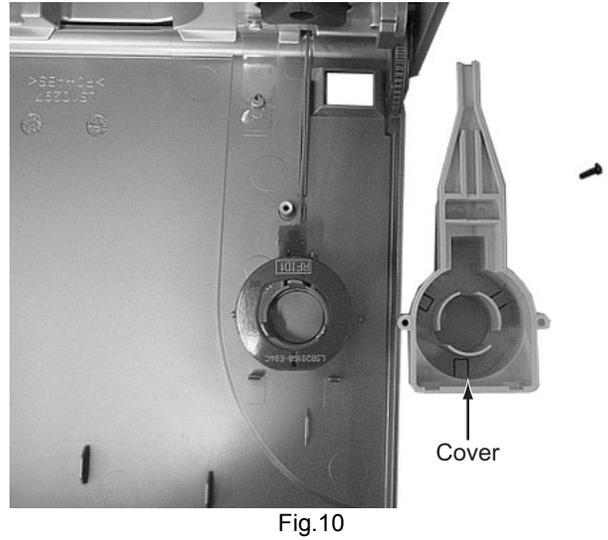
(4) Disconnect the two cables from the connectors on the front board.



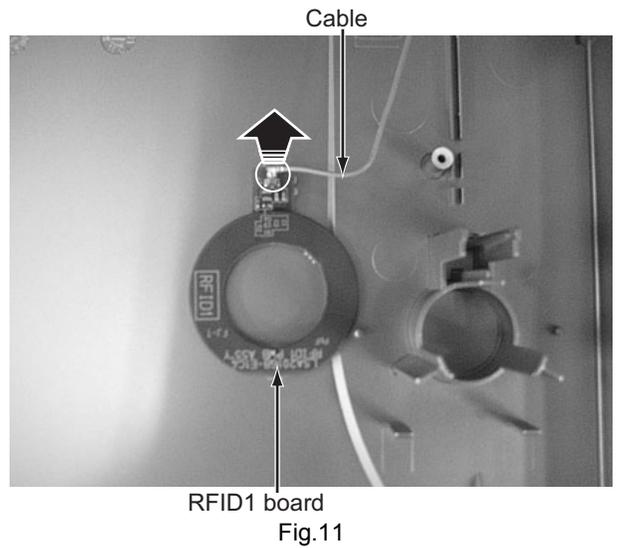
(5) Remove the one screw **F** attaching the cover.  
(6) Press the two tabs, pull up the cover at the point marked with an arrow, and then remove the cover.



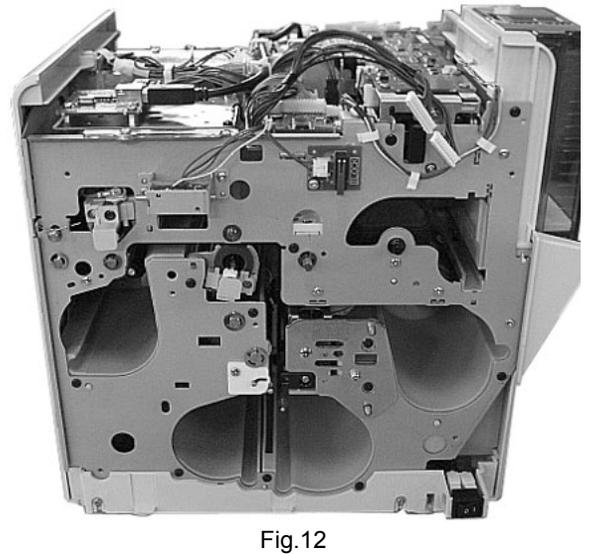
(7) Front panel unit with the cover removed.



(8) Disconnecting the cable from the RFID1 board detaches the front panel unit from the main unit.

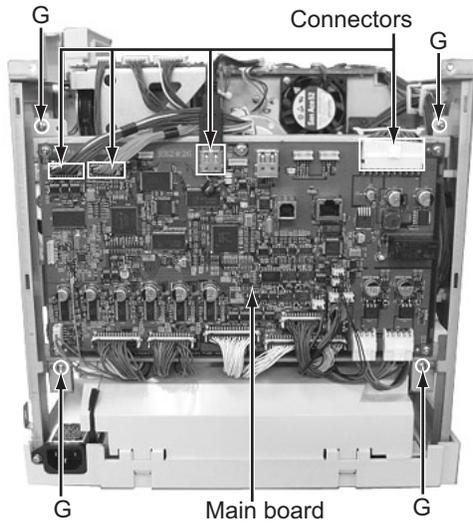


(9) Main unit with the front panel unit removed.

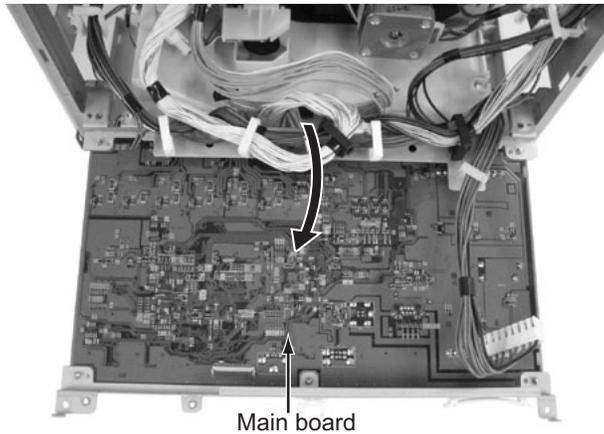


### 3.3 Removing the major boards and major units (See figure 13 to figure 33)

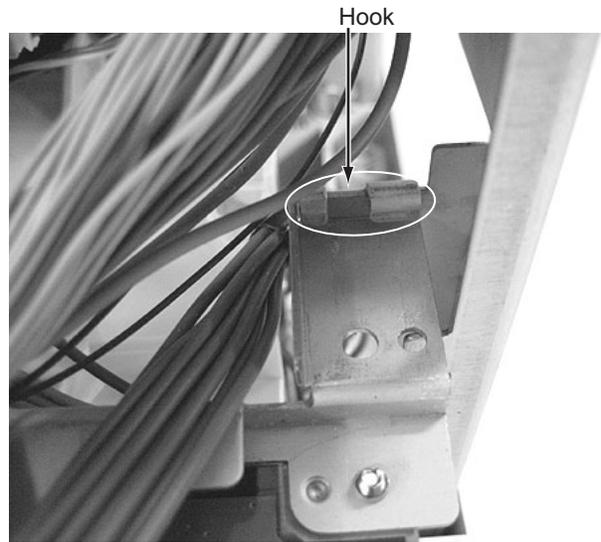
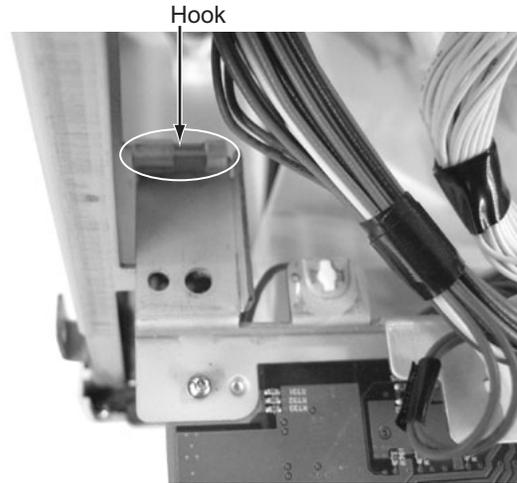
- (1) Disconnect the four cables from the connectors on the main board.
- (2) Remove the four screws **G** attaching the main board.



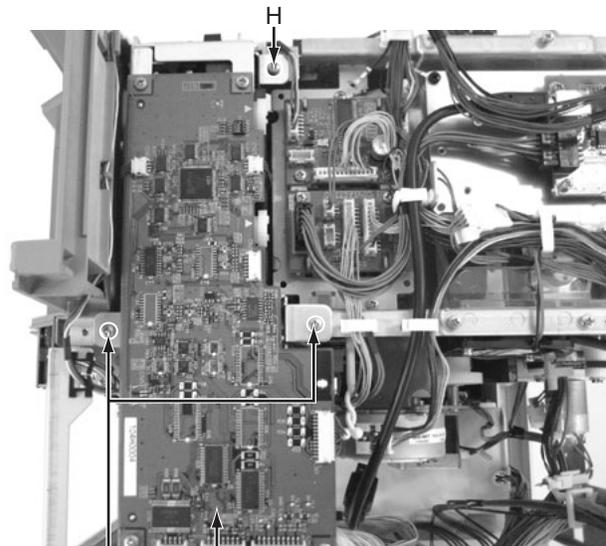
- (3) Pull the main board open to the rear side.



- (4) Hanging the left and right brackets on the main board to the hooks on the chassis prevents the main board from falling.



- (5) Remove the three screws **H** attaching the MG encoding unit, then remove the unit.



(6) Removed MG encoding unit.

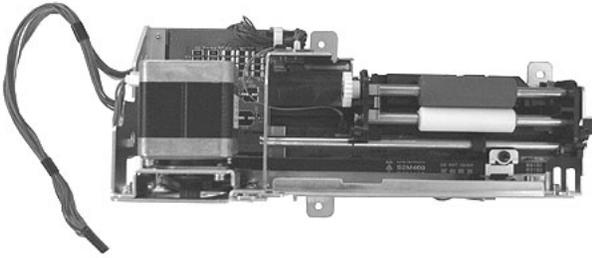


Fig.18

(7) The KEY LOCK UNIT consists of a SECURITY PWB ASSY and two solenoids.



Fig.19

(8) Remove the one screw J to release the solenoid on the card stocker side.

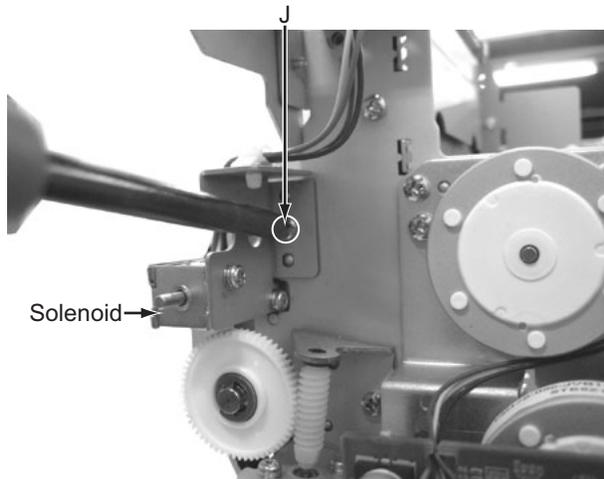
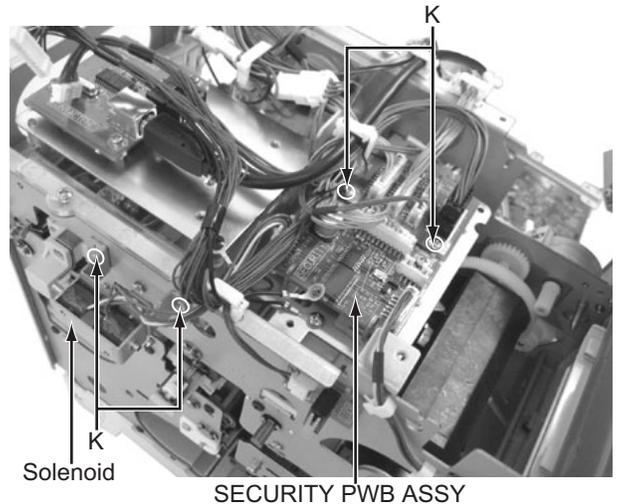


Fig.20

(9) Remove the four screws K to release the SECURITY PWB ASSY and the solenoid on the front side.



SECURITY PWB ASSY

Fig.21

(10) Removed KEY LOCK UNIT SET.(LS31237-201A)

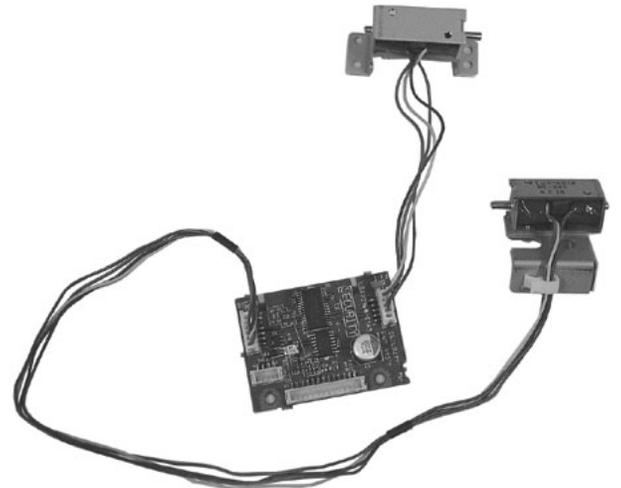
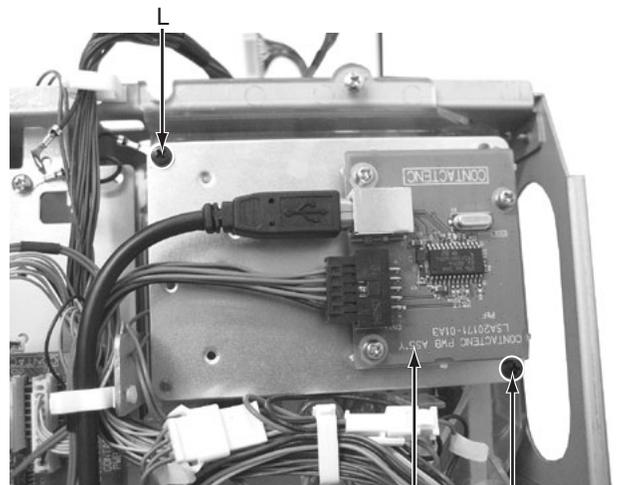


Fig.22

(11) Remove the two screws L, then remove the bracket with IC R/W UNIT.



IC R/W UNIT (CF-7CRW)

Fig.23

(12) Removed IC R/W UNIT.



This bracket is an accessory of the IC contact unit.

Fig.24

(13) Remove the one screw **M** attaching the bracket with CONTACTIFC board, then slide the CONTACTIFC board forward to remove.

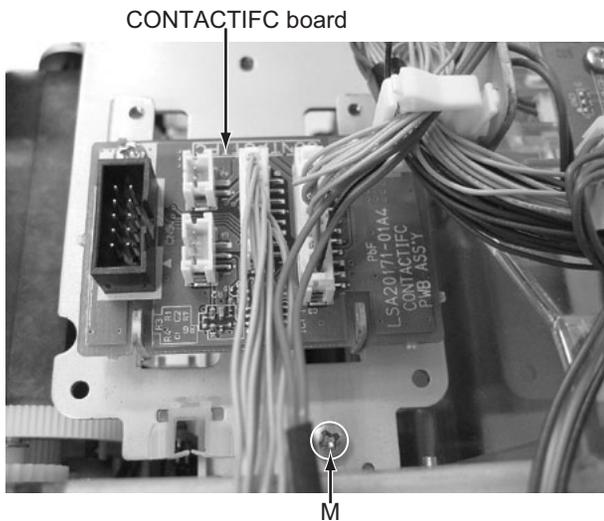


Fig.25

- To attach the CONTACTIFC board, insert the part **a** into the slit on the front side.

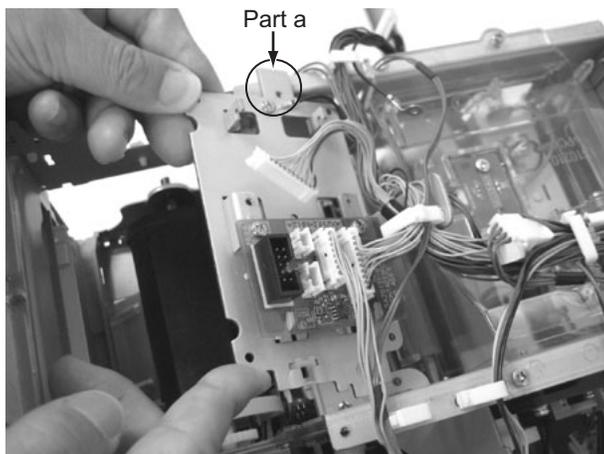


Fig.26

(14) Remove the two screws **N** attaching the cover, then remove the cover.

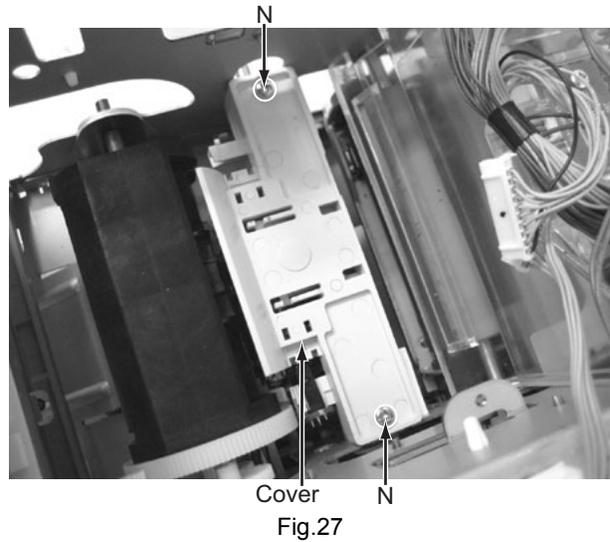


Fig.27

(15) Before removing the IC contact unit, the turn unit needs to be removed first.

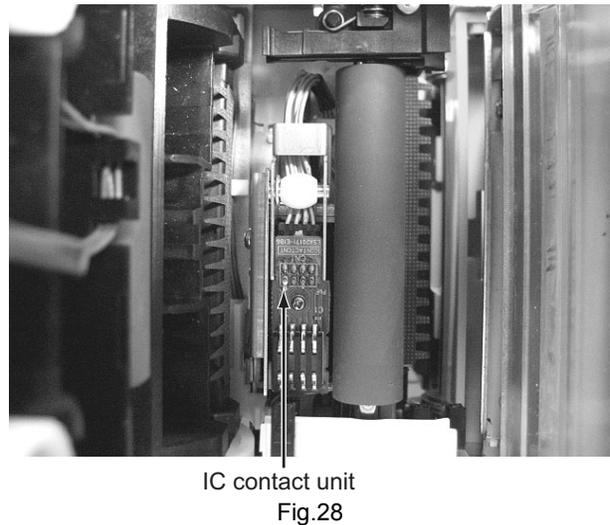


Fig.28

(16) Remove the four screws **P** attaching the turn unit from the front side and the rear side.

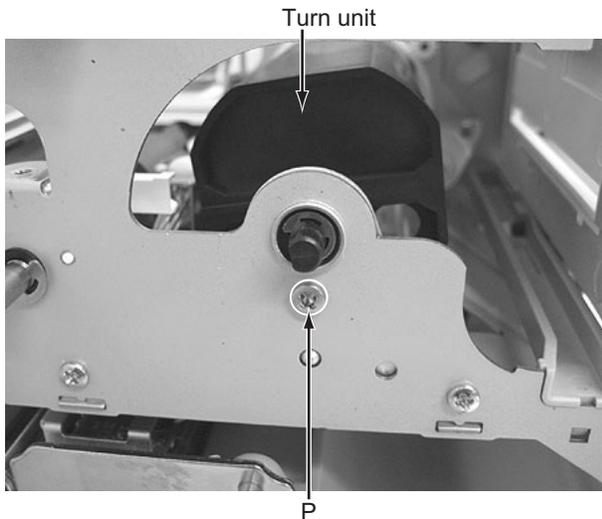


Fig.29

(18) Remove the two screws **Q** attaching the IC contact unit, then remove the unit.

