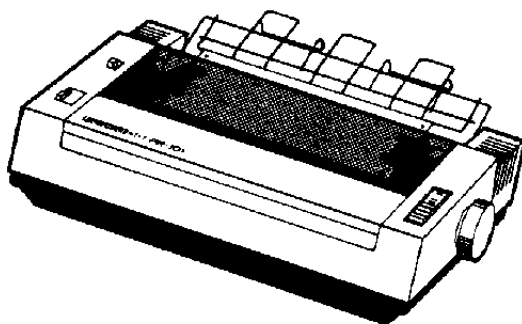


# Service Manual

**PR-1111**



A division of:

**Roland DG Canada Inc.**

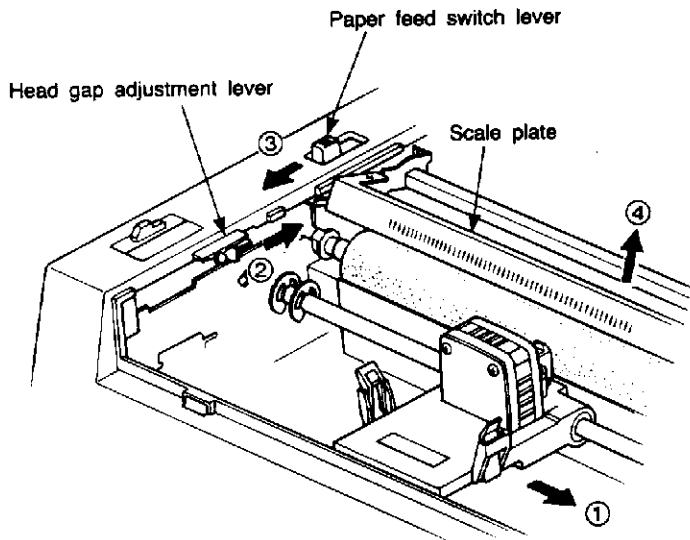
 **Roland**  
DIGITAL GROUP

Vancouver • Toronto • Montréal • Ottawa • Calgary

# ADJUSTMENTS

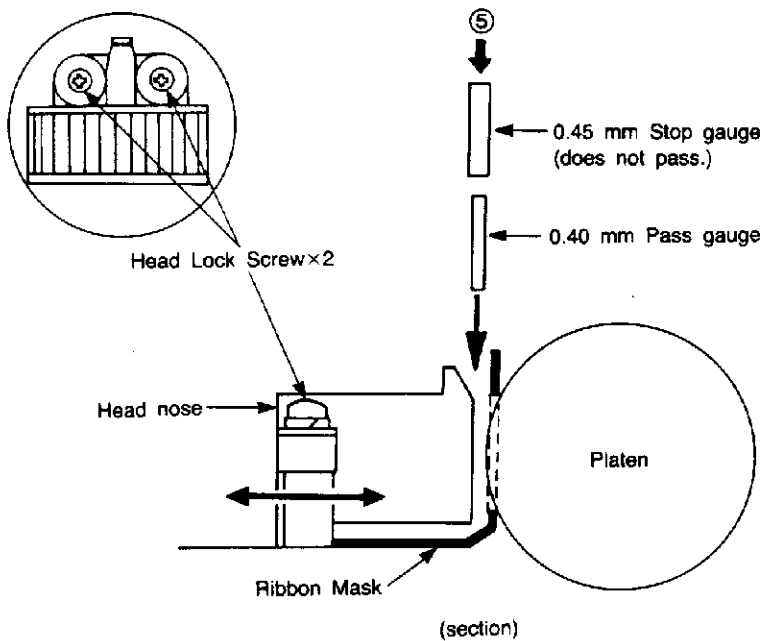
## 1. Adjustment of the head gap

### 1-1 Preparation



- ① Move the carriage to the center of the platen roller.
- ② Turn the head gap adjustment lever to single sheet position.
- ③ Turn the paper feed switch lever to "TRACTOR" position.
- ④ Lift the scale plate.

### 1-2 Adjustment

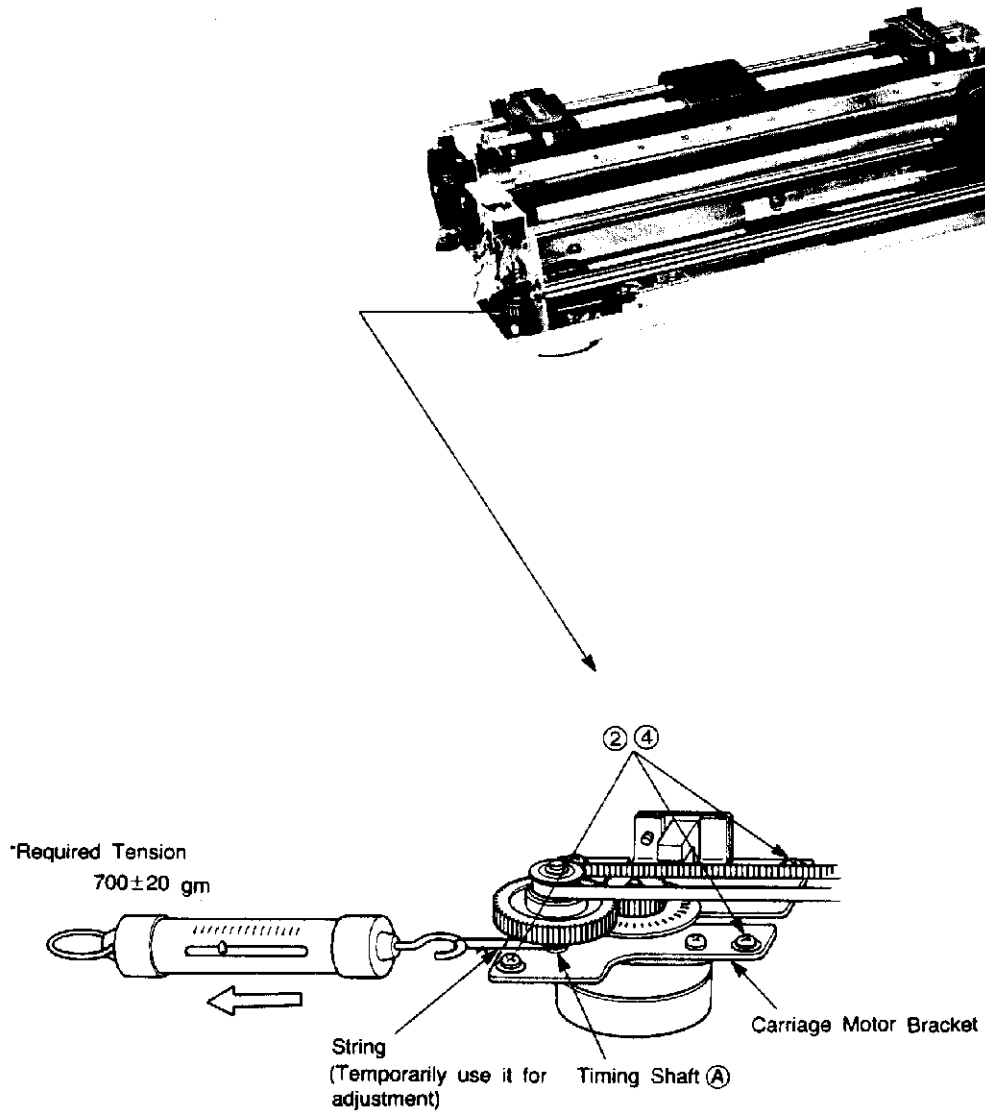


- ⑤ Adjust the gap between the platen and the head for a clearance of 0.4–0.45 mm by loosening the two head lock screws and moving the head forward or backward. Tighten screws and then secure with bond lock.

**NOTE:** Use Specified Jig for Adjustment.

## 2. Adjustment of the timing belt tension

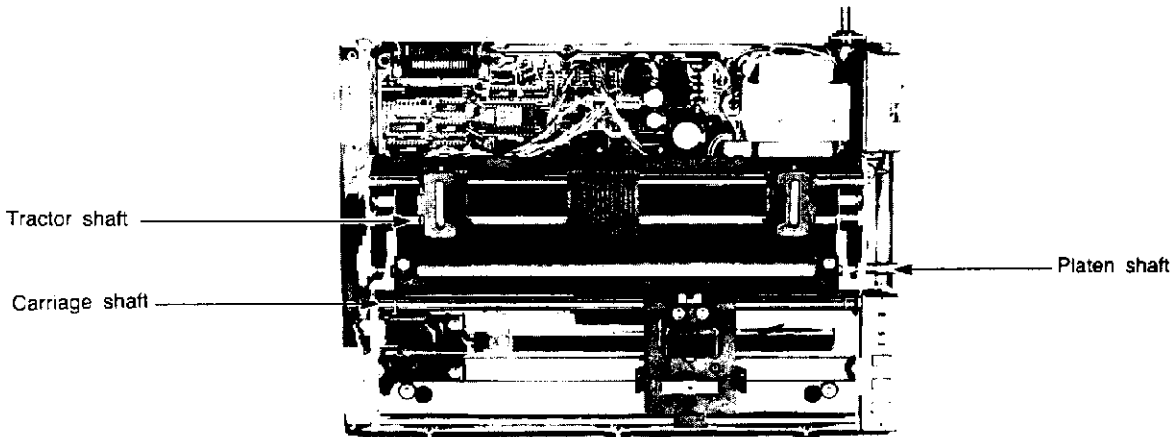
- ① Remove printing mechanism from the base of the machine. (Refer to page 5 Fig. 6 ㉔)
- ② Move the carriage to the extreme right and loosen the four screws on the carriage motor bracket, located at extreme left.
- ③ Attach tension gauge to timing gear shaft ㉑. Pull to the left until 680–720 gm of tension has been attained.
- ④ Maintain tension and tighten the four bracket screws. Secure with bond lock.



