# ENVELOPE FEEDER

## for LBP-NX PCB

# SERVICE MANUAL

REVISION 0

Canon

OCT. 1991

RY8-1352-000



CANON ENVELOPE FEEDER FOR LBP-NX PCB OCT. 1991 REVISION 0 PRINTED IN JAPAN (IMPRIME AU JAPON)

***Printed in Japan***
***Imprimé au Japon***

Use of this manual should be strictly supervised to avoid disclosure of confidential information.

Prepared by

PERIPHERAL PRODUCTS QUALITY PLANNING DIV.
PERIPHERAL PRODUCTS TECHNICAL DOCUMENTS DEPT.

CANON INC.

30-2 Shimomaruko 3-chome, Ohta-ku, Tokyo 146, Japan

# PREFACE

This service manual contains the basic information needed for market service for maintaining product quality and functions envelope feeder for the LBP-NX PCB.

Here are the contents of each chapter.

Chapter 1: General Description
Specifications and names of the parts

Chapter 2: Outline of Operations
Explanation of the basic operating principles and timing of the mechanical and electrical systems for each feature.

Chapter 3: Mechanical Systems
Explanation of the mechanical configuration and disassembly, assembly, and adjustment

Chapter 4: Maintenance and Servicing
Periodic replacement parts and consumable parts, etc.

Chapter 5: Troubleshooting
Standards, adjustments, troubleshooting, etc.

Appendix: Overall timing charts, overall circuit diagrams, etc.

The information in this manual is subject to change due to improvements in the product, but in this case, you will be notified immediately of these changes in a service information bulletin.

Reading this service manual and its service information bulletins quite carefully and gaining a deep and correct understanding of this machine is the only way to develop the skills needed to maintain the product quality and functions longer and the applied skills for tracking down the causes of breakdowns.

## CONTENTS

### CHAPTER 1 GENERAL DESCRIPTION



### CHAPTER 2 OPERATION AND TIMING



### CHAPTER 3 THE MECHANICAL SYSTEMS



### CHAPTER 4 MAINTENANCE AND SERVICING



### CHAPTER 5 TROUBLESHOOTING



### APPENDIX

# CHAPTER 1

# GENERAL DESCRIPTION

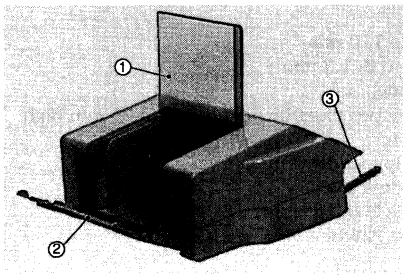
# I. SPECIFICATIONS

| | | |
|---|---|---|
| 1. | Type: | One-touch removable type |
| 2. | Paper-feed speed: | 10 sheets per minute max. |
| 3. | Envelope types: | Com10, Monarch |
| | Envelope sizes: | Width ..... 98.4 to 110 mm |
| | | Length .... 190.5 to 241.3 mm |
| 4. | Envelope switching method: | Manual (slide guide) |
| 5. | Paper pick-up capacity: | The stack of envelopes must be no more than 75 mm high |
| 6. | Operating environment: | According to printer |
| 7. | Power supply: | 24 VDC 1.5 A (Supplied by printer) |
| 8. | Power consumption: | During printing: 36W max. |
| | | 9.2Wh (average) |
| | | at standly : 0.72Wh |
| 9. | Noise (values including printer noise) | |
| | Operating: | 60 dB(A) max. |
| | Standby: | 50 dB(A) max. |
| 10. | Dimensions: | 268.5 mm x 314.0 mm x 130.0 mm |
| 11. | Weight: | About 2.7 kg |

These specifications are subject to change due to improvements in the product.

## II. NAMES OF THE PARTS

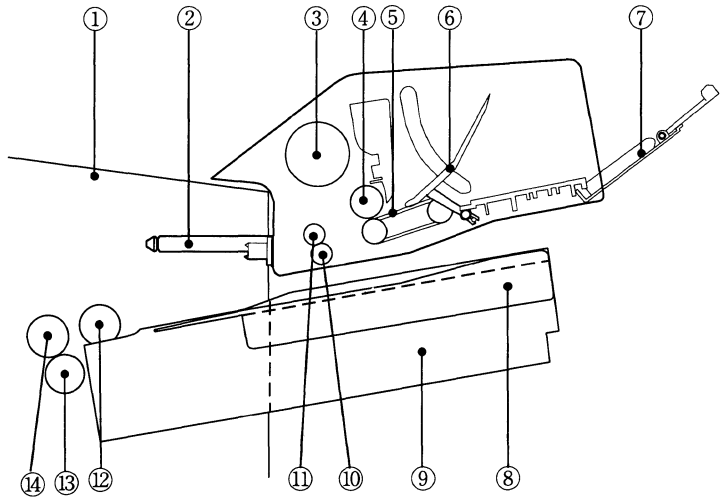
### A. External View




① Top cover
② Envelope tray
③ Mount positioning rods

**Figure 1-1**

### B. Cross-sectional View




1: Printer
2: Mount positioning rod
3: Envelope feed motor
4: Separation roller
5: Paper pick-up belt
6: Weight
7: Envelope tray
8: Special cassette cover
9: Upper cassette
10: Lower feed roller
11: Upper feed roller
12: Upper pick-up roller (Printer)
13: Upper separation roller (Printer)
14: Upper feed roller (Printer)

**Figure 1-2**

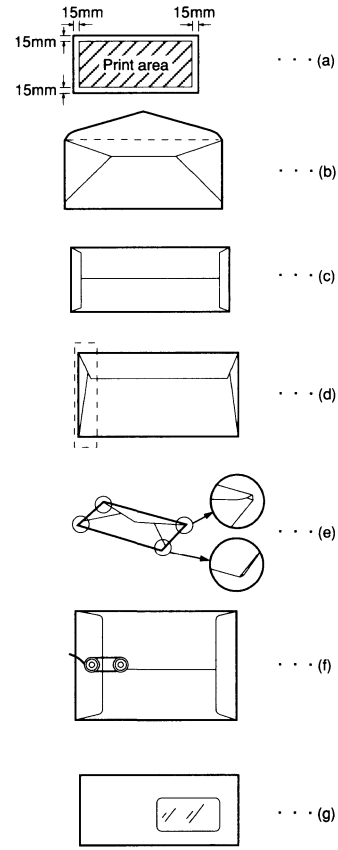
## III. DESCRIPTION OF OPERATION

**A. Precautions for Using Feed Unit**

1. Pick-up system
   - Install the special cassette cover on the upper cassette. (Don't install it on the lower cassette.)
   - Sheets cannot be manually fed from the upper cassette.
   - Divide the envelope bundle (max. 100sheets) into two and set respectively.
   - Use the sub tray when the envelope, which has more than 200mm length is fed.
   - Insert envelopes into the feeder face up.
2. Print mode
   - Double-side printing of envelopes is not possible.

**B. Precautions for Envelopes**

1. The rear side of the envelope can not be printed on.
2. It is impossible to print within about 15 mm of the edges of the envelope. ..... (a)
3. The following types of envelopes can not be printed.
   - Envelopes with unfolded flaps .... (b)
   - Envelopes of the type shown on the right ..... (c)
   - Envelopes with three sheets folded (pasted) together as shown on the right ..... (d)
   - Envelopes with corners formed as shown on the right ..... (e)
   - Envelopes with clasps, snaps, or strings as shown on the right ..... (f)
   - Envelopes with transparent windows as shown on the right ..... (g)
4. Envelopes should have no wrinkles, bulges, folded corners, or stains.
5. Do not use envelopes which are already sealed.



# CHAPTER 2

# OPERATION AND TIMING

1. This chapter describes the ENVELOPE FEEDER functions, the relationships between mechanisms and circuits, and timing of operations. Mechanical linkages are indicated by striped conduits ( ▬▬▬ ), control signal by arrow ( ——► ), and groups of signals by thick arrows ( ⟹ ).
2. The signals in digital circuits are identified as "H" for HIGH and "L" for LOW. The voltage for LOW is very close to 0V; the voltage for HIGH depends on the circuit. If a signal name has no bar over it (e.g., ENVFED), "H" is a "TRUE" signal. If a signal name has a slash over it (e.g., /FEDID), "L" is a "TRUE" signal. (A "TRUE" signal will usually cause an action to occur, etc.; a "FALSE" signal will normally prevent the operation).