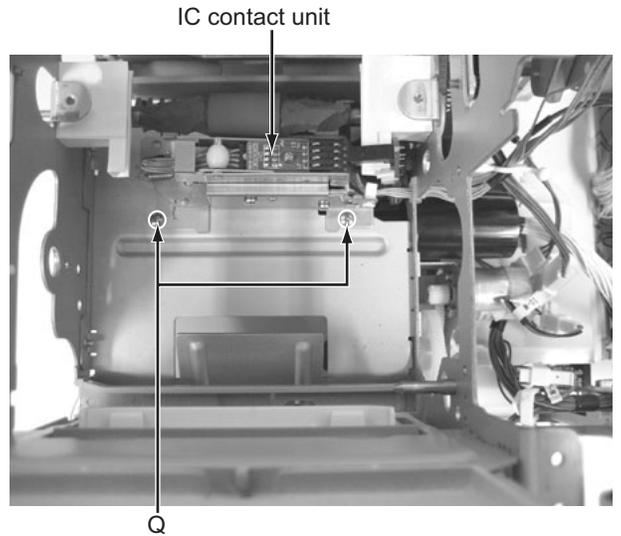


Fig.32

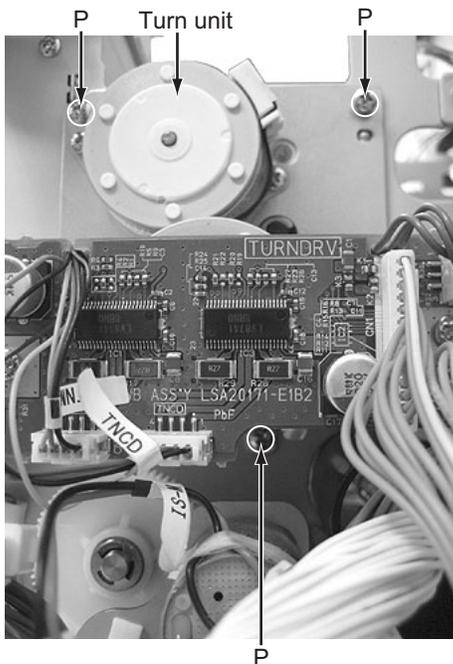
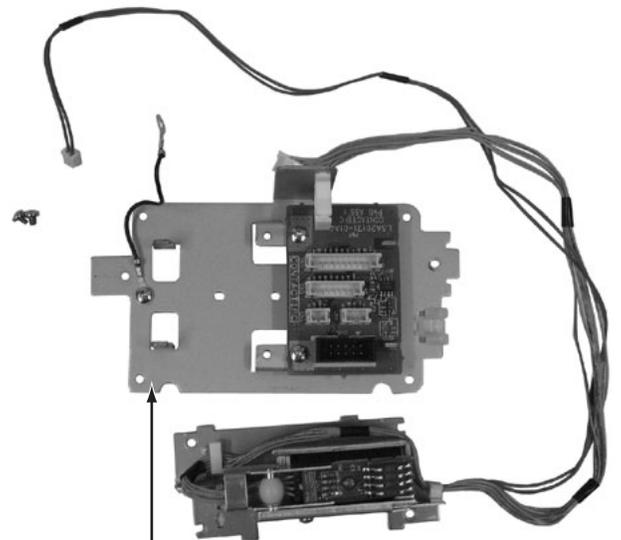


Fig.30

(19) Removed IC contact unit.  
ISO: CF-7CCS



This bracket is an accessory of the card printer unit.

Fig.33

(17) Removed turn unit.

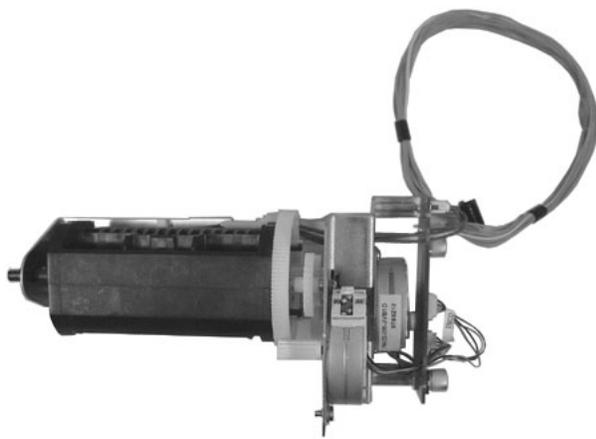
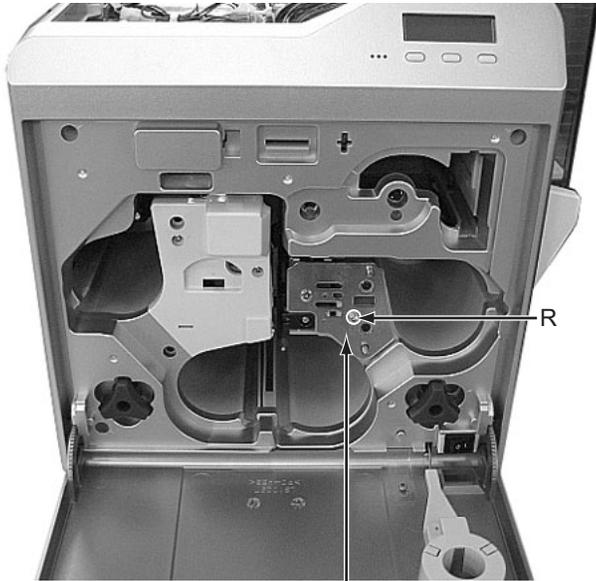


Fig.31

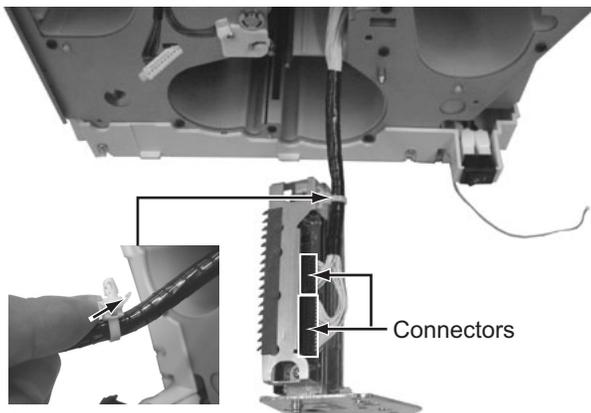
### 3.4 Replacing the head unit (See figure 34 and figure 35)

- (1) Remove the one screw R attaching the head unit.



Head unit  
Fig.34

- (2) Pull out the head unit paying attention to the cable, then disconnect the two connectors.



Note:

- \* Do not cut the cable lock. This cable lock is removable.
- \* Press to loosen the lock in the direction of the arrow. The cable lock can be removed.

Fig.35

### 3.5 Removing the reform H unit (See figure 36 and figure 37)

- (1) Remove the one screw S attaching the reform H unit, then pull out the reform H unit.
- (2) To replace the heater only, remove the one screw T.

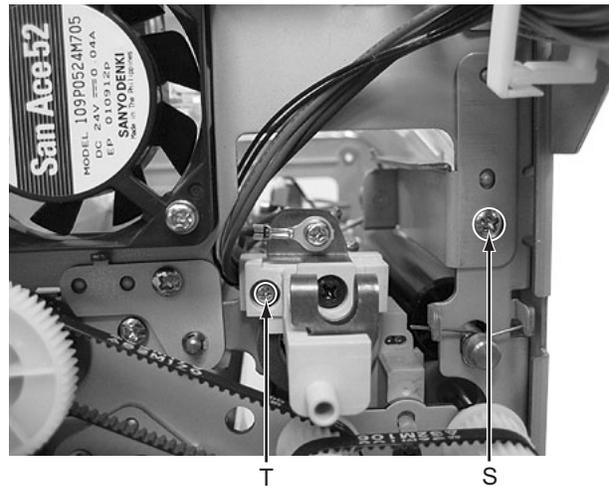


Fig.36

- (3) Removed reform H unit.



Fig.37

### 3.6 Replacing the heater on the heat unit (See figure 38 and figure 39)

- (1) Remove the one screw U attaching the cover from the front side.

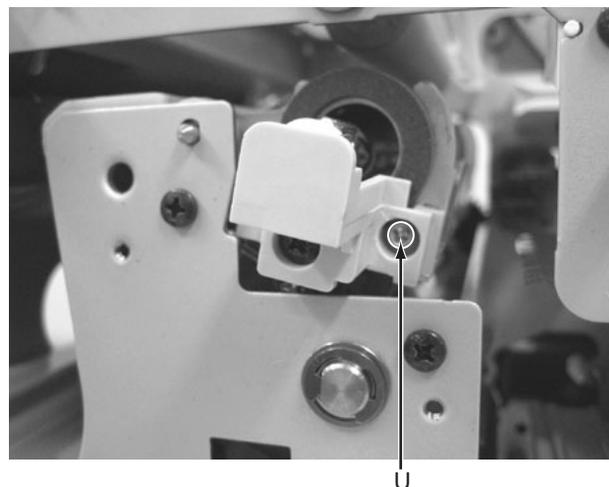
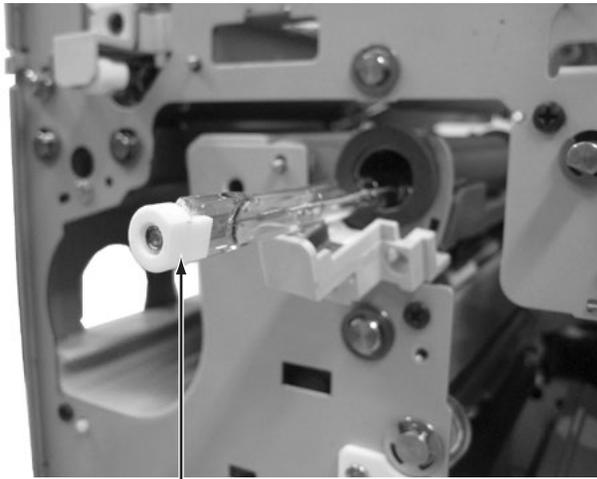


Fig.38

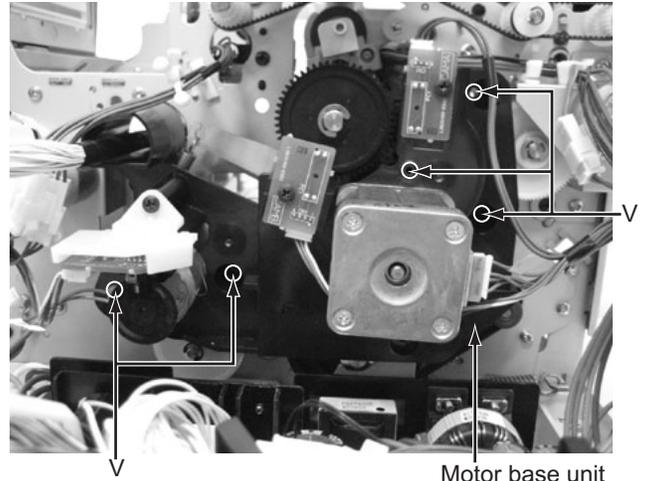
(2) Pulled out heater.



Heater

Fig.39

(3) Remove the five screws V attaching the motor base unit, then remove the motor base unit.



Motor base unit

Fig.42

### 3.7 Removing the motor base unit (See figure 40 to figure 43)

(1) Push two tabs on the PS cover, then remove the PS cover.

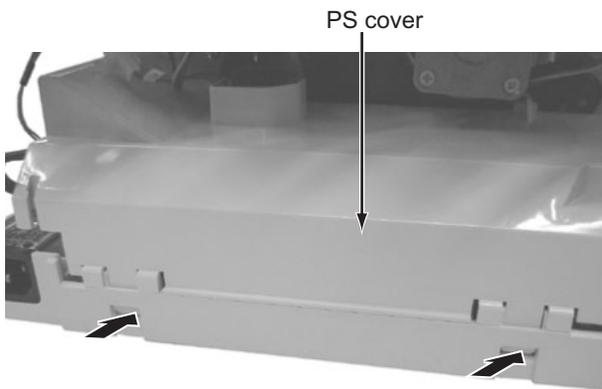
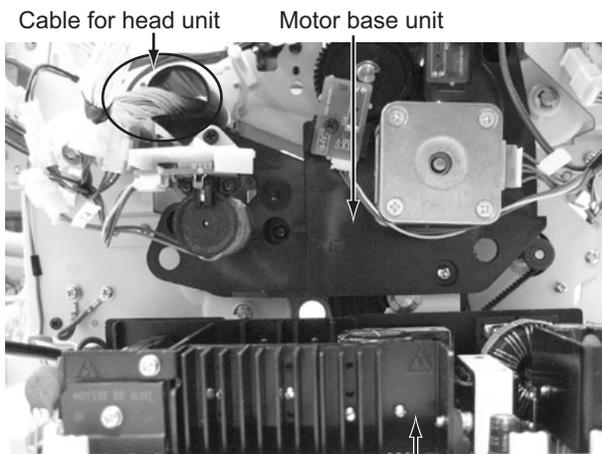


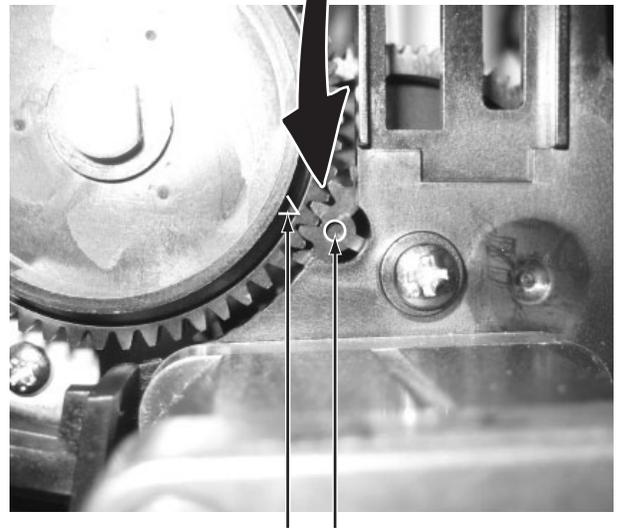
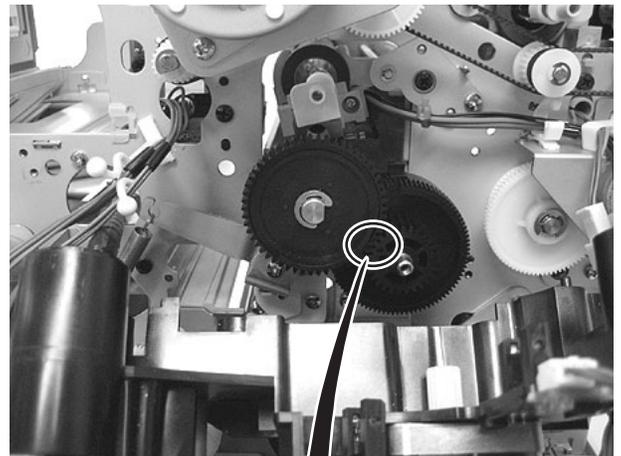
Fig.40

(2) Main unit with the PS cover removed



Power supply unit  
Fig.41

(4) Main unit with the motor base unit removed.



When the gear is detached, the position of a triangular sign and a round sign is matched and installed.

Fig.43

## SECTION 4 ADJUSTMENT

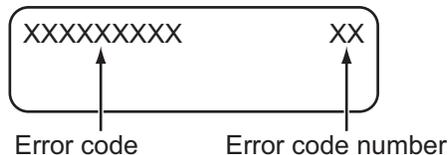
This service manual does not describe ADJUSTMENT.

## SECTION 5 TROUBLE SHOOTING

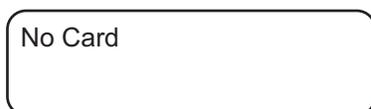
### 5.1 When an error message is display

When the error occurs, the error code and the error code number are displayed in the operation panel.

Solve the error referring to the following when the error occurs.



#### 5.1.1 No Card



- Cards have run out.  
Replenish the cards.
- The card hopper is not installed.  
Install the card hopper.

#### Memo:

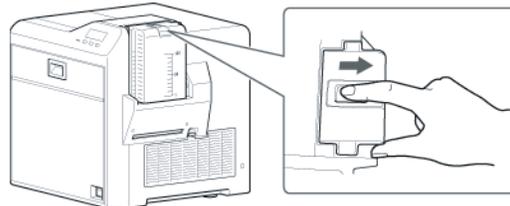
- The operation panel display appears blinking when the cards have run out or when the card hopper is not installed.

- Replenish the cards.
- The card hopper is able to store up to about 100 cards with a thickness of 0.76 mm.

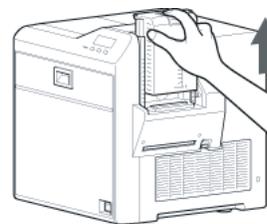
#### Cautions:

- Get ready cards that are designated by the authorized dealer.
- If the security lock is on, deactivate it. After work is complete, activate the security lock again.
- Do not touch the printing surface of the card. Touching it may cause printing errors. Put on the supplied gloves when handling the cards.
- To prevent card jams from occurring, limit the number of cards stored in the card hopper at any time to about 100 pieces regardless of the card thickness.
- When using new cards, set them after making sure that they are not adhered to each other due to static.
- Align the cards before setting them in the printer. Otherwise, the card hopper cover may not close properly, and this may damage the printer.
- Printing the card on the side with the magnetic stripe may cause printing errors or damage to the card's functions. If you want to do so, please consult our authorized dealers in advance.
- To set cards with both functions (magnetic stripe and contact IC), follow the procedure for setting the contact IC card.

- (1) Set the card hopper knob to [OPEN].



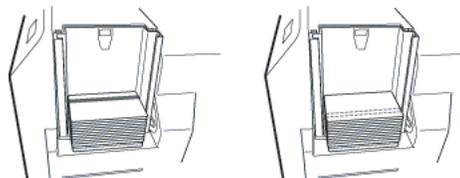
- (2) Lift to remove the card hopper cover.



- (3) Align the orientation of the cards, and set them in the printer.

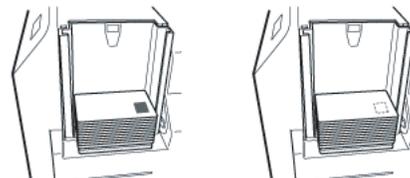
#### • Magnetic stripe cards

- Set the card with the magnetic stripe facing upward and toward the printer, or facing downward and toward you.

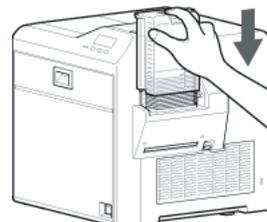


#### • ISO contact IC cards

- Set the card with the Contact IC terminal facing upward and toward the rear of the printer, or downward and toward the rear of the printer.
- For single-sided printers, set the cards with the IC terminal facing down and toward the rear of the printer.



- (4) Install the card hopper cover, and set the card hopper knob to [LOCK]



### 5.1.2 Jam(Hopper) 90

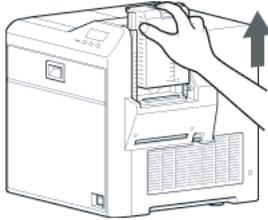
Jam (Hopper) 90

- Card jam near the card hopper and cleaning roller.  
Remove the jammed card.