# HANDLING PRECAUTIONS

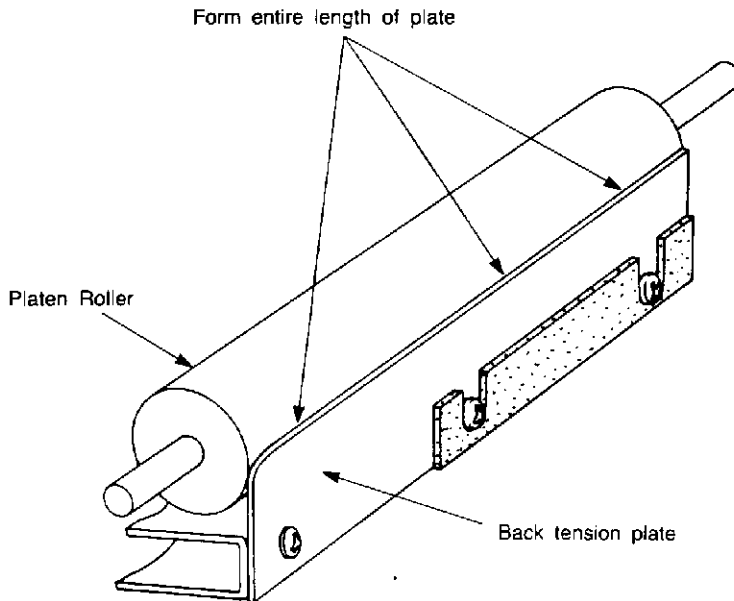
When disassembling and assembling the printer, avoid scratching the platen and shafts.

Caution should also be exercised when removing the E-ring on the left side of the carriage shaft because of the location of the gear and detector.



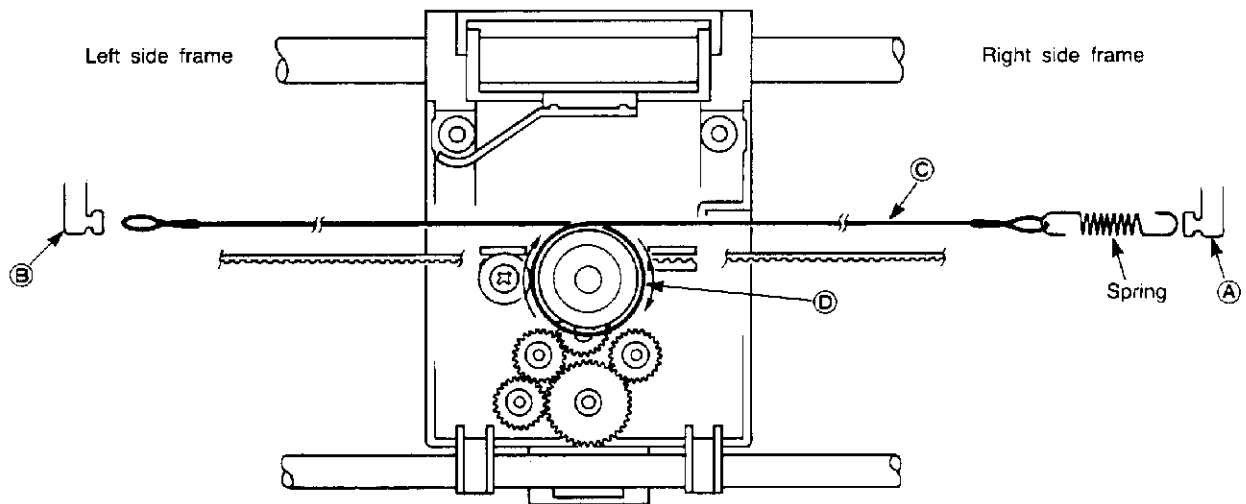
## 1. Back tension plate

After installing the platen, check and confirm that there is no clearance between platen and the back tension plate. Otherwise remove back tension plate (three screws) and form as needed.



## 2. Ribbon feed wire removal and replacement

1. Remove the feed wire © from the left side frame of the printer and carefully remove the spring.
2. To replace, attach feed wire to left side frame ⑥ of printer. Feed the wire clockwise around the white plastic pulley ④ and out toward the right side of the printer.  
Connect the spring to the feed wire and then reattach it to the side frame ①.
3. Move the printer to the left and then to the right to make sure there is no bind and that ribbon feed is normal.



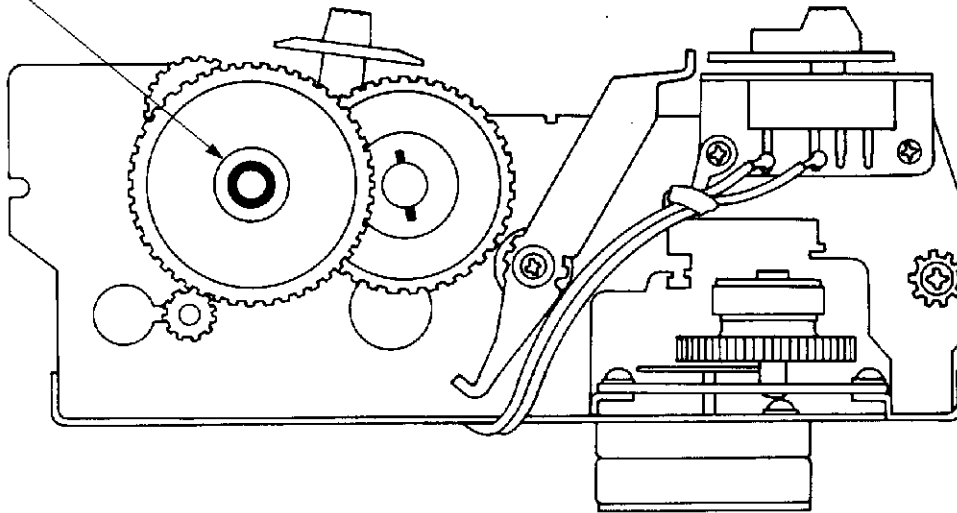
(Bottom View)

### 3. Lubrication Requirements.

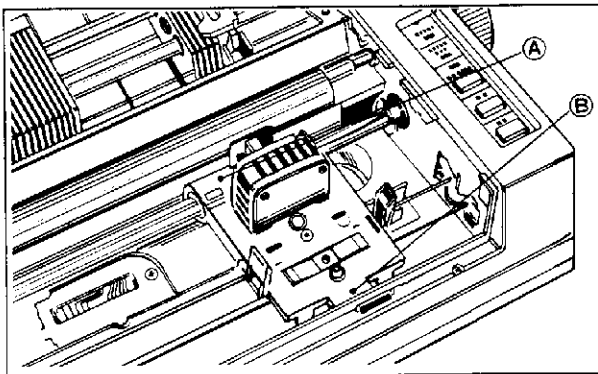
If Lubrication is required, the following oil and greases are recommended in order to avoid machine damage.

Parts	Specified No.
① Middle gear shaft	PJOL-K1879 grease
② Carriage shaft, carriage guide shaft	PJOL-948P oil
•Other Mechanical part	PJOL-SG3451 grease

① Middle gear shaft



(View from the left side)

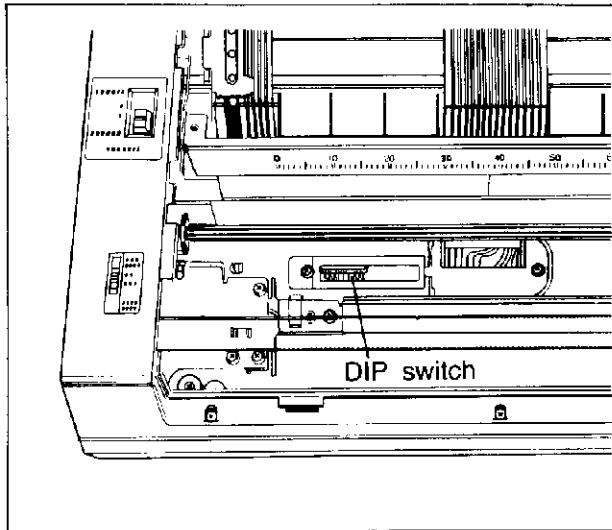


② Carriage shaft and carriage guide shaft.

Apply oil to (A) and (B)

# SETTING OF DIP SWITCH

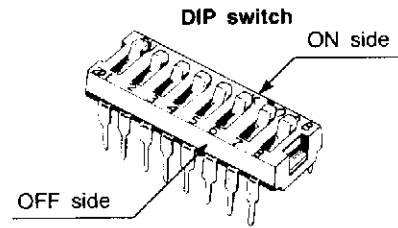
## 1. Location of Switch



## 2. DIP Switch Setting Procedure

Turn off the Power switch before setting switch.

