

#2188

CASSETTE TAPE DECK  
**CT-F2121**  
KCU, DV, NB, DP

<ART-144-0>

*Service Manual*

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# 1. SPECIFICATIONS

Systems . . . . .	Compact cassette, 2-channel stereo
Recording . . . . .	AC bias system (bias frequency: 85kHz)
Erasing . . . . .	AC push-pull system
Heads . . . . .	"Permalloy Solid" recording/playback head x 1 Ferrite erasing head x 1
Motor . . . . .	Electronically-controlled DC motor
Fast Winding Time . . . . .	Approximately 80 seconds (C-60 tape)
Wow and Flutter . . . . .	No more than 0.12% (WRMS)
Frequency Response . . . . .	Standard, LH tapes; 30 to 13,000Hz (40 to 11,000Hz, $\pm 3$ dB) Chromium dioxide tape; 30 to 16,000Hz (40 to 12,000Hz, $\pm 3$ dB)
Signal-to-Noise Ratio . . . . .	Dolby OFF; 48dB (standard and LH tapes) Dolby ON; 58dB (over 5kHz, standard and LH tapes)
(When chromium dioxide tape is used, signal-to-noise ratio is further improved by 4.5dB over 5kHz)	
Inputs (Sensitivity/Maximum allowable input/Impedance)	
	MIC x 2; 0.3mV/63mV/20k $\Omega$ , 6mm $\phi$ jacks (Reference Mic impedance; 600 $\Omega$ to 20k $\Omega$ )
	LINE x 2; 63mV/12V/50k $\Omega$ , Pin jacks
	REC/PB x 1; 10mV/2V/10k $\Omega$ , 5P jack (DIN standard)
Outputs (Reference level/Load impedance)	
	LINE x 2; 450mV/50k $\Omega$ , Pin jacks
	HEADPHONE x 1; 80mV/8 $\Omega$ , 6mm $\phi$ , stereo jack
	REC/PB x 1; 450mV/50k $\Omega$ , 5P jack (DIN standard)
Semiconductors . . . . .	Amplifier section; 41 transistors (including 2 FETs)
	28 diodes (including 3 zener diodes, 1 LED)
	Motor control section; 2 transistors, 1 diode

Subfunctions . . . . .	<ul style="list-style-type: none"> <li>•Dolby system (ON-OFF) with indicator lamp</li> <li>•Tape selector (STD/CrO<sub>2</sub>) Independently switchable bias and equalizer</li> <li>•Full-auto stop mechanism (in all modes of PLAY/REC/FF/REW)</li> <li>•Cassette compartment illumination</li> </ul>
Power Requirements . . . . .	AC120V, 60Hz (KCU model) AC220V, 50/60Hz (NB model) AC120V, 220V and 240V (switchable) 50–60Hz (DV, DP model)
Power Consumption . . . . .	15 watts (max.)
Dimensions . . . . .	350(W) x 142(H) x 282(D) mm. 13-3/4(W) x 5-5/8(H) x 11-1/8 in.
Weight . . . . .	14 lb 9 oz (6.6 kg) (without package)
Accessories . . . . .	<ul style="list-style-type: none"> <li>Stereo connecting cord with pin plugs x 2</li> <li>Head cleaning kit x 1</li> <li>Operating instructions x 1</li> </ul>

*NOTE:*

*Specifications and design subject to possible modification without notice due to improvement.*

*Test Conditions:*

1. Reference tape: standard, LH tapes are DIN no. 45513 chrome tape is DIN no. 45513 (CrO<sub>2</sub>)
2. Reference recording level is meter 0dB level (equivalent to 160 pwb/mm).
3. Reference signal is 333Hz.
4. Wow & Flutter: at 3kHz weighted rms.
5. Frequency response is measured at -20dB level, DOLBY OFF.  
Level deviation is  $\pm 6$ dB without indication.
6. Signal-to-Noise ratio is measured at 4dB level (equivalent to 250 pwb/mm), with IEC A curve on weighted.
7. Sensitivity: Input level (mV) for reference recording level measured with input (recording) level control set at maximum position.
8. Maximum allowable input level is measured at the point where the output signal wave is clipped while gradually turning the input level control.
9. Output (playback) level: Output level to reference recording level.

## 2. FRONT PANEL FACILITIES

### POWER BUTTON

Depress to turn AC power ON (illuminating lamp will light); depress again to turn power OFF.

### CASSETTE DOOR

Keep door closed to protect the transport mechanism and head assembly from dust.

### REC INDICATOR LAMP

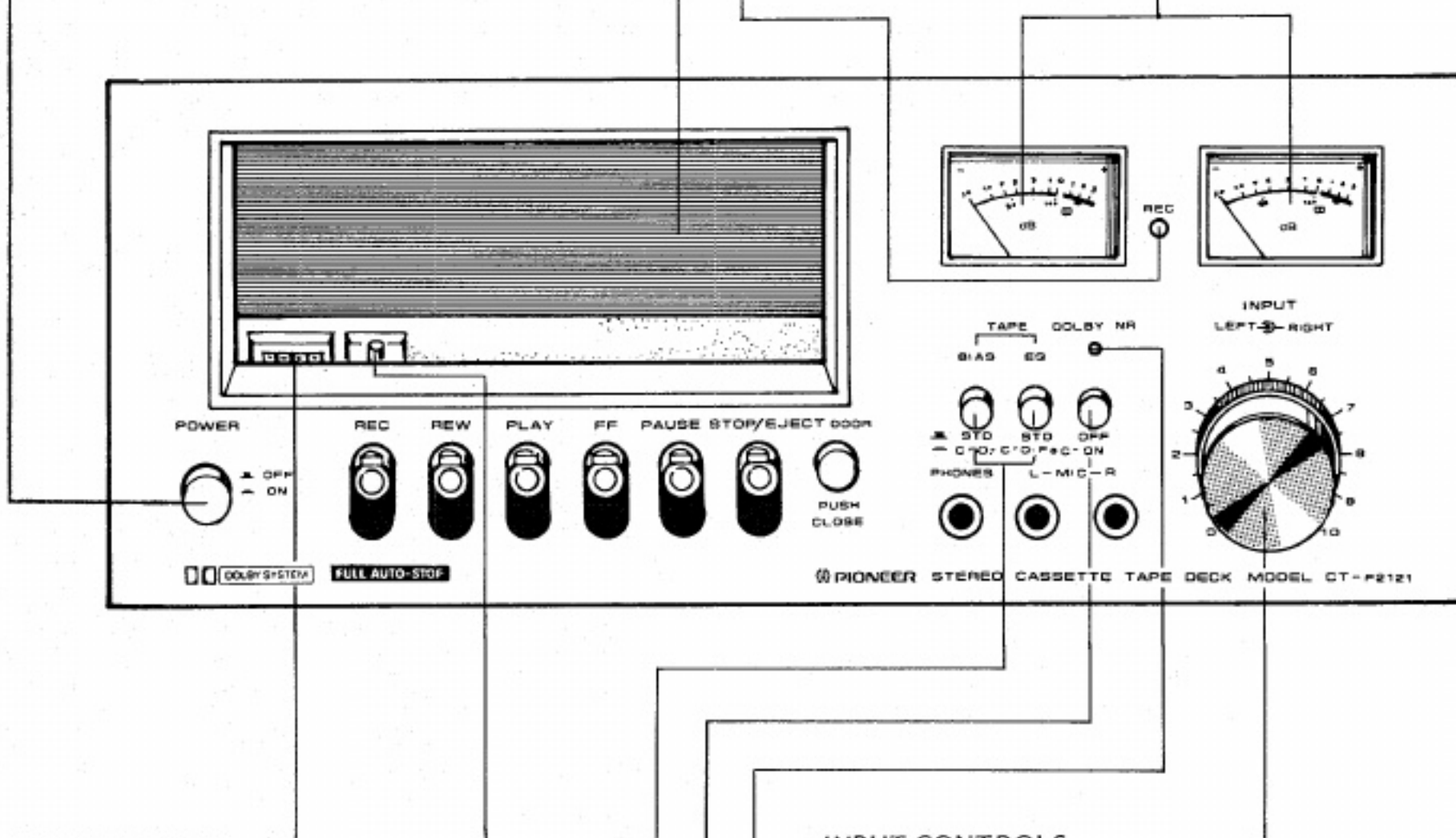
Lights to indicate recording mode.

#### NOTE:

Be sure to confirm REC indicator lighting before proceeding with recording.

### LEVEL METERS

Indicate input level during recording and output level during playback. During recording, adjust recording level while observing meter deflection.



### TAPE COUNTER

Indicates tape running position.

### COUNTER RESET BUTTON

Press button to reset counter to 000.

### BIAS & EQ SELECTOR BUTTONS

**BIAS:** employ during recording according to tape. Depress when using chrome tape.

**EQ:** Employ during recording and playback according to tape. Depress when using chrome or ferri-chrome tape.

Do not depress when using earlier specification (120 $\mu$ s) chrome tape for recording.

### INPUT CONTROLS

Adjust recording input from INPUT (REC) jacks, MIC jacks and DIN REC/PB jack. The outer knob adjusts the right (R) channel, while the inner adjusts the left (L) channel. Observe LEVEL meter deflection when adjusting the recording level.

### DOLBY NR LAMP

Lights when DOLBY NR button is depressed. Indicates recording or playback via Dolby mode.

### DOLBY NR BUTTON

Depress to employ built-in Dolby system for recording, or to play Dolby encoded tape.

### PHONES JACK

Plug stereo headphones into this jack for private listening or to monitor conditions during recording.

#### CAUTION:

*Do not plug microphone into this jack. Microphone can be damaged.*

### DOOR BUTTON

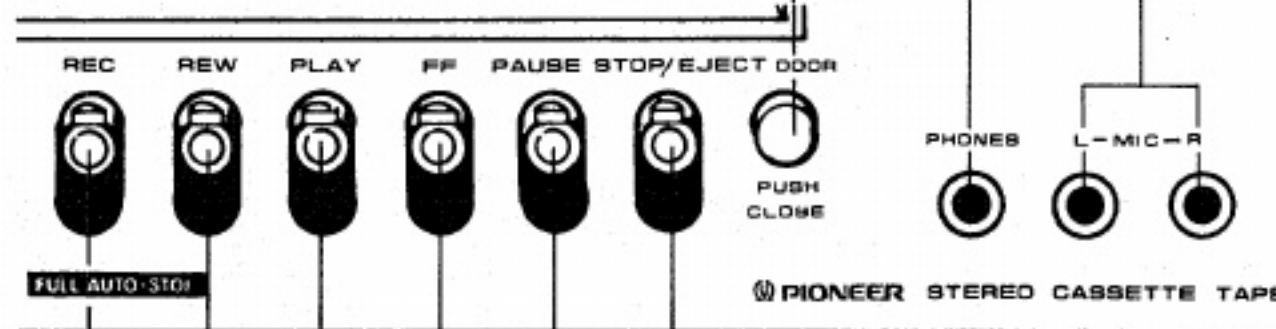
Press to close cassette door. To open door, raise it gently by hand until it clicks open.

### MIC JACKS

Plug microphones into these jacks for live recording. Use one microphone in each jack for stereo, or one microphone in either jack for mono recording.

#### NOTE:

*Be sure to unplug microphones when not employing them. If left connected, recording cannot be performed from source connected to INPUT (REC) or DIN REC/PB jacks.*



### OPERATING LEVERS

#### REC (RECORD) LEVER

Press downward together with PLAY lever for recording.

#### REW (REWIND) LEVER

Press downward to rewind tape (tape travels from right to left).

#### PLAY LEVER

Press downward to play tape. To record, press simultaneously with REC lever. (Tape travels from left to right.)

#### STOP/EJECT LEVER

Press downward to stop tape motion and release other operating levers. After stopping, open cassette door and press lever again to eject cassette.

#### PAUSE LEVER

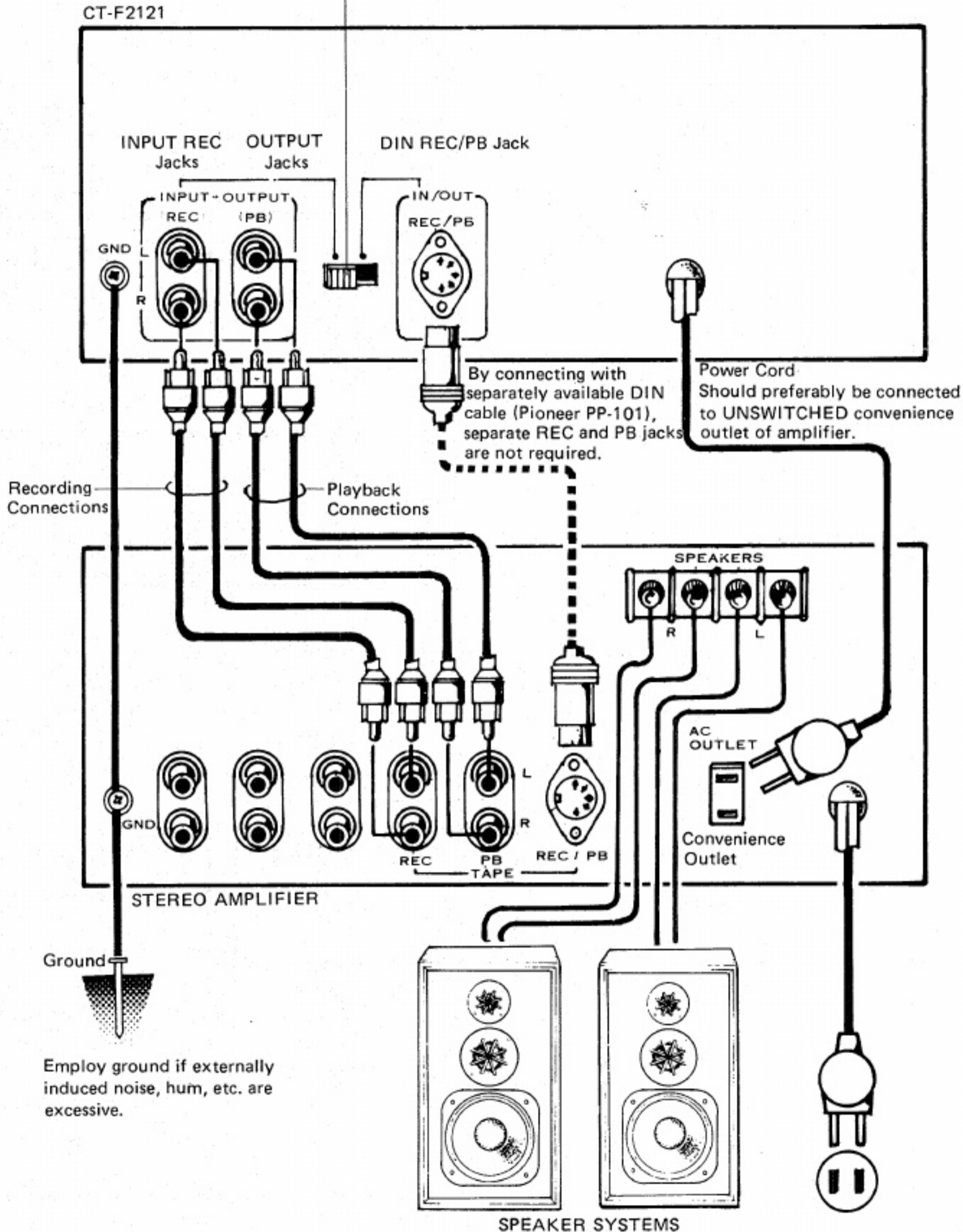
Press downward to temporarily stop tape motion during recording or playback. Press again to resume tape motion.

#### FF (FAST FORWARD) LEVER

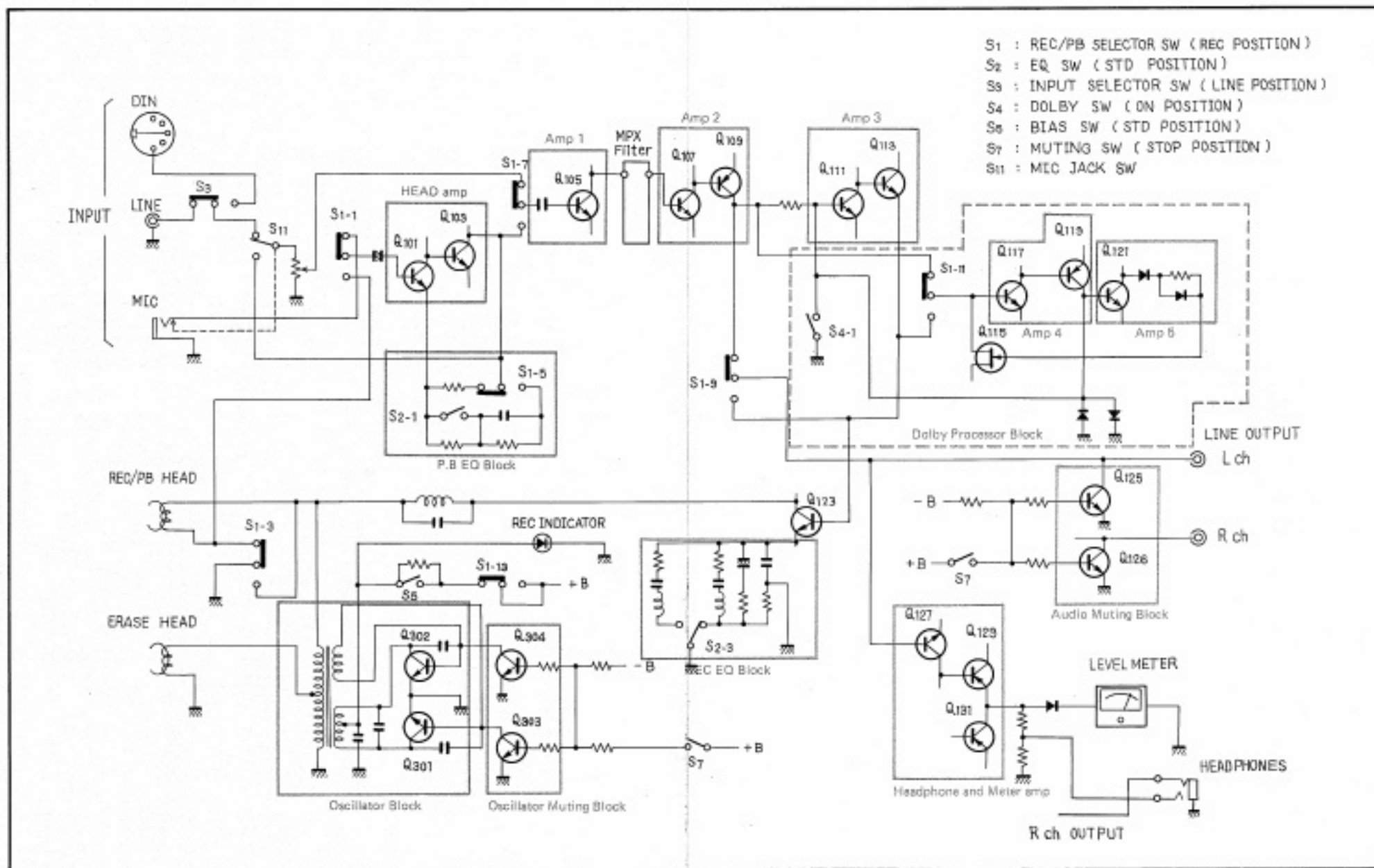
Press downward for tape fast forward (tape travels from left to right).

### 3. CONNECTION DIAGRAM

**Input Jack Selector Switch**  
 Set to left position to record from source connected to INPUT (REC) jacks.  
 Set switch to right position to record from source connected to DIN REC/PB jack.

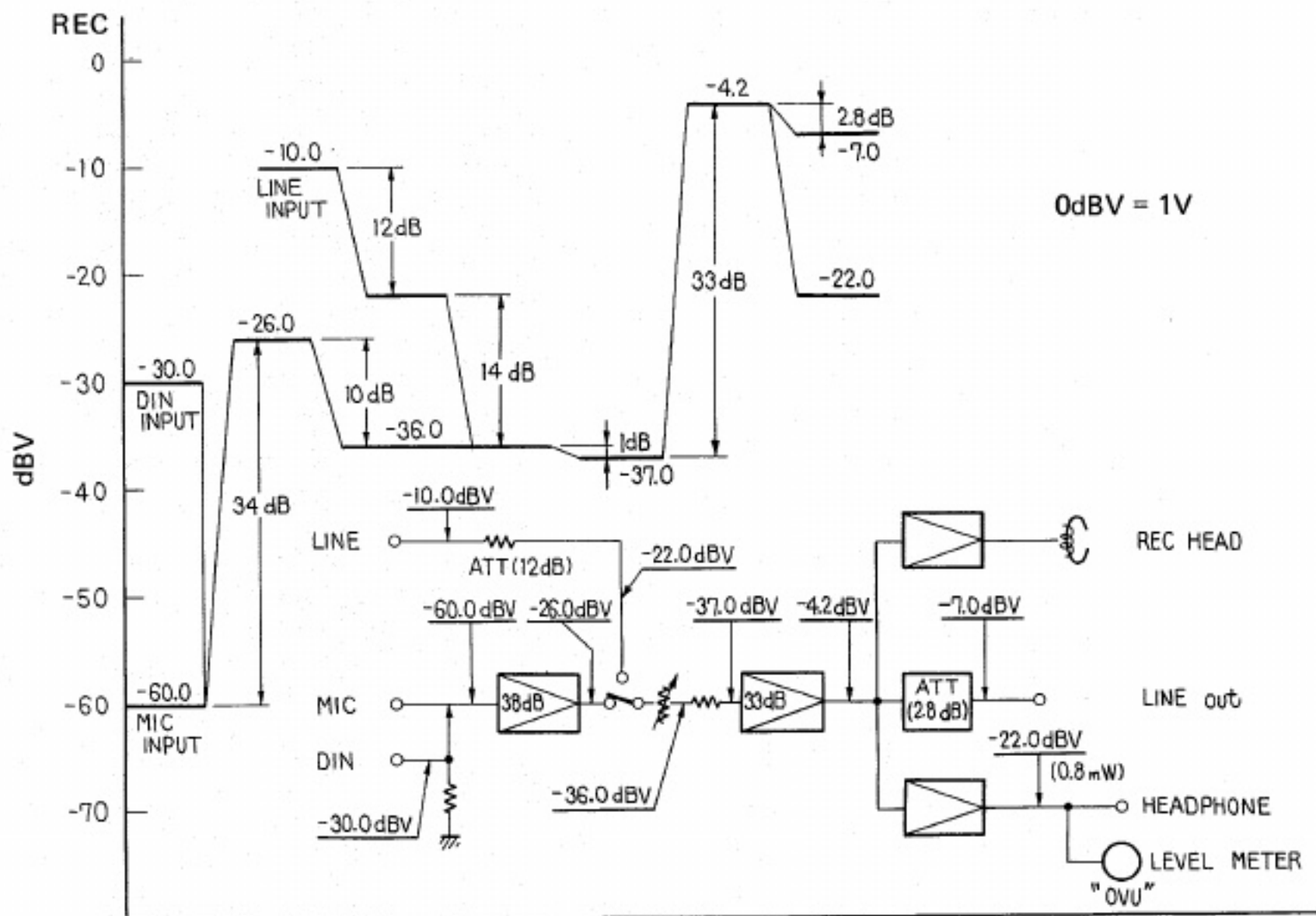
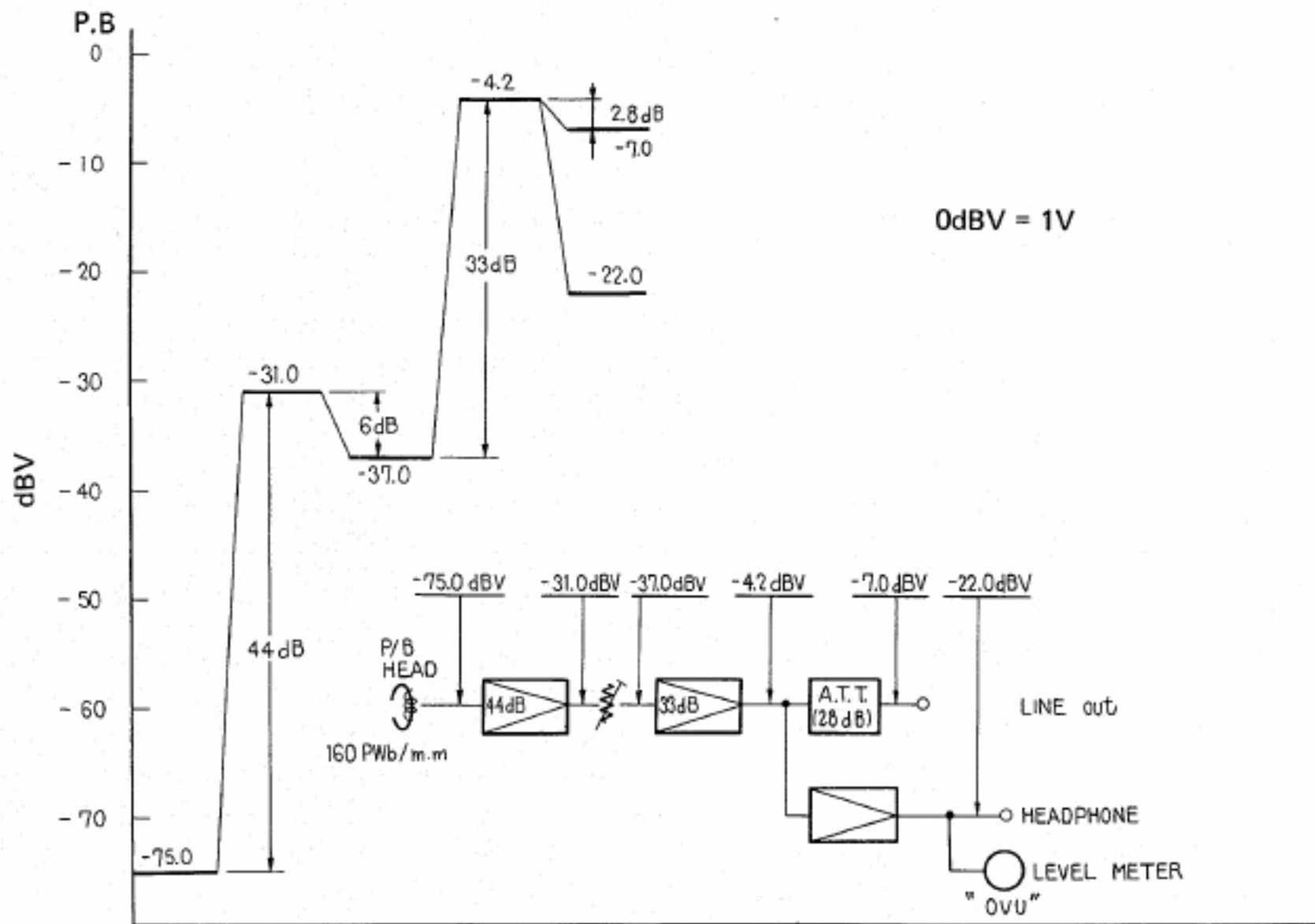


#### 4. BLOCK DIAGRAM





# 5. LEVEL DIAGRAM



# 6. CIRCUIT DESCRIPTIONS

## 6.1 RECORDING AND PLAYBACK CIRCUITS

Fig. 1 shows the block diagram of the recording and playback system (L ch). The main common circuitry is used for both recording and playback.

### Tape Selector

2-step selection for normal and chrome.

### \* EQ (Equalizer) Selector

Selects high band peaking frequency and low band equalization during recording. During playback equalization is selected.

### \* Tape Bias Selector

Changes bias oscillator supply voltage during recording to determine oscillation amplitude.

### EQ Amplifier

2-stage direct coupled NPN transistor circuit functions as an equalizer amplifier during playback and as a flat frequency response amplifier during recording.

### REC Amplifier

Composed of 1 PNP transistor. Low frequency compensation is performed by CR circuitry, high frequency compensation by LC, and STD and chrome level compensation by CR.

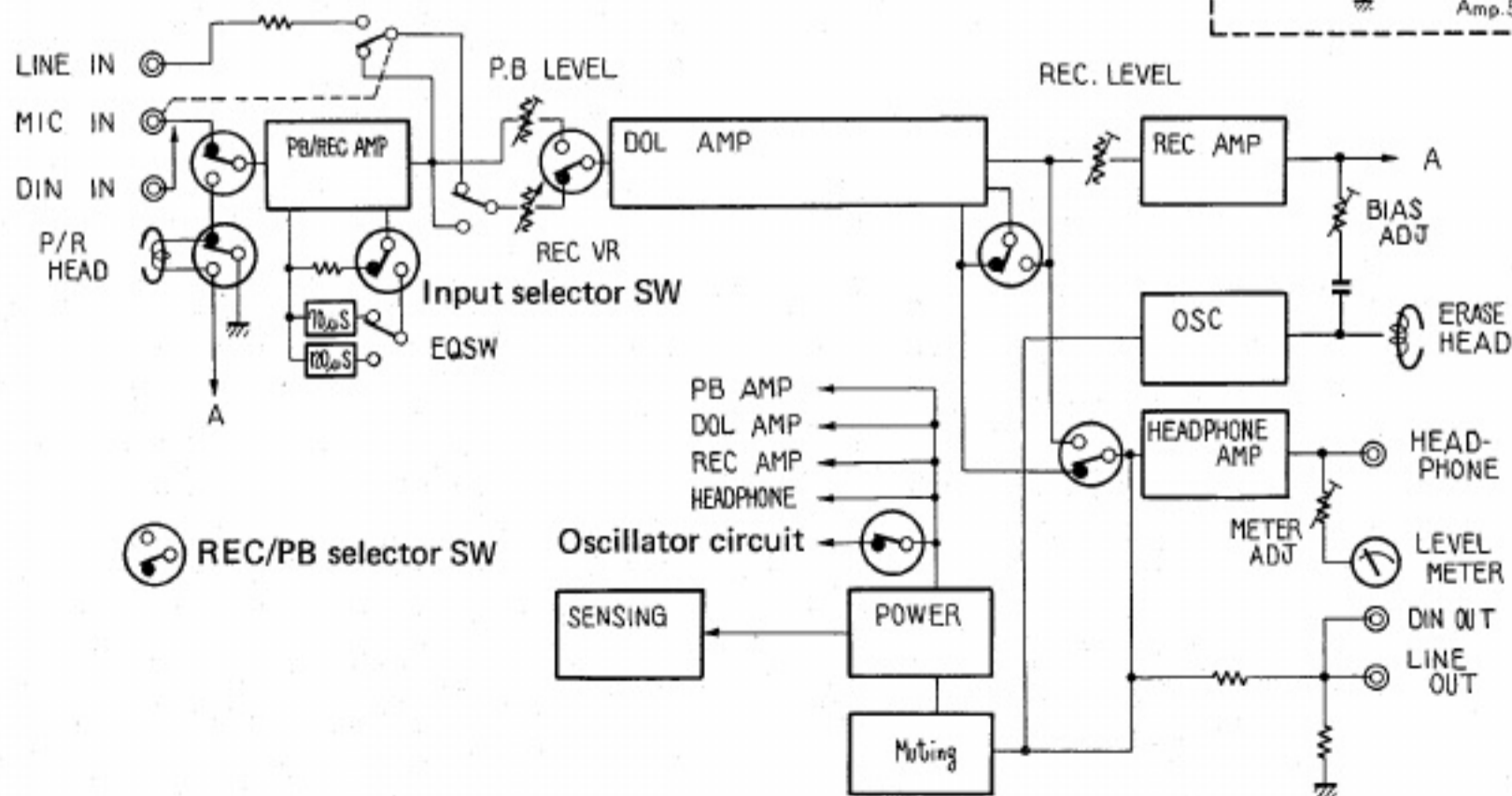


Fig. 1

### Dolby Processor (Fig. 2, Fig. 3)

A Dolby B-type Switchable Processor is built into this set, with which the Dolby effect is obtained only in the middle and high frequencies. The most objectionable tape hiss noise can thus be reduced during playback.

When the input at middle and high frequencies falls below a specified level (Dolby level) the recording level is automatically raised, while the level is automatically returned to normal during playback. This operation is performed by adding (or subtracting) the compressor output signal and the direct signal.

