

SERVICE MANUAL

CASSETTE TAPE DECK **CT-F7171** KCU, FV

NOTE:

MODEL CT-F7171 COMES IN TWO VERSIONS DISTINGUISHED AS FOLLOWS:

Round label on rear panel	Voltage	Type
KCU	120V only	CSA (Canada) and UL (U.S.A.) approved
FV	110V, 120V, 130V, 220V and 240V (Switchable)	General export model with

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1. SPECIFICATIONS

Modes	Compact cassette, 2-channel stereo/mono
Recording System	AC bias system (bias frequency : 85kHz)
Erasing System	AC push-pull system
Heads	"Ferrite Solid" recording/playback head x 1 Ferrite erasing head x 1
Motor	Electronically-controlled DC motor
Wow and Flutter	Less than 0.10% (WRMS)
Fast Winding Time	Approximately 80 seconds (C-60 tape)
Frequency Response	Regular tape; 30 to 13,000Hz (40 to 12,000Hz ± 3 dB) Chromium dioxide tape; 30 to 16,000Hz (40 to 13,000Hz ± 3 dB)
Signal-to-Noise Ratio	Dolby off; 48dB (regular tape) Dolby on; 58dB (over 5kHz, regular tape) By the use of chromium dioxide tapes, signal-to-noise ratio is further improved by 4.5dB over 5kHz.
Harmonic Distortion	Less than 2% (at 333Hz, 0dB)
Inputs (sensitivity to maximum level/impedance)	MIC (6mm Jack); 0.2mV to 90mV/20k Ω Low-impedance (600 Ω) microphones can be used. LINE (pin jack); 60mV to 9V/470k Ω REC/PB (DIN jack); 6mV to 2.7V/10k Ω
Outputs (level/impedance, at meter 0dB)	LINE (pin jack); 300mV/50k Ω REC/PB (DIN jack); 300mV/50k Ω HEADPHONE (6mm jack); 40mV/8 Ω
Semiconductors	Amplifier section; Transistors.....37, Diodes.....23 ICs.....2, Zener Diodes.....5 Light Emitting Diodes.....2 FETs.....2 Motor control section; Transistors.....2, Diode.....1
Power Requirements	KCU model: 120V 60Hz FV model: 110, 120, 130, 220 and 240V (switchable) 50-60Hz (No need for pulley changing between 50Hz and 60Hz areas.)
Power Consumption	KCU model: 13W (max.) FV model: 15W (max.)
Dimensions	430(W) x 138(H) x 310(D)mm 16-15/16(W) x 5-7/16(H) x 12-7/32(D) in.
Weight	18 lb 12 oz (8.5kg)

- Additional Features
- Tape selector (NORM-CHROM) with independently-switchable bias and equalizer
 - Built-in Dolby system (ON-OFF) with indicator lamp
 - Full-auto stop mechanism
 - "SKIP" button that enables quick monitoring at double-normal speed.
 - Recording LED peak indicator
 - Recording limiter (ON-OFF) (Operates at +4dB level from reference level)
 - Memory rewind switch (ON-OFF)
 - Cassette Compartment illumination light and switch
 - Two pairs of input and output terminals
 - Independent recording and playback level controls with memory markers
 - Wooden cabinet

- NOTES:
- Frequency response is measured at -20dB level from meter 0dB level (reference level, 160pwb/mm).
 - Signal-to-noise ratio is measured at $+4\text{dB}$ level (equivalent to 250 pwb/mm , DIN standard reference recording level) and weighted.
 - Distortion, input and output levels are measured at reference level. Reference tape is BASF C-90LH and reference signal is 333Hz .
 - Specifications and design subject to possible modification without notice due to improvements.

LINE VOLTAGE & FUSE

F V model only

Confirm the line voltage of your house current before turning the power on, because your CT-F7171 may not be conditioned for operation with the local line voltage.

CT-F7171 is a 5-line voltage model whose line voltage can be changed as follows:

Turn the fuse cap of the line voltage selector (on the back of the unit) and remove the fuse (Fig. A). Then remove the voltage selector plug and put it back in such a way that the correct voltage figure is visible in the cutout in the plug. Also, check the rating of the fuse. For 220 or 240 volt operation, a 0.5 ampere fuse must be used. For 110, 120 or 130 volt, use a 1 ampere fuse. Insert the proper fuse, then put the fuse cap back into position.

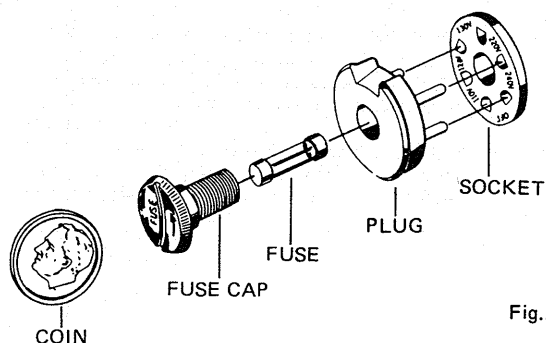


Fig.A

Take off the fuse cap by turning it with a coin in the direction indicated by the arrow.

2. PARTS IDENTIFICATION

FRONT PANEL

TAPE COUNTER
MEMORY REWIND SWITCH (MEMORY)
 First set the tape counter to "000." With this switch set to ON, once recording (playback) has been completed, the REW lever depressed takes the tape to "999" on the tape counter temporarily, and then stop.

COUNTER RESET BUTTON
 Push this button to reset the tape counter to "000."

CASSETTE DOOR

LIGHT SWITCH

POWER SWITCH (POWER)

SKIP BUTTON (SKIP)
 If this button is pushed while listening to a recording (in playback), the sound will remain audible, but the tape speed will increase, indicating that the SKIP operation is functioning to skip over unwanted portions of tape. It is very convenient to quickly and easily find where your desired portion begins.

OPERATING LEVERS

STOP/EJECT:
 Light pressure stops all functions of tape transport. Holding down the lever a second time will cause the inserted cassette to pop out.

PAUSE LEVER:
 Depress this lever during recording or playback to stop tape movement for a moment. Depress a second time to resume tape movement at the original speed.

FF:
 Fast forward. Gives rapid tape transport from left to right.

PLAY:
 Depress for playback. For recording; recording commences as soon as the PLAY lever is depressed if the REC lever has first been depressed and held down.

REW:
 Rewind. Gives rapid tape transport from right to left.

REC:
 Used in conjunction with the PLAY lever to place the deck in the RECORD mode.

REC - LEVEL LIMITER (LIMITER)
 When there are great variations in the recording level, so that overloading occurs and control is difficult, record with this button depressed.

EQUALIZER SELECTOR BUTTON (EQ)
 The setting depends on tapes available. Be sure to push this button when using chrome tape. However, do not push this for playing back conventional chrome tape recorded at 120µs.

BIAS SELECTOR BUTTON (BIAS)
 The setting also depends on tapes available. Be sure to push this button when using chrome tape.

DOLBY INDICATOR
 With the DOLBY NR button pushed, this indicator will light, indicating that the Dolby system is functioning.

DOLBY NR BUTTON (DOLBY NR)
 Push this button when recording with the Dolby system, or when playing back recordings which have been made using it.

CASSETTE DOOR BUTTON (DOOR)
 Push this button when closing the door. Lightly push it back by hand when opening.

REAR PANEL

LEVEL METERS
 The meters make it possible to monitor the input levels during recording, and output levels during playback.

PEAK INDICATOR (PEAK)
 When the recording level exceeds +4dB, this indicator will light in red, giving a visual alarm to the recording level to be diminished less than +4dB.

RECORDING INDICATOR (REC)
 During recording, this indicator will light in red.

MICROPHONE JACKS (MIC)
 These are the input jacks for use in recording from microphones. The left (L) and right (R) channels are independently usable.

HEADPHONE JACK (PHONES)
 This jack accepts stereo headphones, monitoring is possible during recording or playback.

RECORDING LEVEL CONTROLS (INPUT)
 This control is used to set the input level of the recording signal. The outer knob is for controlling the right channel and the inner knob for the left channel.

PLAYBACK LEVEL CONTROLS (OUTPUT)
 This control is used to set the output level of the playback signal. The outer knob is for controlling the right channel and the inner knob for the left channel.

MEMORY MARKERS
 These are used to remind you later of what were the last level settings in the recording and playback modes.

AC POWER OUTLET
 Connected to power cords of stereo amplifier, tuner, etc.

FUSE HOLDER

DIN CONNECTOR (REC/PB)
 Used for both input and output connections.

LINE OUTPUT JACKS
 Used for individual pin-jack cord connection.

LINE INPUT JACKS
 Used for individual pin-jack cord connection. Note that the INPUT 1 (OUTPUT 1) are usually used and the INPUT 2 (OUTPUT 2) are auxiliary jacks which are connected in parallel to the INPUT 1 (OUTPUT 2).

GROUND TERMINAL (GND)
 Grounded if external induced hum, etc. is obtrusive.

3. CIRCUIT DESCRIPTION

3.1 RECORDING AND PLAYBACK CIRCUIT

Fig. 1 shows a block diagram of the recording and playback system (left channel). Most of the circuitry is common in recording and playback.

Tape Selectors

Both equalizer and bias selectors have two positions; NORMAL and CHROME.

○ Switching the equalizer

During recording the EQ button switches the REC amp's frequency response in the high and low frequency ranges to compensate for different tapes. During playback it switches the playback equalizer characteristic.

○ Selecting the tape bias

In the recording mode the BIAS button varies the supply voltage to the bias oscillator circuit. This changes the output level of the oscillator, varying the tape bias.

Equalizer

This is a 2-stage direct-coupled amplifier using NPN transistors. During playback it functions as an equalizing amplifier and during recording it functions as a linear amplifier.

Recording Amplifier (REC amp)

Consisting of 2 NPN transistors this REC amp provides CR correction for low frequencies and LC correction for high frequencies.

Limiter (Fig. 2)

This circuit compresses an excessive signal of above +4VU to below +4VU. It has no effect on signals of less than +4VU. After the input level control a variable impedance circuit consisting of 2 transistors controlled by DC voltage is connected. The control voltage comes from the final output through a rectifier diode. As the output level increases, the impedance of the variable impedance circuit decreases with control voltage. Consequently, excessive signals can be suppressed.

Peak Level Indicator (Fig. 3)

This circuit detects electrically when the signal level exceeds +4VU and causes the light emitting diode (LED) to light up. In Fig. 3, Q_{405} is an emitter follower which increases the input impedance of this circuit and Q_{406} and Q_{407} form a schmitt circuit. The base bias of Q_{406} is determined by R_{416} , R_{417} and R_{418} so that it becomes conducting when there is no input signal. The base bias of Q_{407} is applied from the collector of Q_{406} through R_{420} , R_{419} . Therefore, when Q_{406} is conducting (ON), Q_{407} is nonconducting (OFF), and vice versa. Assuming that the input signal is a sine wave, it is half-wave rectified by D_{403} (left channel)/ D_{404} (right channel) and the input waveform at the base of Q_{406} takes a shape of the base DC voltage (V_B) superimposed on the half-wave rectified signal. Since V_B has been established higher than the trigger voltage (V_S) of the Schmitt circuit, Q_{406} remains conducting when the amplitude of the input signal is small. When it becomes bigger, at times (T) the base voltage of Q_{406} is less than V_S . During these times Q_{406} is OFF and Q_{407} is ON, causing the LED to light.

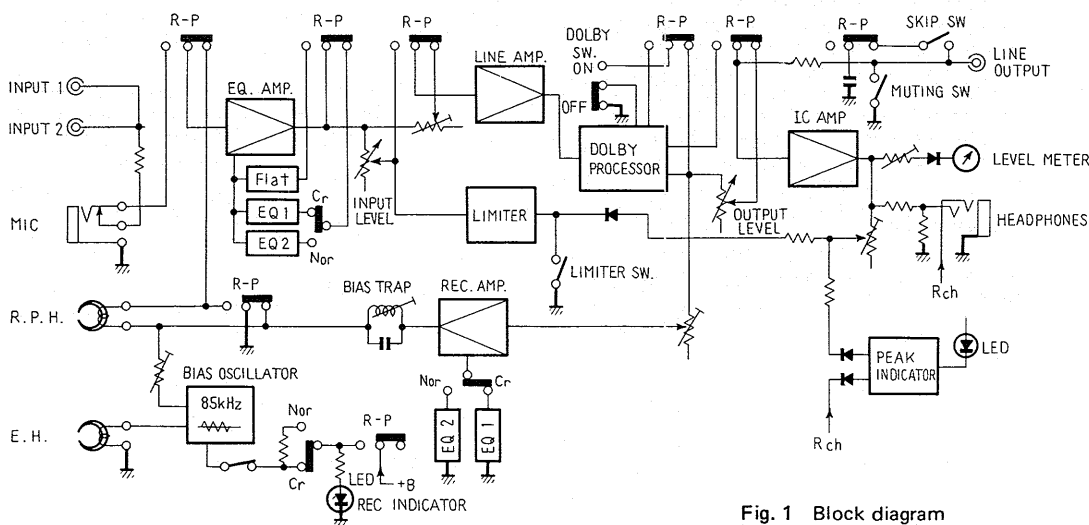


Fig. 1 Block diagram

Dolby Processor (Fig. 4)

The CT-F7171 incorporates a Dolby B-type switchable processor. The B-type Dolby noise reduction system is designed to operate only in middle and high frequency ranges to reduce tape hiss which is a problem inherent in tape playback. When the input signal does not reach the specified level (Dolby level) at middle and high frequencies, the recording level is automatically boosted and, in playback, it is reduced to the original level. This is done by addition (or subtraction) of the source signal and the compressor's output signal. In recording, part of the output of amp 2 is input to the compressor and the compressor's output is added to amp 3 where it is added to the source signal to provide the required characteristics.

In playback, part of the output of amp 3 is input to the compressor. The phase of this input is reverse compared to the input when

recording. The output of the compressor is added to the source signal in amp 3. This means that in practice subtraction takes place and operation is exactly opposite to that in recording.

Compressor

The input signal passes through the high pass filter. There is an FET electronic attenuator circuit between the high pass filter and amp 4. When the input signal is low level, the control voltage applied to the gate of the FET is low and the impedance between the drain and source of the FET is maintained at a high value. Because of this, the input signal of amp 4 is not attenuated.

With high level input signals the control voltage becomes high and the impedance between drain and source of the FET decreases. This causes the attenuation of amp 4's input to increase and the output of the compressor to decrease.

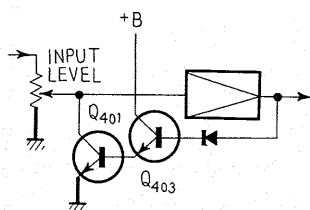


Fig. 2 Limiter block

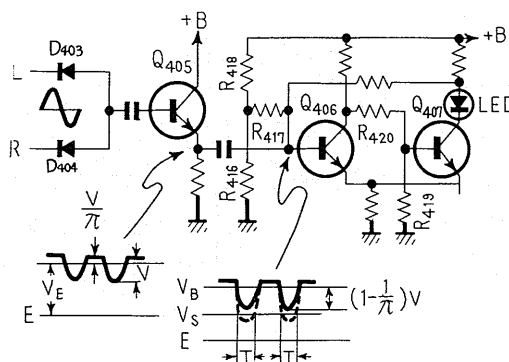


Fig. 3 Peak level indicator block

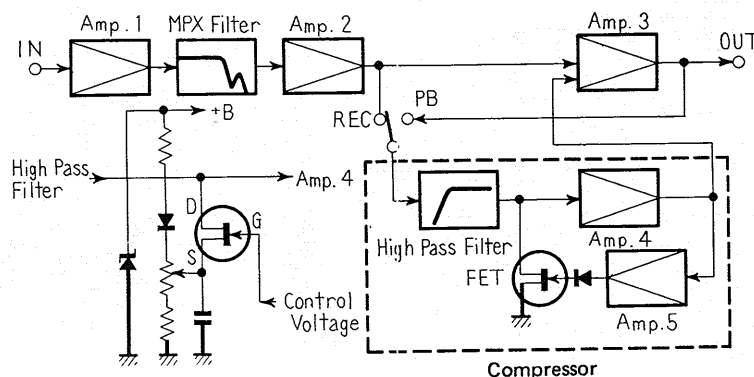


Fig. 4 Dolby processor block

3.2 AUTO STOP CIRCUIT (Fig. 7)

When the tape is wound to the end, the auto stop circuit automatically releases the tape transport control levers. Tape running is detected by a magnetic switch (S16). The switch is constructed as in Fig. 5 and switches on and off while the magnet which is driven by a belt from the take-up reel base is rotating (Fig. 6). S15-2 causes the cathode of thyristor (SR301) to be grounded when one of the FF, REW and PLAY levers is pressed. While the tape is running, S16 switches on and off. This means that an alternating current is applied to Q₃₀₁. Because of this Q₃₀₁ is repeatedly conducting and nonconducting and C₃₀₃ charging and discharging. In Fig. 7 point A is connected to the gate of SR301 through the Zener diode (ZD301). While Q₃₀₁ is switching ON and OFF, the potential at A is maintained at a relatively low value and no current flows to ZD301.

When the tape stops, the switch S16 stops moving and no signal is supplied to the base of Q₃₀₁, which becomes non-conducting. Consequently, C₃₀₃ is charged only and the potential at A increases. When the potential

across ZD301 exceeds the Zener voltage, current flows through ZD301 and the gate voltage of SR301 exceeds the trigger gate voltage causing SR301 to fire. When SR301 becomes conducting, current flows through the solenoid (P), which releases the tape transport control levers. When the levers are released, S15-2 goes to its STOP position, cutting the current to the solenoid and discharging C₃₀₃. S6-4 turns on only when the PLAY lever is pressed and S12 turns on only when the PAUSE lever is pressed. Therefore, when the PAUSE lever is pressed in playback (or recording) to stop the tape temporarily, the rise of potential at point A is suppressed and the auto stop mechanism does not operate.

3.3 POWER SUPPLY (Fig. 8)

The CT-F7171 uses a DC motor. Power is supplied to the motor and amplifier independently. In the power supply circuit for the amplifier a voltage stabilizer consisting of a transistor and Zener diode is provided. S15-1, the motor switch, turns on only when the FF, REW or PLAY lever is pressed, causing the motor to start.

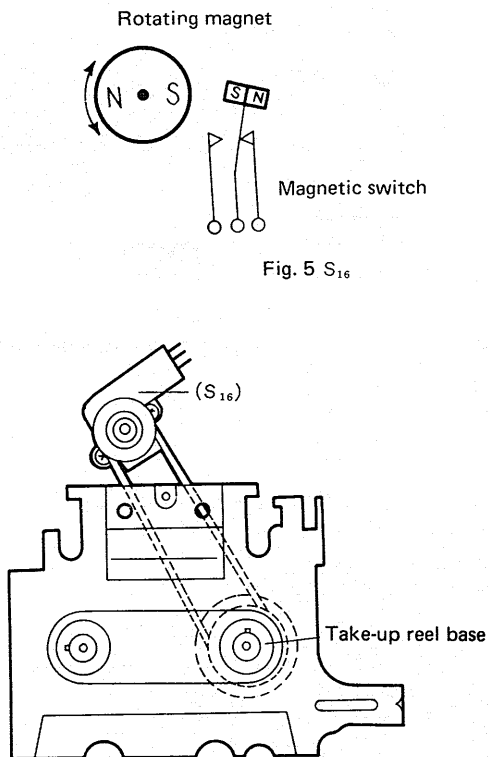


Fig. 6

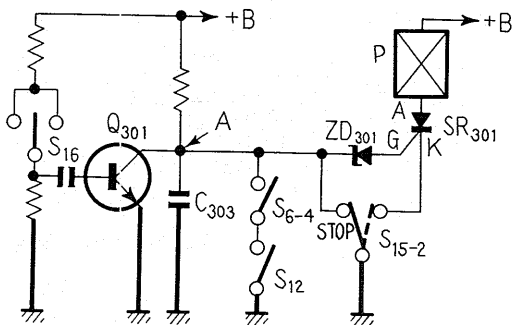


Fig. 7 Auto stop block

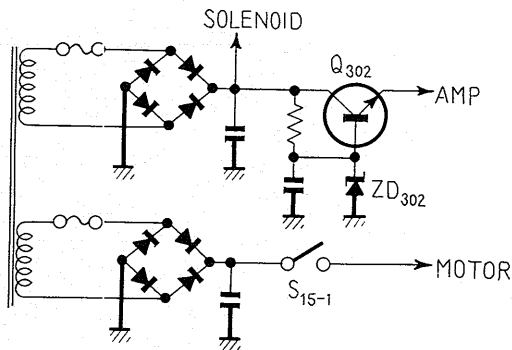


Fig. 8 Power supply

3.4 SUBSIDIARY CIRCUITS

Memory Stop (Fig. 9)

When the MEMORY switch is set to ON, S10 is closed. When the REW lever is pressed, S9 is closed. S13 is linked to the tape counter and is switched on when the tape counter indicates "999." When S13 is switched on, C310 is charged, causing a pulse voltage (shown in Fig. 9) to be generated at the S9 side of C310. This pulse acts as a trigger pulse for SR301, providing the solenoid with current. This brings the tape transport mechanism to the STOP mode.

Cueing (SKIP) (Figs. 10, 11)

When the SKIP button is pressed, S8-1 through S8-3 are switched on and R₁₅₄ is put in parallel with the motor's servo control circuit. This increases the motor speed and accelerates the tape. At the same time C₁₂₉(C₁₃₀) is connected to the LINE OUTPUT terminal, reducing high frequencies in the output.