1. Remove the TOP and Front covers. (see page 4)
2. Move the Carriage to the right side.
3. Lift the DIP switch cover (Transparent sheet) from the right edge.
4. Set the switches using the setting chart.
5. After completing switch settings, reinstall covers.



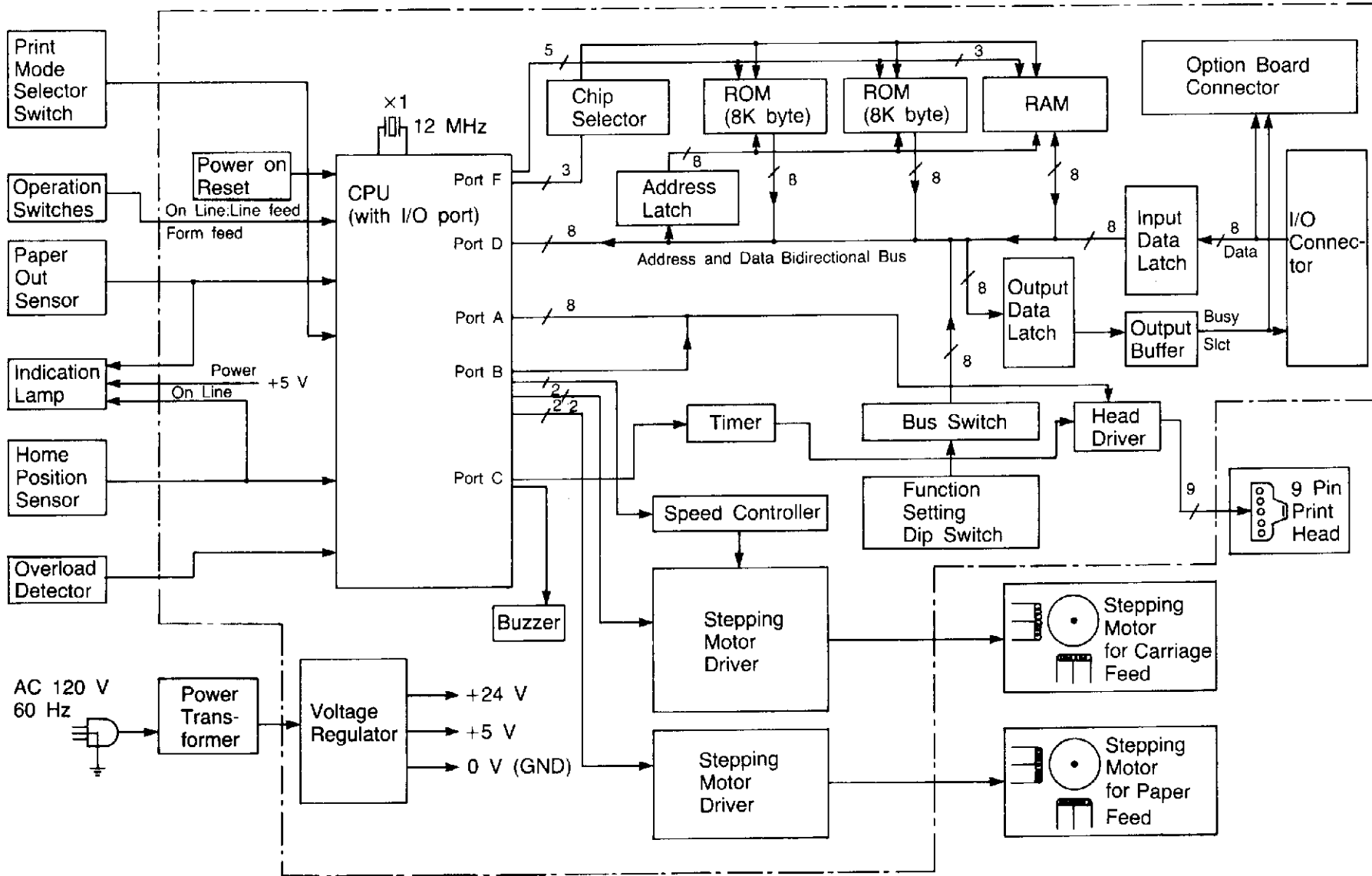
SWITCH NUMBER	FUNCTION	ON	OFF	POSITION WHEN SHIPPED
SW1 SW2	Printer Mode	See Printer Mode Chart		ON ON
SW3	AUTO FEED XT	Fixed Internally	Not Fixed Internally	OFF
SW4	Skip Perforation	1 Inch Skip	No Skip	OFF
SW5 SW6 SW7	International Character Set	See International Character Set Chart		ON ON ON
SW8	7 bit/8 bit	7 bit	8 bit	OFF

Initial Setting of line feed is 1/6".

SW5	SW6	SW7	INTERNATIONAL CHARACTER SET	FORM LENGTH (INCHES)
ON	ON	ON	USA	11
OFF	ON	ON	FRANCE	12
ON	OFF	ON	GERMANY	12
OFF	OFF	ON	ENGLAND	11
ON	ON	OFF	DENMARK	12
OFF	ON	OFF	SWEDEN	12
ON	OFF	OFF	ITALY	12
OFF	OFF	OFF	SPAIN	12

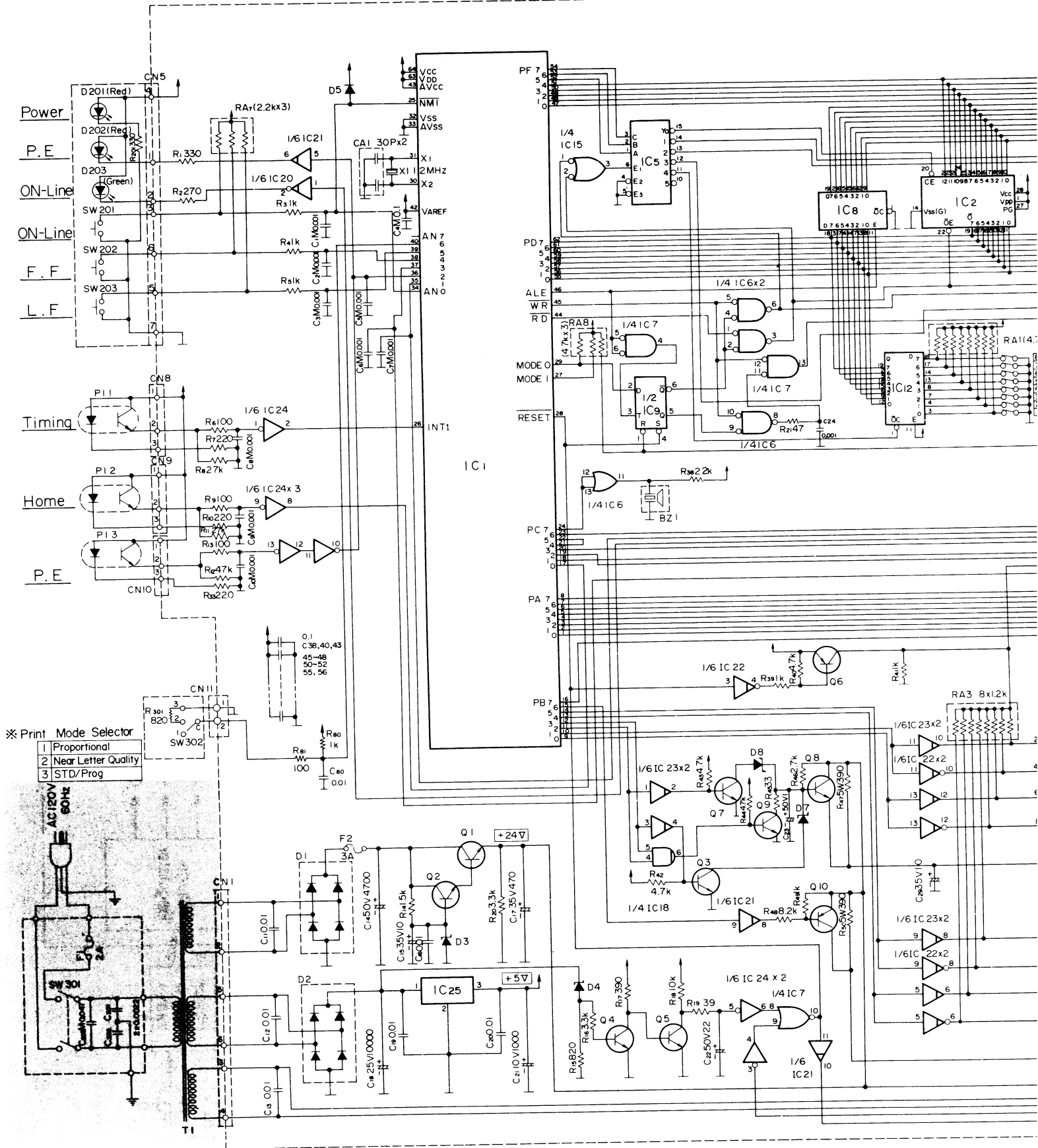
SW1	SW2	PRINTER MODE
ON	ON	Standard
OFF	ON	IBM Matrix Printer
ON	OFF	IBM Graphics Printer Character Set G1
OFF	OFF	IBM Graphics Printer Character Set G2