During recording, the compressor input is taken from the Amp. 3 input, while the compressor output is added in Amp. 3 to the direct signal in order to obtain the required characteristics. The compressor input is taken from the Amp. 3 output side during playback. Amp. 3 is designed so that its input and output sides are in opposite phase, causing the signal to be reversed. This addition of a reversed phase signal is equivalent to subtraction, thus reversing the process during playback and recording.

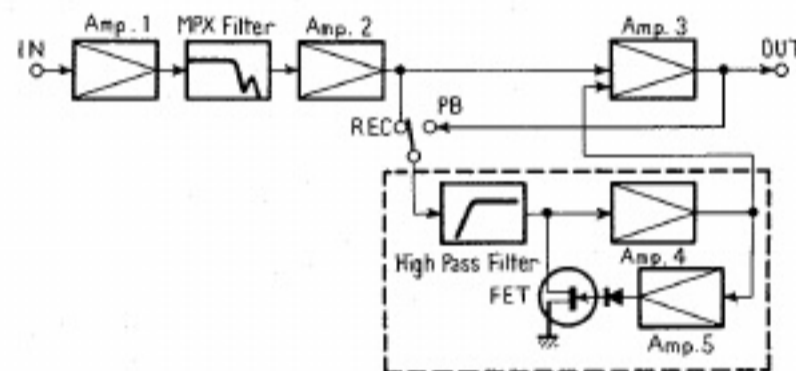


Fig. 2

**\* Compressor**

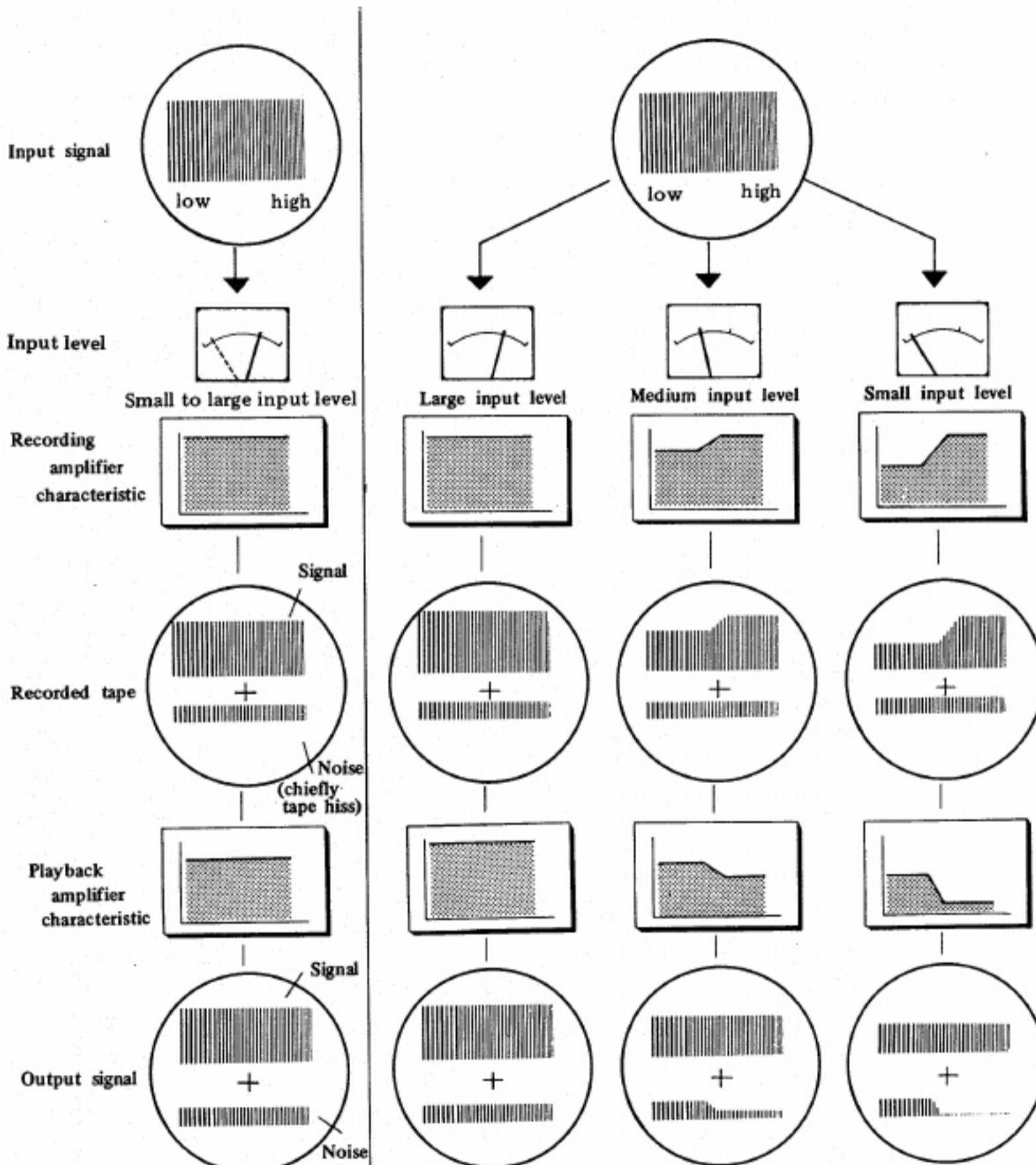
The input signal passes through a high pass filter and an FET electronic attenuator, and goes to Amp. 4. By varying the FET gate bias, the impedance between the drain and source also varies. This effect is produced by applying a voltage to the FET source, making the voltage between the gate and source equal to the pinch off voltage. The FET impedance thus becomes extremely high, while the rectified feedback

signal forms the control voltage applied to the FET gate.

With a small signal, the control voltage is reduced and the impedance between drain and source remains high. The electronic attenuation is thus small, resulting in a large compressor output. A large input signal produces a high control voltage. Impedance between drain and source declines and approaches zero, increasing the attenuation and reducing the compressor output voltage.

**Conventional Tape Deck**

**Dolby System Tape Deck**



In conventional tape decks, recording and playback characteristics remain constant, regardless of high or low signal levels. Therefore, when the signal level is low, the signal-to-noise ratio in playback drops, meaning that noise is more noticeable.

In the Dolby system, recording and playback amplifier characteristics change in accordance with the treble signal level. Noise reduction is effective at low signal levels where noise would otherwise be particularly irritating.

Fig. 3

## 6.2 AUTO STOP CIRCUIT

The playback mode is indicated in Fig. 4. In this mode, S6 (sensing switch) repeatedly opens and closes with take up reel rotation. The resulting pulse voltage is applied to Q351 base, producing a waveform between collector and ground as shown in Fig. 5. Voltage is applied to Q352 and Q353 via R363 and D355 - D354, R359, cutting them off. Since no current flows to Q354, the autostop solenoid P1 does not operate.

When tape running stops, S6 stops in either an open or closed position. Since Q351 base is at 0 potential, it is cut off. In this state, internal resistance between emitter and collector increases and the voltage waveform shown in Fig. 6 appears between collector and ground. Q352 base potential begins to rise and when the potential reaches point A in Fig. 6, Q352 switches ON. Q353 next switches ON and current flows to Q354. The autostop solenoid then operates.

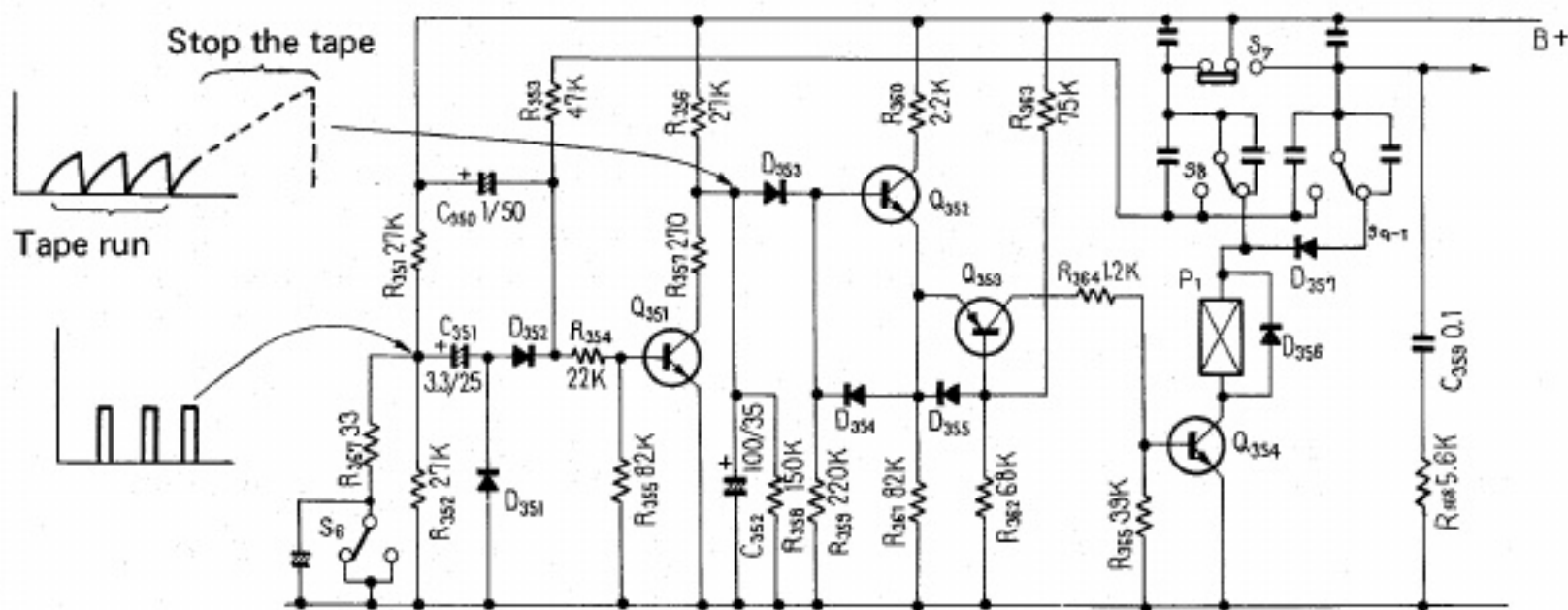


Fig. 4

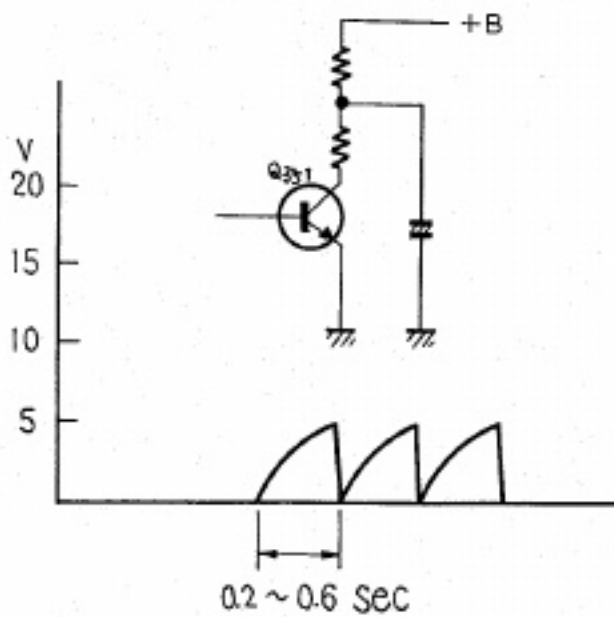


Fig. 5

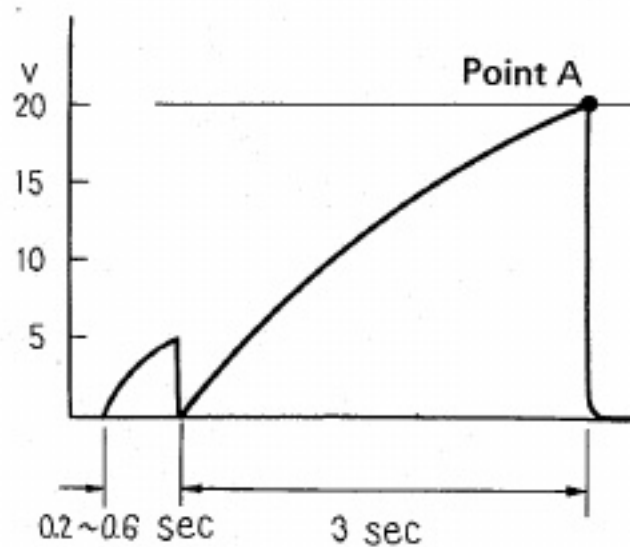


Fig. 6

**6.3 POWER SUPPLY CIRCUIT (Fig. 7)**

Independent power supplies are provided for the DC motor and amplifier sections. They incorporate separate transformer windings and bridge rectifiers in a stabilized design which eliminates ripple components. S<sub>9-2</sub> is closed and the motor rotates only when the FF, REW or Play lever is pressed.

**6.4 MUTING CIRCUIT**

**\* Osc Circuit**

As shown in Fig. 8, +B is applied to the bases of Q303 and Q304 through S7 during stop mode, switching them ON. This causes Q301 and Q302 base to ground impedance to decline, and oscillation stops. S7 is OFF during recording, switching Q303 and Q304 OFF. Q301 and Q302 base to ground impedance then rises, allowing the oscillator circuit to operate.

**\* Audio Circuit**

During the stop mode, as shown in Fig. 9, +B is applied by S7 to the bases of Q125 and Q126, switching them ON. Collector to emitter impedance of these transistors declines and the signal to LINE OUT becomes shorted. S7 is switched OFF during recording and playback, and the two transistors also switch OFF. Since a negative voltage is applied, LINE OUT becomes open and a signal is obtained.

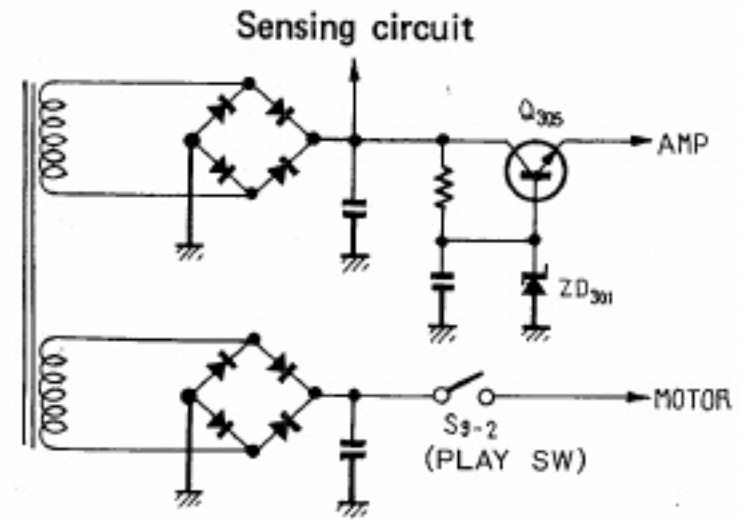


Fig. 7

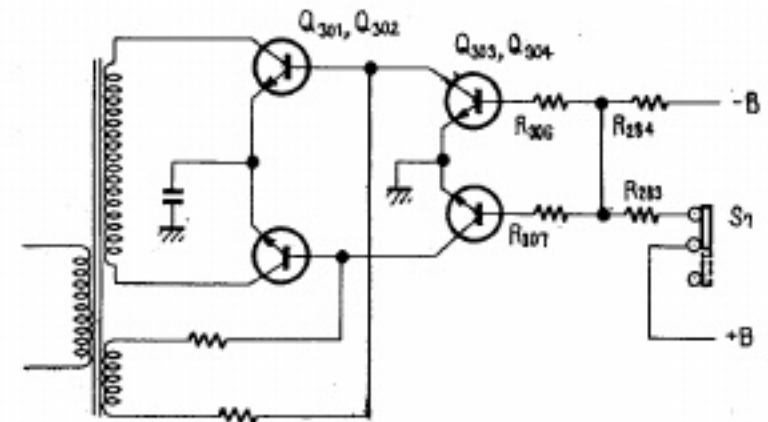


Fig. 8

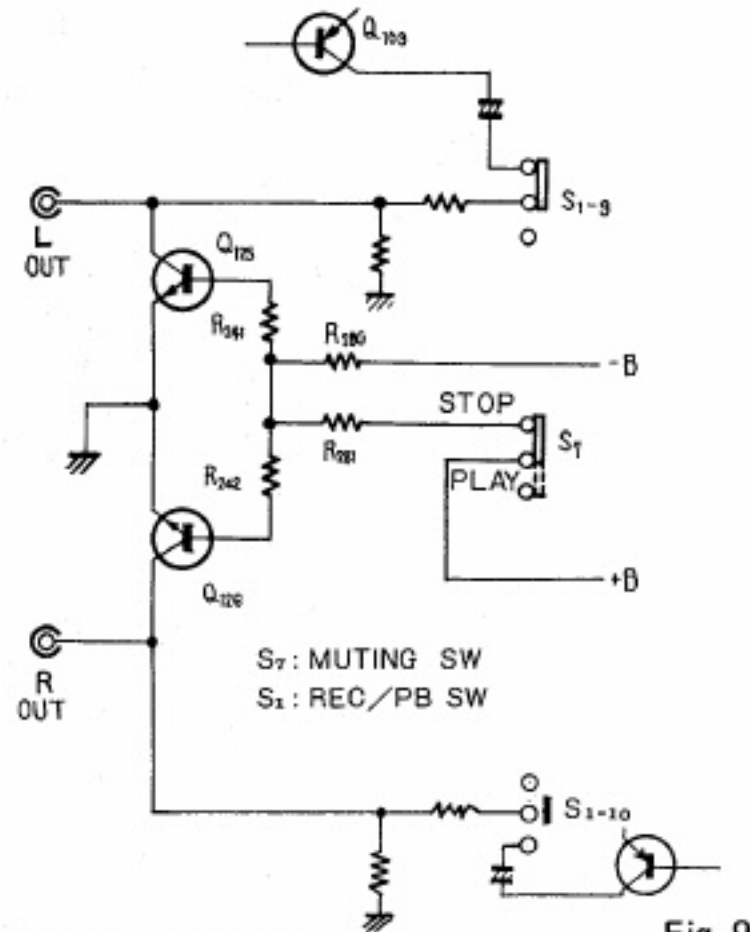


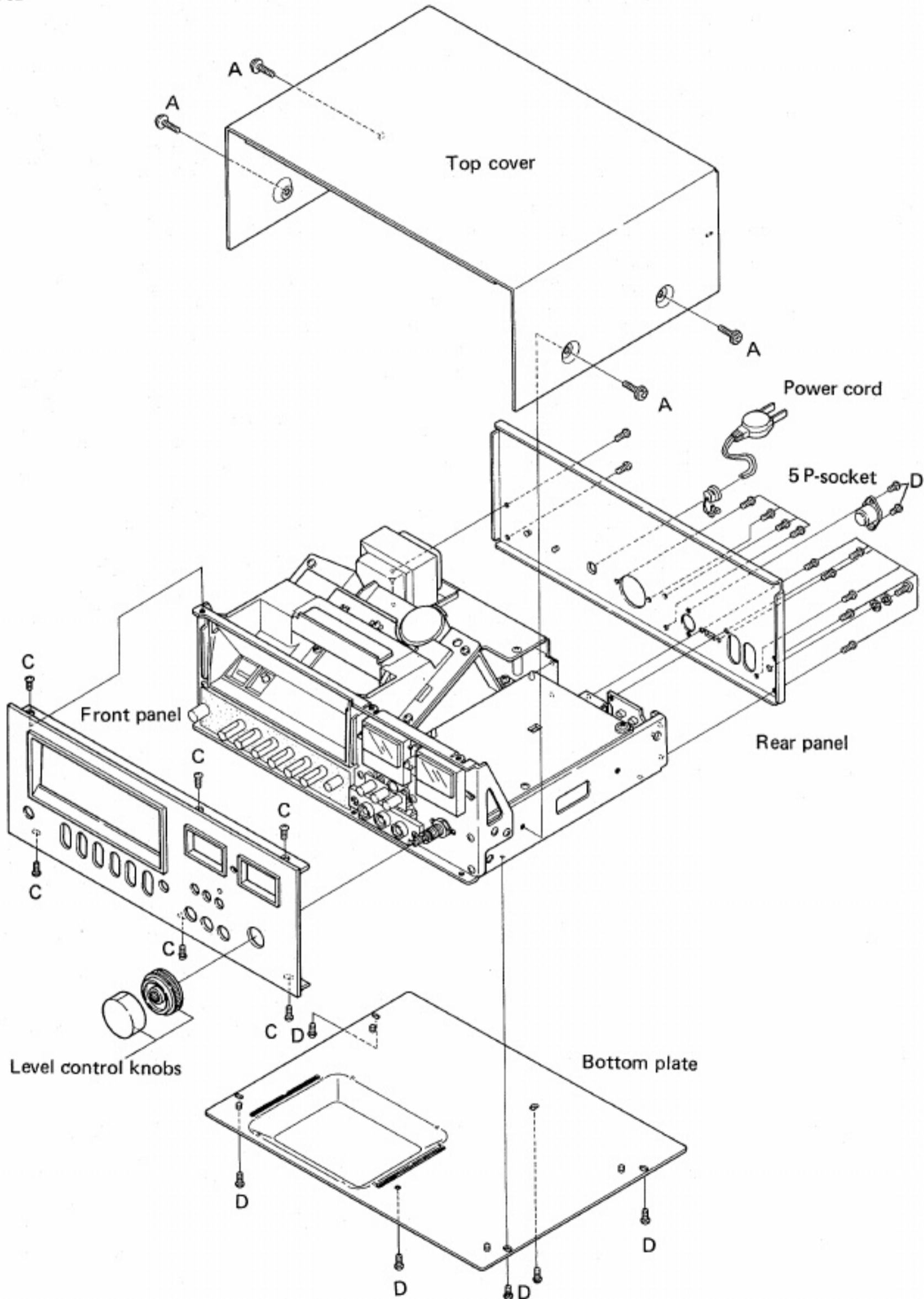
Fig. 9

# 7. DISASSEMBLY

## PART 1

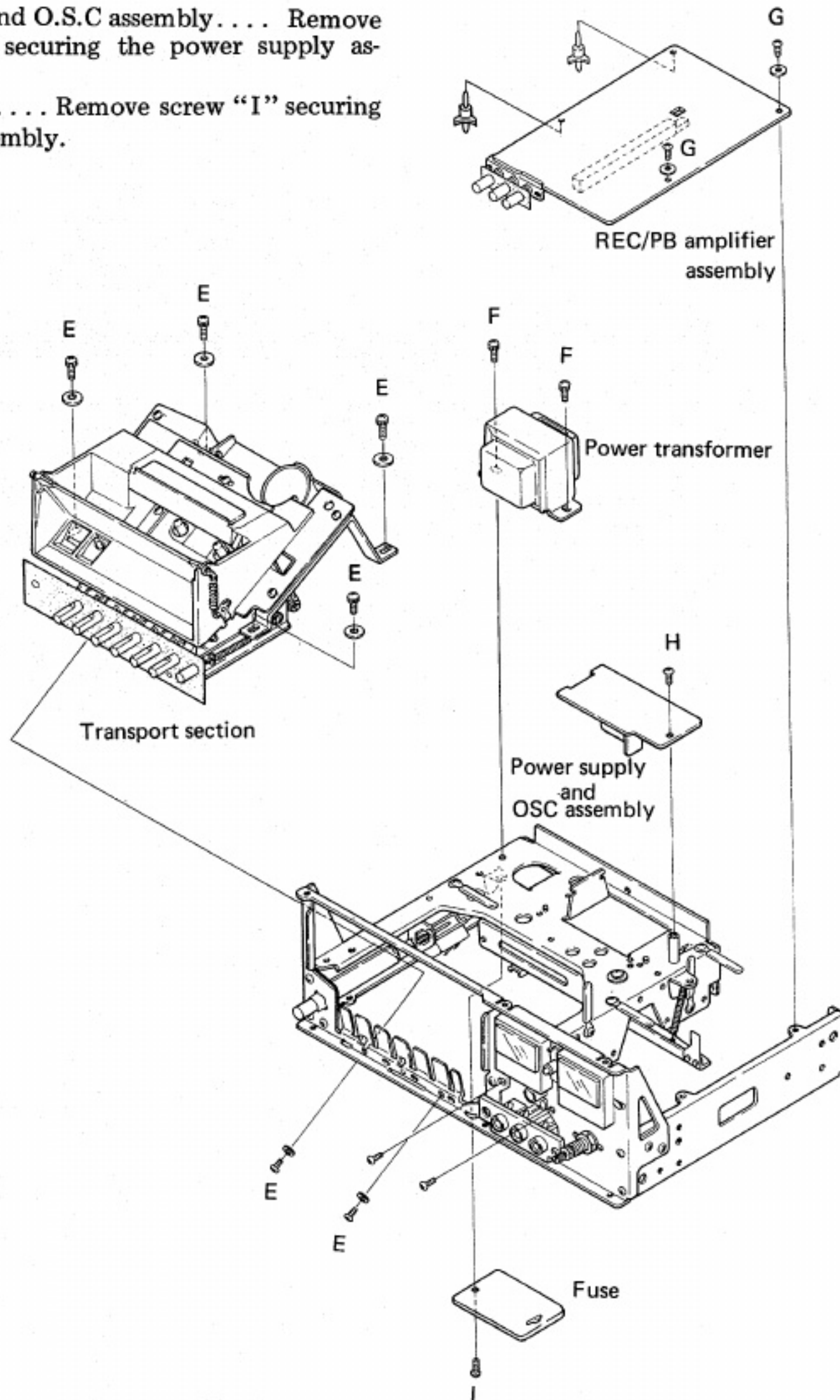
- Top cover . . . . Remove 4 "A" screws securing the top cover

- Front panel . . . . Remove 6 screws "C" securing the front panel and the level control knobs.
- Bottom plate . . . . Remove 6 screws "D" securing the bottom plate.



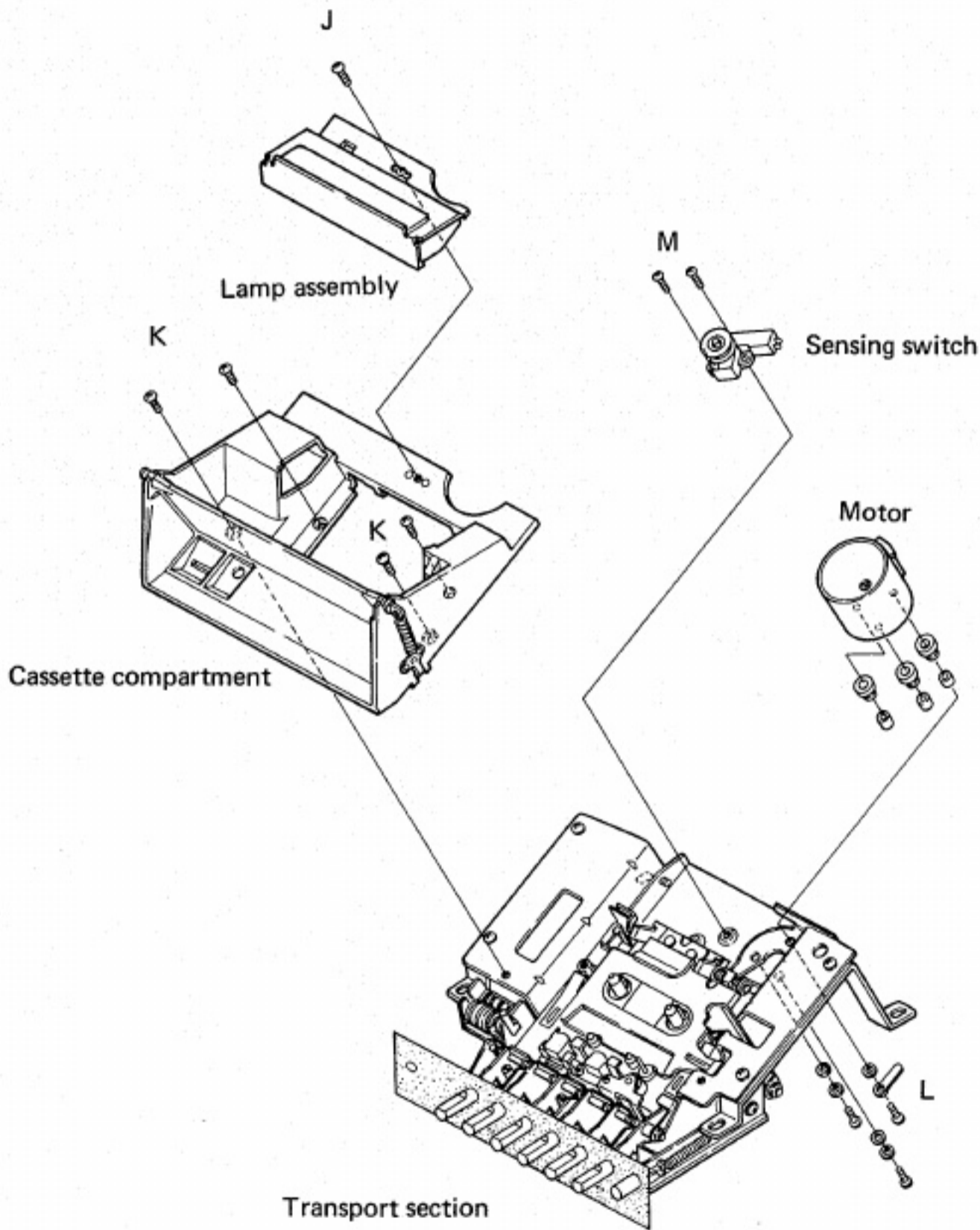
## PART 2

- Transport section . . . . Remove 6 screws "E" securing the transport section.
- Power transformer. . . . Remove 2 screws "F" securing the power transformer.
- REC/PB amplifier assembly . . . . Remove 2 screws "G" securing the REC/PB amplifier assembly.
- Power supply and O.S.C assembly . . . . Remove screw "H" securing the power supply assembly.
- Fuse assembly . . . . Remove screw "I" securing the fuse assembly.



**PART 3**

- Lamp assembly . . . Remove screw "J" securing the lamp assembly.
- Cassette compartment . . . Remove 4 screws "K" securing the cassette compartment.
- Motor . . . Remove 3 screws "L" securing the motor.
- Sensing switch . . . Remove 2 screws "M" securing sensing switch.