# I. BASIC OPERATION

**A. Functions**

The envelope feeder comprises the paper pick-up/feed system, which sends the envelopes set into the envelope feeder to the printer, the envelope feeder controller PCB, which drives the pick-up/feed system, and the envelope feed motor.

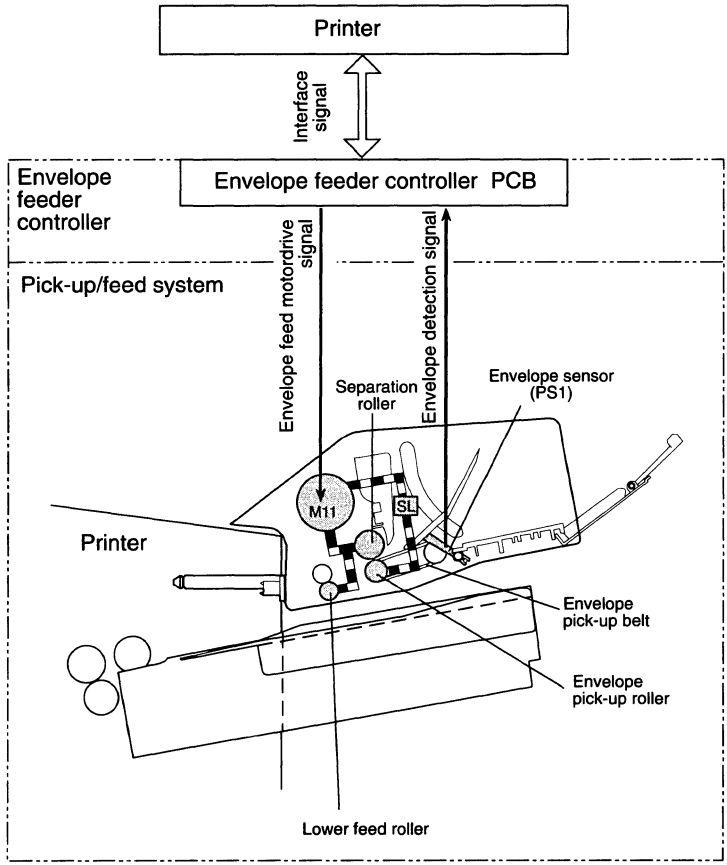
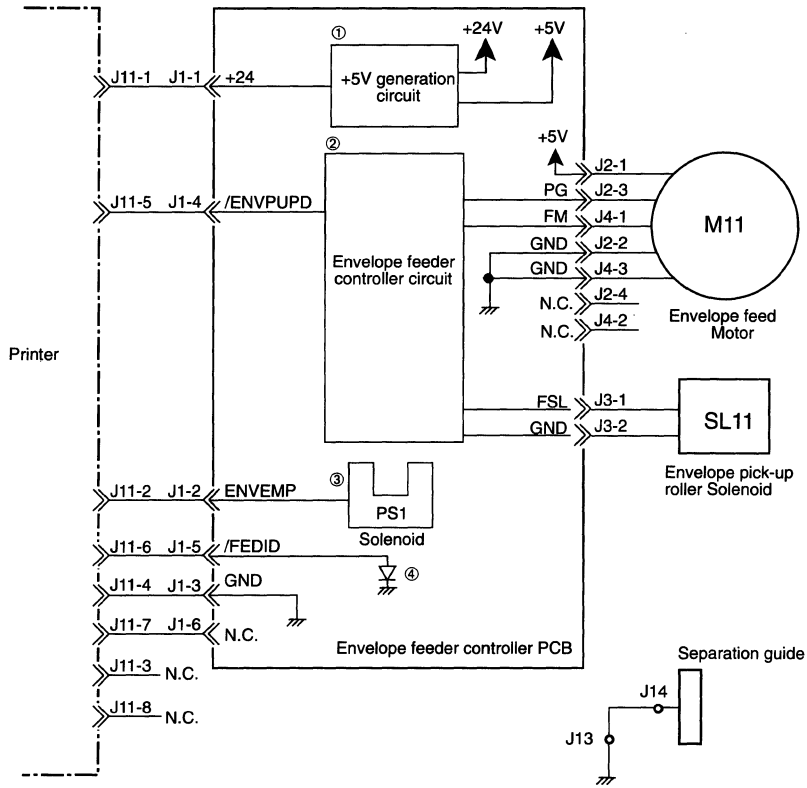



**Figure 2-1**

**B. Outline of the Electrical System**

The feeder unit's electrical circuits are on the envelope feeder controller PCB.




1: Makes the +5V power from the +24V power that the printer sends for the envelope feed motor.

2: This CPU receives the /ENVPUPD signal from the printer controls the envelope feed motor and solenoid.
- When the /ENVPUPD signal is "L", the envelope feed motor (M11) is driven for about 3.5 seconds and the solenoid (SL11) is driven for about 1.0 seconds.

3: The envelope sensor detects whether or not envelopes are loaded.
- When there is no envelope, the ENVEMP signal is "H".

4: Detects whether or not the envelope feeder is mounted correctly on the printer.
- When the envelope feeder is mounted correctly, the /FEDID signal is "L".

**Figure 2-2**

### C. Envelope Interface Signals

The figure below shows the three signals in the interface connecting the envelope feeder and the printer. One of these signals is input and the other two are output.
The interface connector is J11 and has 8 pins. Table 2-1 shows the signal assignment.

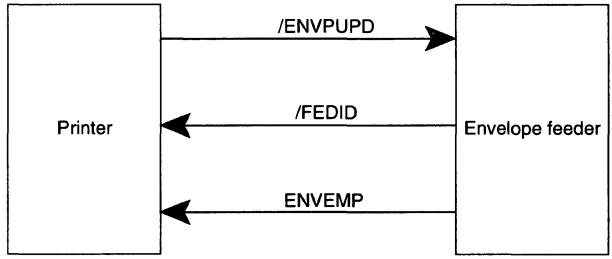



**Figure 2-3**

**Table 2-1**

| Connector | Signal name | Function |
|---|---|---|
| J11-1 | 24V | +24V, 1.5A power supply |
| J11-2 | ENVEMP | Signal detecting whether or not there are envelopes in the feeder. |
| J11-3 | N.C. | Not connected |
| J11-4 | GND | Ground |
| J11-5 | /ENVPUPD | Signal for controlling envelope feed motor and solenoid. |
| J11-6 | /FEDID | Signal detecting whether or not the envelope feeder is loaded. |
| J11-7 | N.C. | Not connected |
| J11-8 | N.C. | Not connected |

**D. Basic Sequence**

With the envelope feeder mounted on the printer and envelopes set in the envelope feeder, when the video controller selects paper pick-up for the envelope feeder and the print signal (/PRNT) is sent to the printer DC controller, the DC controller outputs the signal (/ENVPUPD) for driving the envelope feeder and the envelope feeder feeds an envelope. Here is a timing chart for this operation.