# BLOCK DIAGRAM

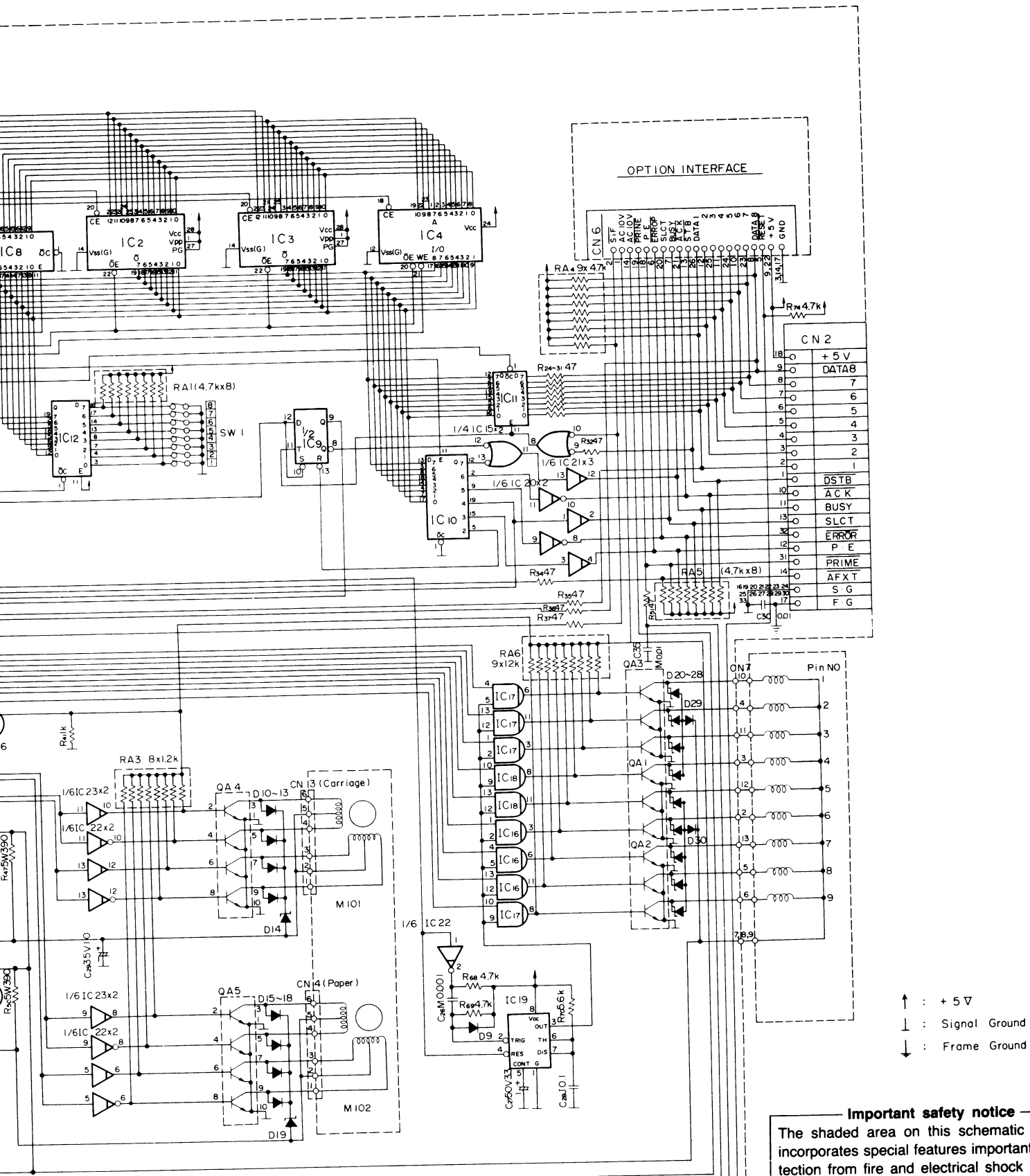




# SCHEMATIC DIAGRAM MODE



# DIAGRAM MODEL



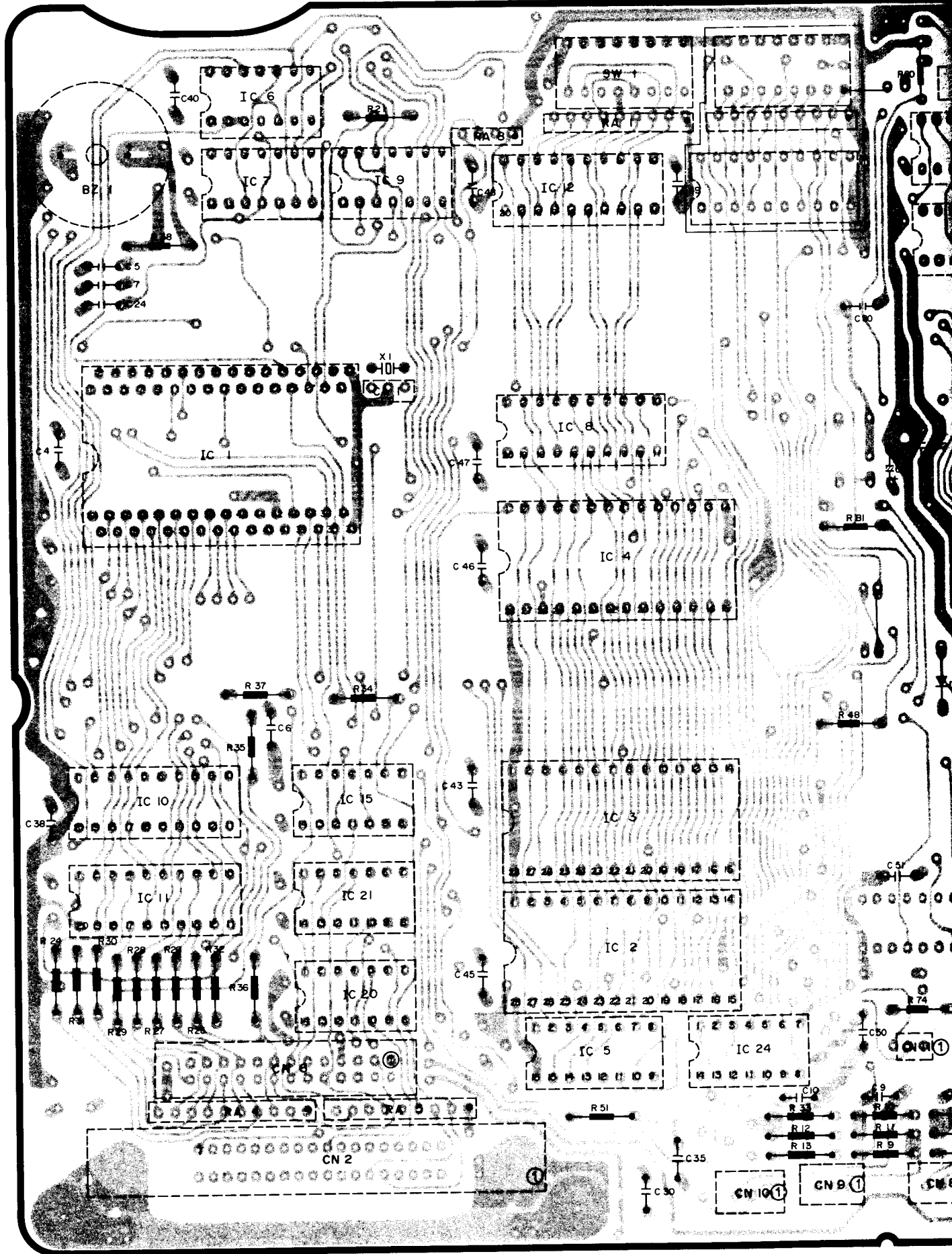
## OPTION INTERFACE

18	+ 5 V
9	DATAB
7	7
6	6
5	5
4	4
3	3
2	2
1	1
10	DSTB
11	ACK
13	BUSY
14	SLCT
15	ERROR
16	P E
17	PRIME
18	AFXT
19	S G
20	F G