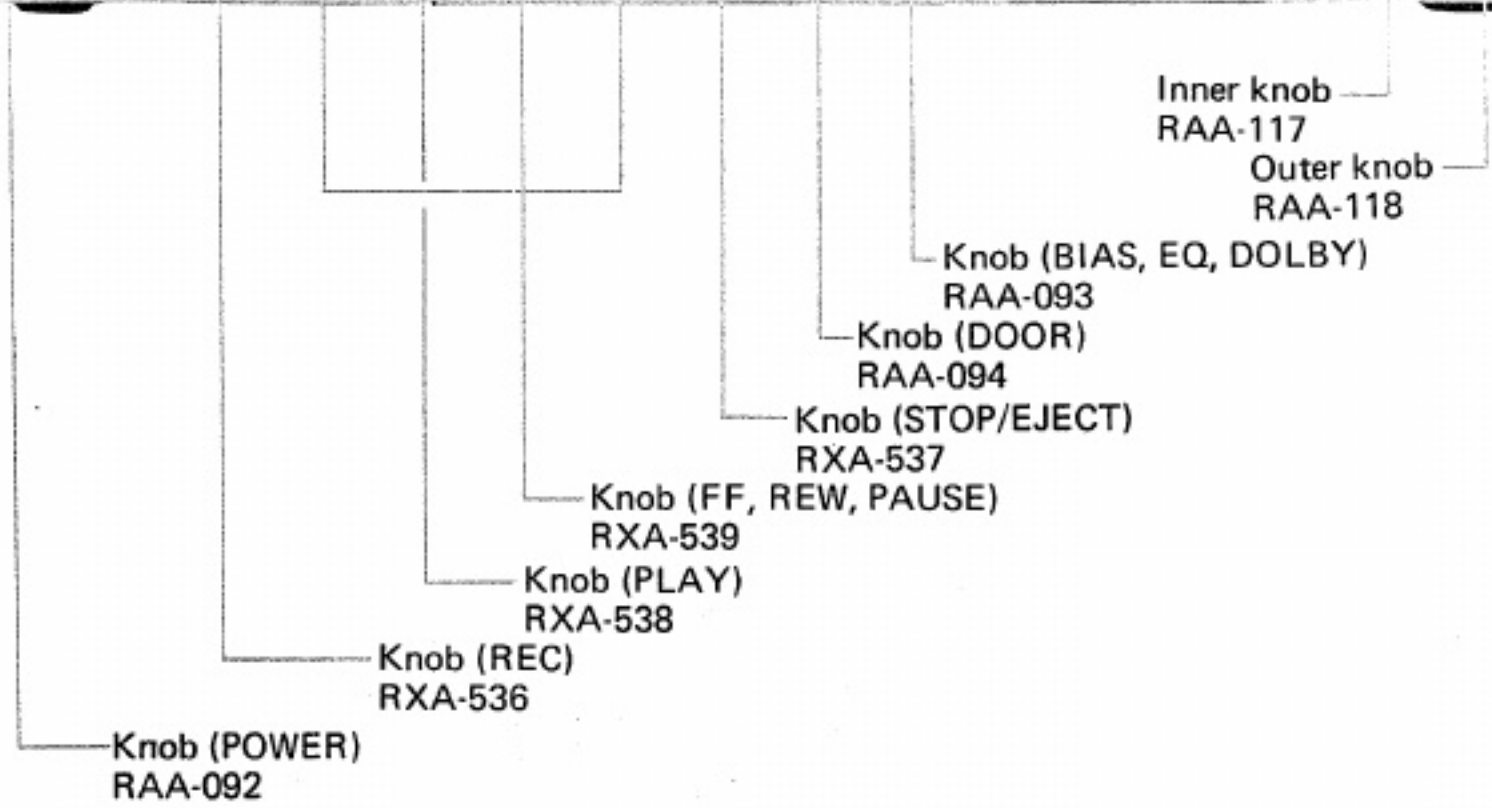
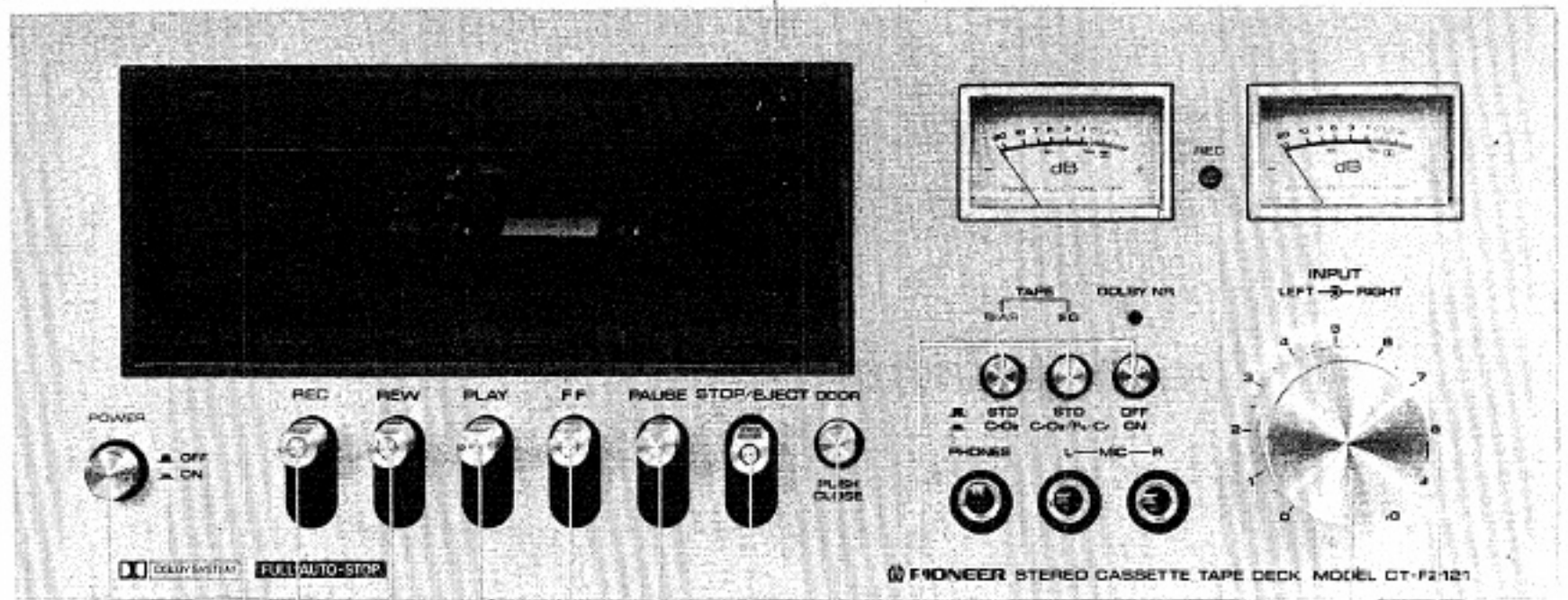




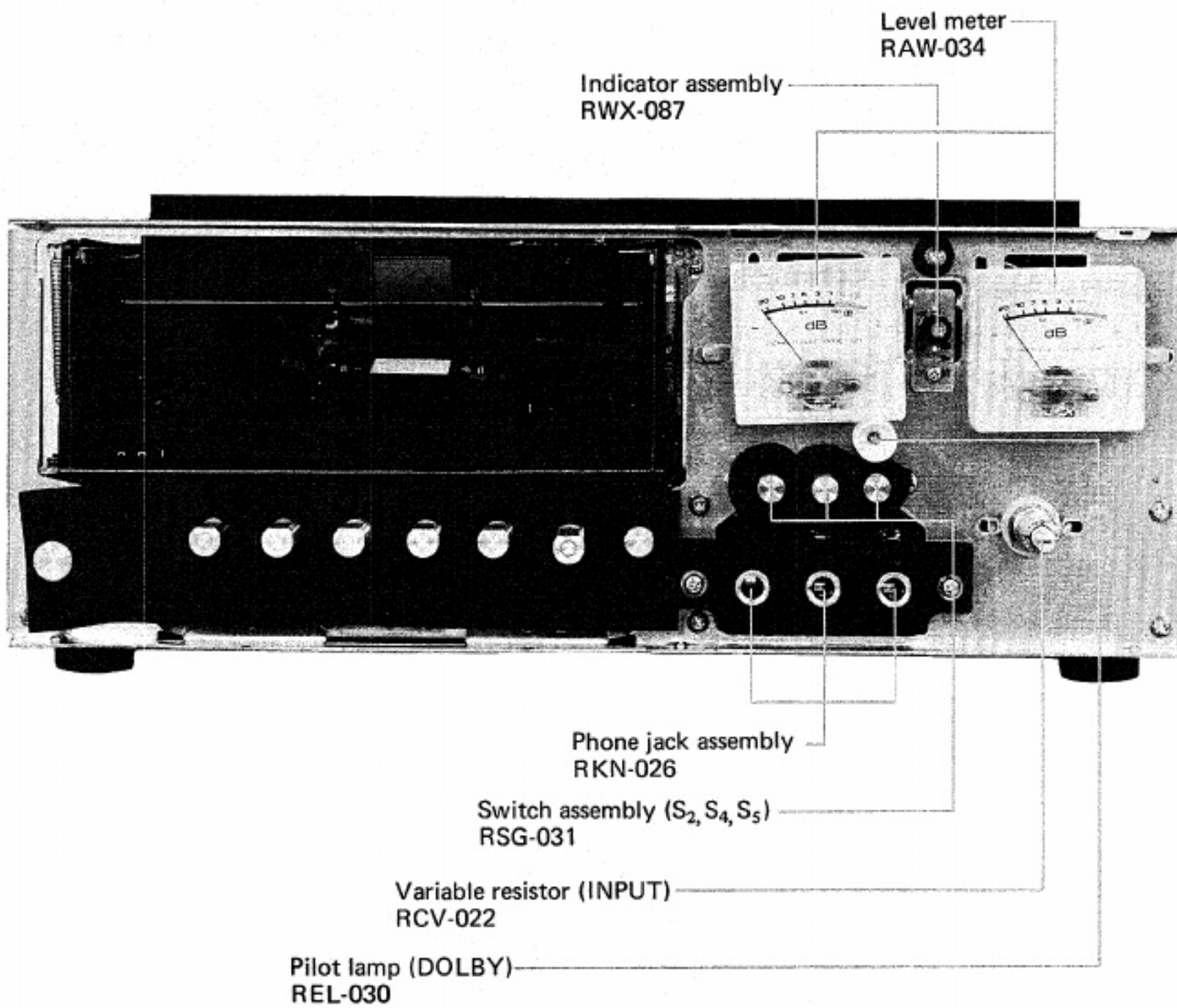
# 8. PARTS LOCATIONS

## 8.1 FRONT VIEW

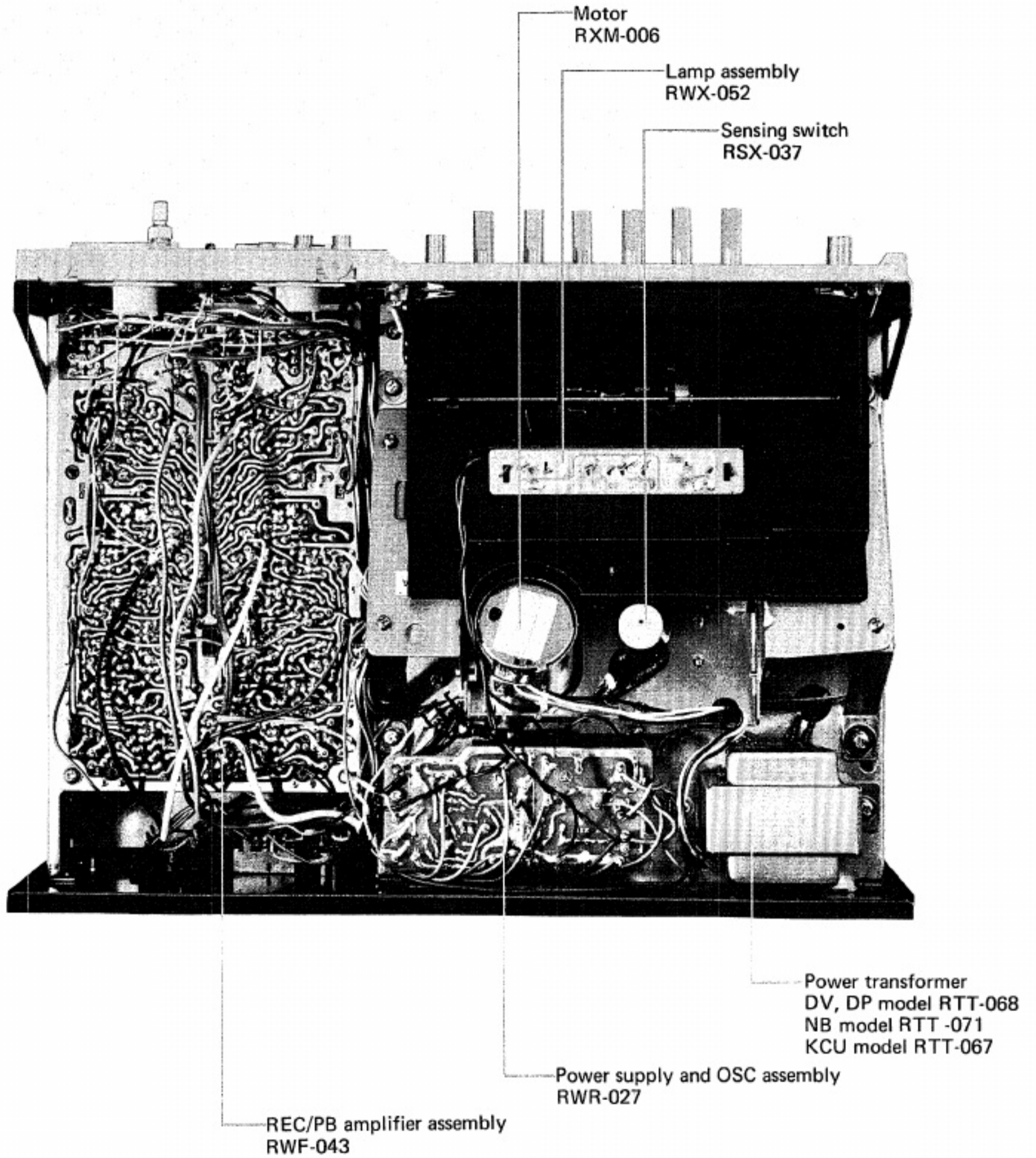
Front panel assembly  
RXX-163



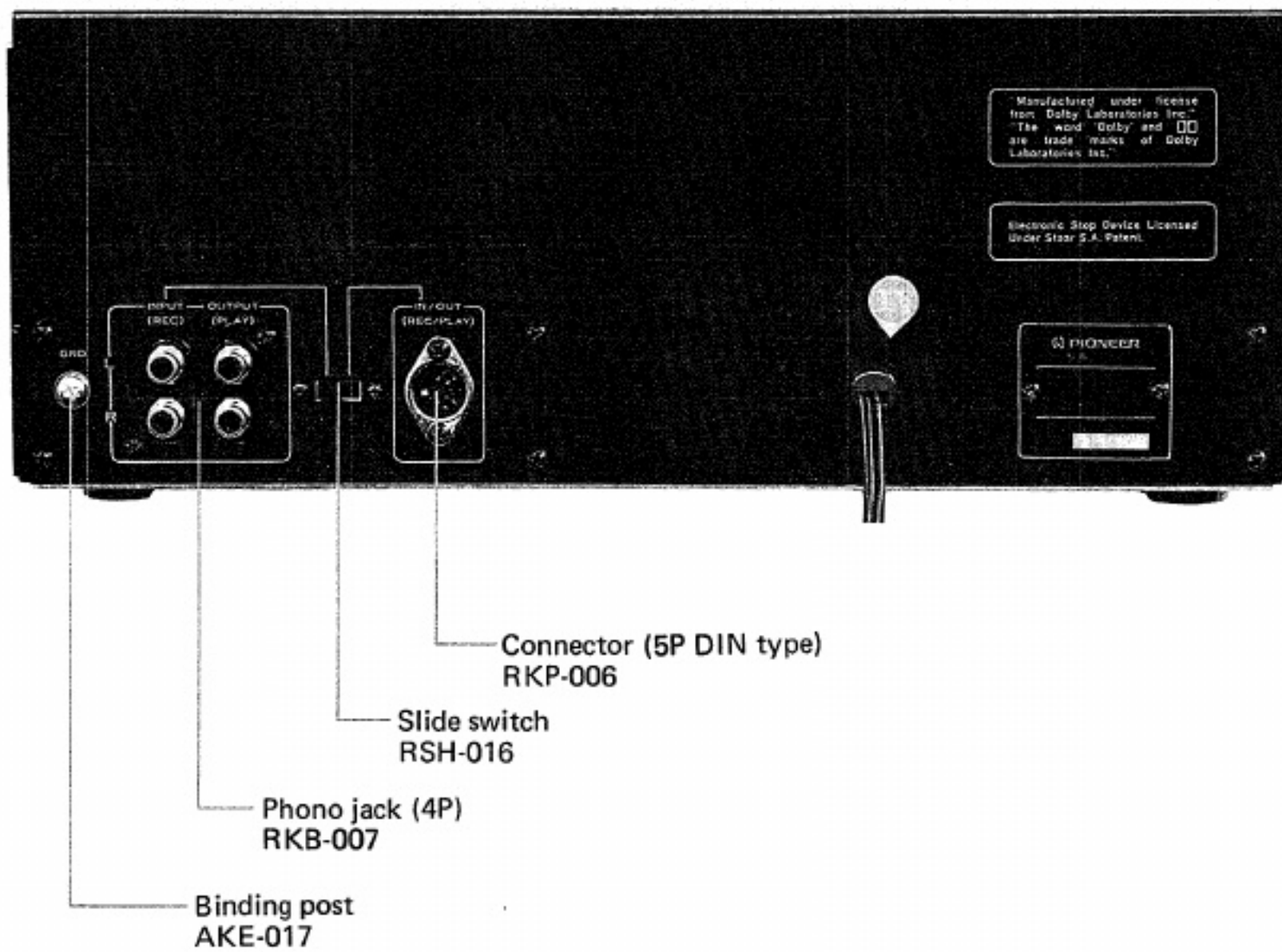
## 8.2 FRONT VIEW WITH PANEL REMOVED



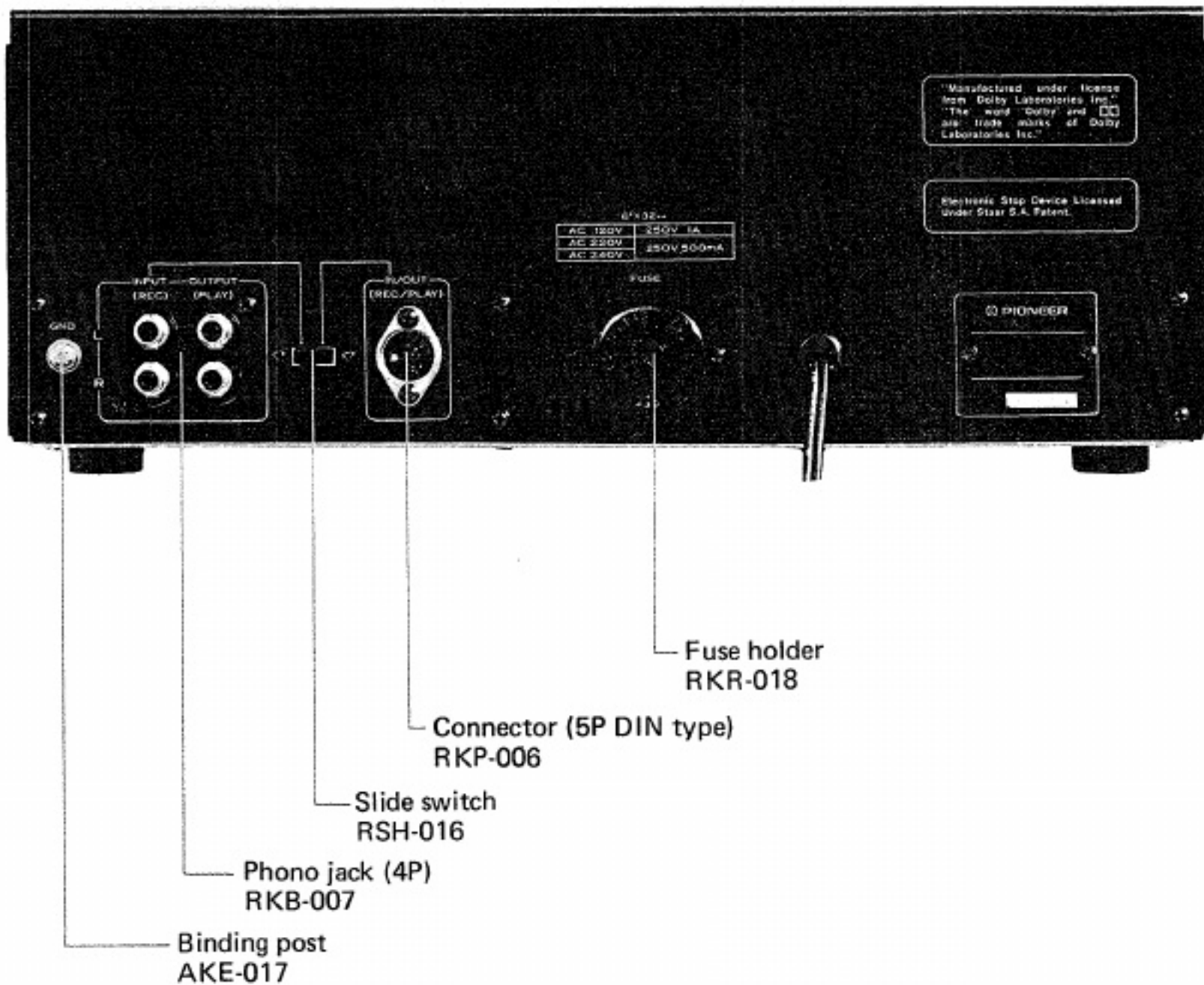
8.3 TOP VIEW



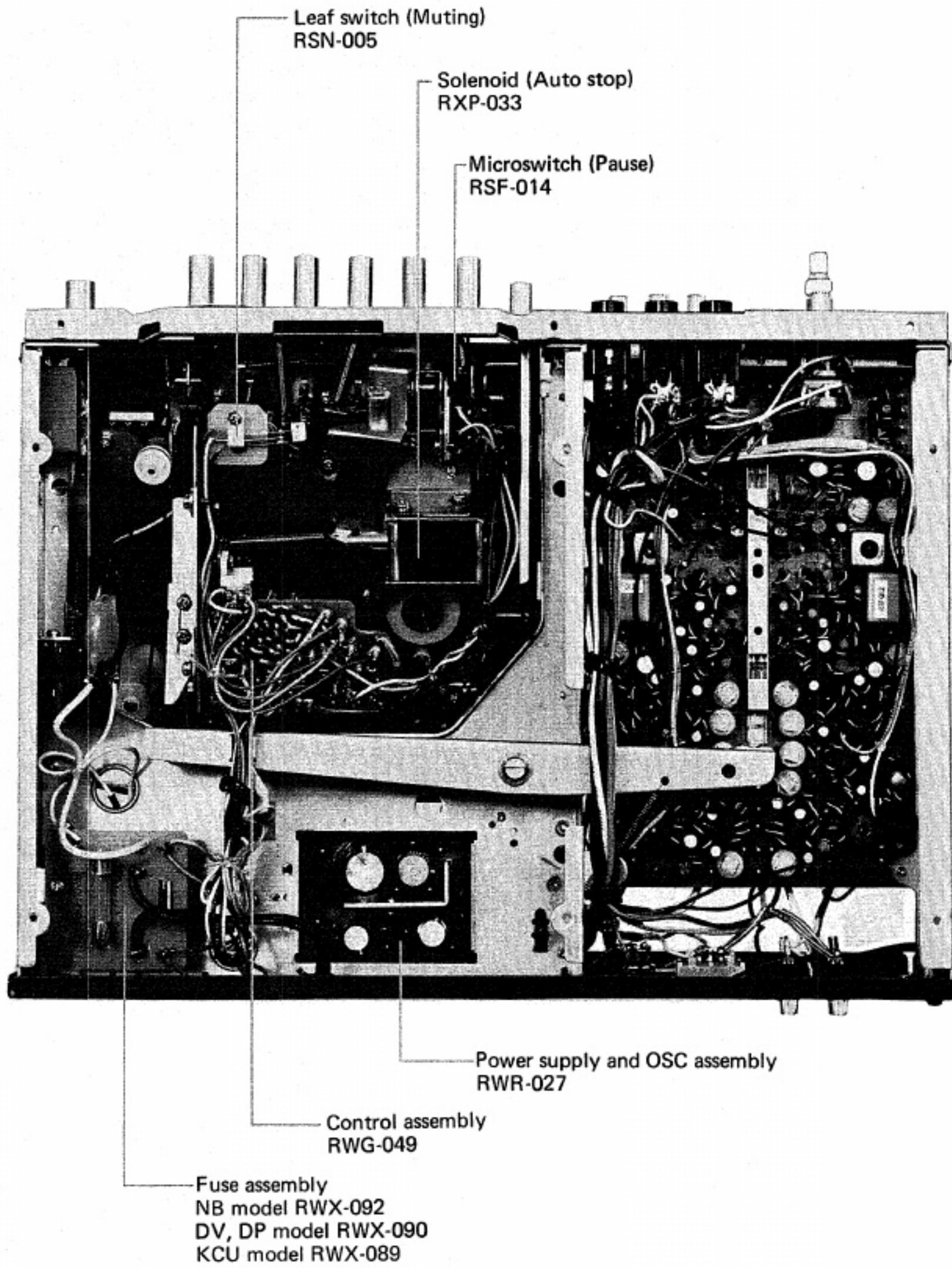
## 8.4 REAR PANEL VIEW (NB, KCU MODEL)



8.5 REAR PANEL VIEW (DV, DP MODEL)



## 8.6 BOTTOM VIEW



## 9. MECHANICAL ADJUSTMENTS

### 9.1 PINCH ROLLER PRESSURE

1. Remove cassette compartment (See P. 16) and press Play lever.
2. Use a spring compression gauge to push the pinch arm, as shown in Fig. 10.
3. Confirm that the force required to separate the pinch roller from the capstan is 300–400 grams.
4. If beyond of this range, unhook the pinch roller spring from its anchor hole and check for easy pinch arm movement.
5. Attempt to adjust by attaching the spring to different anchor holes.
6. If this is unsuccessful, replace the pinch roller spring.

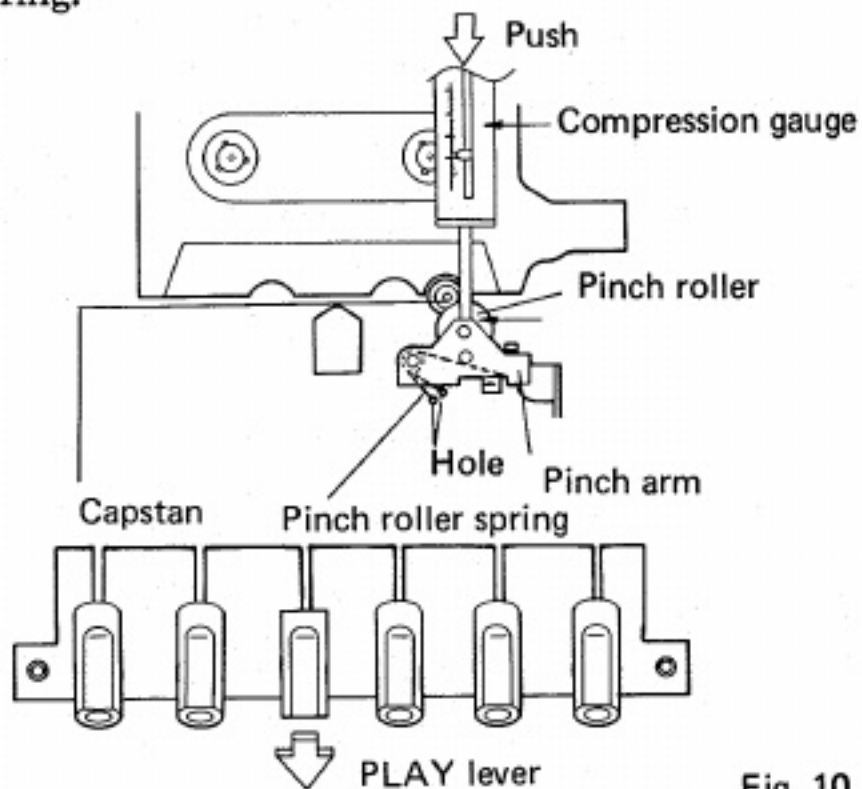


Fig. 10

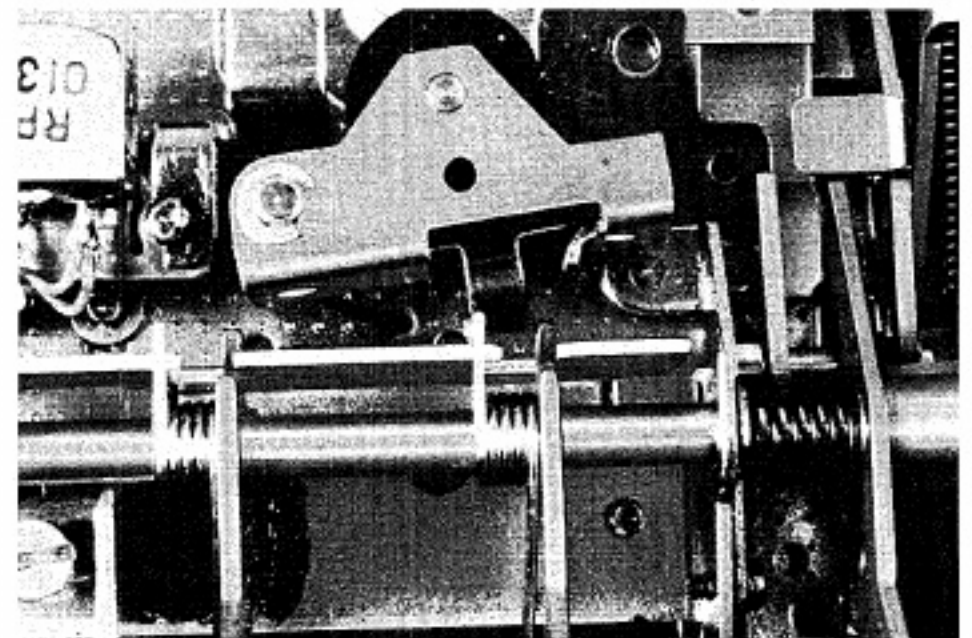


Photo 1

### 9.2 TAPE SPEED (Fig. 11)

Inserting small screwdriver into the adjusting hole, turn the trimmer resistor inside the motor.

Speed slow: turn clockwise (speed increases)

Speed fast: turn counter-clockwise (speed decreases)

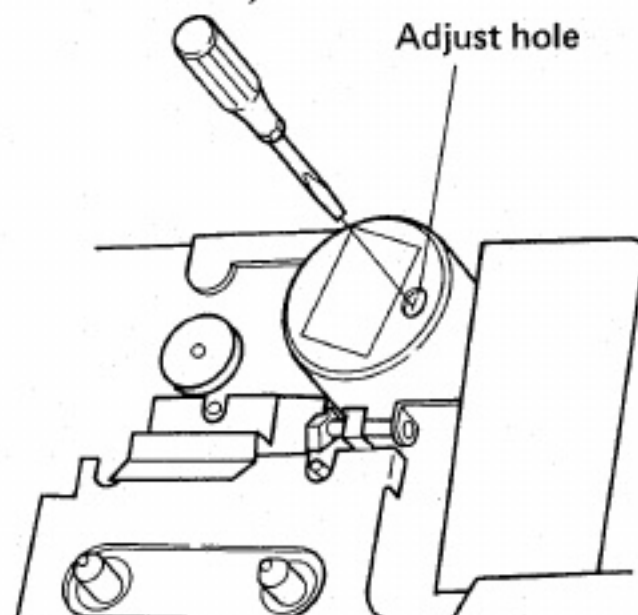


Fig. 11

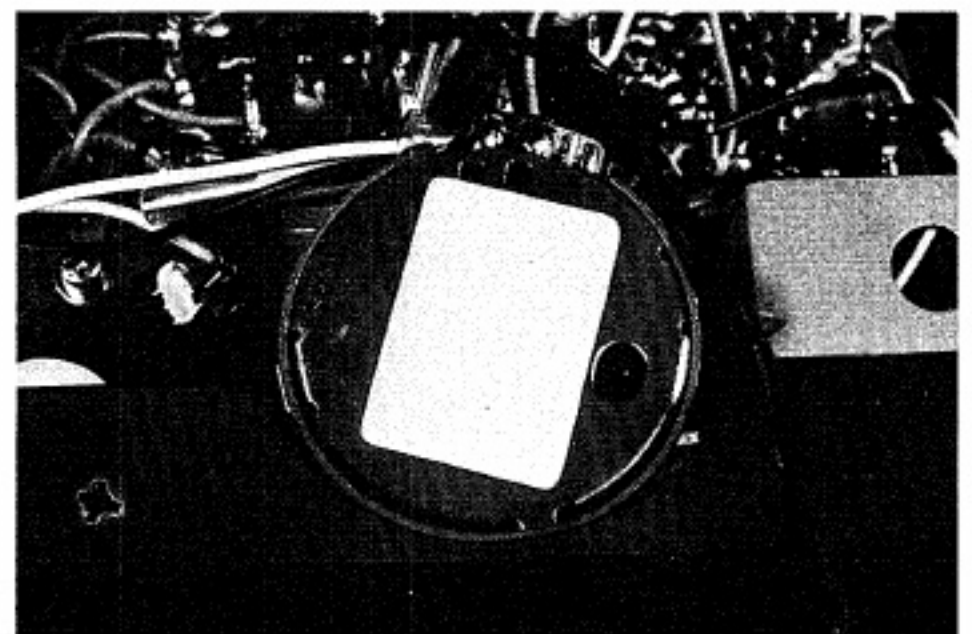


Photo 2

### 9.3 REEL HUB TORQUE

Measure by means of a torque gauge (Fig. 12).