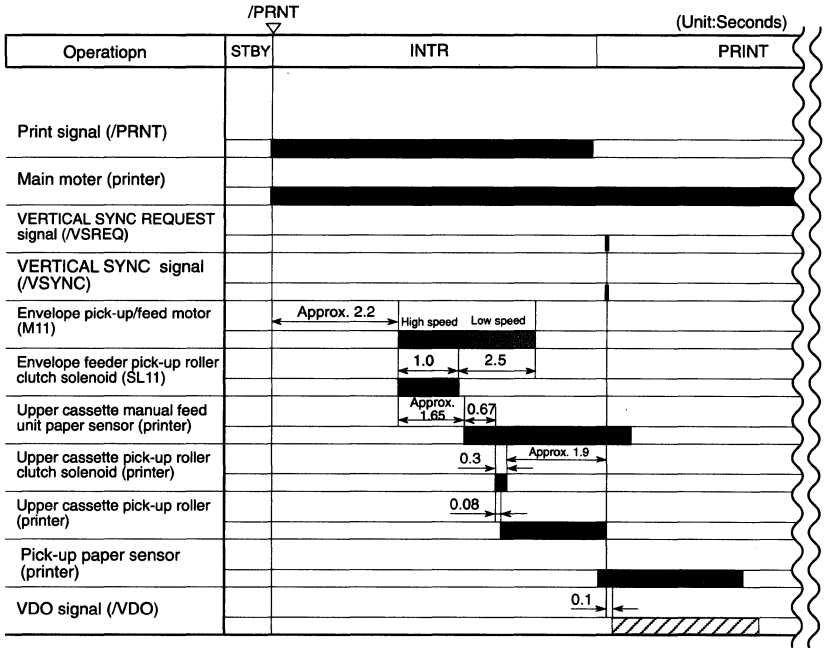



**Figure 2-4**

## II. PICK-UP / FEED SYSTEM

### A. Outline of Operation

With the envelope feeder mounted securely on the printer, when the printer power is switched ON, the /FEDID signal goes "L" and the printer detects that the envelope feeder is mounted on it.

When envelopes are loaded correctly in the envelope feeder and the video controller selects paper pick-up from the envelope feeder, the envelope empty signal (/ENVEMP) is "L". If the /PRNT signal from the printer's DC controller becomes "L", after about 2.2 seconds the envelope pick-up/feed signal (/ENVPUPD) becomes "L" sent via the paper feed PCB to the envelope feeder controller PCB from the DC controller PCB in the printer. When it receives this signal, the CPU on the envelope feeder controller PCB drives the envelope feed motor (M11) for about 3.5 seconds and the solenoid (SL11) for about 1.0 seconds.

Driving the envelope feed motor (M11) turns the separation roller and the feed roller and the paper pick-up belt. The solenoid (SL11) control the paper pick-up belt drive.

Thus, while the solenoid (SL11) is driven, one envelope is fed, reaches the feed rollers, then is sent to the upper pick-up roller on the printer by the feed rollers. When the envelope is fed and the upper manual feed paper sensor in the printer becomes on, about 0.7 seconds later the upper pick-up roller rotates and the envelope is fed into the printer and printed.

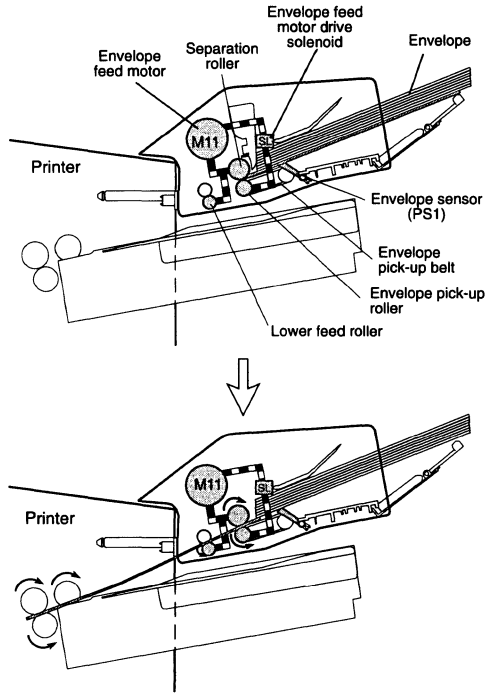



**Figure 2-5**

**B. Paper Jam Detection**

In order to check whether or not the envelope is fed correctly within the envelope feeder and within the printer, there are the following sensors.

- Upper manual feed paper sensor: PS372 (printer)
- Pick-up paper sensor: PS3 (printer)
- Fixing unit delivery paper sensor: PS151 (printer)
- Face-down tray delivery paper sensor: PS7 (printer)

Jams are judged by the microcomputer on the printer's DC controller checking each sensor for the presence of the envelope with the timing shown below. When the microcomputer judges that the envelope has jammed, it stops printer operations and notifies the video controller PCB of the jam.

1) Paper pick-up delay jam
   This means that the envelope does not reach the upper manual feed paper sensor (PS372) within the prescribed time.

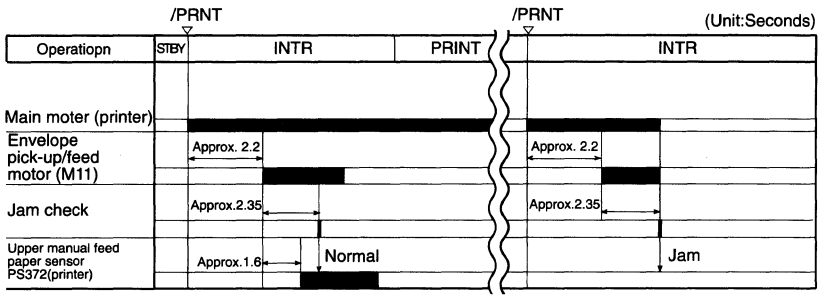



**Figure 2-6**

2) Paper pick-up stationary jam
   This means that the envelope does not reach the printer's upper manual feed paper sensor (PS372) within the prescribed time.

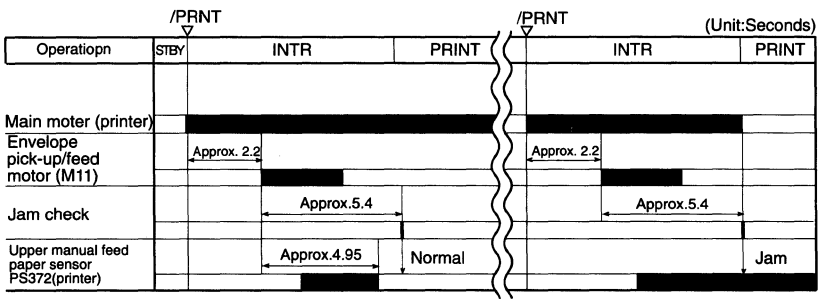



**Figure 2-7**

3) Paper pick-up delay jam
This means that the envelope does not reach the pick-up paper sensor (PS3) within the prescribed time.

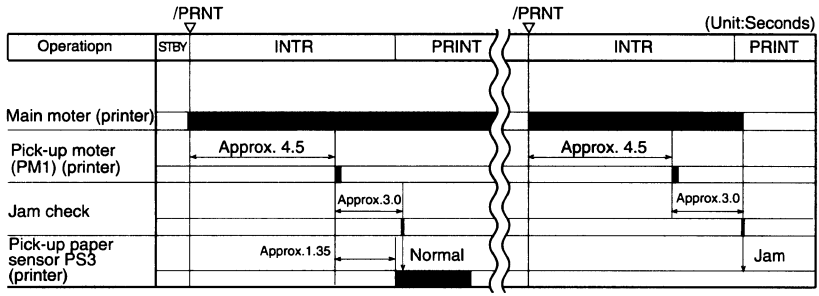



**Figure 2-8**

4) Fixing unit delivery delay jam
This means that the envelope does not reach the fixing unit delivery paper sensor (PS151) within the prescribed time.

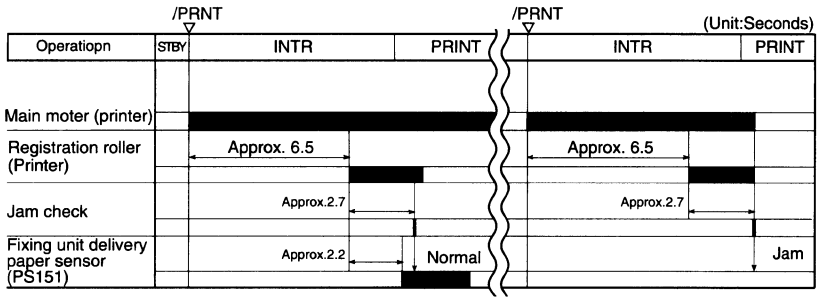



**Figure 2-9**

5) Fixing unit delivery stationary jam
This means that the envelope did not pass the face-down tray delivery sensor (PS7) within the prescribed time.

