

# *Service Manual*

**4-CHANNEL STEREO  
TAPE DECK**

**QT-6600/F**

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# 1. SPECIFICATIONS

|                              |                                                                    |
|------------------------------|--------------------------------------------------------------------|
| Drive and control            | 1 motor, center capstan drive with automatic reverse               |
|                              | 4-channel recording/playback (Forward only)                        |
|                              | 2-channel recording/playback (Manual or automatic reverse)         |
| Track                        | 4-track 4-channel stereo                                           |
|                              | 4-track 2-channel stereo                                           |
|                              | 4-track 1-channel mono                                             |
| Head                         | 4-track 4-channel recording/playback head x 1                      |
|                              | 4-track 2-channel recording/playback head x 1                      |
|                              | 4-track 2-channel erase head x 3                                   |
| Motor                        | Hysteresis synchronous motor                                       |
| Tape speed                   | 7-1/2 ips (19 cm/s)                                                |
|                              | 3-3/4 ips (9.5 cm/s)                                               |
| Fast winding time            | Approx. 110 seconds (1200 ft/370m tape)                            |
| Wow and flutter              | Less than 0.12% at 7-1/2 ips (19 cm/s)                             |
|                              | Less than 0.20% at 3-3/4 ips (9.5 cm/s)                            |
| Reel                         | Up to 7 inches                                                     |
| Semiconductor                | Transistors 28                                                     |
|                              | Diodes 7                                                           |
| REC/PLAY compensation        | NAB standard                                                       |
| Erasing                      | AC system                                                          |
| Frequency response           | 30 to 20,000Hz (50 to 15,000Hz, $\pm 2$ dB) at 7-1/2 ips (19 cm/s) |
|                              | 30 to 13,000Hz at 3-3/4 ips (9.5 cm/s)                             |
| SN ratio                     | More than 55dB                                                     |
| Input level/impedance        | Microphone ..... 0.3 mV/50 k $\Omega$                              |
|                              | Line input ..... 30 mV/330 k $\Omega$                              |
| Output level/load impedance  | Line output ..... 0.775 V/50 k $\Omega$                            |
|                              | (Level meter "0" position) 1.2V (Max)                              |
|                              | Headphone output ..... 0.2 mW/8 $\Omega$                           |
|                              | (Level meter "0" position)                                         |
| Recording/Playback connector | DIN-type (Usable only for 2-channel stereo)                        |
| Subfunction                  | 1. Recording-master level control                                  |
|                              | 2. Individual level control for each channel                       |
|                              | 3. Pause control                                                   |
|                              | 4. Easy opening head housing                                       |
|                              | 5. Two headphone jacks for front & rear                            |
|                              | 6. 4-digit tape counter                                            |
| Power requirements           | AC 110V, 120V; 130V, 220V and 240V (50Hz or 60Hz)                  |
| Maximum power consumption    | 75W                                                                |
| Overall dimensions           | 17" (W) x 8-3/8" (D) x 18-3/8" (H)                                 |
|                              | 434 (W) x 212 (D) x 478 (H) mm                                     |
|                              | (including body-height dust cover and feet)                        |
| Weight                       | With package 46lb 4 oz (21 kg)                                     |
|                              | Without package 37lb 7 oz (17 kg)                                  |
| Furnished accessory          | Empty reel ..... 1                                                 |
|                              | Reel cap. .... 2                                                   |
|                              | Connection cord ..... 4                                            |
|                              | Motor pulley (50Hz or 60Hz) ..... 1                                |
|                              | Hexagon wrench ..... 1                                             |
|                              | Splicing tape ..... 1                                              |
|                              | Sensing foil ..... 1                                               |
|                              | Cleaning kit ..... 1                                               |
|                              | Cleaning ribbon ..... 1                                            |
|                              | Dust cover ..... 1                                                 |
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NOTE: Specifications and the design subject to possible modification without notice due to improvements

# 2. SETTING UP 4-CHANNEL STEREO SYSTEM

## STEREO AMPLIFIER

A 4-channel stereo system can be set up with QT-6600 combined with a 4-channel stereo amplifier (Pioneer QA-800, for instance) or two units of 2-channel stereo amplifier (Pioneer SA-800, for instance) and four speaker systems installed as illustrated in Fig. 1.

## INSTALLATION OF FOUR SPEAKER SYSTEMS

For optimum 4-channel stereo performance, one each speaker system is installed to the left-hand side and right-hand side in the front of the listening position, and one each speaker to the left-hand side and right-hand side in the rear. However, the two speaker systems can be installed in any different way according to a program or to your taste.

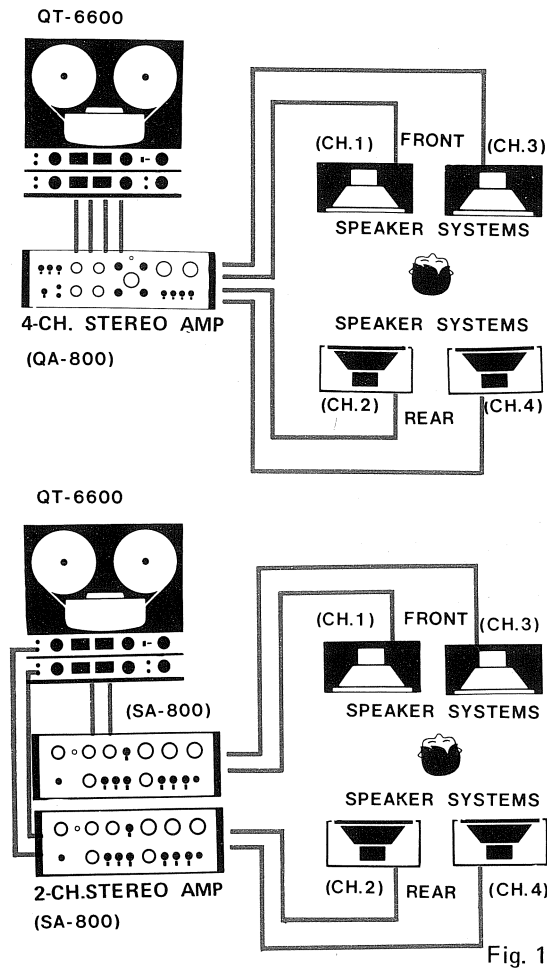
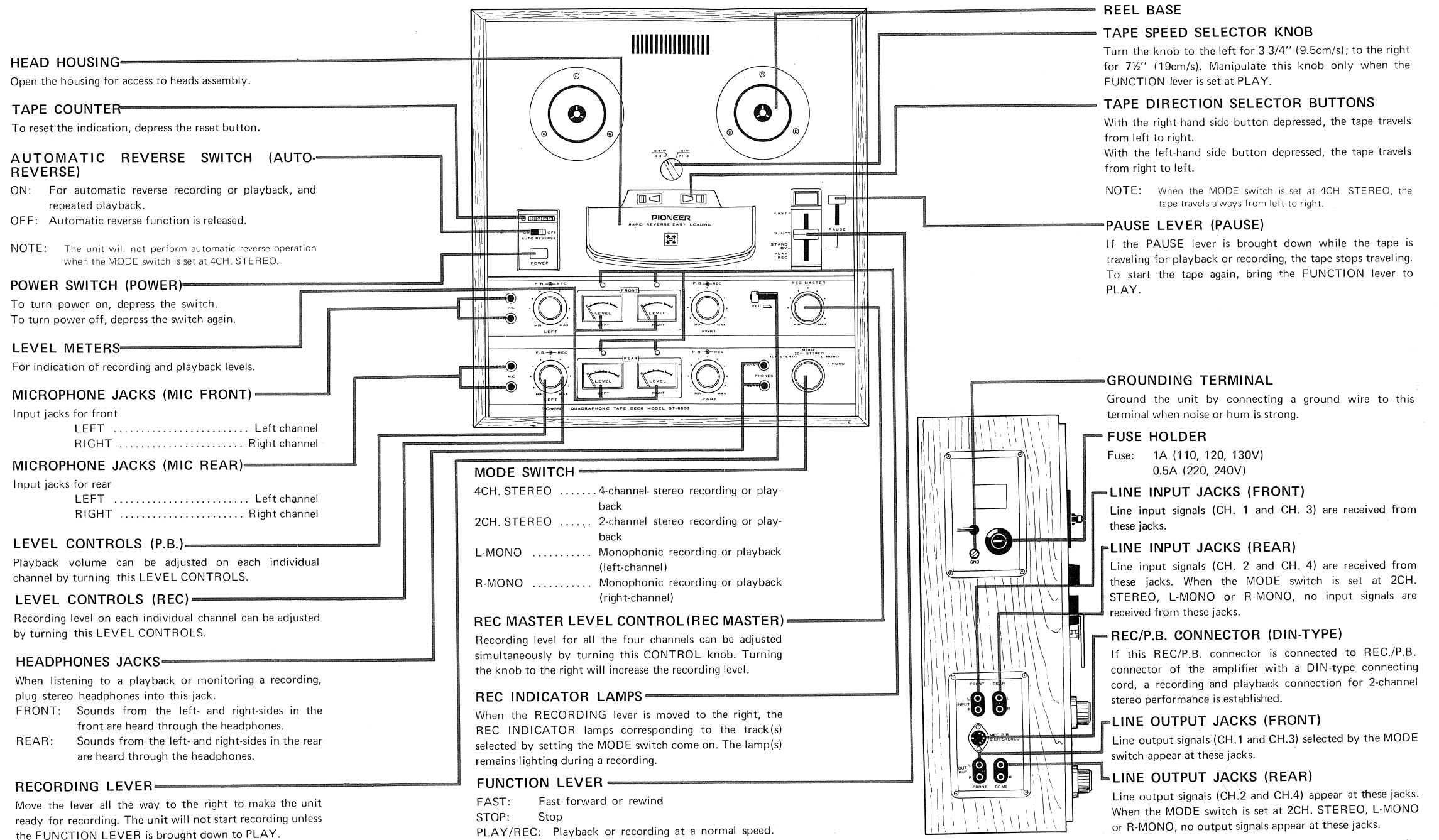


Fig. 1

- CH. 1..... FRONT LEFT
- CH. 3..... FRONT RIGHT
- CH. 2..... REAR LEFT
- CH. 4..... REAR RIGHT

### 3. PARTS IDENTIFICATION



## 4. CIRCUIT DESCRIPTION

As the QT-6600 employs the two-head system, all amplifier stages (except the bias oscillator and the final recording equalizer) are used both for recording and playback, with switchover effected by S2, sections S2-1 to S2-6, as shown in Fig. 2. Switches S1 and S13 also select the head in accordance with tape travel direction, i.e. FORWARD or REVERSE.

### 4-1. PLAYBACK SIGNAL PATH

The signal from the head first enters the equalizer amplifier consisting of Q1 and Q2. Frequency characteristics of this stage depend on the CR network in the negative feedback (NFB) circuit connected between S2-2 and S2-3. Next, the signal enters the flat response amplifier stage Q3 and Q4. Here, flat frequency response is obtained by the CR network at S2-5.

Output from this stage passes to the output terminals (LINE OUTPUT), while another portion of the signal is amplified in Q5 to drive the LEVEL meter (V.U.) and, through a matching transformer (T1) and the headphones.

### 4-2. RECORDING SIGNAL PATH AND BIAS

In recording function, the amplifier input is switched over from head (playback) to LINE INPUT or MIC INPUT (recording). This switching is done by S2, section S2-1. The input signal for the recording head is taken from the collector output of Q6.

Other circuit elements and signal paths are the same as in playback, except the CR networks in the NFB circuits which, selected by S2, sections S2-2, S2-3 and S2-5, are changed to obtain frequency characteristics as shown in the little boxes in Fig. 2.

The single-stage Q6 amplifier functions as recording compensator only (high boost).

The bias oscillator Q7 and Q8 is activated to supply recording bias and erase current. Q9 and Q10 form a regulator for the bias current, to keep the bias current constant in any operation mode such as 4-channel, 2-channel and monophonic.

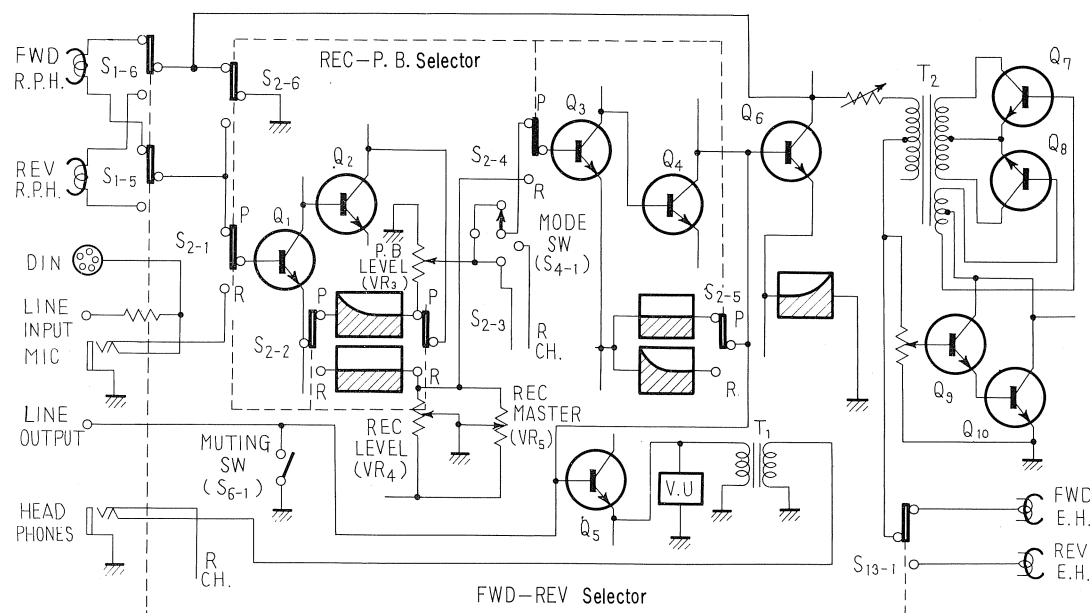


Fig. 2

### 4-3. TAPE DIRECTION SELECTOR

Fig. 3 shows the two DC power supply circuits for the amplifier and for the tape direction selector. Switch positions indicate FORWARD position.

The rectifier consisting of D3 has loads such as the pilot lamps, relay and plunger in its negative return circuit (between center tap of transformer and ground). Now, when S8 is closed manually on its REV side, point (A) with positive potential is grounded through S7, whereby the 24 V DC line becomes a closed circuit. (As the contact points are connected in parallel to each side of S8, the same switching occurs when the sensing foil on the tape passes in front of these contact points.)

Current thus flows through R64 and the relay. Therefore, relay switches RL1-1 through RL1-4 are turned over. The function of RL1-4 is to switch on the alternate pilot lamp. Also, the relay is held in activated condition.

RL1-3 retracts the plunger. RL1-1 and RL1-2 switch the starter coil polarity of the motor, producing motor rotation in reverse direction. Motion of the plunger effects switching of S1 and S13 in order to select the tape head for operation.

S9 is in the position shown in Fig. 3, permitting powerful starting current to flow through the plunger. As soon as the plunger is retracted, however, S9 opens, so that plunger current must now flow through R66, whereby current through the plunger is reduced to protect it from overheating in "hold" condition. Start-up current must be powerful, however, to assure efficient switching functions.

When S8 is pushed in position FWD, or when the second set of contact points is closed, the mechanism returns to forward mode. Upon return to FORWARD tape travel, first the relay is released, then the plunger is released by RL1-3 opening.

Other functions of the switches in Fig. 3 are as follows:

S7 is linked to the FUNCTION lever on the deck panel. When the lever is set in position FAST, S7 is opened, whereby the TAPE DIRECTION SELECTOR is defeated as long as the tape is in fast winding motion.

S4 is the channel selector mode switch, for both recording and playback.

S5 is linked to the RECORDING lever on the amplifier panel.

S6 is a muting switch.

These three switches deactivate the tape travel direction switching circuits when the set is in 4-channel recording or playback mode.

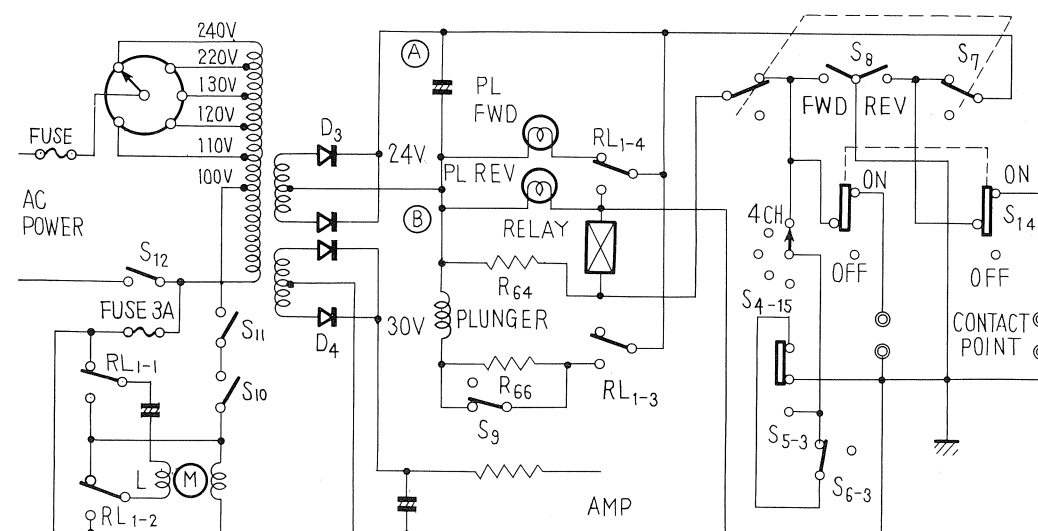


Fig. 3

## 5. DISASSEMBLY

### 5-1. DECK PANEL

For mechanism checks:

1. Remove the three knobs (FUNCTION lever, TAPE SPEED SELECTOR knob, PAUSE lever).
2. Open the head housing.
3. Remove screws 1, 2, 3, 4 in Fig. 4.

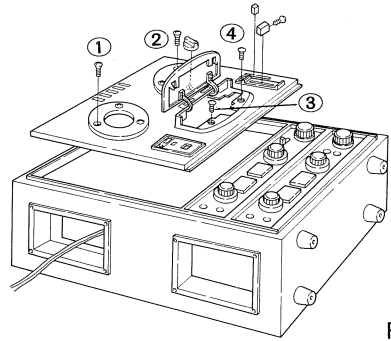


Fig. 4

### 5-2. AMPLIFIER PANEL

For checking lamps and LEVEL meters:

1. Remove all knobs in Fig. 5.
2. Remove the lock nuts from the four control shafts.

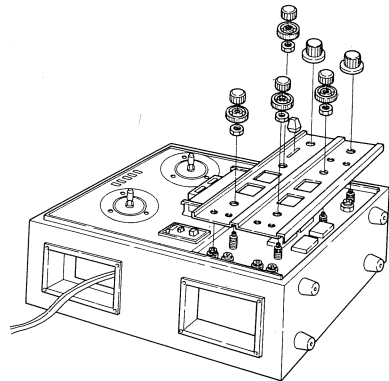


Fig. 5

### 5-3. BOTTOM PANEL

For checking motor, plunger and power supply:

Remove the six screws (1 ~ 6) shown in Fig. 6, then remove the hard board bottom panel.