\*Acceptable torque ranges

Take up reel hub play: 40 — 65 g.cm  
fast forward: 70 — 130 g.cm

Supply reel hub Rewind: 70 — 130 g.cm

\*Adjustments

Take Up Reel Hub, During Play (Figs. 13 & 14)

1. Check that the take up pulley is properly engaged with the rubber ring of the take up reel hub.

2. If pressure is incorrect, adjust drive roller arm spring.

3. If pressure is correct, but the torque out of acceptable range, replace tension arm assembly.

Take Up Reel Hub, During Fast Forward (Fig. 15)

When torque is outside the acceptable range, adjust by bending leaf spring of FF drive lever.

Supply Reel Hub, During Rewind (Fig. 16)

If torque is not within acceptable range, adjust REW lever spring.

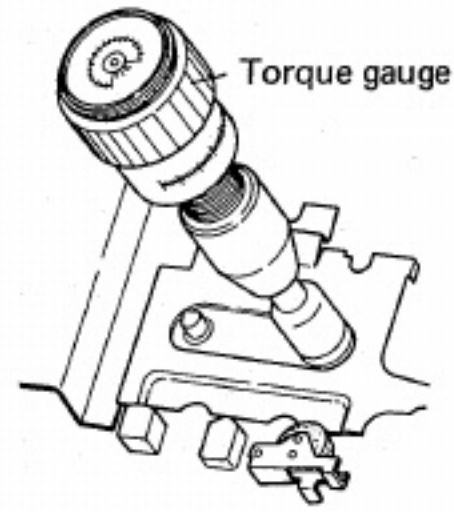


Fig. 12

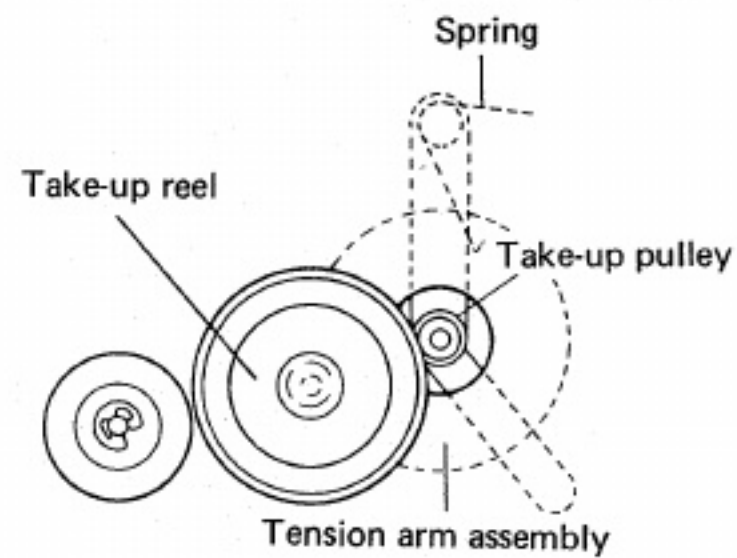


Fig. 13

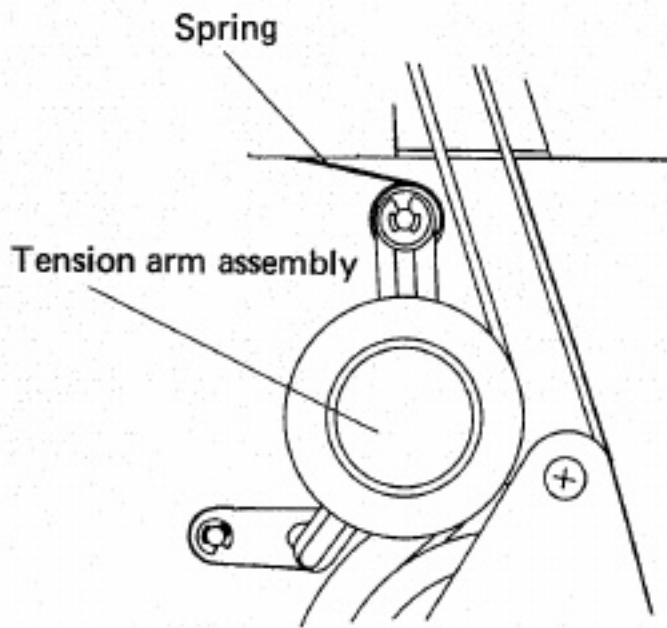


Fig. 14

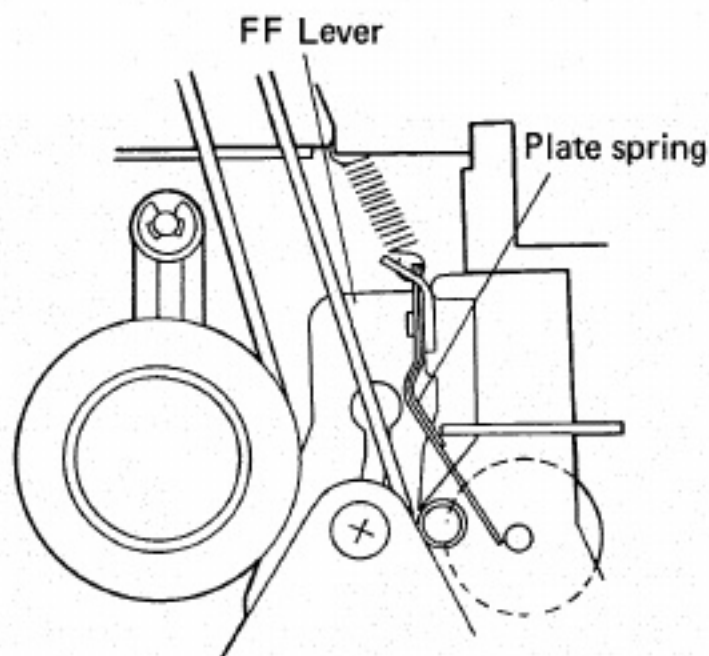


Fig. 15

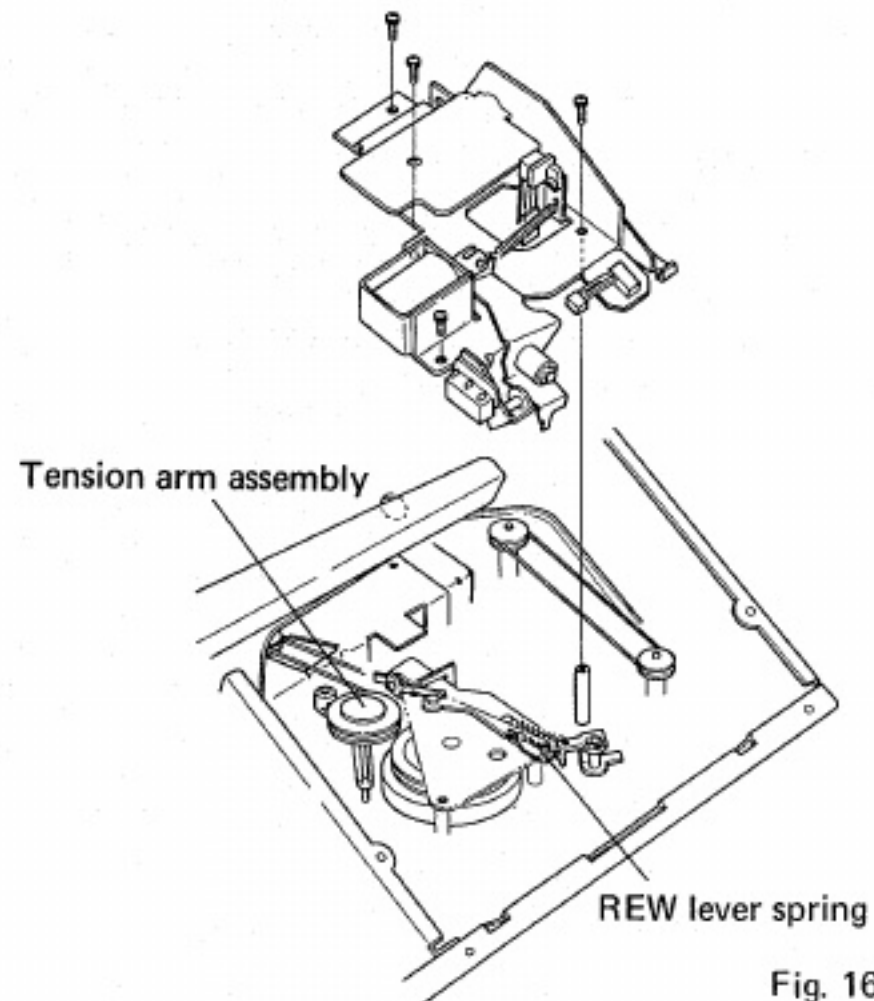


Fig. 16



#### 9.4 MUTING SWITCH (Fig. 17)

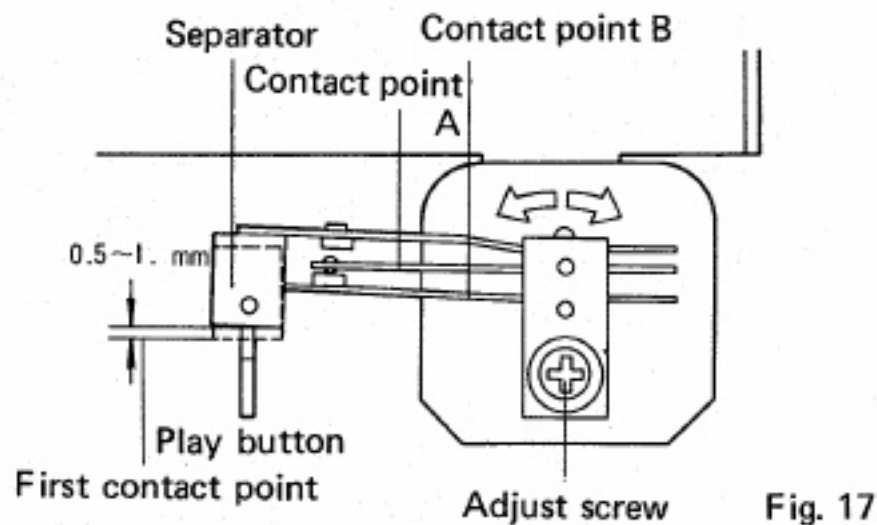
##### Adjustment Specifications

In Play mode, muting switch operation shall be fully completed. Switch timing shall be delayed from Stop to Play, but fast from Play to Stop.

In Stop mode, muting switch shall be completely reset.

##### Adjustment

Loosen adjusting screw and, by changing the switch mounting position, adjust so that separator moves 0.5 – 1.0 mm after contacts A and B close.



#### 9.5 SOLENOID OPERATION (Fig. 18)

1. Place mechanism in Stop mode.
2. Push plunger ① until points ② and ③ contact.
3. Adjust for 1.6mm gap at G by loosening the screws ⑤ and moving the solenoid.
4. Lock REC and Play levers, then confirm that locks release when plunger is pulled in.

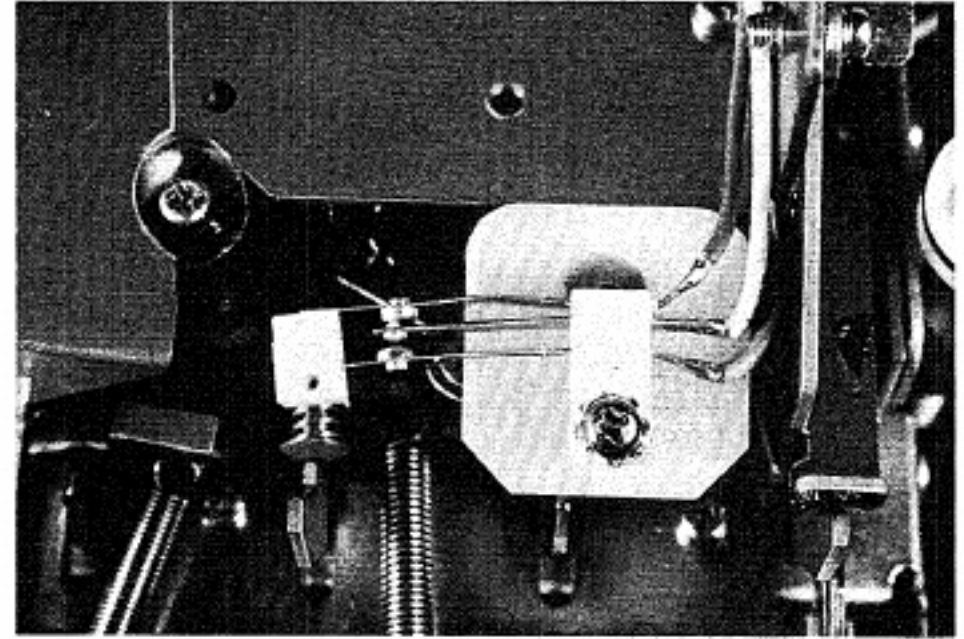
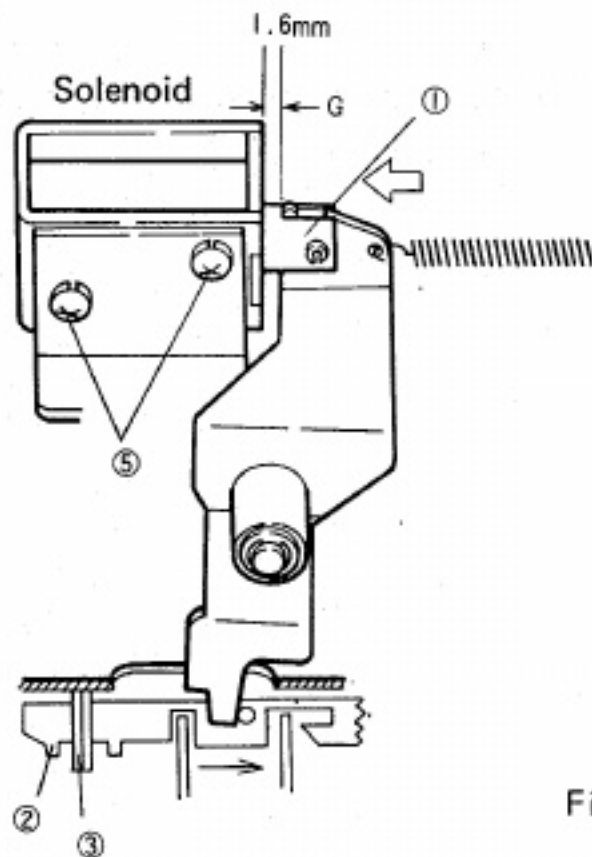


Photo 3

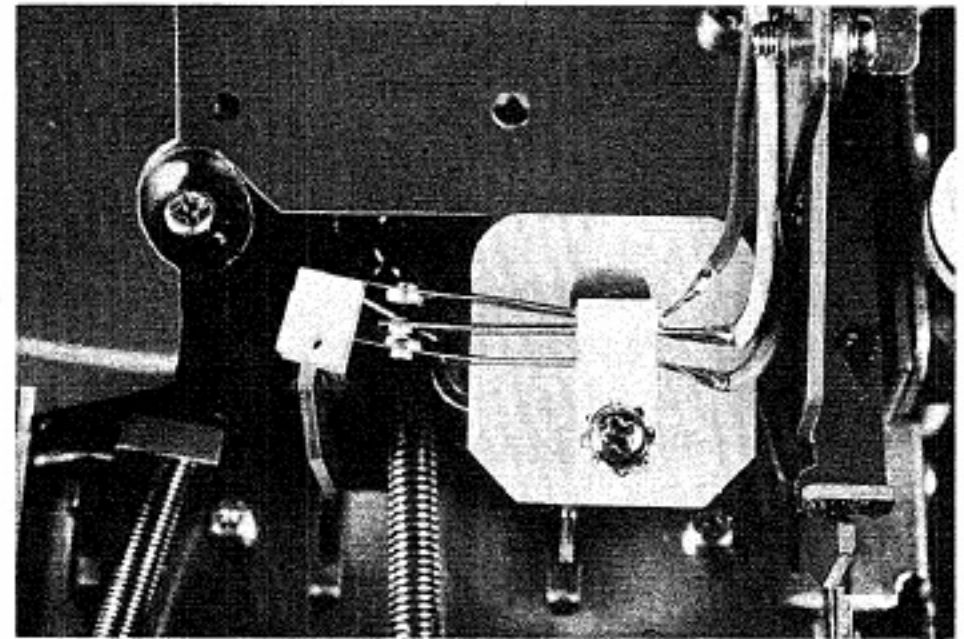


Photo 4

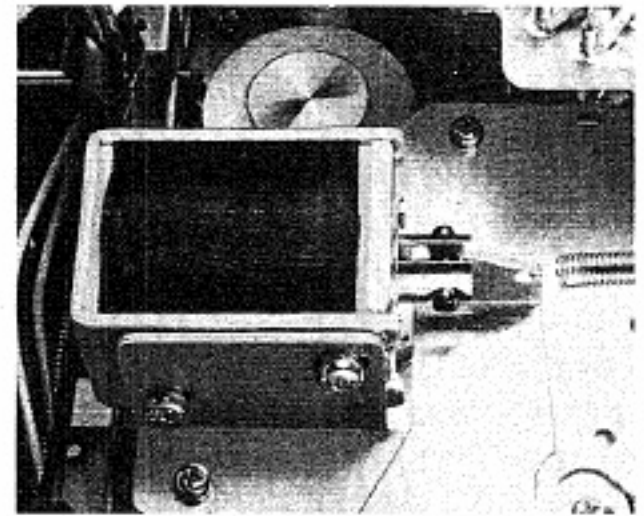


Photo 5

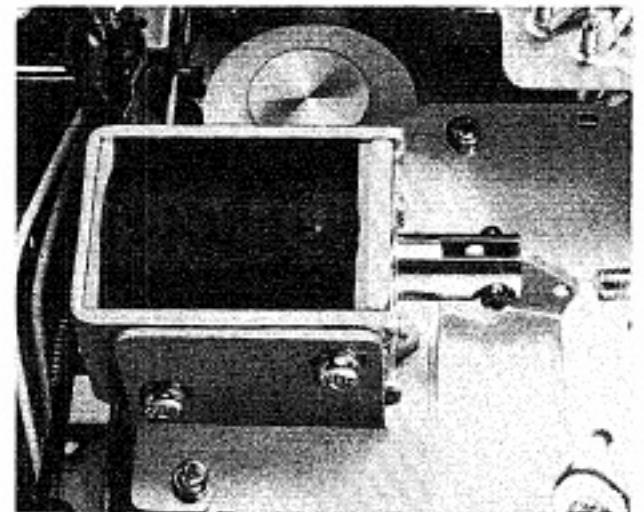


Photo 6

### 9.6 PLAY SWITCH (Fig. 19)

1. Place mechanism in Stop mode.
2. Loosen screw ③ and adjust so that space G between ① and ② becomes 0.1mm ( $\pm 0.05\text{mm}$ ).
3. Confirm switch operation in FF, Play and REW.

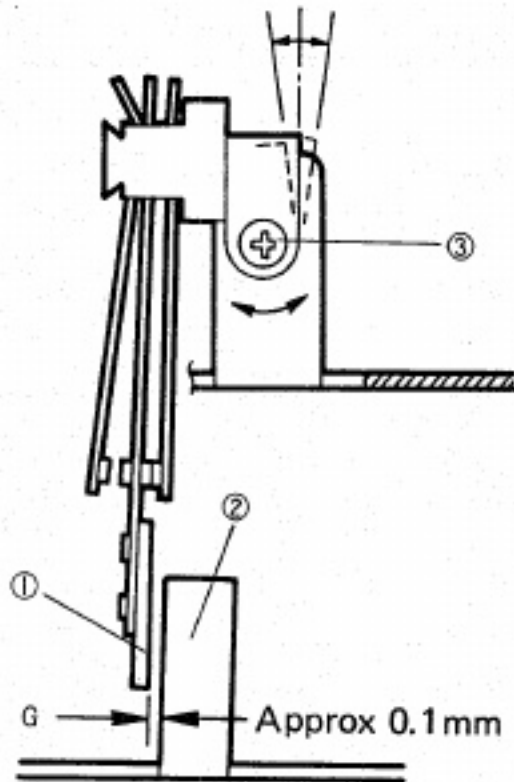


Fig. 19

### 9.7 REC ACTUATING LEVER (Fig. 20)

Loosen adjusting screws and position adjusting plate for 1 – 2 mm gap between REC lever and REC/PB selector switch.

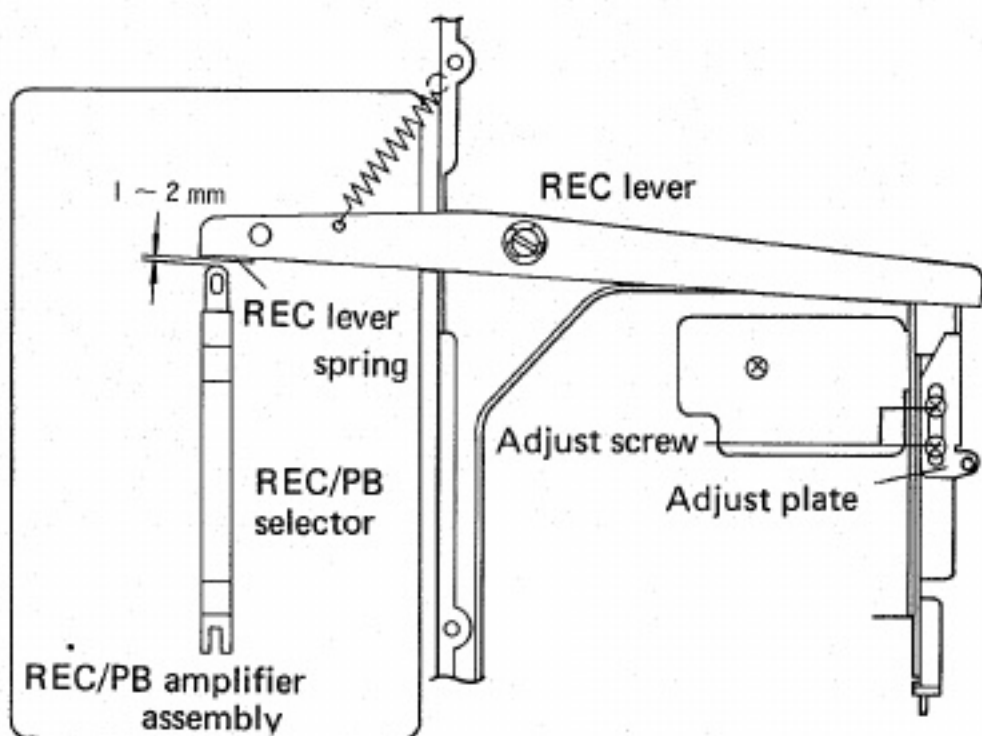


Fig. 20

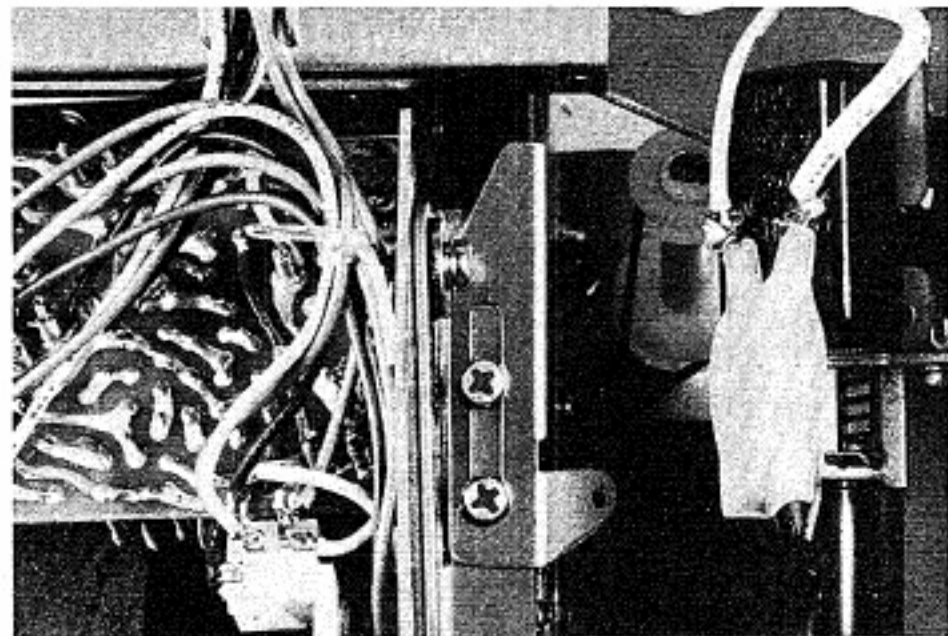


Photo 7

## 10. ELECTRICAL ADJUSTMENTS

The following test equipment is required for adjustments.

\*mV meter (high sensitivity AC voltmeter)

\*Low frequency oscillator

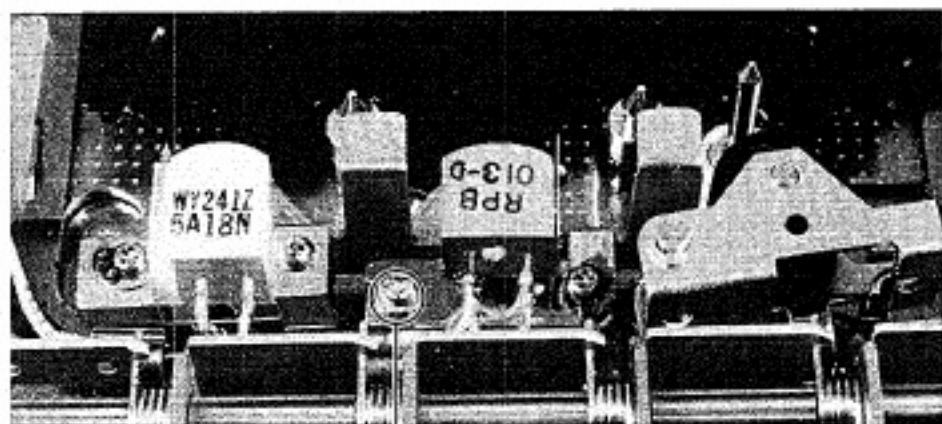
\*Attenuator

\*Oscilloscope

0 dBv = 1V Connect 50 k $\Omega$  resistor to Output jacks.

### 10.1 HEAD AZIMUTH

1. Set EQ selector to STD.
2. Connect mV meter to Output jacks.
3. Play test tape STD-334 10 kHz -10dB signal.
4. Adjust screw 1 for maximum mV meter indication for both left and right channels.
5. After adjusting, apply sealing compound to screw ① to prevent loosening.



① Adjusting screw

Photo 8

### 10.2 PLAYBACK EQUALIZER (Fig. 22)

1. Set EQ selector to Chrome.
2. Connect mV meter to Output jacks.
3. Set VR101 and VR102 of rec/play amplifier board to maximum.
4. Play test tape STD-334 333Hz -20dB signal.
5. Adjust VR115 and VR116 for -20dBv indication on mV meter.
6. Play 6.3kHz -20dB signal of test tape.
7. Adjust VR103 (L ch) and VR104 (R ch) for -24.5dBv indication on mV meter.
8. Set EQ selector to STD.
9. In the same manner as Steps 4 and 6, play 333Hz and 6.3kHz.
10. Confirm that when 6.3kHz is played, the mV meter indicates -20dBv  $\pm$ 1dB. If not within this rating, adjust by changing the connection of the printed circuit board marked A, B. (in Fig. 22). After adjusting, set VR115 and VR116 to maximum (clockwise as viewed from pattern surface).

### 10.3 PLAYBACK LEVEL

1. Connect mV meter to TP<sub>1</sub> (L) and TP<sub>1</sub> (R) of rec/play amplifier board.
2. Set Dolby NR switch to ON.
3. Play test tape STD-334 333Hz 0dB signal.
4. Adjust VR101 (L ch) and VR102 (R ch) for -0.2dBv indication on mV meter.

### 10.4 LEVEL METER CALIBRATION

1. Connect mV meter to TP<sub>1</sub> (Lch) and TP<sub>1</sub> (R ch) of rec/play amplifier board.
2. Apply 333Hz -10dBv signal to Input jacks and set in recording mode.
3. Adjust Input Level controls (VR1 & VR2) for Perform -4.2dBv indication on mV meter.
4. Adjust VR111 (L ch) and VR112 (R ch) for 0 indication on level meters.

### 10.5 RECORDING CURRENT

\*This adjustment is performed with the tape bias current cut-off. By opening the solder connection in the copper foil (shown \* in Fig. 21), power is not supplied to the oscillator circuit, thus interrupting the bias current.

1. Select recording mode, and apply 333Hz -10dBv signal to Input jacks.
2. Adjust Input Level controls for -7dBv level at the monitor output (Output jacks).
3. Connect mV meter between terminals 3 & 5 (L ch) and 4 & 6 (R ch) of rec/play amplifier board.
4. Set EQ selector to STD.
5. Adjust VR109 (L ch) and VR110 (R ch) for 0.35mV (=35 $\mu$ A) indication on mV meter.

### 10.6 RECORDING BIAS

1. Select recording mode, and turn Input level controls to minimum.
2. Set bias Selector to STD.
3. Connect mV meter between rec/play amplifier board terminals 3 & 5 (L ch) and 4 & 6 (R ch).
4. Adjust VR113 (L ch) and VR114 (R ch) for 6.5mV (=650 $\mu$ A) indication on mV meter.

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## 10.7 BIAS TRAP

1. Select recording mode, and turn Input Level controls to minimum.
2. Connect mV meter and oscilloscope to rec/play amplifier board terminals TP<sub>3</sub> (L ch) and TP<sub>3</sub> (R ch).
3. Adjust L107 (L ch) and L108 (R ch) for minimum bias waveform amplitude.
4. Set Bias selector to Chrome.
5. Connect mV meter to TP2
6. Adjust L101 (L ch) and L102 (R ch) for minimum indication on mV meter.

## 10.8 RECORD/PLAYBACK FREQUENCY RESPONSE

\*Perform by fine adjustment of bias current.

1. Set EQ selector to STD.
2. Select recording mode, and apply 333Hz -30dBv signal to Input jacks.
3. Adjust Input Level controls for -27dBv at monitor output (output jacks).
4. Record with STD-601 tape.
5. Record 6.3kHz at the same level.
6. Play tape and adjust VR113 (L ch) and VR114 (R ch) to obtain the same level at both 333Hz and 6.3kHz.
7. Record and play back up to 12kHz and confirm that frequency response is within specifications.
8. Set EQ and Bias selectors to Chrome.
9. Employ STD-602 tape and confirm that recording and playback frequency response is within specifications.
10. With Dolby NR switch ON, confirm that specifications are met at each tape position.
11. Check distortion and confirm that bias is not shallow.

\*Recording Equalizer

Peaking coils (L103 - L106) normally do not require adjustment. However, if frequency response is not improved by bias adjustment, measure recording amplifier frequency response and confirm that peak is in the vicinity of 12.5kHz with STD and 15kHz with Chrome. Adjust the peaking coils only if the frequency deviation is large.

## 10.9 RECORDING LEVEL

1. Set EQ and Bias selectors to STD.
2. Connect mV meter to TP<sub>1</sub> (L) and TP<sub>1</sub> (R) of REC/PB amplifier assembly.
3. Select recording mode, and apply 333Hz -10dBv signal to Input jacks.
4. Adjust Input Level controls for -4.2dBv indication on mV meter.
5. Record with STD-601.
6. Record and playback several times. Adjust VR109 (L) and VR110 (R) for -4.2dBv indication on mV meter.
7. Set EQ and Bias selectors to Chrome.
8. In the same manner as for STD, record on STD-602A tape.
9. Play tape and confirm mV meter indication of -4.2dBv ±1.5dB.

## 10.10 DOLBY PROCESSOR

1. Connect mV meter to TP<sub>1</sub> (L) and TP<sub>1</sub> (R) of rec/play amplifier board.
2. Set Dolby NR switch to ON.
3. Set VR105 (L) and VR106 (R) of REC/PB amplifier assembly to maximum.
4. In recording mode, apply 5kHz signal to Input jacks.
5. Adjust Input Level controls for -2.2dBv indication on mV meter.
6. Reduce Input level by 40dB (with respect to Step 4).
7. Adjust VR107 (L) and VR108 (R) for -32.2dBv indication on mV meter.
8. Reduce input level by 30dB with respect to Step 4.
9. Adjust VR105 (L) and VR106 (R) for -28.2dBv indication on mV meter.