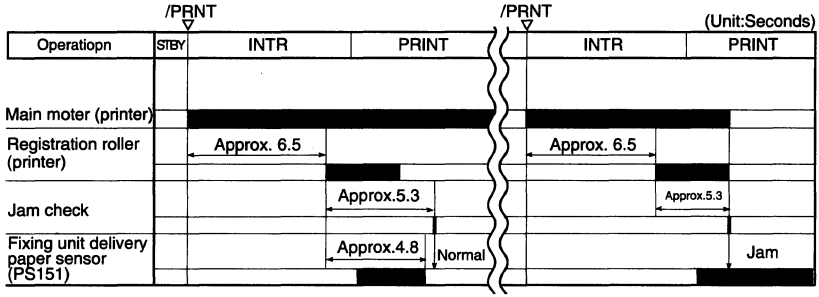



**Figure 2-10**

6) Face-down tray delivery delay jam
This means that the envelope did not reach the face-down tray delivery sensor (PS7) within the prescribed time.

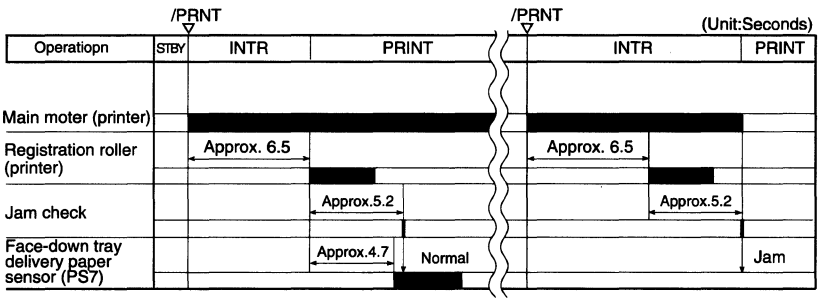



**Figure 2-11**

7) Face-down tray delivery stationary jam
This means that the envelope did not pass the face-down tray delivery sensor (PS7) within the prescribed time.

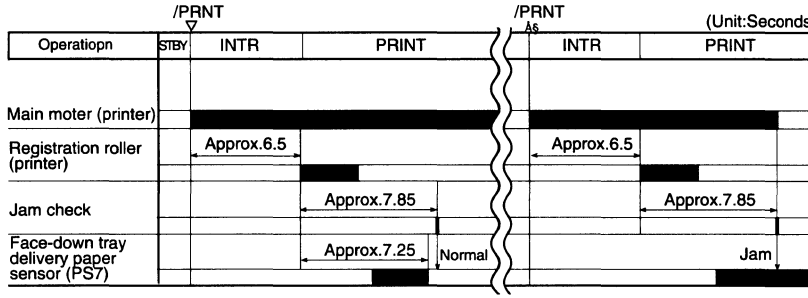



**Figure 2-12**

# CHAPTER 3

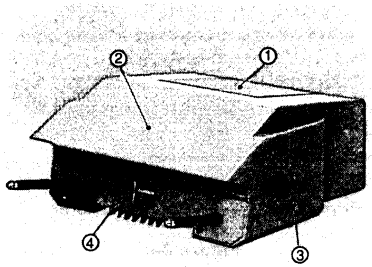
# THE MECHANICAL SYSTEMS

This chapter explains mechanical operation, and disassembly and reassembly of the feeder unit. Note the following precautions during disassembly or reassembly.

1. Disconnect the printer from the wall outlet before servicing it.
2. Note the lengths, diameters, and locations of screws. Use them in their original locations when reassembling the printer.
3. Do not operate the feeder unit with any part removed.
4. Assembly is the reverse of disassembly unless specifically noted.

# I. EXTERNALS

## A. External Covers



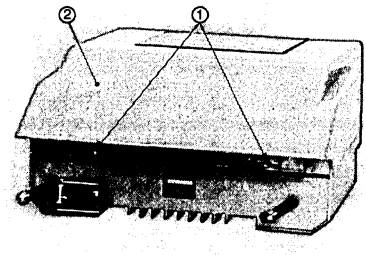

① Top cover (0) ② Upper cover (2)
③ Bottom cover (4) ④ Front cover (4)

**Figure 3-1**

**Note:** The numbers in parentheses show how many screws hold that part in place.

When cleaning, inspecting, or repairing the insides of the feeder unit, remove the necessary covers with the following operating procedure.

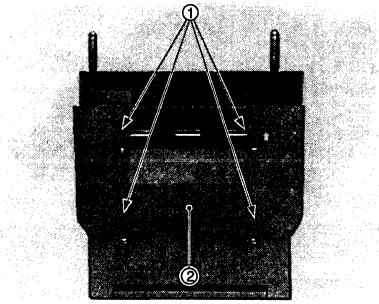
**1. Upper cover**
1) Remove the two screws.
2) Remove the upper cover.




① Screws ② Upper cover

**Figure 3-2**

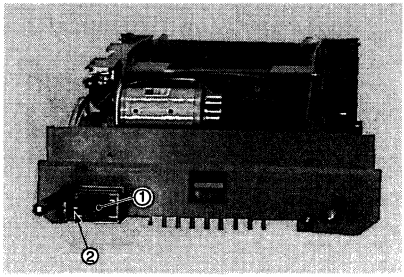
**2. Bottom cover**
1) Remove the four screws.
2) Remove the bottom cover.




① Screws ② Bottom cover

**Figure 3-3**

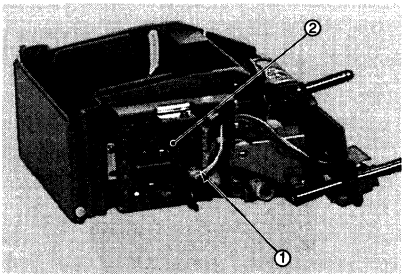
**3. Front cover**
1) Remove the upper cover and bottom cover.
2) Remove one of the screws fixing the connector.




① Connector ② Screw

**Figure 3-4**

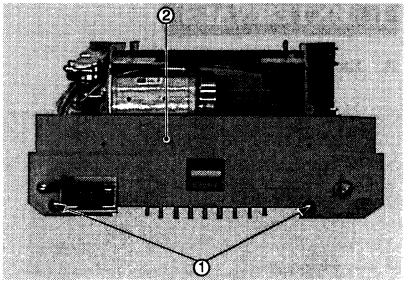
3) Disconnect the connector (J1) on the envelope feeder controller.




① Connector (J1)
② Envelope feeder controller

**Figure 3-5**

4) Remove the two screws.
5) Remove the front cover.



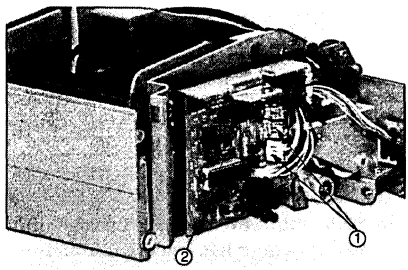

① Screws ② Front cover

**Figure 3-6**

## II. DRIVE SYSTEM

**A. Envelope Feed Motor (M11)**

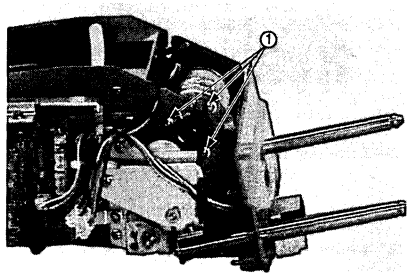
1) Remove the upper cover and bottom cover.
2) Disconnect the connector J2 and the connector J4.




① Connector (J2,J4)
② Envelope feeder controller

**Figure 3-7**

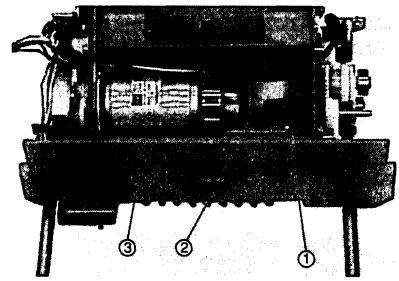
3) Remove the three screws.