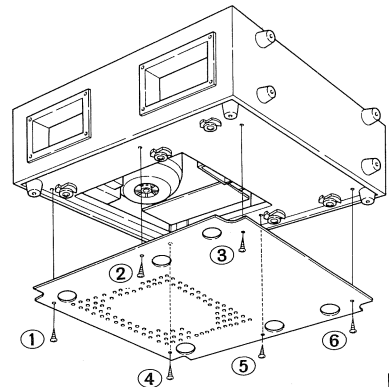


Fig. 6

### 5-4. WOODEN CABINET

For checks and alignments of electric circuits:

1. Remove the six screws (7 ~ 12) and the claw washer shown in Fig. 7, then lift the unit from the wooden cabinet.
2. Pull off the metal shield cover as shown in Fig. 8.

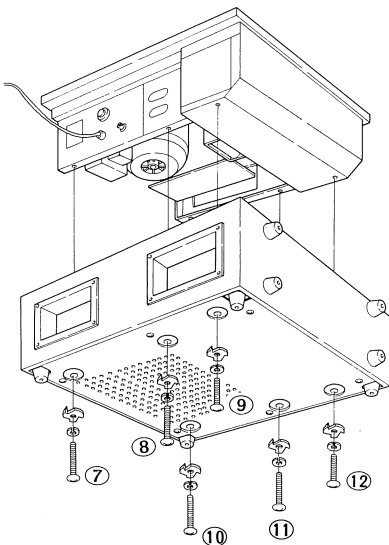


Fig. 7

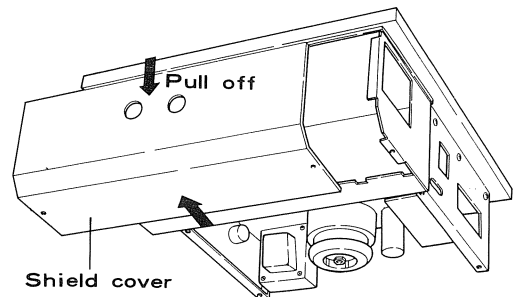


Fig. 8

## 6. TROUBLESHOOTING CHART

### 6-1. MECHANISM AND POWER SOURCE

| PROBLEM                                                      | CHECK POINTS                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No power input                                               | 1. Fuse and outlet contacts, check causes if fuse is burned out                                                                                                                                                                                                                                                             |
| Motor does not rotate                                        | 1. Slack tape loading<br>2. Voltages across motor winding, switch contacts in the motor circuits<br>3. Motor bearing wear                                                                                                                                                                                                   |
| Capstan does not rotate                                      | 1. Motor rotation<br>2. Capstan bearing wear<br>3. Driving belt between flywheel and motor pulley                                                                                                                                                                                                                           |
| Inconsistent speed or failure to travel in playback function | 1. Friction of supply reel<br>This is source of back tension for tape See page 12<br>2. Pressure between capstan and pinch roller See page 14<br>3. Dust or deformation on pinch roller, capstan and heads, also rotating parts such as bearings and belts<br>4. Function of take-up pulley clutch (Nos. 11, 23 in page 35) |
| Does not take-up in playback function                        | 1. Function of take-up pulley clutch<br>2. Belt condition of take-up side and bearing                                                                                                                                                                                                                                       |
| Does not fast wind                                           | 1. Take-up belt for dust or slipping<br>2. Take-up tension See page 12<br>3. Take-up and supply brakes<br>4. Back tension of supply reel in fast winding See page 13                                                                                                                                                        |
| Malfunction of tape direction selector                       | 1. TAPE DIRECTION SELECTOR switch<br>2. AUTOMATIC REVERSE switch<br>3. Relay coil and contact on P.C.B. of power supply unit<br>4. Sensing foil length on tape (at least 3/4"), also touching of contact point with foil                                                                                                    |
| Tape slackens when to STOP function during tape run          | 1. Brake shoe, spring (Nos. 3, 31 page 35)<br>2. Brake timing and maladjustment of brake mechanism See page 13                                                                                                                                                                                                              |
| Tape speed will not change                                   | 1. Speed selector cam ass'y (No. 49 page 35)<br>NOTE: Does not move TAPE SPEED SELECTOR knob in STOP function                                                                                                                                                                                                               |
| FUNCTION lever will not turn to PLAY position                | 1. Slide stopper (No. 79 page 36) and deformation of stopper linked to Speed Selector stopper (No. 35 page 35)                                                                                                                                                                                                              |
| Tape counter does not turn.                                  | 1. Belt to driving counter (No.6 page 35, No.63 page 36)<br>2. Counter (No.62 page 36)                                                                                                                                                                                                                                      |
| Mechanical noise                                             | 1. Contact between belts and speed selector arm (Nos. 50, 51 page 35)<br>2. Bearings                                                                                                                                                                                                                                        |
| PAUSE lever sticks                                           | 1. Pause cam spring (No. 46 page 35)                                                                                                                                                                                                                                                                                        |

### 6-2. ELECTRICAL CIRCUIT

| PROBLEM                                   | CHECK POINTS                                                                                                                                                                                                                                                                                   |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Does not playback                         | 1. B plus voltage from power supply unit<br>2. Head winding and signal path wiring and switch connections<br>3. Muting switch located on back of amplifier chassis (No. 33 page 41)                                                                                                            |
| Playback level too small                  | 1. Dust on head surface                                                                                                                                                                                                                                                                        |
| Highly-distorted sound                    | 1. Recorded tape sound quality and level<br>2. Rectifier diode for LEVEL meter                                                                                                                                                                                                                 |
| Drop out                                  | 1. Head surface<br>2. Playing tape quality                                                                                                                                                                                                                                                     |
| Poor higher frequency range               | 1. Head surface, head and tape contact depending on back tension<br>2. Head azimuth, after checking recording of playing tape                                                                                                                                                                  |
| Poor base response                        | 1. Playback equalizing amplifier characteristics See page 19                                                                                                                                                                                                                                   |
| Noise and Hum                             | 1. Contacts of switches in the playback signal path, playback volume<br>2. Components of playback amplifier<br>3. When equipment is fitted in stereo system, check connections of each part                                                                                                    |
| Plays back but does not record            | 1. Input signal source and jack contact<br>2. S1 and S2 (S102), on the P.C.B. of the amplifier unit A (B)<br>3. Oscillator circuit                                                                                                                                                             |
| Poor recording sound but correct playback | 1. Input level<br>2. Check recording tape, try standard tape (100 or 150 class)<br>3. Oscillator outputs, especially bias across the head, S13 on the oscillator unit<br>4. Recording compensator characteristics, Q6 (Q106) on the P.C.B. of the amplifier unit A (B) See pages 21, 45 and 50 |
| Does not erase                            | 1. Erasing head winding<br>2. B plus voltage on the oscillator unit and circuit                                                                                                                                                                                                                |
| Channel unbalance                         | 1. Tape path part, noticeable tape traveling height See page 14                                                                                                                                                                                                                                |

## 7. MECHANICAL ADJUSTMENTS

### 7-1. BACK TENSION AT NORMAL-SPEED TAPE TRAVEL (Supply reel friction)

1. Turn power off. Place 7-inch reel with 60mm hub on reel shaft, fasten a piece of tape or string to the reel hub (with adhesive tape, etc.).
2. See Fig. 9. Set FUNCTION lever to PLAY position. Attach tension gauge to end of tape or string, pull in direction indicated at approximately normal tape speed ( $7\frac{1}{2}$  ips). Proper reading should be between 60 and 80 grams.

3. If proper tension reading is not obtained, see Fig. 10. Turn tension adjustment nut. Clockwise rotation increases tension.

4. After this adjustment, lock the adjustment nut securely with the spring washer and nut.

NOTE: Normal-speed take-up torque is not adjustable. In the case of malfunctions, the reel base pulley assembly must be replaced, as the take-up torque is governed by the clutch in the reel base pulley.

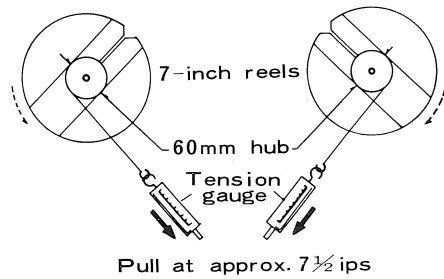


Fig. 9

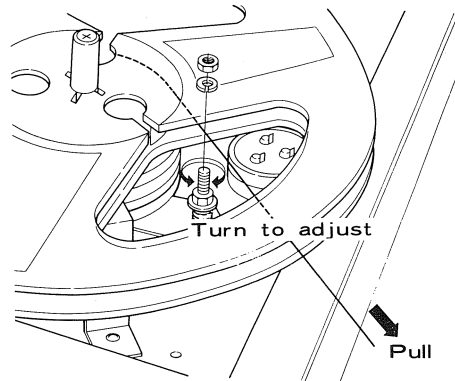


Fig. 10

### 7-2. TAKE-UP TORQUE AT FAST WINDING

1. Turn power on. Load reel(s) with tape or string attached as explained above (7-1-1).
2. Fasten the shut-off switch lever under the head housing in operating position with a rubber band, etc.
3. Attach tension gauge to end of tape or string, and hold it firmly. Then set the FUNCTION lever at FAST position.
4. Pull tension gauge to stop reel. Gauge reading should be between 300 and 350 grams.
5. If proper reading is not obtained, refer to Fig. 12. Turn the torque adjustment screw after loosening the locking nut. Clockwise rotation increases torque. After this adjustment, tighten locking nut securely.
6. Repeat this adjustment for both reels, twice on each side.

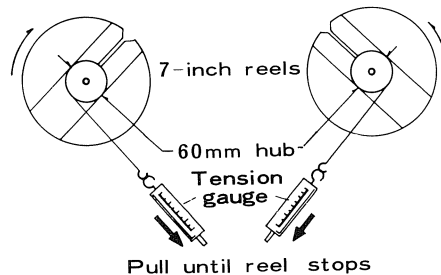


Fig. 11

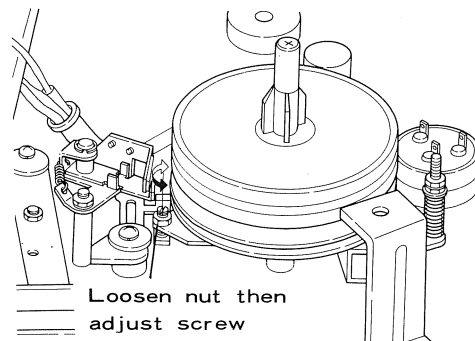


Fig. 12

### 7-3. BACK TENSION AT FAST WINDING

1. Follow steps 1 thru 3 of section 7-2, above.
2. Pull tension gauge until reel begins to turn in opposite direction (Fig. 13). Gauge reading should be between 7 and 20 grams.
3. If proper reading is not obtained, refer to Fig. 14. The FUNCTION lever at STOP position and bend tension brake spring inward for stronger back tension, outward for weaker back tension.
4. Back tension on left reel is reinforced by tape counter, brake contact may therefore be somewhat weaker than on right reel.
5. Repeat this adjustment twice on each reel.

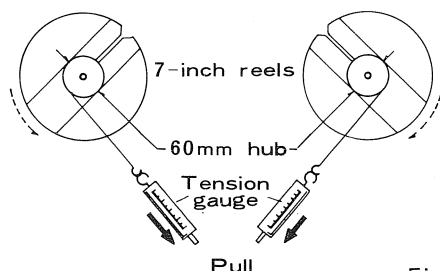


Fig. 13

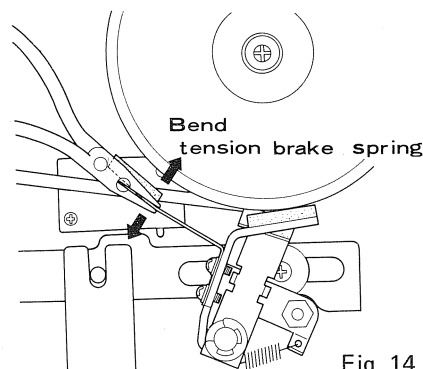


Fig. 14

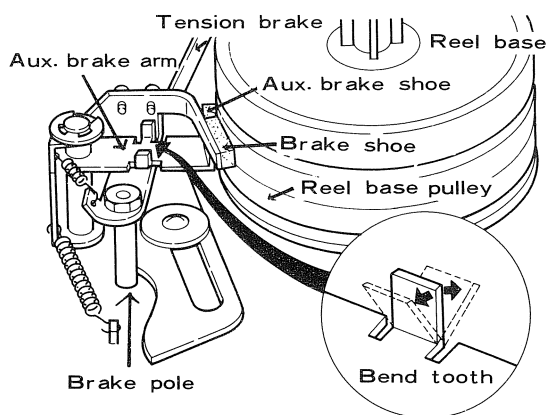


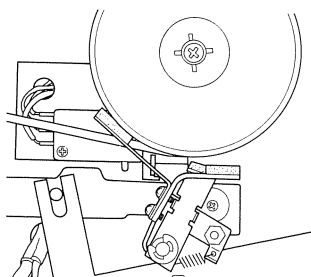
Fig. 15

### 7-4. BRAKE ADJUSTMENT

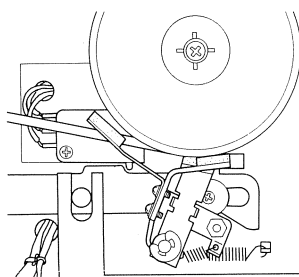
1. Turn power off. See table below and Figs. 16, 17 and 18 for brake positions according to different tape travel functions.
2. If brakes require re-adjustment, bend brake pole, auxiliary brake arm tooth and tension brake accordingly. See Fig. 15.

| Parts                             | PLAY           | STOP     | FAST           | Adjust               |
|-----------------------------------|----------------|----------|----------------|----------------------|
| Brake shoe, Reel base             | 0.5 — 1 mm gap | Contact  | 1.5 — 2 mm gap | Brake pole           |
| Aux. brake shoe, Reel base pulley | Contact        | Contact  | 0.5 — 1 mm gap | Aux. brake arm tooth |
| Tension brake, Reel base          | 3 — 4 mm gap   | 5 mm gap | Contact        | Tension brake        |

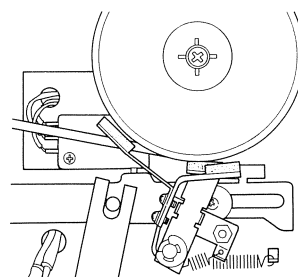
These figures illustrate brake positions.



FAST Fig. 16



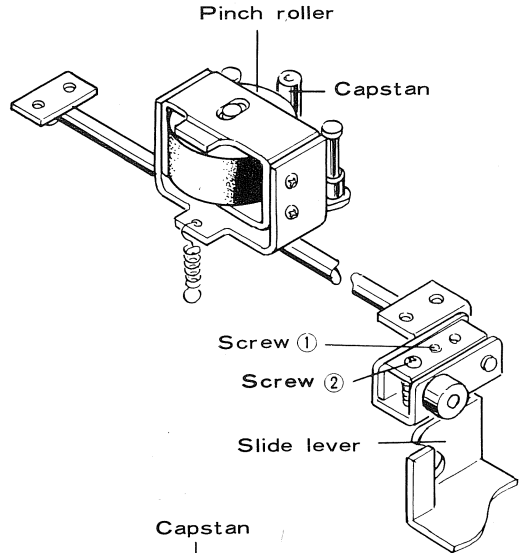
STOP Fig. 17



PLAY Fig. 18

7-5. PINCH ROLLER CONTACT

- 1. Special tools required: hex. wrench (4φ), Philips head screwdriver.
- 2. Set the FUNCTION lever to PLAY position.
- 3. Loosen screw 2 in Fig. 19.
- 4. Turn screw 1 (Fig. 19) so that pinch roller shaft is in exact parallel position with capstan.
- 5. Tighten screw 2.
- 6. Adjust pinch roller shaft in the same dimension (0.7 mm) as shown in Fig. 20.  
Pressure is applied automatically by spring shown with dotted lines in Fig. 20.



7-6. PAUSE LEVER ADJUSTMENTS

- 1. Remove wooden cabinet.
- 2. Set FUNCTION lever at STOP position.
- 3. Pull PAUSE lever slightly toward the front. Its allowance should be not more than 1.5 mm.
- 4. Otherwise, see Fig. 21. Loosen the two adjusting screws. Move the PAUSE lever bracket to obtain a gap between bracket and linking rod.

7-7. ADJUSTMENT OF TAPE TRAVEL HEIGHT

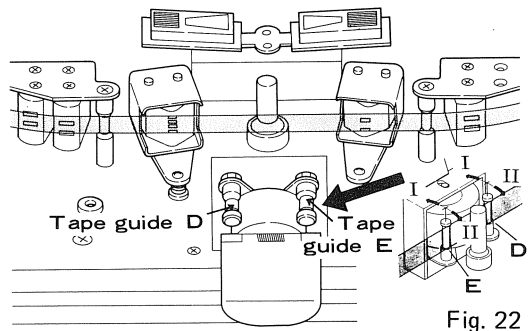
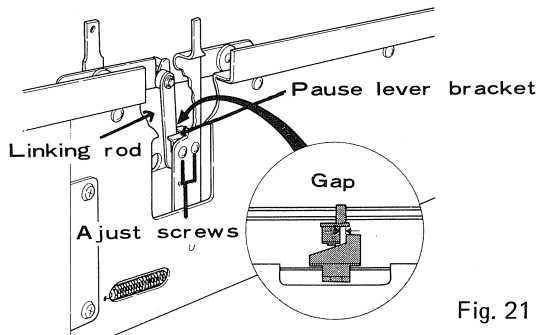
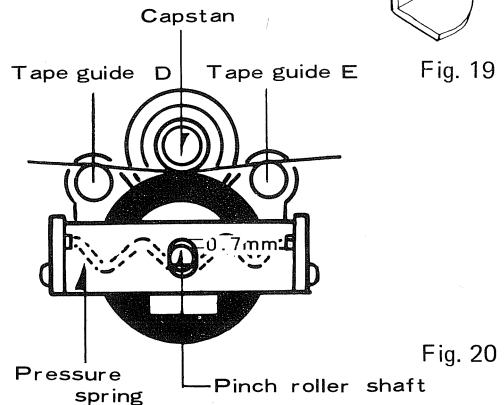
The height at which the tape travels over the heads must be identical in both FORWARD and REVERSE travel at normal speed. Re-adjustment will be required after replacement or adjustment of the pinch roller assembly.

- 1. Load a tape. Set tape deck in PLAY mode at 7½ ips or 3¾ ips (19 or 9.5 cm/sec).
- 2. While observing the tape's traveling height, reverse the travel direction.
- 3. If the traveling height changes, refer to the following table. Tilt the tape guides D or E in the directions indicated by arrows in Fig. 22.

Note that even a very slight tilt will result in a major change in the tape's traveling behavior.

| Tape direction | If tape moves | Tape guide | Tilt direction |
|----------------|---------------|------------|----------------|
| Forward        | Up            | D          | II             |
|                | Down          | D          | I              |
| Reverse        | Up            | E          | II             |
|                | Down          | E          | I              |

- 4. Repeat these adjustments several times until correct tape travel height is obtained. This adjustment should be done with a new tape, if possible.



## 8. TAPE HEAD ADJUSTMENTS

### 8-1. HEIGHT

Before adjusting the height of the tape heads, confirm that the tape traveling height is the same in both forward and reverse motion. Refer to section 7-7.

For the following adjustments, use transparent leader tape.

Also, note that the erase head units cannot be adjusted.

#### REC./P.B. HEAD A

1. Load transparent tape, put tape deck in forward play motion.
2. Distances between the tape edges and the outer edges of track 1, respectively, should be exactly equal Fig. 23.
3. To readjust, turn Philips head screws 1 and 3 in Fig. 24.

#### REC./P.B. HEAD B

1. Distance between the lower tape edge and the bottom edge of track 4 should be the same as in case of head A.
2. To readjust, turn screws 4 and 6 in Fig. 24.