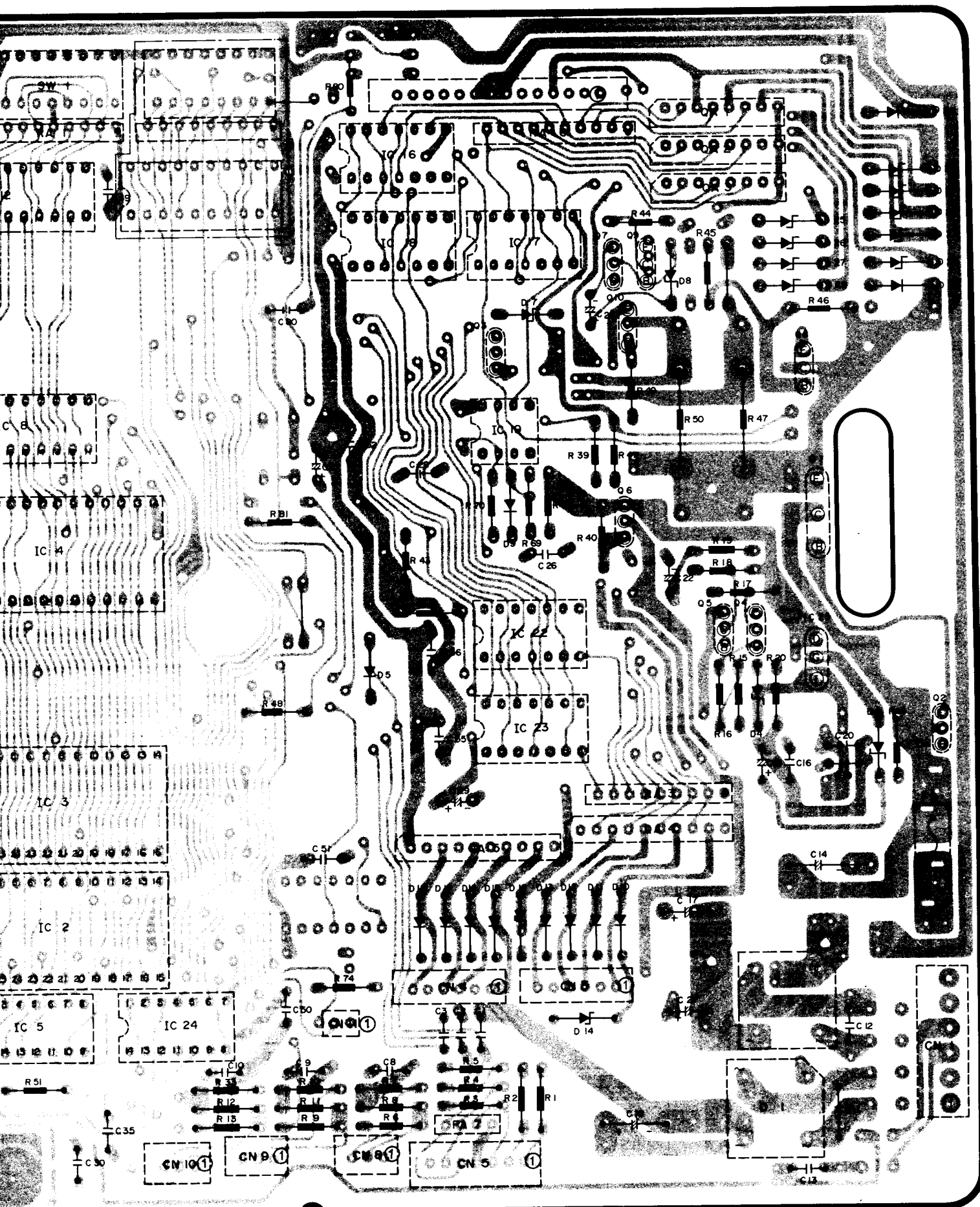
- ↑ : + 5 V
- ↓ : Signal Ground
- ⎓ : Frame Ground

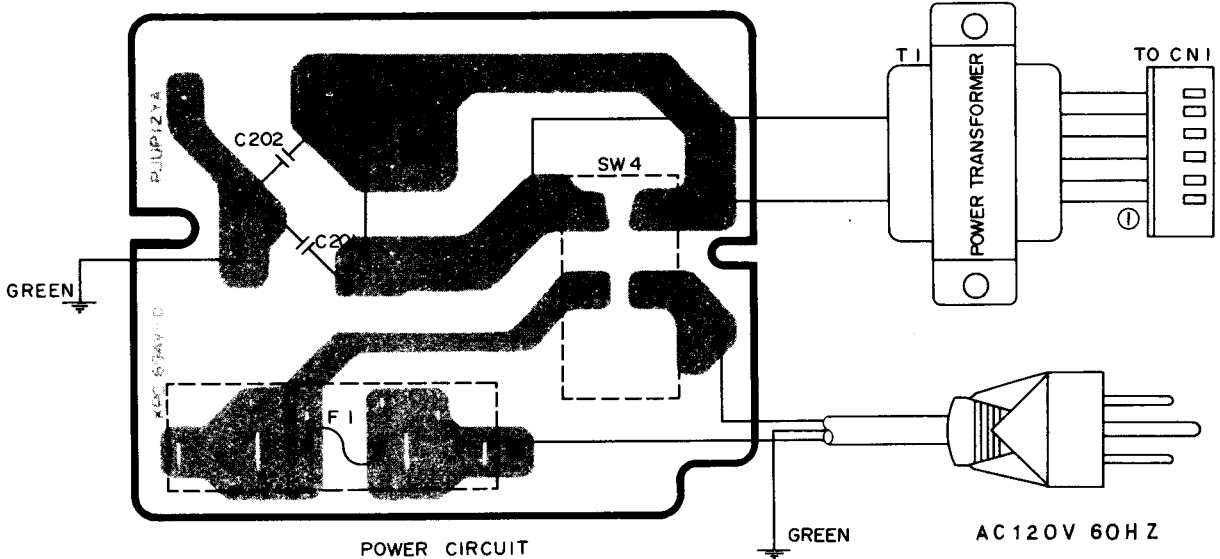
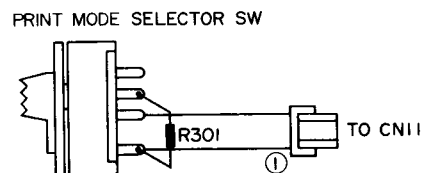
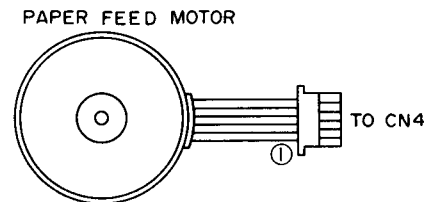
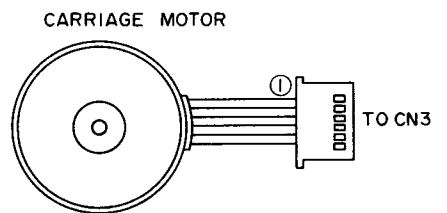
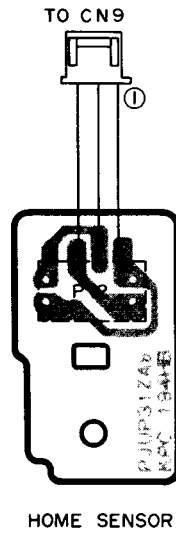
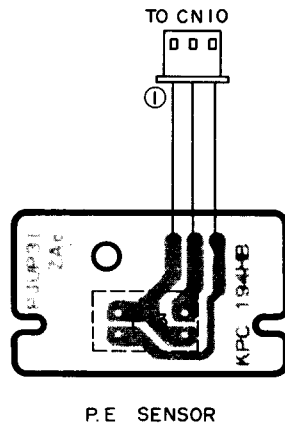
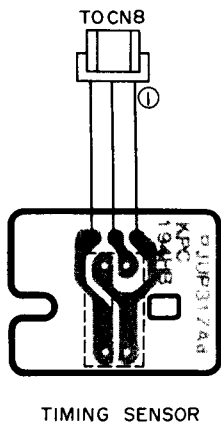
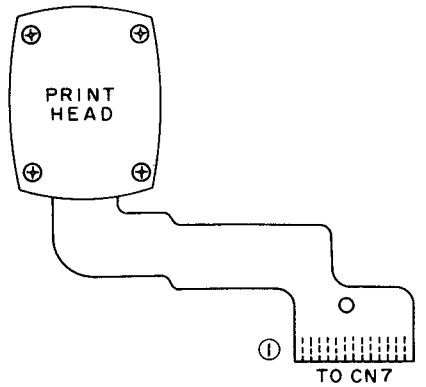
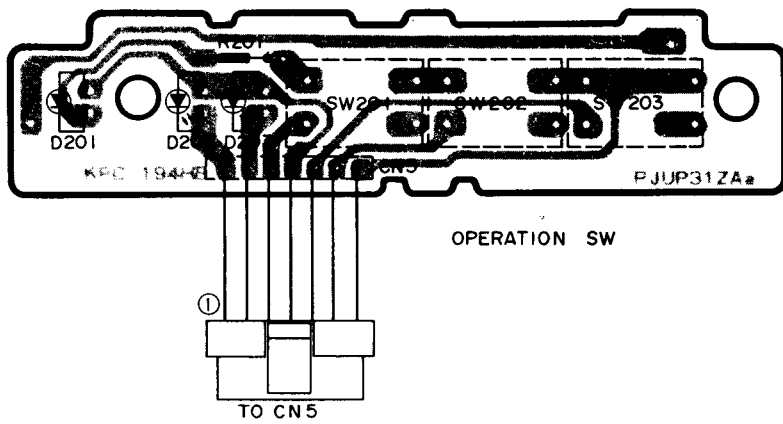
**Important safety notice**  
 The shaded area on this schematic diagram incorporates special features important for protection from fire and electrical shock hazards. When servicing it is essential that only manufacturer's specified parts be used for the critical components in the shaded areas of the schematic.

# CIRCUIT BOARD DIAGRAM MOD



# JIT BOARD DIAGRAM MODEL





## 5. Troubleshooting Guide.

### 5-1 Symptom

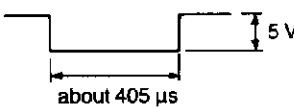
① When power switch is turned ON, the display LED does not light, and unit does not operate.