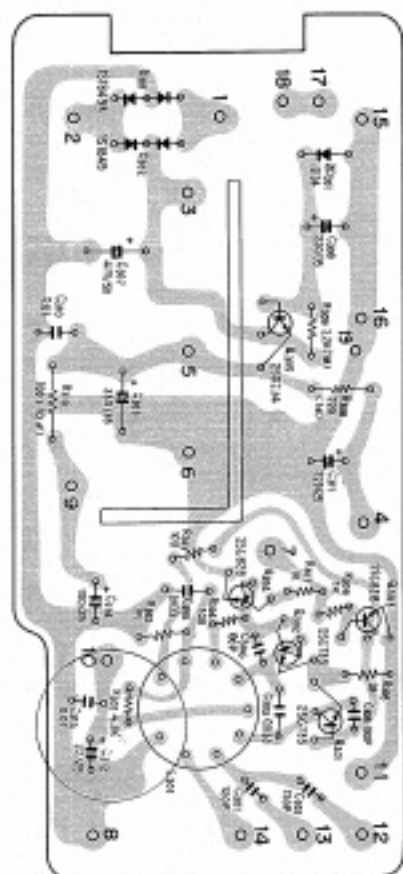


Fig. 21

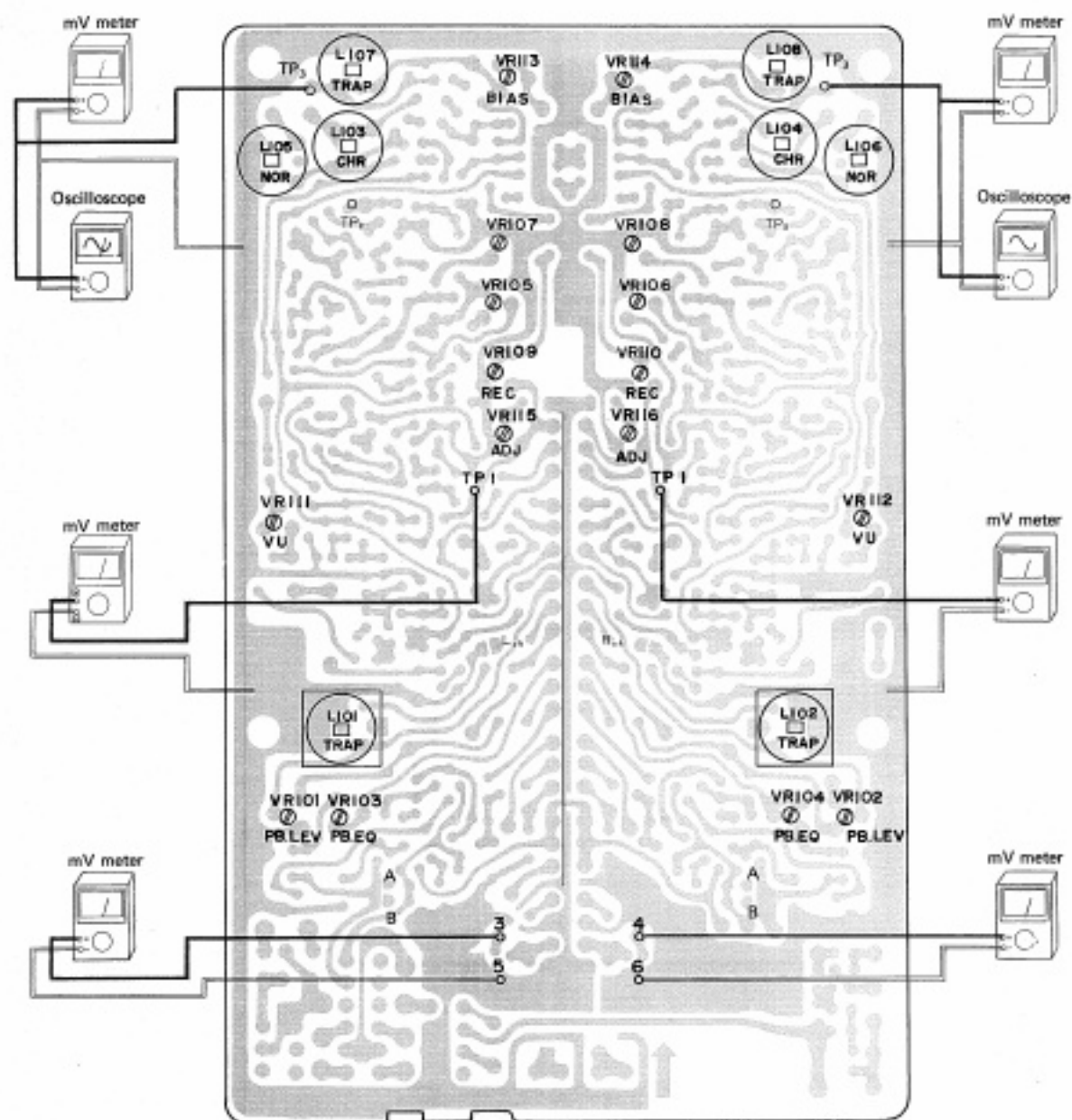
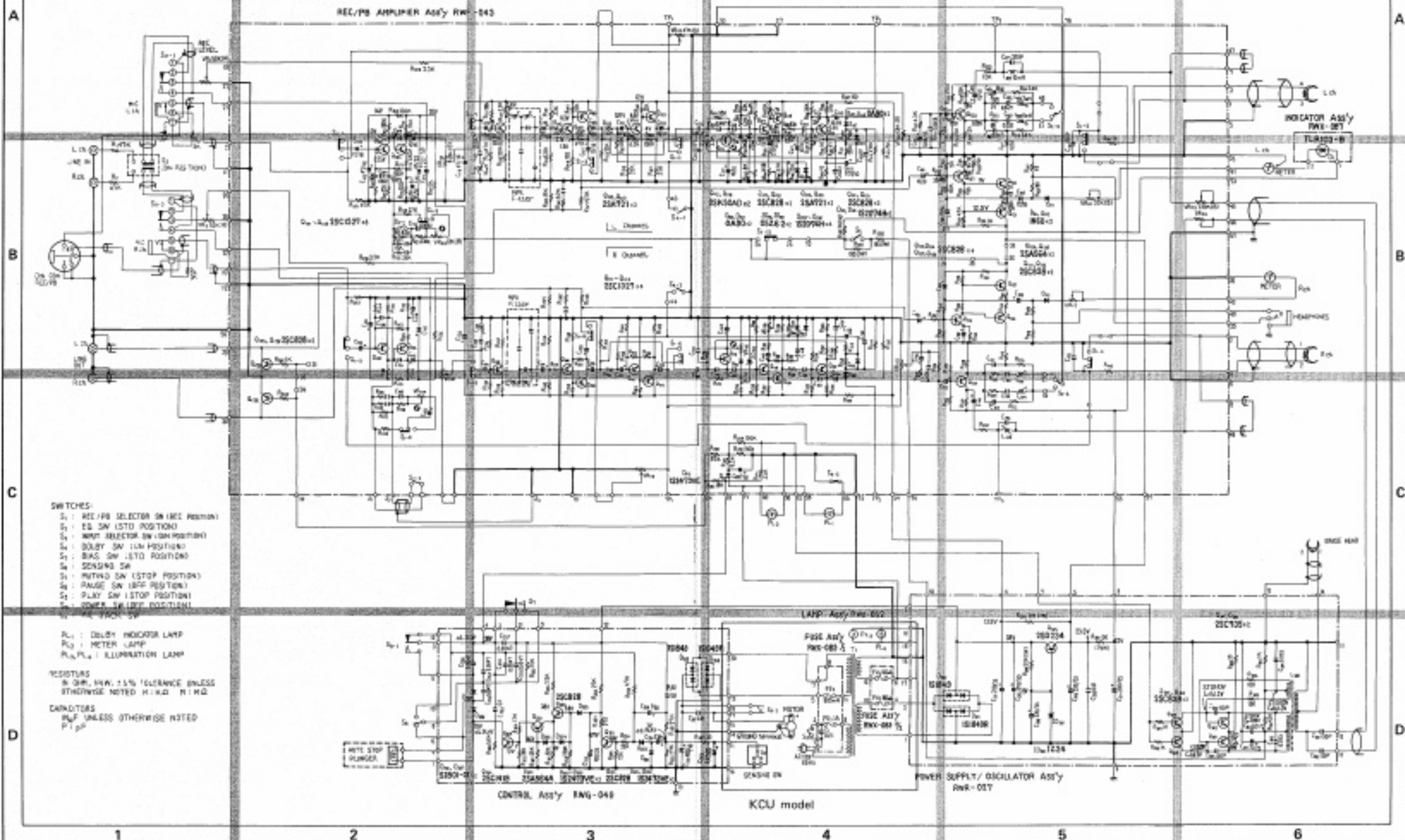


Fig. 22

# 11. SCHEMATIC DIAGRAMS, P.C. BOARD PATTERNS AND PART LISTS

## 11.1 SCHEMATIC DIAGRAMS AND MISCELLANEOUS PARTS



MAIN PARTS

Symbol	Description	Part No.
	Solenoid (auto stop)	RXP-033
	Power transformer (KCU model)	RTT-067
	(NB model)	RTT-071
	(DV, DP model)	RTT-068

SWITCHES

Symbol	Description	Part No.
S1	Switch (REC/PB selector)	RSH-017
S2,S4,S5	Switch	RSG-031
S3	Switch (input selector)	RSH-016
S6	Switch (sensing switch)	RSX-037
S7	Muting switch	RSN-005
S8	Switch (PAUSE switch)	RSF-014
S9	Switch (play)	RSN-002
S10	Switch (power) KCU model	RSA-010
S11	Switch (power) DV, NB, DP model	RSA-015

PILOT LAMP

Symbol	Description	Part No.
PL1	Lamp (Dolby)	REL-030
PL2	Lamp (meter)	REL-030
PL3, PL4	Cassette compartment	REL-007

NOTE:

- Capacitors: in  $\mu F$  unless otherwise noted p:pF
- Resistors: in  $\Omega$ ,  $\frac{1}{4}W$  unless otherwise noted k:k $\Omega$ , M:M $\Omega$

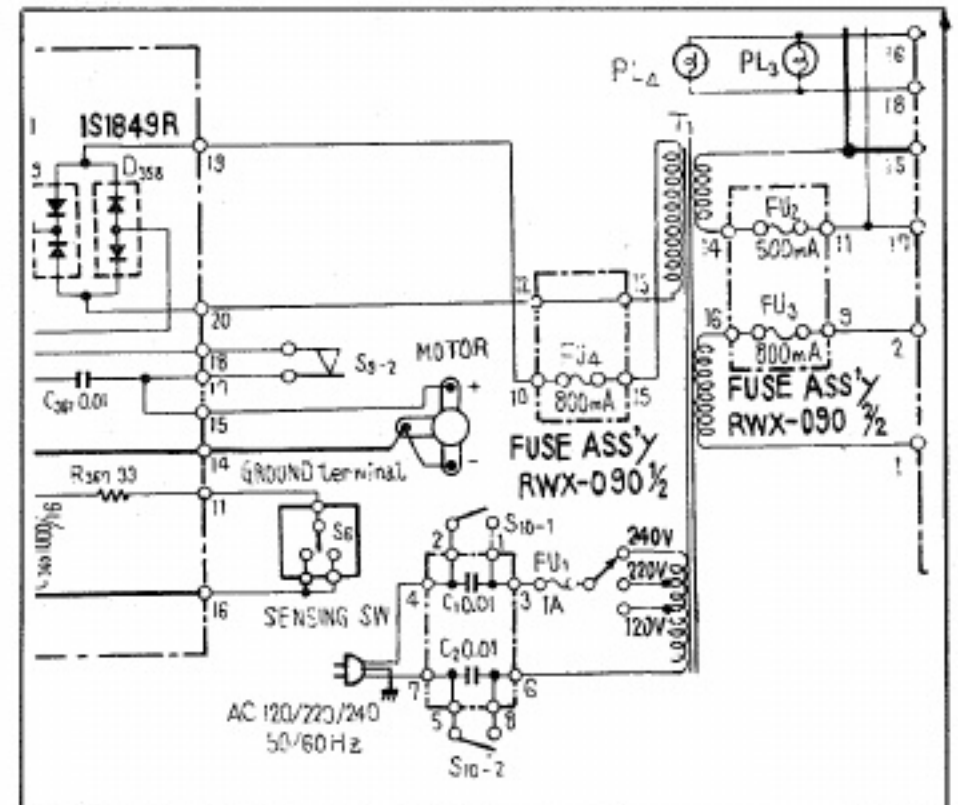
RESISTORS

Symbol	Description	Part No.
R1	Carbon film 47k	RD $\frac{1}{4}$ PS 473J
R2	Carbon film 47k	RD $\frac{1}{4}$ PS 473J
R3	Carbon film 3k	RD $\frac{1}{4}$ PS 302K
R4	Carbon film 3k	RD $\frac{1}{4}$ PS 302K
VR1,VR2	Variable resistor (input)	RCV-022

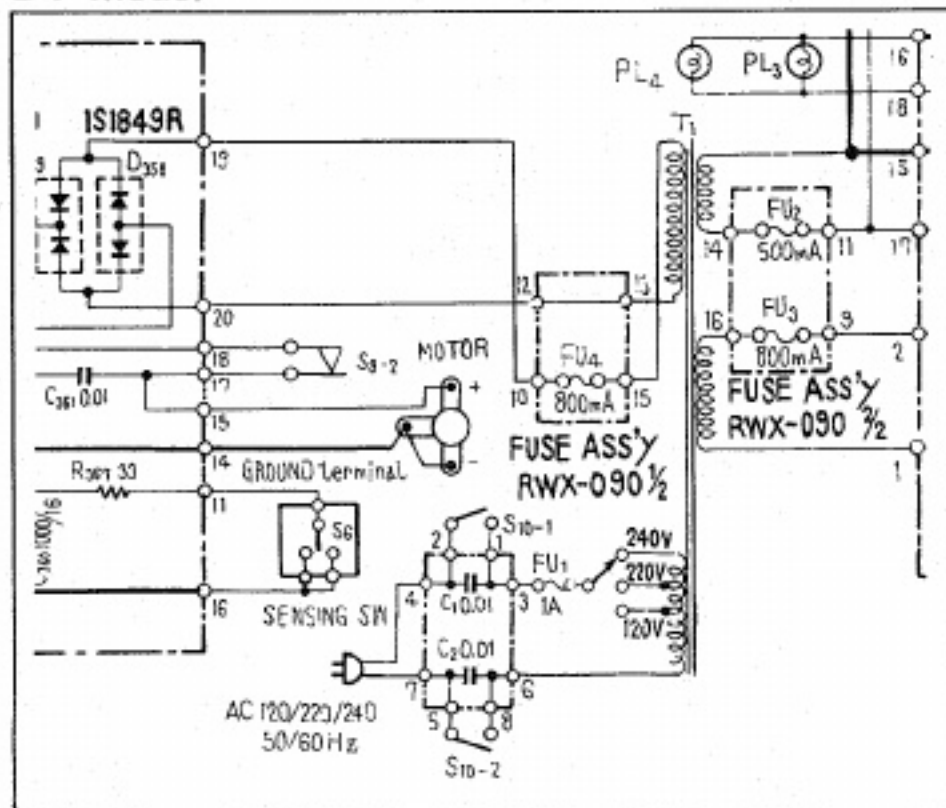
CAPACITORS

Symbol	Description	Part No.
C1	Ceramic 0.01	C43-003

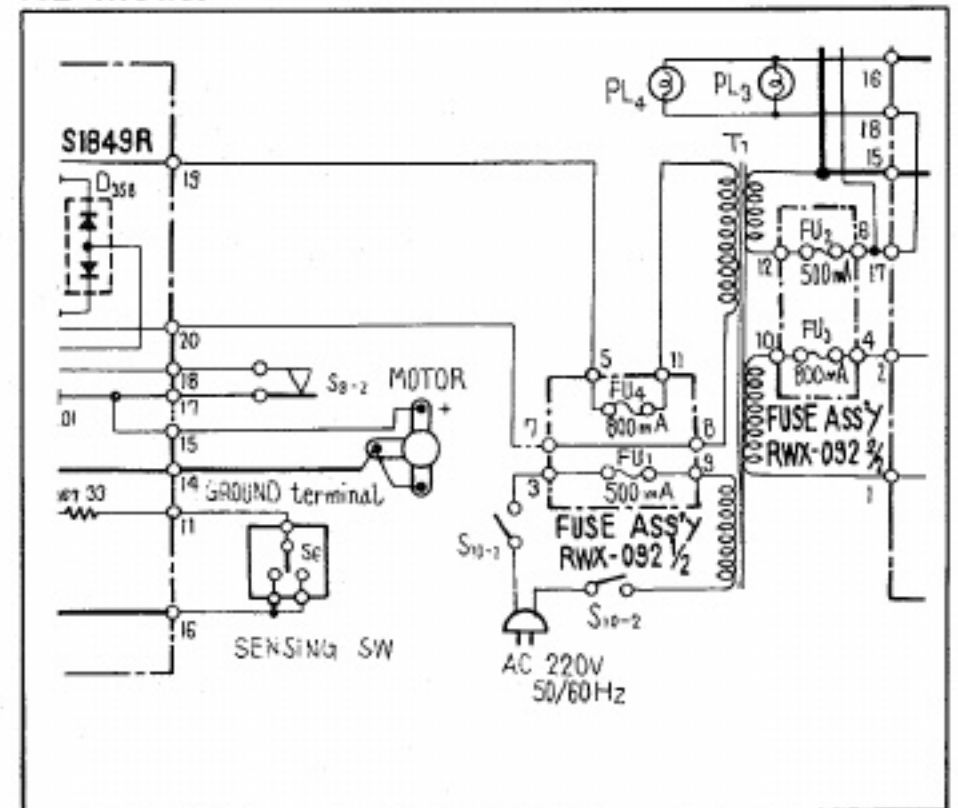
DP model



DV model

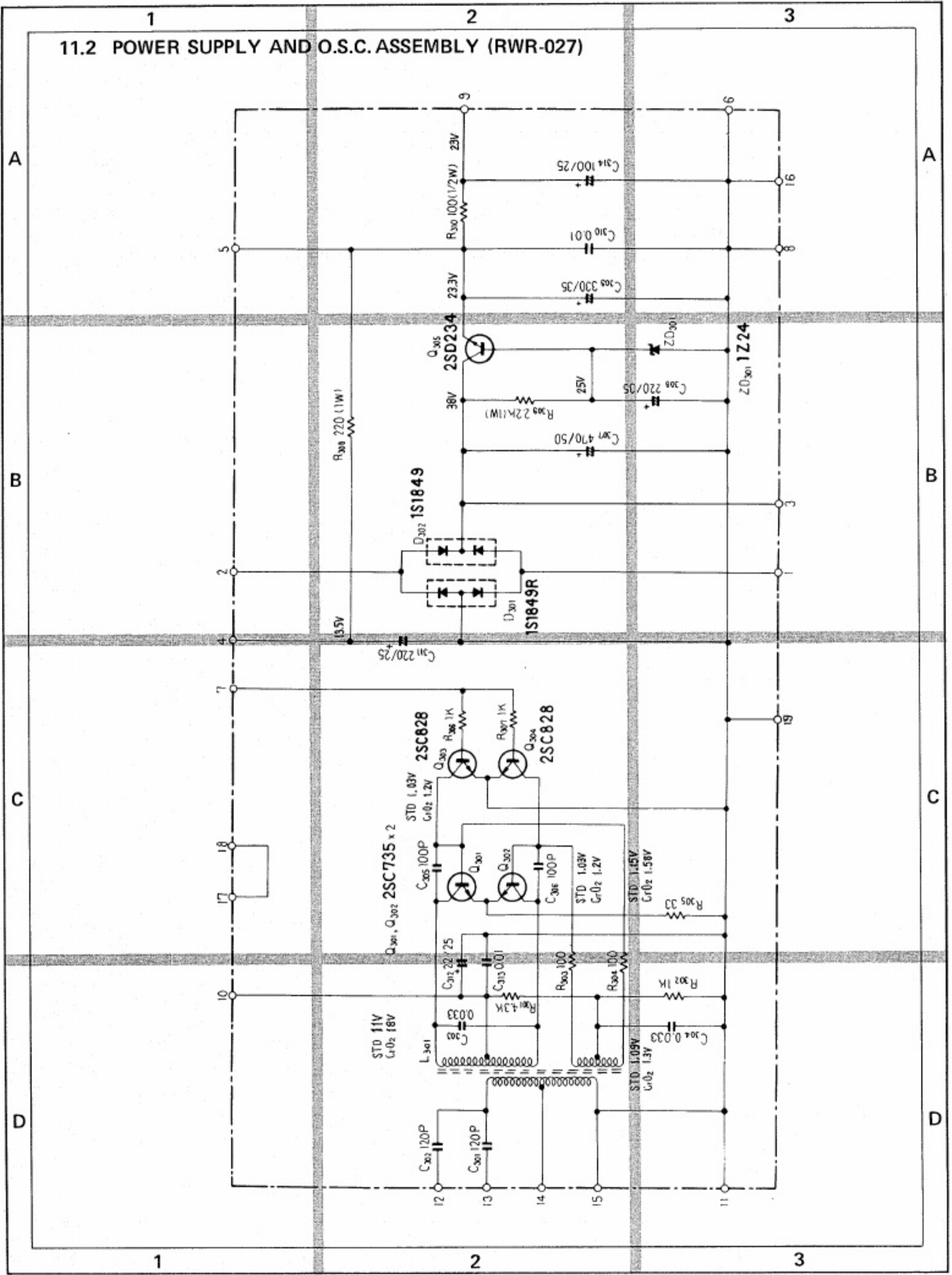


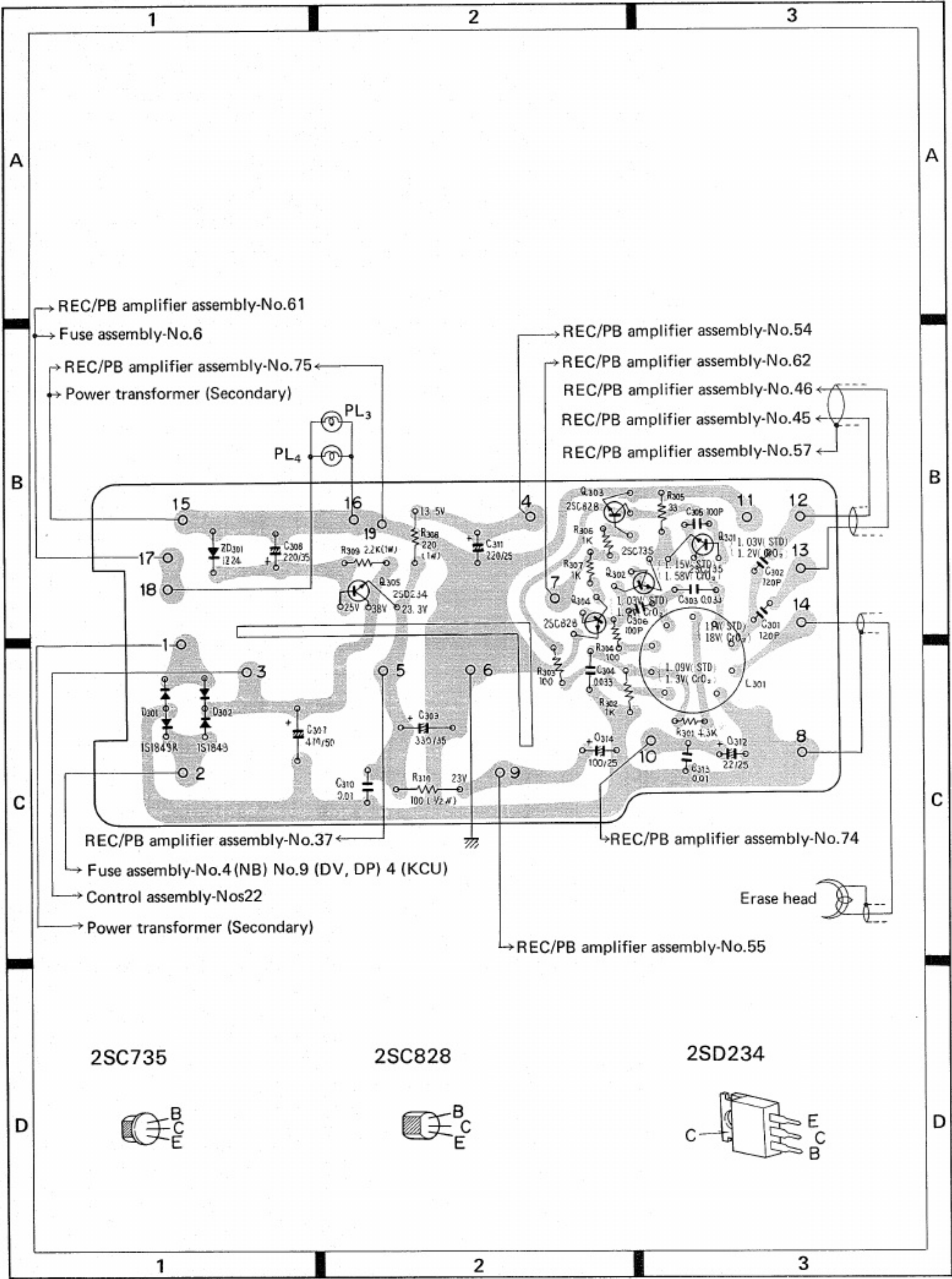
NB model





# 11.2 POWER SUPPLY AND O.S.C. ASSEMBLY (RWR-027)





REC/PB amplifier assembly-No.61  
 Fuse assembly-No.6  
 REC/PB amplifier assembly-No.75  
 Power transformer (Secondary)

REC/PB amplifier assembly-No.54  
 REC/PB amplifier assembly-No.62  
 REC/PB amplifier assembly-No.46  
 REC/PB amplifier assembly-No.45  
 REC/PB amplifier assembly-No.57

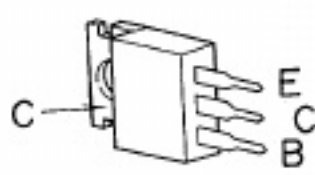
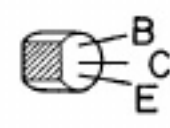
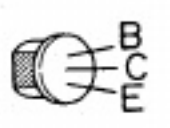
REC/PB amplifier assembly-No.37  
 Fuse assembly-No.4(NB) No.9 (DV, DP) 4 (KCU)  
 Control assembly-Nos22  
 Power transformer (Secondary)

REC/PB amplifier assembly-No.74  
 Erase head  
 REC/PB amplifier assembly-No.55

2SC735

2SC828

2SD234



## Parts List of Power Supply and O.S.C. Assembly (RWR-027)

## CAPACITORS

Symbol	Description			Part No.
C301	Styrol	120p	50V	RCE-009-0
C302	Styrol	120p	50V	RCE-009-0
C303	Mylar	0.033	50V	CQMA 333K 50
C304	Mylar	0.033	50V	CQMA 333K 50
C305	Ceramic	100p	50V	CCDSL 101K 50
C306	Ceramic	100p	50V	CCDSL 101K 50
C307	Electrolytic	470	50V	CEA 471P 50
C308	Electrolytic	220	35V	CEA 221P 35
C309	Electrolytic	330	35V	CEA 331P 35
C310	Mylar	0.01	50V	CQMA 103K 50
C311	Electrolytic	220	25V	CEA 221P 25
C312	Electrolytic	22	25V	CEA 220P 25
C313	Mylar	0.01	50V	CQMA 103K 50
C314	Electrolytic	100	25V	CEA 101P 25

## RESISTORS

Symbol	Description			Part No.
R301	Carbon film	4.3k		RD $\frac{1}{4}$ VS 432J
R302	Carbon film	1k		RD $\frac{1}{4}$ VS 102J
R303	Carbon film	100		RD $\frac{1}{4}$ VS 101J
R304	Carbon film	100		RD $\frac{1}{4}$ VS 101J
R305	Carbon film	33		RD $\frac{1}{4}$ VS 330J
R306	Carbon film	1k		RD $\frac{1}{4}$ VS 102J
R307	Carbon film	1k		RD $\frac{1}{4}$ VS 102J
R308	Metal oxide	220	1W	RS1PSF 221K
R309	Metal oxide	2.2k	1W	RS1PSF 222K
R310	Metal oxide	100	$\frac{1}{2}$ W	RS $\frac{1}{2}$ PSF 101K

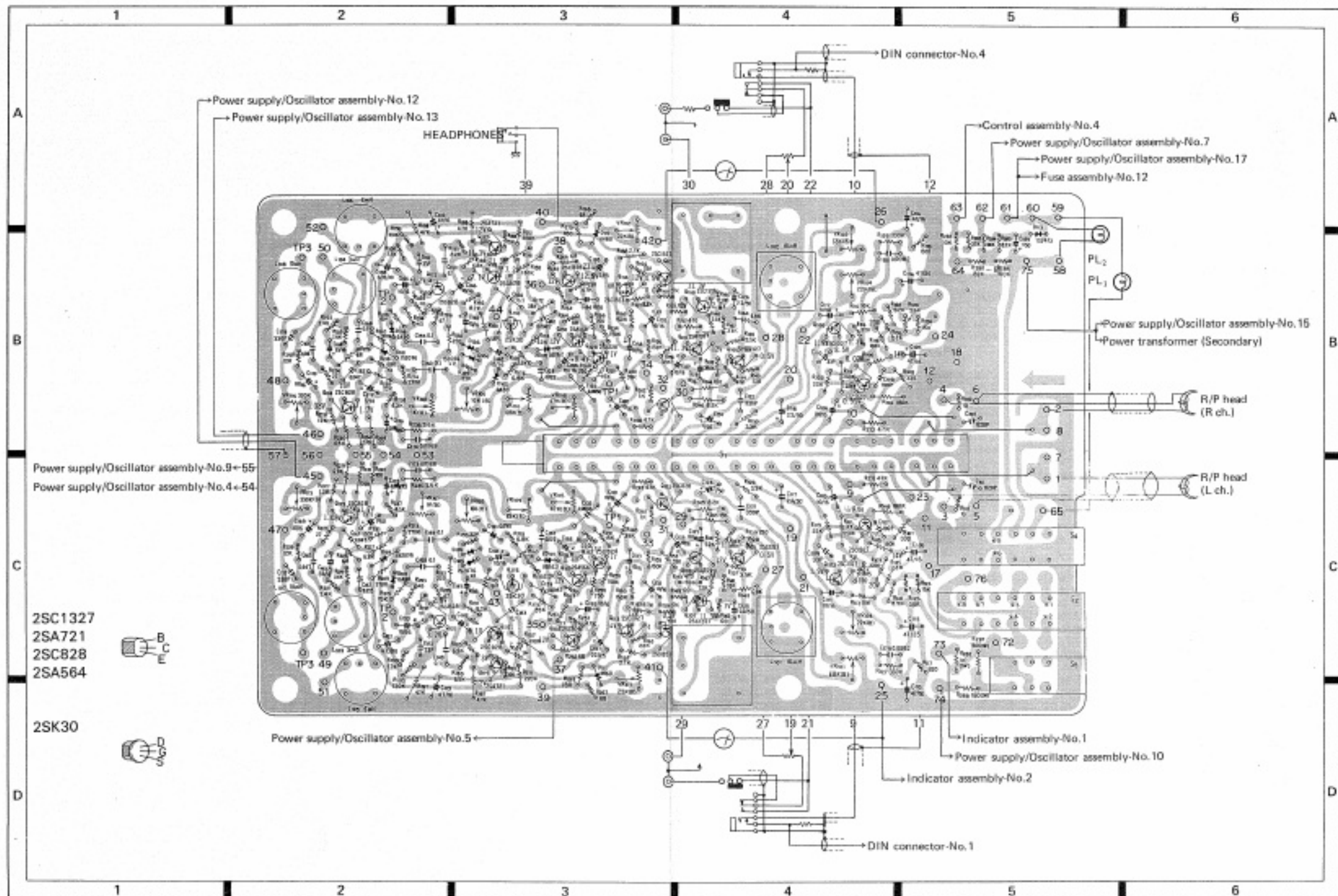
## SEMICONDUCTORS

Symbol	Description			Part No.
Q301	Transistor			2SC735-Y
Q302	Transistor			2SC735-Y
Q303	Transistor			2SC828-R
Q304	Transistor			2SC828-R
Q305	Transistor			2SD234-O
D301	Diode			1S1849R
D302	Diode			1S1849
ZD301	Zener			1Z24