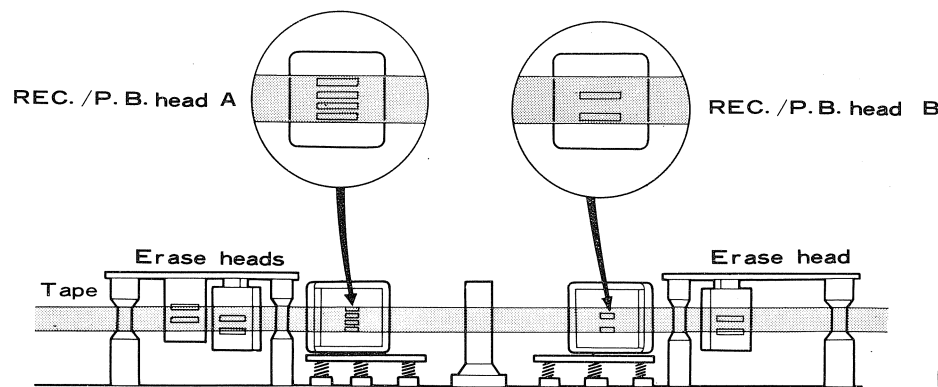


Fig. 23

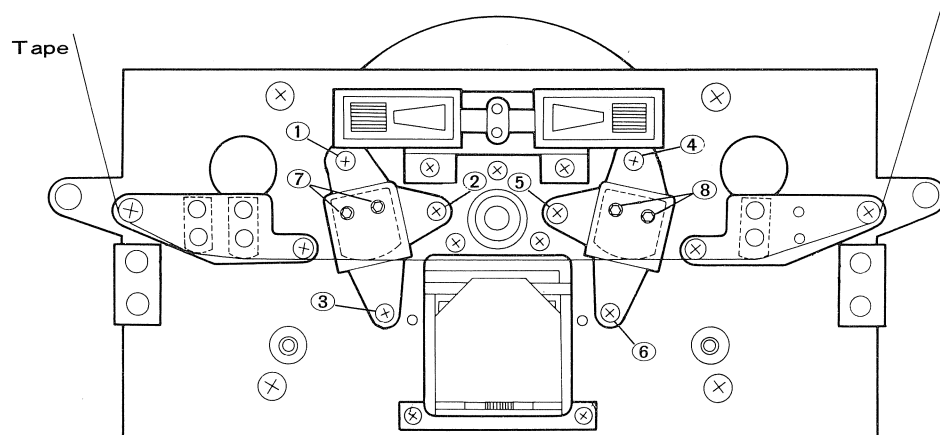


Fig. 24

### CONFIRMATION BY TEST TAPE

Correct tape head height can be confirmed with a 4-track test tape (TT-500A) recorded only on tracks 1 & 3.

1. Connect two voltmeters (VTVMs) to LINE OUTPUT FRONT L and R, respectively.
2. Load TT-500A test tape. Put tape deck in forward play motion.
3. The first portion of the test tape contains a 500 Hz 0 dB signal on tracks 1 and 3.
4. In forward tape motion, both VTVMs should indicate maximum output level. Re-adjustment: screws 1 and 3 in Fig. 24.
5. Turn test tape over, re-load. Put tape deck in reverse play motion. Adjust screw 4 and 6 in Fig. 24 to obtain maximum reading on both VTVMs.

NOTE: In this adjustment, output levels of both channels are not necessarily identical.

### 8-2. HEAD AZIMUTH ALIGNMENT

#### COARSE VISUAL ALIGNMENT

1. No tape is required.
2. Check if head surface is perpendicular to deck panel. To readjust, turn screws 1 or 3 for head A, screws 4 or 6 for head B.
3. Note that these adjusting screws also change the height of the heads (section 8-1).

#### CONFIRMATION BY TEST TAPE

Clean heads scrupulously.

1. Connect two voltmeters (VTVMs) to LINE OUTPUT FRONT L and R. Load Pioneer TT-500A test tape. Put tape deck in forward play motion at 7½ ips (19 cm/sec).
2. The second portion of the test tape contains a 10 kHz -10 dB signal over its whole width (full track).
3. With your fingertip, push the traveling tape against head A. If the output level increases, tape-to-head contact has not been perfect. Loosen screws 7 in Fig. 26 slightly, then push core of head A slightly toward tape. Re-tighten screws.
4. Reverse tape travel direction. Repeat the same procedure for head B. Re-adjustment is by screws 8.

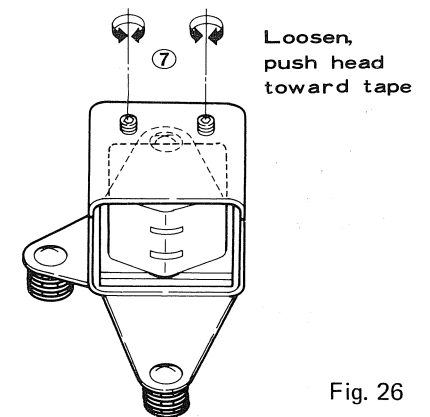


Fig. 26

### 8-3. SLIT ANGLE ADJUSTMENT

This adjustment should be made alone or after all other head adjustments have been completed.

1. Connect two voltmeters (VTVMs) to LINE OUTPUT FRONT L and R. Load test tape TT-500A.
2. Set playback levels of both channels to maximum.
3. Set the MODE switch at 2-CH. STEREO.
4. Put tape deck in forward play motion at 7½ ips (19 cm/sec).
5. Play the second tape portion (10 kHz, -10 dB). Adjust screw 2 in Fig. 25 to obtain maximum meter readings. If the two channels have different maximum points, adjust for average between these.
6. Reverse tape travel direction. Repeat the same adjustment with screw 5 in Fig. 25.

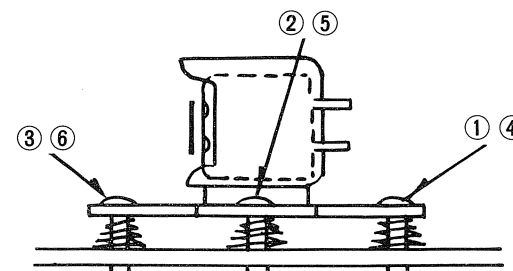


Fig. 25

9. RECORDING BIAS ADJUSTMENT

9-1. OSCILLATOR OUTPUT LEVEL CHECK AND ADJUSTMENT

- 1. Connect voltmeter (VTVM) between terminal 21 on oscillator unit and ground. Reading should be approximately 60 V.
- 2. To readjust, turn VR15 on oscillator unit. After re-adjustment, bias current must also be adjusted (see below).

9-2. BIAS CURRENT ADJUSTMENT

- 1. Connect measuring instruments as shown in Fig. 27.
- 2. Set controls as follows:  
MODE switch at 4-CH.STEREO.  
REC MASTER LEVEL at minimum.  
RECORDING lever in REC position.  
FUNCTION lever at PLAY.  
Then stop mechanism by PAUSE lever.
- 3. Amplitude at TP1 (Fig. 27) should be 3V or less. Adjust by L3 (front) and L103 (rear).
- 4. Note that there are a total of four check points designated TP1, two for the front and two for the rear channels.
- 5. voltage level at TP2 (total of four TP2 check points) should be 8.5mV. Adjust variable resistors on oscillator unit according to table below.

| Test point | Channel | VR on oscillator unit |
|------------|---------|-----------------------|
| TP2-a      | FRONT L | VR9                   |
| TP2-b      | FRONT R | VR11                  |
| TP2-c      | REAR L  | VR13                  |
| TP2-d      | REAR R  | VR14                  |

- 5. Then set MODE switch to 2-CH. STEREO position. Observe oscilloscope connected to TP2-a. Adjust L4 on oscillator unit so that identical wave form is obtained with MODE switch in 4-CH. STEREO and in 2-CH. STEREO position.
- 6. With MODE switch in 2-CH. STEREO position, reverse tape travel direction. Again, adjust L4 to obtain identical wave forms from TP-1a for both tape travel directions.
- 7. With MODE switch in position 2-CH. STEREO, set tape deck for reverse tape travel direction. Measure voltage at TP2-a and TP2-b. Adjust VR10 (left) and VR12 (right) on oscillator unit to obtain a reading of 8.5mV.

- 8. Set MODE switch to L MONO (or R MONO) position. Observe wave forms on oscilloscope connected to TP1-a. Adjust L5 on oscillator unit to obtain identical wave forms in STEREO and MONO positions of MODE switch. Especially, observe amplitude.
- 9. Repeat all above adjustments (items 3 through 8) several times.

9-3. BIAS TRAP COIL ALIGNMENT

- 1. Connect two voltmeters (VTVMs) to the LINE OUTPUT of the FRONT L and R channels.
- 2. Set unit in recording mode, MODE switch in 4-CH.STEREO position. Turn REC MASTER level and the level controls (REC) for each channel to maximum.
- 3. Adjust L1-a and L1-b to obtain minimum (less than 80 mV) meter readings.
- 4. Re-connect VTVMs to rear channel LINE OUTPUT.
- 5. Repeat adjustment for L101-a and L101-b.

10. PLAYBACK AMPLIFIER ALIGNMENT

10-1. PLAYBACK EQUALIZATION CHECK

For these checks, portions 5 through 11 of the TT-500A test tape are used.

- 1. Connect two voltmeters (VTVMs) to the front left and front right LINE OUTPUT. Make notes of each output level obtained at the different test frequencies on the test tape, both at 7½ ips (19 cm/sec) and 3¾ ips (9.5 cm/sec) tape speeds.

- 2. Response deviation should be within the range shown in Fig. 28.
- 3. If readings outside this range are obtained, proceed to the equalizer adjustment (below) and slit angle adjustment.
- 4. Also, take the same readings for the rear channels.

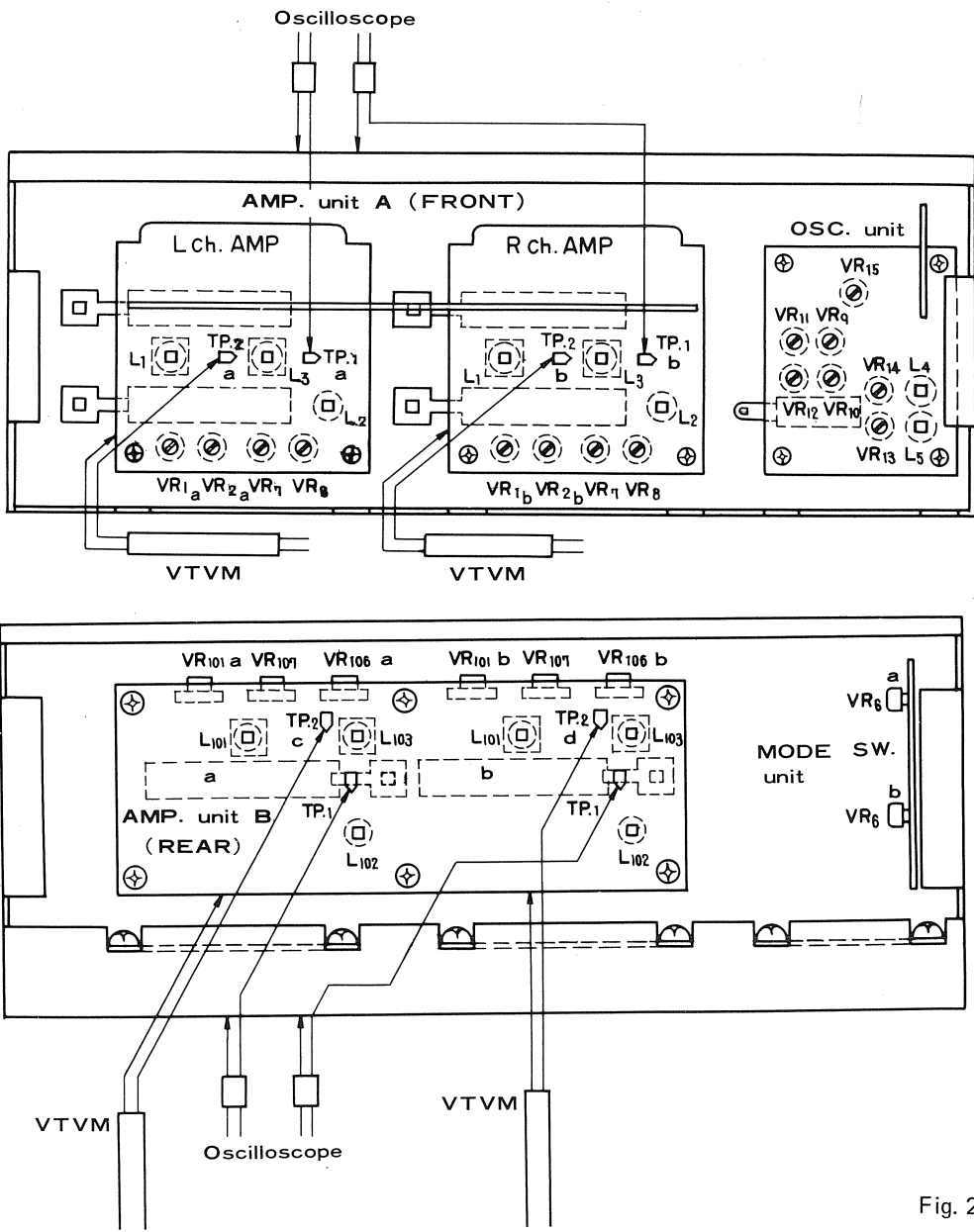


Fig. 27

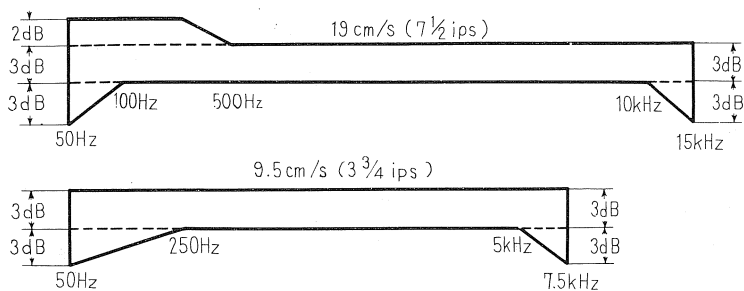


Fig. 28

10-2. EQUALIZER ADJUSTMENT

Equalizer adjustments are made in the sequence of the following table and may have to be repeated several times. ↗

- ↗ Required instruments:  
Two voltmeters (VTVMs) of high sensitivity.  
VTVM range 1.5V full scale.  
Pioneer TT-500A test tape, portions 3 and 4.

| Connect VTVM to   |   | MODE selector | Tape direction | Level control (P.B.) knobs | Test tape frequency | Meter reading |
|-------------------|---|---------------|----------------|----------------------------|---------------------|---------------|
| LINE OUTPUT FRONT | L | 4-CH.STEREO   | Forward        | Adjust for 0.775V          | 700 Hz              | 0.775V        |
|                   | R | 4-CH.STEREO   | Forward        |                            | 700 Hz              | 0.775V        |
| LINE OUTPUT REAR  | L | 4-CH.STEREO   | Forward        |                            | 700 Hz              | 0.775V        |
|                   | R | 4-CH.STEREO   | Forward        |                            | 700 Hz              | 0.775V        |

| Connect VTVM to   |   | MODE selector | Tape direction | Level control (P.B.) knobs | Test tape frequency | Adjust  | Meter reading |
|-------------------|---|---------------|----------------|----------------------------|---------------------|---------|---------------|
| LINE OUTPUT FRONT | L | 4-CH.STEREO   | Forward        | —                          | 5,000Hz             | VR1-a   | 0.775V        |
|                   | R | 4-CH.STEREO   | Forward        | —                          | 5,000Hz             | VR1-b   | 0.775V        |
| LINE OUTPUT REAR  | L | 4-CH.STEREO   | Forward        | —                          | 5,000Hz             | VR101-a | 0.775V        |
|                   | R | 4-CH.STEREO   | Forward        | —                          | 5,000Hz             | VR101-b | 0.775V        |
| LINE OUTPUT FRONT | L | 2-CH.STEREO   | Reverse        | —                          | 5,000Hz             | VR2-a   | 0.775V        |
|                   | R | 2-CH.STEREO   | Reverse        | —                          | 5,000Hz             | VR2-b   | 0.775V        |

For confirmation, test according to following chart. If different readings are obtained at ↗ ↗ forward and reverse tape travel, above adjustment must be repeated.

| Connect VTVM to   |   | MODE selector | Tape direction | Level control (P.B.) knobs | Test tape frequency | Meter reading |
|-------------------|---|---------------|----------------|----------------------------|---------------------|---------------|
| LINE OUTPUT FRONT | L | 2-CH.STEREO   | Forward        | Adjust for 0.775 V         | 700Hz               | 0.775V        |
|                   | R | 2-CH.STEREO   | Forward        |                            | 700Hz               | 0.775V        |
| LINE OUTPUT FRONT | L | 2-CH.STEREO   | Reverse        | —                          | 700Hz               | 0.775V        |
|                   | R | 2-CH.STEREO   | Reverse        | —                          | 700Hz               | 0.775V        |

10-3. LEVEL METER CALIBRATION

The four LEVEL meters can be re-calibrated according to the following procedure.

Required instruments: VTVM.  
Pioneer TT-500A test tape.

1. Connect VTVMs to LINE OUTPUT FRONT L and R.
2. Set MODE switch at 4-CH. STEREO position.
3. Play portion 3 (700 Hz 0dB full track) at 7½ ips (19 cm/sec). ↗

- ↗ 4. LEVEL meter for channel being measured with VTVM should indicate "0" when VTVM reads 0.775V.

5. If not, adjust VR6-a (front left channel)  
VR6-b (front right channel)  
VR106-a (rear left channel)  
VR106-b (rear right channel)

These are located in the MODE switch unit and AMP unit B.

# 11. RECORDING AMPLIFIER ALIGNMENT

## 11-1. RECORDING SENSITIVITY

As this tape deck is a two-head type with combined recording and playback heads, over-tape measurements for the purpose of recording amp alignment are extremely difficult and time consuming.

The units is factory-adjusted for standard recording tape SCOTCH 111 and should produce 0dB output level if recording is done with the LEVEL meter(s) indicating "0."

If adjustments must be made, observe the following channel relationships.

## 11-2. RELATION OF LEVEL METERS TO RECORDING AMPLIFIER SENSITIVITY

1. Set REC MASTER level control to maximum.
2. Apply 1,000 Hz 100mV signal to LINE INPUT.
3. Slowly turn up recording level controls for each channel. LEVEL meters should pass "0" mark before level controls are fully turned up.

Adjustment of VRs in table above will not affect reading of LEVEL meters, because the meters obtain their signals from the recording amplifiers without passing through the VRs.

| MODE selector | Tape direction | Channel | VR and its location   |
|---------------|----------------|---------|-----------------------|
| 4-CH. STEREO  | Forward        | FRONT L | VR7-a on amp unit A   |
| 4-CH. STEREO  | Forward        | FRONT R | VR7-b on amp unit A   |
| 4-CH. STEREO  | Forward        | REAR L  | VR107-a on amp unit B |
| 4-CH. STEREO  | Forward        | REAR R  | VR107-b on amp unit B |
| 2-CH. STEREO  | Reverse        | FRONT L | VR8-a on amp unit A   |
| 2-CH. STEREO  | Reverse        | FRONT R | VR8-b on amp unit A   |

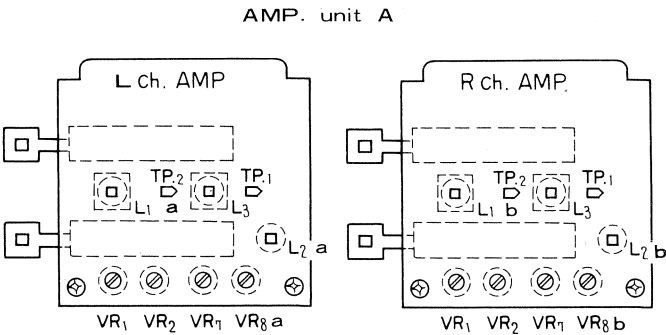


Fig. 29

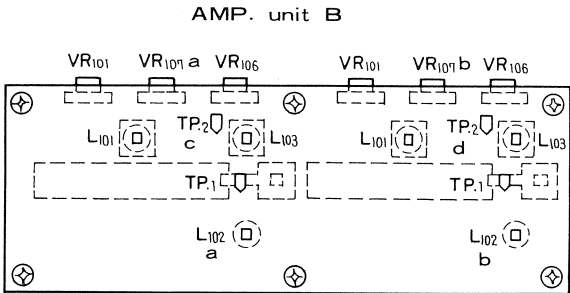


Fig. 30

### 11-3. RECORDING EQUALIZATION CHECK

For these checks, an audio generator, two voltmeters (VTVMs) and blank recording tape (SCOTCH 111) are required.