① Screws

**Figure 3-8**

4) Remove the screw fixing the plate mounted the motor.
   Slide the envelope feed motor and the plate mounted the motor to the right.
5) Remove the envelope feed motor (M11).



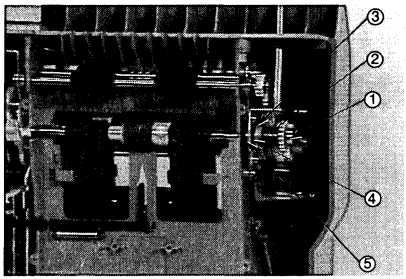

① Screws ② Plate mounted the motor
③ Envelope feed motor (M11)

**Figure 3-9**

## III. PAPER TRANSPORT SYSTEM

**A. Envelope Pick-up Belt**

1) Remove the bottom cover.
2) Remove the clutch stopper, the clutch, the dowel pin, and the bushing and the E-ring from the right side.

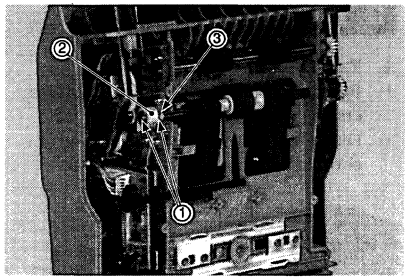



① Clutch stopper ② Clutch
③ Dowel pin ④ E-ring
⑤ Bushing

**Figure 3-10**

**Note:** Be careful not to lose the dowel pin.

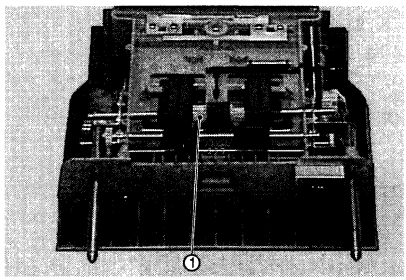
3) Remove the two E-rings, then remove the ring, and the bushing from the left side.




① E-rings ② Ring
③ Bushing

**Figure 3-11**

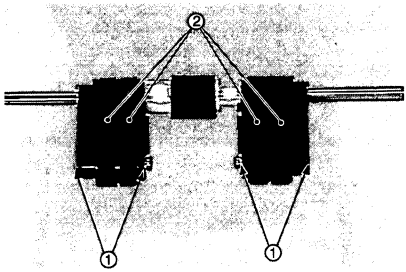
4) Sliding the envelope pick-up roller unit to the right or left, remove it from the envelope feeder.




① Envelope pick-up roller unit

**Figure 3-12**

5) Remove the four E-rings.
6) Remove the envelope pick-up belt.

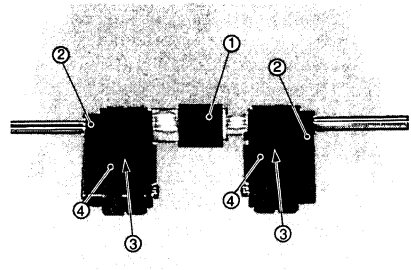



① E-rings
② Envelope pick-up belt

**Figure 3-13**

**B. Envelope pick-up roller**

1) Remove the bottom cover.
2) Remove the envelope pick-up roller unit.
3) Remove the envelope pick-up belt.
4) Remove the belt pulleys and belt arms.
5) Remove the envelope pick-up rollers.

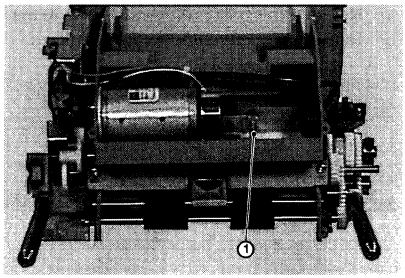



① Envelope pick-up roller
② Belt arms
③ Belt pulleys
④ Envelope pick-up belt

**Figure 3-14**

**C. Upper Feed Roller**

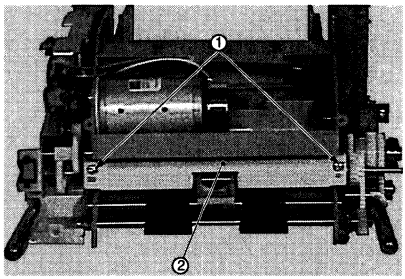
1) Remove the upper cover, the bottom cover, and the front cover.
2) Remove the spring.



① Spring

**Figure 3-15**

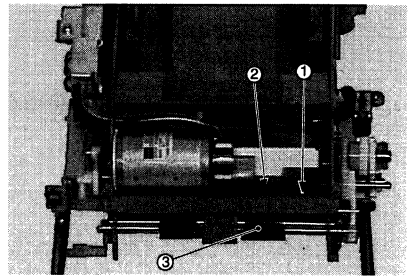
3) Remove two screws fixing the front plate.



① Screws ② Front plate

**Figure 3-16**

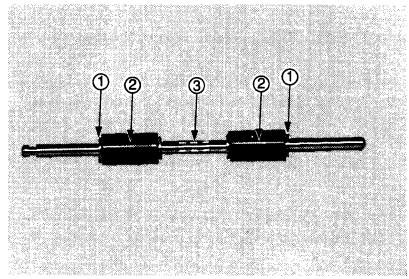
4) Remove the screw fixing the plate mounted the motor.
   Remove the front plate.
5) Remove the upper feed roller unit.



① Springs ② Plate mounted the motor
③ Upper feed roller unit

**Figure 3-17**

6) Remove two E-rings, and the upper feed rollers from the roller rod.

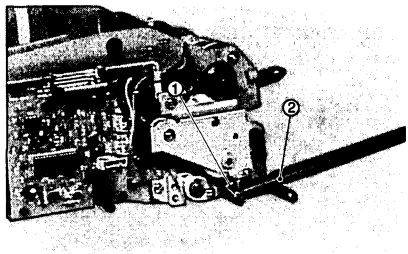


① E-rings ② The upper feed roller
③ Roller rod

**Figure 3-18**

**D. Lower Feed Roller**

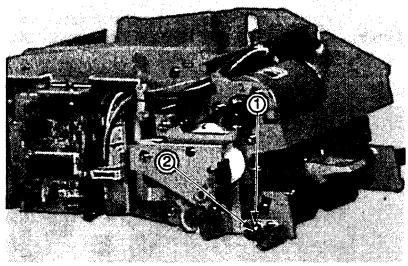
1) Remove the upper cover, the bottom cover, and the front cover.
2) Remove the screw.
3) Remove the left positioning rod.



① Screw ② Left positioning rod

**Figure 3-19**

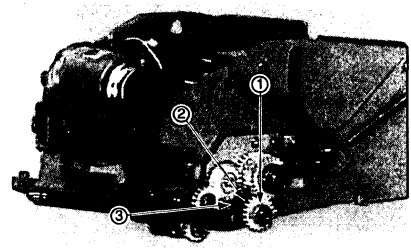
4) Remove the E-ring, the bushing.



① E-ring ② Bushing

**Figure 3-20**

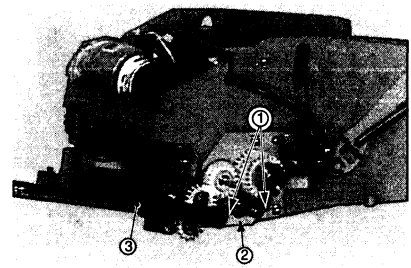
5) Remove the clutch stopper, clutch and the dowel pin.



① Clutch stopper ② Dowel pin
③ Clutch

**Figure 3-21**

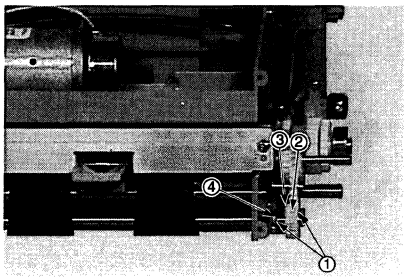
6) Remove the two screws.
Remove the right positioning rod with the plate fixing the rod.