No.	Cause of Trouble	Check Point	Repair Method
1	1st stage fuse.	Is fuse blown? Check power filter P.C.B.	<ul style="list-style-type: none"> <li>● If fuse is blown, replace.</li> <li>● If fuse blows again after replacement, check next step.</li> </ul>
2	Power filter P.C.B.	Use tester to check if transformer side 1st stage voltage is produced.	<ul style="list-style-type: none"> <li>● If proper voltage is not produced, replace power filter P.C.B.</li> </ul>
3	Transformer	Disconnect transformer's 2nd stage connector and use tester to measure 2nd stage voltage. Voltage between pins 1-2: AC 30 V Voltage between pins 3-4: AC 10 V Voltage between pins 5-6: AC 10 V	If not normal, replace transformer.

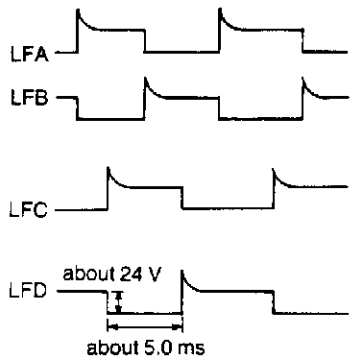
② Although 2nd stage transformer voltage is normal, display LED does not light.

No.	Cause of Trouble	Check Point	Repair Method
1	Disconnection between main P.C.B. and control panel.	Use tester to check (CN5)	Resolder disconnection.

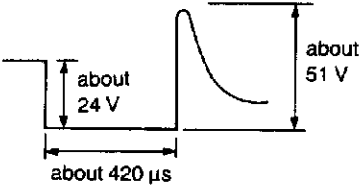
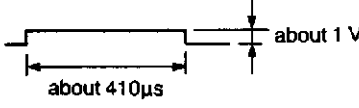
③ Carriage moves properly, but all 9 pins of type head do not type.

No.	Cause of Trouble	Check Point	Repair Method
1	Drive pulse width is faulty or absent.	Check Waveform of IC22 pin① with oscilloscope. 	<ul style="list-style-type: none"> <li>● If pulse width is abnormal, check CPU periphery.</li> </ul>

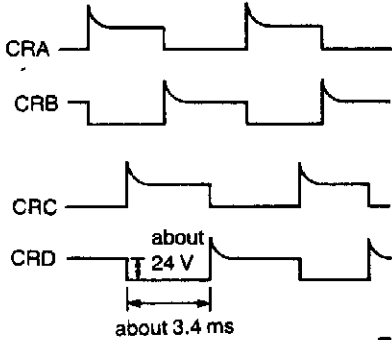
④ Paper feed motor does not move at all. Or, motor vibrates and does not operate properly.

No.	Cause of Trouble	Check Point	Repair Method
1	Paper feed faulty or drive circuit faulty, or logic circuit faulty.	Check transistor array QA5 (PU4119A) collector waveform.  Fig. B	<ul style="list-style-type: none"> <li>● If collector waveform is normal, motor is faulty.</li> <li>● If collector waveform is abnormal, check base waveform.</li> <li>● If base waveform is normal, QA5 is faulty.</li> <li>● If base waveform is abnormal, CPU periphery is faulty.</li> </ul>

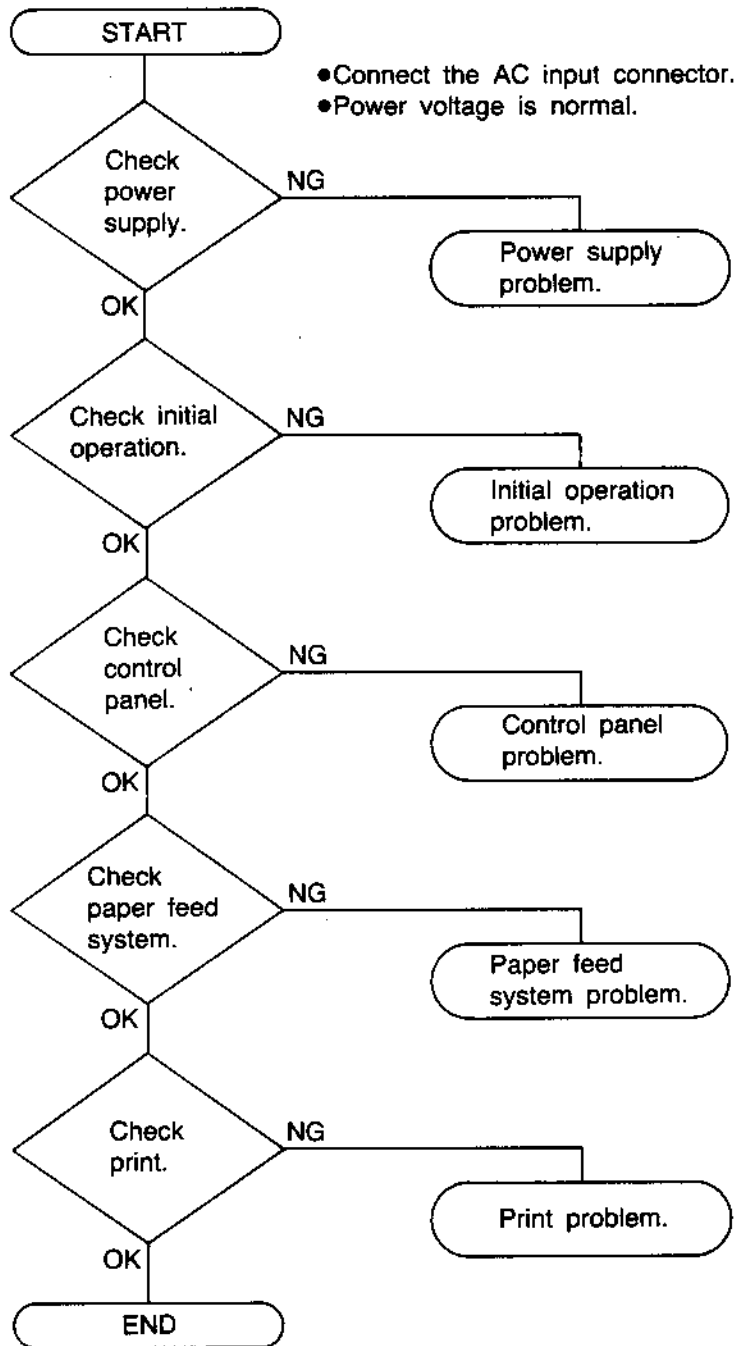
⑤ Carriage moves normally, but one part of type head pins do not type.

No.	Cause of Trouble	Check Point	Repair Method
1	Faulty type head.	Check transistor array QA1~QA3 collector voltage waveform. 	If waveform is normal, type head is faulty (replace w/new).
2	Drive circuit is faulty.	<ul style="list-style-type: none"> <li>• If waveform (No. 1 above) is normal, check to see if transistor array QA1~QA3 base voltage is normal.</li> <li>• If collector waveform is absent, check whether +24 V is impressed on pins 7,8,9 CN 7</li> </ul> 	<ul style="list-style-type: none"> <li>• If base waveform is normal, QA1~QA3 are faulty.</li> <li>• If +24 V is not present, main P.C.B. is faulty.</li> </ul>

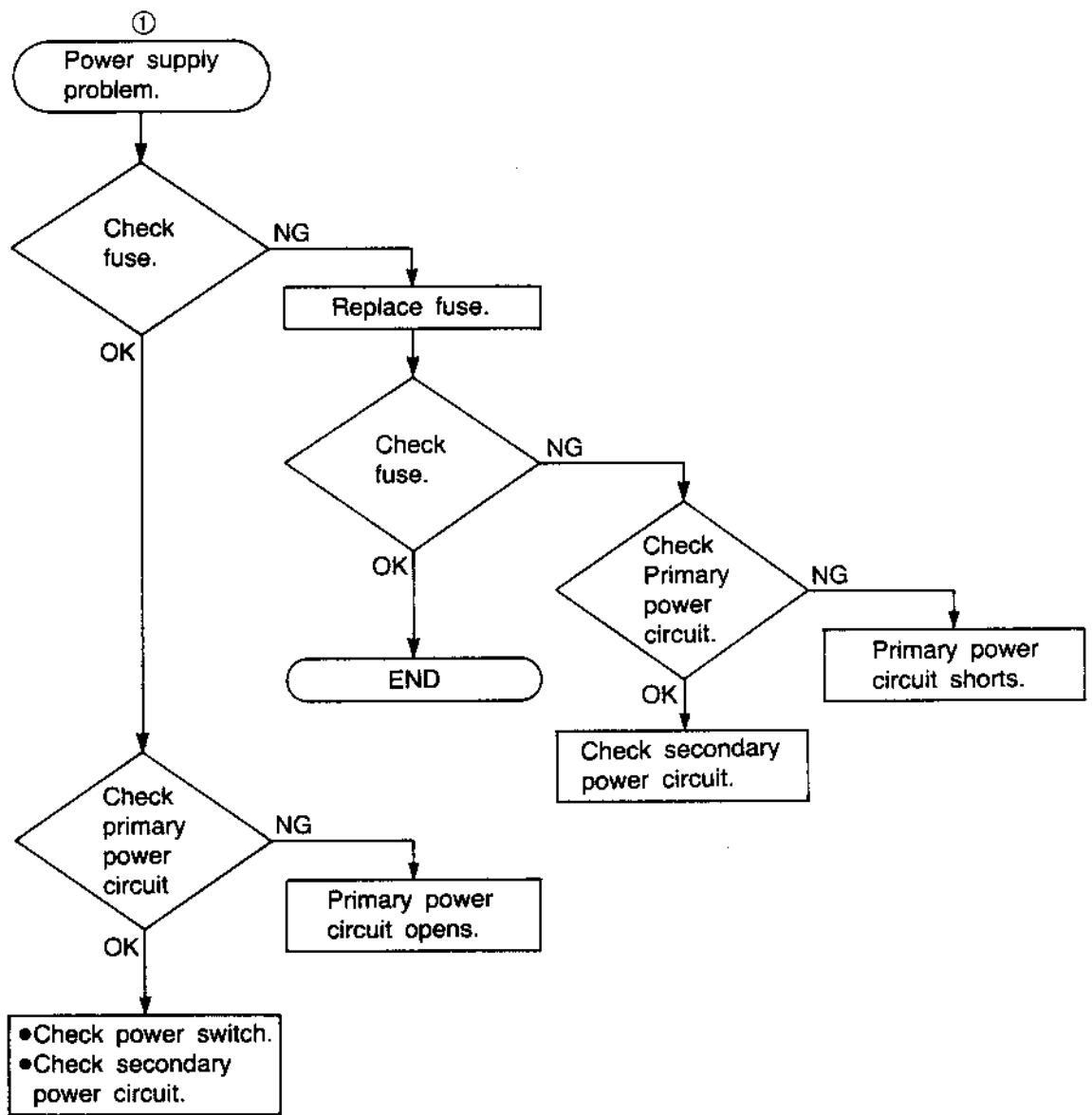
⑥ Carriage does not move.