1. Connect VTVMs to LINE OUTPUT FRONT L and R.
2. Turn REC MASTER and each-channel level controls (REC) to maximum.
3. Connect audio generator in parallel to LINE INPUT FRONT L and R.
4. Adjust audio generator for 10mV output. Record frequencies from 50 Hz to 15 kHz on standard tape at 7½ips (19cm/sec). Then play this tape.
5. Take meter readings on VTVMs. They should be within the specified response range shown in Fig.31.
6. Repeat this procedure at 3¾ips (9.5cm/sec), with the highest recorded frequency at about 7.5 kHz.
7. If only the high end of the frequency shows insufficient response, this can usually be corrected by slightly reducing the abis current (see item 9-2, above).
8. Repeat this procedure for the rear channels by re-connecting audio generator and VTVMs.

If correct readings cannot be obtained, proceed to equalizer adjustment, below.

### 11-4. RECORDING EQUALIZATION ALIGNMENT

Required instruments: audio generator, VTVM

1. Connect voltmeter (VTVM) to TP2-a.
2. Set controls as follows:  
TAPE SPEED SELECTOR 7½ ips (19 cm/sec),  
MODE switch at 4-CH. STEREO,  
RECORDING lever in REC position,  
All recording level controls at maximum,  
FUNCTION lever at STOP.
3. Connect audio generator to LINE INPUT of FRONT L channel.
4. Adjust audio generator at 20 kHz, 7.8mV.
5. Adjust L2-a on amp unit A to obtain maximum VTVM reading.
6. Repeat this procedure for the other three channels by re-connecting VTVM and audio generator

| Test point | LINE INPUT | Adjust coil |
|------------|------------|-------------|
| TP2-a      | FRONT L    | L2-a        |
| TP2-b      | FRONT R    | L2-b        |
| TP2-c      | REAR L     | L102-a      |
| TP2-d      | REAR R     | L102-b      |

7. At 3¾ips (9.5cm/sec) tape speed, maximum VTVM reading will be obtained at a frequency of approximately 11 kHz.  
No adjustment is possible.

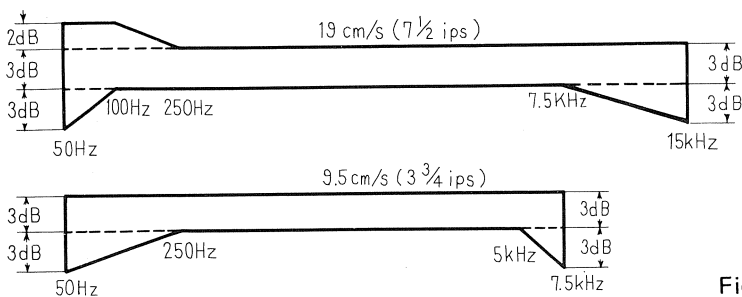


Fig. 31

## 12. SELECTION OF LINE FREQUENCY

If the line frequency in your area does not agree with the operation line frequency of the tape deck, change the operation line frequency of the deck in the following sequence:

1. Unplug the QT-6600 power cord from an power outlet.
2. Remove the PAUSE lever knob and TAPE SPEED SELECTOR knob.
3. Remove the FUNCTION lever by unscrewing the set screws.
4. Remove the four screws (1 ~ 4) on the deck panel and remove the deck panel. (Refer to Fig. 32)
5. When the deck panel is removed, the motor pulley and capacitor will appear in the cabinet. Take off the belts from the pulley, unscrew the set screw on the pulley, and remove the pulley from the motor shaft.
6. Next, install the replacement pulley (either one for 50 Hz or one for 60 Hz) on the motor shaft and set the belts on the pulley. (Fig. 33)
7. In this case, a distance of about 1/2" (2mm) from the chassis to the bottom of the pulley would provide the best result.
8. Also, check the belts to see if there is any oil on them. If oil is found on the belts, clean them thoroughly with a clean, soft cloth.
9. The motor pulley for 60Hz use is identified by a groove on the top. One which does not have this groove is for 50Hz. (Fig. 33)
10. When replacement with a correct pulley was made, change the leads of the capacitor as follows:  
In 50Hz, connect the terminals of the capacitor with the leads, but in 60Hz, cut the leads.
11. Last of all, replace the deck panel, fixing four set screws and resetting three knobs.

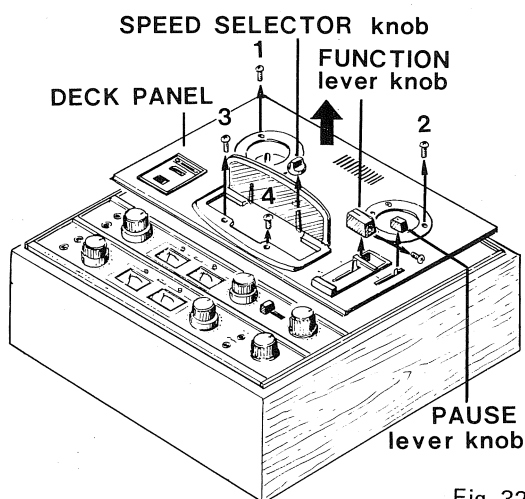


Fig. 32

FOR 60Hz USE

FOR 50Hz USE

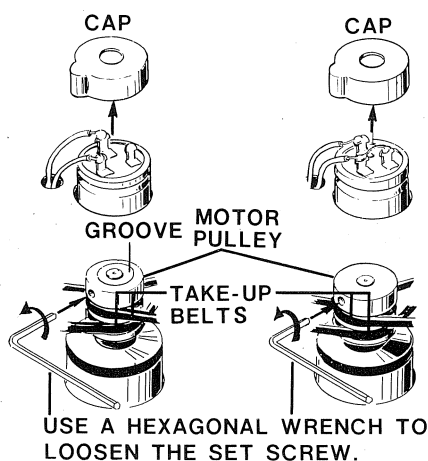
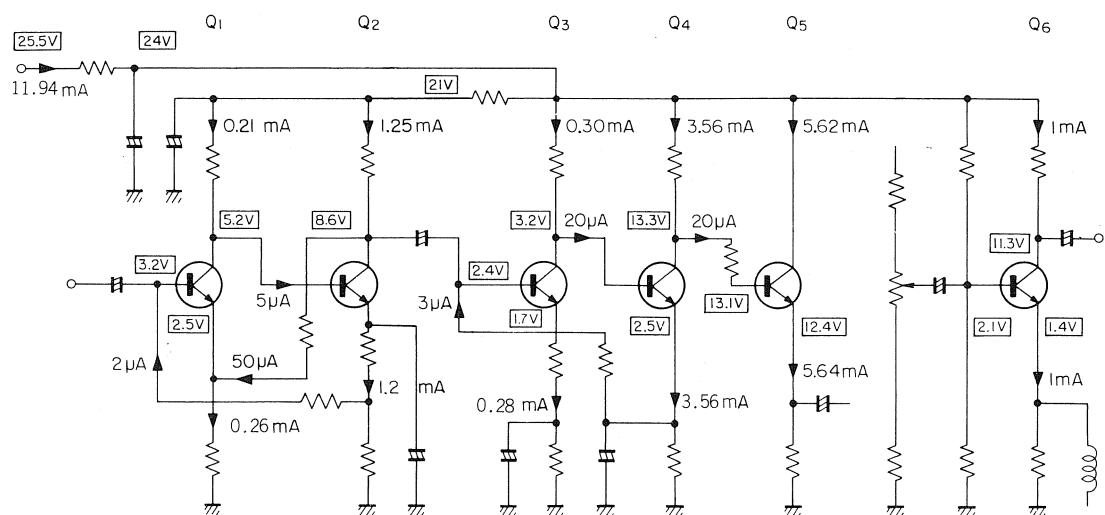


Fig. 33

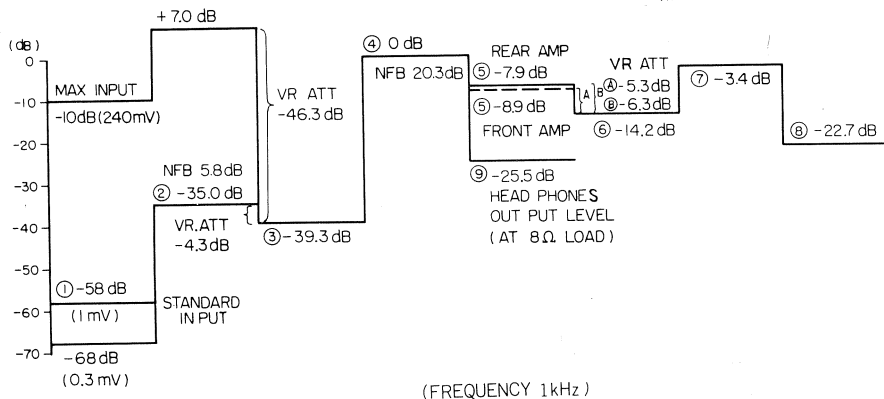
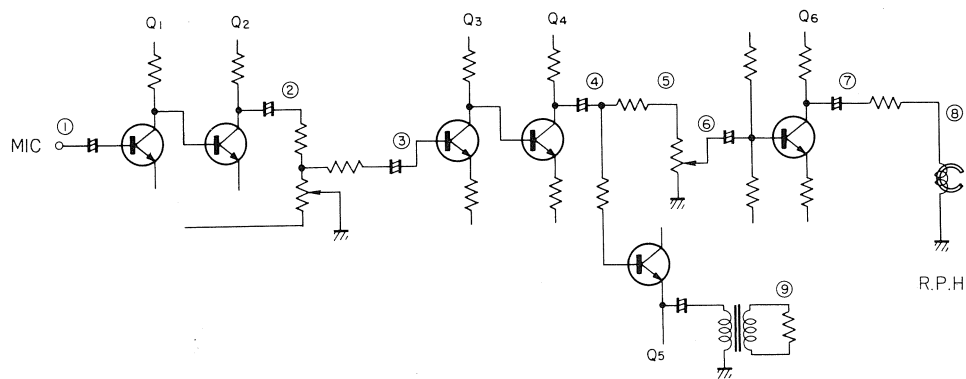
13. CURRENT AND VOLTAGE DIAGRAM



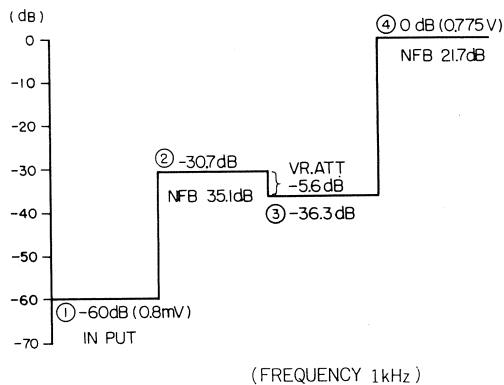
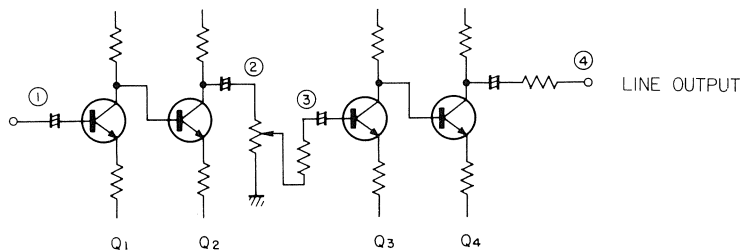
Q1~Q3 2SC458LG ⑧  
Q4~Q6 2SC458 ⑨

# 14. LEVEL DIAGRAM

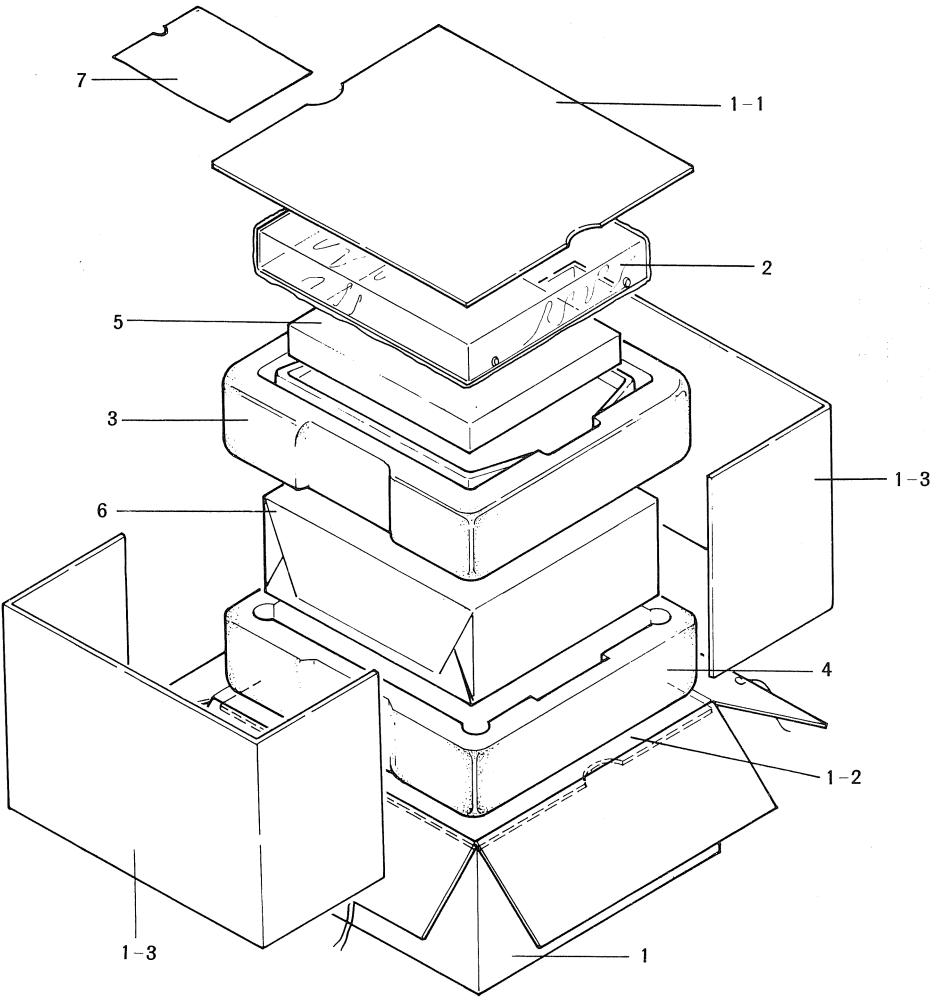
## 14-1. RECORDING



## 14-2. PLAYBACK



15. PACKING METHOD AND PARTS LIST



| Key No. | Description            | Part No.  |  |
|---------|------------------------|-----------|--|
| 1       | Packing case           | RHK-058-O |  |
| 1-1     | Top carton             |           |  |
| 1-2     | Bottom carton          |           |  |
| 1-3     | Hard board protector   |           |  |
| 2       | Dust cover assembly    | RAX-001-B |  |
| 3       | Styrotector A          | RHA-003-A |  |
| 4       | Styrotector B          | RHA-015-O |  |
| 5       | Accessories parts box  | RHX-004-A |  |
| 6       | Vinyl bag              | RHL-001-O |  |
| 7       | Operating instructions | RRB-005-A |  |

# 16. EXPLODED VIEWS AND MECHANICAL PARTS LIST

The following symbols stand for screws, nuts, washers, etc., as shown in EXPLODED VIEWS on pp. 27 — 40.

| Symbol | Description                    |
|--------|--------------------------------|
| P      | Pan head screw                 |
| B      | Binding head screw             |
| T      | Truss head screw               |
| C      | Countersunk head screw         |
| OC     | Oval countersunk head screw    |
| TS     | Tapping screw                  |
| PS     | Pan head sems screw            |
| CT     | Countersunk head tapping screw |
| BS     | Binding head sems screw        |
| SS     | Set screw                      |
| F      | Flat washer                    |
| SW     | Spring washer                  |
| FW     | Fiber washer                   |
| NW     | Nylon washer                   |
| TW     | Teflon washer                  |
| L      | Locking washer                 |
| S      | Solder lug                     |
| E      | Eyelet                         |
| N      | Hex nut                        |
| EW     | Retaining washer E-type        |