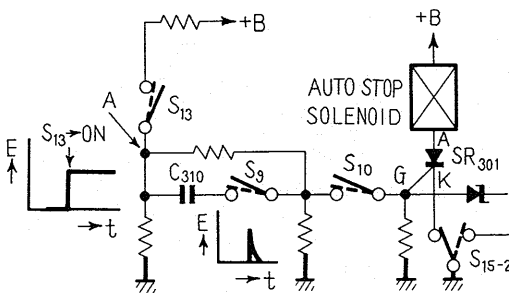


Fig. 9 Memory stop block

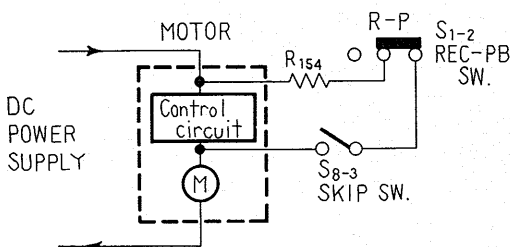


Fig. 10 Cueing block A (SKIP)

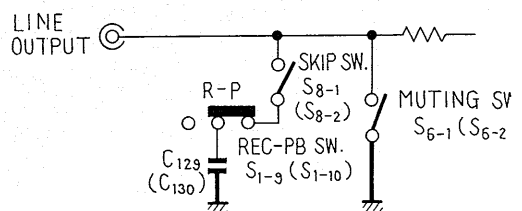


Fig. 11 Cueing block B (SKIP)

4. DISASSEMBLY AND P.C. BOARD LOCATION

WOODEN CASE

1. Remove the screws in the left and right side panels (2 on each side).
2. Raise the rear of the case slightly.
3. Slide the case backwards.
4. Raise the case.

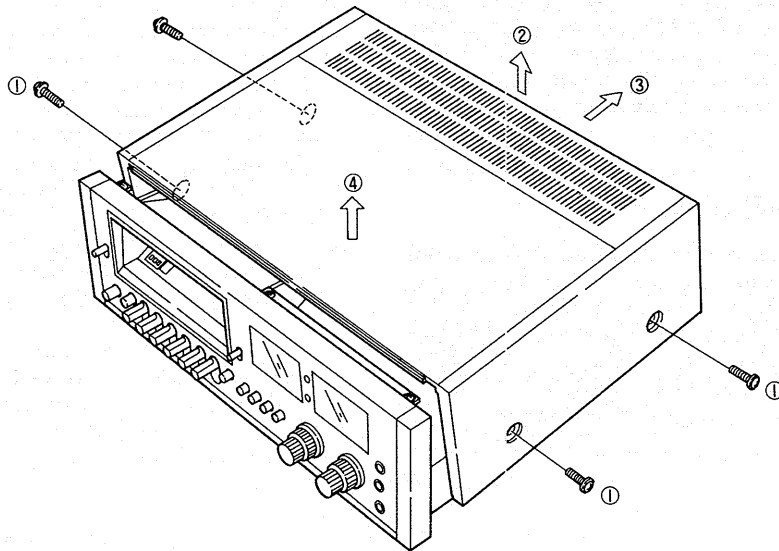


Fig. 12

BOTTOM PLATE

Remove the seven screws.

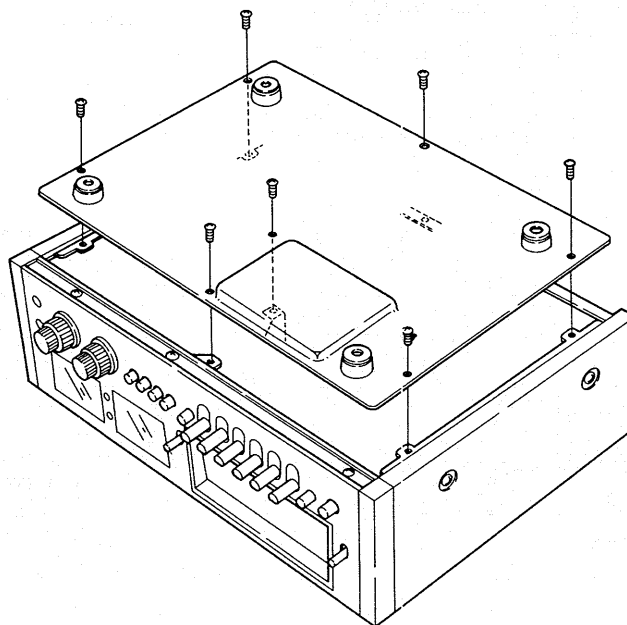


Fig. 13

FRONT PANEL

1. Remove the wooden case.
2. Remove the INPUT and OUTPUT level control knobs.
3. Remove the three screws at both the top and bottom of the front panel.
4. Remove the front panel.

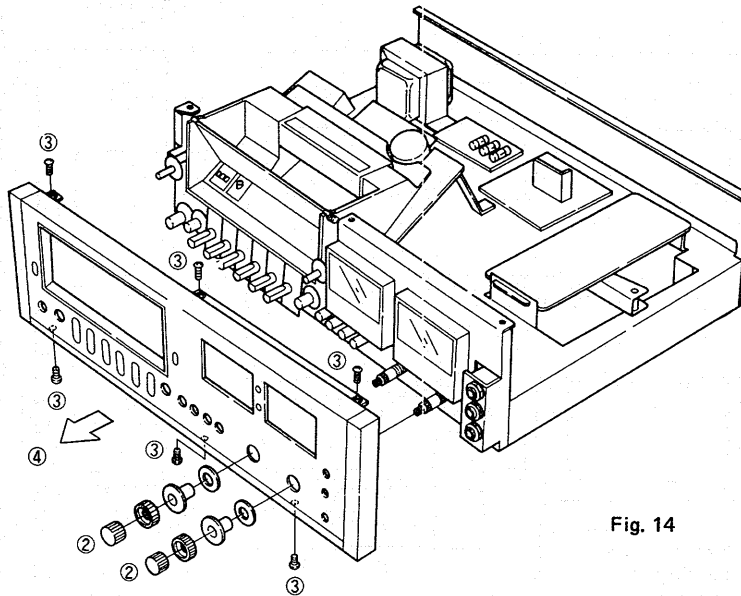


Fig. 14

CASSETTE COMPARTMENT

1. Remove the wooden case.
2. Remove the front panel.
3. Remove the two large screws ③A and the two small screws ③B
4. Lift out the cassette compartment.

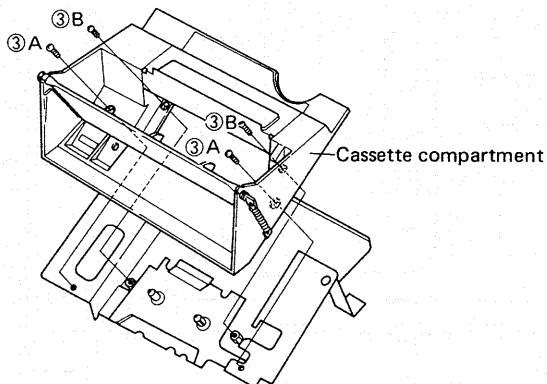


Fig. 15

P. C. BOARD LOCATION

• Top View

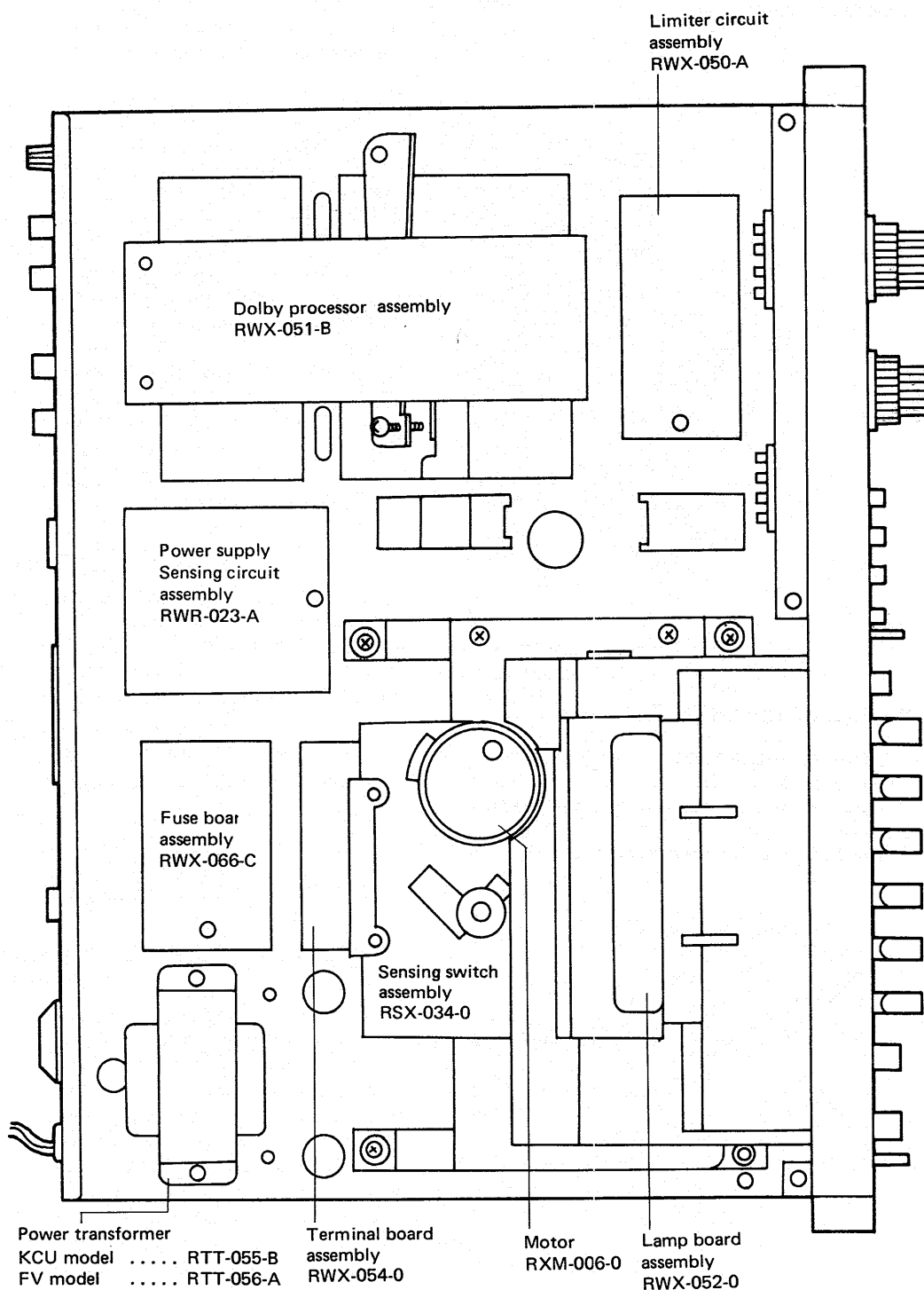


Fig. 16

• Bottom View

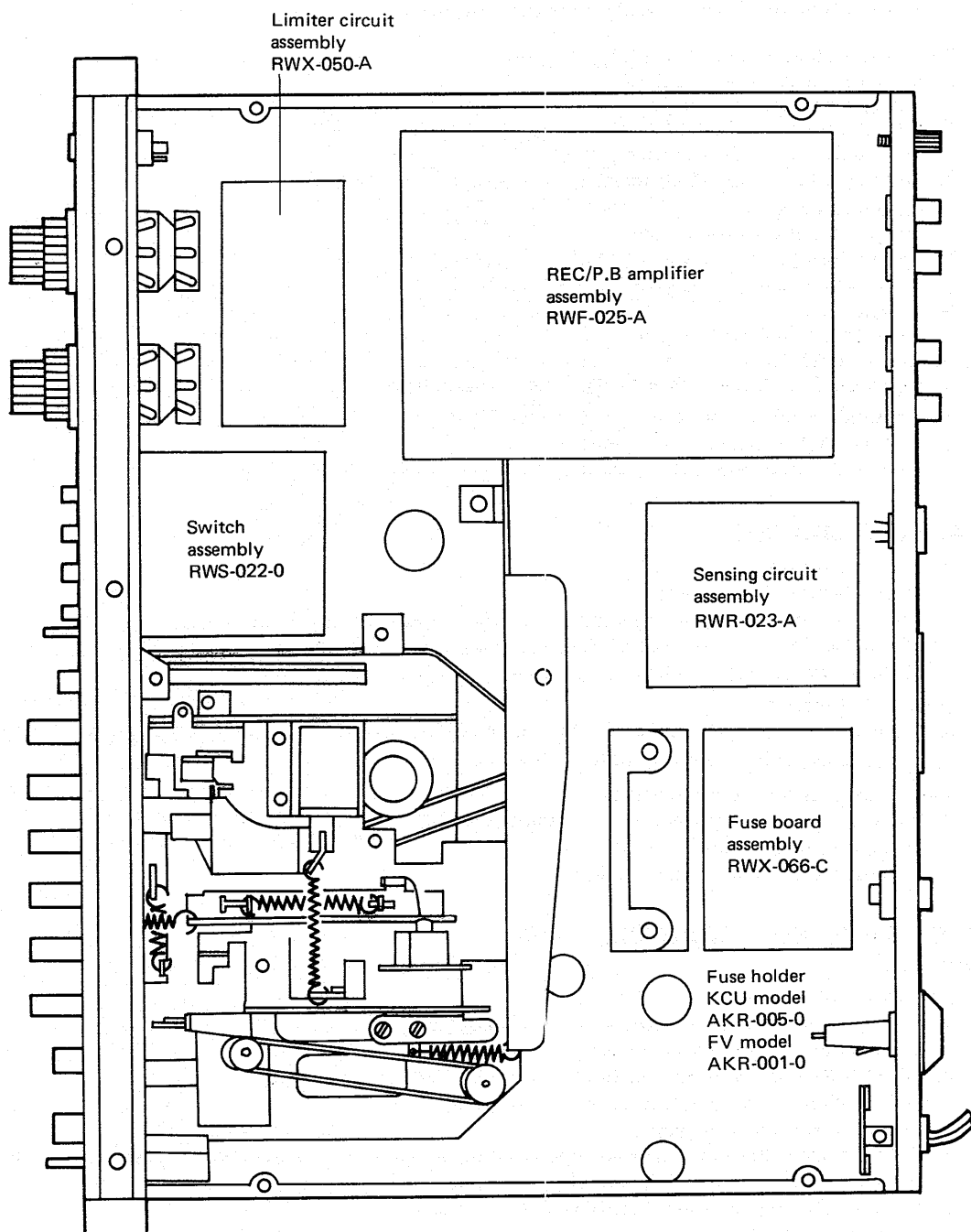


Fig. 17

5. TROUBLESHOOTING CHART

INDICATOR LAMPS NOT LIGHTING

1. None of the lamps light (except REC indicator, peak level indicator)
 - a. Lamp fuse blown——Check the lamp circuit, (Fuse board assembly, if there is nothing wrong, between terminals 1 and 8, replace the fuse. 500mA)
2. Level meter illumination (PL1, PL2)
 - a. Lamp defective——replace
 - b. Wiring disconnected——repair
3. Cassette illumination (PL3, PL4)
 - a. Lamp defective——replace
 - b. Switch (S14) not operating correctly——replace
4. Dolby indicator lamp
 - a. Lamp defective——replace
 - b. Switch (S2-3) not operating correctly——replace
 - c. Wiring disconnected——repair
5. REC indicator
 - a. LED (D502) defective—replace
6. Peak level indicator
 - a. Signal level too low——check with a higher signal level
 - b. Operation level incorrect——adjust (see 7.10)
 - c. LED (D501) defective——replace
 - d. Peak indicator circuit not operating correctly——repair (Q405~Q407)

TAPE NOT MOVING

1. Motor not working
 - a. Motor defective——replace
 - b. PLAY switch (S15-1) not operating correctly——adjust (see 6.5) or replace
 - c. Motor fuse blown——replace (Fuse board assembly, between terminals 3 and 9, 800mA)
 - d. Motor power supply circuit not operating correctly——repair
2. Capstan not rotating
 - a. Drive belt not operating correctly (broken, stretched, dirty)——replace, clean (use alcohol)
 - b. Motor pulley fixing screw loose——tighten
3. Fast forward or rewind not working
 - a. Winding torque insufficient——adjust (see 6.2)
 - b. PLAY switch (S15) not working correctly——adjust (see 6.5)

AUTO-STOP NOT WORKING CORRECTLY

1. Auto-stop not working
 - a. Solenoid positioning incorrect——adjust (see 6.4)
 - b. Solenoid not operating correctly——replace
 - c. S6, S12, S15 not operating correctly——repair, adjust or replace
 - d. Sensing circuit not operating correctly——repair
2. Auto-stop working too frequently
 - a. Rotary magnet or sensing belt not operating correctly——repair, adjust (not in place, stretched)
 - b. Sensing switch not operating correctly——replace
3. Auto-stop operates while the PAUSE switch is pressed
 - a. S12 not operating correctly——repair or replace
4. Memory stop not operating
 - a. S9, S10, S13 not operating correctly——repair or replace

NO OUTPUT SIGNAL

- a. recording/playback head broken——replace
- b. Muting switch not operating correctly——adjust (see 6.3)
- c. Connection cords defective——check or repair

OUTPUT LEVEL TOO LOW

- a. Recording level too low——adjust (see 7.9)
- b. Recording bias incorrect——adjust (see 7.6)

RECORDING NOT POSSIBLE

- a. S1, S7 not operating correctly——adjust (see 6.6)
- b. Oscillator circuit not operating correctly——repair

CUE NOT OPERATING CORRECTLY

- a. S8 not operating correctly——replace
- b. R154 not operating correctly——replace
- c. Motor not operating correctly——replace

DOLBY NOT OPERATING CORRECTLY

- a. Characteristics incorrect——adjust (see 7.12)
- b. S2 not operating correctly——replace

6. MECHANICAL ADJUSTMENTS

Precautions

1. Oil must never be allowed to touch the rubber parts.
2. When disassembling for repair, remove as few parts as possible.
3. It is difficult to adjust the tension of the coil spring. When adjustment becomes essential, replace it.

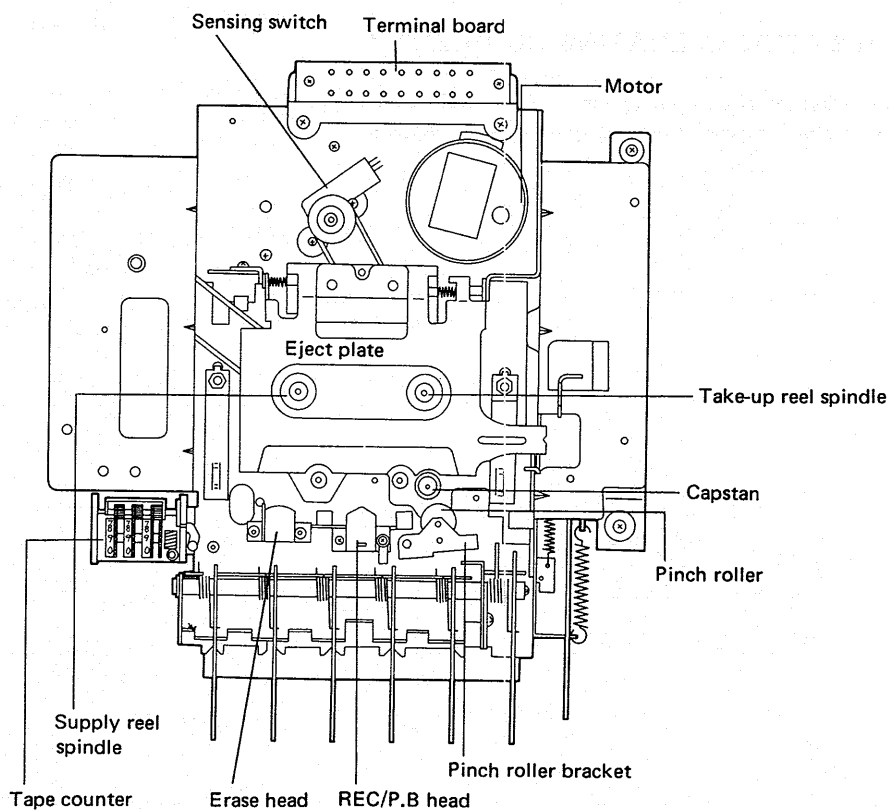


Fig. 18

6.1 PINCH ROLLER PRESSURE (Fig. 19)

1. Remove the cassette compartment (see page 13) and press the PLAY lever.
2. Push the tension gauge against the pinch roller as shown in Fig. 19.
3. The force required to separate the pinch roller from the capstan must be 300g ~ 400g.
4. When it is not within this range, unhook the pinch roller spring from the hole and make sure that the pinch roller bracket moves easily.
5. Hook the spring into another hole.
6. When it is impossible to correct, replace the pinch roller spring.