## COIL

Symbol	Description			Part No.
L301	Oscillator coil			T64-001





## Parts List of REC/PB Amplifier Assembly (RWF-043)

### CAPACITORS

Symbol	Description			Part No.
C101	Styrol	820p	50V	RCE-022
C102	Styrol	820p	50V	RCE-022
C103	Electrolytic	10	16V	RCH-018
C104	Electrolytic	10	16V	RCH-018
C105	Electrolytic	47	16V	CEA 470P 16
C106	Electrolytic	47	16V	CEA 470P 16
C107	Styrol	100p	50V	RCE-003
C108	Styrol	100p	50V	RCE-003
C109	Styrol	33p	50V	RCE-016
C110	Styrol	33p	50V	RCE-016
C111	Electrolytic	10	16V	CEA 100P 16
C112	Electrolytic	10	16V	CEA 100P 16
C113	Electrolytic	47	16V	CEA 470P 16
C114	Electrolytic	47	16V	CEA 470P 16
C115	Electrolytic	47	25V	CEA 470P 25
C116	Electrolytic	47	25V	CEA 470P 25
C117	Electrolytic	2.2	50V	RCH-024
C118	Electrolytic	2.2	50V	RCH-024
C119	Electrolytic	47	16V	CEA 470P 16
C120	Electrolytic	47	16V	CEA 470P 16
C121	Styrol	330p	50V	RCE-008
C122	Styrol	330p	50V	RCE-008
C123	Electrolytic	1	50V	CEA 010P 50
C124	Electrolytic	1	50V	CEA 010P 50
C125	Electrolytic	2.2	50V	CEA 2R2P 50
C126	Electrolytic	2.2	50	CEA 2R2P 50
C127	Electrolytic	10	16	CEA 100P 16
C128	Electrolytic	10	16	CEA 100P 16
C129	Electrolytic	10	16	CEA 100P 16
C130	Electrolytic	10	16	CEA 100P 16
C131	Electrolytic	10	16	CEA 100P 16
C132	Electrolytic	10	16	CEA 100P 16
C133	Electrolytic	10	16	CEA 100P 16
C134	Electrolytic	10	16	CEA 100P 16
C135	Mylar	0.0056	50V	CQMA 562K 50
C136	Mylar	0.0056	50V	CQMA 562K 50
C137	Mylar	0.027	50V	CQMA 273K 50
C138	Mylar	0.027	50V	CQMA 273K 50
C139	Mylar	0.0047	50V	CQMA 472K 50
C140	Mylar	0.0047	50V	CQMA 472K 50
C141	Electrolytic	10	16V	CEA 100P 16
C142	Electrolytic	10	16V	CEA 100P 16
C143	Mylar	0.1	50V	CQMA 104K 50
C144	Mylar	0.1	50V	CQMA 104K 50
C145	Electrolytic	10	16V	CEA 100P 16
C146	Electrolytic	10	16V	CEA 100P 16
C147	Electrolytic	10	16V	CEA 100P 16
C148	Electrolytic	10	16V	CEA 100P 16

Symbol	Description			Part No.
C149	Mylar	0.1	50V	CQMA 104K 50
C150	Mylar	0.1	50V	CQMA 104K 50
C151	Styrol			RCE-016
C152	Styrol			RCE-016
C153	Electrolytic	10	16V	CEA 100P 16
C154	Electrolytic	10	16V	CEA 100P 16
C155	Mylar	0.1	50V	CQMA 104K 50
C156	Mylar	0.1	50V	CQMA 104K 50
C157	Electrolytic	0.33	10V	CSSA R33M 10
C158	Electrolytic	0.33	10V	CSSA R33M 10
C159	Mylar	0.1	50V	CQMA 104K 50
C160	Mylar	0.1	50V	CQMA 104K 50
C161	Mylar	0.047	50V	CQMA 473K 50
C162	Mylar	0.047	50V	CQMA 473K 50
C163	Electrolytic	33	16V	CEA 330P 16
C164	Electrolytic	33	16V	CEA 330P 16
C165	Mylar	0.047	50V	CQMA 473K 50
C166	Mylar	0.047	50V	CQMA 473K 50
C167	Mylar	0.033	50V	CQMA 333K 50
C168	Mylar	0.033	50V	CQMA 333K 50
C169	Electrolytic	10	16V	CEA 100P 16
C170	Electrolytic	10	16V	CEA 100P 16
C171	Electrolytic	1	50V	CEA 010P 50
C172	Electrolytic	1	50V	CEA 010P 50
C173	Mylar	0.0068	50V	CQMA 682K 50
C174	Mylar	0.0068	50V	CQMA 682K 50
C175	Electrolytic	0.68	25V	CSSA R68M 25
C176	Electrolytic	0.68	25V	CSSA R68M 25
C177	Styrol	330	50V	RCE-008
C178	Styrol	330	50V	RCE-008
C179	Mylar	0.0082	50V	CQMA 822K 50
C180	Mylar	0.0082	50V	CQMA 822K 50
C181	Electrolytic	10	16V	CEA 100P 16
C182	Electrolytic	10	16V	CEA 100P 16
C183	Electrolytic	10	16V	CEA 100P 16
C184	Electrolytic	10	16V	CEA 100P 16
C185	Electrolytic	10	16V	CEA 100P 16
C186	Electrolytic	10	16V	CEA 100P 16
C187	Electrolytic	22	25V	CEA 220P 25
C188	Electrolytic	22	25V	CEA 220P 25
C189	Electrolytic	1	50V	CEA 010P 50

### RESISTORS

Symbol	Description		Part No.
VR101	Semi-fixed	68k $\Omega$	RCP-013
VR102	Semi-fixed	68k $\Omega$	RCP-013
VR103	Semi-fixed	22k $\Omega$ -B	C92-857
VR104	Semi-fixed	22k $\Omega$ -B	C92-857
VR105	Semi-fixed	10k-B	C92-049

Symbol	Description	Part No.
VR106	Semi-fixed 10k-B	C92-049
VR107	Semi-fixed 1kΩ	C92-404
VR108	Semi-fixed 1kΩ	C92-404
VR109	Semi-fixed 68k	RCP-013
VR110	Semi-fixed 68k	RCP-013
VR111	Semi-fixed 22k-B	C92-857
VR112	Semi-fixed 22k-B	C92-857
VR113	Semi-fixed 330k-B	RCP-021
VR114	Semi-fixed 330k-B	RCP-021
VR115	Semi-fixed	C92-048
VR116	Semi-fixed	C92-048
R101	Carbon film 10	RD%VS 100J
R102	Carbon film 10	RD%VS 100J
R103	Carbon film 180k	RD%VS 184J
R104	Carbon film 180k	RD%VS 184J
R105	Carbon film 180k	RD%VS 184J
R106	Carbon film 180k	RD%VS 184J
R107	Carbon film 330	RD%VS 331J
R108	Carbon film 330	RD%VS 331J
R109	Carbon film 100k	RD%VS 104J
R110	Carbon film 100k	RD%VS 104J
R111	Carbon film 150k	RD%VS 154J
R112	Carbon film 150k	RD%VS 154J
R113	Carbon film 10k	RD%VS 103J
R114	Carbon film 10k	RD%VS 103J
R115	Carbon film 220	RD%VS 221J
R116	Carbon film 220	RD%VS 221J
R117	Carbon film 820	RD%VS 821J
R118	Carbon film 820	RD%VS 821J
R119	Carbon film 22k	RD%VS 223J
R120	Carbon film 22k	RD%VS 223J
R121	Carbon film 8.2k	RD%VS 822J
R122	Carbon film 8.2k	RD%VS 822J
R123	Carbon film 15k	RD%VS 153J
R124	Carbon film 15k	RD%VS 153J
R125	Carbon film 3.6k	RD%VS 362J
R126	Carbon film 3.6k	RD%VS 362J
R127	Carbon film 330k	RD%VS 334J
R128	Carbon film 330k	RD%VS 334J
R129	Carbon film 3.3k	RD%VS 332J
R130	Carbon film 3.3k	RD%VS 332J
R131	Carbon film 390k	RD%VS 394J
R132	Carbon film 390k	RD%VS 394J
R133	Carbon film 47k	RD%VS 473J
R134	Carbon film 47k	RD%VS 473J
R135	Carbon film 1k	RD%VS 102J
R136	Carbon film 1k	RD%VS 102J
R137	Carbon film 3.3k	RD%VS 332J
R138	Carbon film 3.3k	RD%VS 332J
R139	Carbon film 220	RD%VS 221J
R140	Carbon film 220	RD%VS 221J

Symbol	Description	Part No.
R141	Carbon film 33k	RD%VS 333J
R142	Carbon film 33k	RD%VS 333J
R143	Carbon film 6.8k	RD%VS 682J
R144	Carbon film 6.8k	RD%VS 682J
R145	Carbon film 100	RD%VS 101J
R146	Carbon film 100	RD%VS 101J
R147	Carbon film 2.2k	RD%VS 222J
R148	Carbon film 2.2k	RD%VS 222J
R149	Carbon film 120	RD%VS 121J
R150	Carbon film 120	RD%VS 121J
R151	Carbon film 470	RD%VS 471J
R152	Carbon film 470	RD%VS 471J
R153	Carbon film 33k	RD%VS 333J
R154	Carbon film 33k	RD%VS 333J
R155	Carbon film 150k	RD%VS 154J
R156	Carbon film 150k	RD%VS 154J
R157	Carbon film 130k	RD%VS 134J
R158	Carbon film 130k	RD%VS 134J
R159	Carbon film 27k	RD%VS 273J
R160	Carbon film 27k	RD%VS 273J
R161	Carbon film 8.2k	RD%VS 822J
R162	Carbon film 8.2k	RD%VS 822J
R163	Carbon film 22k	RD%VS 223J
R164	Carbon film 22k	RD%VS 223J
R165	Carbon film 150k	RD%VS 154J
R166	Carbon film 150k	RD%VS 154J
R167	Carbon film 2.2k	RD%VS 222J
R168	Carbon film 2.2k	RD%VS 222J
R169	Carbon film 3.3k	RD%VS 332J
R170	Carbon film 3.3k	RD%VS 332J
R171	Carbon film 39k	RD%VS 393J
R172	Carbon film 39k	RD%VS 393J
R173	Carbon film 2.2k	RD%VS 222J
R174	Carbon film 2.2k	RD%VS 222J
R175	Carbon film 6.8k	RD%VS 682J
R176	Carbon film 6.8k	RD%VS 682J
R177	Carbon film 1M	RD%VS 105J
R178	Carbon film 1M	RD%VS 105J
R179	Carbon film 1.8M	RD%VS 185J
R180	Carbon film 1.8M	RD%VS 185J
R181	Carbon film 15k	RD%VS 153J
R182	Carbon film 15k	RD%VS 153J
R183	Carbon film 220	RD%VS 221J
R184	Carbon film 220	RD%VS 221J
R185	Carbon film 6.8k	RD%VS 682J
R186	Carbon film 6.8k	RD%VS 682J
R187	Carbon film 4.7k	RD%VS 472J
R188	Carbon film 4.7k	RD%VS 472J
R189	Carbon film 8.2k	RD%VS 822J
R190	Carbon film 8.2k	RD%VS 822J
R191	Carbon film 8.2k	RD%VS 822J

Symbol	Description	Part No.
R192	Carbon film 8.2k	RD%VS 822J
R193	Carbon film 33k	RD%VS 333J
R194	Carbon film 33k	RD%VS 333J
R195	Carbon film 120k	RD%VS 124J
R196	Carbon film 120k	RD%VS 124J
R197	Carbon film 47k	RD%VS 473J
R198	Carbon film 47k	RD%VS 473J
R199	Carbon film 2.7k	RD%VS 272J
R200	Carbon film 2.7k	RD%VS 272J
R201	Carbon film 1k	RD%VS 102J
R202	Carbon film 1k	RD%VS 102J
R203	Carbon film 43	RD%VS 430J
R204	Carbon film 43	RD%VS 430J
R205	Carbon film 47	RD%VS 470J
R206	Carbon film 47	RD%VS 470J
R207	Metal oxide 100	RS%PSF 101K
R208	Metal oxide 100	RS%PSF 101K
R209	Carbon film 270k	RD%VS 274J
R210	Carbon film 270k	RD%VS 274J
R211	Carbon film 220k	RD%VS 224J
R212	Carbon film 220k	RD%VS 224J
R213	Carbon film 270k	RD%VS 274J
R214	Carbon film 270k	RD%VS 274J
R215	Carbon film 15k	RD%VS 153J
R216	Carbon film 15k	RD%VS 153J
R217	Carbon film 6.8k	RD%VS 682J
R218	Carbon film 6.8k	RD%VS 682J
R219	Carbon film 2.2k	RD%VS 222J
R220	Carbon film 2.2k	RD%VS 222J
R221	Carbon film 2.4k	RD%VS 242J
R222	Carbon film 2.4k	RD%VS 242J
R223	Carbon film 27	RD%VS 270J
R224	Carbon film 27	RD%VS 270J
R225	Carbon film 68	RD%VS 680J
R226	Carbon film 68	RD%VS 680J
R227	Carbon film 1.2k	RD%VS 122J
R228	Carbon film 1.2k	RD%VS 122J
R229	Carbon film 6.8k	RD%VS 682J
R230	Carbon film 6.8k	RD%VS 682J
R231	Carbon film 22k	RD%VS 223J
R232	Carbon film 22k	RD%VS 223J
R233	Carbon film 270k	RD%VS 274J
R234	Carbon film 270k	RD%VS 274J
R235	Carbon film 5.6k	RD%VS 562J
R236	Carbon film 5.6k	RD%VS 562J
R237	Carbon film 4.3k	RD%VS 432J
R238	Carbon film 4.3k	RD%VS 432J
R239	Carbon film 12k	RD%VS 123J
R240	Carbon film 12k	RD%VS 123J
R241	Carbon film 1k	RD%VS 102J
R242	Carbon film 1k	RD%VS 102J

Symbol	Description	Part No.
R243	Carbon film 18k	RD%VS 183J
R244	Carbon film 18k	RD%VS 183J
R245	Carbon film 8.2k	RD%VS 822J
R246	Carbon film 8.2k	RD%VS 822J
R247	Carbon film 4.7k	RD%VS 472J
R248	Carbon film 4.7k	RD%VS 472J
R249	Carbon film 39k	RD%VS 393J
R250	Carbon film 39k	RD%VS 393J
R251	Carbon film 15k	RD%VS 153J
R152	Carbon film 15k	RD%VS 153J
R153	Carbon film 150k	RD%VS 154J
R154	Carbon film 150k	RD%VS 154J
R155	Carbon film 750	RD%VS 751J
R156	Carbon film 750	RD%VS 751J
R157	Carbon film 4.7k	RD%VS 472J
R158	Carbon film 4.7k	RD%VS 472J
R159	Carbon film 220	RD%VS 221J
R160	Carbon film 220	RD%VS 221J
R261	Carbon film 1k	RD%VS 102J
R262	Carbon film 1k	RD%VS 102J
R263	Carbon film 68	RD%VS 680J
R264	Carbon film 68	RD%VS 680J
R265	Carbon film 68	RD%VS 680J
R266	Carbon film 68	RD%VS 680J
R267	Carbon film 68	RD%VS 680J
R268	Carbon film 68	RD%VS 680J
R269	Carbon film 180	RD%VS 181J
R270	Carbon film 180	RD%VS 181J
R271	Carbon film 47k	RD%VS 473J
R272	Carbon film 47k	RD%VS 473J
R280	Carbon film 82k	RD%VS 823J
R281	Carbon film 10k	RD%VS 103J
R282	Metal oxide 1k 1W	RS1PSF 102K
R283	Carbon film 33k	RD%VS 333J
R284	Carbon film 100k	RD%VS 104J
R285	Carbon film 8.2k	RD%VS 822J
R286	Carbon film 910k	RD%VS 914J
R287	Metal oxide 180 1W	RS1PSF 181K
R288	Metal oxide 180 1W	RS1PSF 181K

SEMICONDUCTORS

Symbol	Description	Part No.
Q101	Transistor	2SC1327-T
Q102	Transistor	2SC1327-T
Q103	Transistor	2SC1327-T
Q104	Transistor	2SC1327-T
Q105	Transistor	2SC1327-T
Q106	Transistor	2SC1327-T
Q107	Transistor	2SC1327-T
Q108	Transistor	2SC1327-T



Symbol	Description	Part No.
Q109	Transistor	2SA721-S
Q110	Transistor	2SA721-S
Q111	Transistor	2SC1327-T
Q112	Transistor	2SC1327-T
Q113	Transistor	2SC1327-T
Q114	Transistor	2SC1327-T
Q115	FET	2SK30-D
Q116	FET	2SK30-D
Q117	Transistor	2SC828-S
Q118	Transistor	2SC828-S
Q119	Transistor	2SA721-S
Q120	Transistor	2SA721-S
Q121	Transistor	2SC828-S
Q122	Transistor	2SC828-S
Q123	Transistor	2SC828-S
Q124	Transistor	2SC828-S
Q125	Transistor	2SC828-S
Q126	Transistor	2SC828-S
Q127	Transistor	2SC828-S
Q128	Transistor	2SC828-S
Q129	Transistor	2SA564-S
Q130	Transistor	2SA564-S
Q131	Transistor	2SC828-S
Q132	Transistor	2SC828-S
D101	Diode	OA90
D102	Diode	OA90
D103	Diode	1S2074H
D104	Diode	1S2074H
D105	Diode	1S2074H
D106	Diode	1S2074H
D107	Diode	OA90
D108	Diode	OA90
D109	Diode	1S2074H
D110	Diode	1S2074H
D111	Diode	1N60
D112	Diode	1N60
D113	Diode	1S2473VE
ZD101	Zener diode	05Z6.2
ZD102	Zener diode	05Z6.2

#### COILS

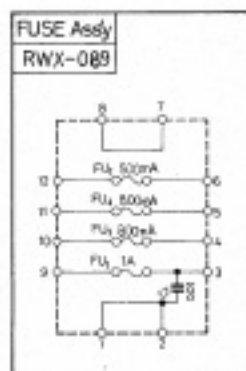
Symbol	Description	Part No.
L101	Trap coil	T84-401
L102	Trap coil	T84-401
L103	Peaking coil	RTF-010
L104	Peaking coil	RTF-010
L105	Peaking coil	RTF-002
L106	Peaking coil	RTF-002
L107	Trap coil	T84-401
L108	Trap coil	T84-401
	MPX coil block	RTF-012
	MPX coil block	RTF-012

#### SWITCHES

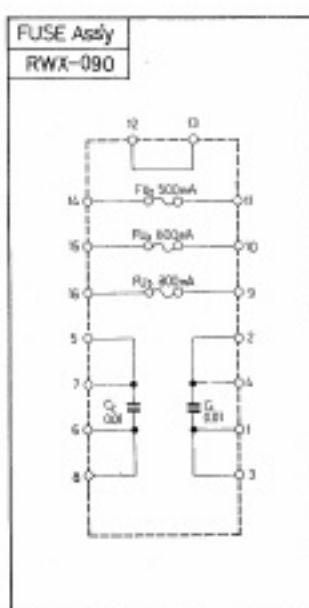
Symbol	Description	Part No.
	Slide switch (S <sub>2</sub> , S <sub>4</sub> , S <sub>5</sub> )	RSG-031
	Slide switch (S <sub>1</sub> )	RSH-017

## 11.4 FUSE BOARD ASSEMBLY

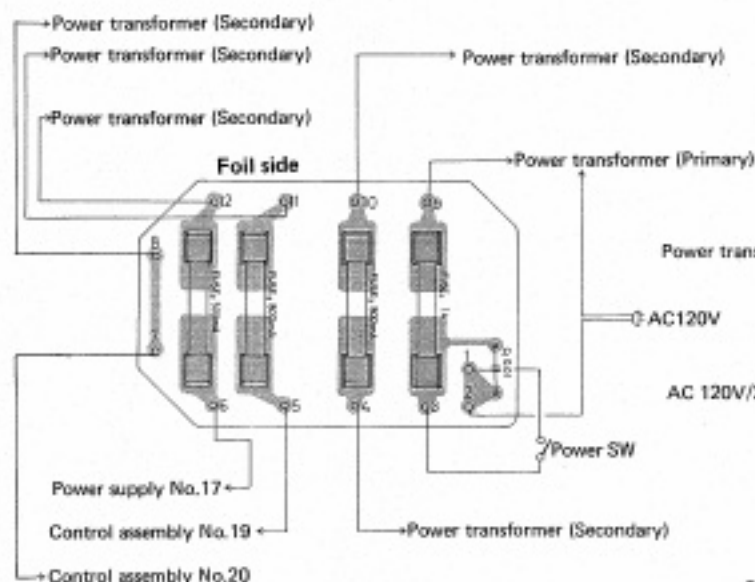
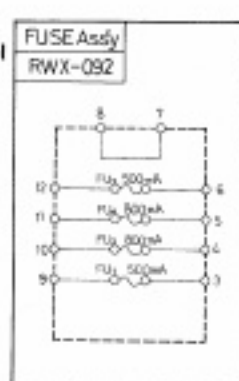
## 1. KCU model



## 2. DV, DP model

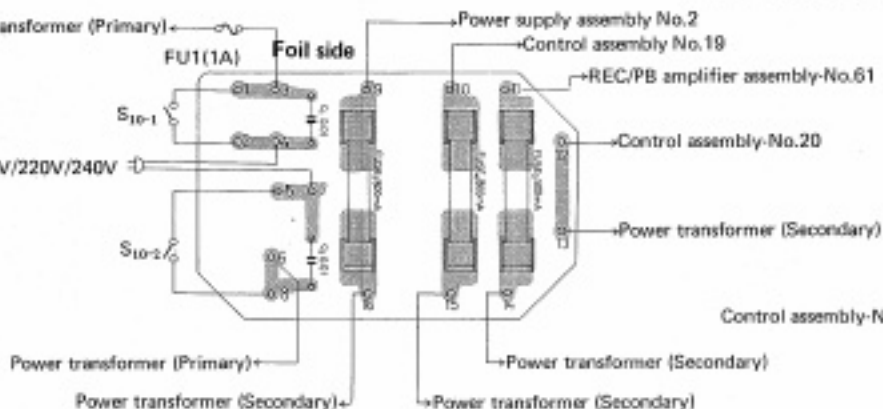


## 3. NB model



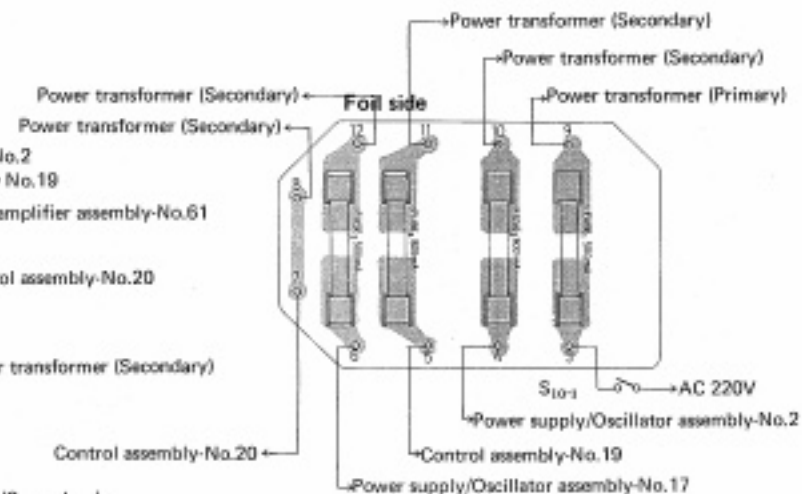
Parts List of Fuse Board Assembly KCU model (RWX-089)

Symbol	Description	Part No.
F1	Fuse clip 1A	RKR-017
F2	Fuse 500mA	REK-033
F3	Fuse 800mA	REK-031
F4	Fuse 800mA	REK-032
C1	Ceramic 0.01 1.4kV	C43-003



Parts List of Fuse Board Assembly DV, DP model (RWX-090)

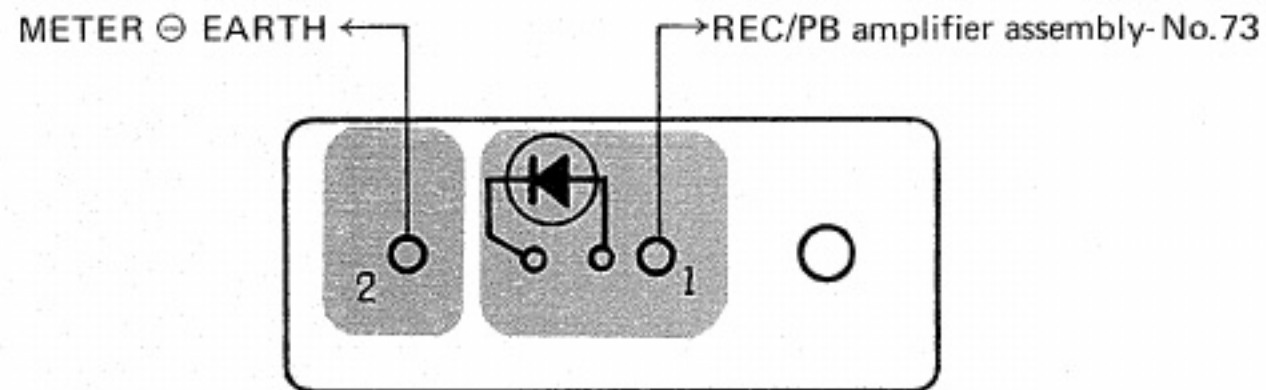
Symbol	Description	Part No.
C1	Ceramic 0.01 1.4kV	C43-003
C2	Ceramic 0.01 1.4kV	C43-003
	Capacitor cover	REC-150
	Fuse clip	RKR-017
F2	Fuse 500mA	REK-031
F3, F4	Fuse 800mA	REK-032



Parts List of Fuse Board Assembly NB model (RWX-092)

Symbol	Description	Part No.
F1, F2	Fuse clip	RKR-013
F3, F4	Fuse 500mA	REK-023
	Fuse 800mA	REK-043

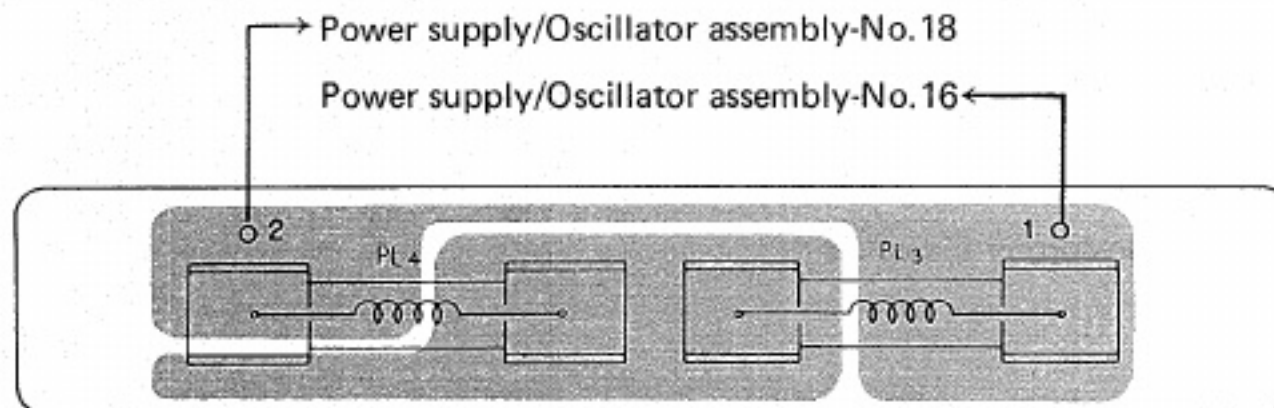
## 11.5 INDICATOR ASSEMBLY (RWX-087)



### Parts List of Indicator Assembly (RWX-087)

Symbol	Description	Part No.
D502	Light emitting Diode TLR-103	TLR-103

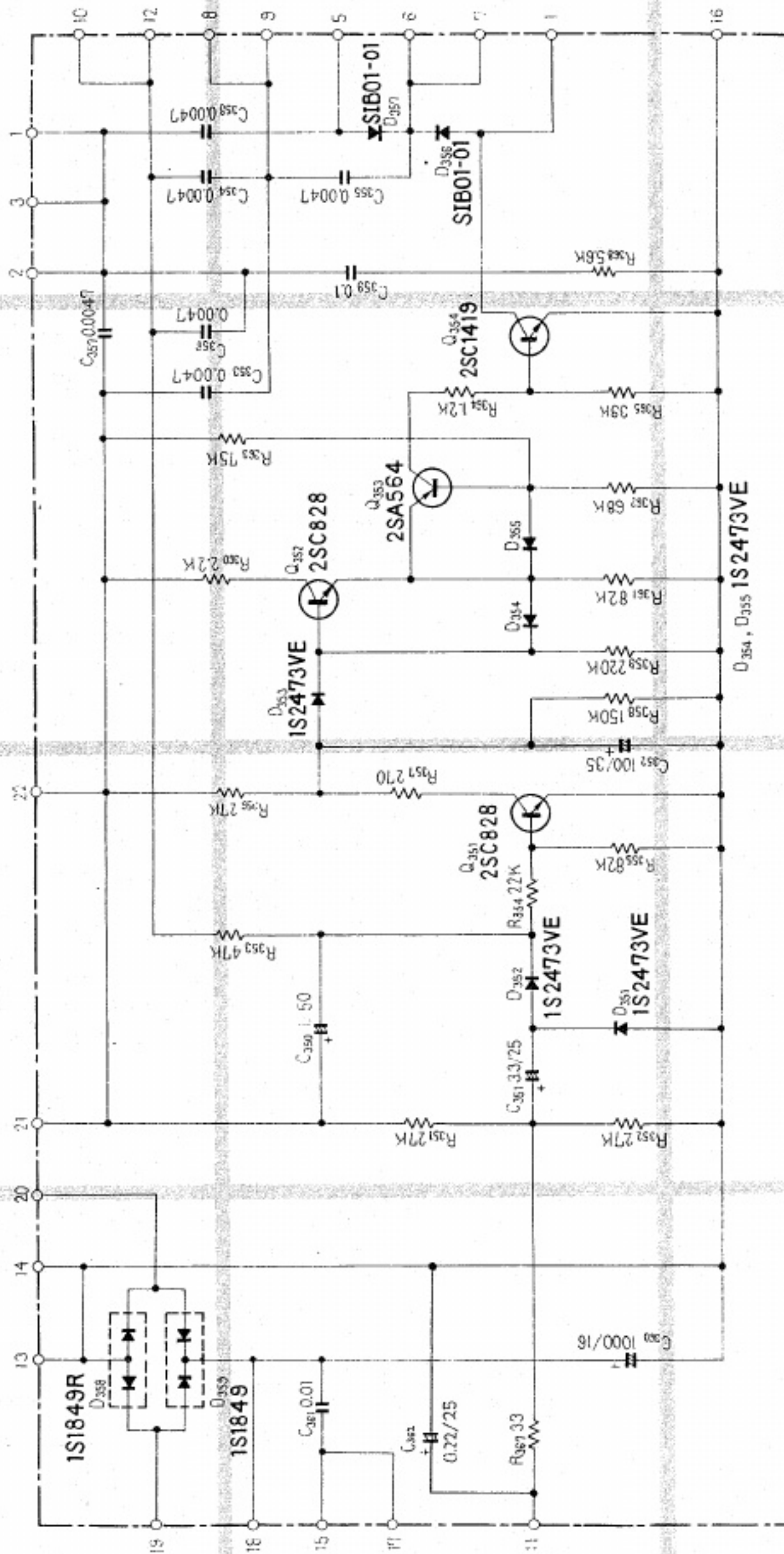
## 11.6 LAMP ASSEMBLY (RWX-052)