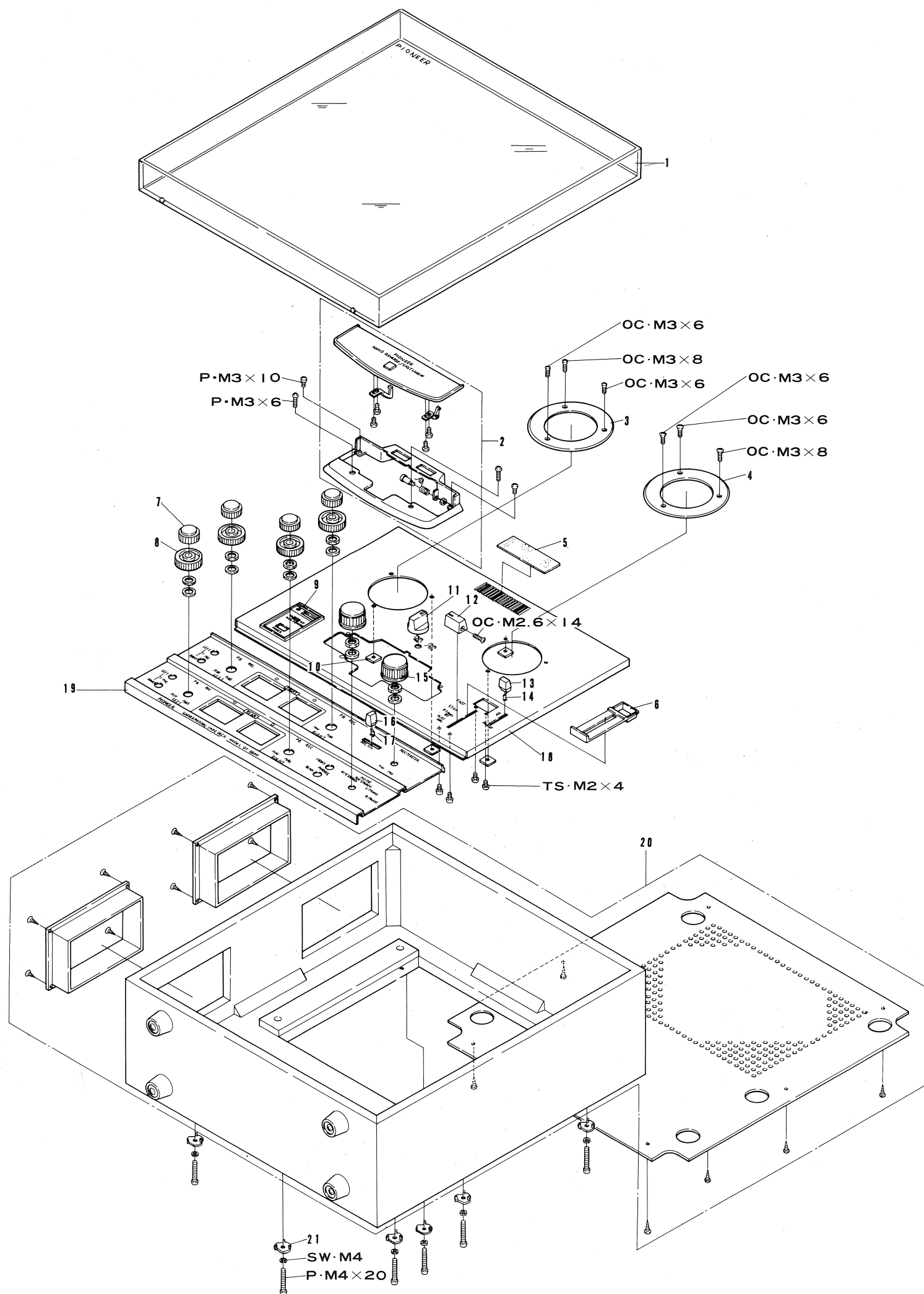
## PARTS LIST OF EXPLODED VIEW 1

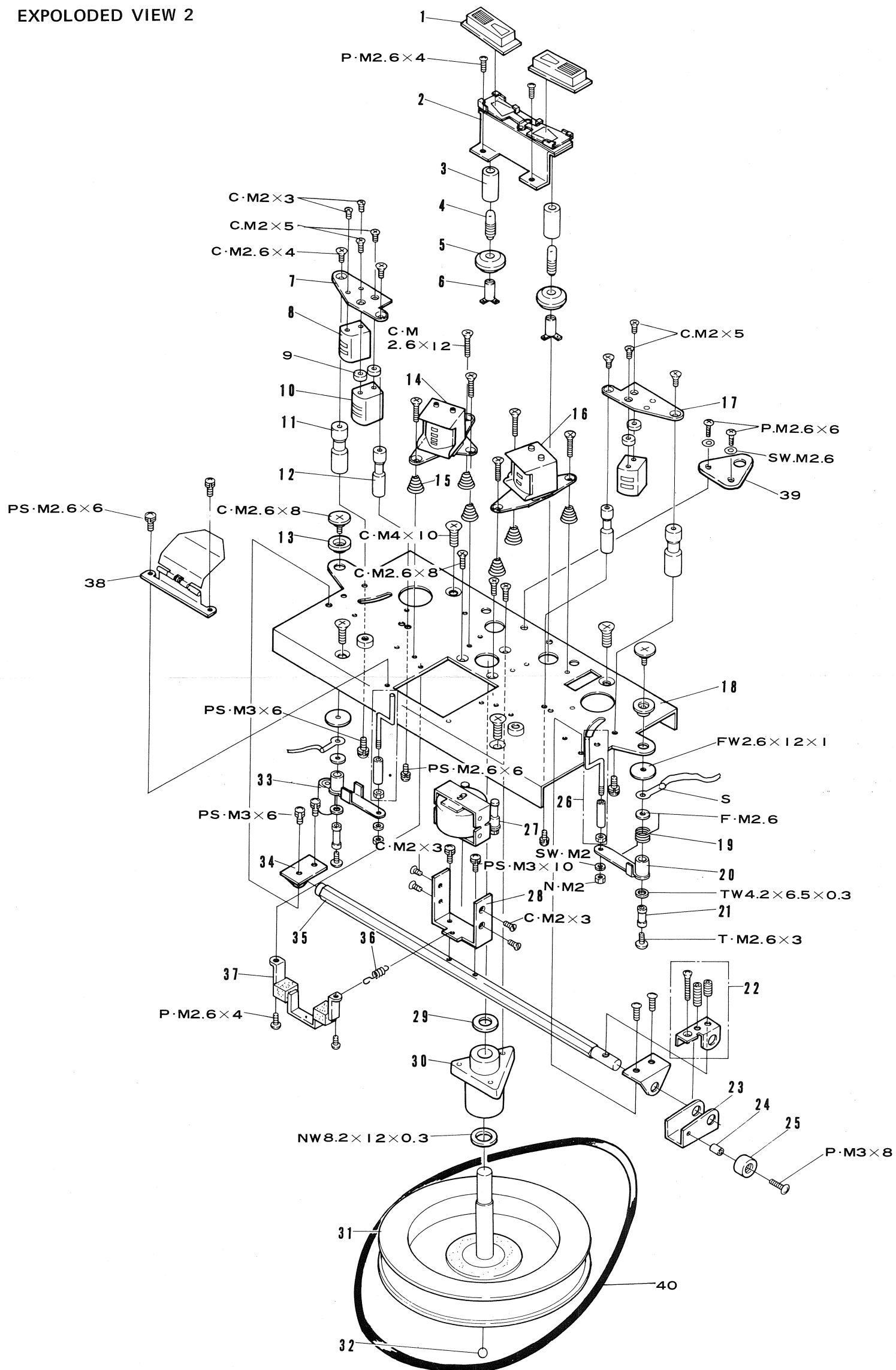
| Key No. | Description                   | Part No.  |   |
|---------|-------------------------------|-----------|---|
| 1       | Dust cover assembly           | RAX-001-B |   |
| 2       | Head housing assembly         | RXX-004-O |   |
| 3       | Reel mount frame              | RAH-064-O | * |
| 4       | Reel mount frame              | RAH-064-O | * |
| 5       | Cloth                         | E33-427-O | * |
| 6       | Finger rest                   | A66-852-A | * |
| 7       | Level control knob (P.B.)     | RAA-005-O |   |
| 8       | Level control knob (REC)      | RAA-004-A |   |
| 9       | Counter escutcheon            | RAP-032-O | * |
| 10      | Special nut                   | B71-856-O | * |
| 11      | Tape speed selector knob      | A12-406-A |   |
| 12      | Function lever knob           | RAA-010-O |   |
| 13      | Pause lever knob              | A18-606-O |   |
| 14      | Lock spring                   | RBK-055-O |   |
| 15      | REC master level control knob | A12-229-O |   |
| 16      | REC lever knob                | A18-401-O |   |
| 17      | Lock spring                   | RBK-055-O |   |
| 18      | Deck panel                    | RAH-023-A | * |
| 19      | Amplifier panel               | RXX-003-O |   |
| 20      | Wooden cabinet assembly       | RMM-022-O |   |
| 21      | Claw washer                   | E35-407-A |   |
|         | Connection cord               | D53-851-O |   |
|         | Operating instructions        | RRB-005-A |   |

### NOTE:

Use of asterisked \* parts can compose deck panel assembly (E17-412-O)

# EXPLODED VIEW 1





## PARTS LIST OF EXPLODED VIEW 2

| Key No. | Description                          | Part No.  |  |
|---------|--------------------------------------|-----------|--|
| 1       | Push switch button assembly          | RAA-008-O |  |
| 2       | Push switch assembly                 | RXE-010-O |  |
| 3       | Pilot lamp tube                      | REB-022-O |  |
| 4       | Pilot lamp                           | E22-851-B |  |
| 5       | Lamp grommet                         | REB-039-O |  |
| 6       | Lamp socket                          | RKK-005-O |  |
| 7       | E. head mounting metal (Left side)   | RNE-241-O |  |
| 8       | E. head                              | RPB-005-A |  |
| 9       | E. head spacer                       | RLA-035-O |  |
| 10      | E. head                              | RPB-005-A |  |
| 11      | Tape guide 8M                        | RLA-036-O |  |
| 12      | Tape guide 6M                        | RLA-037-O |  |
| 13      | Contact lever mounting base          | N93-857-O |  |
| 14      | REC/P.B. head (4 channel) assembly   | RXX-001-O |  |
| 15      | Head spring                          | RBH-076-O |  |
| 16      | REC/P.B. head (2 channel) assembly   | RXX-002-O |  |
| 17      | E head mounting metal (Right side)   | RNE-240-O |  |
| 18      | Mounting plate assembly              | RXA-077-A |  |
| 19      | Contact lever spring                 | B31-854-O |  |
| 20      | Contact lever arm (B)                | W72-851-O |  |
| 21      | Contact lever shaft                  | N54-856-A |  |
| 22      | Pinch arm raising metal (B) assembly | E17-409-O |  |
| 23      | Pinch arm raising metal (A)          | N62-528-O |  |
| 24      | Nylon shaft                          | N54-494-O |  |
| 25      | Nylon collar                         | N92-851-O |  |
| 26      | Contact lever pole assembly          | W73-409-B |  |
| 27      | Pinch roller assembly                | E17-511-O |  |
| 28      | Pinch roller holder                  | RNE-069-O |  |
| 29      | Oil shielding washer (A)             | REB-052-O |  |
| 30      | Capstan bearing                      | W71-852-A |  |

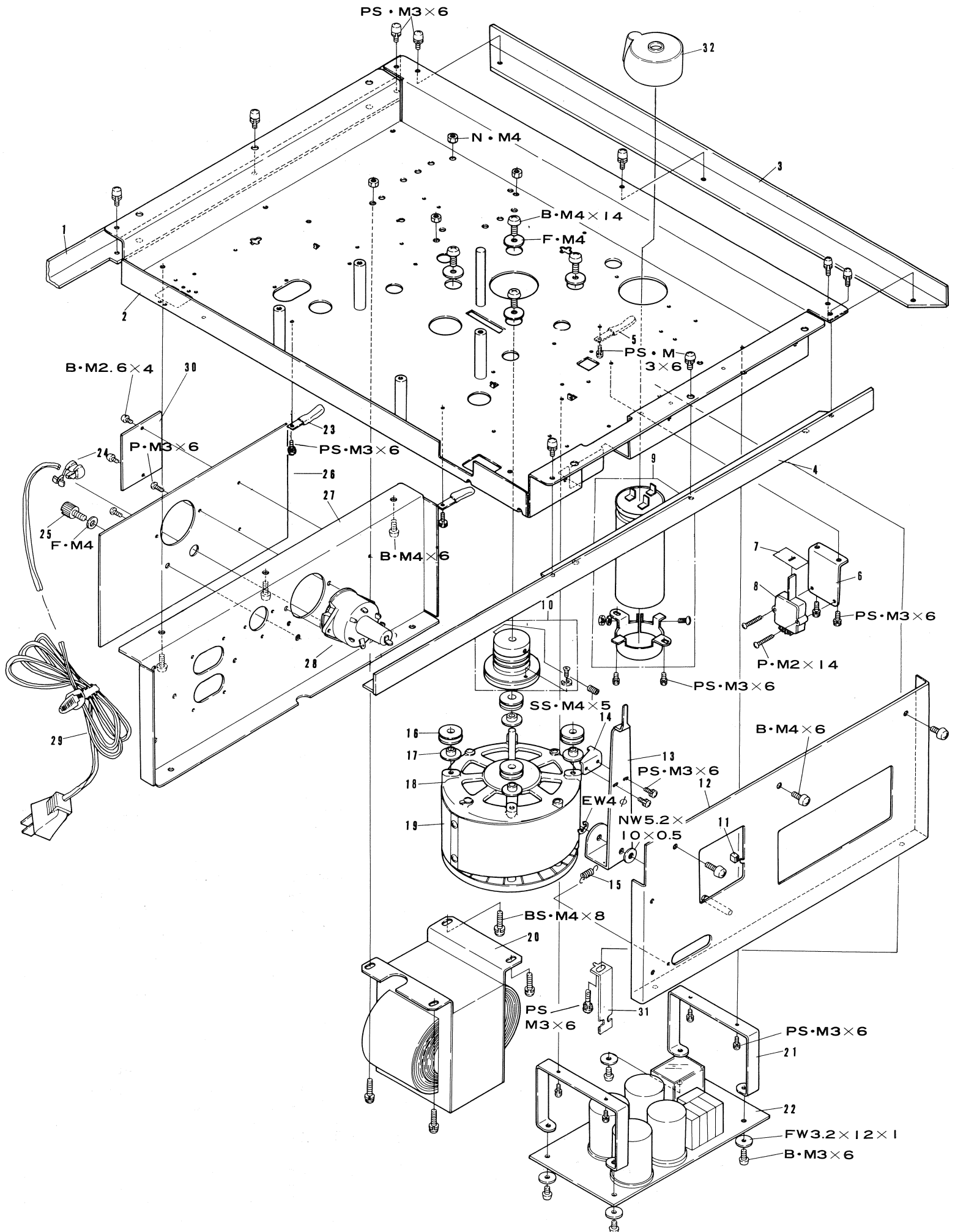
| Key No. | Description                   | Part No.  |  |
|---------|-------------------------------|-----------|--|
| 31      | Flywheel assembly             | E17-452-O |  |
| 32      | Nylon ball                    | N23-608-A |  |
| 33      | Contact lever arm (A)         | W72-855-O |  |
| 34      | Pinch arm bearing             | RNE-209-O |  |
| 35      | Pinch arm                     | N54-493-C |  |
| 36      | Pinch roller return spring    | B31-858-A |  |
| 37      | Pinch roller stopper assembly | W72-862-O |  |
| 38      | Pinch cover assembly          | W72-864-A |  |
| 39      | Rotary switch holder (A)      | RNE-131-O |  |
| 40      | Drive belt                    | N28-851-O |  |

## 32 PARTS LIST OF EXPLODED VIEW 3

| Key No. | Description                  | Part No.               |  |
|---------|------------------------------|------------------------|--|
| 1       | Aluminum frame (Left side)   | RAP-003-O              |  |
| 2       | Chassis assembly             | RXA-103-A              |  |
| 3       | Aluminum frame A (Tope side) | A61-409-B              |  |
| 4       | Aluminum frame (Right side)  | RAP-002-O              |  |
| 5       | Cord fixer                   | M46-025-B              |  |
| 6       | Switch mounting plate        | RNE-065-O              |  |
| 7       | Switch cover                 | E34-404-O              |  |
| 8       | Switch                       | S42-403-A              |  |
| 9       | MP capacitor                 | C22-403-A              |  |
| 10      | Motor pulley 50Hz<br>60Hz    | RXA-235-O<br>RXA-238-O |  |
| 11      | Rubber cushion               | REB-004-O              |  |
| 12      | Side chassis (Right side)    | RXA-232-O              |  |
| 13      | Pause lever                  | N62-524-A              |  |
| 14      | Metal for pause lever        | N62-525-O              |  |
| 15      | Pause lever spring           | B31-443-A              |  |
| 16      | Grommet                      | E31-851-O              |  |
| 17      | Motor spacer                 | N51-857-O              |  |
| 18      | Motor                        | RXM-003-A              |  |
| 19      | Motor shield cover           | W72-888-B              |  |
| 20      | Power transformer            | RTT-007-A              |  |
| 21      | Power supply unit stay       | M45-408-O              |  |
| 22      | Power supply unit            | RWR-008-A              |  |
| 23      | Cord fixer                   | M46-025-B              |  |
| 24      | Cord stopper                 | E32-056-O              |  |
| 25      | Screw for ground termianl    | B11-012-A              |  |
| 26      | Name plate                   | RAH-016-A              |  |
| 27      | Side chassis (Left side)     | RNC-020-A              |  |
| 28      | Line voltage selector switch | AKR-001-O              |  |
| 29      | Power cord                   | D11-003-E              |  |
| 30      | Model name plate             | RAL-037-O              |  |

| Key No. | Description   | Part No.  |  |
|---------|---------------|-----------|--|
| 31      | P.C.B. stay   | RNE-064-O |  |
| 32      | Capacitor cap | N93-438-O |  |

# EXPLODED VIEW 3



## 35 PARTS LIST OF EXPLODED VIEW 4

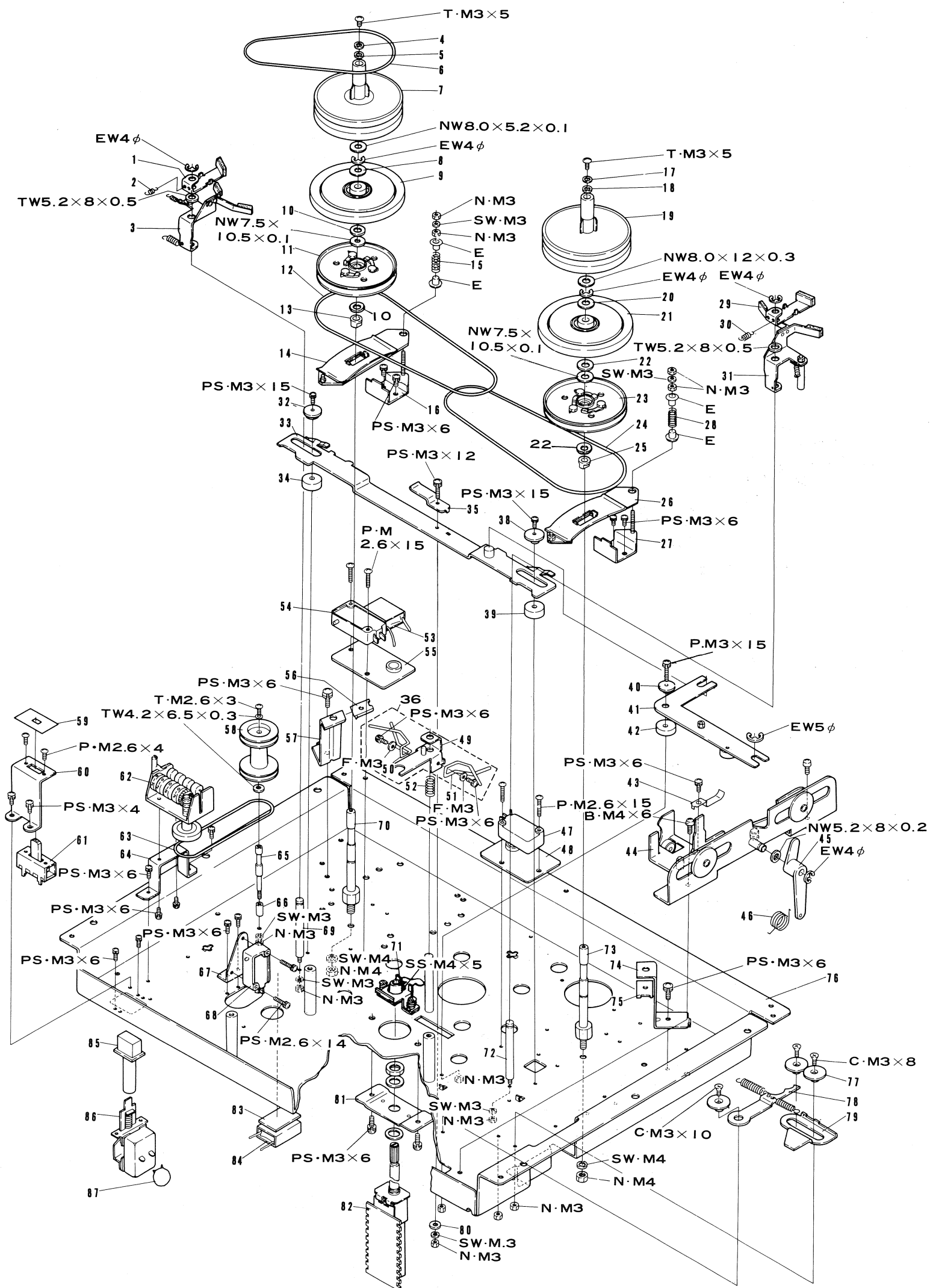
| Key No. | Description                             | Part No.  |  |
|---------|-----------------------------------------|-----------|--|
| 1       | Auxiliary brake (B) assembly            | W72-887-A |  |
| 2       | Brake roller spring                     | B31-860-O |  |
| 3       | Brake arm (A) assembly                  | RXA-001-O |  |
| 4       | Teflon washer                           | B23-865-O |  |
| 5       | Teflon washer                           | B23-866-O |  |
| 6       | Counter belt                            | N28-853-O |  |
| 7       | Reel mount base assembly                | E17-403-O |  |
| 8       | Oil shielding washer (B)                | E31-857-O |  |
| 9       | Reel mount pulley assembly              | E17-408-O |  |
| 10      | Nylon washer                            | B22-424-O |  |
| 11      | Take-up pulley (B) assembly             | E17-402-O |  |
| 12      | Take-up belt                            | REB-051-O |  |
| 13      | Take-up pulley spacer                   | RLA-197-O |  |
| 14      | Tension adjusting assembly              | W72-871-B |  |
| 15      | Tension adjusting spring                | B31-865-O |  |
| 16      | Tension adjusting plate holder assembly | W72-883-O |  |
| 17      | Teflon wahser                           | B23-865-O |  |
| 18      | Teflon washer                           | B23-866-O |  |
| 19      | Reel mount base assembly                | E17-403-O |  |
| 20      | Oil shielding washer (B)                | E31-857-O |  |
| 21      | Reel mount pulley assembly              | E17-408-O |  |
| 22      | Nylon washer                            | B22-424-O |  |
| 23      | Take-up pulley (A) assembly             | E17-401-O |  |
| 24      | Take-up belt                            | REB-051-O |  |
| 25      | Take-up pulley spacer                   | RLA-197-O |  |
| 26      | Tension adjusting assembly              | W72-871-B |  |
| 27      | Tension adjusting plate holer assembly  | W72-883-O |  |
| 28      | Tension adjusting spring                | B31-865-O |  |
| 29      | Auxiliary brake (A) assembly            | W72-886-A |  |
| 30      | Brake roller spring                     | B31-860-O |  |