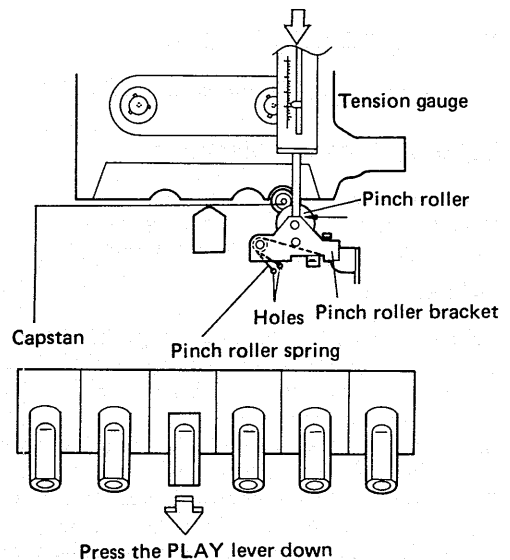


Fig. 19

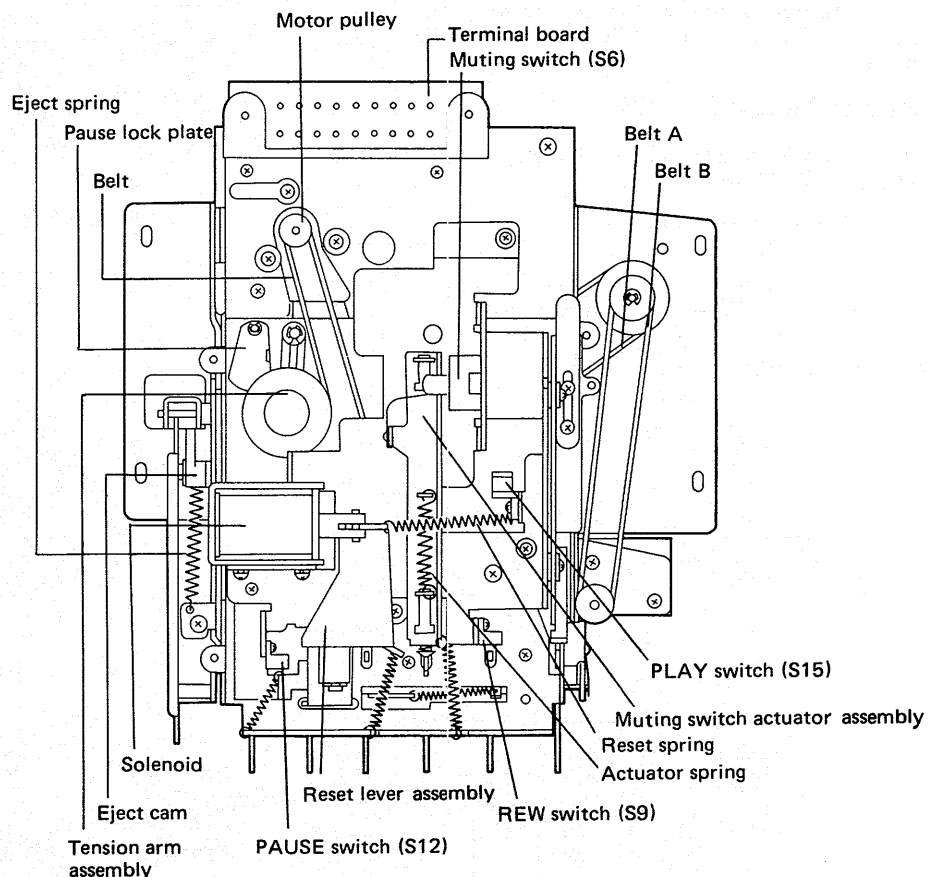


Fig. 20

6.2 TAKE-UP TORQUE

Use a torque gauge as shown in Fig. 21.

Take-Up Torque Tolerances

In playback/recording	40~65g·cm
In fast forward	70~130g·cm
In rewind	70~130g·cm

Adjustment

Take-up torque (in playback) (Figs. 22, 23)

1. Check the take-up pulley and rubber flange of the take-up reel base make contact without slipping.
2. If the contact between them is incorrect, adjust the idler pulley arm spring.
3. If the contact pressure is correct and yet you cannot correct the torque so that it is within the prescribed limits, replace the tension arm assembly.

Take-Up Torque (in fast forward) (Fig. 24)

If the torque is not within the limits given, adjust by bending the FF linkage lever of leaf switch.

Rewind Torque (Fig. 25)

If the torque is not within the limits given, adjust the REW lever spring.

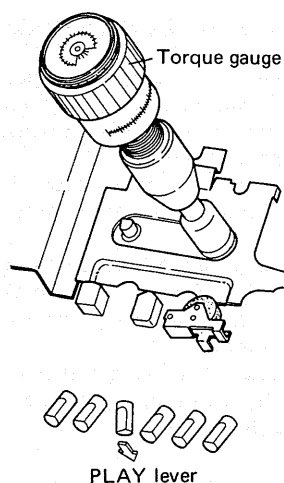


Fig. 21

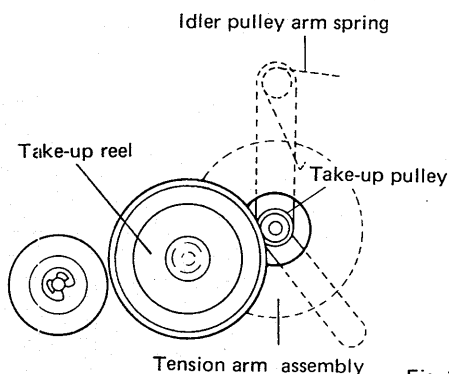


Fig. 22

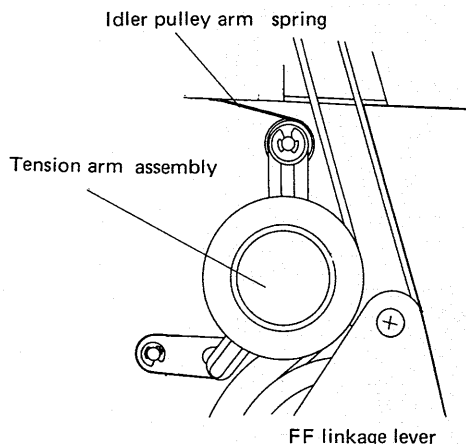


Fig. 23

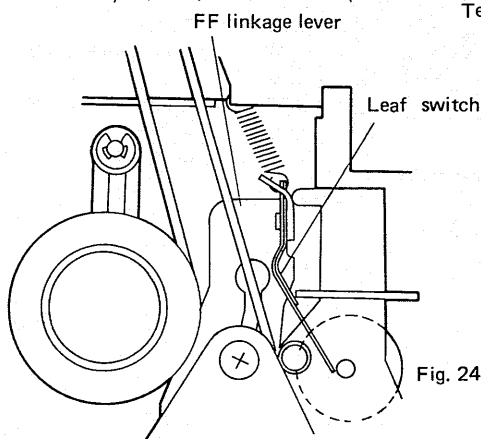


Fig. 24

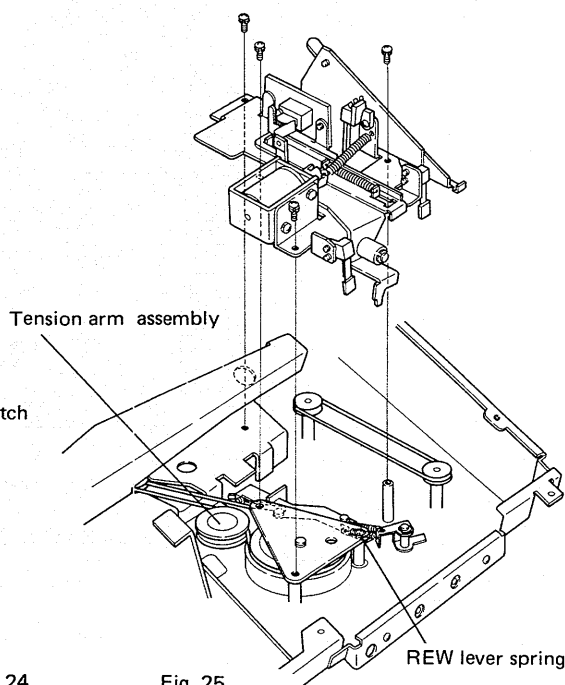


Fig. 25

6.3 MUTING SWITCH

Adjustment Standard (Fig. 26)

In the PLAY mode the muting switch should complete its switching action.

The switching speed should be slower when the mode is changed from STOP to PLAY than when it is changed from PLAY to STOP.

In the STOP mode the muting switch should return completely to its original position.

Adjustment

1. Adjust by bending (1) in Fig. 26 so that the standards above are satisfied.
2. Adjust by bending (3) so that there is no gap between (2) and (3) in PLAYBACK mode.

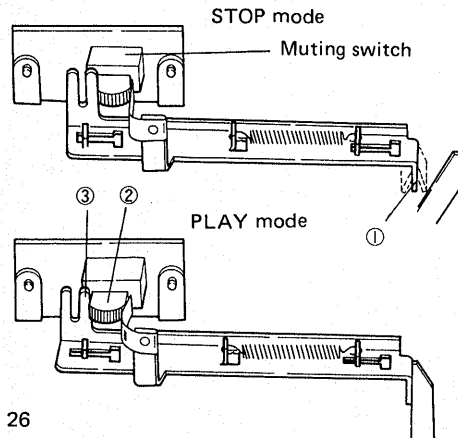


Fig. 26

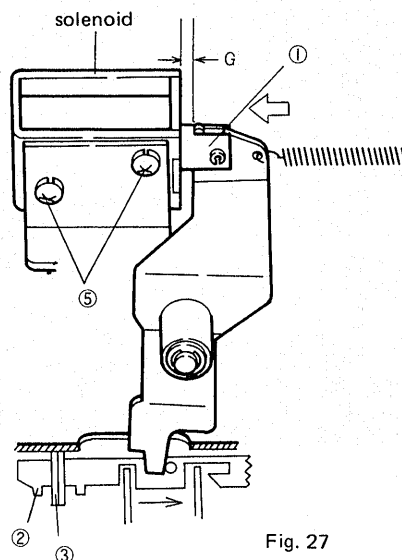


Fig. 27

6.4 SOLENOID (Fig. 27)

1. Put the tape transport in the STOP mode.
2. Push in the plunger (1) until (2) comes into contact with (3).
3. Loosen screws (5) and move the solenoid so that the gap G is 1.6mm in this condition.
4. Lock the REC and PLAY levers and make sure that they are released when the plunger is pressed.

6.5 PLAY SWITCH (Fig. 28)

1. Put the tape transport in the STOP mode.
2. Loosen screw (3) and tighten it so that gap G between (2) and (1) is 0.1mm (± 0.05 mm).
3. Make sure that the switch works normally in the FF, PLAY and REW modes.

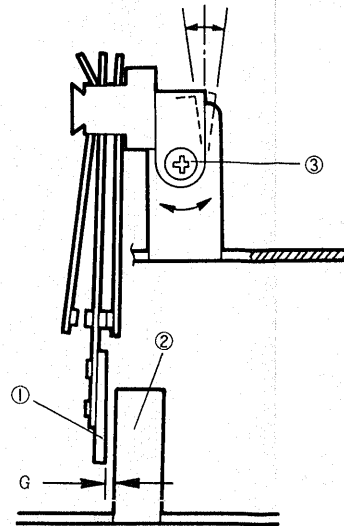


Fig. 28

6.6 REC ACTUATING LEVER (Fig. 29)

1. Lock the REC lever.
2. Adjust screw (2) so that the gap G between (2) and (1) is 0.4mm (± 0.1 mm).
3. After adjustment, fix the screw so that it will not move.

6.7 TAPE SPEED (Fig. 30)

Insert a small screwdriver into the adjustment hole, shown in Fig. 30, and adjust the variable resistor.

- If the speed is low, turn the resistor clockwise.
- If the speed is high, turn it counterclockwise.

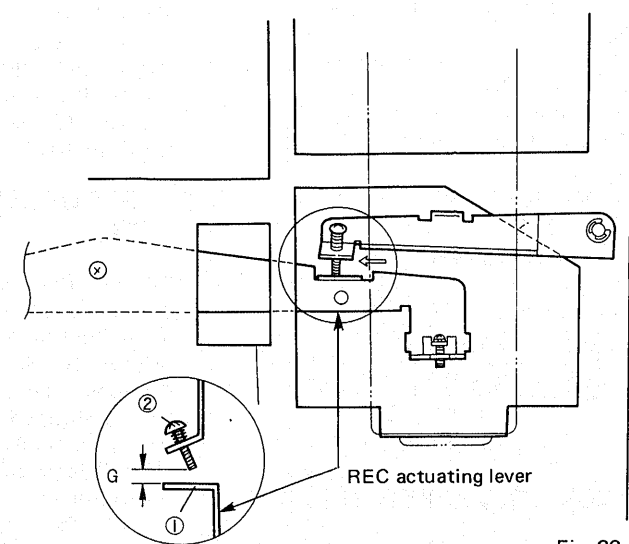


Fig. 29

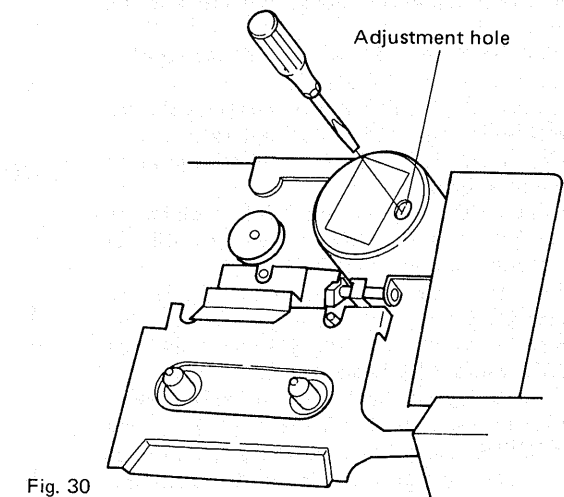


Fig. 30

7. ELECTRICAL ADJUSTMENTS

To make the adjustments the following instruments are necessary:

- High sensitivity AC voltmeter
- Audio frequency oscillator
- Attenuator
- Oscilloscope

0dBv = 1V. Connect a 50k Ω resistor between OUTPUT terminals and ground.

7.1 HEAD AZIMUTH (Fig. 31)

1. Set the equalizer selector (EQ) to NORMAL.
2. Connect the voltmeter to OUTPUT terminals.
3. Set the OUTPUT level controls (VR3, VR4) to maximum.
4. Play back the 10kHz, -10dB signal of the test tape (MTT-116L).
5. Observing the voltmeter, turn screw (1) to maximize the signal on both the left and right channels.
6. After adjustment, be sure to lock screw (1) so that it cannot move.

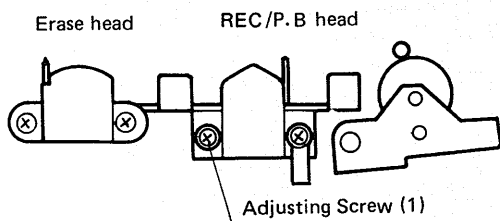


Fig. 31

7.2 PLAYBACK EQUALIZER (Fig. 32)

1. Set the equalizer selector (EQ) to NORMAL.
2. Connect the voltmeter to the OUTPUT terminals.
3. Set VR105 (right) and VR106 (left) on the REC/P.B Amplifier assembly to maximum.
4. Play back the 333Hz, -10dB signal of the test tape (MTT-116L).
5. Adjust the OUTPUT level controls till the voltmeter indicates -20dBv (0.1v).
6. Play back the 6.3kHz, -10dB signal of the test tape.
7. Adjust VR101 (left) and VR102 (right) on the REC/P.B Amplifier assembly until the voltmeter indicates -20dBv.
8. Set the equalizer selector (EQ) to CHROME.
9. Repeat items 4 ~ 6, playing back the 333Hz and 6.3kHz signals.
10. When playing back the 6.3kHz signal, VR103 (left) and VR104 (right) on the REC/P.B Amplifier assembly should be adjusted till the voltmeter reads -24.5dBv.

7.3 PLAYBACK LEVEL

1. Connect the voltmeter to terminals No. 13 (left) and No. 15 (right) on the Dolby processor assembly.
2. Switch the DOLBY NR switch ON.
3. Play back the 333Hz 0dB signal of the test tape (MTT-116L).
4. VR105 (left) and VR106 (right) should be adjusted till the voltmeter read is -2.7dBv.

7.4 LEVEL METER CALIBRATION

1. Connect the voltmeter to terminals No. 13 (left) and No. 15 (right) of the Dolby Processor Assembly.
2. Apply a 333Hz/-10dBv signal to the INPUT terminals and put the deck in the record mode.
3. Adjust the INPUT level controls (VR1 and VR2) till the voltmeter reads -6.7dBv.
4. Adjust VR109 (left) and VR110 (right) until the level meters indicate "0."

7.5 RECORDING CURRENT (LEVEL)

- To do this adjustment, the tape bias current must be stopped. In Fig. 32 at a mark (*) of solder joins, two parts of the printed circuit. When this solder has been removed, the power supply to the oscillator is stopped. This shuts off bias current.
1. Apply a 333Hz/-10dBv signal to the INPUT terminals and put the deck in the record mode.
 2. Adjust the cap level controls till the output from the MONITOR terminals is -10dBv.
 3. Connect the voltmeter between terminals No. 1 and No. 7 (left) and between No. 2 and No. 8 (right) on the REC/P.B Amplifier assembly.
 4. Set the equalizer selector (EQ) to NORMAL.
 5. Adjust VR107 (left) and VR108 (right) until the voltmeter reads 0.4mV (=40 μ A).

7.6 RECORDING BIAS

1. Set the INPUT level controls to their minimum positions and put the deck in the record mode.
2. Set the BIAS selector to NORMAL.
3. Connect the voltmeter between REC/P.B Amplifier assembly terminals No. 1 and No. 7 to adjust the left channel and terminals No. 2 and No. 8 to adjust the right channel.
4. Adjust VR113 (left) and VR114 (right) until the voltmeter reads 1.9mV (=190 μ A).

7.7 BIAS TRAP

1. Put the deck in the record mode and set the INPUT level controls to their maximum positions.
2. Connect the voltmeter and oscilloscope to terminals TP1 (left) and TP2 (right) on the REC/P.B Amplifier assembly
3. Adjust L103 (left) and L104 (right) until the amplitude of the bias waveform is minimized.
4. Set the BIAS selector to CHROME.
5. Switch the LIMITER button ON.
6. Connect the voltmeter to the OUTPUT terminals.
7. Adjust L101 (left) and L102 (right) till the reading on the voltmeter is minimized.

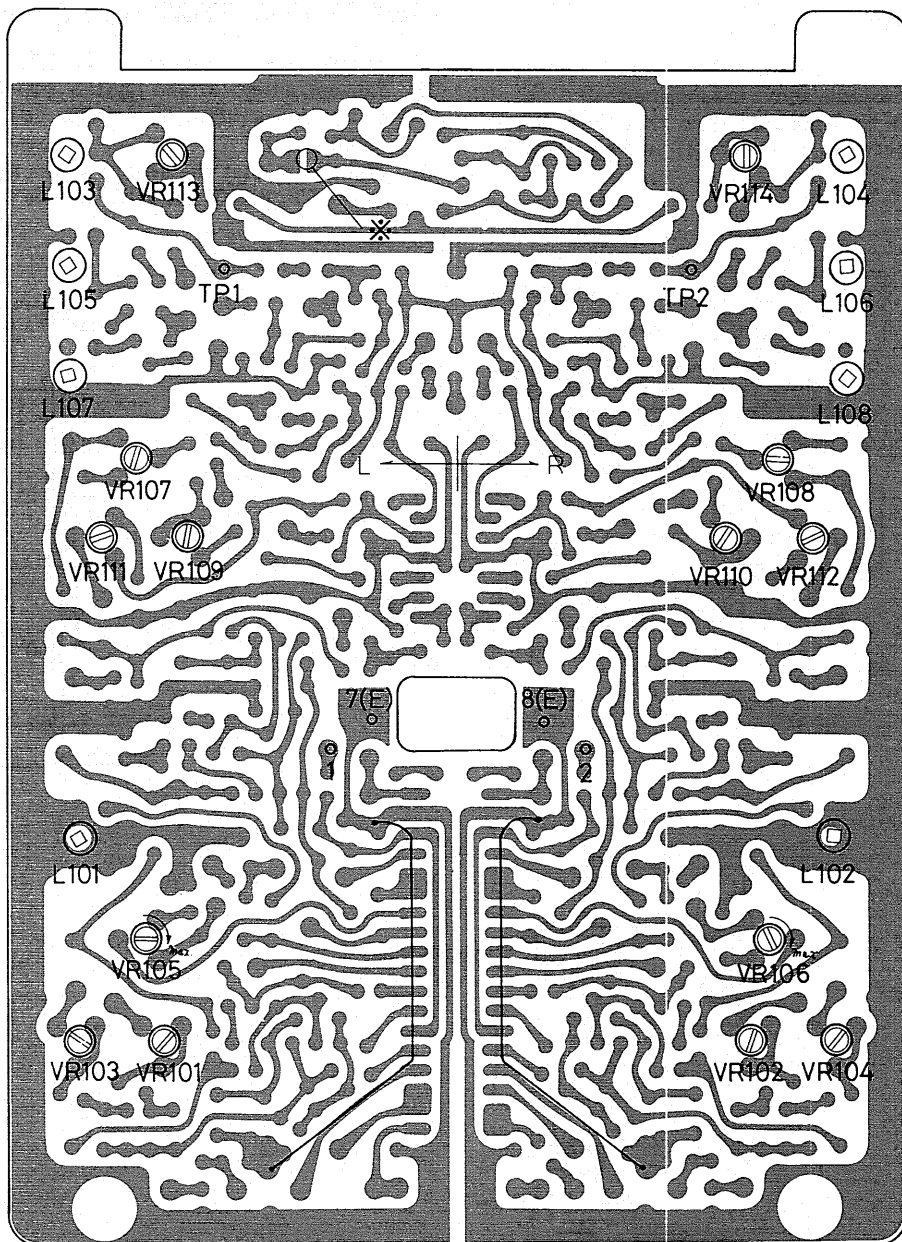


Fig. 32 REC/P.B Amplifier assembly

7.8 RECORDING/PLAYBACK FREQUENCY RESPONSE

- This adjustment can be done by fine adjustment of the bias current.
1. Set the BIAS and equalizer (EQ) selectors to NORMAL.