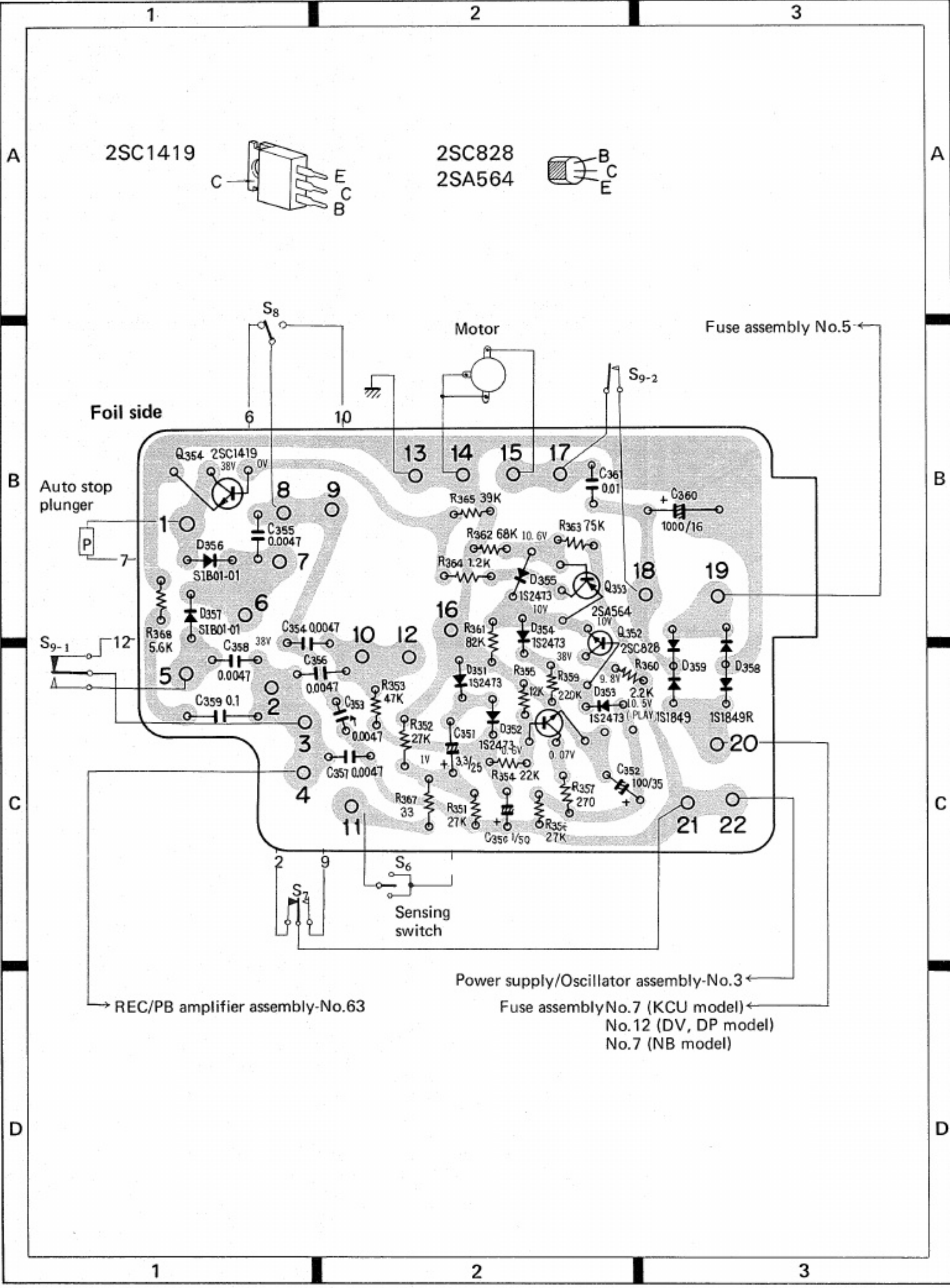


### Parts List of Indicator Assembly (RWX-052)

Symbol	Description	Part No.
PL3	Clip-in type fuse holder Pilot lamp 6V 100mA (compartment)	K91-006-0 REL-007-0
PL4	Pilot lamp 6V 100mA (compartment)	REL-007-0

# 11.7 CONTROL ASSEMBLY (RWG-049)





Parts List of Control Assembly (RWG-049)

CAPACITORS

Symbol	Description	Part No.
C350	Electrolytic 1 50V	CEA 010P 50
C351	Electrolytic 3.3 25V	CEA 3R3P 25
C352	Electrolytic 100 35V	CEA 101P 35
C353	Mylar 0.0047 50V	CQMA 472K 50
C354	Mylar 0.0047 50V	CQMA 472K 50
C355	Mylar 0.0047 50V	CQMA 472K 50
C356	Mylar 0.0047 50V	CQMA 472K 50
C357	Mylar 0.0047 50V	CQMA 472K 50
C358	Mylar 0.0047 50V	CQMA 472K 50
C359	Mylar 0.1 50V	CQMA 104K 50
C360	Electrolytic 1000 16V	CEA 102P 16
C361	Mylar 0.01 50V	CQMA 103K 50

OTHER

Symbol	Description	Part No.
	Transistor Spacer	RNK-212

RESISTORS

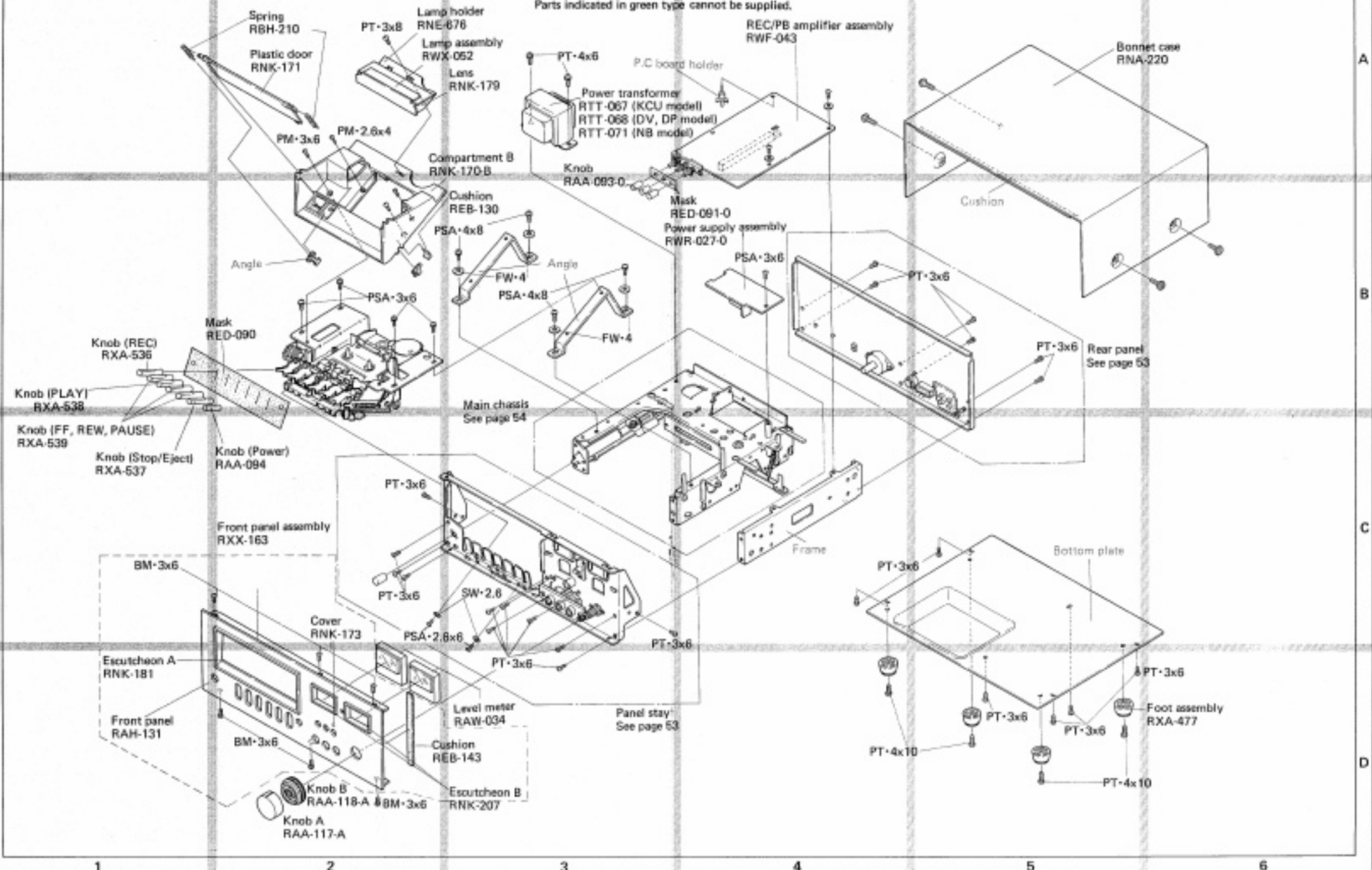
Symbol	Description	Part No.
R351	Carbon film 27k	RD4VS 273J
R352	Carbon film 27k	RD4VS 273J
R353	Carbon film 47k	RD4VS 473J
R354	Carbon film 22k	RD4VS 223J
R355	Carbon film 82k	RD4VS 823J
R356	Carbon film 27k	RD4VS 273J
R357	Carbon film 270	RD4VS 271J
R358	Carbon film 150k	RD4VS 154J
R359	Carbon film 220k	RD4VS 224J
R360	Carbon film 2.2k	RD4VS 222J
R361	Carbon film 82k	RD4VS 823J
R362	Carbon film 68k	RD4VS 683J
R363	Carbon film 75k	RD4VS 753J
R364	Carbon film 1.2k	RD4VS 122J
R365	Carbon film 39k	RD4VS 393J
R367	Carbon film 33	RD4VS 330J
R368	Carbon film 5.6k	RDPVS 562J

SEMICONDUCTORS

Symbol	Description	Part No.
Q351	Transistor	2SC828A-R
Q352	Transistor	2SC828A-R
Q353	Transistor	2SA564A-R
Q354	Transistor	2SC1419-C
D351	Diode	1S2473VE
D352	Diode	1S2473VE
D353	Diode	1S2473VE
D354	Diode	1S2473VE
D355	Diode	1S2473VE
D356	Diode	S1B-01-01
D357	Diode	S1B-01-01
D358	Diode	1S1849R
D359	Diode	1S1849

# 12. EXPLODED VIEW

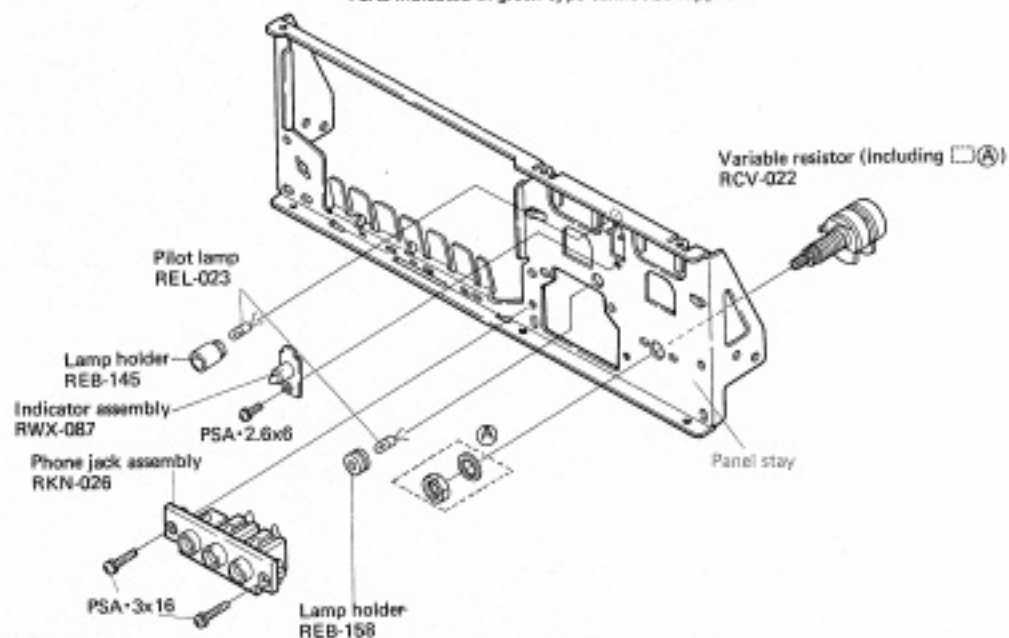
**NOTE:**  
Parts indicated in green type cannot be supplied.



## 12.1 PANEL STAY

## NOTE:

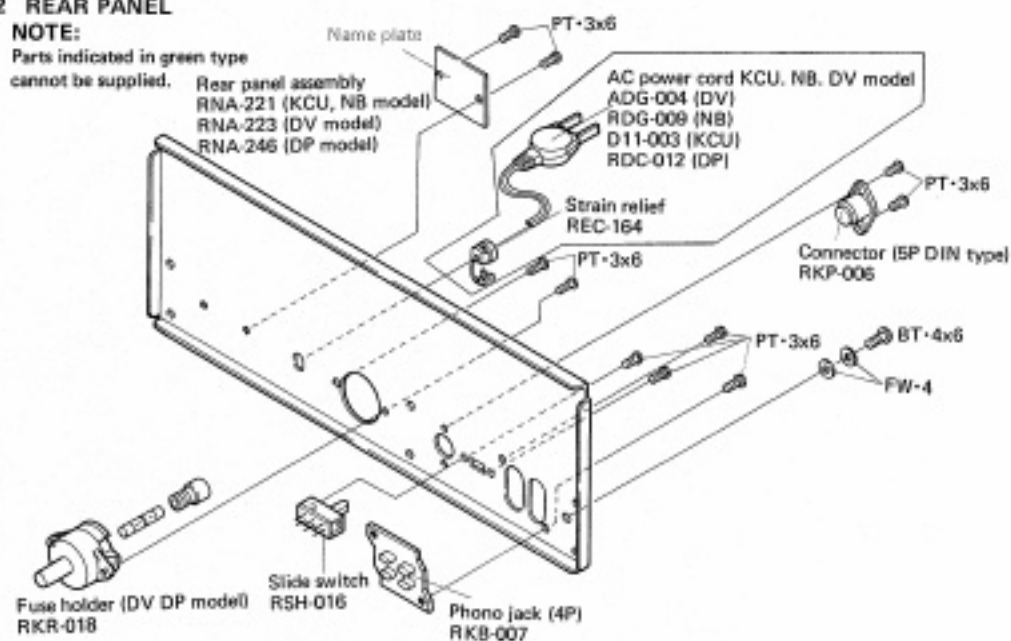
Parts indicated in green type cannot be supplied.



## 12.2 REAR PANEL

## NOTE:

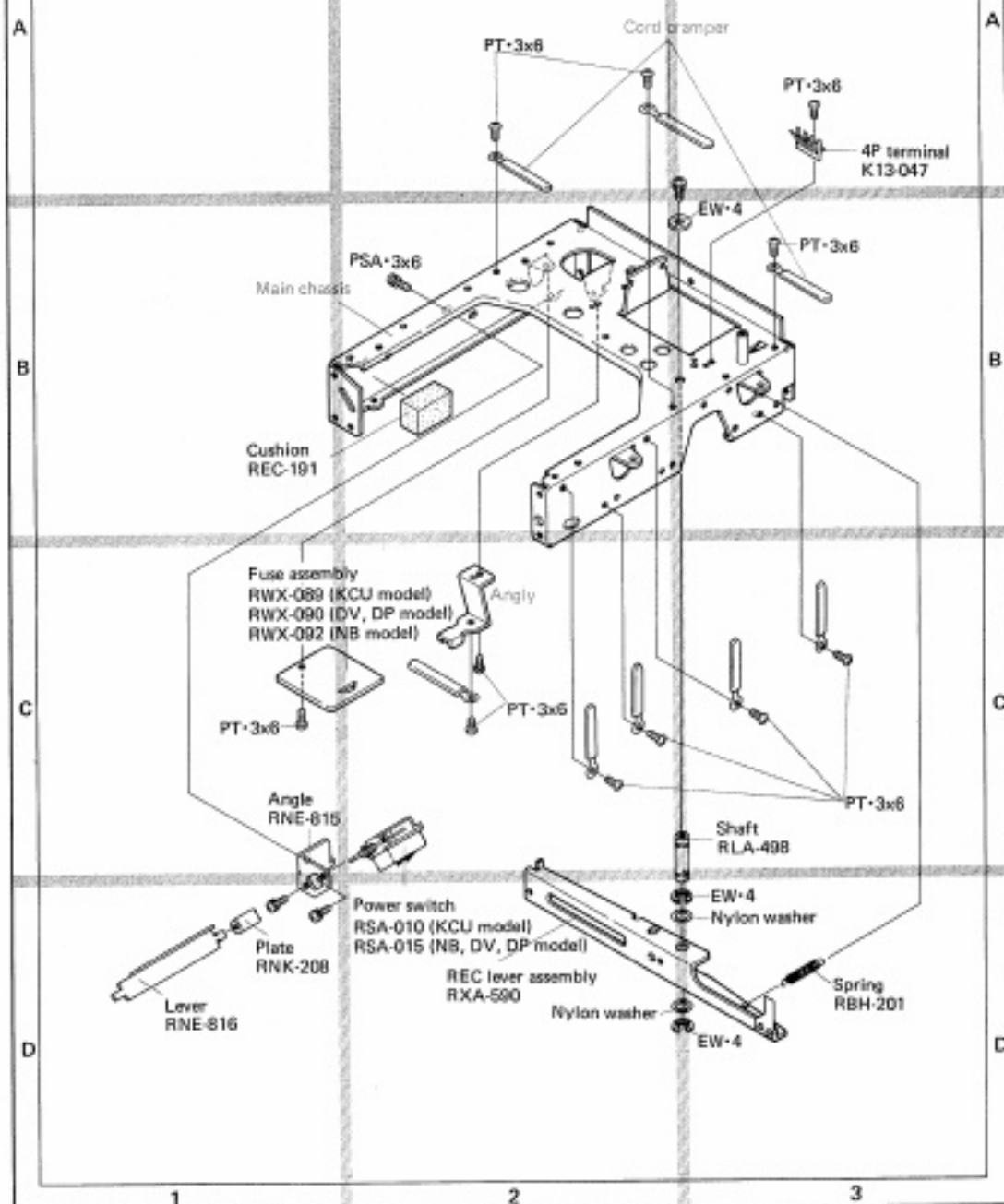
Parts indicated in green type cannot be supplied.



## 12.3 MAIN CHASSIS

## NOTE:

Parts indicated in green type cannot be supplied.

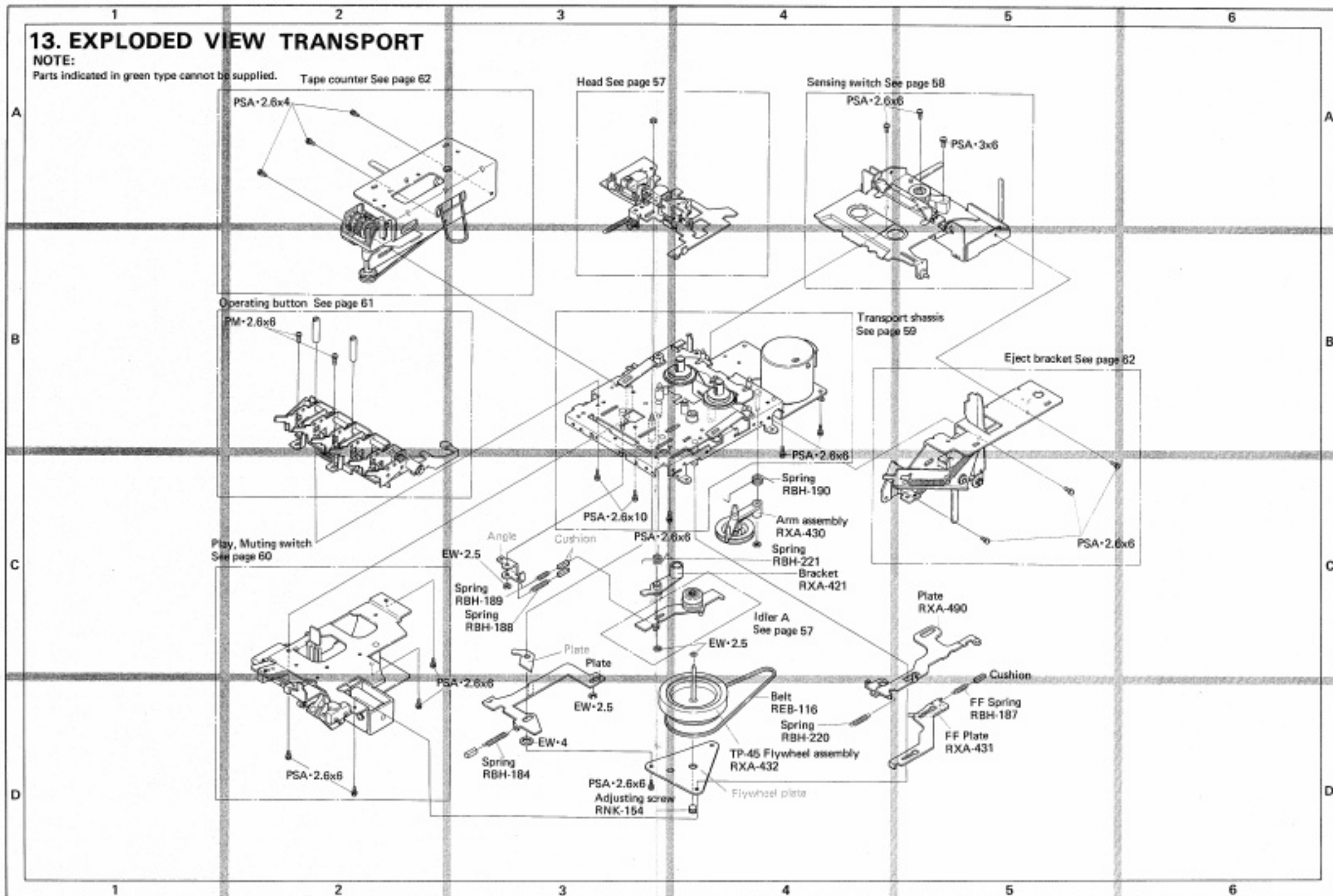




# 13. EXPLODED VIEW TRANSPORT

## NOTE:

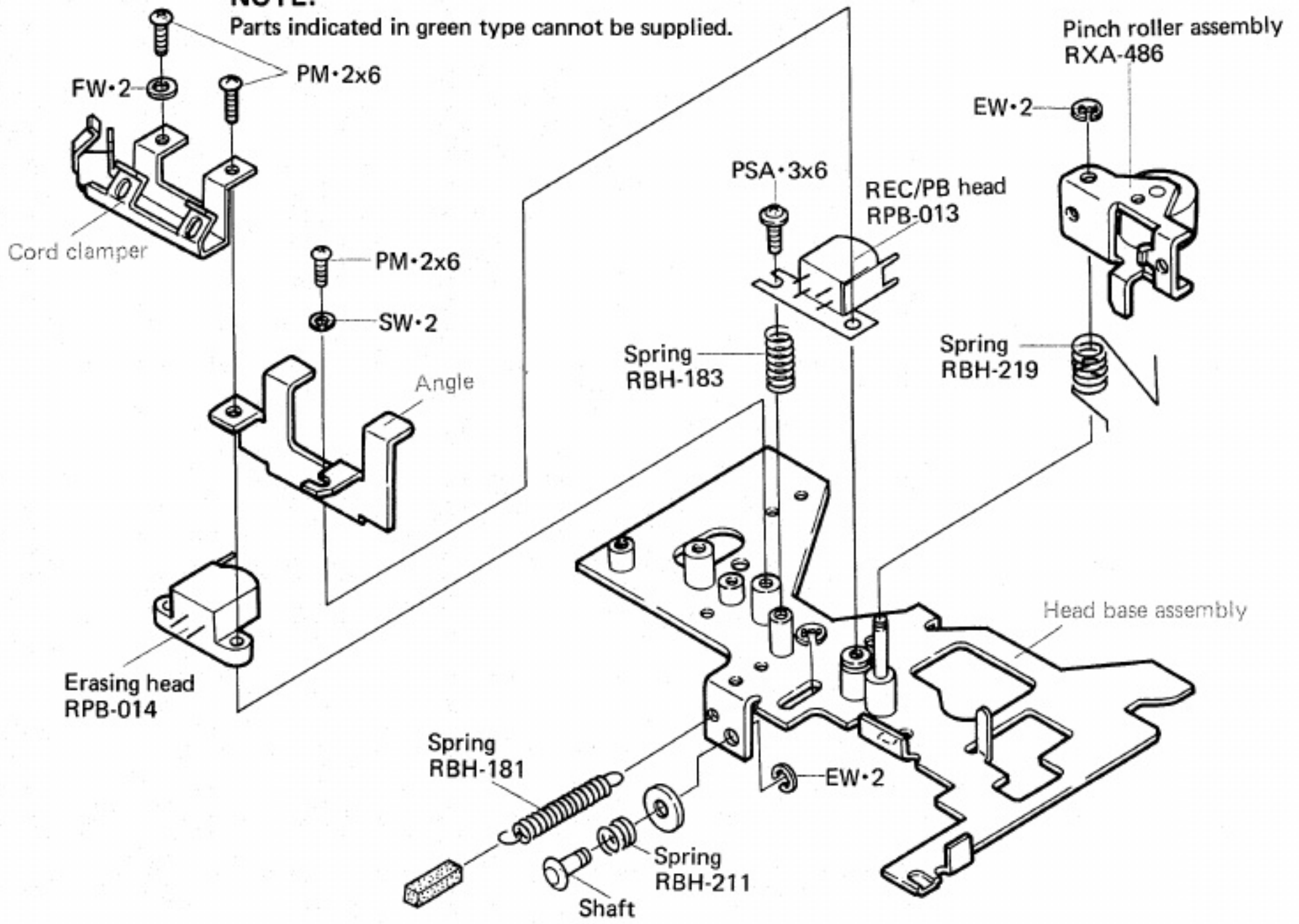
Parts indicated in green type cannot be supplied. Tape counter See page 62



13.1 HEAD

NOTE:

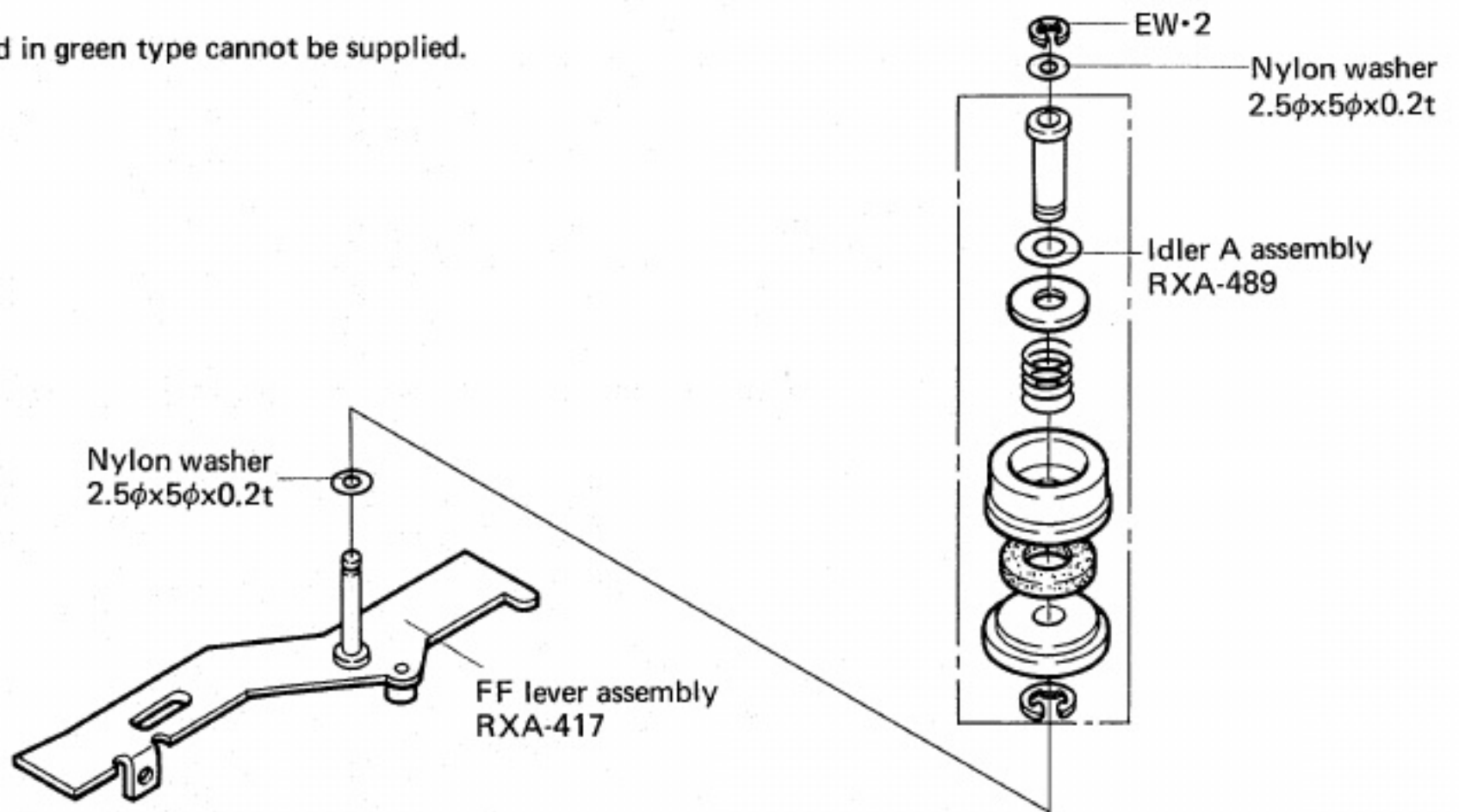
Parts indicated in green type cannot be supplied.



13.2 IDLER A

NOTE:

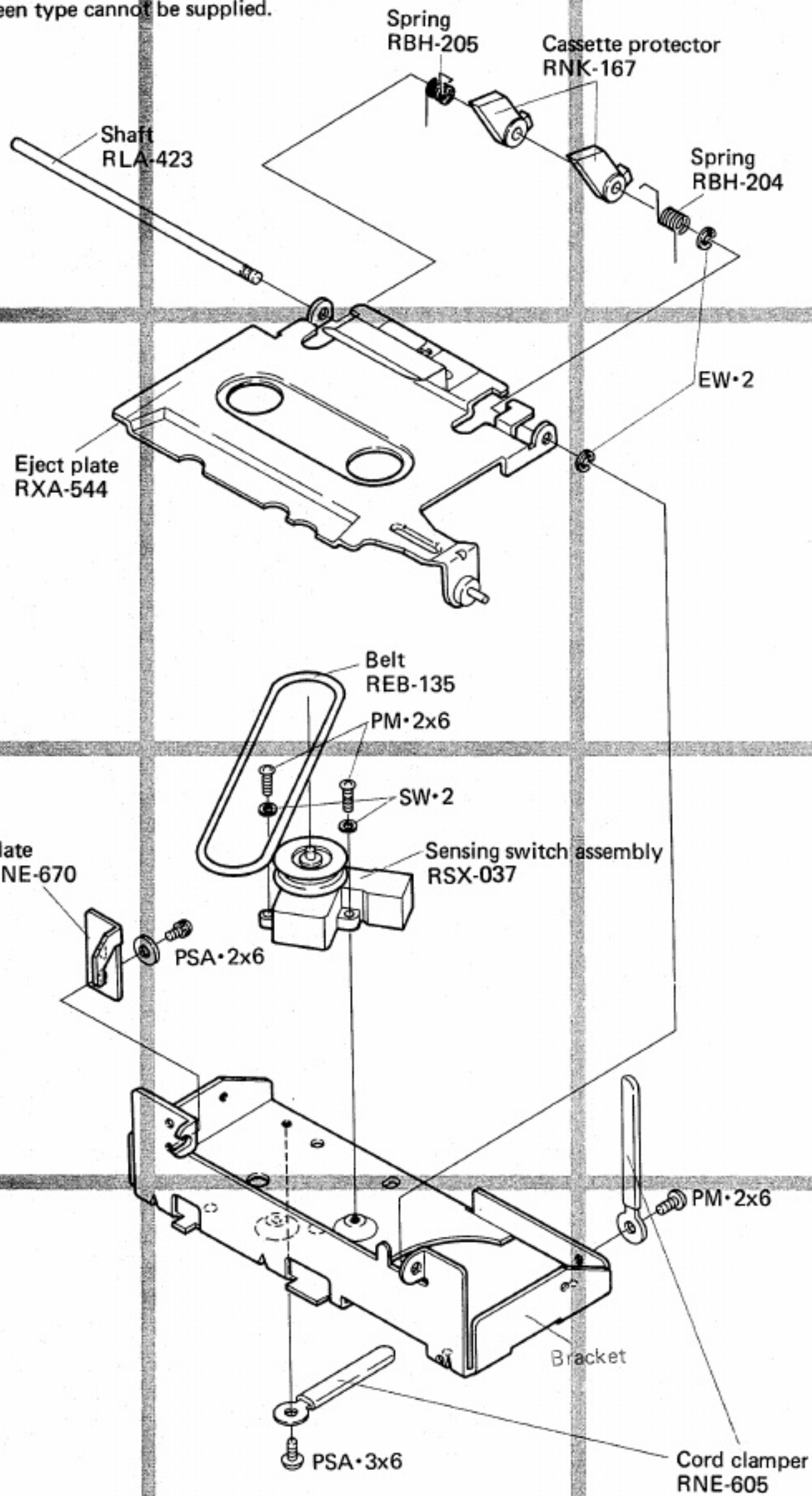
Parts indicated in green type cannot be supplied.