| Key No. | Description                     | Part No.  |  |
|---------|---------------------------------|-----------|--|
| 31      | Brake arm (B) assembly          | RXA-002-O |  |
| 32      | Stepped washer (C)              | N51-855-A |  |
| 33      | Fast-forward cam                | W72-477-B |  |
| 34      | Slide spacer                    | N54-866-A |  |
| 35      | Speed selector stopper          | RNE-167-O |  |
| 36      | Speed selector cam assembly     | E17-512-O |  |
| 37      |                                 |           |  |
| 38      | Stepped washer (C)              | N51-855-A |  |
| 39      | Slide spacer                    | N54-866-A |  |
| 40      | Stepped washer (C)              | N51-855-A |  |
| 41      | Stepper arm assembly            | W72-869-A |  |
| 42      | Stepper arm spacer              | N54-867-O |  |
| 43      | Slide stepper spring            | B32-853-O |  |
| 44      | Slide lever assembly            | RXA-130-B |  |
| 45      | Pause cam lever                 | N81-404-A |  |
| 46      | Pause cam spring                | B31-444-O |  |
| 47      | Microswitch                     | S21-418-O |  |
| 48      | Insulator                       | M98-855-O |  |
| 49      | Speed selector cam (B) assembly | W72-479-A |  |
| 50      | Speed selector arm (A)          | N83-401-A |  |
| 51      | Speed selector arm (B)          | N83-402-A |  |
| 52      | Speed selector cam spring       | RBH-050-O |  |
| 53      | Spark killer                    | W53-045-O |  |
| 54      | Shut-off switch                 | S21-851-O |  |
| 55      | Insulator                       | M98-855-O |  |
| 56      | Special nut                     | B71-403-A |  |
| 57      | Panel holder                    | M48-401-A |  |
| 58      | Counter pulley                  | N93-855-O |  |
| 59      |                                 |           |  |
| 60      |                                 |           |  |

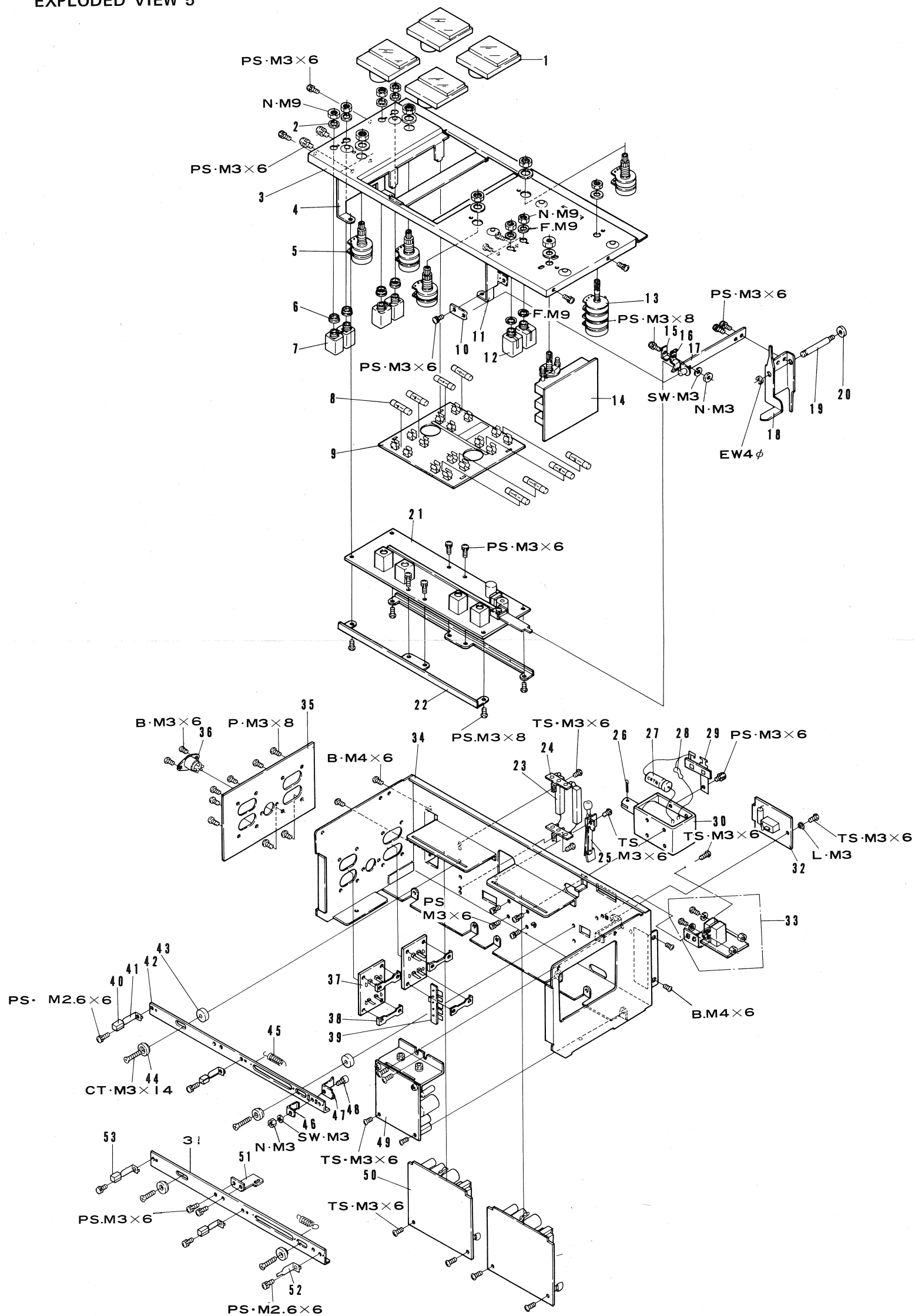
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| Key No. | Description                          | Part No.  |  |
|---------|--------------------------------------|-----------|--|
| 61      |                                      |           |  |
| 62      | Counter                              | RAW-001-O |  |
| 63      | Counter belt                         | N28-853-O |  |
| 64      | Counter mounting plate               | RNE-034-O |  |
| 65      | Counter pulley shaft                 | N54-863-A |  |
| 66      | Counter pulley spacer                | N54-864-O |  |
| 67      | Shut-off switch mounting plate       | M44-851-O |  |
| 68      | Shut-off switch                      | S21-851-O |  |
| 69      | Arm shaft                            | N54-862-O |  |
| 70      | Reel mount shaft                     | RLA-102-O |  |
| 71      | Speed selector assembly              | RXX-053-O |  |
| 72      | Arm shaft                            | N54-862-O |  |
| 73      | Reel mount shaft                     | RLA-102-O |  |
| 74      | Panel holder                         | M48-401-A |  |
| 75      | Special nut                          | B71-403-A |  |
| 76      | Chassis                              | RXA-132-A |  |
| 77      | Stepped washer (B)                   | N51-854-O |  |
| 78      | Stepper cam assembly                 | W72-474-O |  |
| 79      | Slide stopper                        | N61-863-O |  |
| 80      | Fast-forward cam collar              | RLA-032-O |  |
| 81      | Rotary switch holder                 | RNE-083-O |  |
| 82      | Equalizer switch unit                | RWX-008-O |  |
| 83      | Double face tape                     |           |  |
| 84      | Spark killer                         | W53-045-O |  |
| 85      | Knob for power switch                | RAA-003-A |  |
| 86      | Power switch                         | S31-851-O |  |
| 87      | Ceramic capacitor 0.01μF<br>DC 1.4kV | C43-003-O |  |

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## EXPLODED VIEW 5



## PARTS LIST OF EXPLODED VIEW 5

| Key No. | Description                      | Part No.    |  |
|---------|----------------------------------|-------------|--|
| 1       | Level meter                      | RAW-002-B   |  |
| 2       | Insulator washer                 | E34-004-O   |  |
| 3       | Front chassis                    | RNB-008-C   |  |
| 4       | Unit holder (Left side)          | RNE-142-O   |  |
| 5       | REC/P.B. level control           | RCV-002-O   |  |
| 6       | Insulator washer                 | E32-045-O   |  |
| 7       | Microphone jack                  | K72-024-O   |  |
| 8       | Pilot lamp                       | REL-002-O   |  |
| 9       | Lamp unit                        | RWX-004-O   |  |
| 10      | Bracket                          | RNE-091-O   |  |
| 11      | Unit holder (Right side)         | RNE-143-O   |  |
| 12      | Headphones jack                  | K72-026-O   |  |
| 13      | REC master level control         | RCV-001-O   |  |
| 14      | Mode switch unit                 | RWX-001-A   |  |
| 15      | Spring lever mounting plate      | RNE-214-A   |  |
| 16      | Spring lever                     | RBK-034-A   |  |
| 17      | Joint lever assembly             | RXA-080-A   |  |
| 18      | Recording lever                  | RNE-088-A   |  |
| 19      | Recording lever shaft            | RLA-038-O   |  |
| 20      | Washer (t = 2)                   | RNE-089-O   |  |
| 21      | AMP. unit (B)                    | RWF-004-B   |  |
| 22      | P.C.B. protector                 | RNE-093-A   |  |
| 23      | Wire wound resistor 75Ω 10W      | RCN-001-O   |  |
| 24      | 2P terminal strip                | RKC-004-O   |  |
| 25      | Spring switch No. 5              | S48-855-O   |  |
| 26      | Slot pin                         | B28-851-O   |  |
| 27      | Electrolytic capacitor 100μF 50V | CEB 101P 50 |  |
| 28      | Carbon film resistor 5.6kΩ ½W    | RD½PS 562J  |  |
| 29      | 1P terminal strip                | RKC-002-O   |  |
| 30      | Plunger                          | N15-852-O   |  |

| Key No. | Description           | Part No.  |  |
|---------|-----------------------|-----------|--|
| 31      | Slide metal           | RNE-092-O |  |
| 32      | REC. SW. unit         | RWX-002-O |  |
| 33      | Muting SW. unit       | RWX-003-O |  |
| 34      | AMP. chassis          | RNB-007-G |  |
| 35      | Terminal name plate   | RAK-001-O |  |
| 36      | DIN type socket       | K93-003-B |  |
| 37      | 4P input terminal     | RKB-001-A |  |
| 38      | Mounting plate        | RNE-119-O |  |
| 39      | 4P terminal strip     | RKC-003-A |  |
| 40      | Insulator tip         | REB-069-O |  |
| 41      | Slide metal lever (A) | RNE-356-O |  |
| 42      | Slide metal (B)       | RNE-215-O |  |
| 43      | Slide spacer          | N54-866-A |  |
| 44      | Stepped washer (D)    | N51-873-O |  |
| 45      | Slide metal spring    | B31-864-O |  |
| 46      | Plate                 | RNE-213-A |  |
| 47      | Plate spring          | RBK-035-O |  |
| 48      | Slide pole            | RLA-040-O |  |
| 49      | OSC. unit             | RWA-002-B |  |
| 50      | AMP. unit (A)         | RWF-003-B |  |
| 51      | Slide metal           | N64-853-O |  |
| 52      | Slide metal lever (B) | B32-419-O |  |
| 53      | Insulator tip         | REB-068-O |  |

# 17. SCHEMATIC DIAGRAMS, P.C.B. PATTERNS AND ELECTROLYTIC PARTS LISTS

## 17-1. MISCELLANEOUS

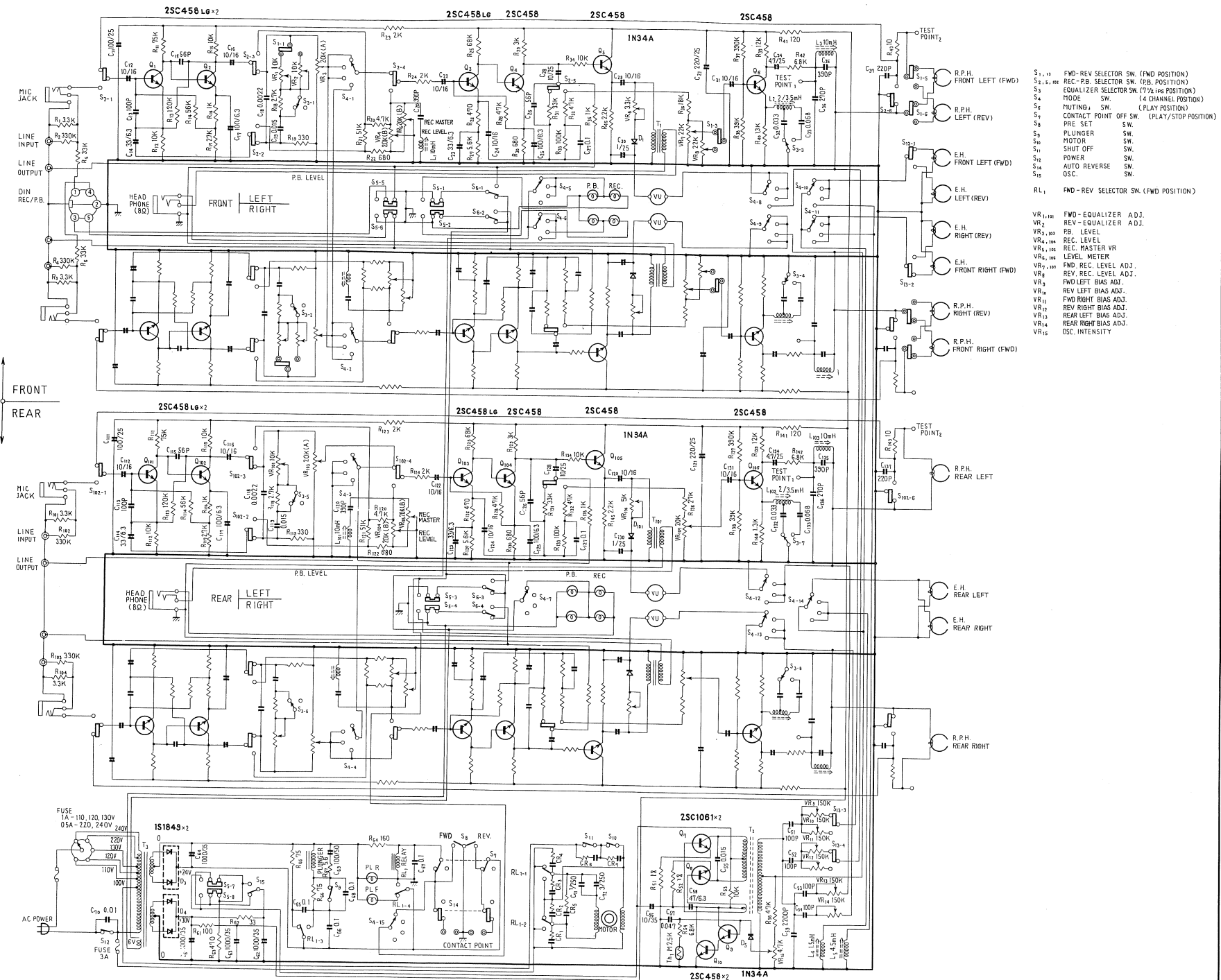
| Symbol  | Description                  | Part No.  |  |
|---------|------------------------------|-----------|--|
| T3      | Power supply unit            | RWR-008-A |  |
|         | EO. SW. unit                 | RWX-008-O |  |
|         | AMP. unit (A)                | RWF-003-B |  |
|         | AMP unit (B)                 | RWF-004-B |  |
|         | OSC. unit                    | RWA-002-B |  |
|         | Mode SW. unit                | RWX-001-A |  |
|         | REC. SW. unit                | RWX-002-O |  |
|         | Muting SW unit               | RWX-003-O |  |
|         | Lamp unit                    | RWX-004-O |  |
|         | Power transformer            | RTT-007-A |  |
|         | REC/P.B. head (4 channel)    | RPB-003-O |  |
|         | REC/P.B. head (2 channel)    | RPB-004-O |  |
|         | E. head                      | RPB-005-A |  |
|         | Line voltage selector switch | AKR-001-O |  |
|         | Level meter                  | RAW-002-B |  |
|         | Microphone jack              | K72-024-O |  |
|         | Headphones jack              | K72-026-O |  |
|         | DIN type socket              | K93-003-B |  |
|         | 4P input terminal            | RKB-001-A |  |
|         | 4P terminal strip            | RKC-003-A |  |
| C71~C72 | 2P lug terminal strip        | RKC-004-O |  |
|         | 1P lug terminal strip        | RKC-002-O |  |
|         | Pilot lamp (Lever meter)     | REL-002-O |  |
|         | Pilot lamp (push button)     | E22-851-B |  |
|         | 1A fuse                      | E21-004-O |  |
|         | Motor                        | RXM-003-A |  |
|         | Plunger                      | N15-852-O |  |
|         | MP capacitor                 | C22-403-A |  |