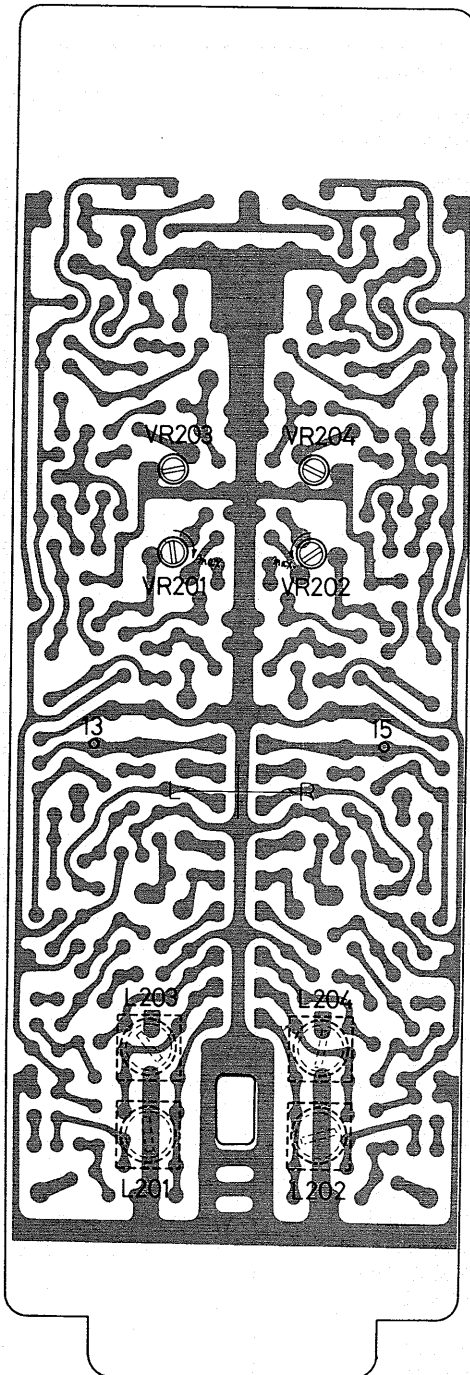


Fig. 33 Dolby processor assembly

2. Apply a 333Hz/-30dBv signal to the INPUT terminals and put the deck in the record mode.
3. Adjust the INPUT level controls so that the monitor output (at the OUTPUT terminals) level is -30dBv.
4. Record this signal on tape MTT-502 (equivalent to BASF C-90).
5. Without changing the level, record a 6.3kHz signal.
6. While playing back this tape, adjust VR113 (left) and VR114 (right) so that the playback levels of the 333Hz and 6.3kHz signals are the same.
7. Record and play back signals of some other frequencies up to 12kHz in order to make sure that the frequency response is within the specified standard.
8. Set the equalizer (EQ) and BIAS selectors to CHROME.
9. Using chrome tape, check the recording and playback frequency response matches the specifications.
10. With the DOLBY NR switch on, using both kinds of tape, check that the frequency response matches the specifications.
11. Check the harmonic distortion and make sure that the bias is not too low.

• Recording Equalizer

Normally the Peaking coil (L105 ~ L108) does not need to be adjusted. However, when the frequency response cannot be corrected by adjusting the bias, measure the recording amp frequency response and check that the peak levels are around 13kHz in the case of NORMAL tape and 15kHz in the case of CHROME tape. Only in the case where there is a big deviation from these frequencies the peaking coil should be adjusted.

7.9 RECORDING LEVEL

1. Set the equalizer (EQ) and BIAS selectors to NORMAL.
2. Connect the voltmeter to terminals No. 13 (left) and No. 15 (right) of the Dolby Processor assembly.
3. Apply a 333Hz/-10dBv signal to the INPUT terminals and put the deck in the record mode.
4. Adjust the INPUT level controls till the voltmeter reads -6.7dBv.
5. Record this signal on MTT-502 tape (equivalent to BASF C-90).

6. When this tape is played back the voltmeter should read -6.7dBv . If it is not, repeat the recording and playback operations to adjust VR107 (left) and VR108 (right).
7. Set the equalizer (EQ) and BIAS selectors to CHROME.
8. Following the same procedures used with NORMAL tape record on MEMOREX CHROME C-60 tape.
9. When playing back this tape, check that the voltmeter reads -6.7dBv . ($\pm 1.5\text{dB}$).

7.10 PEAK LEVEL INDICATOR

1. Connect the voltmeter to the OUTPUT terminals.
2. Set the INPUT level controls to their minimum positions.
3. Apply a $333\text{Hz}/-10\text{dBv}$ signal to the INPUT terminals. Put the deck in the record mode.
4. Adjust the left INPUT level control so that the voltmeter reads -6dBv .
5. Adjust VR111 (left) so that the peak level indicator lights at this signal level (-6dBv).
6. Move the left channel INPUT control to its minimum position and adjust the right channel INPUT control till the voltmeter indicates -6dBv .
7. Adjust VR112 (right) so that the peak level indicator lights at this signal level (-6dBv).
8. Check that, when moving up the left and right INPUT level controls at the same time, the voltmeter reads -8dBv ($\pm 1\text{dB}$) at which the indicator lights.

7.11 CHECKING OPERATION OF LIMITER

1. Connect the voltmeter to the OUTPUT terminals.
2. Apply a $333\text{Hz}/-10\text{dBv}$ signal to the INPUT terminals and put the deck in the record mode.
3. Adjust the INPUT level controls till the voltmeter reads -10dBv .
4. Increase the level of the input signal to the INPUT terminals to 10dB and switch the over level limiter (LIMITER) ON.
5. Check that the voltmeter reads -6dBv ($\pm 1\text{dB}$).

7.12 DOLBY PROCESSOR (Fig. 33)

• Adjusting The FM MPX Filter

This adjustment is not necessary in normal circumstances. If it is to be done, the 19kHz and 38kHz test signals must be 100% accurate.

1. Apply the 19kHz signal to the INPUT terminals and put the deck in the record mode.
2. Adjust L203 (left) and L204 (right) on the Dolby Processor assembly so as to minimize the signal coming out of the OUTPUT terminals.
3. Change the frequency of the input signal to 38kHz and adjust L201 (left) and L202 (right) to minimize the signal coming out of the OUTPUT terminals.

• Adjusting the Compressor

1. Connect the voltmeter to terminals No. 13 (left) and No. 15 (right) of the Dolby Processor assembly
2. Switch the Dolby switch (DOLBY NR) ON.
3. Turn VR201 (left) and VR202 (right) on the Dolby Processor assembly to maximum.
4. Apply a 5kHz signal to the INPUT terminals and put the deck in the record mode.
5. Adjust the INPUT level controls till the voltmeter reads -4.7dB .
6. Drop the level of the input signal to the INPUT terminals to a level 40dB lower than the input level in step 4.
7. Adjust VR203 (left) and VR204 (right) till the voltmeter reads -34.7dBv .
8. Adjust the level of the input signal to the INPUT terminals to a level 30dB lower than the input level in step 4.
9. Adjust VR201 (left) and VR202 (right) till the voltmeter reads -26.7dB .

8. LEVEL DIAGRAMS

Playback

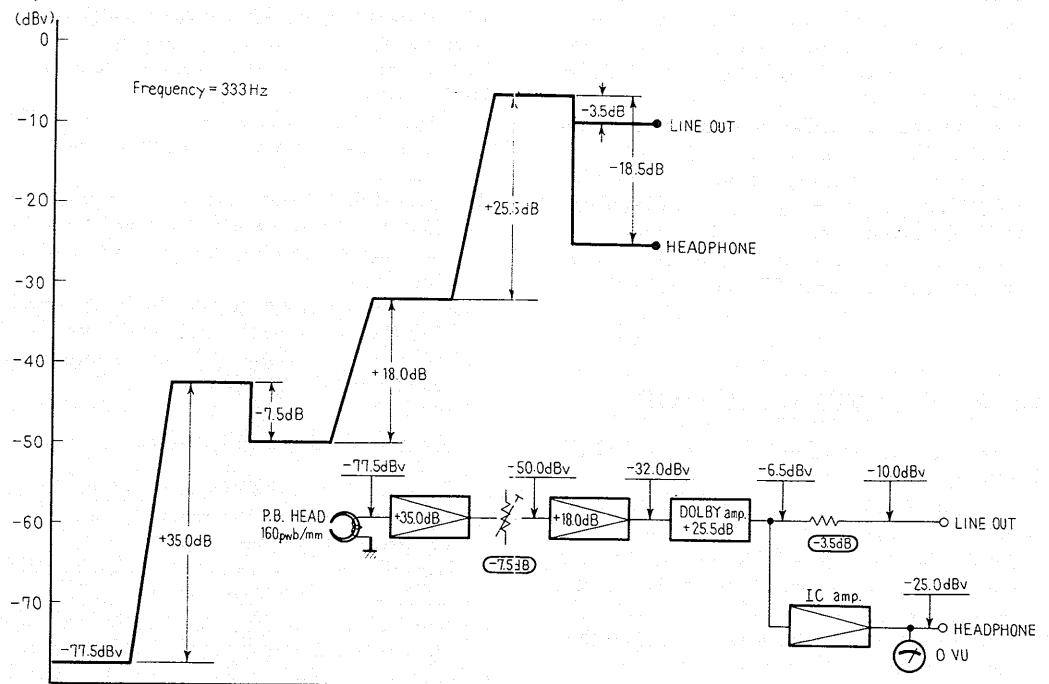


Fig. 34

Recording

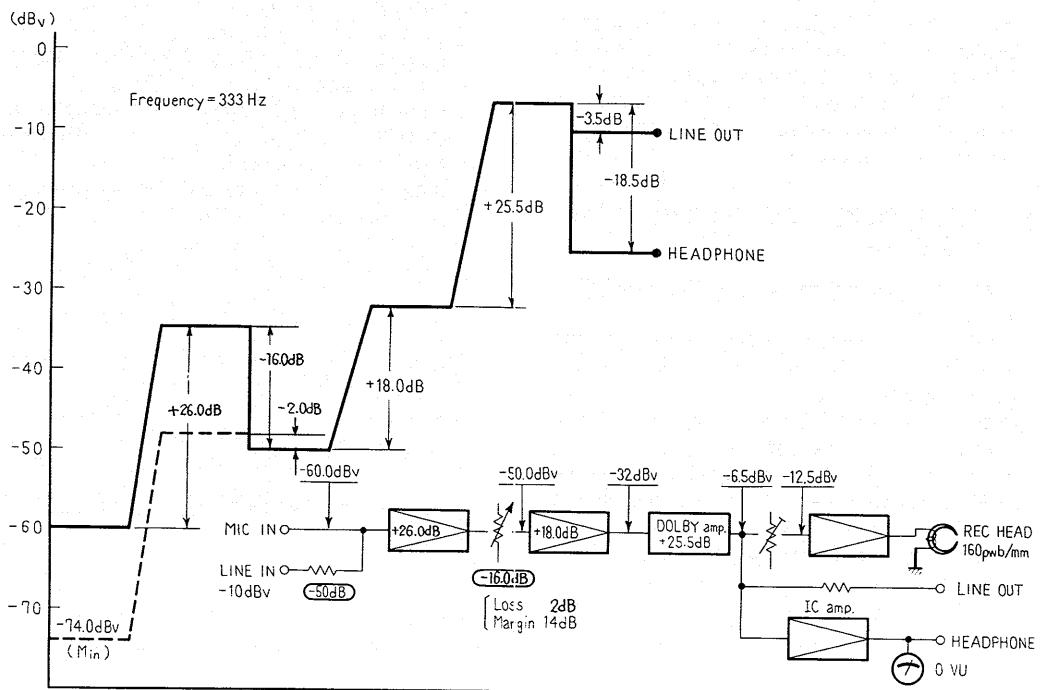


Fig. 35

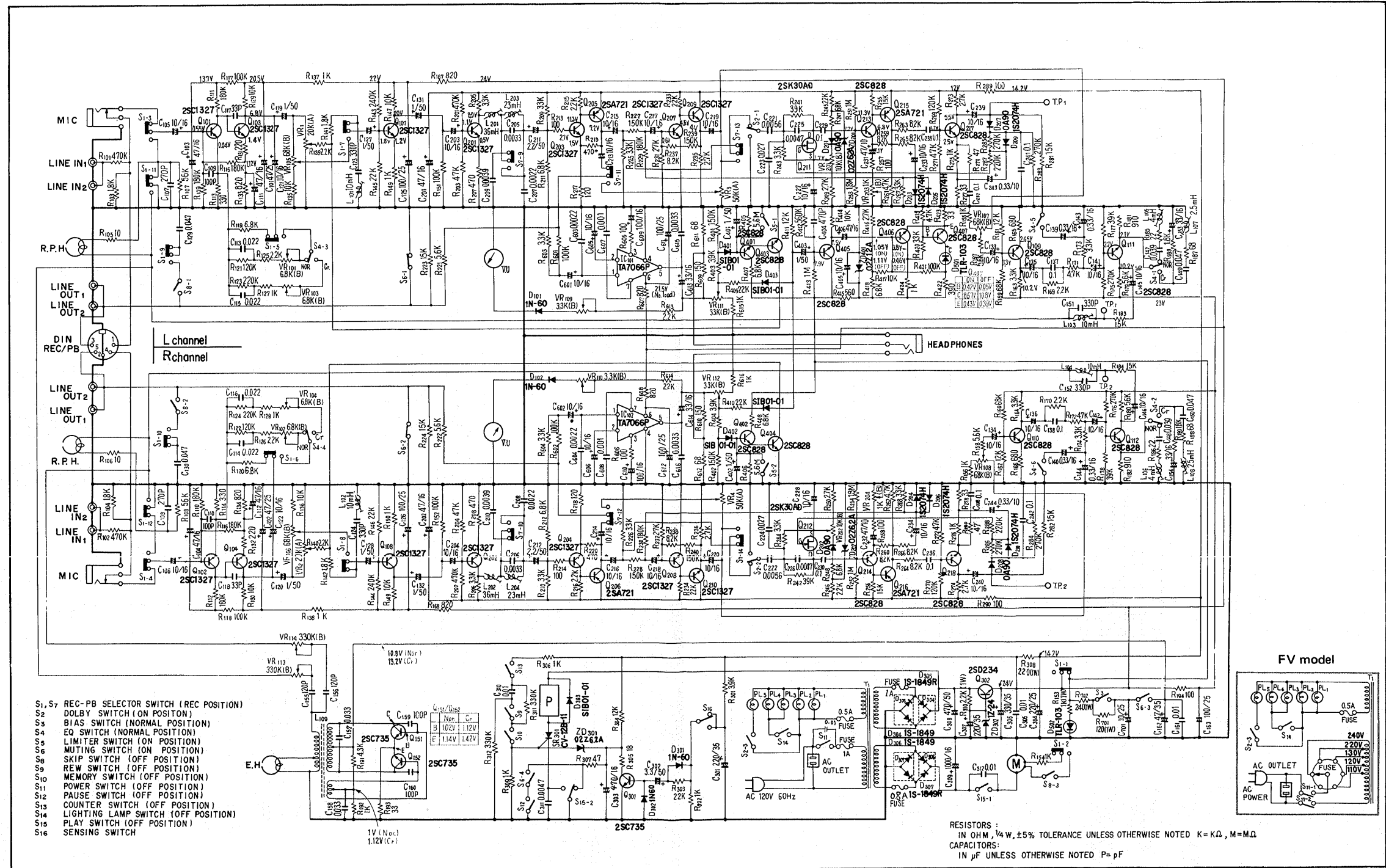
9. SCHEMATIC DIAGRAMS, P.C.BOARD PATTERNS AND PARTS LIST

9.1 ELECTRO PARTS LIST

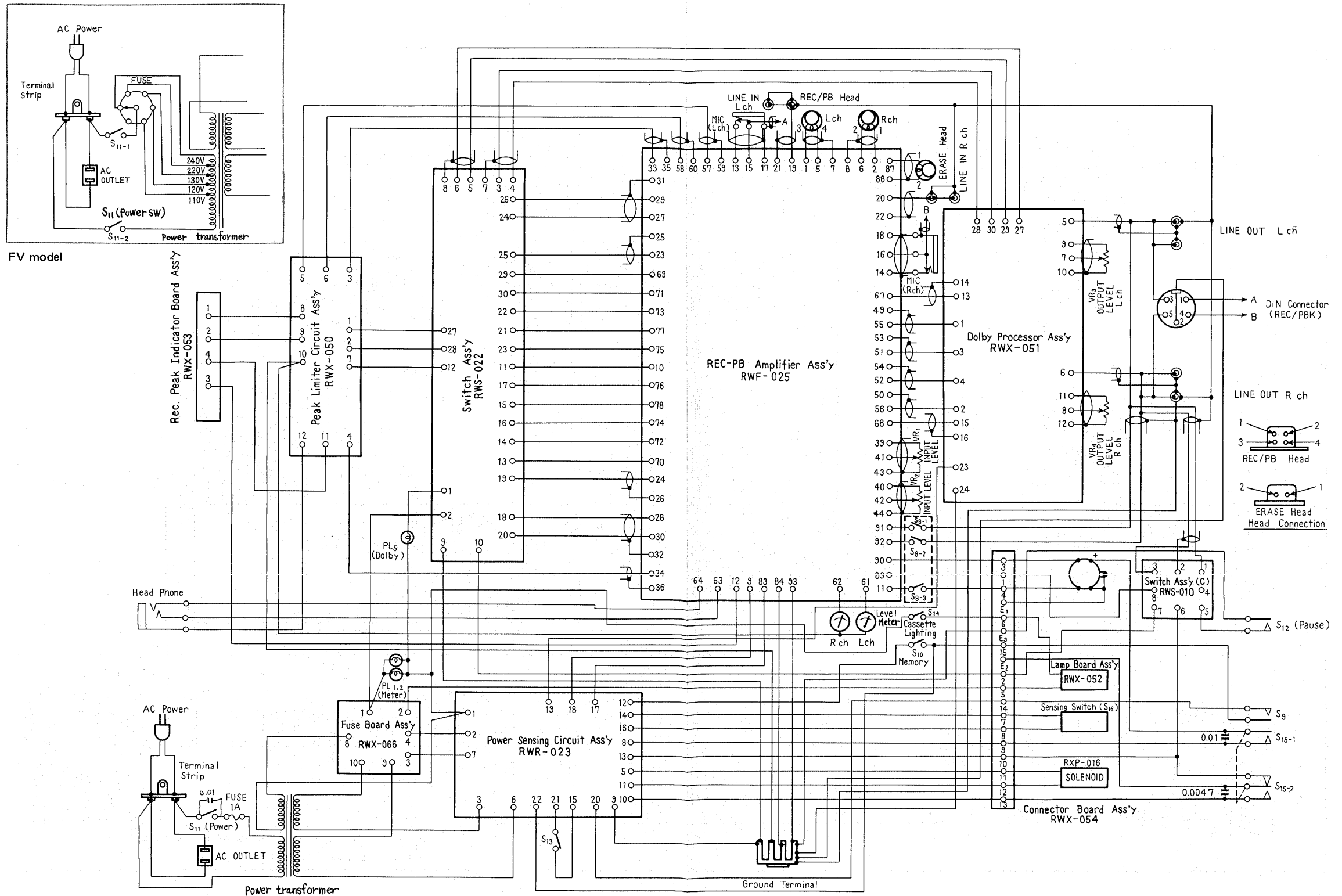
- CAPACITORS: IN μ F UNLESS OTHERWISE NOTED p: pF
- RESISTORS: IN Ω , $\frac{1}{4}$ W UNLESS OTHERWISE NOTED k: k Ω , M: M Ω

Symbol	Description	Part No.	
C311	Mylar 0.0047 50V	CQMA 472K 50	
C312	Mylar 0.01 50V	CQMA 103K 50	
S8	Push switch (SKIP)	RSG-022-0	
S9	Leaf switch (REW)	RSK-019-A	
S10	Lever switch (MEMORY)	RSK-024-0	
S11	Push switch (POWER)	RSA-010-A	KCU model
	Push switch (POWER)	RSA-011-0	FV model
S12	Leaf switch (PAUSE)	RSK-019-A	
S13	Tape counter	RAW-023-0	
S14	Lever switch (LIGHT)	RSK-024-0	
S15	Leaf switch (Play)	RSN-002-0	
S16	Sensing switch assembly	RSX-034-0	
PL5	Pilot lamp (DOLBY)	REL-013-0	
T1	Power transformer	RTT-055-B	KCU model
	Power transformer	RTT-056-A	FV model
P	Solenoid	RXP-016-0	
M	Motor	RXM-006-0	
R.P.H.	REC/P.B. head	RPB-027-A	
E.H.	Erasing head	RPB-014-0	
VU	Level meter	RAW-022-0	
VR1/VR2	Variable resistor 20k Ω -A (REC LEVEL)	RCV-017-0	
VR3/VR4	Variable resistor 50k Ω -A (PB LEVEL)	RCV-018-0	
	DIN type socket	RKP-006-0	
	Phono jack (4 jacks)	AKB-014-0	
	AC outlet	AKP-002-0	
	Phone jack (MIC)	K72-024-0	
	Phone jack (HEAD)	RKN-002-A	
	AC power cord	D11-003-E	KCU model
	AC power cord	ADG-004-0	FV model
	Fuse holder	AKR-005-0	KCU model
	Fuse holder	AKR-001-0	FV model
	Fuse (1A)	REK-033-0	KCU model
	Fuse (500mA)	REK-031-0	FV model
	Connection cord	RDE-010-0	
	REC/P.B. amplifier assembly	RWF-025-A	
	Sensing circuit assembly	RWR-023-A	with in power supply
	Switch assembly	RWS-022-A	
	Switch C assembly	RWS-010-A	
	Limiter circuit assembly	RWX-050-A	
	Dolby processor assembly	RWX-051-B	
	Lamp board assembly	RWX-052-0	
	Indicator board assembly	RWX-053-0	
	Terminal board assembly	RWX-054-0	
	Fuse board assembly	RWX-066-C	