### 13.3 SENSING SWITCH

#### NOTE:

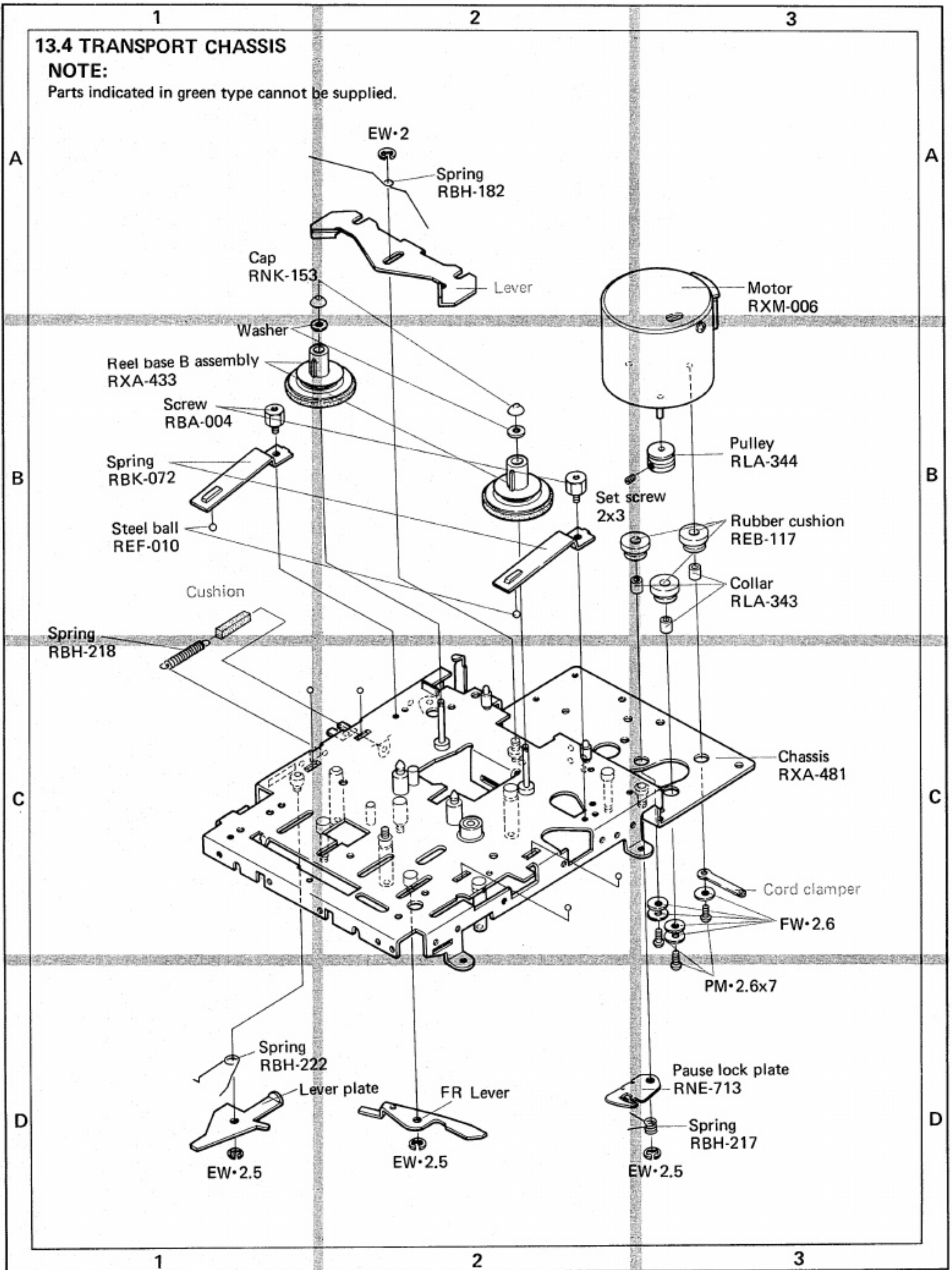
Parts indicated in green type cannot be supplied.



13.4 TRANSPORT CHASSIS

NOTE:

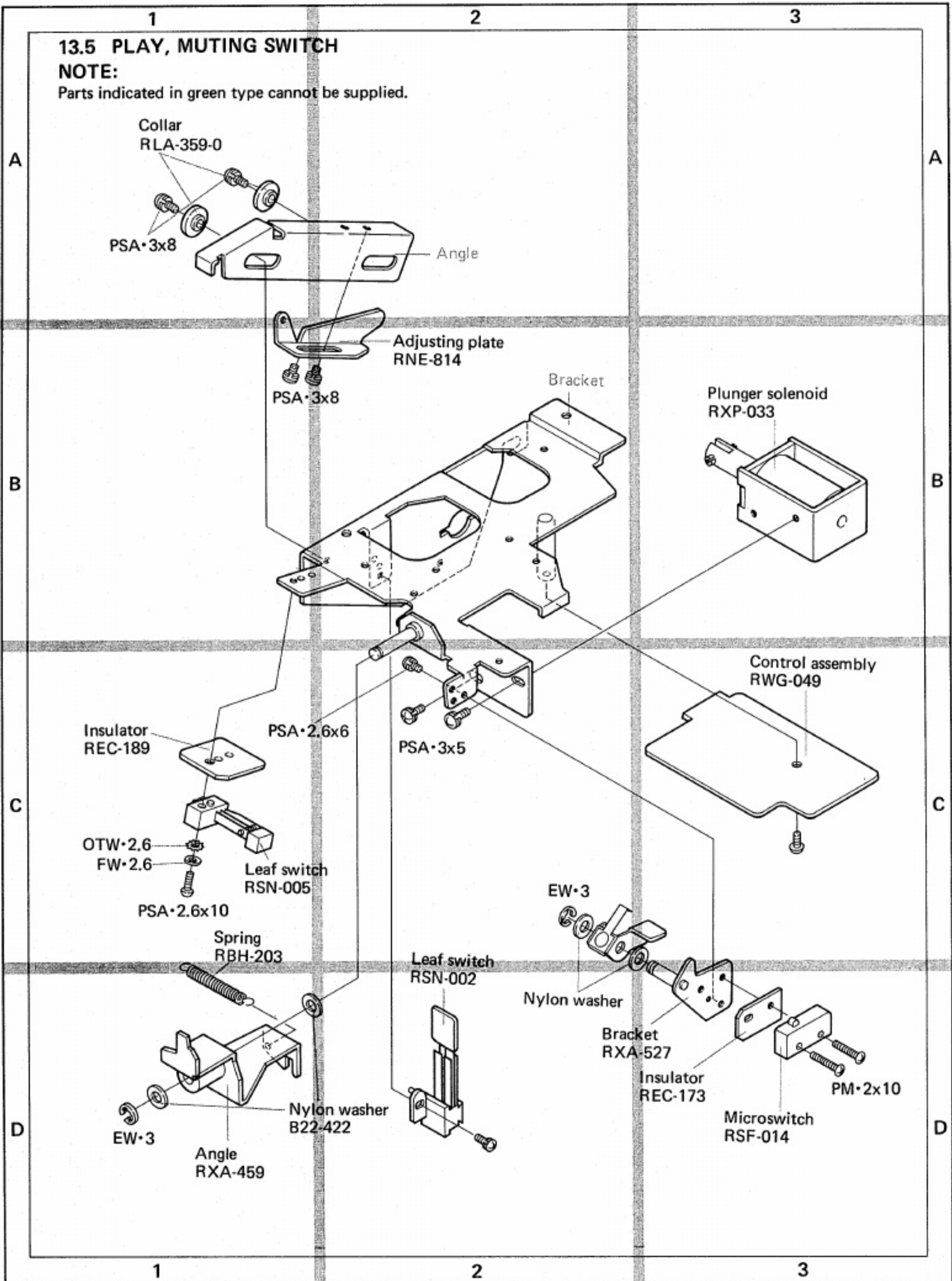
Parts indicated in green type cannot be supplied.



### 13.5 PLAY, MUTING SWITCH

**NOTE:**

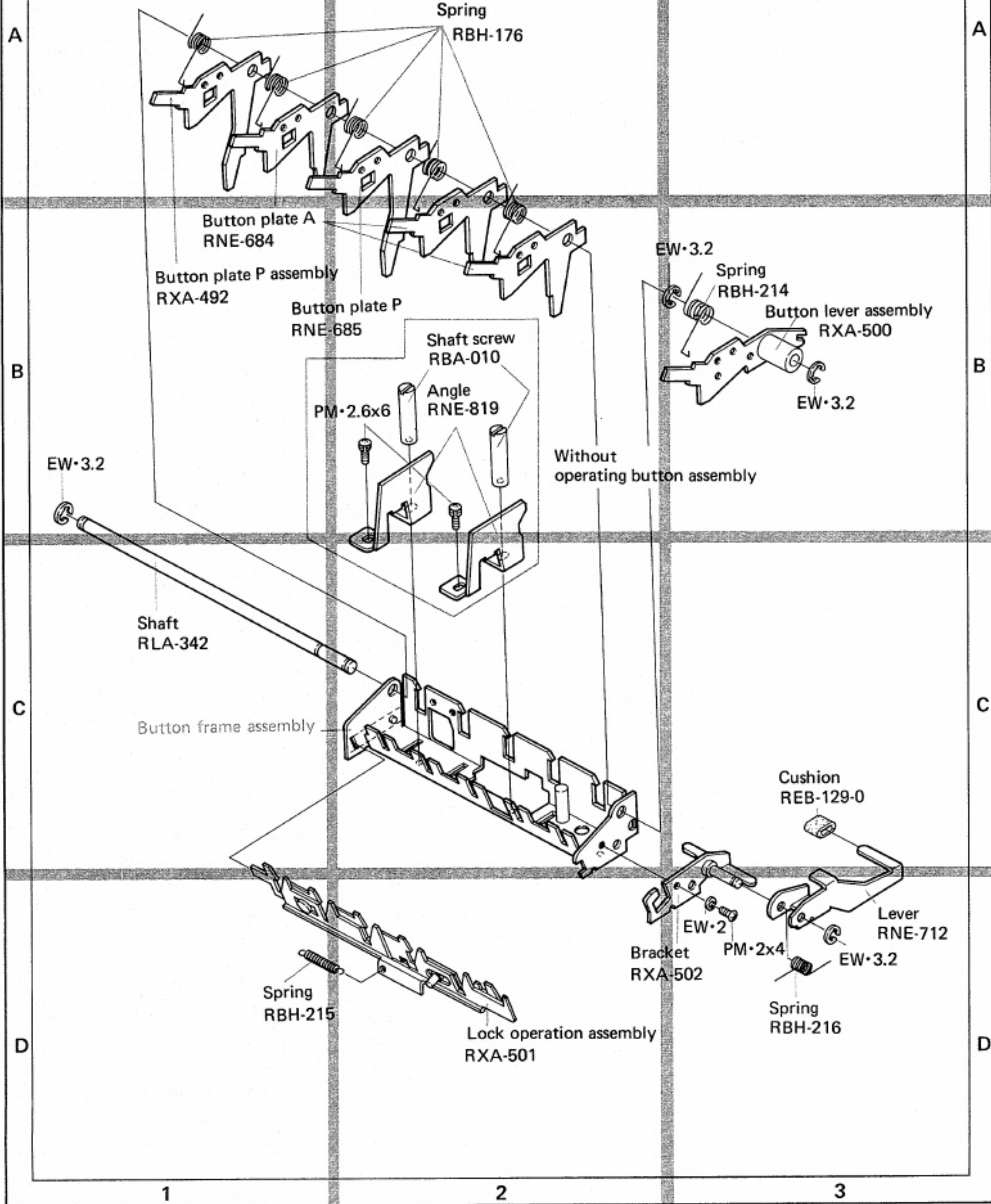
Parts indicated in green type cannot be supplied.



13.6 OPERATING BUTTON ASSEMBLY (RXA-498)

NOTE:

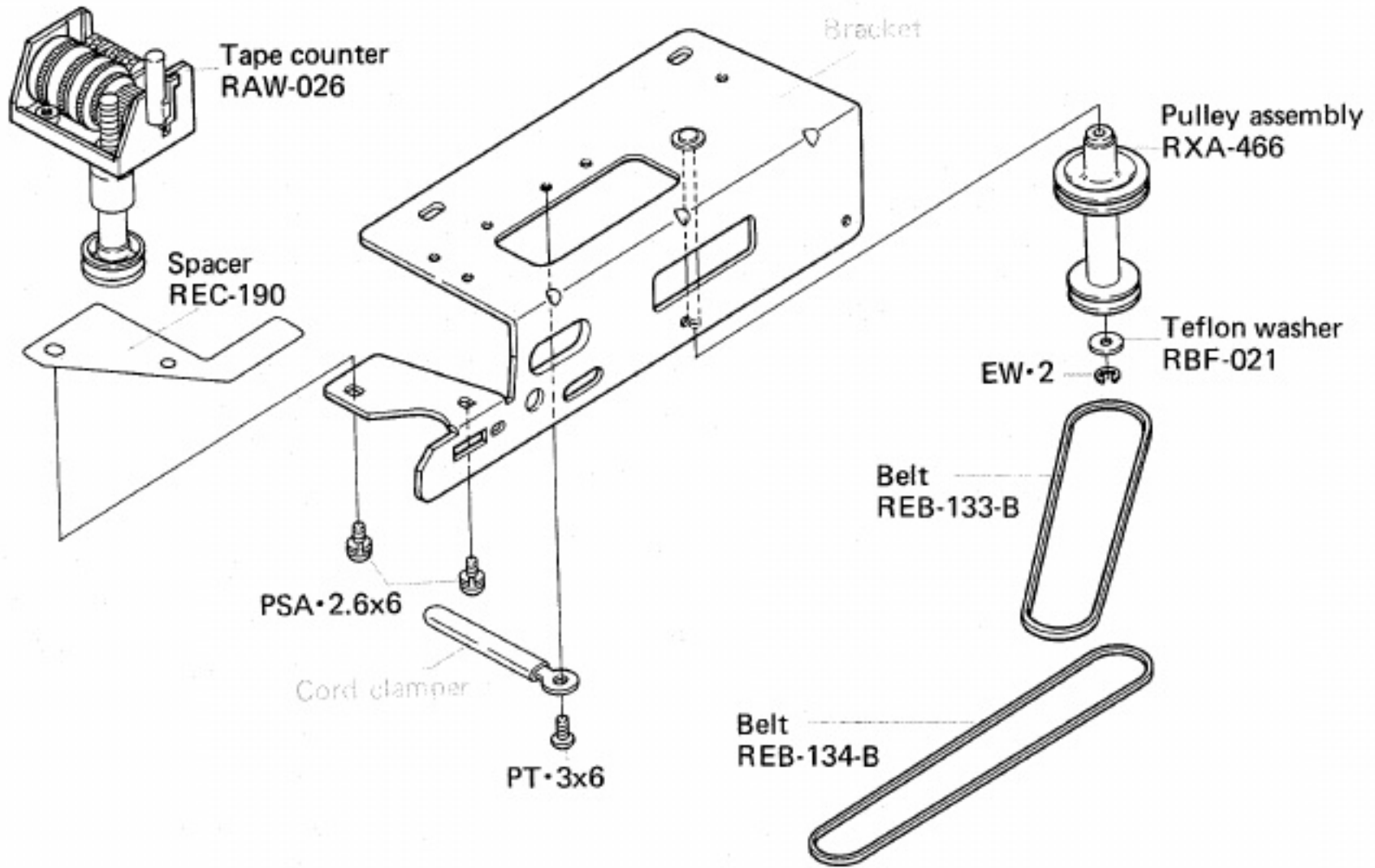
Part indicated in green type cannot be supplied.



### 13.7 TAPE COUNTER

**NOTE:**

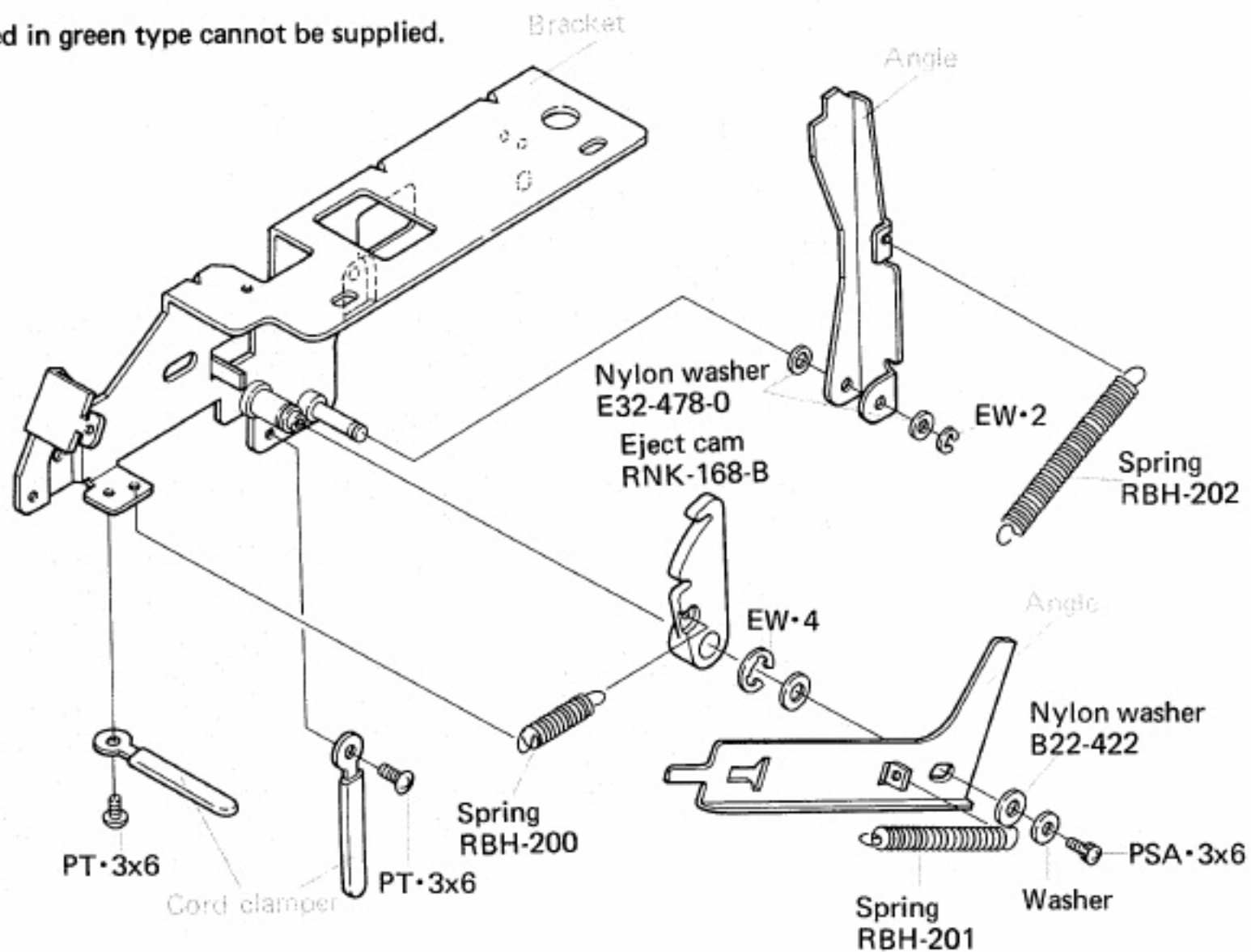
Parts indicated in green type cannot be supplied.



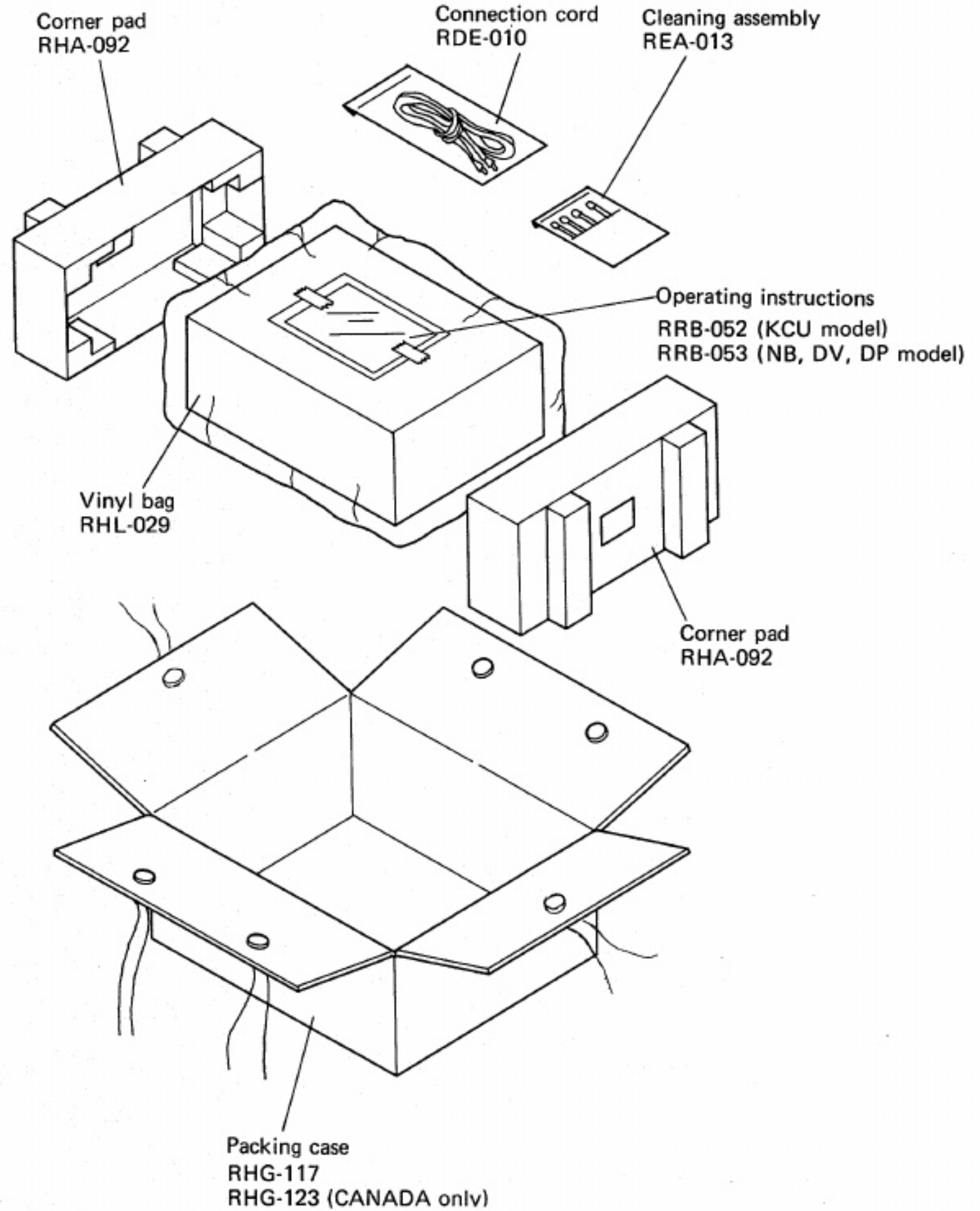
### 13.8 EJECT BRACKET

**NOTE:**

Parts indicated in green type cannot be supplied.





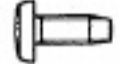


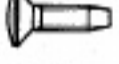
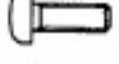

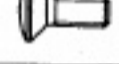
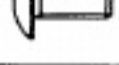
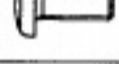
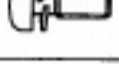
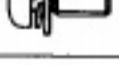
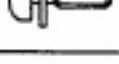
# 14. PACKING







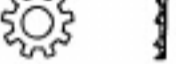
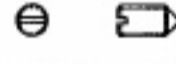
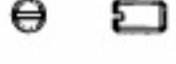

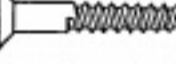
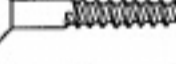
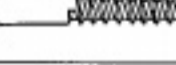




## NOMENCLATURE OF SCREWS, WASHERS AND NUTS

The following symbols stand for screws, washers and nuts as shown in exploded view.

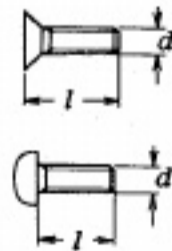
Symbol	Description	Shape
RT	Brazier head tapping screw	
PT	Pan head tapping screw	
BT	Binding head tapping screw	
CT	Countersunk head tapping screw	
TT	Truss head tapping screw	
OCT	Oval countersunk head tapping screw	
PM	Pan head machine screw	
CM	Countersunk head machine screw	
OCM	Oval countersunk head machine screw	
TM	Truss head machine screw	
BM	Binding head machine screw	
PSA	Pan head screw with spring lock washer	
PSB	Pan head screw with spring lock washer and flat washer	
PSF	Pan head screw with flat washer	

Symbol	Description	Shape
EW	E type washer	
FW	Flat washer	
SW	Spring lock washer	
N	Nut	
WN	Washer faced nut	
ITW	Internal toothed lock washer	
OTW	Outernal toothed lock washer	
SC	Slotted set screw (Cone point)	
SF	Slotted set screw (Flat point)	
HS	Hexagon socket headless set screw	
OCW	Oval countersunk head wood screw	
CW	Countersunk head wood screw	
RW	Round head wood screw	

### EXAMPLE

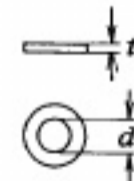
PM • 3x8

length in mm ( $l$ )  
 diameter in mm ( $d$ )  
 Symbol



FW • 9φ x 1<sup>t</sup>

thickness in mm ( $t$ )  
 diameter in mm ( $d$ )  
 Symbol



# 15. PARTS LIST OF EXPLODED VIEW

Parts No.	Parts Name	Parts No.	Parts Name
ADG-004	AC Power Cord (KCU, NB, DV model)	RED-090	Mask
AEB-019	P.C. Board Holder	RED-090	Mask
AKE-017	Binding Post	REF-010	Steel Ball
RAA-092	Knob (POWER)	REK-033	Fuse 1A
RAA-093	Knob (BIAS, EQ, DOLBY)	REL-030	Pilot Lamp (DOLBY)
RAA-094	Knob (POWER)	RKB-007	Phono Jack 4P
RAA-117	Knob A	RKN-026	Phono Jack Assembly
RAA-118	Knob B	RKP-006	Connector (SP, DIN Type)
RAW-026	Tape Counter	RKP-007	Phono Jack 4P
RAW-034	Level Meter	RKR-018	Fuse Holder (DV, DP model)
RBA-004	Screw	RLA-343	Coller
RBA-010	Shaft Screw	RLA-344	Pulley
RBF-021	Teflon Washer	RLA-359	Coller
RBH-181	Spring	RLA-423	Shaft
RBH-182	Spring	RLA-498	Shaft
RBH-183	Spring	RNA-220	Bonnet Case
RBH-184	Spring	RNE-578	Plate
RBH-187	FF Spring	RNE-605	Cord Clamper
RBH-188	Spring	RNE-670	Plate
RBH-189	Spring	RNE-676	Lamp Holder
RBH-190	Spring	RNE-713	Pause Lock Plate
RBH-200	Spring	RNE-814	Adjusting Plate
RBH-201	Spring	RNE-815	Angle
RBH-202	Spring	RNE-816	Bar
RBH-203	Spring	RNE-819	Angle
RBH-204	Spring	RNE-822	Angle
RBH-205	Spring	RBH-210	Spring
RBH-211	Spring	RNE-153	Cup
RBH-217	Spring	RNK-154	Adjusting Screw
RBH-219	Spring	RNK-167	Cassette Protector
RBH-220	Spring	RNK-168	Eject Cam
RBH-221	Spring	RNK-170	Compartment B
RBH-222	Spring	RNK-171	Plastic Door
RBK-072	Spring	RNK-173	Cover
RBK-218	Spring	RNK-179	Lens
RCV-022	Variable Resistor (INPUT)	RNK-208	Plate
REB-116	Belt	RPB-013	REC/PB Head
REB-117	Rubber Cushion	RPB-014	Erasing Head
REB-129	Eject Cam Lever	RSA-010	Power Switch (KCU model)
REB-133-B	Belt	RSA-015	Power Switch (NB, DV, UP model)
REB-134-B	Belt	RSF-014	Micro Switch
REB-135-B	Belt	RSG-031	Switch Assembly
REB-143	Cushion	RSH-016	Slide Switch
REB-145	Lamp Holder	RSN-002	Leaf Switch
REB-158	Lamp Holder	RSN-005	Leaf Switch
REC-164	Strain Relief	RSX-037	Sensing Switch Assembly
REC-173	Insulator	RTT-067	Power Transformer (KCU MODEL)
REC-189	Insulator	RTT-068	Power Transformer (DV MODEL)
REC-190	Spacer	RTT-071	Power Transformer (NB MODEL)
REC-191	Cushion	RWF-043	REC/PB Amplifier Assembly
		RWG-049	Control Assembly

Parts No.	Parts Name
RWR-027	Power Supply and OSC assembly
RWX-052	Lamp Assembly
RWX-087	Indicator Assembly
RXA-417	FF Lever Assembly
RXA-421	Bracket
RXA-430	Arm Assembly
RXA-431	FF Plate
RXA-432	TP-45 Flywheel Assembly
RXA-433	Reel Base B Assembly
RXA-459	Angle
RXA-466	Pulley Assembly
RXA-477	Foot Assembly
RXA-481	Chasis
RXA-486	Pinch Roller Assembly
RXA-489	Idler A Assembly
RXA-490	Plate
RXA-527	Bracket
RXA-536	Knob (REC)
RXA-537	Knob (STOP/EJECT)
RXA-538	Knob (PLAY)
RXA-539	Knob (FF, REW, PAUSE)
RXA-544	Eject Plate
RXA-590	REC Lever Assembly
RXM-006	Motor
RXP-033	Solenoid Plunger
RXX-163	Front Panel Assembly
B22-422	Nylon Washer
E32-478	Nylon Washer
K13-047	4P Terminal
REB-130	Cushion
RAH-131	Front panel
RNA-221	Rear Panel Assembly (KCU, NB model)
RNA-223	Rear Panel Assembly (DV model)
RNA-246	Rear Panel Assembly (DP model)
RWX-089	Fuse Assembly (KCU model)
RWX-090	Fuse Assembly (DV, DP model)
RWX-092	Fuse Assembly (NB model)
RXA-498	Operating Button Assembly
RBH-176	Spring
RNE-684	Button Plate A
RNE-685	Button Plate P
RXA-492	Button Plate P Assembly
RBH-214	Spring
RLA-342	Shaft
RBH-215	Spring
RXA-501	Lock Operation Assembly
RXA-502	Bracket
RBH-216	Spring
RNE-712	Lever
RXA-500	Button Lever Assembly
RHG-117	Packing Case
RHG-123	Packing Case (CANADA only)

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