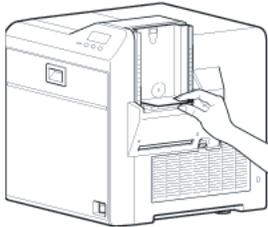
**Note:**

- Do not apply excessive force on the card hopper. Doing so may damage it.
- Do not touch the printing surface of the card. Touching it may cause printing errors. Put on the supplied gloves when handling the cards.

- (1) Detach the card hopper cover, and remove the unused cards.



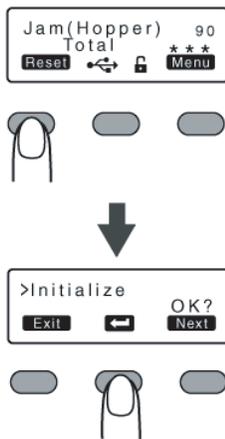
- (2) Remove the jammed card with a hand.



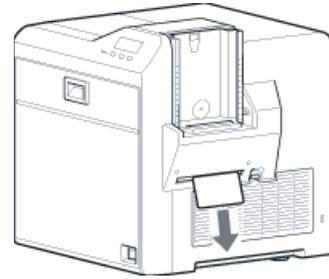
- (3) Return the unused cards to their original position.
- (4) Install the card hopper cover.

#### 5.1.2.1 If the card cannot be removed by hand.

- (1) Press [RESET] → to reset the printer.



- The card is discharged from the NG card outlet.

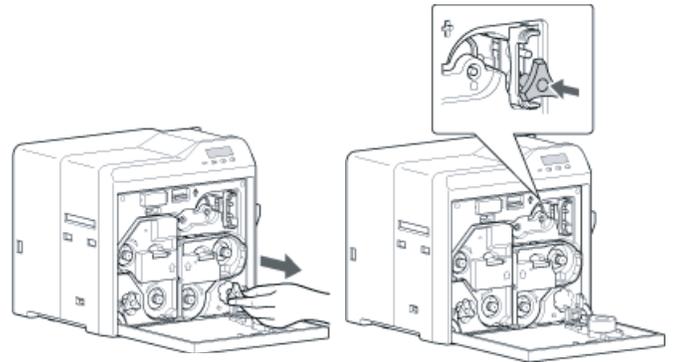


#### 5.1.2.2 If the card cannot be discharged

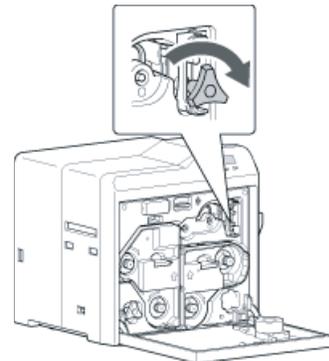
- (1) Turn off the power.
- (2) Open the printer door, and check the position of the jammed card.



- (3) Attach the jog dial to the cleaning roller shaft.



- (4) Turn the cleaning roller shaft in the clockwise direction, while checking the position of the card.



- (5) Remove the card after it is discharged from the card load slot.
- (6) Restore the jog dial to its original position, and close the printer door.
- (7) Turn on the power.

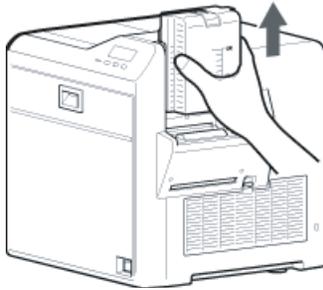
### 5.1.3 Jam(TurnOver) 91

Jam (Turn Over)

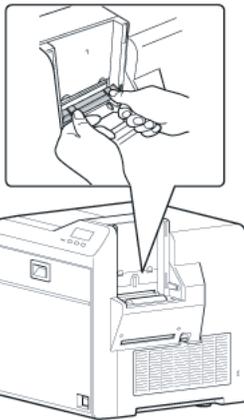
91

- Card jam near the card turn over unit.  
Remove the jammed card.

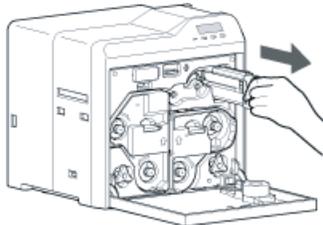
- (1) Turn off the power.
- (2) Remove the card hopper.



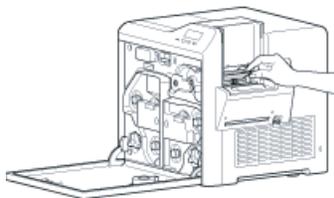
- (3) Detach the card load slot cover.



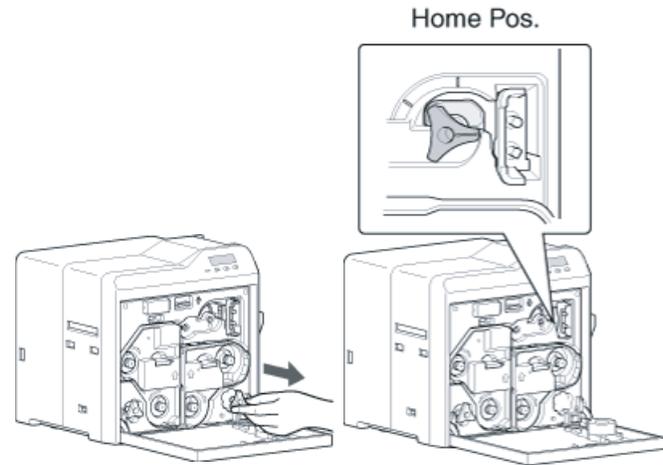
- (4) Open the printer door, and remove the cleaning unit.



- (5) Remove the jammed card in the card turn over unit from the card load slot.



- (6) Install the cleaning unit.
- (7) Attach the jog dial to the card turn over unit shaft, and set the card turn over unit to "Home Pos."
  - "Home Pos." is the position where the slit on the jog dial points to the right and the card turn over unit is horizontal.



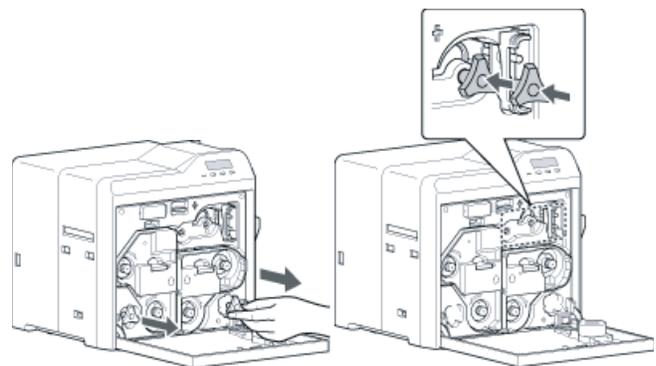
- (8) Restore the jog dial to its original position.
- (9) Install the card load slot cover and card hopper, and close the printer door.
- (10) Turn on the power.

#### Cautions:

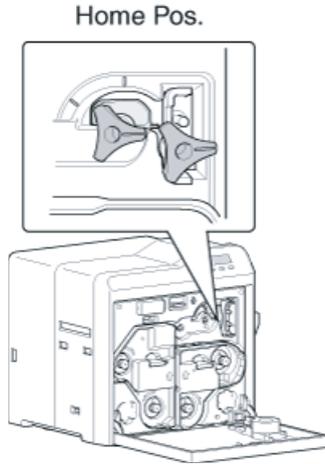
- When a Jam(TurnOver) error occurs, the [Jam(TurnOver)] message will not disappear after removing the jammed card until the card turn over unit is set to "Home Pos."
- If the printer door is opened when a Jam(TurnOver) error occurs, a [Please Adjust Turn Unit Pos!] message will be displayed. Remove the jammed card, and set the card turn over unit to "Home Pos."

#### 5.1.3.1 If the card cannot be removed

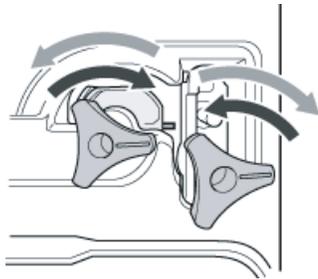
- (1) Install the cleaning unit.
- (2) Attach the jog dial to the cleaning roller shaft and card turn over unit shaft.



- (3) Set the card turn over unit to “Home Pos.”
- “Home Pos.” is the position where the slit on the jog dial points to the right and the card turn over unit is horizontal.



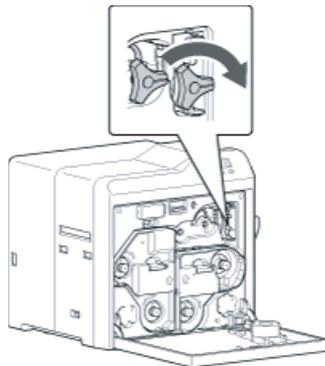
- If the card protrudes from the card turn over unit, turn the cleaning roller shaft to move the card into the unit.
- Turning the card turn over unit moves the card inside the unit outward. Turn the card turn over unit while turning the cleaning roller shaft so that the card is retained inside the card turn over unit, and set to “Home Pos.”.



**Cautions:**

- Do not turn the card turn over unit forcibly if there is a card inside the unit. Doing so may jam the card and damage the printer.

- (4) Turn the cleaning roller shaft in the clockwise direction.

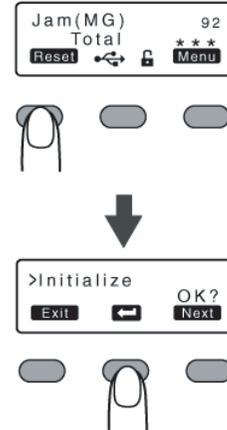


- (5) Remove the card after it is discharged from the card load slot.  
Go to step 8 of 5.1.3.

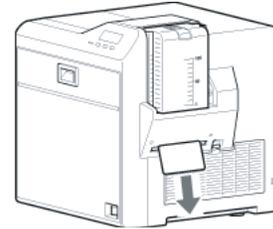
### 5.1.4 Jam(MG) 92

Jam (MG) 92

- Card jam in the magnetic encoder unit.  
Remove the jammed card.  
(1) Press [RESET] → to reset the printer.



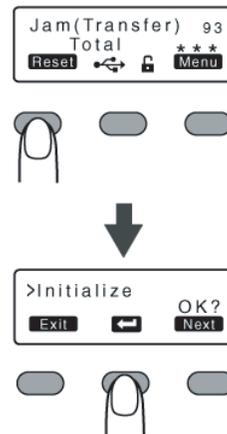
- The card is discharged from the NG card outlet.



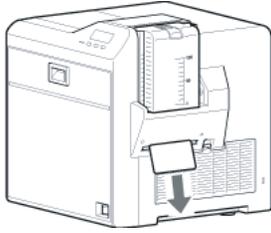
### 5.1.5 Jam(Transfer) 93

Jam (Transfer) 93

- Card jam in the card feed roller.  
Remove the jammed card.  
(1) Press [RESET] → to reset the printer.

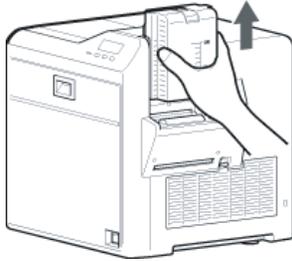


- The card is discharged from the NG card outlet.

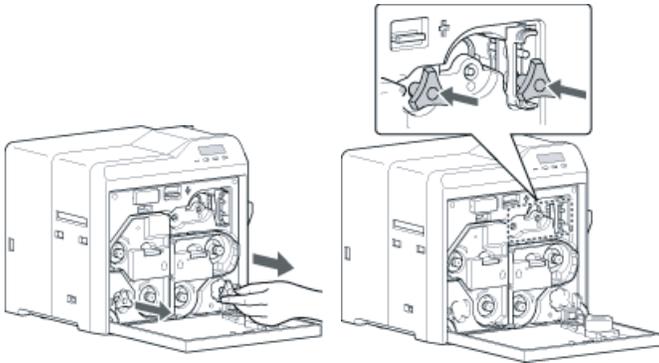


### 5.1.5.1 If the card cannot be discharged

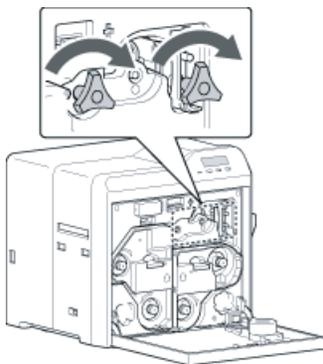
- (1) Turn off the power, and detach the card hopper.



- (2) Open the printer door, and check the position of the jammed card.
- (3) Attach the jog dial to the card feed roller shaft and cleaning roller shaft.



- (4) Turn the card feed roller shaft and cleaning roller shaft in the clockwise direction, while checking the position of the card.



- Remove the card after it is discharged from the card load slot.  
(For single-sided printers, the card is discharged from the NG card outlet.)
- (5) Restore the jog dial to its original position.
  - (6) Install the card hopper, and close the printer door.
  - (7) Turn on the power.

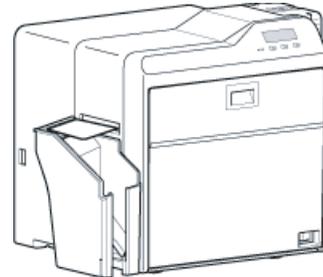
### 5.1.6 Jam(Discharge) 94

Jam (Discharge) 94

- Card jam near the card outlet.  
Remove the jammed card.
- (1) Press [RESET] → to reset the printer.



- The card is discharged from the card outlet.

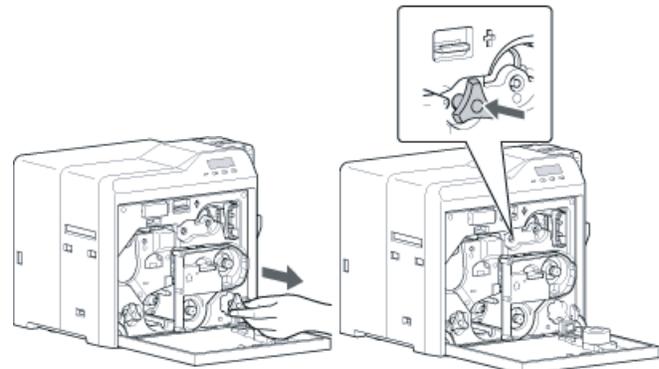


### 5.1.6.1 If the card cannot be discharged

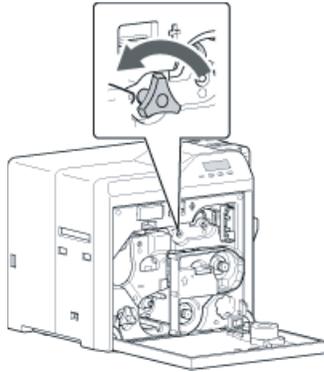
- (1) Turn off the power, and open the printer door.
- (2) Pull out the retransfer film cassette, and check the position of the card.



- (3) Attach the jog dial to the card feed roller shaft.

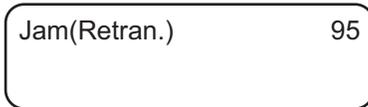


- (4) Turn the card feed roller shaft in the anti-clockwise direction, while checking the position of the card.

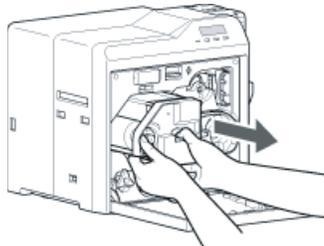


- The card is discharged from the card outlet.
- (5) Restore the jog dial to its original position, and install the retransfer film cassette.  
 (6) Close the printer door, and turn on the power.

### 5.1.7 Jam(Retrans.) 95



- Card jam near the retransfer heating roller.  
Remove the jammed card.
- (1) Open the printer door.  
  - A [Please Remove Jam Card!] or [Please Close Door] message appears.
 (2) Pull out the retransfer film cassette.

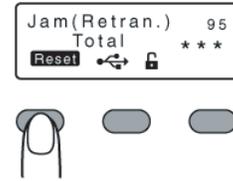


**Cautions:**

- The card may be adhered to the retransfer film. Pull out the retransfer film while taking care not to jam it.
- If a [Please Close Door] message is displayed, the retransfer film is stuck and the retransfer film cassette cannot be removed.  
In this case, close the printer door before pulling out the retransfer film cassette.

- (3) Remove the jammed card.  
 There is an explanation in each symptom.
- If the card is adhered to the retransfer film.
  - If the card is inside the printer unit.
  - If the card is caught in the card feed roller to the right of the retransfer heating roller.
  - If the card is caught in the card feed roller to the left of the retransfer heating roller.
- (4) Install the retransfer film cassette, and close the printer door.

- (5) Press [RESET].  
  - A [Jam Card Removed?] message appears.

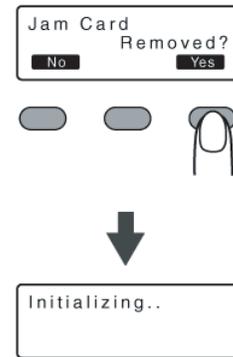


- (6) Press [Yes].

**Cautions:**

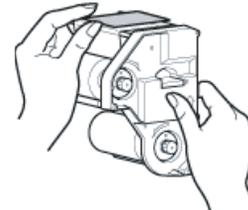
- Initializing the printer without first removing the card will cause the printer to malfunction. Be sure to remove the card then press [Yes].

- An [Initializing..] message appears, and initialization of the printer starts.



#### 5.1.7.1 If the card is adhered to the retransfer film

- Remove the jammed card with a hand.



**Cautions:**

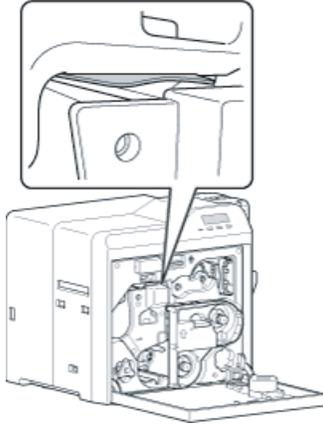
- The card may be very hot. Be careful not to burn your fingers when removing the card.

Go to step 4 of 5.1.7.

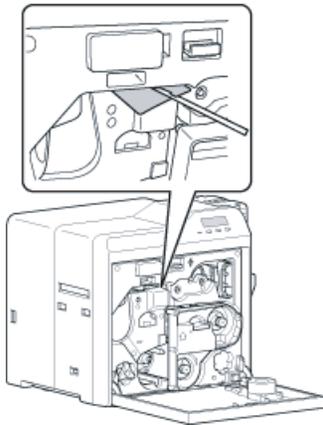
### 5.1.7.2 If the card is inside the printer unit

- If the card is not drawn into the card feed roller and is left inside the printer, use the tweezers (supplied) to remove the card.

- (1) Turn off the power.
- (2) Check the position of the card that is left inside the printer.



- (3) Pick up the card using the tip of the card Pickup. (supplied)
  - Be careful not to drop the card inside the printer.
- (4) Pull out the card slowly.



#### Cautions:

- The card may be very hot. Be careful not to burn your fingers when removing the card.