9.2 SCHEMATIC DIAGRAM

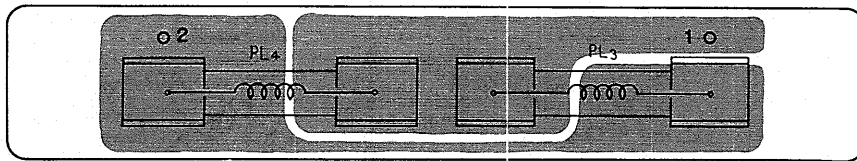


9.3 CONNECTION DIAGRAM



9.4 LAMP BOARD ASSEMBLY (RWX-052-0)

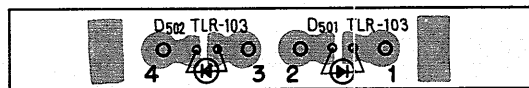
Foil side



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

9.5 INDICATOR BOARD ASSEMBLY (RWX-053-0)

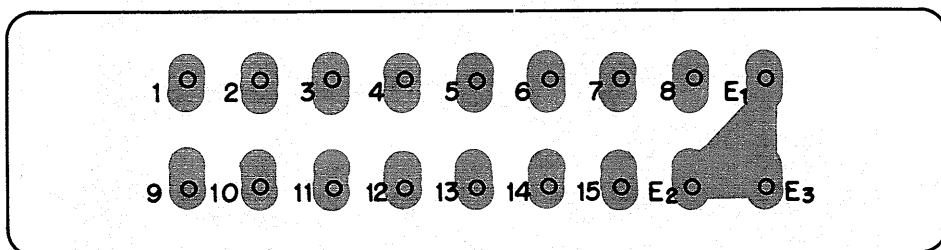
Foil side



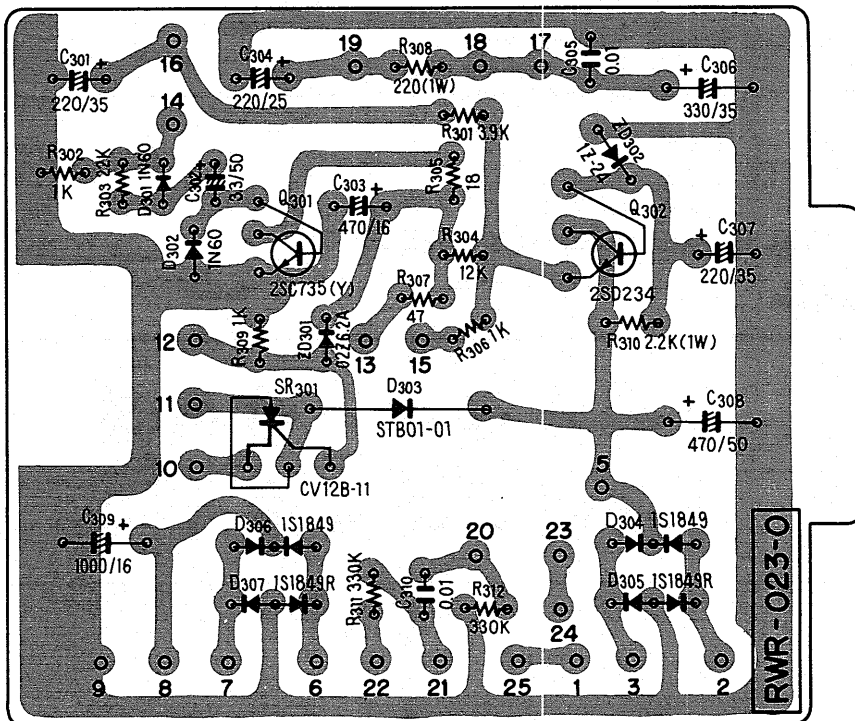
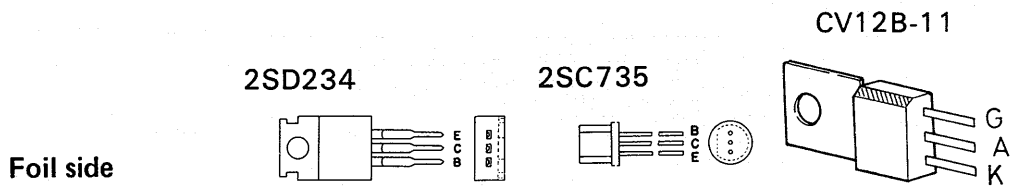
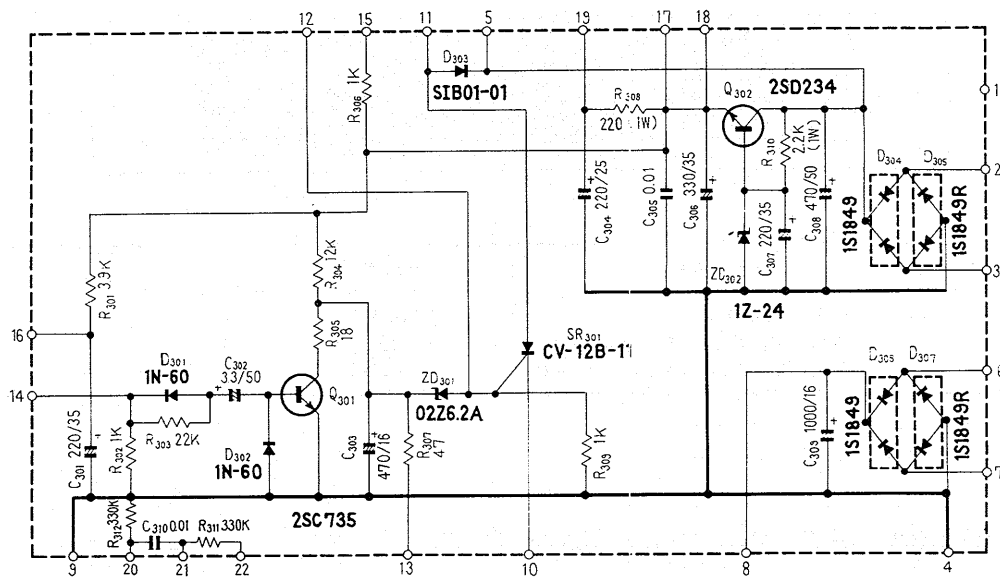
Symbol	Description	Part No.	
D501	Light emitting Diode TLR-103		
D502	Light emitting Diode TLR-103		

9.6 TERMINAL BOARD ASSEMBLY (RWX-054-0)

Foil side



9.7 SENSING CIRCUIT ASSEMBLY (RWR-023-0)



Parts List of Sensing Circuit Assembly

CAPACITORS

Symbol	Description			Part No.	
C301	Electrolytic	220	35V	CEA 221P 35	
C302	Electrolytic	3.3	50V	CEA 3R3P 50	
C303	Electrolytic	470	16V	CEA 471P 16	
C304	Electrolytic	220	25V	CEA 221P 25	
C305	Mylar	0.01	50V	CQMA 103K 50	
C306	Electrolytic	330	35V	CEA 331P 35	
C307	Electrolytic	220	35V	CEA 221P 35	
C308	Electrolytic	470	50V	CEA 471P 50	
C309	Electrolytic	1,000	16V	CEA 102P 16	
C310	Mylar	0.01	50V	CQMA 103K 50	

RESISTORS

Symbol	Description			Part No.	
R301	Carbon film	3.9k		RD%VS 392J	
R302	Carbon film	1k		RD%VS 102J	
R303	Carbon film	22k		RD%VS 223J	
R304	Carbon film	12k		RD%VS 123J	
R305	Carbon film	18		RD%VS 180J	
R306	Carbon film	1k		RD%VS 102J	
R307	Carbon film	47		RD%VS 470J	
R308	Metal oxide	220	1W	RS1PSF 221K	
R309	Carbon film	1k		RD%VS 102J	
R310	Metal oxide	2.2k	1W	RS1PSF 222K	
R311	Carbon film	330k		RD%VS 334J	
R312	Carbon film	330k		RD%VS 334J	

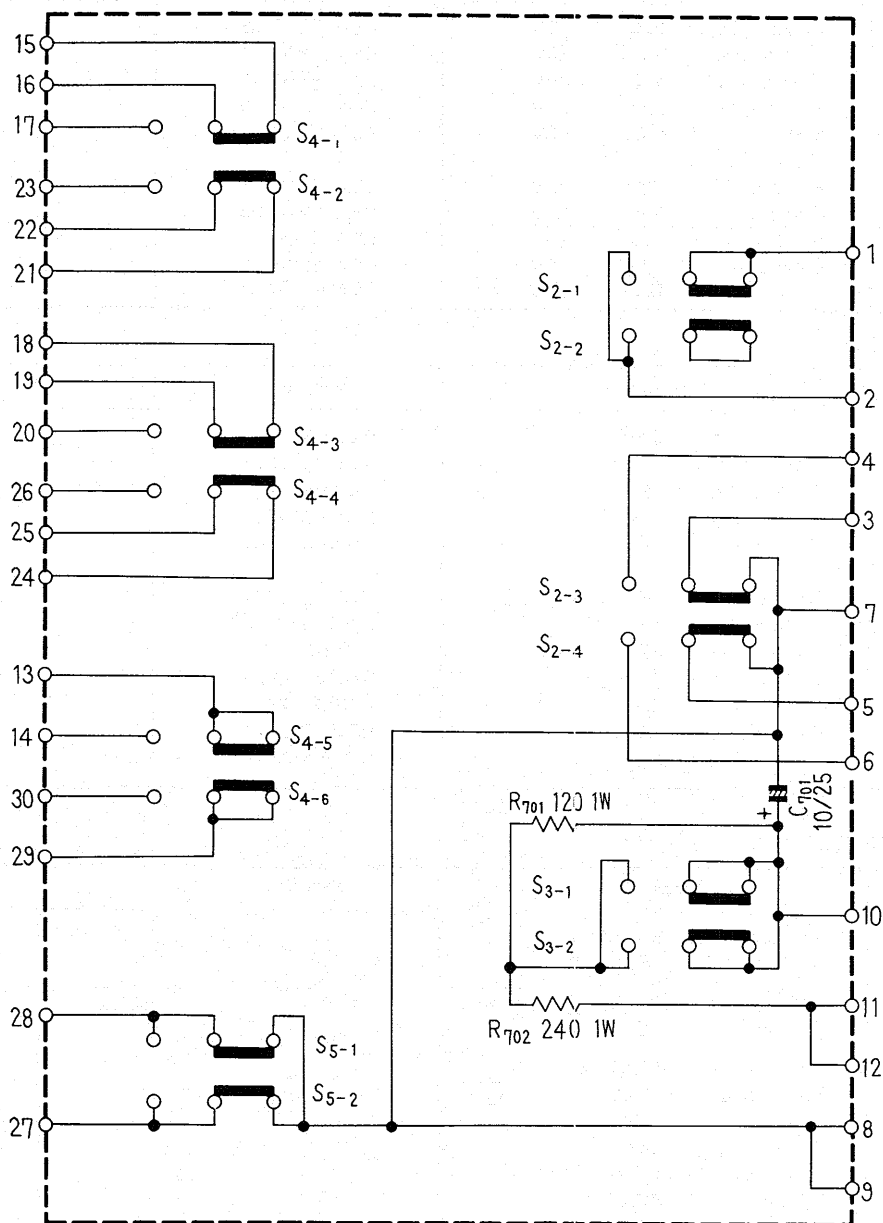
SEMICONDUCTORS

Symbol	Description			Part No.	
Q301	Transistor	2SC735-Y			
Q302	Transistor	2SD234-0			
SR301	Thyristor	CV12B-11			
ZD301	Zener diode	02Z6.2A			
ZD302	Zener diode	1Z24			
D301	Diode	1N60			
D302	Diode	1N60			
D303	Diode	S1B01-01			
D304	Diode	1S1849			
D305	Diode	1S1849R			
D306	Diode	1S1849			
D307	Diode	1S1849R			

OTHERS

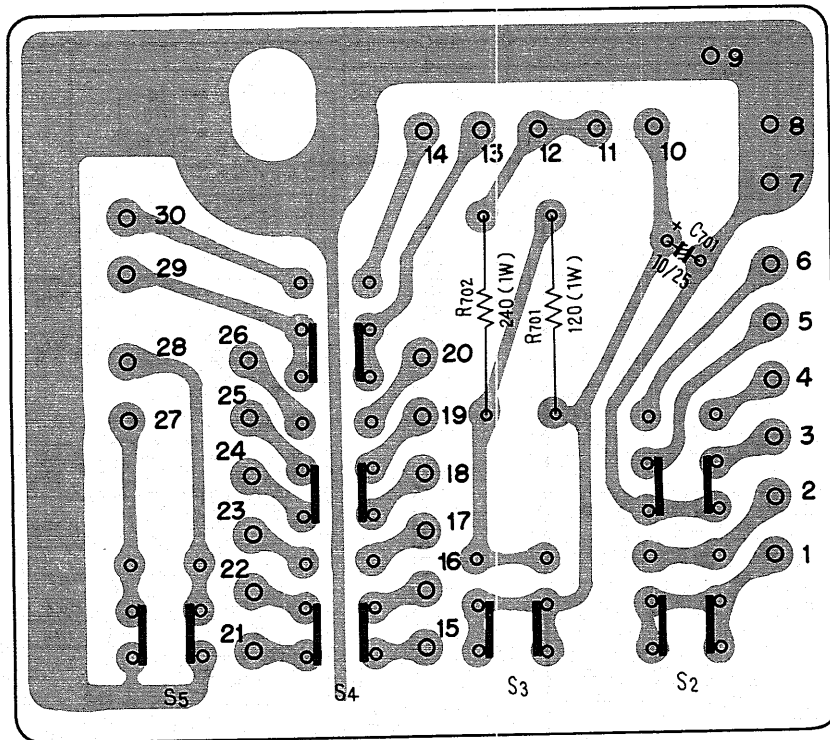
Symbol	Description	Part No.	
	Heat sink	RNE-645-0	

9.8 SWITCH ASSEMBLY (RWS-022-A)



S₂ DOLBY SWITCH (OFF POSITION)
 S₃ BIAS SWITCH (NORMAL POSITION)
 S₄ EQ SWITCH (NORMAL POSITION)
 S₅ LIMITER SWITCH (OFF POSITION)

Foil Side



Parts List of Switch Assembly

CAPACITOR

Symbol	Description			Part No.	
C701	Electrolytic	10	25V	CEA 100P 25	

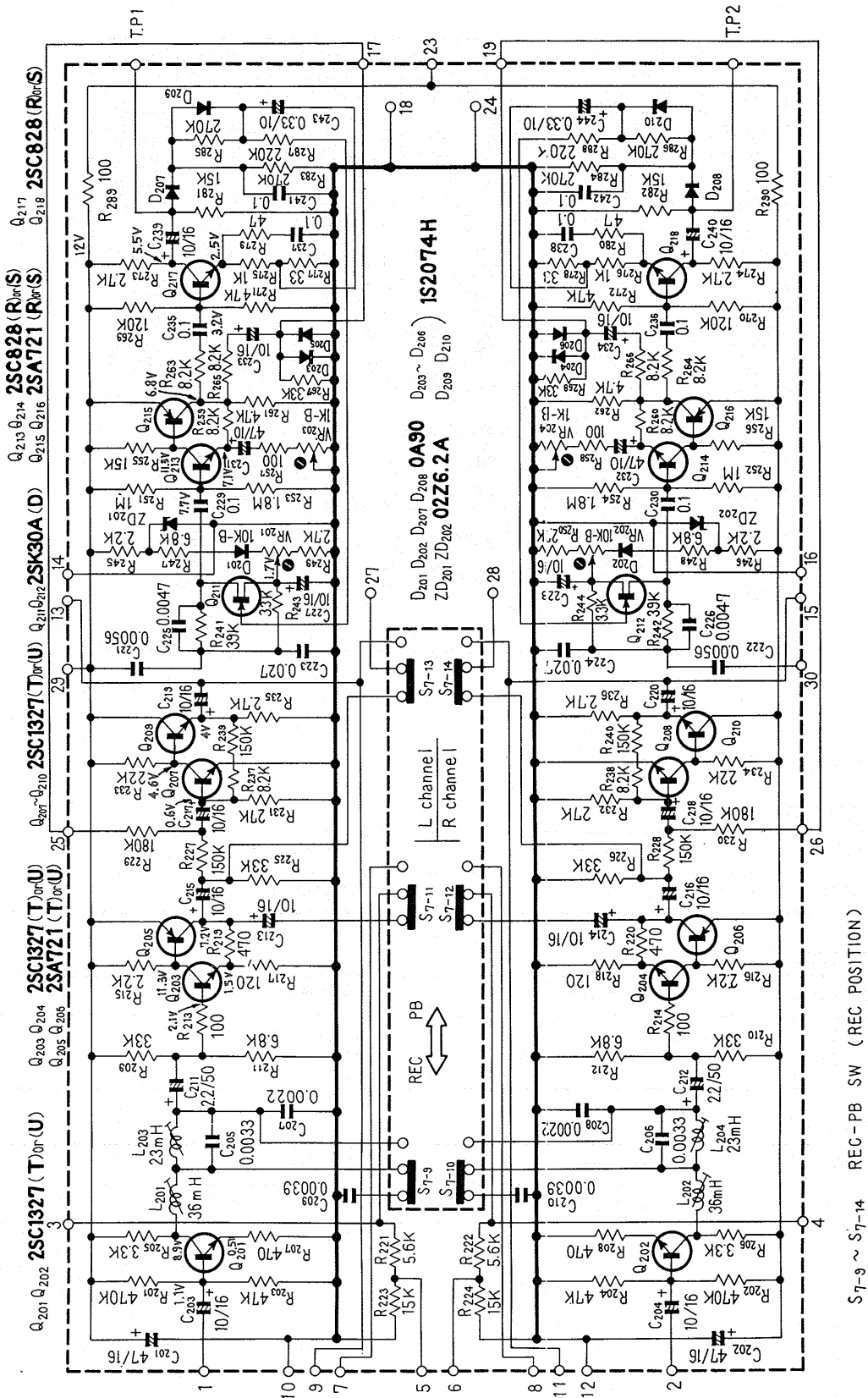
RESISTORS

Symbol	Description			Part No.	
R701	Metal oxide	120	1W	RS1PSF 121K	
R702	Metal oxide	240	1W	RS1PSF 241K	

SWITCHES

Symbol	Description			Part No.	
S2~S5	Push switch (Dolby, Bias, EQ, Limiter)			RSG-023-0	

9.9 DOLBY PROCESSOR ASSEMBLY (RWX-051-B)



Parts List of Dolby Processor Assembly

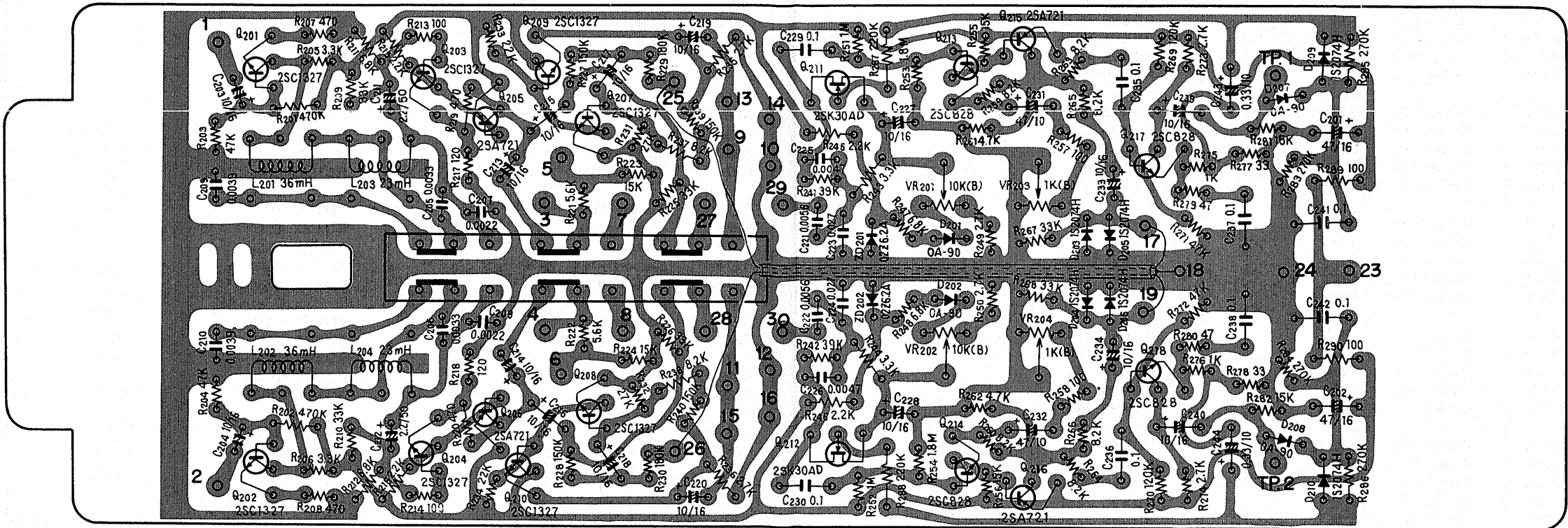
CAPACITORS

Symbol	Description			Part No.
C201	Electrolytic	47	16V	CEA 470P 16
C202	Electrolytic	47	16V	CEA 470P 16
C203	Electrolytic	10	16V	CEA 100P 16
C204	Electrolytic	10	16V	CEA 100P 16
C205	Mylar	0.0033	50V	CQMA 332K 50
C206	Mylar	0.0033	50V	CQMA 332K 50
C207	Mylar	0.0022	50V	CQMA 222K 50
C208	Mylar	0.0022	50V	CQMA 222K 50
C209	Mylar	0.0039	50V	CQMA 392K 50
C210	Mylar	0.0039	50V	CQMA 392K 50
C211	Electrolytic	2.2	50V	CEA 2R2P 50
C212	Electrolytic	2.2	50V	CEA 2R2P 50
C213	Electrolytic	10	16V	CEA 100P 16
C214	Electrolytic	10	16V	CEA 100P 16
C215	Electrolytic	10	16V	CEA 100P 16