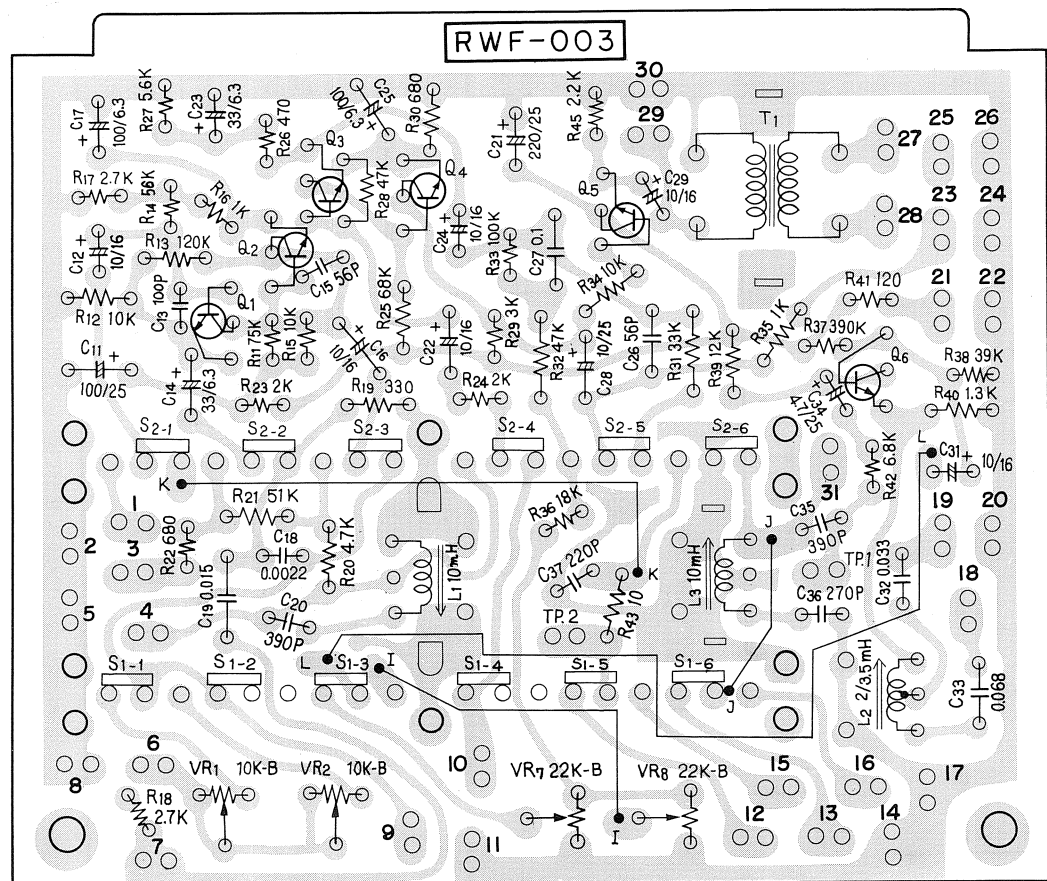
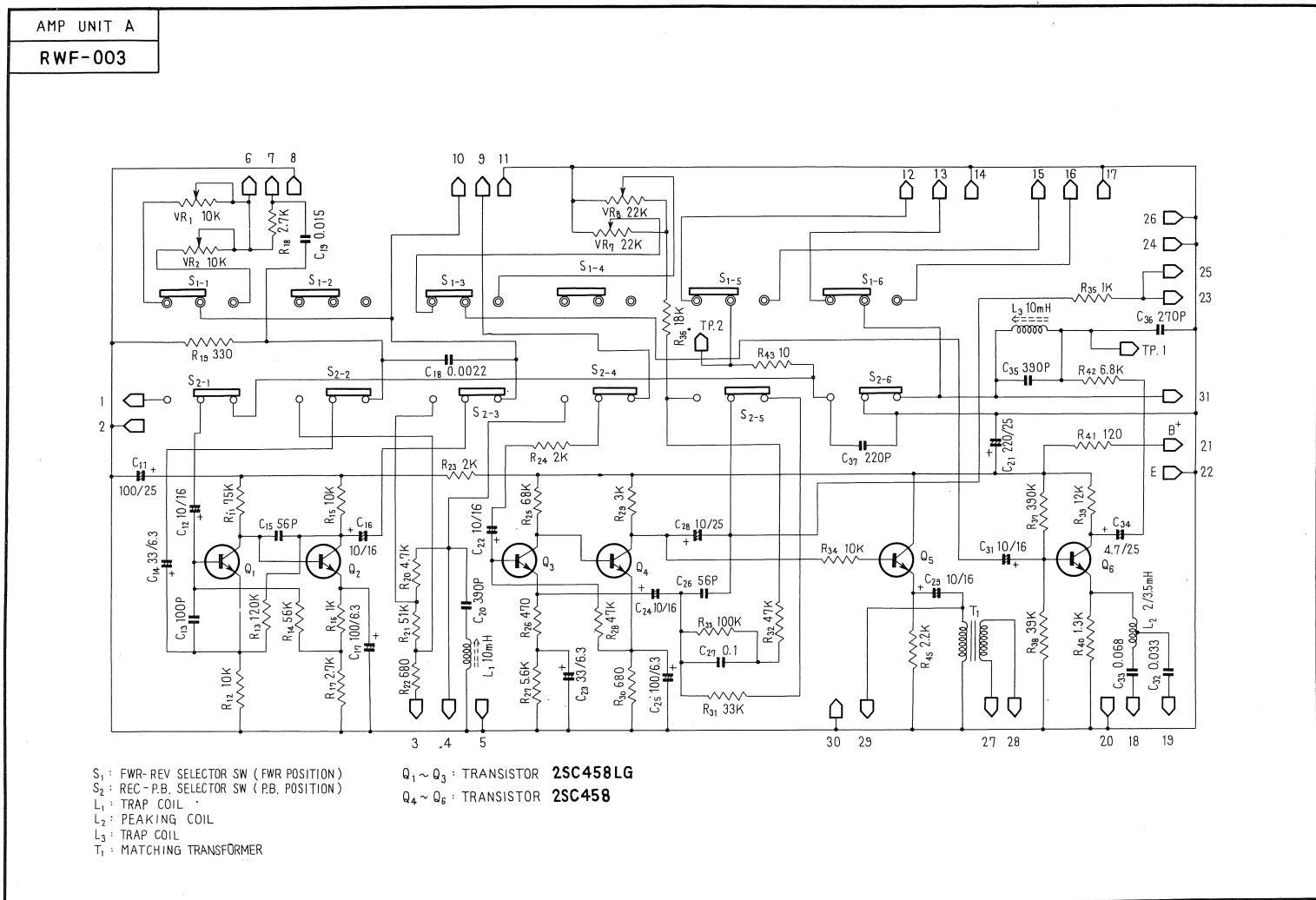
## RESISTORS

IN  $\Omega$ ,  $\frac{1}{4}W$  UNLESS OTHERWISE NOTED, k:k $\Omega$ , M:M $\Omega$ .

| Symbol | Description                | Part No.                 |  |
|--------|----------------------------|--------------------------|--|
| VR3    | >20k dual (REC/P.B. level) | RCV-002-O                |  |
| VR4    |                            |                          |  |
| VR103  | >20k dual (REC/P.B. level) | RCV-002-O                |  |
| VR104  |                            |                          |  |
| VR5    | >20k 4-gang (REC MASTER)   | RCV-001-O                |  |
| VR105  |                            |                          |  |
| R1     | Carbon film 3.3k           | RD $\frac{1}{4}$ PS 332K |  |
| R2     | Carbon film 330k           | RD $\frac{1}{4}$ PS 334K |  |
| R3     | Carbon film 3.3k           | RD $\frac{1}{4}$ PS 332K |  |
| R4     | Carbon film 330k           | RD $\frac{1}{4}$ PS 334K |  |
| R5     | Carbon film 33k            | RD $\frac{1}{4}$ PS 333K |  |
| R6     | Carbon film 33k            | RD $\frac{1}{4}$ PS 333K |  |
| R101   | Carbon film 3.3k           | RD $\frac{1}{4}$ PS 332K |  |
| R102   | Carbon film 330k           | RD $\frac{1}{4}$ PS 334K |  |
| R103   | Carbon film 330k           | RD $\frac{1}{4}$ PS 334K |  |
| R104   | Carbon film 3.3k           | RD $\frac{1}{4}$ PS 332K |  |
| R65    | Wire wound 75 10W          | RCN-001-O                |  |
| R66    | Wire wound 75 10W          | RCN-001-O                |  |

QT-6600/F





$Q_1 \sim Q_3$  2SC458 LG (B) or (C)  
 $Q_4 \sim Q_6$  2SC458 (C) or (D)  
 $S_1$  : FWD-REV SELECTOR SW (FWD POSITION)  
 $S_2$  : REC-P.B. SELECTOR SW (P.B. POSITION)  
 $L_1$  : TRAP. COIL  
 $L_2$  : PEAKING COIL  
 $L_3$  : TRAP COIL  
 $T_1$  : MATCHING TRANSFORMER

## AMP. UNIT A

### CAPACITORS

IN  $\mu\text{F}$ , UNLESS OTHERWISE NOTED, p:  $\mu\text{F}$ .

| Symbol | Description  |        |      | Part No.     |  |
|--------|--------------|--------|------|--------------|--|
| C11    | Electrolytic | 100    | 25V  | CEA 101P 25  |  |
| C12    | Electrolytic | 10     | 16V  | CEA 100P 16  |  |
| C13    | Styrol       | 100p   | 50V  | RCE-003-O    |  |
| C14    | Electrolytic | 33     | 6.3V | CEA 330P 6R3 |  |
| C15    | Styrol       | 56p    | 50V  | RCE-004-O    |  |
| C16    | Electrolytic | 10     | 16V  | CEA 100P 16  |  |
| C17    | Electrolytic | 100    | 6.3V | CEA 101P 6R3 |  |
| C18    | Mylar        | 0.0022 | 50V  | CQMA 222K 50 |  |
| C19    | Mylar        | 0.015  | 50V  | CQMA 153K 50 |  |
| C20    | Styrol       | 390p   | 50V  | RCE-001-O    |  |
| C21    | Electrolytic | 220    | 25V  | CEA 221P 25  |  |
| C22    | Electrolytic | 10     | 16V  | CEA 100P 16  |  |
| C23    | Electrolytic | 33     | 6.3V | CEA 330P 6R3 |  |
| C24    | Electrolytic | 10     | 16V  | CEA 100P 16  |  |
| C25    | Electrolytic | 100    | 6.3V | CEA 101P 6R3 |  |
| C26    | Styrol       | 56p    | 50V  | RCE-004-O    |  |
| C27    | Mylar        | 0.1    | 50V  | CQMA 104K 50 |  |
| C28    | Electrolytic | 10     | 25V  | CEA 100P 25  |  |
| C29    | Electrolytic | 10     | 16V  | CEA 100P 16  |  |
| C31    | Electrolytic | 10     | 16V  | CEA 100P 16  |  |
| C32    | Mylar        | 0.033  | 50V  | CQMA 333K 50 |  |
| C33    | Mylar        | 0.068  | 50V  | CQMA 683K 50 |  |
| C34    | Electrolytic | 4.7    | 25V  | CEA 4R7P 25  |  |
| C35    | Styrol       | 390p   | 50V  | RCE-001-O    |  |
| C36    | Styrol       | 270p   | 50V  | RCE-002-O    |  |
| C37    | Styrol       | 220p   | 50V  | RCE-006-O    |  |

## RESISTORS

IN  $\Omega$ ,  $\frac{1}{4}\text{W}$  UNLESS OTHERWISE NOTED, k: k $\Omega$ .

| Symbol | Description |      |        | Part No.                 |  |
|--------|-------------|------|--------|--------------------------|--|
| VR1    | Semi-fixed  | 10k  | type B | C92-049-O                |  |
| VR2    | Semi-fixed  | 10k  | type B | C92-049-O                |  |
| VR7    | Semi-fixed  | 22k  | type B | C92-857-O                |  |
| VR8    | Semi-fixed  | 22k  | type B | C92-857-O                |  |
| R11    | Carbon film | 75k  |        | RD $\frac{1}{4}$ VS 753K |  |
| R12    | Carbon film | 10k  |        | RD $\frac{1}{4}$ VS 103K |  |
| R13    | Carbon film | 120k |        | RD $\frac{1}{4}$ VS 124K |  |
| R14    | Carbon film | 56k  |        | RD $\frac{1}{4}$ VS 563K |  |
| R15    | Carbon film | 10k  |        | RD $\frac{1}{4}$ VS 103K |  |
| R16    | Carbon film | 1k   |        | RD $\frac{1}{4}$ VS 102K |  |
| R17    | Carbon film | 2.7k |        | RD $\frac{1}{4}$ VS 272K |  |
| R18    | Carbon film | 2.7k |        | RD $\frac{1}{4}$ VS 272K |  |
| R19    | Carbon film | 330  |        | RD $\frac{1}{4}$ VS 331K |  |
| R20    | Carbon film | 4.7k |        | RD $\frac{1}{4}$ VS 472K |  |
| R21    | Carbon film | 51k  |        | RD $\frac{1}{4}$ VS 513K |  |
| R22    | Carbon film | 680  |        | RD $\frac{1}{4}$ VS 681K |  |
| R23    | Carbon film | 2k   |        | RD $\frac{1}{4}$ VS 202K |  |
| R24    | Carbon film | 2k   |        | RD $\frac{1}{4}$ VS 202K |  |
| R25    | Carbon film | 68k  |        | RD $\frac{1}{4}$ VS 683K |  |
| R26    | Carbon film | 470  |        | RD $\frac{1}{4}$ VS 471K |  |
| R27    | Carbon film | 5.6k |        | RD $\frac{1}{4}$ VS 562K |  |
| R28    | Carbon film | 47k  |        | RD $\frac{1}{4}$ VS 473K |  |
| R29    | Carbon film | 3k   |        | RD $\frac{1}{4}$ VS 302K |  |
| R30    | Carbon film | 680  |        | RD $\frac{1}{4}$ VS 681K |  |
| R31    | Carbon film | 33k  |        | RD $\frac{1}{4}$ VS 333K |  |
| R32    | Carbon film | 47k  |        | RD $\frac{1}{4}$ VS 473K |  |
| R33    | Carbon film | 100k |        | RD $\frac{1}{4}$ VS 104K |  |
| R34    | Carbon film | 10k  |        | RD $\frac{1}{4}$ VS 103K |  |
| R35    | Carbon film | 1k   |        | RD $\frac{1}{4}$ VS 102K |  |
| R36    | Carbon film | 18k  |        | RD $\frac{1}{4}$ VS 183K |  |

| Symbol | Description |      |  | Part No.   |  |
|--------|-------------|------|--|------------|--|
| R37    | Carbon film | 390K |  | RD¼VS 394K |  |
| R38    | Carbon film | 39k  |  | RD¼VS 393K |  |
| R39    | Carbon film | 12k  |  | RD¼VS 123K |  |
| R40    | Carbon film | 1.3k |  | RD¼VS 132K |  |
| R41    | Carbon film | 120  |  | RD¼VS 121K |  |
| R42    | Carbon film | 6.8k |  | RD¼VS 682K |  |
| R43    | Carbon film | 10   |  | RD¼VS 100K |  |
| R45    | Carbon film | 2.2k |  | RD¼VS 222K |  |

## SEMICONDUCTORS

| Symbol | Description |        |            |  | Part No. |  |
|--------|-------------|--------|------------|--|----------|--|
| Q1     | 2SC458LG    | B or C | Transistor |  |          |  |
| Q2     | 2SC458LG    | B or C | Transistor |  |          |  |
| Q3     | 2SC458LG    | B or C | Transistor |  |          |  |
| Q4     | 2SC458      | C or D | Transistor |  |          |  |
| Q5     | 2SC458      | C or D | Transistor |  |          |  |
| Q6     | 2SC458      | C or D | Transistor |  |          |  |

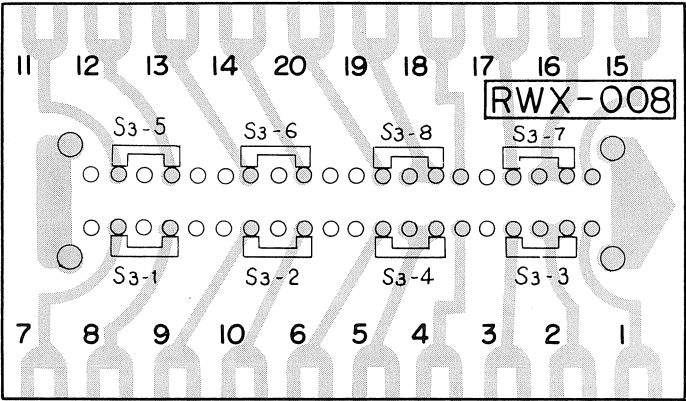
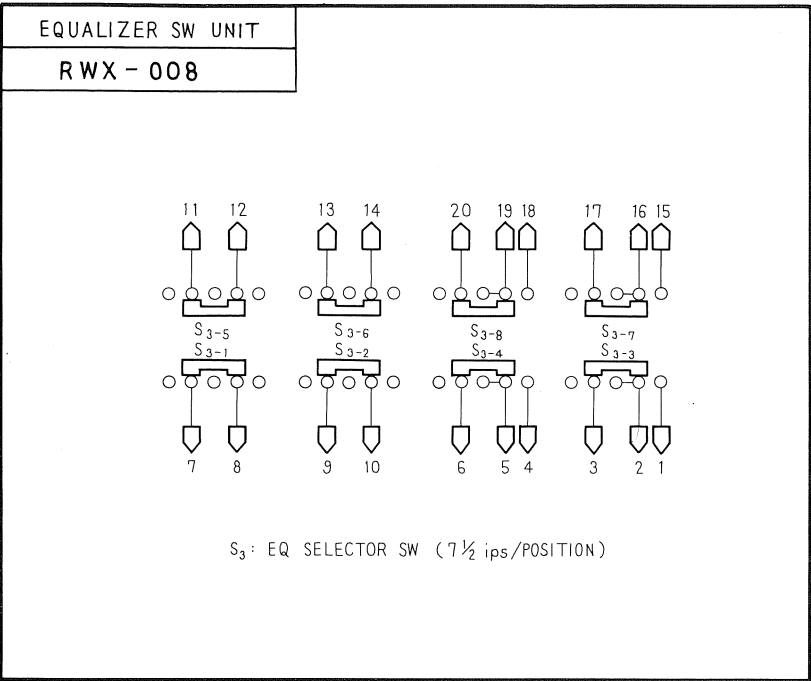
## SWITCHES

| Symbol | Description  |  | Part No.  |  |
|--------|--------------|--|-----------|--|
| S1     | Slide switch |  | S41-852-A |  |
| S2     | Slide switch |  | S41-852-A |  |

## TRANSFORMER, COILS

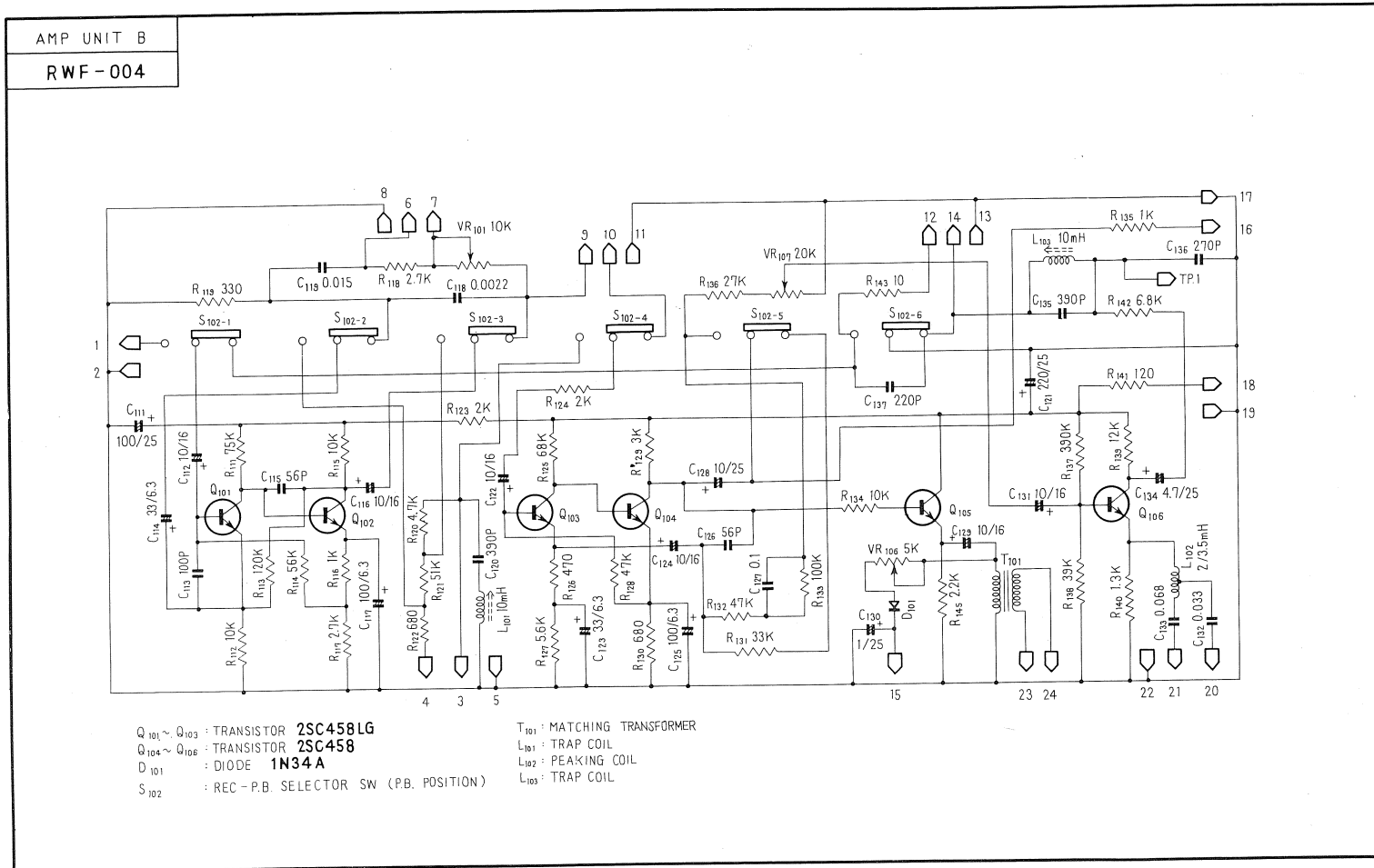
| Symbol | Description          | Part No.  |  |
|--------|----------------------|-----------|--|
| T1     | Matching transformer | T61-408-A |  |
| L1     | Trap coil            | T84-401-A |  |
| L2     | Peaking coil         | T84-402-A |  |
| L3     | Trap coil            | T84-401-A |  |