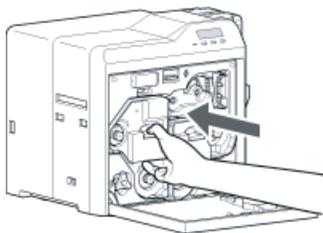
#### Memo:

Example of how to pick up the card



- Pick up the card by following the diagram above.

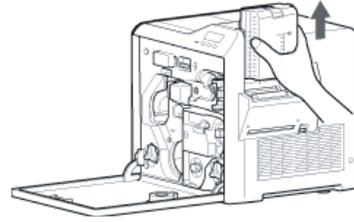
- (5) Install the retransfer film cassette, and close the printer door.



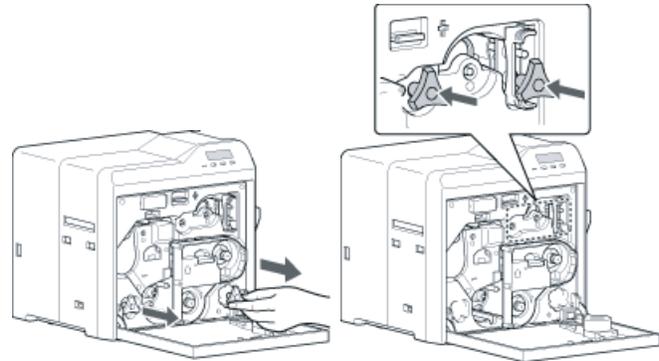
- (6) Turn on the power.  
Go to step 5 of 5.1.7.

### 5.1.7.3 If the card is caught in the card feed roller to the right of the retransfer heating roller

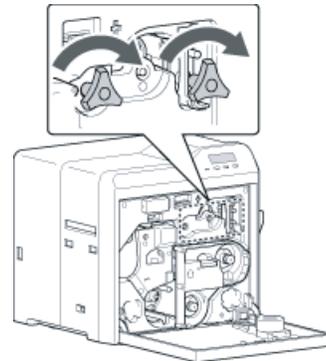
- (1) Turn off the power, and detach the card hopper.



- (2) Check the position of the card.
- (3) Attach the jog dial to the card feed roller shaft and cleaning roller shaft.



- (4) Turn the card feed roller shaft and cleaning roller shaft in the clockwise direction, while checking the position of the card.



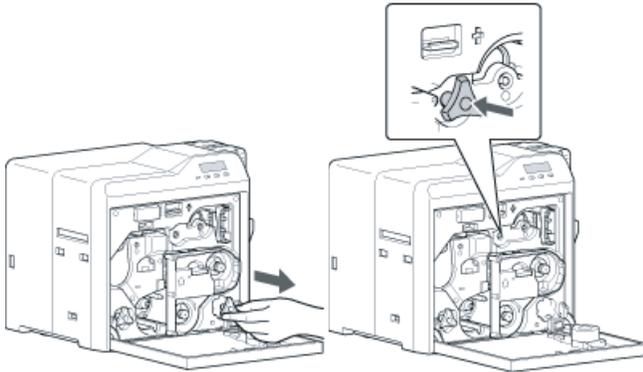
- Remove the card after it is discharged from the card load slot.

(For single-sided printers, the card is discharged from the NG card outlet.)

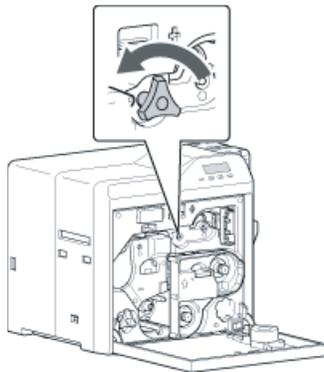
- (5) Restore the jog dial to its original position, and install the card hopper.
- (6) Install the retransfer film cassette, and close the printer door.
- (7) Turn on the power.  
Go to step 5 of 5.1.7.

#### 5.1.7.4 If the card is caught in the card feed roller to the left of the retransfer heating roller

- (1) Turn off the power.
- (2) Check the position of the card.
- (3) Attach the jog dial to the card feed roller shaft.



- (4) Turn the card feed roller shaft in the anti-clockwise direction, while checking the position of the card.



- The card is discharged from the card outlet.
- (5) Restore the jog dial to its original position.
  - (6) Install the retransfer film cassette, and close the printer door.
  - (7) Turn on the power.  
Go to step 5 of 5.1.7.

#### 5.1.8 Film Search A1

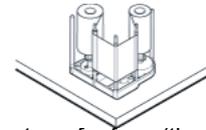
Film Serch

A1

- Retransfer film is broken.  
Repair the retransfer film.

##### Cautions:

- If the security lock is on, deactivate it. After work is complete, activate the security lock again.
- Stand the cassette on a flat surface as illustrated in the diagram.  
Avoid doing so on the floor as dust attached to it may cause printing errors.



- Do not touch the retransfer face (the side that faces outward when installed) with your hand. Touching it may cause printing errors. Put on the supplied gloves when handling the retransfer film.
- The cassette is heavy when the retransfer film is loaded. To prevent the cassette from dropping during handling, make sure to hold it with both hands.
- When installing a used retransfer film, align the unused side of the film with the arrow indicated on the label of the cassette. Improper alignment may result in errors, or the print may turn out light.
- Do not perform any work on the printer door. Do not place heavy objects or apply load on the printer. Doing so may damage it.
- During replacement, clean the four bobbin holders on the printer. If burrs produced by friction with the bobbins are attached to the bobbin holders, they may fall onto the card, ink ribbon, or retransfer film, causing printing errors.

- (1) Open the printer door.



- (2) Press and hold down the cassette button, and remove the retransfer film cassette. (on the left)

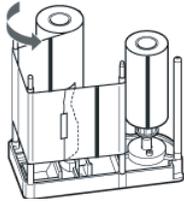


- (3) Cut away the broken portion, and attach the unused portion at the supply side to the other end at the take-up side using an adhesive tape, while making sure that the joint surface is even.

##### Cautions:

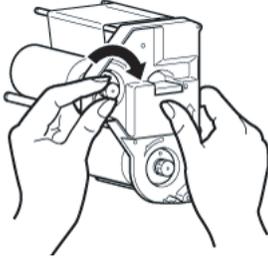
- Do not discard the used retransfer film at the take-up side.

- (4) Turn the take-up side using your hand until the broken portion can no longer be seen.

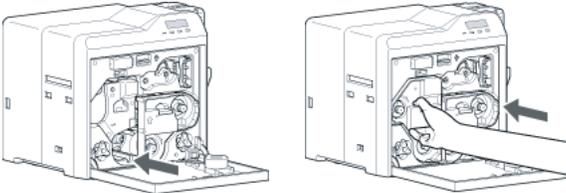


- Align the film side of the unused portion with the arrow indicated on the label of the cassette.

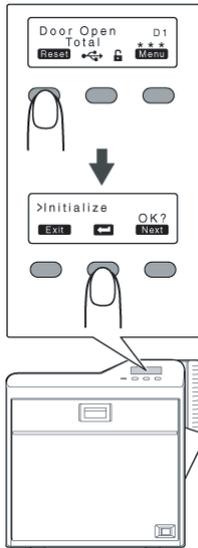
- (5) Remove any slack in the film.



- (6) Insert the cassette all the way in along the guide rail until a “click” sound is heard, followed by closing the printer door.



- (7) Press [RESET] → to reset the printer.



**Memo:**

- To avoid printing errors, it is recommended that you forward by one or two images after installing the ink ribbon cassette or retransfer film cassette.

**5.1.9 MG Test Err A8**

MG Test Err A8

- A writing error has occurred during magnetic encoder self-diagnosis.  
Press [RESET] → to reset the printer.

**5.1.10 Ink Error B0**

Ink Error B0

- An incorrect ink ribbon is installed.  
Install a correct ink ribbon.

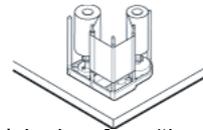
**5.1.11 Ink Search B1**

Ink Serch B1

- Ink ribbon is broken.  
Repair the ink ribbon.

**Cautions:**

- If the security lock is on, deactivate it. After work is complete, activate the security lock again.
- Stand the cassette on a flat surface as illustrated in the diagram. Avoid doing so on the floor as dust attached to it may cause printing errors.

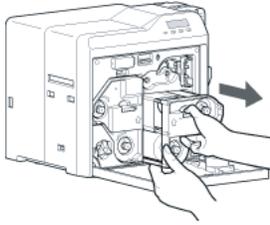


- Do not touch the inked surface (the side that faces outward when installed) with your hand. Touching it may cause printing errors. Put on the supplied gloves when handling the ink ribbon.
- The cassette is heavy when the ink ribbon is loaded. To prevent the cassette from dropping during handling, make sure to hold it with both hands.
- When installing a used ink ribbon, align the yellow side of the unused ribbon with the arrow indicated on the label of the cassette. If the position of the yellow side is not properly aligned, the print may turn out light.
- Do not perform any work on the printer door. Do not place heavy objects or apply load on the printer. Doing so may damage it.
- During replacement, clean the four bobbin holders on the printer. If burrs produced by friction with the bobbins are attached to the bobbin holders, they may fall onto the card, ink ribbon, or retransfer film, causing printing errors.

- (1) Open the printer door.



- (2) Press and hold down the cassette button, and remove the ink ribbon cassette. (on the right)

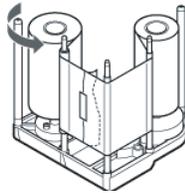


- (3) Cut away the broken portion, and attach the unused portion at the supply side to the other end at the take-up side using an adhesive tape, while making sure that the joint surface is even.

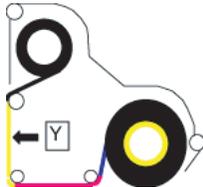
**Cautions:**

- Do not discard the used ribbon at the take-up side.

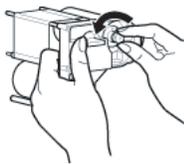
- (4) Turn the take-up side using your hand until the broken portion can no longer be seen.



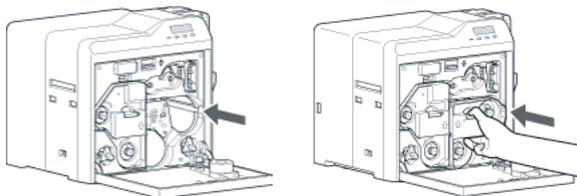
- Align the yellow side of the unused portion with the arrow indicated on the label of the cassette.



- (5) Remove any slack in the ink ribbon.



- (6) Insert the cassette all the way in along the guide rail until a “click” sound is heard, followed by closing the printer door.



- (7) Press [RESET] → to reset the printer.



**Memo:**

- To avoid printing errors, it is recommended that you forward by one or two images after installing the ink ribbon cassette or retransfer film cassette.

**5.1.12 Door Open D1**

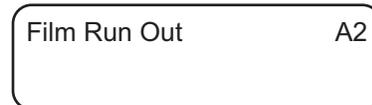


- The printer door is open. Close the printer door, and Press [RESET] → to reset the printer.
- Cleaning unit is not installed. Install the cleaning unit, close the printer door, and press [RESET] → to reset the printer.

**Memo:**

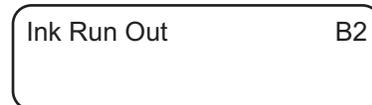
- The operation panel display appears blinking when the printer door is open or when the cleaning unit is not installed.

**5.1.13 Film Run Out A2**



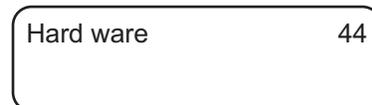
- Retransfer film has run out. Replace with a new one.

**5.1.14 Ink Run Out B2**



- Ink ribbon has run out. Replace with a new one.

**5.1.15 Hardware 44**



- A hardware failure has occurred on the printer. Turn off and on the power again. If the same problem recurs, turn off the power and consult our authorized dealers.

#### 5.1.16 MG Mechanical AB

MG Mechanical AB

- An error has occurred in the mechanical component of the magnetic encoder.  
Turn off and on the power again. If the same problem recurs, turn off the power and consult our authorized dealers.

#### 5.1.17 MG Hardware AC

MG Hardware AC

- A hardware failure has occurred on the magnetic encoder.  
Turn off and on the power again. If the same problem recurs, turn off the power and consult our authorized dealers.

#### 5.1.18 Cam Error C1

Cam Error C1

- A heating roller operation error has occurred.  
Turn off and on the power again. If the same problem recurs, turn off the power and consult our authorized dealers.

#### 5.1.19 HR Overheat C2

HR Overheat C2

- The temperature of the bend remedy heating roller or retransfer heating roller is too high.  
Turn off and on the power again. If the same problem recurs, turn off the power and consult our authorized dealers.

#### 5.1.20 Hardware D8

Hardware D8

- A hardware error has occurred during initialization.  
Turn off and on the power again. If the same problem recurs, turn off the power and consult our authorized dealers.

#### 5.1.21 TR Overheat F0

TR Overheat F0

- The temperature of the retransfer heating roller is too high.  
Turn off and on the power again. If the same problem recurs, turn off the power and consult our authorized dealers.

#### 5.1.22 TR Heater F1

TR heater F1

- The retransfer heating roller is faulty.  
Turn off and on the power again. If the same problem recurs, turn off the power and consult our authorized dealers.

#### 5.1.23 TR Thermister F2

TR Thermister F2

- The retransfer heating roller thermistor is faulty.  
Turn off and on the power again. If the same problem recurs, turn off the power and consult our authorized dealers.

#### 5.1.24 RR Overheat F3

RR Overheat F3

- The temperature of the bend remedy heating roller is too high.  
Turn off and on the power again. If the same problem recurs, turn off the power and consult our authorized dealers.

#### 5.1.25 RR Heater F4

RR Heater F4

- The bend remedy unit is faulty.  
Turn off and on the power again. If the same problem recurs, turn off the power and consult our authorized dealers.

#### 5.1.26 RR Thermister F5

RR Thermister F5

- The bend remedy heating roller thermistor is faulty.  
Turn off and on the power again. If the same problem recurs, turn off the power and consult our authorized dealers.

#### 5.1.27 Overcool F6

Overcool F6

- The operating ambient temperature of the printer is too low.  
Check the temperature. If the same problem recurs within the range of operating ambient temperature, turn off the power and consult our authorized dealers.

#### 5.1.28 Head Overheat F8

Head Overheat F8

- The temperature of the thermal head is too high.  
Turn off and on the power again. If the same problem recurs, turn off the power and consult our authorized dealers.

#### 5.1.29 Power Intrpt C3

Power Intrpt C3

- An instantaneous interruption is detected.  
Turn off and on the power again. If the same problem recurs, turn off the power and consult our authorized dealers.

## 5.2 Use of service mode

Besides "User mode" that is for setting this unit depending on the printing media or card used by the user, there is a "Service mode" for status checking and changing setting of this unit during service. The checking and adjustment of the following items can be performed in service mode:

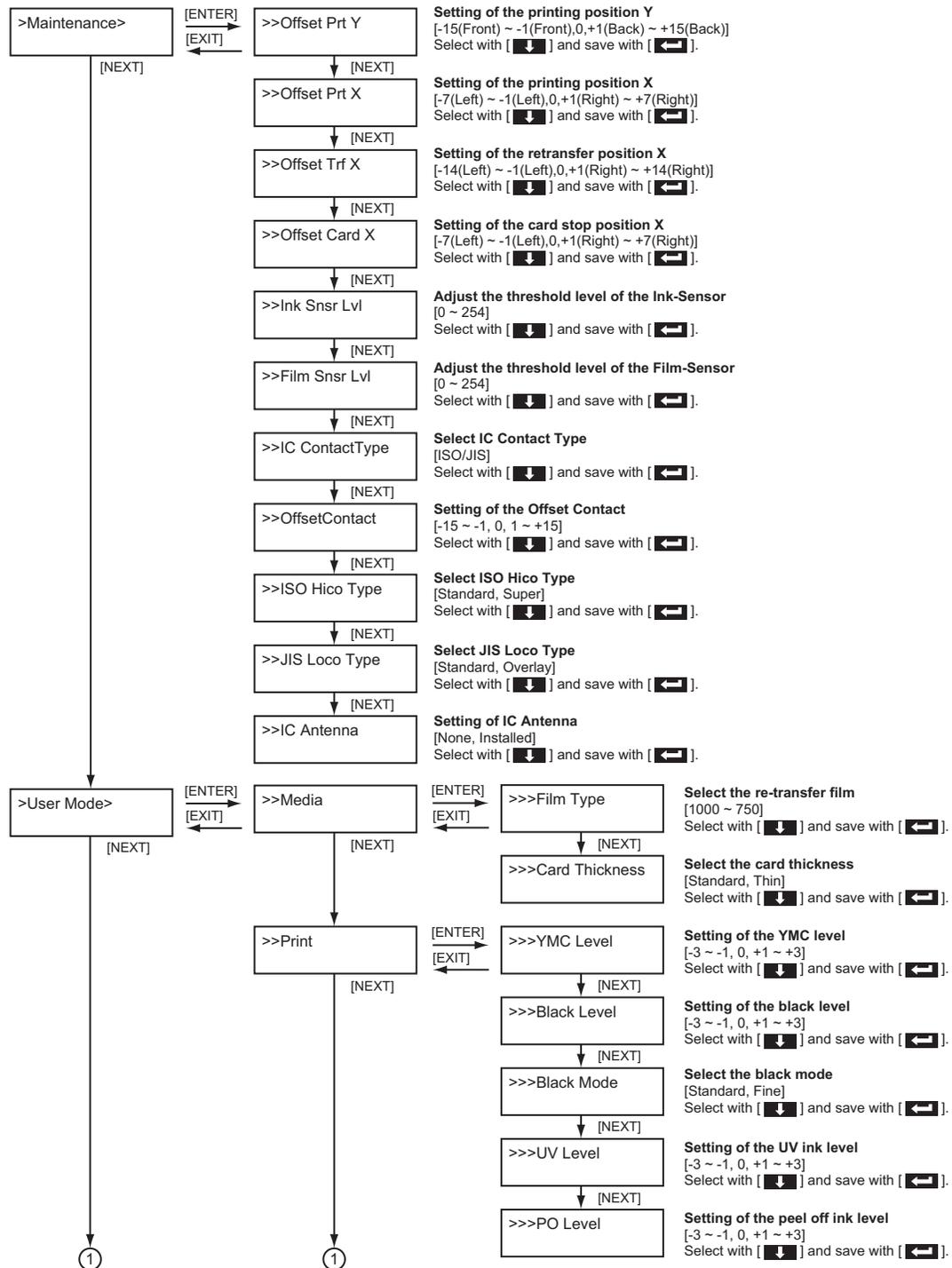
- |  |                                    |
|--|------------------------------------|
| (1) Fine adjustment of the printing position         | (4) Information display of printer |
| (2) Printing of built-in test pattern                | (5) Saving of setting data         |
| (3) Operation checking of various motors and sensors | (6) Setting change of user mode    |

For user mode, only the items that can be changed in this mode are described.