Symbol	Description			Part No.
C216	Electrolytic	10	16V	CEA 100P 16
C217	Electrolytic	10	16V	CEA 100P 16
C218	Electrolytic	10	16V	CEA 100P 16
C219	Electrolytic	10	16V	CEA 100P 16
C220	Electrolytic	10	16V	CEA 100P 16
C221	Mylar	0.0056	50V	CQMA 562K 50
C222	Mylar	0.0056	50V	CQMA 562K 50
C223	Mylar	0.027	50V	CQMA 273K 50
C224	Mylar	0.027	50V	CQMA 273K 50
C225	Mylar	0.0047	50V	CQMA 472K 50
C226	Mylar	0.0047	50V	CQMA 472K 50
C227	Electrolytic	10	16V	CEA 100P 16
C228	Electrolytic	10	16V	CEA 100P 16
C229	Mylar	0.1	50V	CQMA 104K 50
C230	Mylar	0.1	50V	CQMA 104K 50
C231	Electrolytic	47	10V	CEA 470P 10
C232	Electrolytic	47	10V	CEA 470P 10
C233	Electrolytic	10	16V	CEA 100P 16
C234	Electrolytic	10	16V	CEA 100P 16
C235	Mylar	0.1	50V	CQMA 104K 50
C236	Mylar	0.1	50V	CQMA 104K 50
C237	Mylar	0.1	50V	CQMA 104K 50
C238	Mylar	0.1	50V	CQMA 104K 50
C239	Electrolytic	10	16V	CEA 100P 16
C240	Electrolytic	10	16V	CEA 100P 16

2SA721
2SC828
2SC1327

2SK30AD



Symbol	Description				Part No.	
C241	Mylar	0.1	50V		CQMA 104K 50	
C242	Mylar	0.1	50V		CQMA 104K 50	
C243	Electrolytic	0.33	10V		CSSA R33M 10	
C244	Electrolytic	0.33	10V		CSSA R33M 10	

POTENTIOMETERS

Symbol	Description				Part No.	
VR201	Semi-fixed	Variable resistor	10k-B		C92-049-0	
VR202	Semi-fixed	Variable resistor	10k-B		C92-049-0	
VR203	Semi-fixed	Variable resistor	1k-B		C92-404-0	
VR204	Semi-fixed	Variable resistor	1k-B		C92-404-0	

RESISTORS

Symbol	Description				Part No.	
R201	Carbon film	470k			RD%VS 474J	
R202	Carbon film	470k			RD%VS 474J	
R203	Carbon film	47k			RD%VS 473J	
R204	Carbon film	47k			RD%VS 473J	
R205	Carbon film	3.3k			RD%VS 332J	
R206	Carbon film	3.3k			RD%VS 332J	
R207	Carbon film	470			RD%VS 471J	
R208	Carbon film	470			RD%VS 471J	
R209	Carbon film	33k			RD%VS 333J	
R210	Carbon film	33k			RD%VS 333J	
R211	Carbon film	6.8k			RD%VS 682J	
R212	Carbon film	6.8k			RD%VS 682J	
R213	Carbon film	100			RD%VS 101J	
R214	Carbon film	100			RD%VS 101J	
R215	Carbon film	2.2k			RD%VS 222J	
R216	Carbon film	2.2k			RD%VS 222J	
R217	Carbon film	120			RD%VS 121J	
R218	Carbon film	120			RD%VS 121J	
R219	Carbon film	470			RD%VS 471J	
R220	Carbon film	470			RD%VS 471J	
R221	Carbon film	5.6k			RD%VS 562J	
R222	Carbon film	5.6k			RD%VS 562J	
R223	Carbon film	15k			RD%VS 153J	
R224	Carbon film	15k			RD%VS 153J	
R225	Carbon film	33k			RD%VS 333J	
R226	Carbon film	33k			RD%VS 333J	
R227	Carbon film	150k			RD%VS 154J	
R228	Carbon film	150k			RD%VS 154J	
R229	Carbon film	180k			RD%VS 184J	
R230	Carbon film	180k			RD%VS 184J	
R231	Carbon film	27k			RD%VS 273J	
R232	Carbon film	27k			RD%VS 273J	
R233	Carbon film	22k			RD%VS 223J	
R234	Carbon film	22k			RD%VS 223J	
R235	Carbon film	2.7k			RD%VS 272J	

Symbol	Description		Part No.	
R236	Carbon film	2.7k	RD%VS 272J	
R237	Carbon film	8.2k	RD%VS 822J	
R238	Carbon film	8.2k	RD%VS 822J	
R239	Carbon film	150K	RD%VS 154J	
R240	Carbon film	150k	RD%VS 154J	
R241	Carbon film	39k	RD%VS 393J	
R242	Carbon film	39k	RD%VS 393J	
R243	Carbon film	3.3k	RD%VS 332J	
R244	Carbon film	3.3k	RD%VS 332J	
R245	Carbon film	2.2k	RD%VS 222J	
R246	Carbon film	2.2k	RD%VS 222J	
R247	Carbon film	6.8k	RD%VS 682J	
R248	Carbon film	6.8k	RD%VS 682J	
R249	Carbon film	2.7k	RD%VS 272J	
R250	Carbon film	2.7k	RD%VS 272J	
R251	Carbon film	1M	RD%VS 105J	
R252	Carbon film	1M	RD%VS 105J	
R253	Carbon film	1.8M	RD%VS 185J	
R254	Carbon film	1.8M	RD%VS 185J	
R255	Carbon film	15k	RD%VS 153J	
R256	Carbon film	15k	RD%VS 153J	
R257	Carbon film	100	RD%VS 101J	
R258	Carbon film	100	RD%VS 101J	
R259	Carbon film	8.2k	RD%VS 822J	
R260	Carbon film	8.2k	RD%VS 822J	
R261	Carbon film	4.7k	RD%VS 472J	
R262	Carbon film	4.7k	RD%VS 472J	
R263	Carbon film	8.2k	RD%VS 822J	
R264	Carbon film	8.2k	RD%VS 822J	
R265	Carbon film	8.2k	RD%VS 822J	
R266	Carbon film	8.2k	RD%VS 822J	
R267	Carbon film	33k	RD%VS 333J	
R268	Carbon film	33k	RD%VS 333J	
R269	Carbon film	120k	RD%VS 124J	
R270	Carbon film	120k	RD%VS 124J	
R271	Carbon film	47k	RD%VS 473J	
R272	Carbon film	47k	RD%VS 473J	
R273	Carbon film	2.7k	RD%VS 272J	
R274	Carbon film	2.7k	RD%VS 272J	
R275	Carbon film	1k	RD%VS 102J	
R276	Carbon film	1k	RD%VS 102J	
R277	Carbon film	33	RD%VS 330J	
R278	Carbon film	33	RD%VS 330J	
R279	Carbon film	47	RD%VS 470J	
R280	Carbon film	47	RD%VS 470J	
R281	Carbon film	15k	RD%VS 153J	
R282	Carbon film	15k	RD%VS 153J	
R283	Carbon film	270k	RD%VS 274J	
R284	Carbon film	270k	RD%VS 274J	
R285	Carbon film	270k	RD%VS 274J	

Symbol	Description	Part No.	
R286	Carbon film 270k	RD%VS 274J	Incombustibility type Incombustibility type
R287	Carbon film 220k	RD%VS 224J	
R288	Carbon film 220k	RD%VS 224J	
R289	Carbon film 100	RD%PSF 101K	
R290	Carbon film 100	RD%PSF 101K	

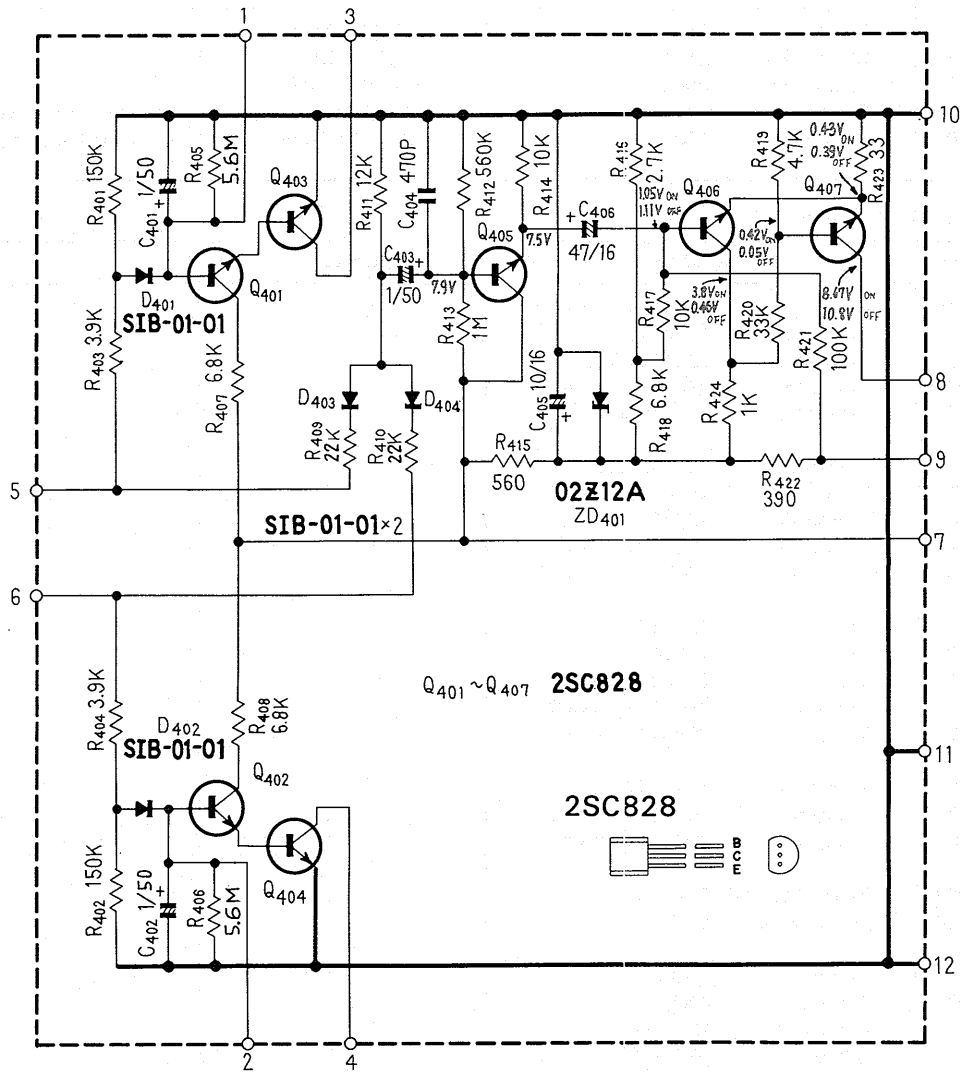
SEMICONDUCTORS

Symbol	Description	Part No.	
Q201	Transistor 2SC1327-T or U		
Q202	Transistor 2SC1327-T or U		
Q203	Transistor 2SC1327-T or U		
Q204	Transistor 2SC1327-T or U		
Q205	Transistor 2SA721-T or U		
Q206	Transistor 2SA721-T or U		
Q207	Transistor 2SC1327-T or U		
Q208	Transistor 2SC1327-T or U		
Q209	Transistor 2SC1327-T or U		
Q210	Transistor 2SC1327-T or U		
Q211	FET 2SK30AD		
Q212	FET 2SK30AD		
Q213	Transistor 2SC828(H)-R or S		
Q214	Transistor 2SC828(H)-R or S		
Q215	Transistor 2SA721-T or U		
Q216	Transistor 2SA721-T or U		
Q217	Transistor 2SC828(H)-R or S		
Q218	Transistor 2SC828(H)-R or S		
ZD201	Zener diode 02Z6.2A		
ZD202	Zener diode 02Z6.2A		
D201	Diode 0A90		
D202	Diode 0A90		
D203	Diode 1S2074H		
D204	Diode 1S2074H		
D205	Diode 1S2074H		
D206	Diode 1S2074H		
D207	Diode 0A90		
D208	Diode 0A90		
D209	Diode 1S2074H		
D210	Diode 1S2074H		

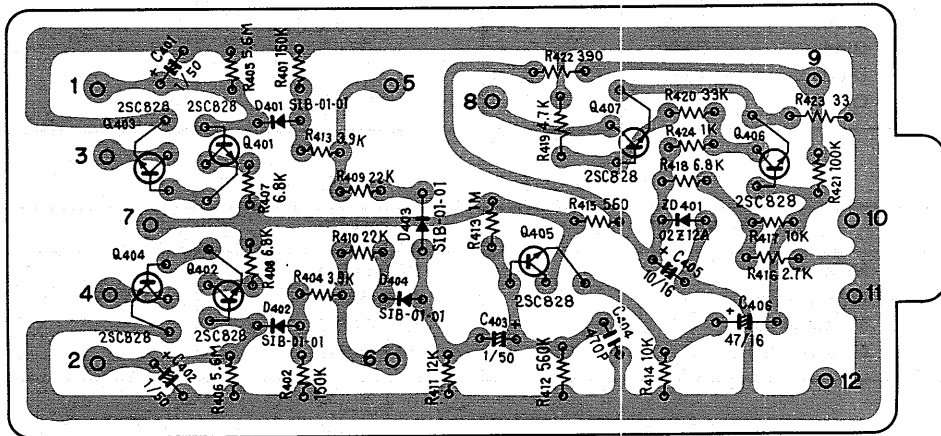
COILS

Symbol	Description	Part No.	
L201	MPX coil (A)	RTF-008-0	
L202	MPX coil (A)	RTF-008-0	
L203	MPX coil (B)	RTF-009-0	
L204	MPX coil (B)	RTF-009-0	

9.10 LIMITER CIRCUIT ASSEMBLY (RWX-050-A)



Foil Side



Parts List of Limiter Circuit Assembly

CAPACITORS

Symbol	Description			Part No.	
C401	Electrolytic	1	50V	CEA 010P 50	
C402	Electrolytic	1	50V	CEA 010P 50	
C403	Electrolytic	1	50V	CEA 010P 50	
C404	Styrol	470p	50V	RCE-014-0	
C405	Electrolytic	10	16V	CEA 100P 16	
C406	Electrolytic	47	16V	CEA 470P 16	

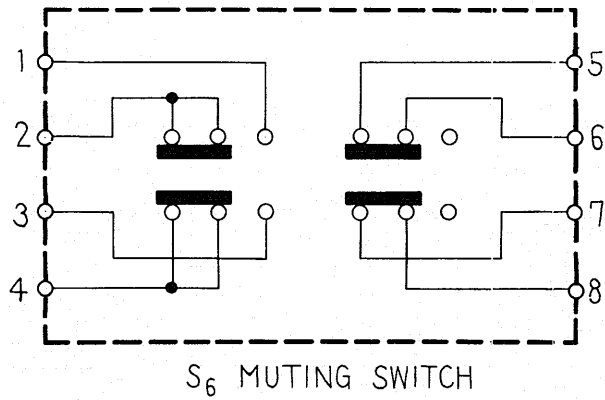
RESISTORS

Symbol	Description			Part No.	
R401	Carbon film	150k		RD%VS 154J	
R402	Carbon film	150k		RD%VS 154J	
R403	Carbon film	3.9k		RD%VS 392J	
R404	Carbon film	3.9k		RD%VS 392J	
R405	Carbon film	5.6M		RD%VS 565J	
R406	Carbon film	5.6M		RD%VS 565J	
R407	Carbon film	6.8k		RD%VS 682J	
R408	Carbon film	6.8k		RD%VS 682J	
R409	Carbon film	22k		RD%VS 223J	
R410	Carbon film	22k		RD%VS 223J	
R411	Carbon film	12k		RD%VS 123J	
R412	Carbon film	560k		RD%VS 564J	
R413	Carbon film	1M		RD%VS 105J	
R414	Carbon film	10k		RD%VS 103J	
R415	Carbon film	560		RD%VS 561J	
R416	Carbon film	2.7k		RD%VS 272J	
R417	Carbon film	10k		RD%VS 103J	
R418	Carbon film	6.8k		RD%VS 682J	
R419	Carbon film	4.7k		RD%VS 472J	
R420	Carbon film	33k		RD%VS 333J	
R421	Carbon film	100k		RD%VS 104J	
R422	Carbon film	390		RD%VS 391J	
R423	Carbon film	33		RD%VS 330J	
R424	Carbon film	1k		RD%VS 102J	

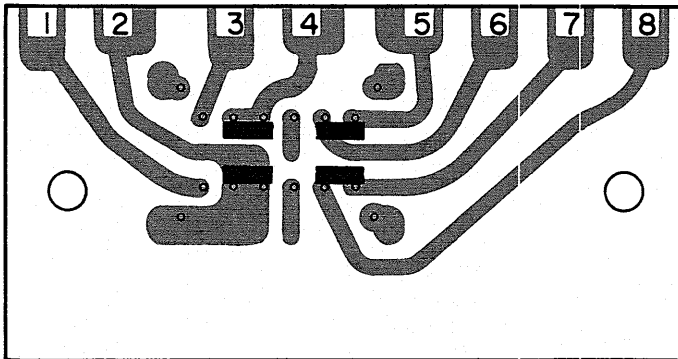
SEMICONDUCTORS

Symbol	Description			Part No.	
Q401	Transistor	2SC828 (H)-R or S			
Q402	Transistor	2SC828 (H)-R or S			
Q403	Transistor	2SC828 (H)-R or S			
Q404	Transistor	2SC828 (H)-R or S			
Q405	Transistor	2SC828 (H)-R or S			
Q406	Transistor	2SC828 (H)-R or S			
Q407	Transistor	2SC828 (H)-R or S			
D401	Diode	SIB01-01			
D402	Diode	SIB01-01			
D403	Diode	SIB01-01			
D404	Diode	SIB01-01			
ZD401	Zener diode	02Z12A			

9.11 SWITCH C ASSEMBLY (RWS-010-A)



Foil side



Part List of Switch C Assembly

Symbol	Description	Part No.	
S6	Slide Switch (Muting)	RSH-009-A	

9.12 REC/P-B AMPLIFIER ASSEMBLY (RWF-025-A)

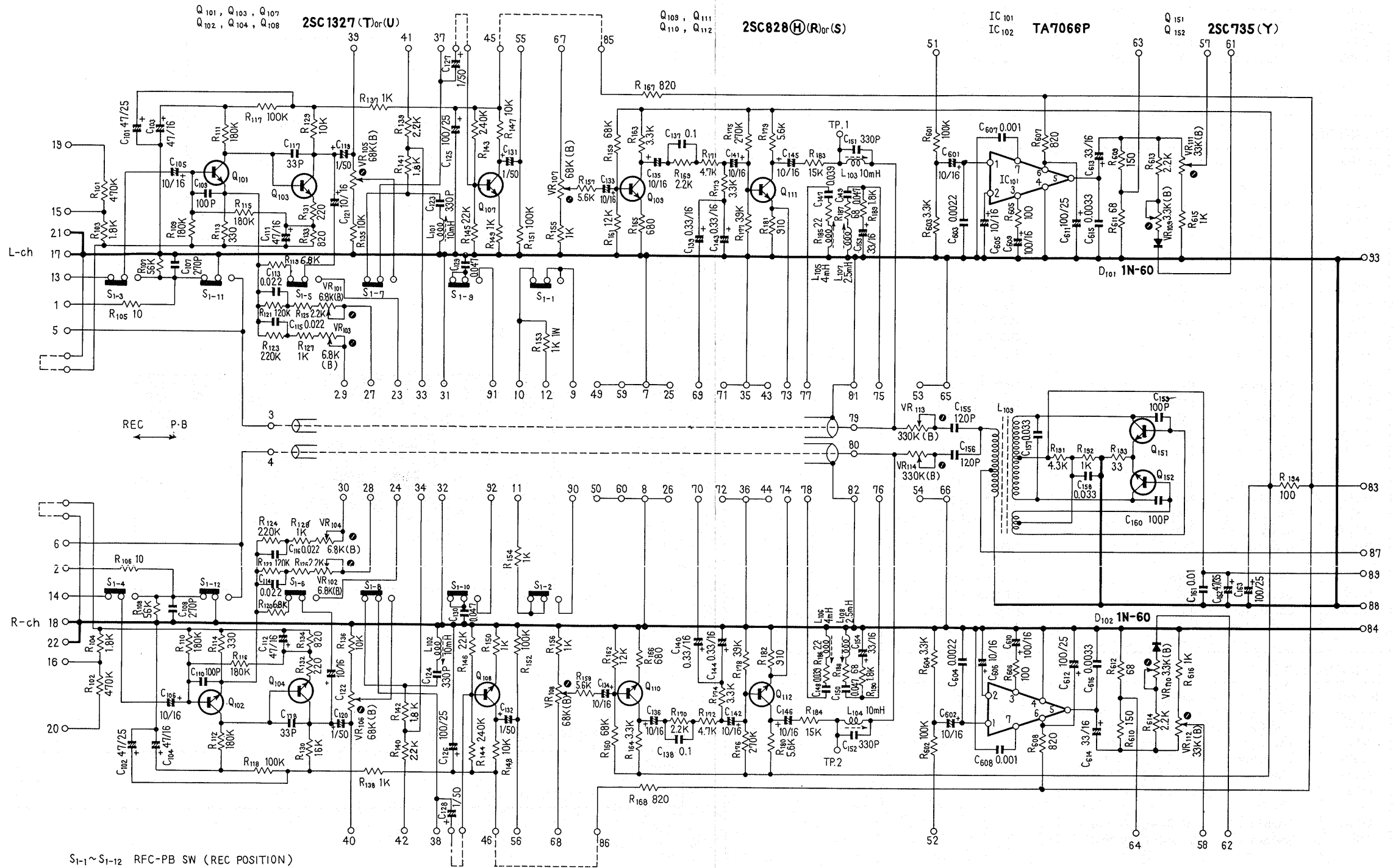
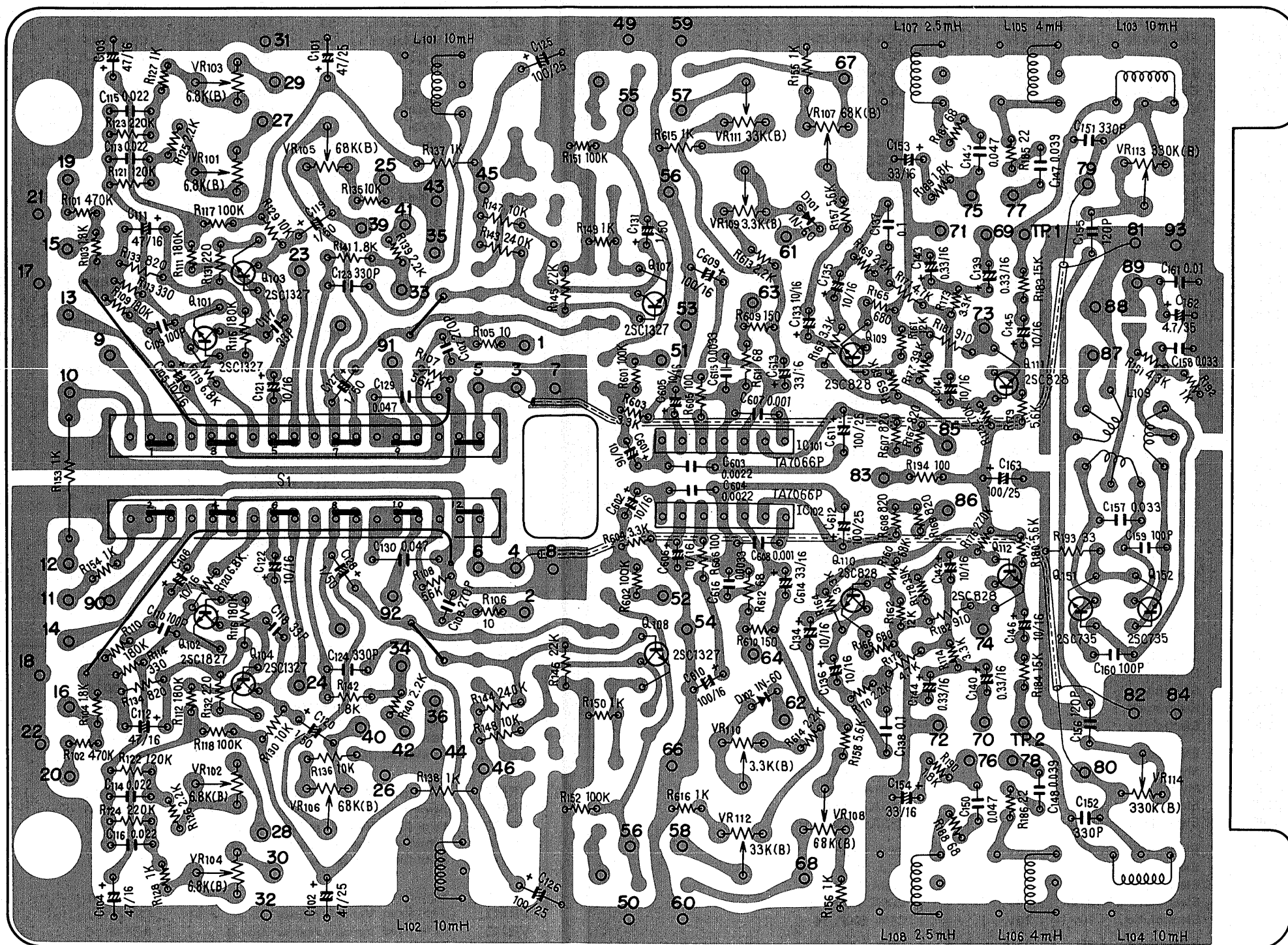