① Screws ② Plate fixing the rod
③ Right positioning rod

**Figure 3-22**

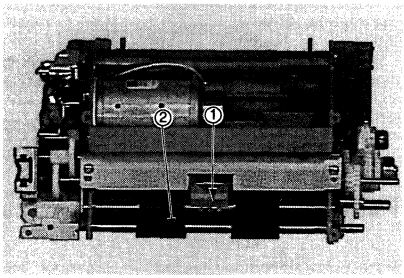
7) Remove the two E-rings, the gear, the bushing, and the dowel pin.



① E-rings ② Gear
③ Bushing ④ Dowel pin

**Figure 3-23**

8) Remove the lower feed roller unit lifting the lever.

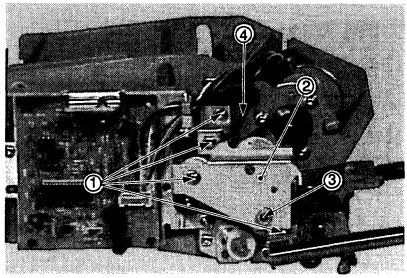


① Lever
② Lower feed roller unit

**Figure 3-24**

**E. Separation Roller**

1) Remove the upper cover and the bottom cover.
2) Remove four screws, the ground cable, the cover plate and bushing.

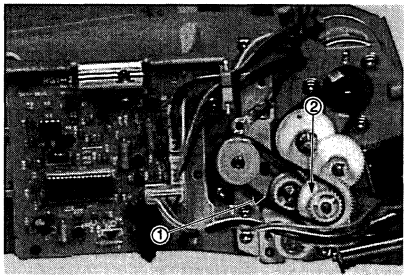


① Screws ② Cover plate
③ Bushing ④ Ground cable

**Figure 3-25**

3) Remove the belt and pull the gear forward.

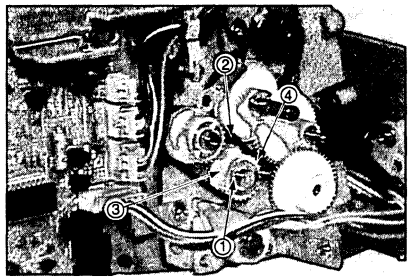
**Note:** Be careful not to lose the dowel pin when removing the gear.



① Belt ② Gear

**Figure 3-26**

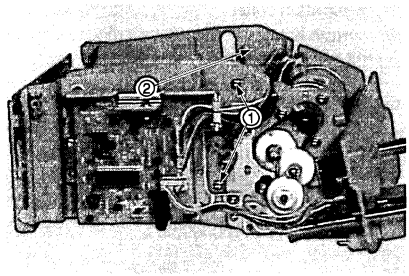
4) Remove the E-ring, the belt, the gear and the dowel pin.



① E-ring ② Belt
③ Gear ④ Dowel pin

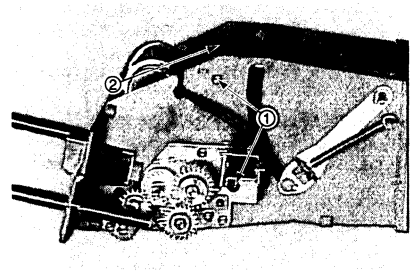
**Figure 3-27**

5) Remove the four screws from the left and right side.
Remove the separation roller cover.



① Screws
② Separation roller cover

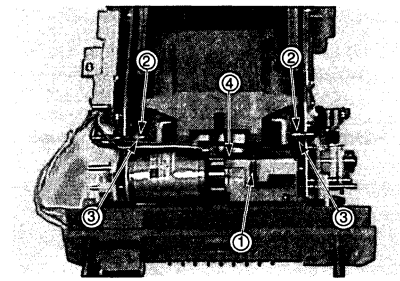
**Figure 3-28a**



① Screws
② Separation roller cover

**Figure 3-28b**

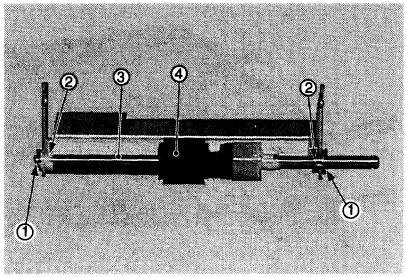
6) Remove the spring, the two E-rings and the two bushings.
Remove the separation roller unit.



① Spring ② E-rings
③ Bushing
④ Separation roller unit

**Figure 3-29**

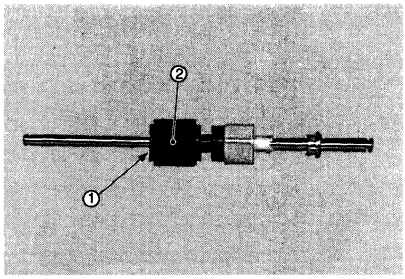
7) Remove the E-ring and the bushing.
Remove the separation roller rod and the rollers.




① E-ring ② Bushing
③ Separation roller rod
④ Separation roller

**Figure 3-30**

8) Remove the E-rings.
Remove the separation roller.

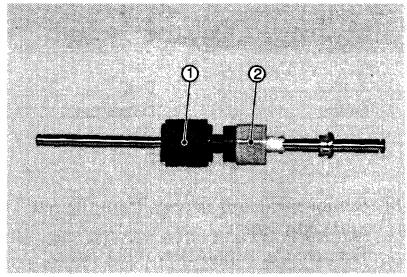



① E-rings ② Separation roller

**Figure 3-31**

**F. Torque Limitter**

1) Remove the upper cover and the bottom cover.
2) Remove the separation roller unit.
3) Remove the two E-rings and the two bushings.
4) Remove the separation roller and the roller rod.
5) Remove the E-ring.
6) Remove the separation roller.
7) Remove the torque limitter.



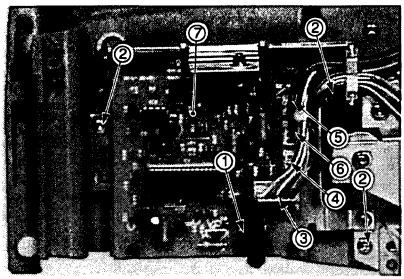

① Separation roller
② Torque limitter

**Figure 3-32**

## IV. ELECTRICAL COMPONENTS

**A. Envelope Feeder Controller PCB**

1) Remove the upper cover and bottom cover.
2) Remove the sensor lever.
3) Remove the cables from cable clamp, and disconnect the connector (J1), connector (J2), connector (J3) and connector (J4).
4) Remove the three screws.
5) Remove the envelope feeder controller PCB.




① Sensor lever
② Screws
③ Connector J1
④ Connector J2
⑤ Connector J3
⑥ Connector J4
⑦ Envelope feeder controller PCB

**Figure 3-33**

# CHAPTER 4

# MAINTENANCE AND SERVICING

## I. PARTS REPLACEMENT SCHEDULE

None.

## II. CONSUMABLE

None.

## III. PERIODIC SERVICE SCHEDULE

None.

# CHAPTER 5

# TROUBLESHOOTING

# I. INTRODUCTION

**A. Initial Check**

The following requirements should be met when installing the envelope feeder:

- The line voltage should not vary more than ±10% from the voltage shown on the rating plate of the printer.
- The room temperature should be kept between 10°C and 32.5°C; the relative humidity, between 20% and 80%.
- The envelope feeder should not be exposed to ammonia gas. It should not be put anywhere hot or humid place (near a water faucet, boiler, humidifier, or refrigerator), near naked flames, or anywhere dusty.
- The envelope feeder should not be exposed to direct sunlight. If it has to be put somewhere that gets the sun, the windows should be curtained to keep the sun off it.
- The envelope feeder should be put somewhere well ventilated.

**B. Basic procedure**

When a problem occurs in the envelope feeder, make an initial check and troubleshoot the envelope feeder as described in section III of this chapter to find the cause and solve the problem.

## II. TROUBLESHOOTING MALFUNCTIONS

When carrying out the troubleshooting in this section, pay attention to the following point.