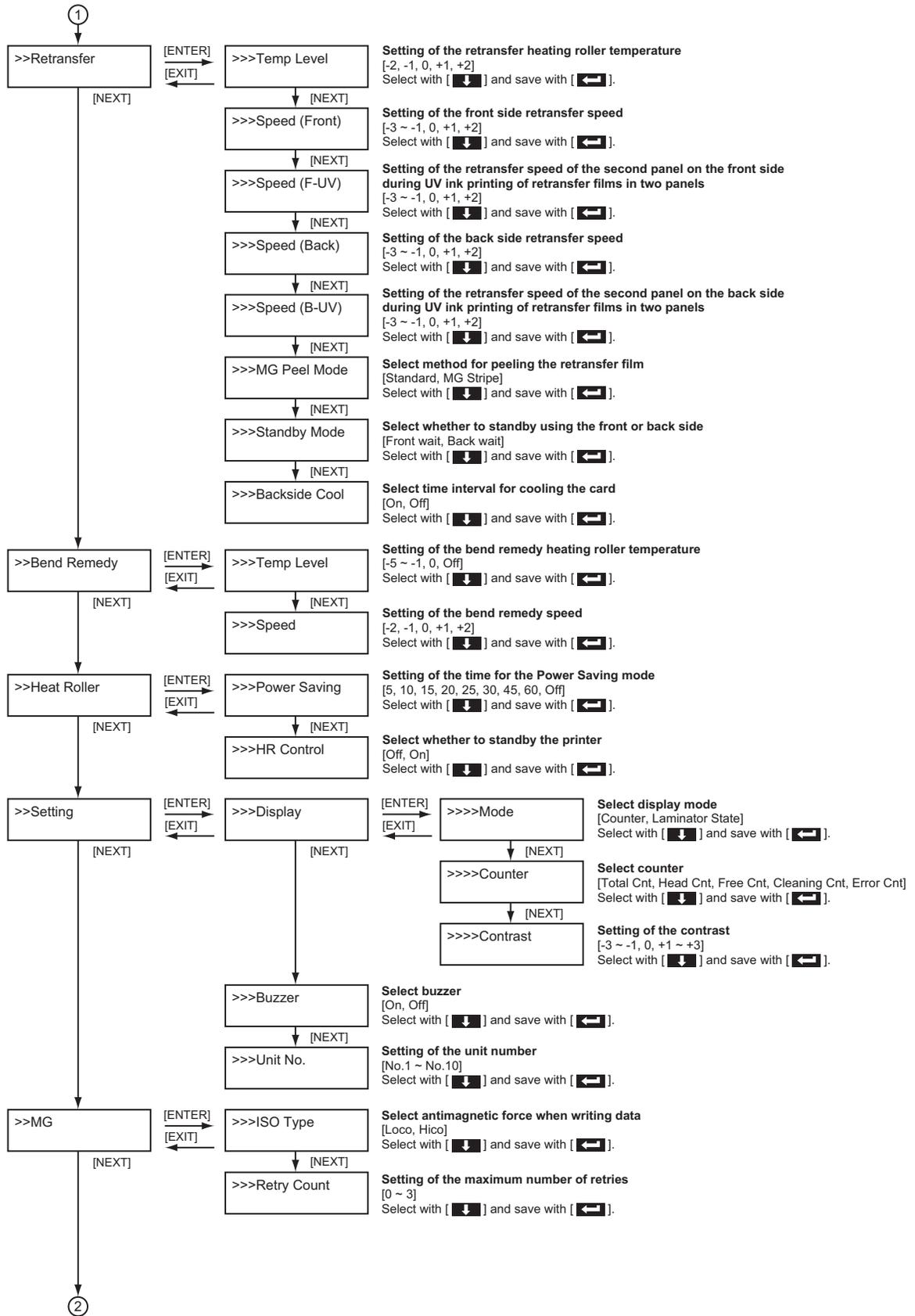
For details of other items, please refer to the instruction manual.

### 5.2.1 Entry into service mode

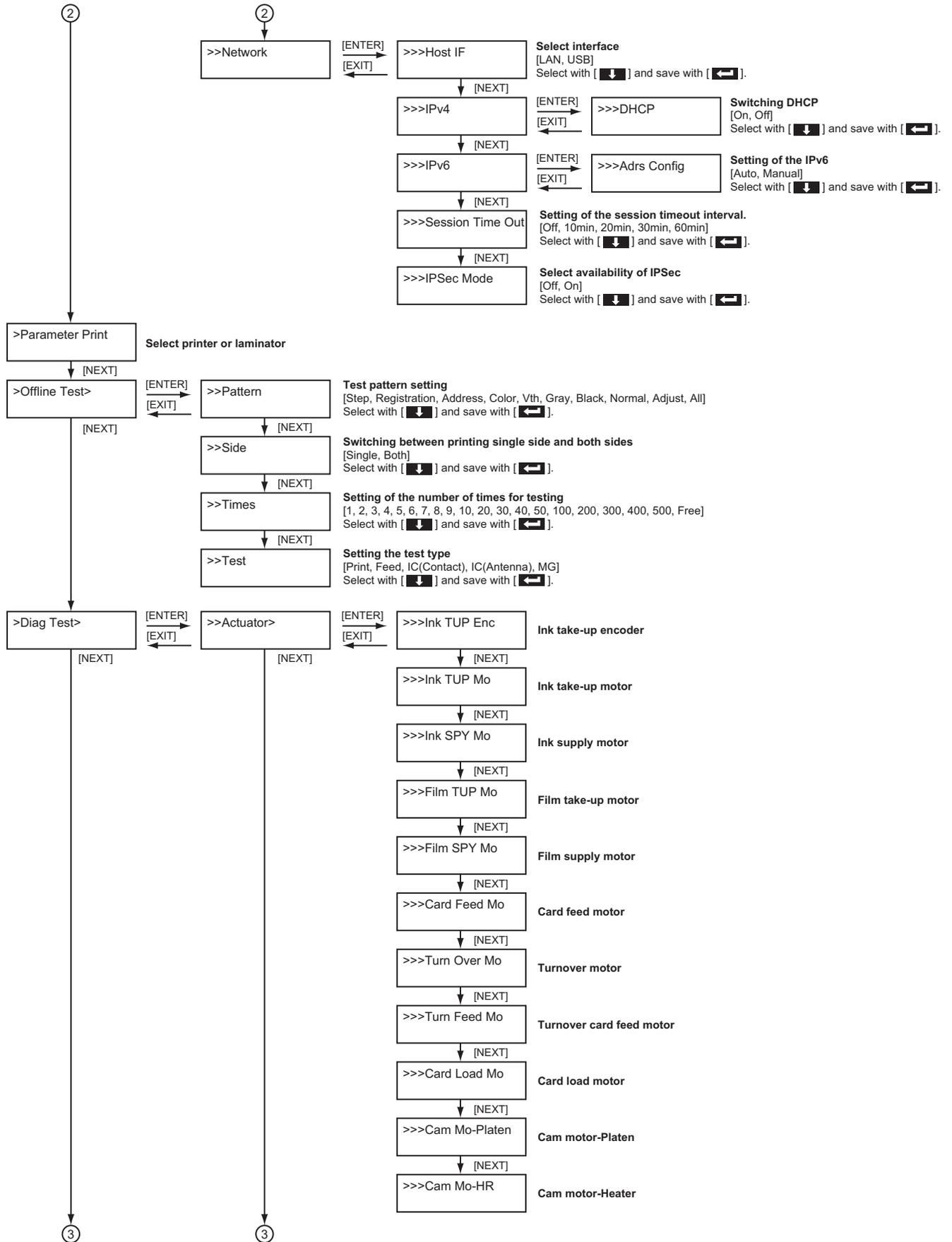
In ready condition, in preheating condition, or in error condition, press the buttons [MENU] and [Center button] simultaneously. When the button [MENU] is released first, the printer will enter into the following service mode.

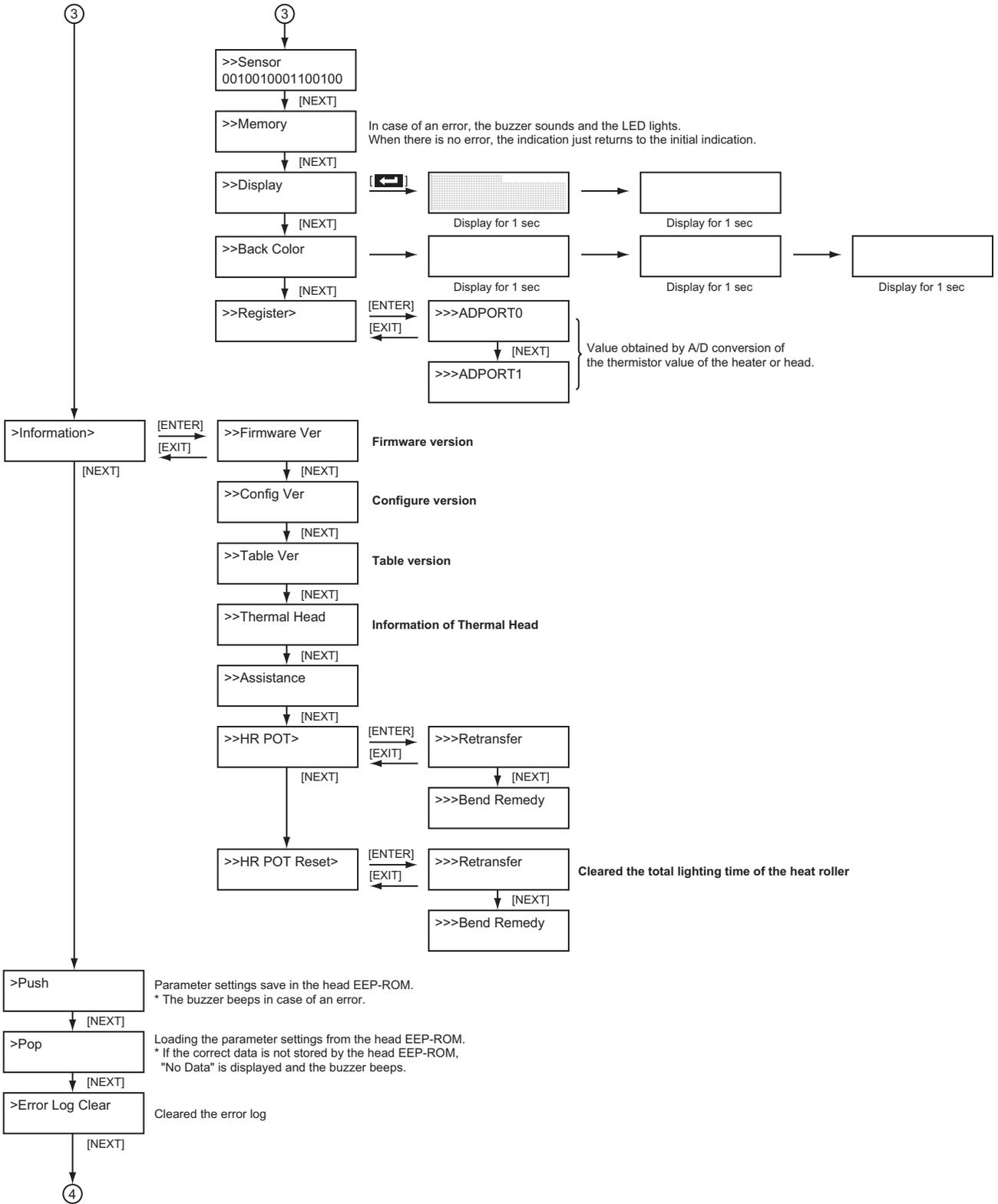


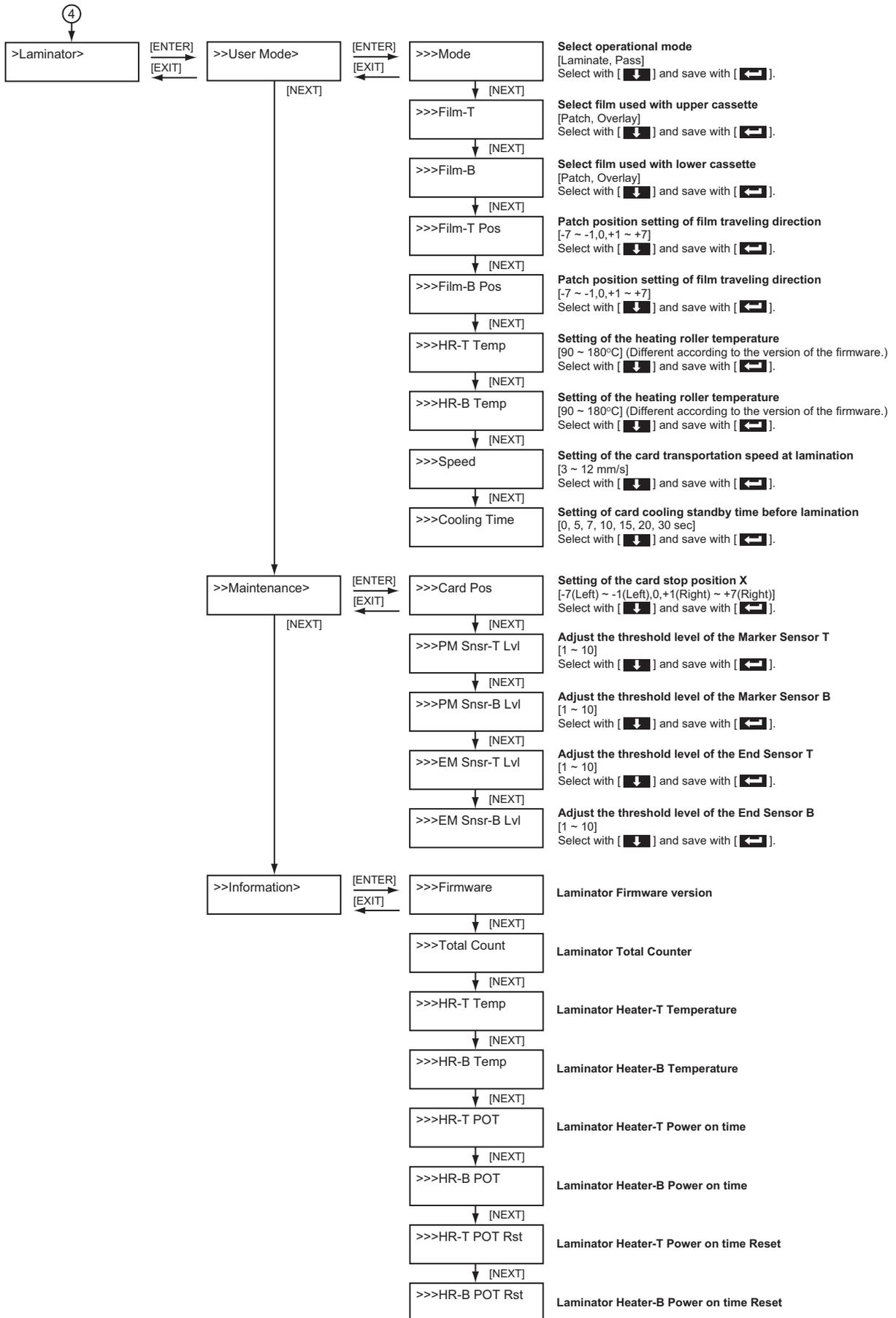
①



②







### 5.3 Explanation of the Various Modes

#### 5.3.1 Maintenance

Set to this mode if a constant setting that is different from the standard setting of this unit is to be used.

In addition, the printing position is adjusted using the following 4 items. Do not change "Offset Card X" as it is the reference of X direction (card transport direction). Follow 5.3.1.2 and 5.3.1.3 to perform adjustment.

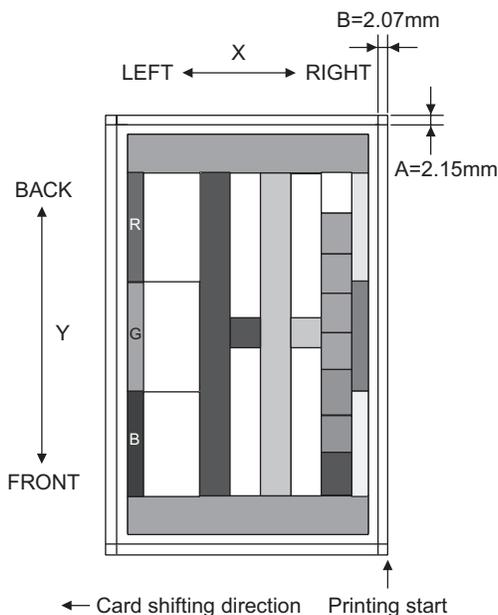
- Item for changing the position of longer side of the card:
  - (1) Item 5.3.1.1: Offset Prt Y --- Adjust the start position used for printing within the thermal head heat source.
- Item for changing the position of shorter side of the card:
  - (1) Item 5.3.1.2: Offset Prt X --- Adjust the feed amount from the black marker of re-transfer film to the start position of printing. (adjust the printing position on the re-transfer film)
  - (2) Item 5.3.1.3: Offset Trf X --- Adjust the feed amount up to the start position of re-transfer film. (adjust the re-transfer position for the card)
  - (3) Item 5.3.1.4: Offset Card X --- Adjust the feed amount from the card edge sensor to the card. (adjust the card position for starting re-transfer)

##### 5.3.1.1 Offset Prt Y Setting

- (1) Determines the displacement amount according to the print results (those owned by the user). Every step corresponds to a displacement of about 0.17 mm. The step can be varied in the range between -15 and +15.
- (2) Press [  ] to save the setting.
- (3) Print and check the result.
- (4) To adjust to the standard setting:
 

In the service mode, print color patterns on single sides of 4 to 5 cards.

Adjust so that the distance from the card edge to the box enclosing the line (A) is about 2.15 mm. (Check the third to fifth cards.)



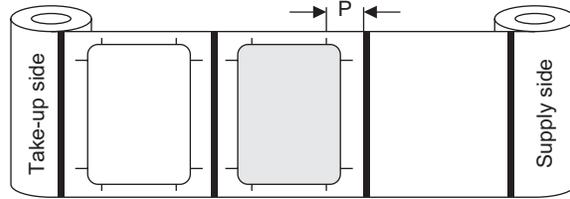
##### 5.3.1.2 Offset Prt X Setting

- (1) Determine the displacement amount according to the print results (those owned by the user). Every step corresponds to a displacement of about 0.085 mm. The step can be varied in the range between -7 and +7.
- (2) Press [  ] to save the setting.

- (3) Print and check the result.
- (4) To adjust to the standard setting:
 

In the service mode, print color patterns on single sides of 4 to 5 cards. And then remove the film cassette.

Adjust so that the distance from the black marker on the film to the remaining vertical line (P) is about 8.5 mm. (Check the third to fifth cards.)



##### 5.3.1.3 Offset Trf X Setting

- (1) Determine the displacement amount according to the print results (those owned by the user). Every step corresponds to a displacement of about 0.085 mm. The step can be varied in the range between -14 and +14.
- (2) Press [  ] to save the setting.
- (3) Print and check the result.
- (4) To adjust to the standard setting:
 

In the service mode, print color patterns on single sides of 4 to 5 cards.

Adjust so that the distance from the card edge to the box enclosing the line (B) is about 2.07 mm. (Check the third to fifth cards.)

##### 5.3.1.4 Offset Card X Setting

This adjustment adjusts the stop position of the card and change the re-transfer start position. If this adjustment is performed while using standard card, the card position against the heat roller will shift causing card jam or retransfer error. Do not change the setting value for normal case.

##### 5.3.1.5 Setting of the ink-sensor level

Set the threshold level of the ink sensor so that the ink sensor detect the ink color "yellow" and "magenta" as transmission, and "cyan" and "Bk" as interruption. Select threshold value by using [  ] buttons, and press the [  ] button to save the select Value.