Diagram of a 7-pin connector with pins numbered 1 to 7.



Parts List of REC/P·B Amplifier Assembly

CAPACITORS

Symbol	Description			Part No.
C101	Electrolytic	47	25V	CEA 470P 25
C102	Electrolytic	47	25V	CEA 470P 25
C103	Electrolytic	47	16V	CEA 470P 16
C104	Electrolytic	47	16V	CEA 470P 16
C105	Electrolytic	10	16V	RCH-015-0
C106	Electrolytic	10	16V	RCH-015-0
C107	Styrol	270p	50V	RCE-002-0
C108	Styrol	270p	50V	RCE-002-0
C109	Styrol	100p	50V	RCE-003-0
C110	Styrol	100p	50V	RCE-003-0
C111	Electrolytic	47	16V	CEA 470P 16
C112	Electrolytic	47	16V	CEA 470P 16
C113	Mylar	0.022	50V	CQMA 223K 50
C114	Mylar	0.022	50V	CQMA 223K 50
C115	Mylar	0.022	50V	CQMA 223K 50
C116	Mylar	0.022	50V	CQMA 223K 50
C117	Styrol	33p	50V	RCE-016-0
C118	Styrol	33p	50V	RCE-016-0
C119	Electrolytic	1	50V	CEA 010P 50
C120	Electrolytic	1	50V	CEA 010P 50
C121	Electrolytic	10	16V	CEA 100P 16
C122	Electrolytic	10	16V	CEA 100P 16
C123	Styrol	330p	50V	RCE-008-0
C124	Styrol	330p	50V	RCE-008-0
C125	Electrolytic	100	25V	CEA 101P 25
C126	Electrolytic	100	25V	CEA 101P 25
C127	Electrolytic	1	50V	CEA 010P 50
C128	Electrolytic	1	50V	CEA 010P 50
C129	Mylar	0.047	50V	CQMA 473K 50
C130	Mylar	0.047	50V	CQMA 473K 50
C131	Electrolytic	1	50V	CEA 010P 50
C132	Electrolytic	1	50V	CEA 010P 50
C133	Electrolytic	10	16V	CEA 100P 16
C134	Electrolytic	10	16V	CEA 100P 16
C135	Electrolytic	10	16V	CEA 100P 16
C136	Electrolytic	10	16V	CEA 100P 16
C137	Mylar	0.1	50V	CQMA 104K 50
C138	Mylar	0.1	50V	CQMA 104K 50
C139	Electrolytic	0.33	16V	CSSA R33M 16
C140	Electrolytic	0.33	16V	CSSA R33M 16
C141	Electrolytic	10	16V	CEA 100P 16
C142	Electrolytic	10	16V	CEA 100P 16
C143	Electrolytic	0.33	16V	CSSA R33M 16
C144	Electrolytic	0.33	16V	CSSA R33M 16
C145	Electrolytic	10	16V	CEA 100P 16
C146	Electrolytic	10	16V	CEA 100P 16
C147	Mylar	0.039	50V	CQMA 393K 50
C148	Mylar	0.039	50V	CQMA 393K 50
C149	Mylar	0.047	50V	CQMA 473K 50
C150	Mylar	0.047	50V	CQMA 473K 50

Symbol	Description			Part No.	
C151	Styrol	330p	50V	RCE-008-0	
C152	Styrol	330p	50V	RCE-008-0	
C153	Electrolytic	33	16V	CEA 330P 16	
C154	Electrolytic	33	16V	CEA 330P 16	
C155	Styrol	120p	50V	RCE-009-0	
C156	Styrol	120p	50V	RCE-009-0	
C157	Mylar	0.033	50V	CQMA 333K 50	
C158	Mylar	0.033	50V	CQMA 333K 50	
C159	Ceramic	100p	50V	CCDSL 101K 50	
C160	Ceramic	100p	50V	CCDSL 101K 50	
C161	Mylar	0.01	50V	CQMA 103K 50	
C162	Electrolytic	4.7	35V	CEA 4R7P 35	
C163	Electrolytic	100	25V	CEA 101P 25	
C601	Electrolytic	10	16V	CEA 100P 16	
C602	Electrolytic	10	16V	CEA 100P 16	
C603	Mylar	0.0022	50V	CQMA 222K 50	
C604	Mylar	0.0022	50V	CQMA 222K 50	
C605	Electrolytic	10	16V	CEA 100P 16	
C606	Electrolytic	10	16V	CEA 100P 16	
C607	Mylar	0.001	50V	CQMA 102K 50	
C608	Mylar	0.001	50V	CQMA 102K 50	
C609	Electrolytic	100	16V	CEA 101P 16	
C610	Electrolytic	100	16V	CEA 101P 16	
C611	Electrolytic	100	25V	CEA 101P 25	
C612	Electrolytic	100	25V	CEA 101P 25	
C613	Electrolytic	33	16V	CEA 330P 16	
C614	Electrolytic	33	16V	CEA 330P 16	
C615	Mylar	0.0033	50V	CQMA 332K 50	
C616	Mylar	0.0033	50V	CQMA 332K 50	

POTENTIOMETERS

Symbol	Description			Part No.	
VR101	Semi-fixed	Variable resistor	6.8k-B	RCP-001-0	
VR102	Semi-fixed	Variable resistor	6.8k-B	RCP-001-0	
VR103	Semi-fixed	Variable resistor	6.8k-B	RCP-001-0	
VR104	Semi-fixed	Variable resistor	6.8k-B	RCP-001-0	
VR105	Semi-fixed	Variable resistor	68k-B	RCP-013-0	
VR106	Semi-fixed	Variable resistor	68k-B	RCP-013-0	
VR107	Semi-fixed	Variable resistor	68k-B	RCP-013-0	
VR108	Semi-fixed	Variable resistor	68k-B	RCP-013-0	
VR109	Semi-fixed	Variable resistor	3.3k-B	C92-402-0	
VR110	Semi-fixed	Variable resistor	3.3k-B	C92-402-0	
VR111	Semi-fixed	Variable resistor	33k-B	C81-426-0	
VR112	Semi-fixed	Variable resistor	33k-B	C81-426-0	
VR113	Semi-fixed	Variable resistor	330k-B	RCP-021-0	
VR114	Semi-fixed	Variable resistor	330k-B	RCP-021-0	

RESISTORS

Symbol	Description	Part No.
R101	Carbon film 470k	RD%VS 474J
R102	Carbon film 470k	RD%VS 474J
R103	Carbon film 1.8k	RD%VS 182J
R104	Carbon film 1.8k	RD%VS 182J
R105	Carbon film 10	RD%VS 100J
R106	Carbon film 10	RD%VS 100J
R107	Carbon film 56k	RD%VS 563J
R108	Carbon film 56k	RD%VS 563J
R109	Carbon film 180k	RD%VS 184J
R110	Carbon film 180k	RD%VS 184J
R111	Carbon film 180k	RD%VS 184J
R112	Carbon film 180k	RD%VS 184J
R113	Carbon film 680	RD%VS 681J
R114	Carbon film 680	RD%VS 681J
R115	Carbon film 180k	RD%VS 184J
R116	Carbon film 180k	RD%VS 184J
R117	Carbon film 100k	RD%VS 104J
R118	Carbon film 100k	RD%VS 104J
R119	Carbon film 6.8k	RD%VS 682J
R120	Carbon film 6.8k	RD%VS 682J
R121	Carbon film 120k	RD%VS 124J
R122	Carbon film 120k	RD%VS 124J
R123	Carbon film 220k	RD%VS 224J
R124	Carbon film 220k	RD%VS 224J
R125	Carbon film 2.2k	RD%VS 222J
R126	Carbon film 2.2k	RD%VS 222J
R127	Carbon film 1k	RD%VS 102J
R128	Carbon film 1k	RD%VS 102J
R129	Carbon film 10k	RD%VS 103J
R130	Carbon film 10k	RD%VS 103J
R131	Carbon film 220	RD%VS 221J
R132	Carbon film 220	RD%VS 221J
R133	Carbon film 820	RD%VS 821J
R134	Carbon film 820	RD%VS 821J
R135	Carbon film 10k	RD%VS 103J
R136	Carbon film 10k	RD%VS 103J
R137	Carbon film 1k	RD%VS 102J
R138	Carbon film 1k	RD%VS 102J
R139	Carbon film 2.2k	RD%VS 222J
R140	Carbon film 2.2k	RD%VS 222J
R141	Carbon film 1.8k	RD%VS 182J
R142	Carbon film 1.8k	RD%VS 182J
R143	Carbon film 240k	RD%VS 244J
R144	Carbon film 240k	RD%VS 244J
R145	Carbon film 22k	RD%VS 223J
R146	Carbon film 22k	RD%VS 223J
R147	Carbon film 10k	RD%VS 103J
R148	Carbon film 10k	RD%VS 103J
R149	Carbon film 1k	RD%VS 102J
R150	Carbon film 1k	RD%VS 102J

Symbol	Description		Part No.
R151	Carbon film	100k	RD½VS 104J
R152	Carbon film	100k	RD½VS 104J
R153	Metal oxide	1k 1W	RS1PSF 102K
R154	Carbon film	1k	RD½VS 102J
R155	Carbon film	1k	RD½VS 102J
R156	Carbon film	1k	RD½VS 102J
R157	Carbon film	5.6k	RD½VS 562J
R158	Carbon film	5.6k	RD½VS 562J
R159	Carbon film	6.8k	RD½VS 683J
R160	Carbon film	6.8k	RD½VS 683J
R161	Carbon film	12k	RD½VS 123J
R162	Carbon film	12k	RD½VS 123J
R163	Carbon film	3.3k	RD½VS 332J
R164	Carbon film	3.3k	RD½VS 332J
R165	Carbon film	680	RD½VS 681J
R166	Carbon film	680	RD½VS 681J
R167	Carbon film	820	RD½VS 821J
R168	Carbon film	820	RD½VS 821J
R169	Carbon film	2.2k	RD½VS 222J
R170	Carbon film	2.2k	RD½VS 222J
R171	Carbon film	4.7k	RD½VS 472J
R172	Carbon film	4.7k	RD½VS 472J
R173	Carbon film	3.3k	RD½VS 332J
R174	Carbon film	3.3k	RD½VS 332J
R175	Carbon film	270k	RD½VS 274J
R176	Carbon film	270k	RD½VS 274J
R177	Carbon film	39k	RD½VS 393J
R178	Carbon film	39k	RD½VS 393J
R179	Carbon film	5.6k	RD½VS 562J
R180	Carbon film	5.6k	RD½VS 562J
R181	Carbon film	910	RD½VS 911J
R182	Carbon film	910	RD½VS 911J
R183	Carbon film	15k	RD½VS 153J
R184	Carbon film	15k	RD½VS 153J
R185	Carbon film	22	RD½VS 220J
R186	Carbon film	22	RD½VS 220J
R187	Carbon film	68	RD½VS 680J
R188	Carbon film	68	RD½VS 680J
R189	Carbon film	1.8k	RD½VS 182J
R190	Carbon film	1.8k	RD½VS 182J
R191	Carbon film	4.3k	RD½VS 432J
R192	Carbon film	1k	RD½VS 102J
R193	Carbon film	33	RD½VS 330J
R194	Metal oxide	100 ½W	RS½PSF 101K
R601	Carbon film	100k	RD½VS 104J
R602	Carbon film	100k	RD½VS 104J
R603	Carbon film	3.3k	RD½VS 332J
R604	Carbon film	3.3k	RD½VS 332J
R605	Carbon film	100	RD½VS 101J

Symbol	Description	Part No.
R606	Carbon film 100	RD%VS 101J
R607	Carbon film 820	RD%VS 821J
R608	Carbon film 820	RD%VS 821J
R609	Carbon film 150	RD%VS 151J
R610	Carbon film 150	RD%VS 151J
R611	Carbon film 68	RD%VS 680J
R612	Carbon film 68	RD%VS 680J
R613	Carbon film 2.2k	RD%VS 222J
R614	Carbon film 2.2k	RD%VS 222J
R615	Carbon film 1k	RD%VS 102J
R616	Carbon film 1k	RD%VS 102J

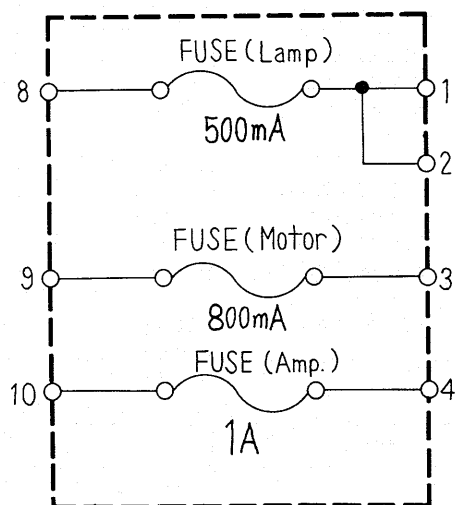
SEMICONDUCTORS

Symbol	Description	Part No.
Q101	Transistor 2SC1327-T	
Q102	Transistor 2SC1327-T	
Q103	Transistor 2SC1327-T	
Q104	Transistor 2SC1327-T	
Q107	Transistor 2SC1327-T	
Q108	Transistor 2SC1327-T	
Q109	Transistor 2SC828(H)R or S	
Q110	Transistor 2SC828(H)R or S	
Q111	Transistor 2SC828(H)R or S	
Q112	Transistor 2SC828(H)R or S	
Q151	Transistor 2SC735-Y	
Q152	Transistor 2SC735-Y	
IC101	IC TA7066P-A (or B)	
IC102	IC TA7066P-A (or B)	
D101	Diode 1N60	
D102	Diode 1N60	

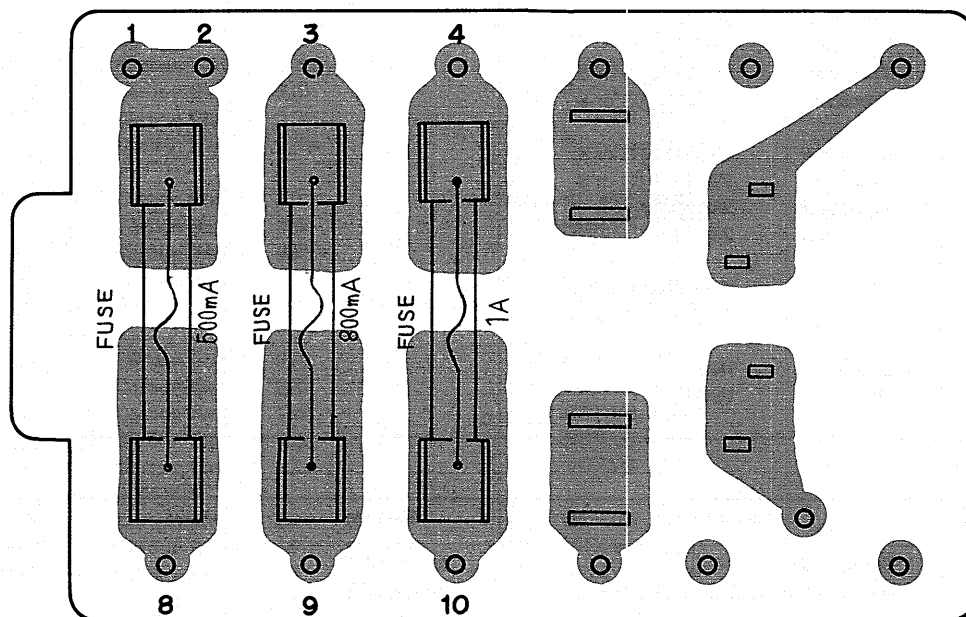
OTHERS

Symbol	Description	Part No.
	Shield case	M15-414-A
	Slide switch (REC/P.B Selector)	RSH-008-B
L101	Trap coil	T84-401-A
L102	Trap coil	T84-401-A
L103	Trap coil	T84-401-A
L104	Trap coil	T84-401-A
L105	Peaking coil	RTF-001-A
L106	Peaking coil	RTF-001-A
L107	Peaking coil	RTF-011-0
L108	Peaking coil	RTF-011-0
L109	OSC coil	T64-001-A

9.13 FUSE BOARD ASSEMBLY (RWX-066-C)



Foil side



Parts List of Fuse Board Assembly

Symbol	Description	Part No.	
	Clip-in type fuse holder	K91-006-0	
	Fuse 800mA	REK-032-0	
	Fuse 500mA	REK-031-0	
	Fuse 1A	REK-033-0	

10. EXPLODED VIEWS AND MECHANICAL PARTS LIST

NOTE: Parts number is subject to change for the purpose of improvement with notice of a service bulletin. Service bulletin will be furnished whenever necessary and are requested to amend parts number in this manual according to the instructions.

10.1 EXTERIOR

NOTICE: Any parts asterisked (*) are subject to being not supplied.