No.	Cause of Trouble	Check Point	Repair Method
1	Motor faulty.	Check waveforms of CN3 (QA4 collector waveforms).  Fig. A	If collector waveforms are normal, motor is faulty (replace with new).
2	CPU periphery is faulty.	If above check reveals abnormal collector waveform, check QA4 base waveform.	If base waveform is abnormal, CPU periphery is faulty.
3	Timing sensor is faulty.	Buzzer sounds when carriage is stopped. Check whether pulse is put out at CPU INT (pin ②) when carriage is moved by hand.	If pulse is absent, timing sensor is faulty. OR repair disconnection between sensor and connector.

## 5-2 Trouble Shooting Flow Chart







②

Initial operation problem.

The carriage does not return to home position.

NO

Crash to left end.

NO

Check control P.C.B.

YES

Does not work.

YES

Is the alarm state?

YES

- Check mechanism.
- Check motor.
- Check carriage drive system.
- Check CPU periphery.

NO

Check CPU periphery.

NO

Crash to right end.

YES

Check home position sensor.

NO

Is the alarm state?

YES

- Check mechanism.
- Check motor.
- Readjust the carriage belt.

NO

Check CPU periphery.

③

Paper feed system problem.

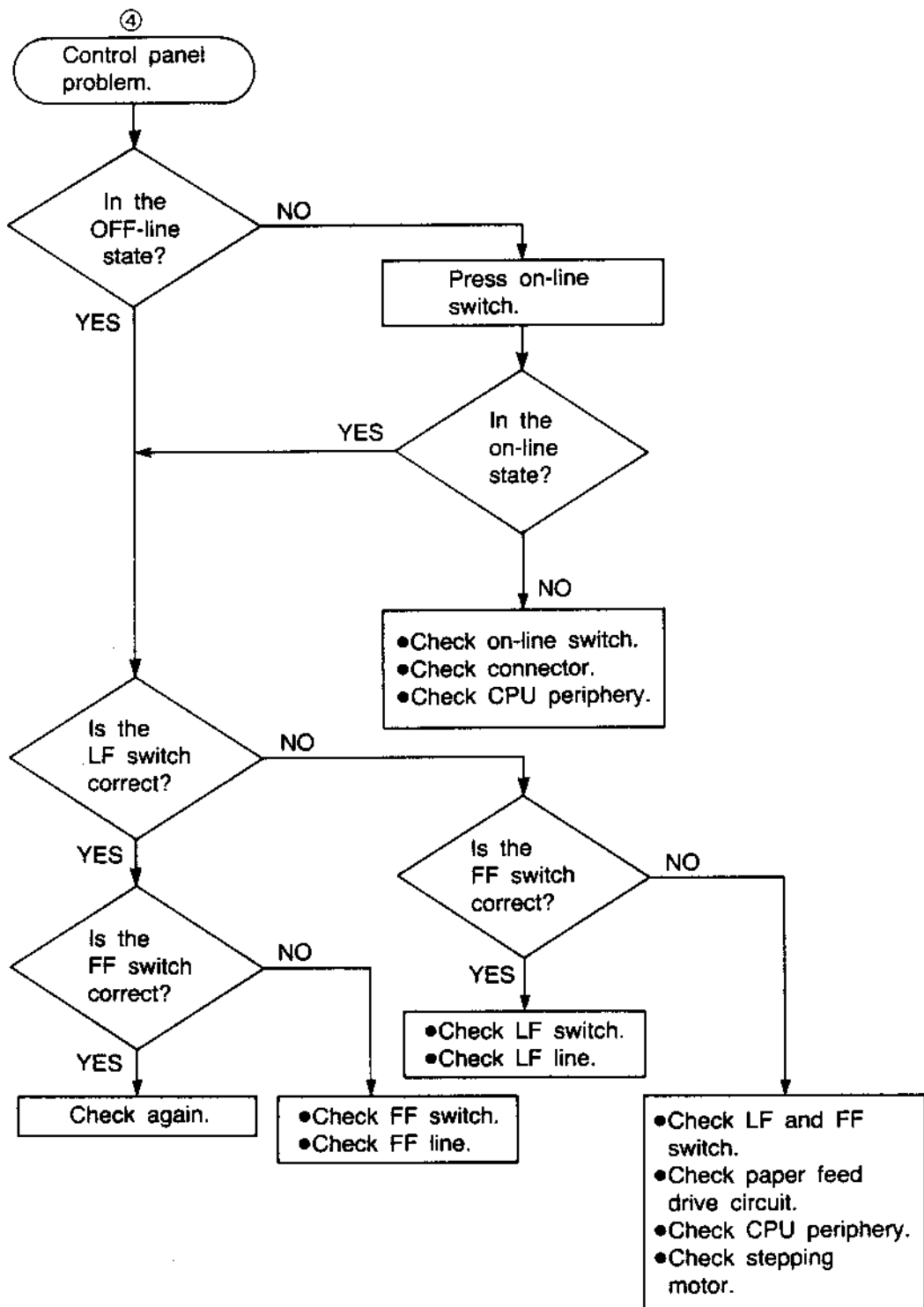
Is the operating sound of stepping motor hear?

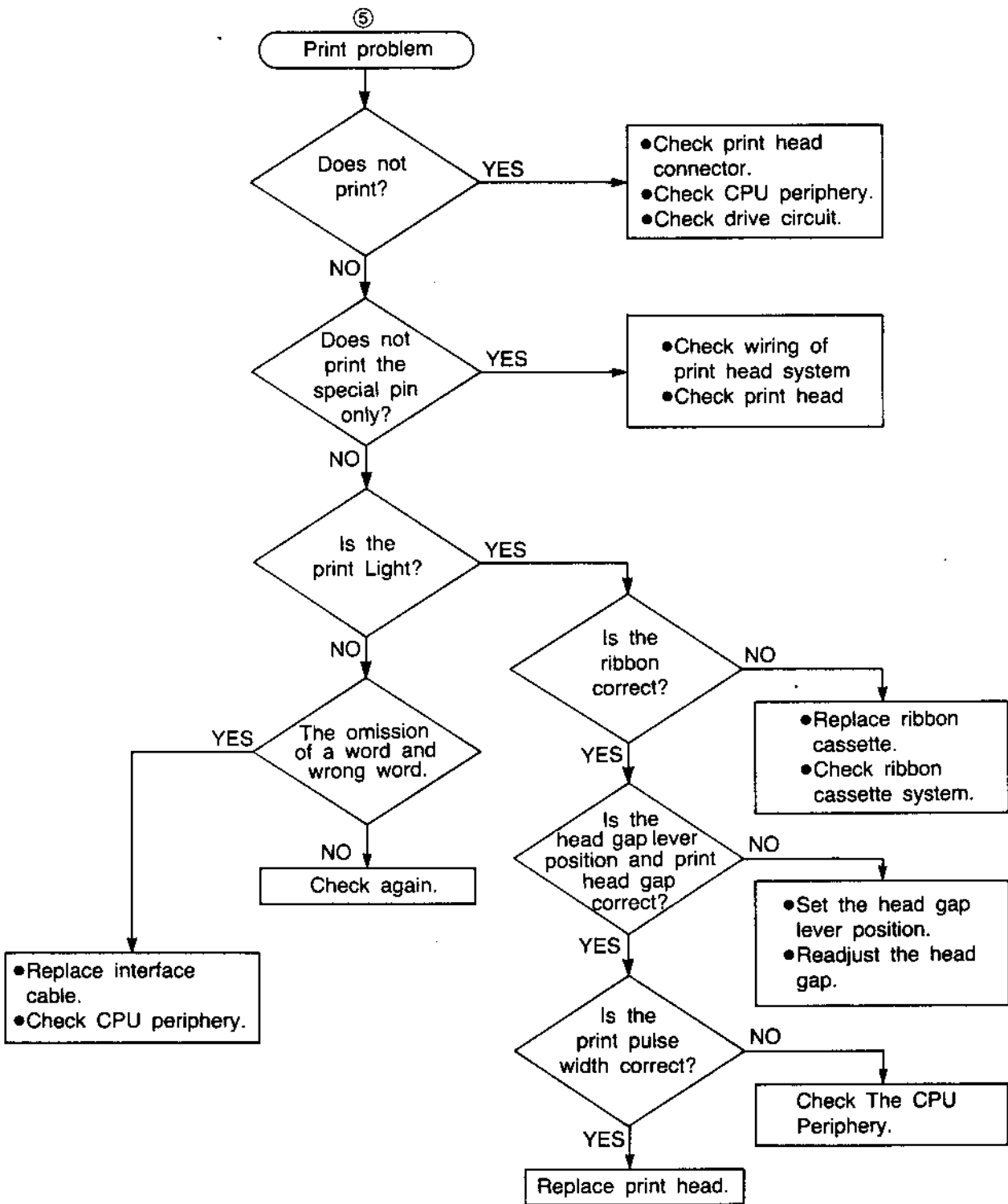
NO

- Check CPU periphery.
- Check control panel.
- Check stepping motor connector.