##### 5.3.1.6 Setting of the film Sensor level

The threshold level of the film sensor is set. The setting value can be changed with the [  ] button and set with the [  ] button. Adjust the value with transparent film area as transmission, and with the black marker area as interruption.

##### 5.3.1.7 IC Contact Type Selection

Select the type of IC contact to be mounted.

##### 5.3.1.8 Offset Contact Setting

To be used for adjusting the position of the attached IC contact unit. Refer to "IC Contact Adj Setting" for adjusting method.

##### 5.3.1.9 ISO Hi-co Type Selection

When the ISO type Mag. Encoder is built in, and Hi-co is selected, the following two types of Hi-co mode can be selected:

- Standard : Use the standard Hi-co card. Antimagnetic force 2750 Oe
- Super : Use the super Hi-co card. Antimagnetic force 4000 Oe

##### 5.3.1.10 IC Antenna Setting

When a contact less IC R/W is mounted, select Installed.

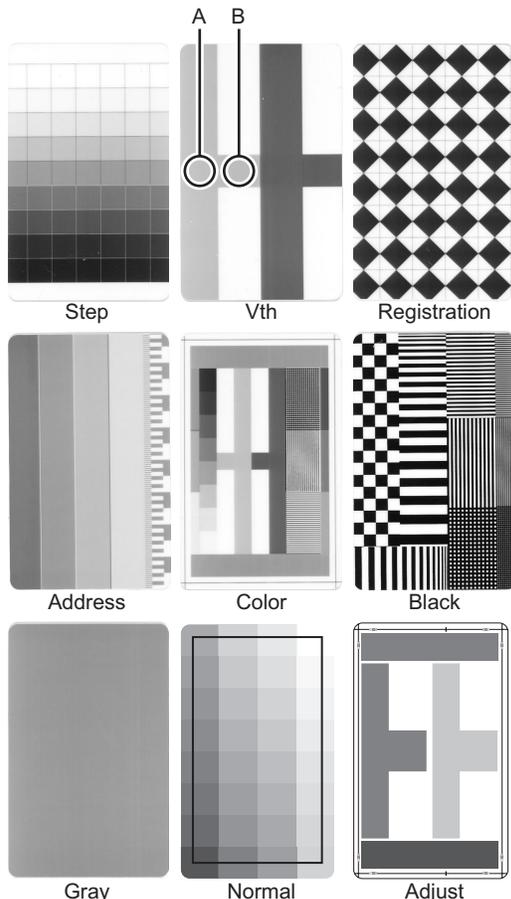
### 5.3.2 Off-line Test

This is used to print the built-in test pattern of this printer and for execution of an MG self-test.

#### 5.3.2.1 Pattern setting

This printer has nine types of built-in printing patterns. Select a pattern and press the [  ] button to store it. Return to the initial pattern is made when the power is cut.

- (1) Step  
This is for confirmation of uniform gradation.
- (2) Registration  
This is used to confirm that each color overlaps correctly.
- (3) Address  
The head has 1036 heater elements for printing. This is used to confirm the uniformity of the density for each heater element.
- (4) Color  
This is a pattern for overall evaluation.
- (5) Vth  
A and B are printed with the same data values. This is used to confirm that the power supply voltage compensation (Vth) has been done correctly (same density).
- (6) Gray  
For checking of feed irregularities caused by mechanical trouble etc.
- (7) Black  
For checking of black ink blurring, drop-outs, etc.
- (8) Normal  
This is a pattern for overall evaluation.
- (9) Adjust  
This is a pattern for overall evaluation.
- (10) ALL  
The above patterns (1) to (9) are printed in sequence. (Each pattern is printed on separate card.)



### 5.3.2.2 Side

Selection whether test printing is to be done on one side or both sides.

### 5.3.2.3 Times

The number of cards for the test contents selected by "Test select" of the following item is selected.

### 5.3.2.4 Test

The test to be executed is selected.

- (1) Print  
Select this for printing and press [  ] twice to start.
- (2) Feed  
Select this to test only the card feed.
- (3) IC (Contact)  
The cards are fed and the contact for clip card is lowered. There is no data communication.
- (4) IC (Antenna)  
The card is fed and stops under the antenna for contact-free clip card.
- (5) MG  
Data actually are written to and read from magnetic stripe cards. An error is displayed on the LCD panel in case of abnormalities.

### 5.3.3 Diag. Test

#### 5.3.3.1 Actuator

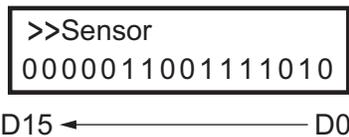
It is possible to operate each motor individually and to check for motor defects and to check the operation of the mechanisms. When cleaning roller has not been inserted or a door open, the power supply to the motor is cut, it will not operate, and inspection should be performed.

- (1) Ink TUP Enc. (Ink Take-Up Encoder)  
Before starting the test, remove the ink cassette. The encoder that detects the amount of ink ribbon feed is checked. An error is displayed if there are any abnormalities.
- (2) Ink TUP Mo. (Ink Take-Up Motor)  
Before starting the test, remove the ink cassette. The ink take-up motor operates for about 5 seconds.
- (3) Ink SPY Mo. (Ink Supply Motor)  
Before starting the test, remove the ink cassette. The ink supply motor operates for about 5 seconds.
- (4) Film TUP Mo. (Re-Transfer Film Take-Up Motor)  
Before starting the test, remove the re-transfer film cassette. The re-transfer film take-up motor operates for about 5 seconds.
- (5) Film SPY Mo. (Re-Transfer Film Supply Motor)  
Before starting the test, remove the re-transfer film cassette. The re-transfer film supply motor operates for about 5 seconds.
- (6) Card Feed Mo. (Card Feed Motor)  
The card feed motor operates for about 5 seconds, and the roller rotates.
- (7) Turn Over Mo. (Turn Over Motor)  
The turn over motor rotates, and the turn over unit rotates once. (Two half turns)
- (8) Turn Feed Mo. (Turn Over Feed Motor)  
The turn over feed motor operates, and the inside roller of the turn over unit rotates for about 5 seconds.
- (9) Card Load Mo. (Card Load Motor)  
The card load motor rotates for about 5 seconds.

- (10) Cam Mo-Platen (Heater Cam Motor - Platen)  
The heater cam motor rotates, keeps pressing the platen for about 3 seconds, leaves the platen, then goes back to the standby position.
- (11) Cam Mo-HR (Heater Cam Motor - Heat Roller)  
The heater cam motor rotates, keeps pressing the heat roller for about 3 seconds, leaves the heat roller, then goes back to the standby position.

### 5.3.3.2 Sensor

Correct operation of the sensor is checked. Confirm the valve is changed, when the sensor is interrupted or reflected.



D0	NOCD	Card existence	Reflection : 0
D1	ICPOS	IC Card position	Reflection : 0
D2	MGCDPOS	MG Card position	Reflection : 0
D3	MGHDPOS	MG Head position	Reflection : 0
D4	TURNPOS	Turnover initial position	Reflection : 0
D5	EDGE	Card edge	Reflection : 0
D6	CDOUT	Card outlet	Reflection : 0
D7	Not used		
D8	INK	Ink start position	Interruption : 0
D9	MEDIA	Film mark	Reflection : 0
D10	CAM A	Retransfer heat roller/Platen roller position	Reflection : 0
D11	CAM B	Retransfer heat roller/Platen roller position	Reflection : 0
D12	Not used		
D13	Not used		
D14	Not used		
D15	Not used		

### 5.3.3.3 Memory

The picture memory SDRAM on the Main PWB is tested. The buzzer sounds in case of an error. The error LED also will light.

### 5.3.3.4 Display

All the dots of LCD are displayed black. Confirm that there is no missing dot.

### 5.3.3.5 Back Color

The back colors red, green, and blue are displayed for 3 seconds and correct display of the back colors is tested.

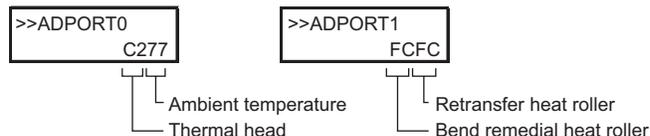
### 5.3.3.6 Registers

This printer has four temperature-detecting thermistors:

- (1) Retransfer heat roller thermistor
- (2) Bend remedial heat roller thermistor
- (3) Thermal head thermistor
- (4) Ambient temperature thermistor

These thermistors output analog signals, which are applied to the circuits for four channel 8bit A/D converter IC.

Each of these converted value in a hex decimal number as shown below. Note that the following values are the values at the moment the [ ← ] button is pressed.



The following table shows reference values.

Heat roller thermistors		Ambient temperature thermistor		Thermal head thermistor	
Temperature (°C)	Indicated Value	Temperature (°C)	Indicated Value	Temperature (°C)	Indicated Value
0	FE	-5	E7	0	E8
20	FC	0	E0	5	E2
50	F5	10	CD	10	DB
80	E2	15	C1	15	D3
100	CC	20	B3	20	C9
130	9E	25	A5	25	BF
140	8D	30	96	30	B4
150	7D	35	87	35	A8
160	6D	40	78	40	9C
170	5E	45	6A	45	90
180	51	50	5C	50	83
190	46	55	50	55	77
200	3B	60	45	60	6C
210	33	65	3B	65	61
220	2B	70	32	70	57

### 5.3.4 Information

The information for the various firmware versions can be confirmed. For the thermal head, the serial No. and the head supply voltage (Vth) are displayed.

And the total lighting time of the heaters (retransfer and bend remedy) can be displayed. And it is possible to clear the total lighting time to zero after replacing those heaters.

### 5.3.4.1 Assistance

The management data used when producing this printer.

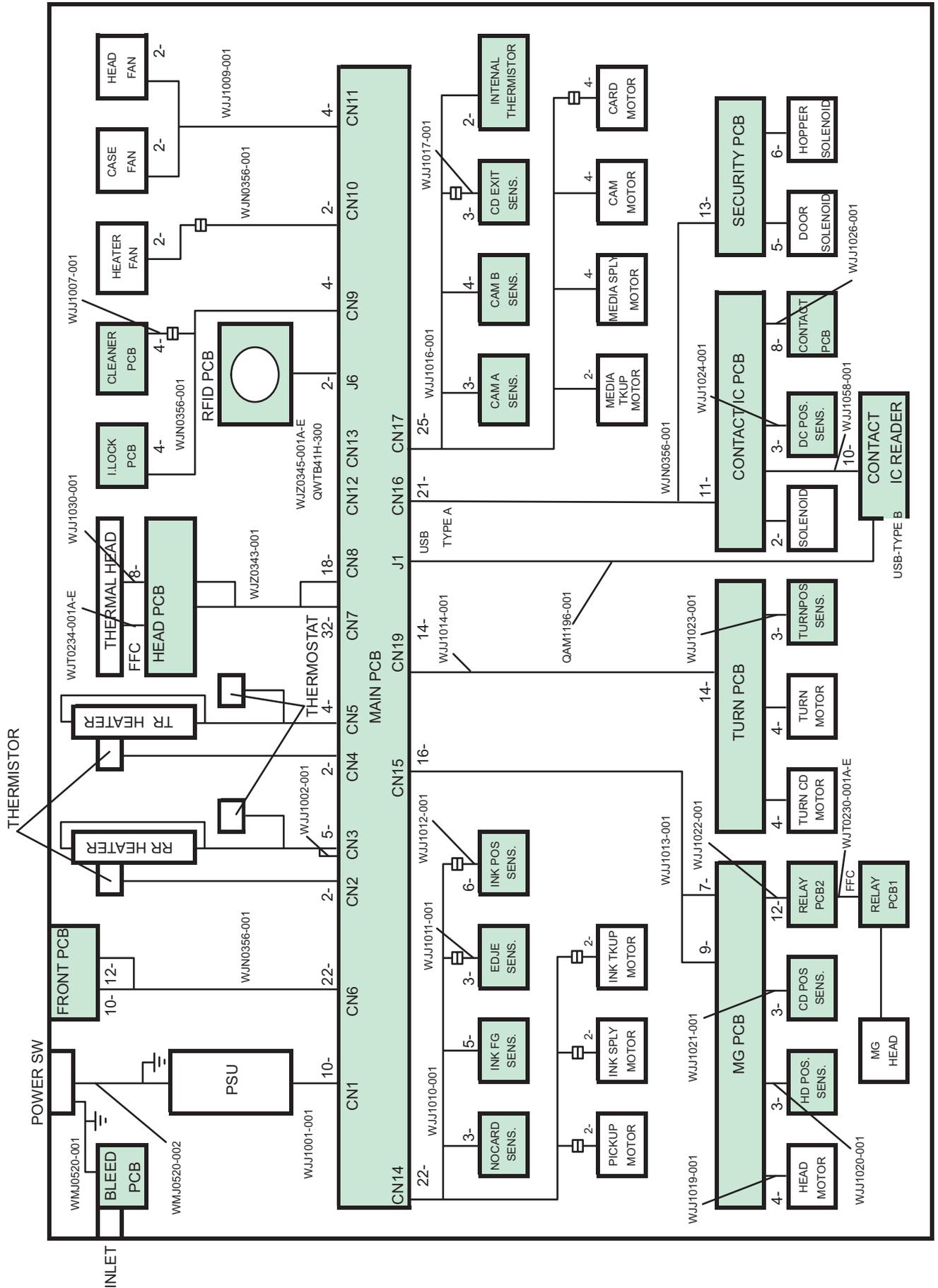
### 5.3.5 Push and Pop

This printer has two EEPROMs for storage of data for the thermal head and for user and service mode.

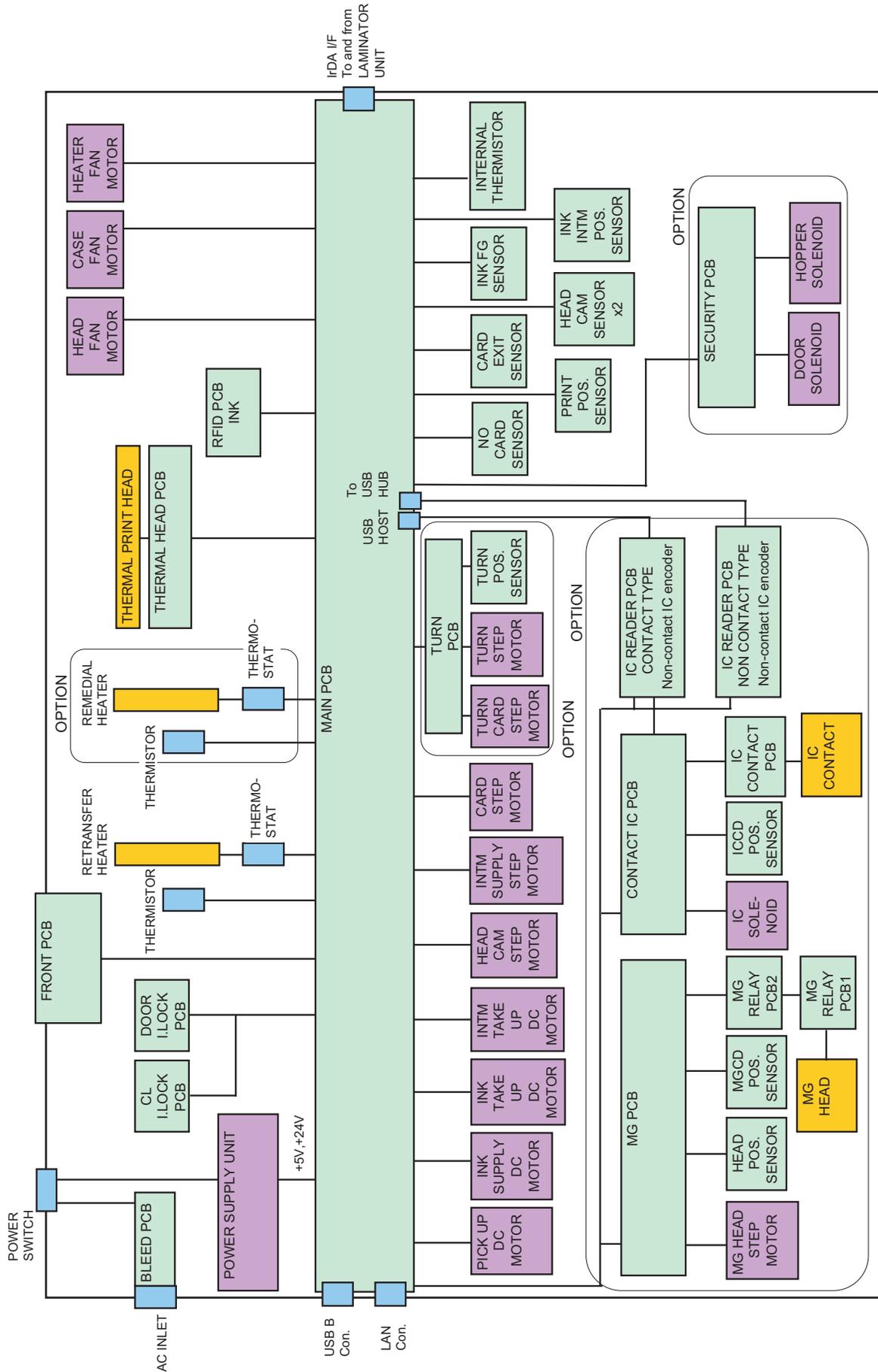
When the Main PWB is exchanged, the settings for user and service mode must be done over again. The Parameter Push/Pop function is provided to shorten this operation.

When initially "Push" is selected and the [ ← ] button is pressed, the set values (including head, total counter) in the EEPROM on the Main PWB are written to the EEPROM in the head. When then "Pop" is selected after the Main PWB has been exchanged and the [ ← ] button is pressed, these set values are copied to the EEPROM on the Main PWB.

### 5.4 Wiring diagram



## 5.5 Block diagram

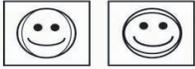
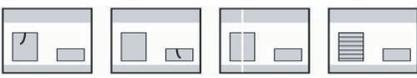
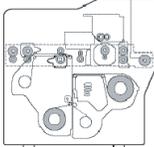


# 5.6 Troubleshooting Sheet

Rev. 1.0

<b>Customer Details</b>			<b>Device Info.</b>		
Company _____	Department _____		Model _____ Printer _____		
In-charge _____ TEL _____ FAX _____	TEL _____ FAX _____		Serial No. (Note 1) Printer _____		
In-charge _____ TEL _____ FAX _____			Purchase date Printer _____		
<b>Details of Trouble (Multiple entries allowed)</b>			<b>Frequency of Occurrence (Multiple entries allowed)</b>		<b>Timing of Occurrence (Multiple entries allowed)</b>
<input type="checkbox"/> A: Does not switch to the Ready mode. <input type="checkbox"/> B: printing defect <input type="checkbox"/> D: card jam (feed defect) <input type="checkbox"/> E: magnetic card encoding defect <input type="checkbox"/> F: IC card encoding defect <input type="checkbox"/> G: other defects (PC communication, printed image, etc.)  Select one or more items from A to G by ticking the corresponding checkbox.			<input type="checkbox"/> Always <input type="checkbox"/> Sometimes (at regular intervals) About _____ cards out of _____ cards About _____ cards every _____ months <input type="checkbox"/> Sometimes (multiple cards discharged at one time) When such trouble frequently occurs About _____ cards out of _____ cards		<input type="checkbox"/> Immediately after purchase <input type="checkbox"/> A while after purchase _____ months after purchase <input type="checkbox"/> Since _____ days ago <input type="checkbox"/> After film exchange <input type="checkbox"/> After ink replacement <input type="checkbox"/> After card replenish <input type="checkbox"/> Early morning <input type="checkbox"/> After installation conditions are changed, e.g. change of layout <input type="checkbox"/> Others [ _____ ]

Note 1) Enter the eight-digit number indicated on the label at the rear of the printer.