- Switch off the power before removing this unit from the printer.

### M-1 Faulty Envelope Feed Motor.

| Possible cause | Step | Check | Result | Measure |
|---|---|---|---|---|
| Connector contact | 1 | Is connector J1, J2 and J4 on the envelope feeder controller PCB making good contact? | NO | If the contacts are dirty, clean them off. |
| Feeder cable | 2 | Check continuity between connector J1 and J11. Is it good? | NO | Replace the feeder cable. |
| Envelope feed motor | 3 | Is the resistance between connector J4-1 (FM) and J4-3 (GND) of the envelope feed motor about 10Ω? | NO | Replace the envelope feed motor. |
| Envelope feeder controller PCB<br><br>Paper feed PCB (printer)<br>DC controller PCB (printer) | | | YES | Replace the envelope feeder controller PCB. If that does not solve the trouble, replace the printer's paper feed PCB of the printer or the DC controller PCB of the printer. |

**M-2 No Envelopes are Fed.**

| Possible cause | Step | Check item | Result | Measure |
|---|---|---|---|---|
| Upper manual feed paper sensor lever (printer) | 1 | Remove the envelope feeder from the printer. Does the upper manual feed paper sensor lever of the printer move smoothly? | NO | Fix so that it does move smoothly. |
| Connector contact | 2 | Is connector J1, J2, J3 and J4 on the envelope feeder controller PCB making good contact? | NO | If the contacts are dirty, clean them off. |
| Feeder cable | 3 | Check continuity between connector J1 and J11. Is it good? | NO | Replace the feeder cable. |
| Envelope sensor | 4 | Is the voltage between connector J1-2 (ENVEMP) and connector J1-3 (GND) on the envelope feeder controller PCB less than 1.0 V when envelopes are loaded into the envelope feeder? Also is it about 5 V when the envelopes are unloaded? | NO | Replace the envelope feeder controller PCB. |
| Envelope feed motor | 5 | Is the resistance between connector J4-1 (FM) and J4-3 (GND) of the envelope feed motor of the envelope feed motor about 10Ω? | NO | Replace the envelope feed motor. |
| Envelope feed solenoid | 6 | Is the resistance between connector J3-1 (FSL) and J3-2 (GND) of the envelope feed solenoid about 120Ω? | NO | Replace the envelope feed solenoid. |
| Envelope feeder controller PCB<br><br>Paper feed PCB (Printer)<br>DC controller PCB (Printer) | | | YES | Replace the envelope feeder controller PCB. If that does not solve the trouble, replace the paper feed PCB of the printer or DC controller PCB of the printer. |

## III. PAPER TRANSPORT TROUBLESHOOTING

If envelopes jam frequently, perform the following procedure.

| Possible cause | Step | Check | Result | Measure |
|---|---|---|---|---|
| Envelope | 1 | Are envelopes recommended by Canon being used? | NO | Advise the customer to use the recommended envelopes and not use the following envelopes.<br>• Envelopes not folded shut correctly<br>• Curled, wrinkled, or folded envelopes<br>• Bodly-made envelopes<br>• Envelopes with transparent windows<br>• Envelopes with fasteners, snaps, tie strings, etc. |
| Number of envelopes piled up | 2 | Is the envelope feeder overloaded? | YES | Instruct the customer not to load the feeder with too many envelopes. |
| | 3 | Are the envelopes set on the tray correctly? | NO | Advise the customer to set the envelopes on the tray correctly. |
| Envelope set guide | 4 | Does the envelope set guide press strongly against the envelopes? | YES | Advise the customer not to make the guide press too strongly against the envelopes. |
| Weight | 5 | Is the envelope holder set properly? | NO | Set the weight properly. |
| Cassette | 6 | Is there at least one sheet in the upper cassette of the printer? | NO | Advice the customer to put at least one sheet in the upper cassette when feeding envelopes from this feeder unit. |
| Separator roller, paper pick-up belt, feed roller | 7 | Is the separation roller, paper pick-up belt, or feed roller deformed, worn, dirty, or etc.? | YES | If the rollers are dirty, clean them. If the rollers are worn or deformed, replace them. |
| Cassette cover | | | NO | If the cassette cover is dirty, clean it. If it is deformed, replace it. |