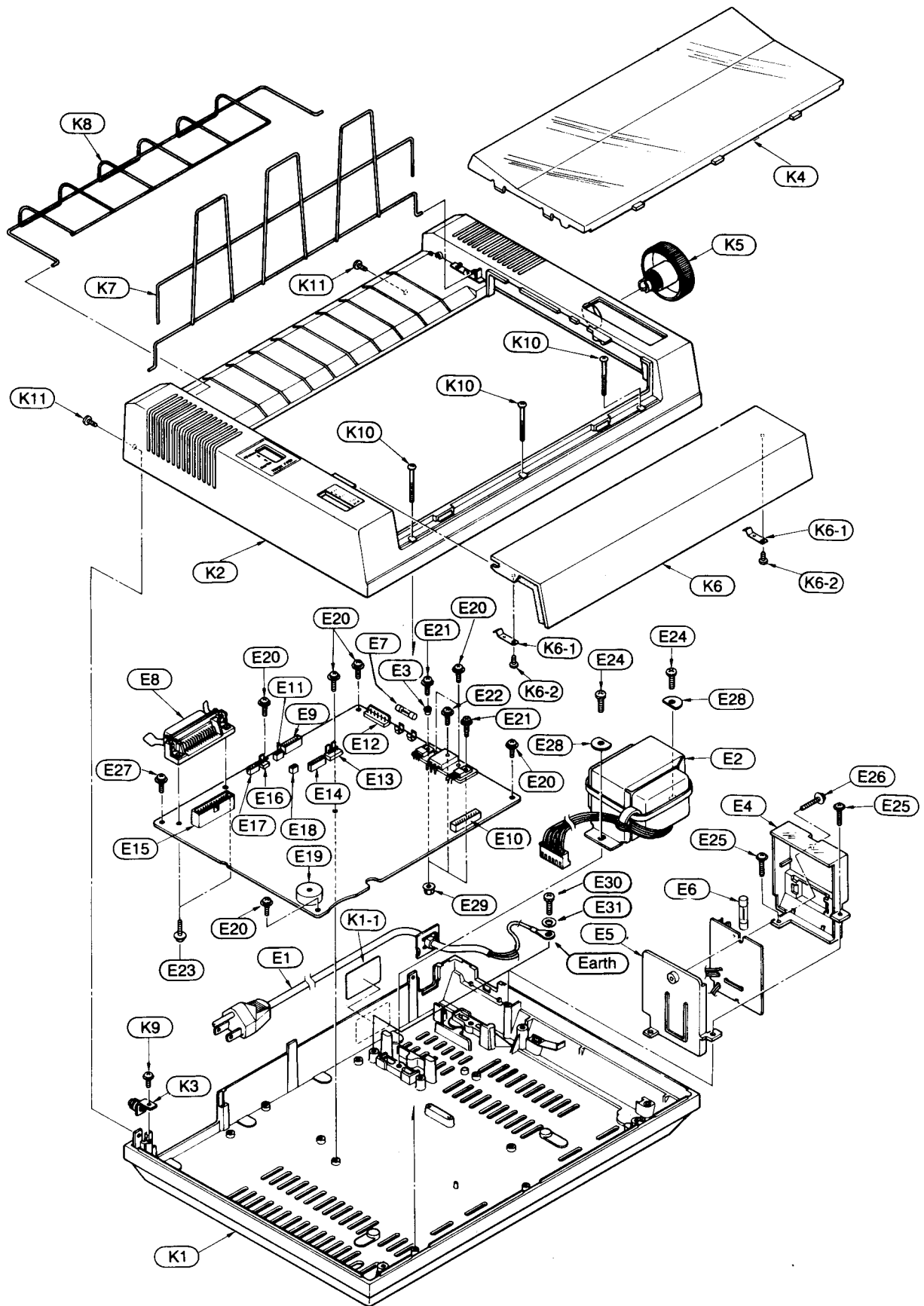
YES

- Check mechanism.
- Check paper feed drive system.
- Check stepping motor connector.

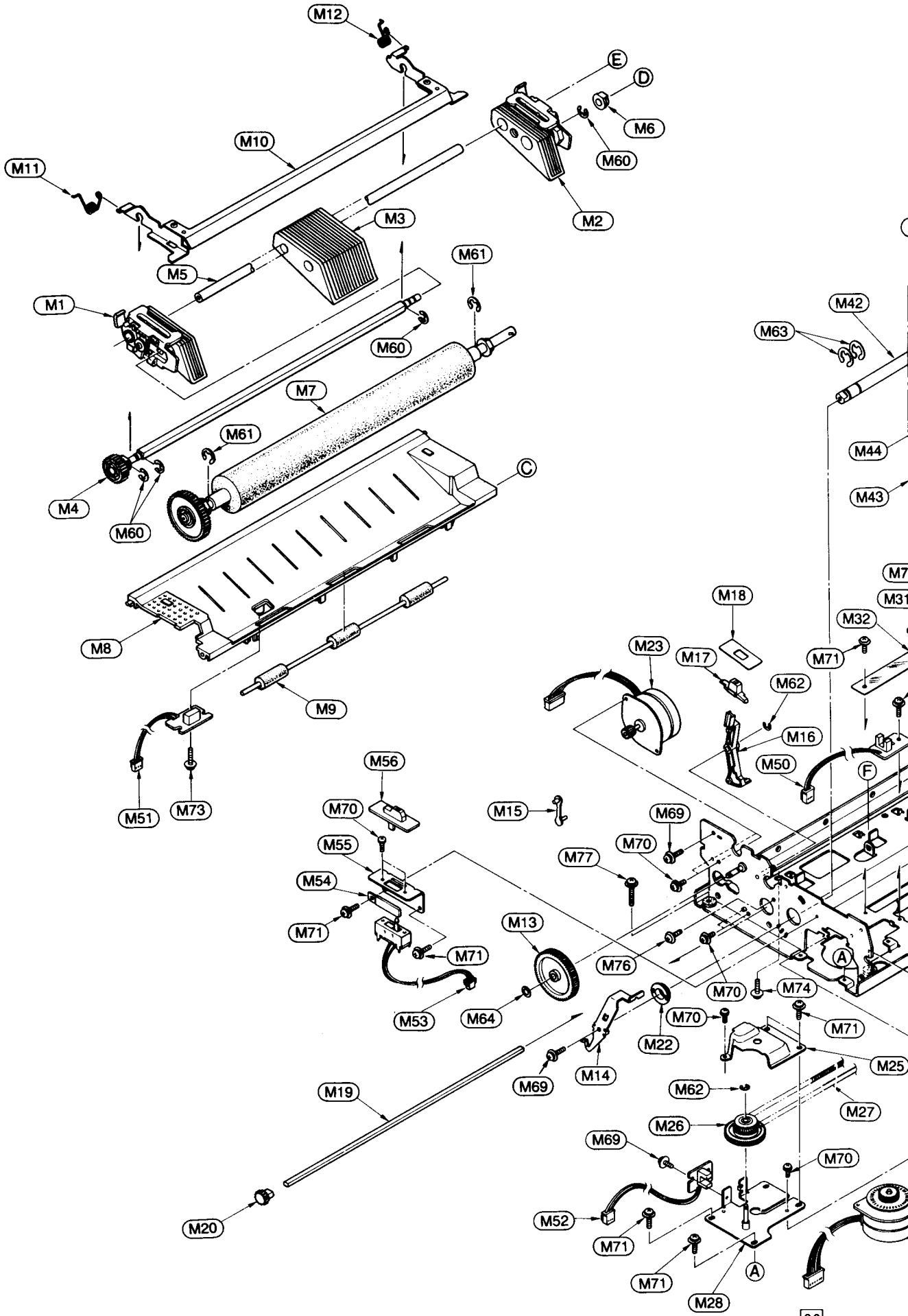




# CABINET AND ELECTRICAL PARTS LOCATION



MECHANICAL PARTS LO



# Mechanical Parts Location