<b>A: Does not switch to the Ready mode.</b>		
<input type="checkbox"/> Printer power does not turn on. <input type="checkbox"/> Does not proceed beyond initialization stage. Printer display [ _____ ] <input type="checkbox"/> Error occurs during initialization. Printer error message display [ _____ ] <input type="checkbox"/> Others (Enter the symptoms in H.)		
<b>B: printing defect</b>		
<input type="checkbox"/> Characters or facial portraits appear double. <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> Bleeding occurs in the characters or facial portraits. 		
<input type="checkbox"/> Streaks or wrinkles appear on the characters or facial po <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d 		
<input type="checkbox"/> Printing position is not properly aligned. _____ by _____ mm Displaced toward <input type="checkbox"/> front side <input type="checkbox"/> rear side <input type="checkbox"/> hopper (upper) <input type="checkbox"/> stacker (lower).		
<input type="checkbox"/> a: Characters appear blurred. <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> b: Characters appear crushed.  <input type="checkbox"/> c: some parts of the characters are missing.		
Ink serial no. [ _____ ] <input type="checkbox"/> a: Printing voids or colored spots about the size of foreign <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d b, c: relatively large printing voids d: nothing is printed. Transferred onto film? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> large printing voids Retransfer film serial no. [ _____ ]		
<input type="checkbox"/> Other printing defects When requesting for repair, please also send photos of currently used cards or cards for which the symptoms can be identified.		
<b>D: card jam (feed defect)</b>  Please indicate the location of occurrence on the left diagram.	<b>F: IC card encoding defect</b> <input type="checkbox"/> Encoding defect occurs inside the printer. Type <input type="checkbox"/> contact <input type="checkbox"/> non-contact <input type="checkbox"/> IC data cannot be read by another reader. Reader model [ _____ ]	If F and/or G is selected please also enter the following. Connection between printer and PC <input type="checkbox"/> USB connection <input type="checkbox"/> Network connection Software application <b>Manufacturer</b> Product name _____ Version _____ Is the driver supplied with the printer used? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not sure
<b>E: magnetic card encoding defect</b> <input type="checkbox"/> Encoding defect occurs inside the printer. <input type="checkbox"/> Magnetic data cannot be read by another reader. Reader model [ _____ ] Type <input type="checkbox"/> JIS <input type="checkbox"/> ISO <input type="checkbox"/> Hidden <input type="checkbox"/> Not sure Coercivity <input type="checkbox"/> _____ Oe <input type="checkbox"/> Not sure	<b>G: ot/IG: other defects (PC communication, unstable operation, etc.)</b> <input type="checkbox"/> Communication error occurs. <input type="checkbox"/> PC does not recognize printer. <input type="checkbox"/> PC does not recognize the encoder inside the printer. Encoder <input type="checkbox"/> Magnetic <input type="checkbox"/> Contact IC <input type="checkbox"/> Non-contact IC encoder <input type="checkbox"/> Others Please enter the symptoms in H.	
<b>H: Symptom description (please describe the symptoms in concrete details.)</b> _____ <input type="checkbox"/> Similar symptoms were observed in the past		

To be entered by receiving personnel	Received on: (DDMMYY): _____	Repair no. _____	Repair classification <input type="checkbox"/> Free <input type="checkbox"/> Paid
<b>Contact of Personnel-in-charge</b>		<b>Secondary Dealer</b>	
Company _____ Department _____	Company _____ Department _____	Name _____ TEL _____ FAX _____	Name _____ TEL _____ FAX _____
Name _____ TEL _____ FAX _____		Mail _____	Mail _____



# PARTS LIST

[CX-D80]

\* SAFETY PRECAUTION

Parts identified by the  $\triangle$  symbol are critical for safety. Replace only with specified part numbers.

\* BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine parts be used.

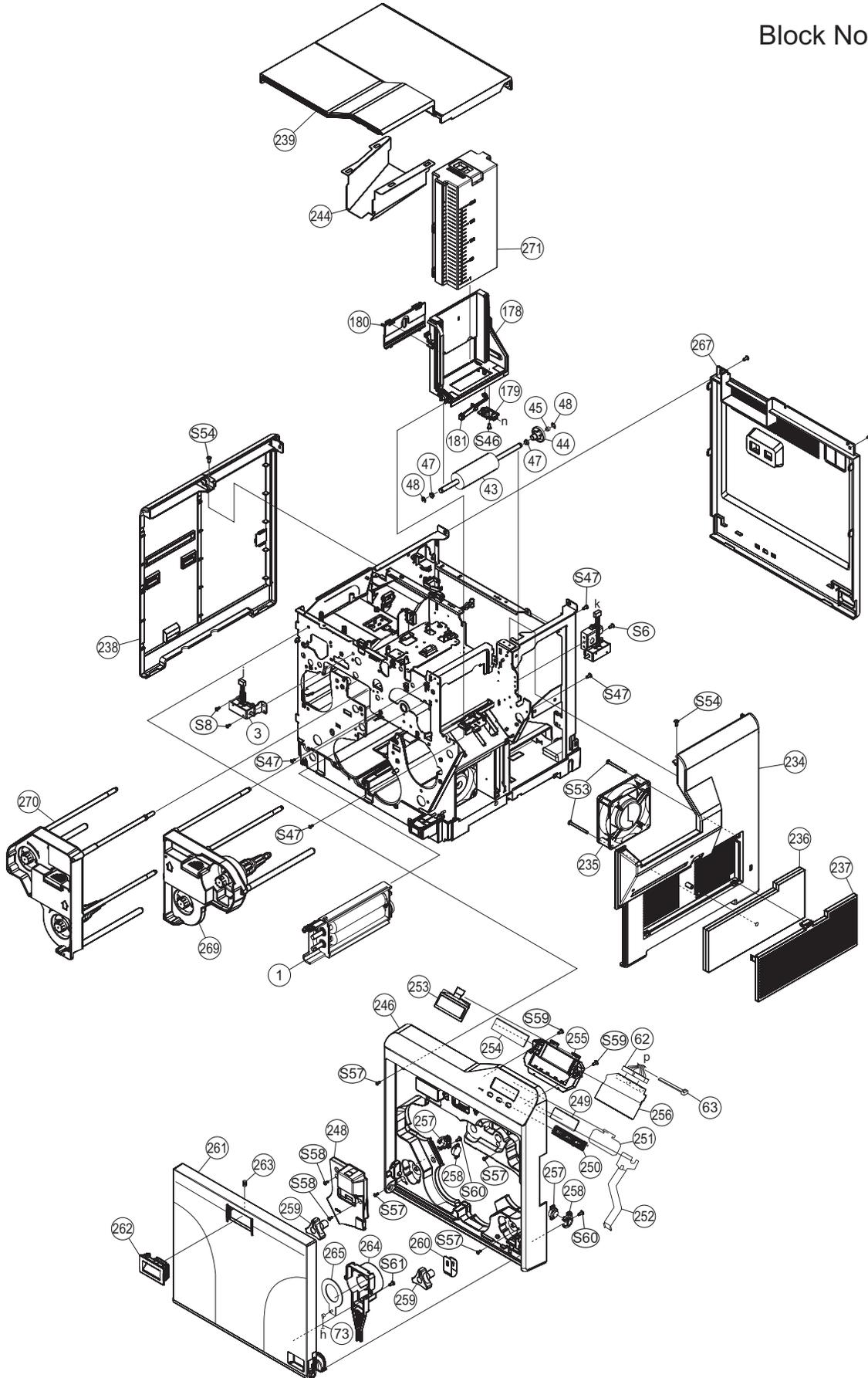
\* (x\_) in a description column shows the number of the used part.

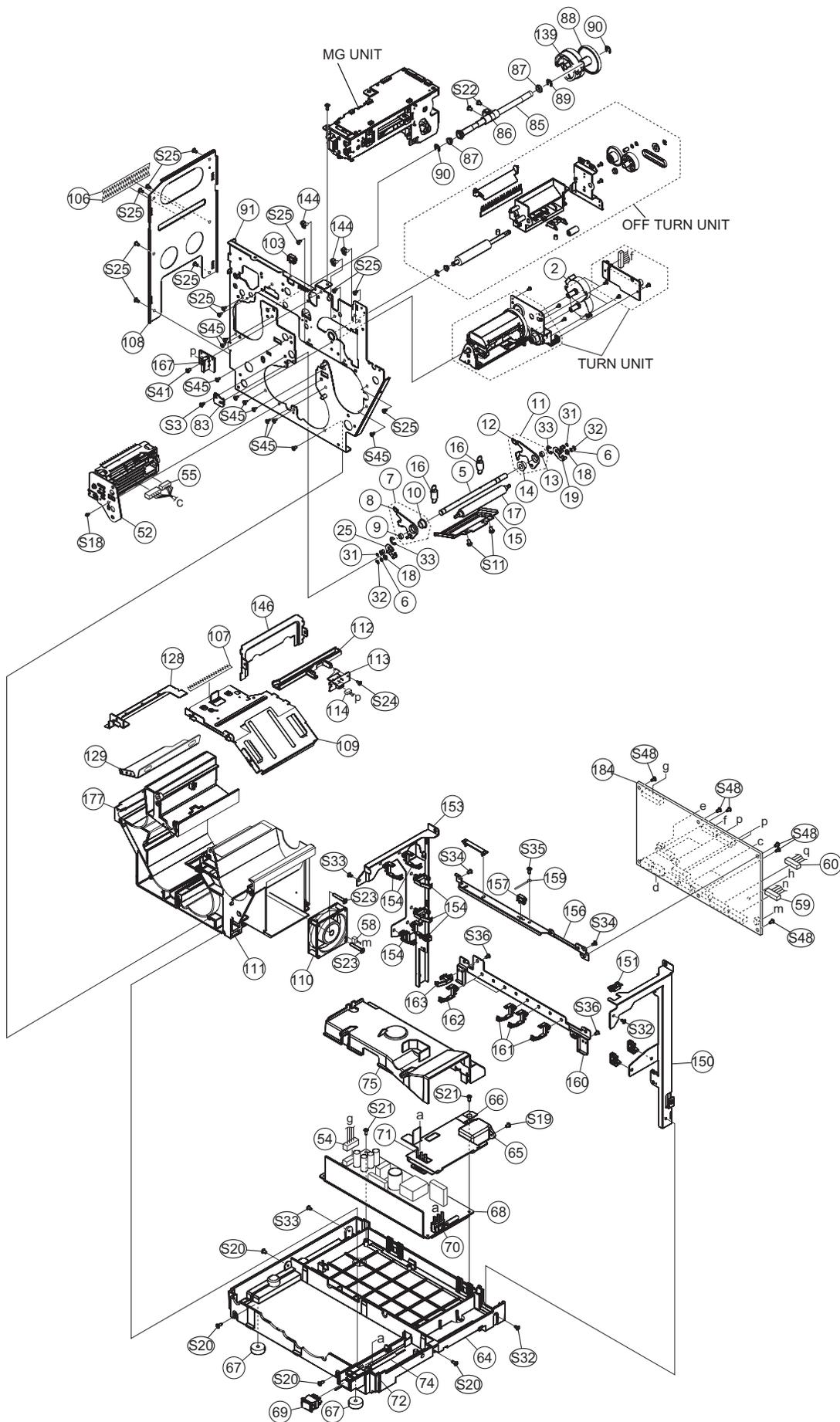
- Contents -

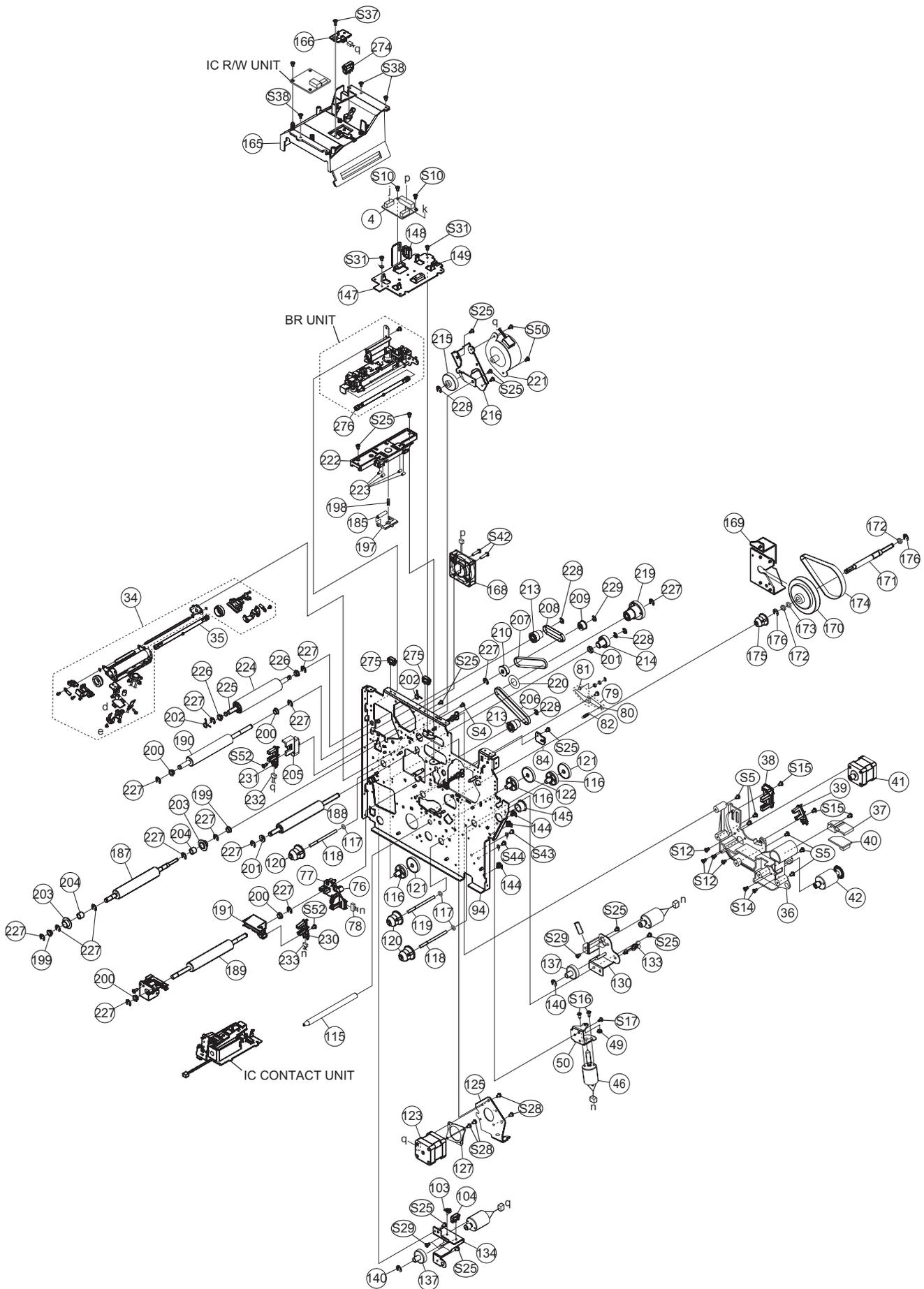
Exploded view of general assembly and parts list .....	3-2
Packing materials and accessories parts list .....	3-9

# Exploded view of general assembly and parts list

Block No.M1MM







# General assembly

Block No. [M][1][M][M]

△ Symbol No.	Part No.	Part Name	Description	Local
1	LS31268-201A	CL ROLLER UNIT		
2	LS41957-001A	TURN M SUB ASSEMBLY	For two sided specification (x2)	
3	LS31237-201A	KEY LOCK UNIT		
4	LSA20168-01A3	SECURITY P ASSEMBLY		
5	LS31047-001A	PLATEN SHAFT		
6	QYWFM416525	WASHER	6.5mm/4.1mm x 0.25mm(x2)	
7	LS41728-001A	ARM F ASSEMBLY		
8	LS31048-001A	ARM F		
9	LS41729-001A	STUD B		
10	LS41973-001A	OIL BEARING		
11	LS41730-001A	ARM R ASSEMBLY		
12	LS31049-001A	ARM R		
13	LS41729-001A	STUD B		
14	LS41973-001A	OIL BEARING		
15	KJP33113-B01	PLATEN LEVER		
16	LS31028-010A	TENSION SPRING	(x2)	
17	LS31051-001A	PLATEN ROLLER		
18	LS31260-001A	BEARING	(x2)	
19	LS41734-001A	LEVER ASSEMBLY		
20	LS41735-001A	LEVER B		
21	LS41736-001A	STUD E		
22	LS41737-001A	STUD D		
23	LS41738-001A	STUD C		
24	LS41739-001A	BUSHING		
25	LS41740-001A	LEVER ASSEMBLY R		
26	LS41735-001A	LEVER B		
27	LS41736-001A	STUD E		
28	LS41737-001A	STUD D		
29	LS41738-001A	STUD C		
30	LS41739-001A	BUSHING		
31	QYREE2000X	E RING	M2(x2)	
32	QYREE3000X	E RING	M3(x2)	
33	QYREE7000X	E RING	M7(x2)	
34	LS31227-201A	HEAT ROL UNIT		
35	QAL1194-001	HEATER		
36	LS20344-001A	MOTOR BASE		
37	LS41829-001A	FG DISK COVER		
38	LSA20169-01A3	CAMA BOARD ASSEMBLY		
39	LSA20169-01A4	CAMB BOARD ASSEMBLY		
40	LSA20169-01A6	INKFG BOARD ASSEMBLY		
41	LS41980-001A	STEP MOTOR ASSEMBLY		
42	LS41953-201A	FG MOTOR ASSEMBLY		
43	LS41700-001A	PICK UP ROLLER		
44	LS41701-001A	ONE WAY GEAR		
45	LS41972-001A	ONEWAY CLUTCH		
46	LS41954-001A	HOP MOTOR ASSEMBLY		
47	KJM46681-002	DRY BEARING	(x2)	
48	QYREE5000X	E RING	M5(x2)	
49	KJY44485-004	OILES BEARING		
50	LS41704-001A	HP MOTOR BRACKET		
52	LS31251-201A	HEAD UNIT		
54	WJJ1001-001A-E	WIRE		
55	WJZ0343-001A-E	E-HARNES ASSEMBLY		
56	QQR0919-001	FERRITE CORE		
57	QQR0216-001	NOISE FILTER	(x2)	
58	WJJ1009-001A-E	WIRE		
59	WJJ1010-001A-E	WIRE		
60	WJJ1016-001A-E	WIRE		
61	WJJ1002-001A-E	WIRE		
62	WJN0356-001A-E	E-HARNES ASSEMBLY		
63	QZW0001-001	WIRE CLAMP	(x3)	
64	LS10219-001A	BOTTOM FRAME		
65	LSA20169-01A9	BLEED BOARD ASSEMBLY		
66	LS31144-001A	PWB COVER		
67	QZF2008-101	FOOT	20mm x 8mm(x2)	
68	QAL1250-001	POWER SUPPLY		
69	QSW0902-002	POWER SWITCH		
70	WJM0520-001A-E	WIRE		
71	WJM0520-002A-E	WIRE		
72	QZW0001-001	WIRE CLAMP	(x2)	
73	WJZ0345-001A-E	COAXIAL CABLE		
74	QWTB41H-300	VINYL TUBE	TRANSPARENT	
75	LS10222-001A	PS COVER		
76	LS31041-001A	SENSOR HOLDER		
77	LSA20169-01A5	INKPOS BOARD ASSEMBLY		
78	WJJ1012-001A-E	WIRE		
79	LS41731-001A	CAM LEVER ASSEMBLY		
80	LS41732-001A	CAM LEVER		
81	LS41733-001A	STUD		