Key No.	Description	Part No.	
1	Wooden case	RMM-029-0	
2	Screw M4x15	ABA-010-0	
3 *	Rear panel	RNA-155-B	
4	AC power cord	D11-003-E	KCU model
	AC power cord	ADG-004-0	FV model
5	AC cord grommet	REC-164-0	
6 *	Name plate	RAL-127-0	KCU model
	Name plate	RAL-129-0	FV model
7	DIN type socket	K93-003-B	
8	Binding post (for ground)	B11-012-A	
9	Fuse (1A)	REK-033-0	KCU model
	Fuse (500 mA)	REK-031-0	FV model
10	Fuse holder	AKR-005-0	KCU model
	Fuse holder	AKR-001-0	FV model
11	AC outlet	AKP-002-0	
12 *	Angle	M49-127-A	
13	Phono jack (4 jack)	AKB-014-0	
14 *	Bottom cover	RNC-086-E	
15 *	Shield plate	RNE-715-0	
16	Foot assembly	RXA-477-0	
17 *	Actuating lever B	RNE-731-0	
18	Spring	RBH-208-0	
19	Nylon washer 5.2φx10φx0.5t mm		
20 *	Shaft B	RLA-367-0	
21 *	Chassis	RNB-052-0	
22	Terminal strip (2P)	RKC-015-0	
23	Terminal strip (4P)	K13-047-0	
24 *	Spacer	RNE-690-0	
25	Nylon washer 8.2φx12φx0.3t mm		
26 *	Actuating lever A	RNC-089-0	
27 *	Shaft A	RLA-366-0	
28	Spring	RBH-227-0	
29	Spring for REC lever	RBH-226-0	
30 *	Cord clamper B	RNE-513-0	
31 *	Cord clamper D	RNE-605-0	
32	Lever switch (MEMOLY and LIGHT)	RSK-024-0	S10, S14
33	Mask	RED-074-0	
34	Knob (MEMORY, LIGHT)	RAA-091-0	
35	Push switch (S11, POWER)	RSA-010-A	KCU model
	Push switch (S11, POWER)	RSA-011-0	FV model
36	Knob (POWER)	RAA-092-0	
37	Push switch (S8, SKIP)	RSG-022-0	
38	Knob (SKIP)	RAA-094-0	
39 *	Sub panel	RNE-659-B	
40 *	Protection bar	RNE-792-A	

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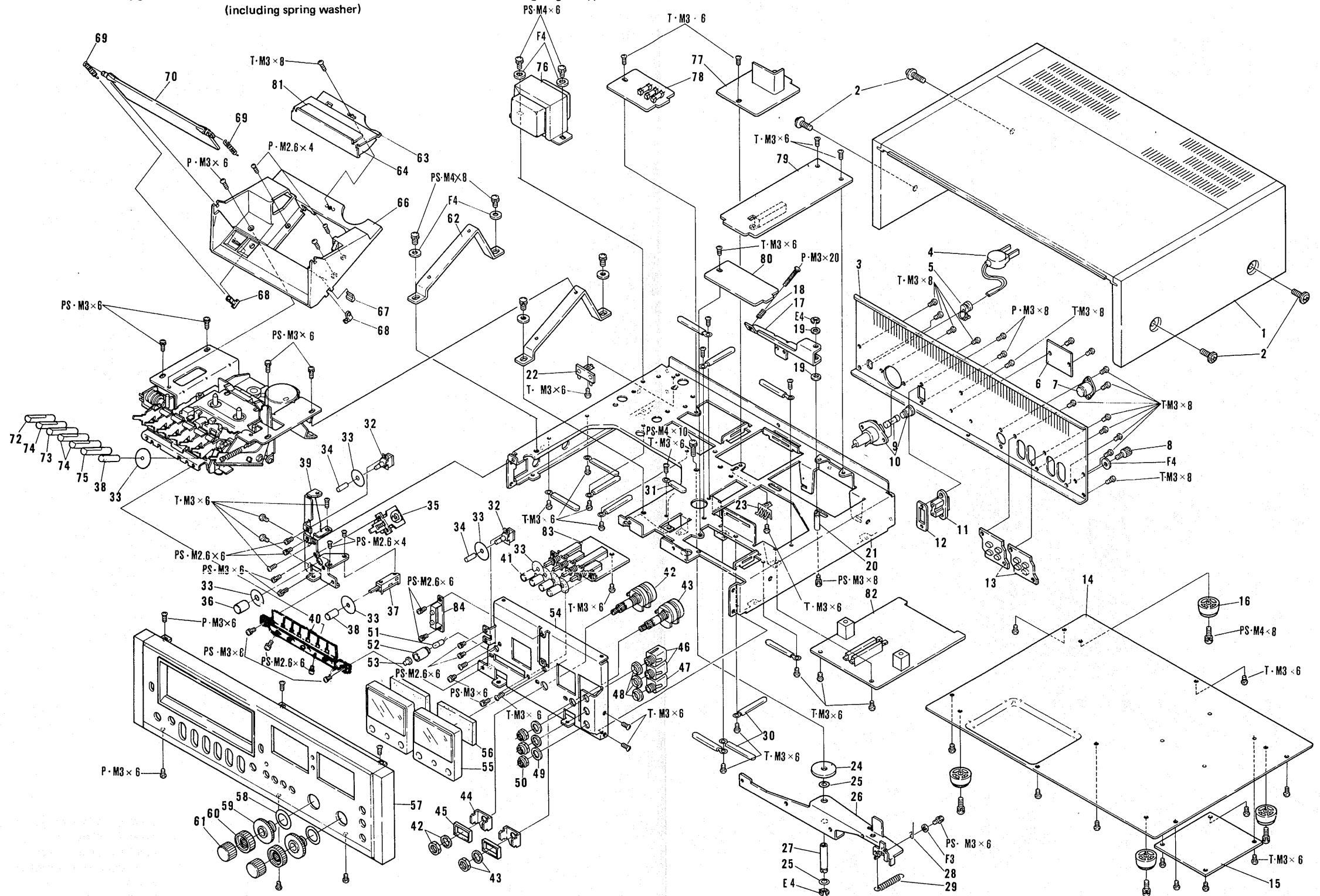
Key No.	Description	Part No.	
41	Knob (DOLBY, NR, BIAS, EQ, LIMITER)	RAA-093-0	
42	Variable resistor 20k Ω -A (INPUT)	RCV-017-0	
43	Variable resistor 50k Ω -A (OUTPUT)	RCV-018-0	
44 *	Bracket	RNE-686-A	
45	Rubber ring	REB-132-0	
46	Phone jack (MIC)	K72-024-0	
47	Phone jack (HEAD)	RKN-002-A	
48	Plastic spacer	E32-045-0	
49	Plastic washer	E32-004-0	
50	Plastic nut	RBN-004-A	
51	Pilot lamp (DOLBY, PL5)		
52	Lamp holder	REB-131-0	
53	Lamp lens	RNK-173-	
54 *	Sub panel	RNE-659-	
55	Level meter	RAW-022-0	
56 *	Meter cushion	REC-160-0	
57	Front panel assembly	RXA-513-A	
58	Spacer	RBF-020-0	
59	Marker ring	RAC-023-0	
60	Knob outer	RAA-089-0	
61	Knob inner	RAA-090-0	
62 *	Angle	RNE-660-A	
63	Lamp box	RNE-676-0	
64	Lamp lens	RNK-179-0	
65			
66	Compartment	RNK-181-0	
67	Cushion	REB-130-0	
68	Angle (door spring)	RNE-675-0	
69	Door spring	RBH-210-0	
70	Door	RNK-171-C	
71			
72	Knob A assembly	RXA-455-A	REC (red)
73	Knob C assembly	RXA-457-A	PLAY (white)
74	Knob D assembly	RXA-458-A	FF, REW, PAUSE
75	Knob B assembly	RXA-456-A	STOP (blue)
76	Power transformer	RTT-055-B	KCU model
	Power transformer	RTT-056-A	FV model
77	Sensing circuit assembly	RWR-023-A	with in power supply
78	Fuse board assembly	RWX-066-C	
79	Dolby processor assembly	RWX-051-B	
80	Limiter circuit assembly	RWX-050-A	
81	Lamp board assembly	RWX-052-0	
82	REC/P.B. amplifier assembly	RWF-025-A	
83	Switch assembly	RWS-022-A	
84	Indicator board assembly	RWX-053-0	

Exterior

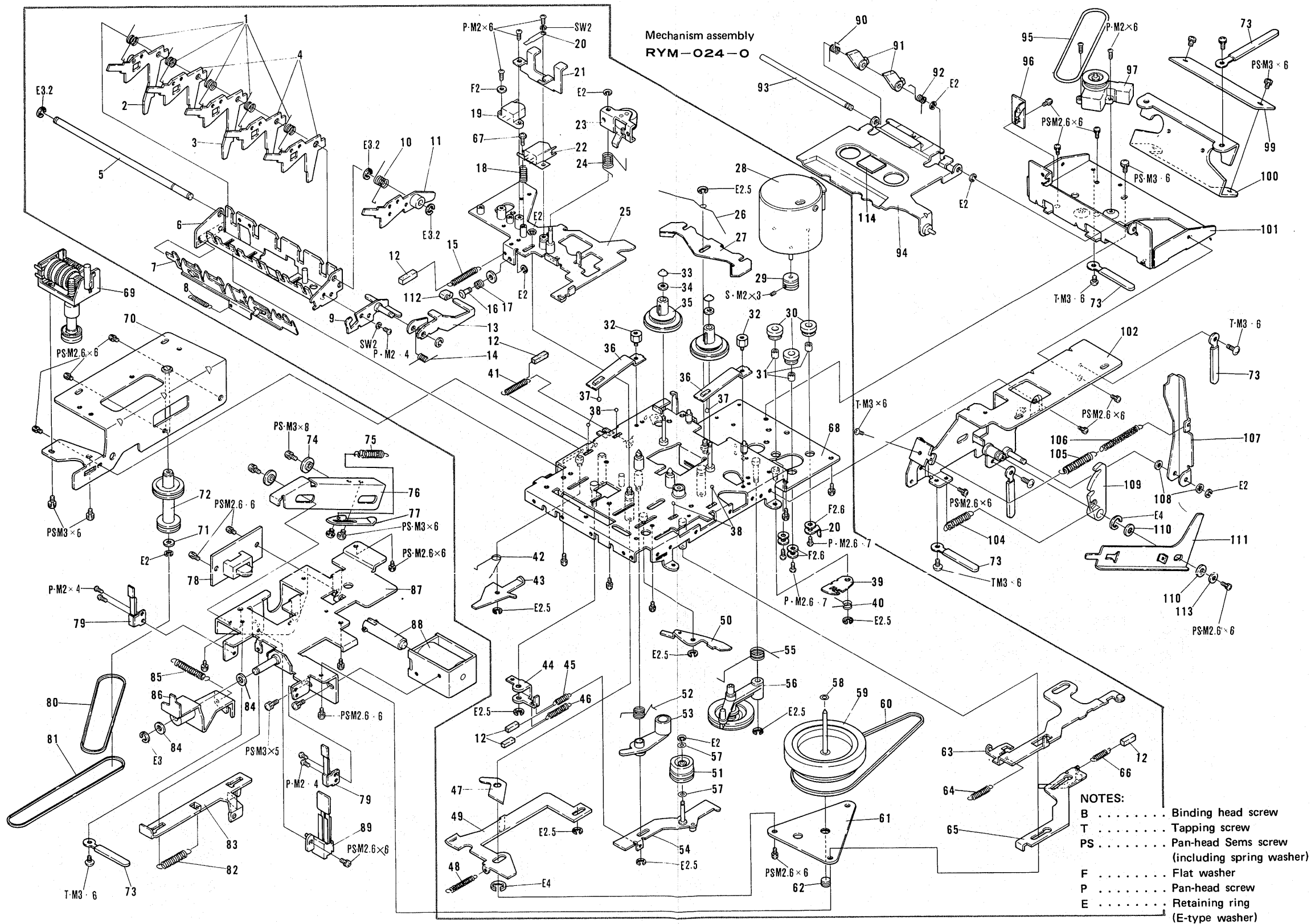
NOTES:

B Binding head screw
 T Tapping screw
 PS Pan-head Sems screw
 (including spring washer)

F Flat washer
 P Pan-head screw
 E Retaining ring (E-type washer)



10.2 MECHANISM



Mechanism

NOTICE: Any parts asterisked (*) are subject to being not supplied.

Key No.	Description	Part No.	
1 *	Spring (operating button)	RBH-176-0	
2 *	Button lever P assembly	RXA-492-0	
3 *	Button lever P	RNE-685-0	
4 *	Button lever A	RNE-684-0	
5 *	Button shaft	RLA-342-0	
6 *	Button chassis assembly	RXA-499-0	
7 *	Sliding cam assembly	RXA-501-0	
8 *	Spring (button lock)	RBH-215-0	
9 *	Bracket	RXA-502-0	
10 *	Spring (STOP EJECT button)	RBH-214-0	
11 *	Button lever assembly	RXA-500-0	
12 *	Cushion	RDM-010-0	
13 *	Lever (EJECT)	RNE-712-0	
14 *	Spring (EJECT)	RBH-216-0	
15	Spring (head base)	RBH-181-0	
16 *	Shaft (head base)	RLA-389-0	
17	Spring (head base)	RBH-211-0	
18	Adjusting spring (head)	RBH-183-0	
19	Erasing head	RPB-014-0	
20 *	Cord clasper	RNE-741-0	
21 *	Cassette protector	RNE-327-0	
22	REC/P.B. head	RPB-027-A	
23	Pinch roller arm assembly	RXA-486-0	
24	Spring (pinch roller)	RBH-219-0	
25	Head base assembly	RXA-485-0	
26	Spring (brake)	RBH-182-0	
27 *	Brake lever	REB-140-0	
28	Motor	RXM-006-0	
29	Motor pulley	RLA-344-0	
30	Motor cushion	REB-117-0	
31	Collar	RLA-343-0	
32	Stud screw	RBA-004-0	
33	Shaft cap	RNK-153-0	
34	Polyethylene washer 1.8φx0.1 t mm		
35	Reel base B assembly	RXA-433-0	
36	Spring for base head	RBK-072-0	
37	Steel ball 2.5φ	REF-010-0	
38	Steel ball 2φ	REF-009-0	
39	Pause lock plate	RNE-713-0	
40	Spring (pause lock)	RBH-217-0	
41	Prevention plate spring	RBH-218-0	
42	Spring for REC lever	RBH-222-0	
43 *	REC lever B	RNE-691-0	
44 *	REW lever B	RNE-714-0	
45	Spring for REW lever	RBH-189-0	
46	FR lever D	RBH-188-0	
47	Syl-lock prevention cam	RNE-578-0	
48	Spring for brake lever	RBH-184-0	
49 *	Brake lever	RNE-580-0	
50 *	FF lever	RNE-717-0	

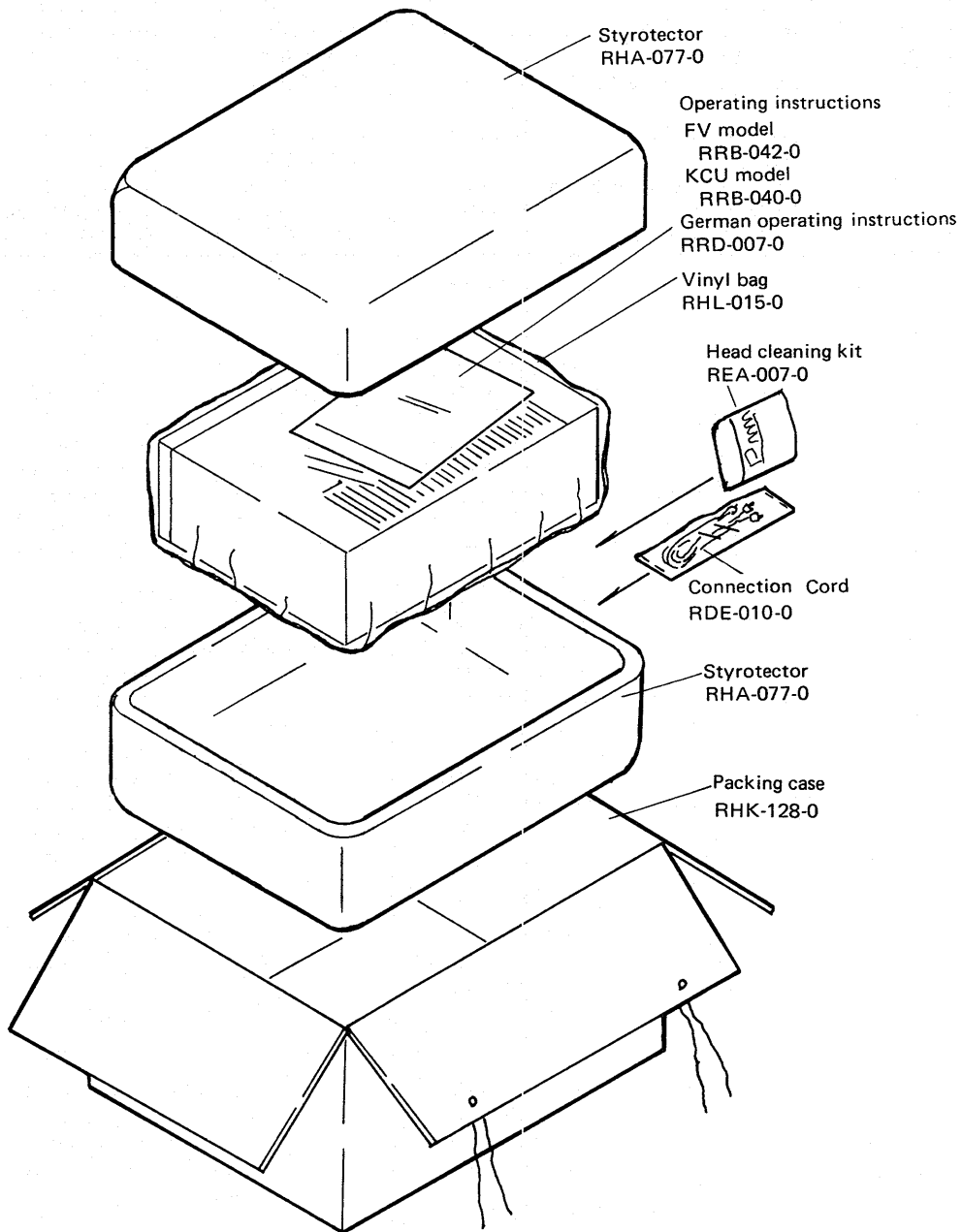
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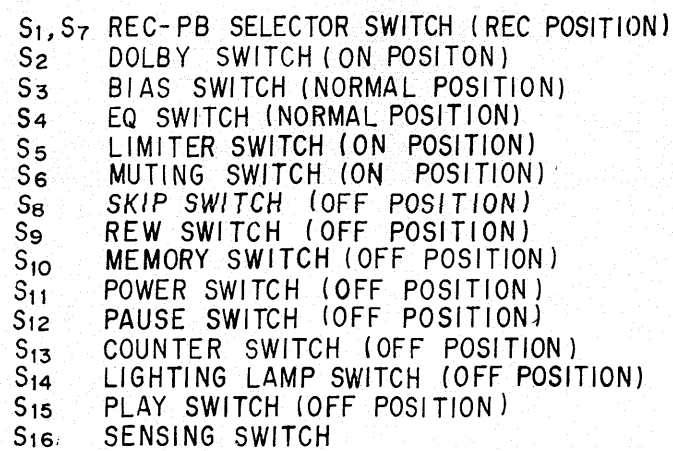
Key No.	Description	Part No.	
51	Idler A assembly	RXA-489-0	
52	Spring for idler B lever	RBH-221-0	
53	Idler B lever assembly	RXA-421-0	
54	FR lever assembly	RXA-417-0	
55	Spring for tension arm	RBH-190-0	
56	Tension arm assembly	RXA-430-0	
57	Polyethylene washer 2.5 ϕ x5 ϕ x0.3t mm		
58	Polyethylene washer 2.5 ϕ		
59	Flywheel assembly B	RXA-432-0	
60	Drive belt	REB-116-0	
61*	Thrust holder	RNE-583-0	
62	Thrust adjusting screw	RNK-154-0	
63	Sliding bar assembly (PAUSE)	RXA-490-0	
64	Spring (Pause-lever)	RBH-220-0	
65	Sliding bar assembly (FF)	RXA-431-0	
66	Spring for FF lever	RBH-187-0	
67	Screw M2x5		
68*	Chassis assembly	RXA-481-0	
69	Tape counter assembly	RAW-023-0	
70	Counter mounting angle assembly	RXA-464-A	
71	Tyfron washer	RBF-021-0	
72	Pulley assembly	RXA-466-0	
73*	Cord clasper D	RNE-605-0	
74	Spacer	RLA-359-0	
75	Spring (Sliding bar)	RBH-209-0	
76	Sliding bar (REC)	RNE-674-B	
77	Adjustment plate	RNE-673-A	
78	Slide switch assembly (Muting)	RWS-010-A	
79	Leaf switch B	RSK-019-A	S9, S12
80	Counter belt A	REB-133-B	
81	Counter belt B	REB-134-B	
82	Spring (Sliding bar)	RBH-110-B	
83	Sliding bar assembly	RXA-460-0	
84	Nylon washer 4.2 ϕ x8 ϕ x0.5t mm	B22-422-0	
85	Spring (Release lever)	RBH-203-0	
86	Release lever assembly	RXA-459-A	
87*	Sub chassis assembly	RXA-461-A	
88	Solenoid	RXP-016-0	
89	Leaf switch	RSN-002-0	S15
90	Spring (Cassett positioner L)	RBH-205-0	
91	Cassett positioner	RNK-167-A	
92	Spring (Cassett positioner R)	RBH-204-0	
93	Shaft	RLA-369-0	
94	Eject plate assembly	RXA-463-A	
95	Belt (Sensing)	REB-135-B	
96	Plate	RNE-670-0	
97	Sensing switch assembly	RSX-034-0	S16
98			
99	Terminal board	RWX-054-0	
100*	Terminal board holder	RNE-671-A	

NOTICE: Any parts asterisked (*) are subject to being not supplied.

Key No.	Description	Part No.	
101*	Bracket	RNE-669-C	
102	Bracket assembly (EJECT)	RXA-523-0	
103			
104	Spring (Cam)	RBH-200-0	
105	Spring (Sliding plate)	RBH-201-0	
106	Spring (Door lock bar)	RBH-202-0	
107	Door lock bar	RNE-678-A	
108	Nylon washer 3.2φx8φ x 0.5t mm	B32-478-0	
109	Cam (Eject)	RNK-168-A	
110	Nylon washer 4.2φx8φ x 0.5t mm	B22-422-0	
111	Sliding plate	RNE-677-0	
112	Cushion	REB-129-0	
113	Washer 2.6φ x 7.5φ x 0.5t mm		
114	Reflecting plate	RAH-010-A	
	Button block assembly	RXA-498-0	Part No. RXA-498 contains key No.1 ~ 11, 13 and 14

11. PACKING METHOD





RESISTORS :
IN OHM, $\frac{1}{4}$ W, $\pm 5\%$ TOLERANCE UNLESS OTHERWISE NOTED K = K Ω , M = M Ω
CAPACITORS:
IN μ F UNLESS OTHERWISE NOTED P = pF

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