# IV. LOCATION OF ELECTRICAL PARTS/FUNCTION

## A. Photointerruptor, Solenoid, Motor, and Feeder Controller PCB

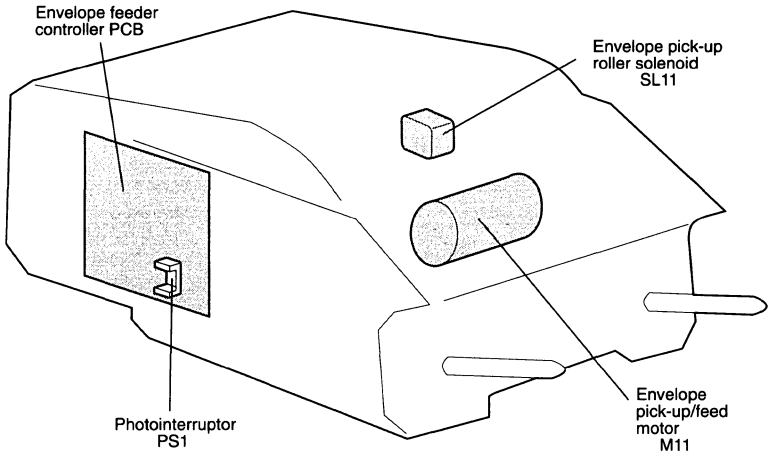


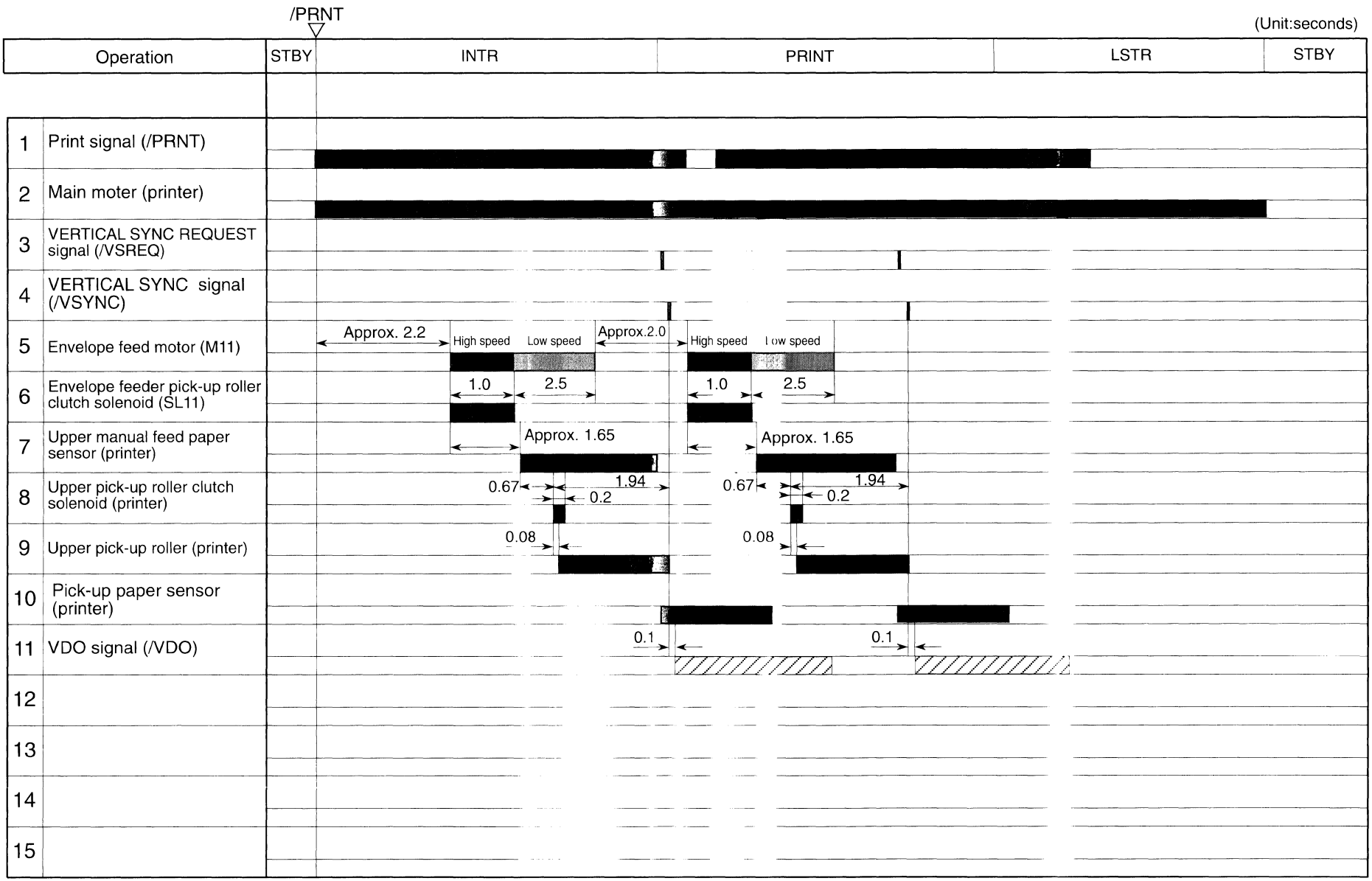

**Figure 5-1**

**Table 5-1**

| Symbol | Name | Code | Role |
|---|---|---|---|
| | Photointerruptor | PS1 | Sensing envelope |
| | Envelope pick-up roller solenoid | SL11 | Operating the paper pick-up belt |
| M | Envelope pick-up/feed motor | M11 | Operating solenoid, feed roller, and separator roller drive |
| | Envelope feeder controller PCB | PCB | Operating motor, solenoid, sonsor and other drive |

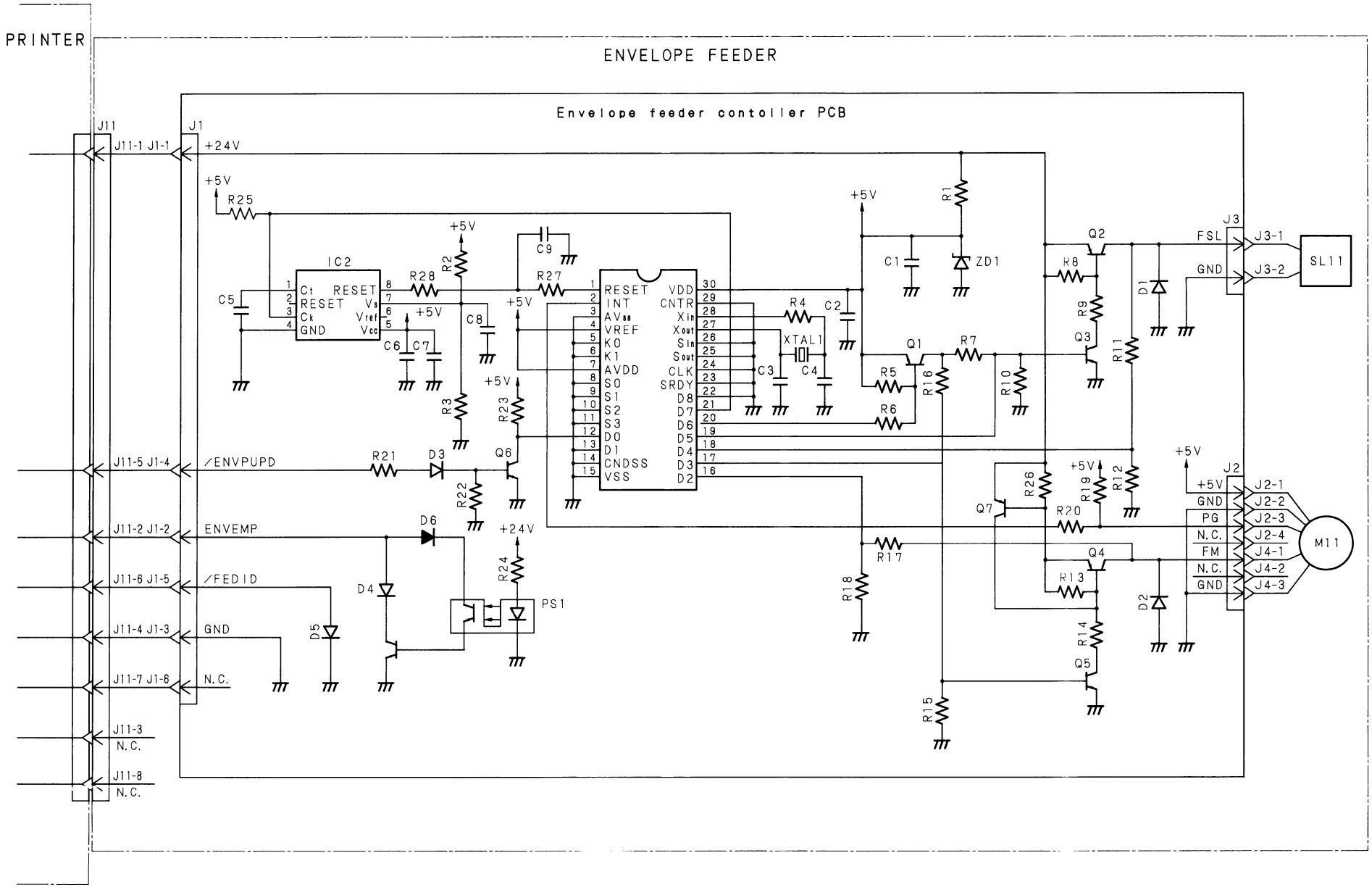
# APPENDIX

● Timing chart for two consecutive single-side prints on the envelope



## II. LIST OF SIGNALS

| Abbreviation | Signal name | Function |
|---|---|---|
| ENVEMP | Envelope detection signal | Signal detecting whether or not there are envelopes in the envelope feeder. |
| /ENVPUPD | Envelope pick-up/feed signal | Signal for controlling envelope feed motor and solenoid. |
| /FEDID | Envelope feeder detection signal | Signal detecting whether or not the envelope feeder is loaded. |


PRINTER
ENVELOPE FEEDER
Envelope feeder contoller PCB
J11
J1
J11-1 J1-1
+24V
+5V
R25
IC2
Ct
RESET
Ck
GND
Vs
Vref
Vcc
R28
R2
C9
C5
C6
C7
C8
R27
R3
R23
RESET
INT
AVss
VREF
K0
K1
AVDD
S0
S1
S2
S3
D0
D1
CNDSS
VSS
VDD
CNTR
Xin
Xout
Sin
Sout
CLK
SRDY
D8
D7
D6
D5
D4
D3
D2
R4
C2
XTAL1
C3
C4
C1
ZD1
R1
R5
R6
Q1
R7
R16
R10
Q2
R8
R9
Q3
R11
D1
J3
FSL
GND
J3-1
J3-2
SL11
J11-5 J1-4
/ENVPUPD
R21
D3
Q6
R22
J11-2 J1-2
ENVEMP
D6
+24V
R24
PS1
J11-6 J1-5
/FEDID
D4
D5
J11-4 J1-3
GND
J11-7 J1-6
N.C.
J11-3
N.C.
J11-8
N.C.
R17
R18
R15
Q7
R26
R19
R12
R20
Q4
R13
R14
Q5
D2
J2
J2-1
J2-2
J2-3
J2-4
J4-1
J4-2
J4-3
PG
N.C.
FM
M11

Prepared by
PERIPHERAL PRODUCTS QUALITY PLANNING DIV.
PERIPHERAL PRODUCTS TECHNICAL DOCUMENTS DEPT.
CANON INC
Printed n Japan

REVISION 0 (OCT. 1991) (29798)

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo 146, Japan

Canon

PRINTED IN JAPAN (IMPRIME AU JAPON) 1091 SE 0.20 CANON INC.