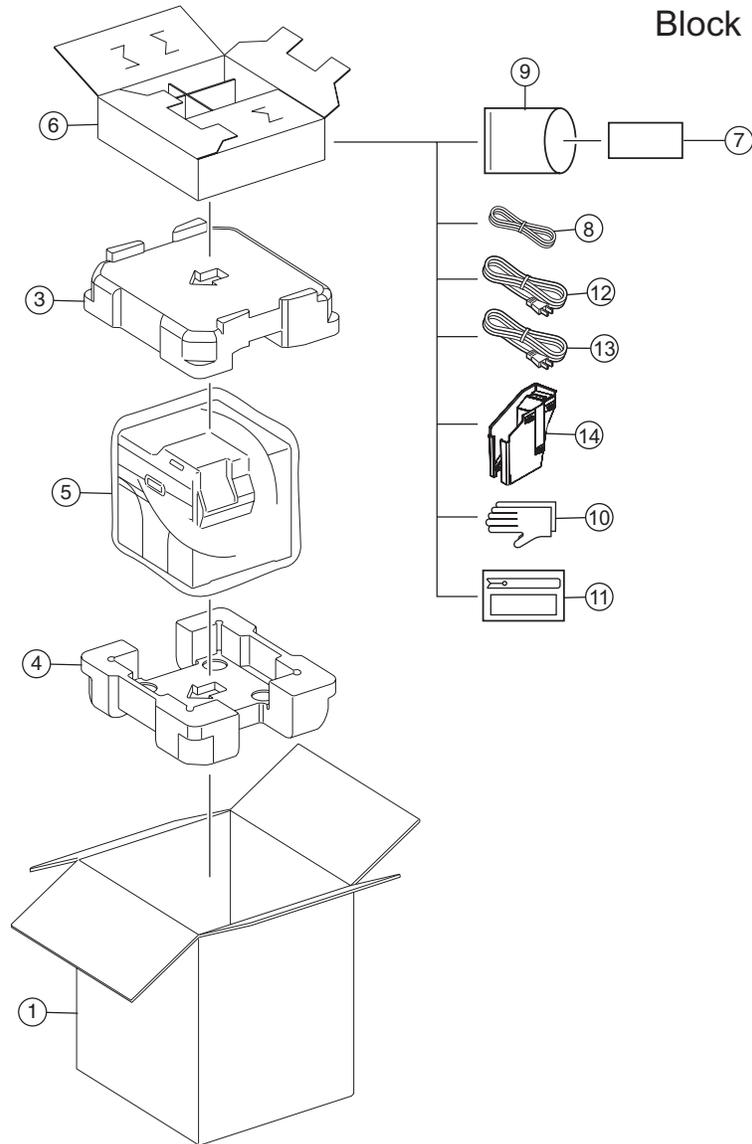
Symbol No.	Part No.	Part Name	Description	Local
82	LS31028-004A	TENSION SPRING		
83	LS31052-001A	PIN GUIDE F		
84	LS31053-001A	PIN GUIDE R		
85	LS31059-001A	HT CAM SHAFT		
86	LS41757-001A	PRESS CAM		
87	LS31260-003A	BEARING	(x2)	
88	LS31060-001A	HEATER GEAR		
89	QYREE7000X	E RING	M7	
90	QYREE6000X	E RING	M6(x2)	
91	LS20345-001A	PLATE F ASSEMBLY		
92	LS10208-001A	PLATE F		
93	LS41758-001A	HEAD PIN	(x2)	
94	LS20346-001A	PLATE R ASSEMBLY		
95	LS10209-001A	PLATE R		
96	LS41759-001A	STUD		
97	LS41760-001A	CAM STUD		
98	LS41761-001A	HEAD PIN	(x2)	
99	LS41762-001A	STUD		
100	LS41763-001A	STUD		
101	LS41827-001A	CL STUD		
102	TA10-35	WIRE CLIP	(x2)	
103	QZW0307-001	WIRE CLAMP		
104	QZW0182-004	CLAMP		
105	QZW0006-003	EDGE SADDLE		
106	LS41936-001A	BRUSH	(x2)	
107	LS41935-001A	BRUSH		
108	LS20347-001A	SIDE FRAME		
109	LS20348-001A	CENTER FRME		
110	QAR0499-001	FAN MOTOR		
111	LS10230-001A	HEAD DUCT		
112	LS31100-001A	GUIDE		
113	LSA20169-01AC	CLEANER BOARD ASSEMBLY		
114	WJJ1007-001A-E	WIRE		
115	LS41764-001A	GUIDE SHAFT		
116	LS31061-001A	INK BUSHING	(x3)	
117	QYWFM629550	WASHER	9.5mm/6.2mm x 0.5mm(x3)	
118	LS41765-001A	BOBBIN SHAFT	(x2)	
119	LS41766-001A	INK GEAR SHAFT		
120	LS31062-001A	BOBBIN INNER	(x3)	
121	LS41767-001A	ONEWAY GEAR	(x2)	
122	LS41768-001A	INK GEAR		
123	QAR0495-001	STEPPING MOTOR		
124	LS41857-001A	MOTOR PULLEY		
125	LS41769-001A	MEDIA MOTOR BRACKET		
126	LS31028-009A	TENSION SPRING		
127	LS41959-001A	MOTOR DAMPER		
128	LS31063-001A	HT GUIDE		
129	LS31064-001A	HT UNDER GUIDE		
130	LS41770-001A	MOTOR BRACKET ASSEMBLY		
133	QZW0407-001	WIRE CLAMP		
134	LS41773-001A	MOTOR BRACKET ASSEMBLY		
137	LS41775-001A	GEAR	(x3)	
138	LS41776-003A	GEAR		
139	LS31054-001A	CAM GEAR		
140	QYREE3000X	E RING	M3(x4)	
141	QYREE4000X	E RING	M4	
142	QYREE5000X	E RING	M5(x5)	
143	QYREE7000X	E RING	M7(x2)	
144	QZW0182-001	MINI CLAMP	(x6)	
145	QZW0290-003	SNAP BUSHING		
146	LS31065-001A	HOPPER FRAME		
147	LS31066-001A	ANNT BRACKET		
148	QZW0307-002	WIRE CLAMP		
149	QZW0240-003	MINI CLAMP		
150	LS20349-001A	MAIN PWB BRACKET R		
151	QZW0006-001	EDGE SADDLE		
152	QZW0114-007	LOCKING WIRE SADDLE	(x2)	
153	LS20350-001A	MAIN PWB BRACKET L		
154	QZW0114-008	LOCKING WIRE SADDLE	(x5)	
155	QZW0114-007	LOCKING WIRE SADDLE		
156	LS31067-001A	MAIN BOARD ANGLEU		
157	QZW0307-001	WIRE CLAMP		
158	QZW0056-006	WIRE CLAMP		
159	QZW0384-001	WIRE CLAMP		
160	LS31068-001A	MAIN BOARD ANGLEL		
161	QZW0114-008	LOCKING WIRE SADDLE	(x3)	
162	QZW0114-009	LOCKING WIRE SADDLE	(x2)	
163	QZW0114-007	LOCKING WIRE SADDLE		
164	QZW0306-001	MINI CLAMP		
165	LS10210-001A	HEATER COVER		
166	LSA20169-01AB	THERMISTOR PWB		
167	LSA20169-01A8	I LOCK BOARD ASSEMBLY		
168	QAR0492-001	FAN MOTOR		

△ Symbol No.	Part No.	Part Name	Description	Local
169	LS31090-001A	PULLEY BRACKET		
170	LS31091-001A	M.SUPPLY PULLEY		
171	LS41798-001A	M SUPPLY SHAFT		
172	LS31260-003A	BEARING	(x2)	
173	QYWFM82C050	WASHER	0.5mm/8.2mm x	
174	LS31261-002A	TIMING BELT		
175	LS31062-001A	BOBBIN INNER		
176	QYREE7000X	E RING	M7(x2)	
177	LS10231-001A	GUIDE FRAME		
178	LS10220-001A	HOPPER BASE		
179	LSA20169-01A7	NOCARD BOARD ASSEMBLY		
180	LS10221-001A	HOP BASE COVER		
181	LS20356-001A	LEVER		
182	QZW0001-001	WIRE CLAMP	(x3)	
183	LS41955-001A	DC MOTOR ASSEMBLY	(x2)	
184	LSA20166-23B	MAIN BOARD ASSEMBLY		
185	LS41707-001A	IDLE ROLLER		
186	LS41851-001A	ROLLER SHAFT		
187	LS31033-001A	FEED ROLLER		
188	LS31034-001A	BACK ROLLER		
189	LS31141-001A	FEED ROLLER		
190	LS31037-001A	FEED ROLLER		
191	LS31038-001A	CARD GUIDE R		
192	LS31402-001A	CARD GUIDE		
193	LS31403-001A	HOLDER GUIDE		
194	LS31398-001A	GUIDE HOLDER		
195	LS42148-001A	TORSION SPRING		
196	LS31032-002A	COMP SPRING		
197	LS31031-001A	IDLE HOLDER		
198	LS31032-011A	COMP SPRING		
199	KJM46681-002	DRY BEARING	(x2)	
200	KJM46681-002	DRY BEARING	(x4)	
201	LS31260-002A	BEARING	(x2)	
202	LS42086-001A	TORSION SPRING	(x2)	
203	LS41718-001A	ADJUST ROLLER	(x2)	
204	LS41719-001A	SPACER	(x2)	
205	LS31040-001A	SENSOR HOLDER		
206	LS31261-004A	TIMING BELT		
207	LS31261-003A	TIMING BELT		
208	LS31261-001A	TIMING BELT		
209	LS41951-001A	PULLEY		
210	LS41949-001A	ONEWAY PULLEY		
211	LS41950-001A	ONEWAY PULLEY		
212	LS41972-002A	ONEWAY CLUTCH		
213	LS41720-001A	DOUBLE PULLEY	(x2)	
214	LS41722-001A	GEAR		
215	LS41723-001A	DOUBLE GEAR		
216	LS41724-001A	MOTOR BRACKET ASSEMBLY		
219	LS41727-001A	GEAR PULLEY		
220	LS41907-001A	WASHER		
221	LS41956-001A	STEP MOTOR ASSEMBLY		
222	LS31083-001A	IC BACK PLATE		
223	LS31084-001A	ROLLER	(x4)	
224	LS31042-001A	ALM ROLLER		
225	LS41746-001A	ROLLER SHAFT		
226	LS41973-002A	OIL BEARING	(x2)	
227	QYREE5000X	E RING	M5(x14)	
228	QYREE4000X	E RING	M4(x4)	
229	QYREE3000X	E RING	M3	
230	LSA20169-01A2	EDG/CDX2 BOARD ASSEMBLY		
231	LSA20169-01A3	CAMA BOARD ASSEMBLY		
232	WJJ1017-001A-E	WIRE		
233	WJJ1011-001A-E	WIRE		
234	LS10211-001A	SIDE COVER R		
235	QAR0498-001	FAN MOTOR		
236	LS31069-001A	AIR FILTER	(x2)	
237	LS10212-001A	FILTER COVER		
238	LS31246-001A	SIDE COVER U-L		
239	LS10214-001A	TOP COVER		
244	LS20371-001B	HEAT DUCT		
246	LS10215-002A	FRONT PANEL		
248	LS20375-001A	FRONT H COVER		
249	LS31071-001A	WINDOW		
250	LS20351-001A	PUSH BUTTON		
251	LS31406-001A	SHIELD WINDOW		
252	LS31407-001A	SHIELD PLATE		
253	QLD0613-001	LCD MODULE		
254	LS20352-001A	LENS		
255	LS10216-001A	LENS HOLDER		
256	LSA20168-01B1	LCD BOARD ASSEMBLY		
257	QZW0402-001	DAMPER	(x2)	
258	LS31072-001A	DAMPER SUPPORT	(x2)	
259	LS20353-001A	JOG DIAL	(x2)	

Symbol No.	Part No.	Part Name	Description	Local
260	LS41915-001A	STOPPER SHEET		
261	LS10297-001A	FRONT DOOR		
262	LS20354-003A	DOOR LATCH		
263	LS31032-007A	COMP SPRING		
264	LS20355-001A	RFID COVER		
265	LSA20168-01A2	RFID1 BOARD ASSEMBLY		
266	LSA20168-01A3	SECURITY P ASSEMBLY		
267	LS31243-001A	REAR COVER UNIT		
269	LS31249-201A	INK F CA UNIT		
270	LS31250-201A	MEDIA F CA UNIT		
271	LS31244-202A	HOPPER CA UNIT		
273	QYREE3000X	E RING	M3	
274	QZW0307-002	WIRE CLAMP		
275	QZW0307-001	WIRE CLAMP	(x2)	
276	QAL1194-001	HEATER		
S 1	QYSDST3006NA	TAP SCREW	M3 x 6mm(x3)	
S 2	QYSDSF3008MA	TAP SCREW	M3 x 8mm	
S 3	QYSDST3006NA	TAP SCREW	M3 x 6mm	
S 4	QYSDST3006NA	TAP SCREW	M3 x 6mm	
S 5	QYSDST3006NA	TAP SCREW	M3 x 6mm(x6)	
S 6	QYSDST3006NA	TAP SCREW	M3 x 6mm	
S 7	QYSDST3006NA	TAP SCREW	M3 x 6mm(x3)	
S 8	QYSDST3006NA	TAP SCREW	M3 x 6mm(x2)	
S 9	QYSDST3006NA	TAP SCREW	M3 x 6mm	
S10	QYSDST3006NA	TAP SCREW	M3 x 6mm(x2)	
S11	QYSPSPH4008NA	SCREW	M4 x 8mm(x2)	
S12	QYSPSPH3008NA	SCREW	M3 x 8mm(x4)	
S13	QYSDSF2006MA	TAP SCREW	M2 x 6mm(x2)	
S14	QYSDST3006NA	TAP SCREW	M3 x 6mm(x2)	
S15	QYSDSF3008MA	TAP SCREW	M3 x 8mm(x3)	
S16	QYSPSPH3005NA	SCREW	M3 x 5mm(x2)	
S17	QYSDST3006NA	TAP SCREW	M3 x 6mm	
S18	QYSDSP4006NA	SCREW	M4 x 6mm	
S19	QYSPSPH3010NA	SCREW	M3 x 10mm	
S20	QYSDST3006NA	TAP SCREW	M3 x 6mm(x4)	
S21	QYSDSF3008MA	TAP SCREW	M3 x 8mm(x2)	
S22	QYSPSPH4008NA	SCREW	M4 x 8mm(x2)	
S23	QYSDSF3035MA	TAP SCREW	M3 x 35mm(x2)	
S24	QYSDSF3008MA	TAP SCREW	M3 x 8mm	
S25	QYSDST3006NA	TAP SCREW	M3 x 6mm(x29)	
S26	QYSDSF3008MA	TAP SCREW	M3 x 8mm(x2)	
S27	QYSPSPH4008NA	SCREW	M4 x 8mm	
S28	QYSPSPH3006NA	SCREW	M3 x 6mm(x4)	
S29	QYSPSPH3005NA	SCREW	M3 x 5mm(x4)	
S30	QYSDST3006NA	TAP SCREW	M3 x 6mm(x2)	
S31	QYSDST3006NA	TAP SCREW	M3 x 6mm(x2)	
S32	QYSDST3006NA	TAP SCREW	M3 x 6mm(x2)	
S33	QYSDST3006NA	TAP SCREW	M3 x 6mm(x2)	
S34	QYSDST3006NA	TAP SCREW	M3 x 6mm(x2)	
S35	QYSDST3006NA	TAP SCREW	M3 x 6mm	
S36	QYSDST3006NA	TAP SCREW	M3 x 6mm(x2)	
S37	QYSDSF3008MA	TAP SCREW	M3 x 8mm	
S38	QYSDST3006NA	TAP SCREW	M3 x 6mm(x3)	
S41	QYSDST3006NA	TAP SCREW	M3 x 6mm	
S42	QYSPSPH3020NA	SCREW	M3 x 20mm(x2)	
S43	QYSPSPH4008NA	SCREW	M4 x 8mm	
S44	QYSPSPH4008NA	SCREW	M4 x 8mm	
S45	QYSDSF3008MA	TAP SCREW	M3 x 8mm(x16)	
S46	QYSDSF3008MA	TAP SCREW	M3 x 8mm	
S47	QYSDSF3008MA	TAP SCREW	M3 x 8mm(x4)	
S48	QYSDST3006NA	TAP SCREW	M3 x 6mm(x6)	
S49	QYSDST2608NA	TAP SCREW	M2.6 x 8mm(x2)	
S50	QYSDST3006NA	TAP SCREW	M3 x 6mm(x2)	
S51	QYSDST3006NA	TAP SCREW	M3 x 6mm(x4)	
S52	QYSDSF3008MA	TAP SCREW	M3 x 8mm(x5)	
S53	QYSDSF3035MA	TAP SCREW	M3 x 35mm(x2)	
S54	QYSDST3006NA	TAP SCREW	M3 x 6mm(x2)	
S55	QYSDSF3008MA	TAP SCREW	M3 x 8mm(x2)	
S56	QYSDSP4012NA	SCREW	M4 x 12mm(x3)	
S57	QYSDST3006NA	TAP SCREW	M3 x 6mm(x4)	
S58	QYSDST3006NA	TAP SCREW	M3 x 6mm(x2)	
S59	QYSDSF3008MA	TAP SCREW	M3 x 8mm(x2)	
S60	QYSDSF3008MA	TAP SCREW	M3 x 8mm(x2)	
S61	QYSDSF3008MA	TAP SCREW	M3 x 8mm	

# Packing materials and accessories parts list

Block No.M2MM



## Packing and accessories

Block No. [M][2][M][M]

△ Symbol No.	Part No.	Part Name	Description	Local
1	LS31211-001A	PACKING CASE A		
2	LS31397-001A	HANDLE	(x2)	
3	LS10253-001A	CUSHION TOP		
4	LS10254-001A	CUSHION BOTTOM		
5	LS42157-001A	POLY BAG		
6	LS20361-001A	ANNEX CASE ASSEMBLY		
7	CX210-CC1	CLEAN. CARD	10 pcs /set	
8	QAM1121-002	USB CABLE		
9	QPA00702005	POLY BAG	7cm x 20cm	
10	U105-M	GLOVE	M size	
10	U105-L	GLOVE	L size	
11	LS42292-001A	CARD PICKUP		
12	QMPE260-200-K2	POWER CORD(US/CA)	2m BLACK	
13	QMPL380-200-K2	POWER CORD(EU)	2m BLACK	
14	LS31254-203A	STOCKER ASSEMBLY		

# DNP

Distributor : DAI NIPPON PRINTING CO., LTD.  
1-1 Ichigaya-kagacho,  
1-chome Shinjuku-ku,  
Tokyo 162-8001 Japan  
Phone: +81-3-3266-3331  
Facsimile: +81-3-3266-2732

---