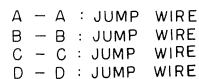
17-3. EQUALIZER SW. UNIT (RWX-008)



S<sub>3</sub> : EQUALIZER SELECTOR SW ( 7½ ips POSITION )

| Symbol | Description   | Part No.  |  |
|--------|---------------|-----------|--|
| S3     | Rotary switch | RSB-004-A |  |

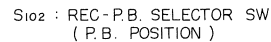




```

L101 : TRAP COIL
L102 : PEAKING COIL
L103 : TRAP COIL

```



```
VR101 : FWD EQUALIZER
VR106 : VU LEVEL
VR107 : FWD REC LEVEL
```

CAPACITORS

| Symbol | Description  |        |      |           | Part No. |  |
|--------|--------------|--------|------|-----------|----------|--|
| C111   | Electrolytic | 100    | 25V  | CEA       | 101P 25  |  |
| C112   | Electrolytic | 10     | 16V  | CEA       | 100P 16  |  |
| C113   | Styrol       | 100p   | 50V  | RCE-003-O |          |  |
| C114   | Electrolytic | 33     | 6.3V | CEA       | 330P 6R3 |  |
| C115   | Styrol       | 56p    | 50V  | RCE-004-O |          |  |
| C116   | Electrolytic | 10     | 16V  | CEA       | 100P 16  |  |
| C117   | Electrolytic | 100    | 6.3V | CEA       | 101P 6R3 |  |
| C118   | Mylar        | 0.0022 | 50V  | CQMA      | 222K 50  |  |
| C119   | Mylar        | 0.015  | 50V  | CQMA      | 153K 50  |  |
| C120   | Styrol       | 390p   | 50V  | RCE-001-O |          |  |
| C121   | Electrolytic | 220    | 25V  | CEA       | 221P 25  |  |
| C122   | Electrolytic | 10     | 16V  | CEA       | 100P 16  |  |
| C123   | Electrolytic | 33     | 6.3V | CEA       | 330 6R3  |  |
| C124   | Electrolytic | 10     | 16V  | CEA       | 100P 16  |  |
| C125   | Electrolytic | 100    | 6.3V | CEA       | 101P 6R3 |  |
| C126   | Styrol       | 56p    | 50V  | RCE-004-O |          |  |
| C127   | Mylar        | 0.1    | 50V  | CQMA      | 104K 50  |  |
| C128   | Electrolytic | 10     | 25V  | CEA       | 100P 25  |  |
| C129   | Electrolytic | 10     | 16V  | CEA       | 100P 16  |  |
| C130   | Electrolytic | 1      | 25V  | CEA       | 010P 25  |  |
| C131   | Electrolytic | 10     | 16V  | CEA       | 100P 16  |  |
| C132   | Mylar        | 0.033  | 50V  | CQMA      | 333K 50  |  |
| C133   | Mylar        | 0.068  | 50V  | CQMA      | 683K 50  |  |
| C134   | Electrolytic | 4.7    | 25V  | CEA       | 4R7P 25  |  |
| C135   | Styrol       | 390p   | 50V  | RCE-001-O |          |  |
| C136   | Styrol       | 270p   | 50V  | RCE-002-O |          |  |
| C137   | Styrol       | 220p   | 50V  | RCE-006-O |          |  |

RESISTORS

| Symbol | Description |      |        | Part No.   |  |
|--------|-------------|------|--------|------------|--|
| VR101  | Semi-fixed  | 10k  | type B | C81-417-O  |  |
| VR106  | Semi-fixed  | 5k   | type B | C81-415-O  |  |
| VR107  | Semi-fixed  | 20k  | type B | C81-428-O  |  |
| R111   | Carbon film | 75k  |        | RD¼VS 753K |  |
| R112   | Carbon film | 10k  |        | RD¼VS 103K |  |
| R113   | Carbon film | 120k |        | RD¼VS 124K |  |
| R114   | Carbon film | 56k  |        | RD¼VS 563K |  |
| R115   | Carbon film | 10k  |        | RD¼VS 103K |  |
| R116   | Carbon film | 1k   |        | RD¼VS 102K |  |
| R117   | Carbon film | 2.7k |        | RD¼VS 272K |  |
| R118   | Carbon film | 2.7k |        | RD¼VS 272K |  |
| R119   | Carbon film | 330  |        | RD¼VS 331K |  |
| R120   | Carbon film | 4.7k |        | RD¼VS 472K |  |
| R121   | Carbon film | 51k  |        | RD¼VS 513K |  |
| R122   | Carbon film | 680  |        | RD¼VS 681K |  |
| R123   | Carbon film | 2k   |        | RD¼VS 202K |  |
| R124   | Carbon film | 2k   |        | RD¼VS 202K |  |
| R125   | Carbon film | 68k  |        | RD¼VS 683K |  |
| R126   | Carbon film | 470  |        | RD¼VS 471K |  |
| R127   | Carbon film | 5.6k |        | RD¼VS 562K |  |
| R128   | Carbon film | 47k  |        | RD¼VS 473K |  |
| R129   | Carbon film | 3k   |        | RD¼VS 302K |  |
| R130   | Carbon film | 680  |        | RD¼VS 681K |  |
| R131   | Carbon film | 33k  |        | RD¼VS 333K |  |
| R132   | Carbon film | 47k  |        | RD¼VS 473K |  |
| R133   | Carbon film | 100k |        | RD¼VS 104K |  |
| R134   | Carbon film | 10k  |        | RD¼VS 103K |  |
| R135   | Carbon film | 1k   |        | RD¼VS 102K |  |
| R136   | Carbon film | 27k  |        | RD¼VS 273K |  |
| R137   | Carbon film | 390k |        | RD¼VS 394K |  |

| Symbol | Description |      |  | Part No.   |  |
|--------|-------------|------|--|------------|--|
| R138   | Carbon film | 39k  |  | RD¼VS 393K |  |
| R139   | Carbon film | 12k  |  | RD¼VS 123K |  |
| R140   | Carbon film | 1.3k |  | RD¼VS 132K |  |
| R141   | Carbon film | 120  |  | RD¼VS 121K |  |
| R142   | Carbon film | 6.8k |  | RD¼VS 682K |  |
| R143   | Carbon film | 10   |  | RD¼VS 100K |  |
| R145   | Carbon film | 2.2k |  | RD¼VS 222K |  |

TRANSFORMER, COILS

| Symbol | Description          | Part No.  |  |
|--------|----------------------|-----------|--|
| T101   | Matching transformer | T61-408-A |  |
| L101   | Trap coil            | T84-401-A |  |
| L102   | Peaking coil         | T84-402-A |  |
| L103   | Trap coil            | T84-401-A |  |

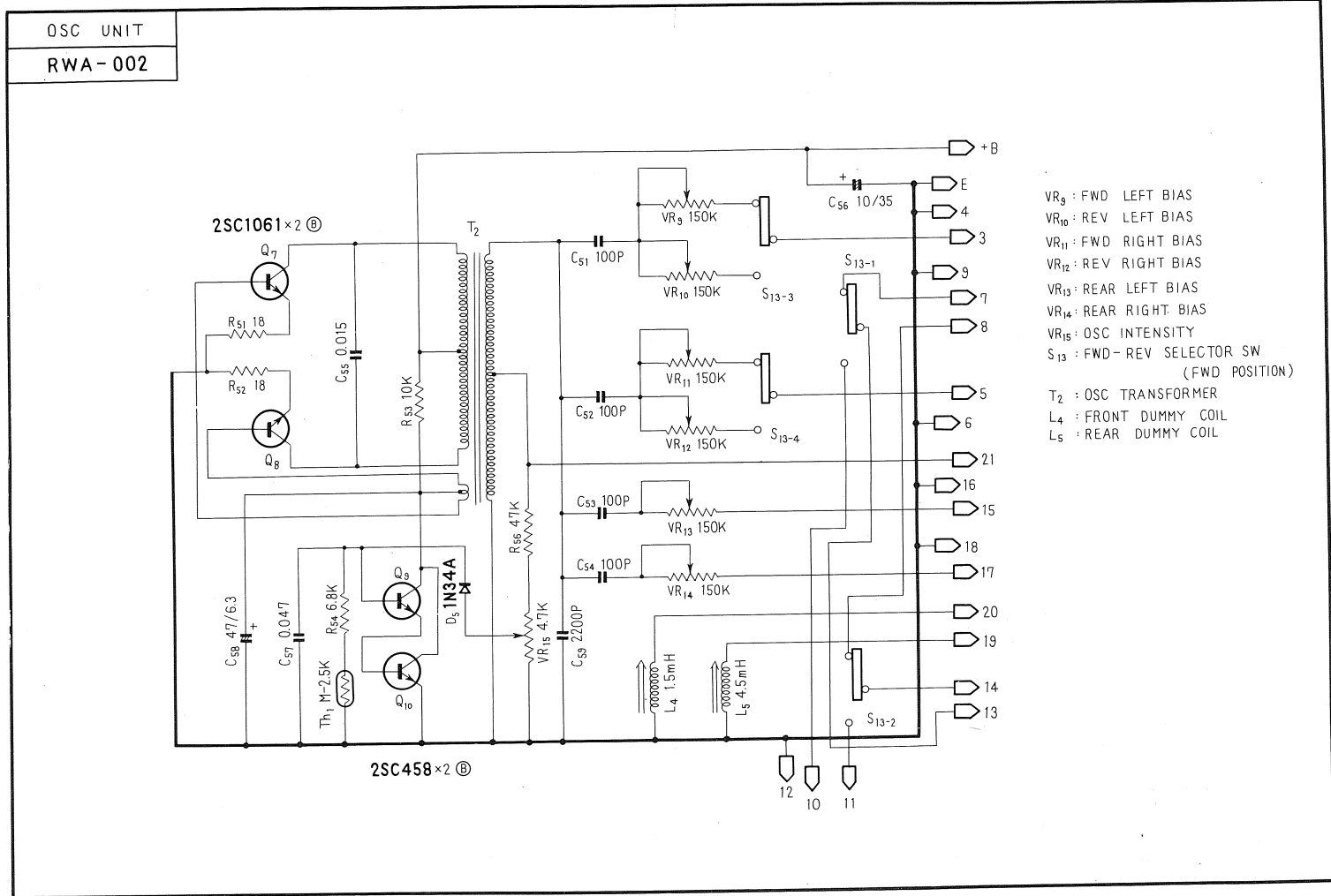
SEMICONDUCTORS

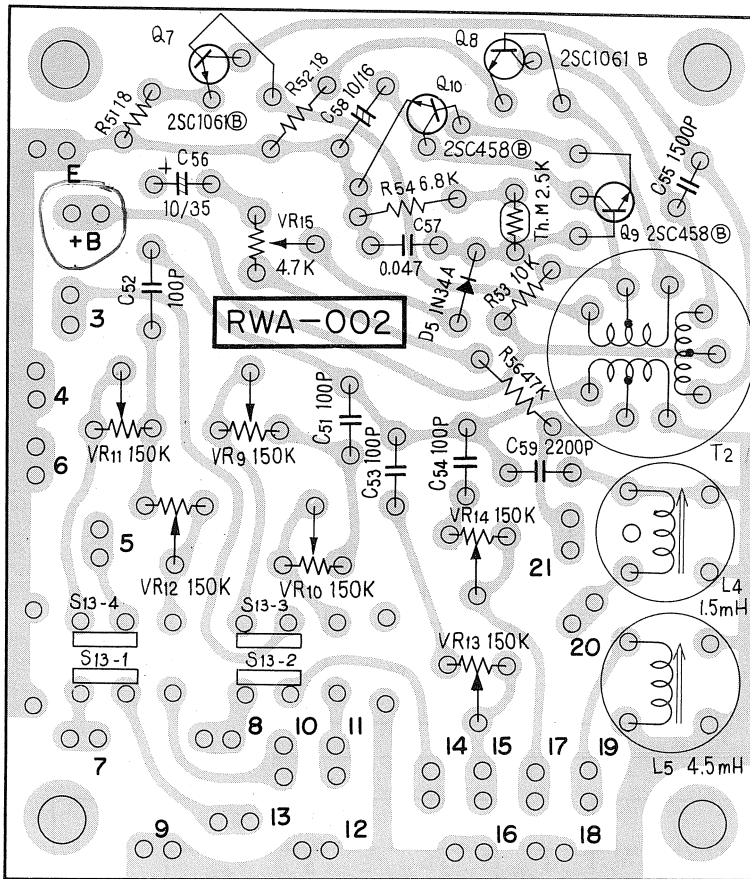
| Symbol | Description |        |            |  | Part No. |  |
|--------|-------------|--------|------------|--|----------|--|
| Q101   | 2SC458LG    | B or C | Transistor |  |          |  |
| Q102   | 2SC458LG    | B or C | Transistor |  |          |  |
| Q103   | 2SC458LG    | B or C | Transistor |  |          |  |
| Q104   | 2SC458      | C or D | Transistor |  |          |  |
| Q105   | 2SC458      | C or D | Transistor |  |          |  |
| Q106   | 2SC458      | C or D | Transistor |  |          |  |
| D101   | 1N34A       |        | Diode      |  |          |  |

SWITCH

| Symbol | Description  | Part No.  |  |
|--------|--------------|-----------|--|
| S102   | Slide switch | RSH-002-O |  |

# 17-5. OSCILLATOR UNIT (RWA-002)





- |                           |                            |                       |
|---------------------------|----------------------------|-----------------------|
| VR9 : FWD LEFT BIAS ADJ   | VR13 : REAR LEFT BIAS ADJ  | T2 : OSC TRANSFORMER  |
| VR10 : REV LEFT BIAS ADJ  | VR14 : REAR RIGHT BIAS ADJ | L4 : FRONT DUMMY COIL |
| VR11 : FWD RIGHT BIAS ADJ | VR15 : OSC INTENSITY       | L5 : REAR DUMMY COIL  |
| VR12 : REV RIGHT BIAS ADJ | S13 : FWD-REV SELECTOR     |                       |
|                           | SW ( FWD POSITION )        |                       |

## 56 OSCILLATOR UNIT

### CAPACITORS

| Symbol | Description  |       |      |  | Part No.     |  |
|--------|--------------|-------|------|--|--------------|--|
| C51    | Styrol       | 100p  | 50V  |  | RCE-003-O    |  |
| C52    | Styrol       | 100p  | 50V  |  | RCE-003-O    |  |
| C53    | Styrol       | 100p  | 50V  |  | RCE-003-O    |  |
| C54    | Styrol       | 100p  | 50V  |  | RCE-003-O    |  |
| C55    | Styrol       | 0.015 | 50V  |  | CQSA 153K 50 |  |
| C56    | Electrolytic | 10    | 35V  |  | CEA 100P 35  |  |
| C57    | Mylar        | 0.047 | 50V  |  | CQMA 473K 50 |  |
| C58    | Electrolytic | 47    | 6.3V |  | CEA 470P 6R3 |  |
| C59    | Styrol       | 2200p | 50V  |  | RCE-005-O    |  |

### RESISTORS

| Symbol | Description |      |        |  | Part No.   |  |
|--------|-------------|------|--------|--|------------|--|
| VR9    | Semi-fixed  | 150k | type B |  | C92-860-O  |  |
| VR10   | Semi-fixed  | 150k | type B |  | C92-860-O  |  |
| VR11   | Semi-fixed  | 150k | type B |  | C92-860-O  |  |
| VR12   | Semi-fixed  | 150k | type B |  | C92-860-O  |  |
| VR13   | Semi-fixed  | 150k | type B |  | C92-860-O  |  |
| VR14   | Semi-fixed  | 150k | type B |  | C92-860-O  |  |
| VR15   | Semi-fixed  | 4.7k | type B |  | C92-051-O  |  |
| R51    | Carbon film | 18   |        |  | RD¼VS 180K |  |
| R52    | Carobn film | 18   |        |  | RD¼VS 180K |  |
| R53    | Carbon film | 10k  |        |  | RD¼VS 103K |  |
| R54    | Carbon film | 6.8k |        |  | RD¼VS 682K |  |
| R56    | Carbon film | 47k  |        |  | RD¼VS 473K |  |

## SEMICONDUCTORS

| Symbol | Description |        |            |  | Part No. |  |
|--------|-------------|--------|------------|--|----------|--|
| Q7     | 2SC1061     | B or C | Transistor |  |          |  |
| Q8     | 2SC1061     | B or C | Transistor |  |          |  |
| Q9     | 2SC458      | B or C | Transistor |  |          |  |
| Q10    | 2SC458      | B or C | Transistor |  |          |  |
| D5     | 1N34A       |        | Diode      |  |          |  |
| TH1    | M2R5K       |        | Thermistor |  |          |  |

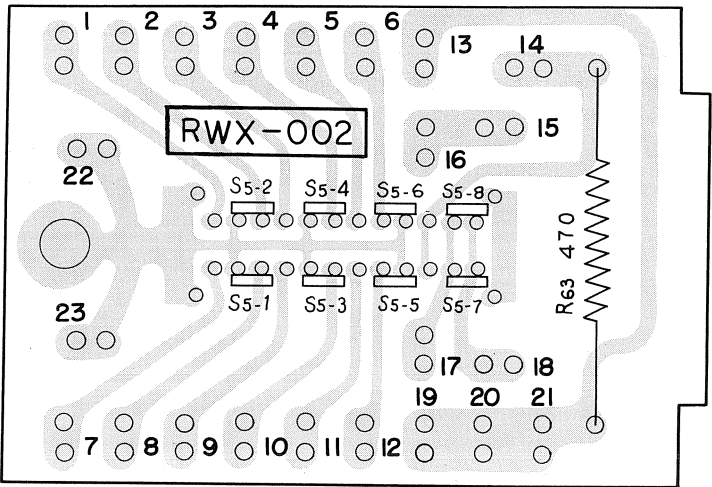
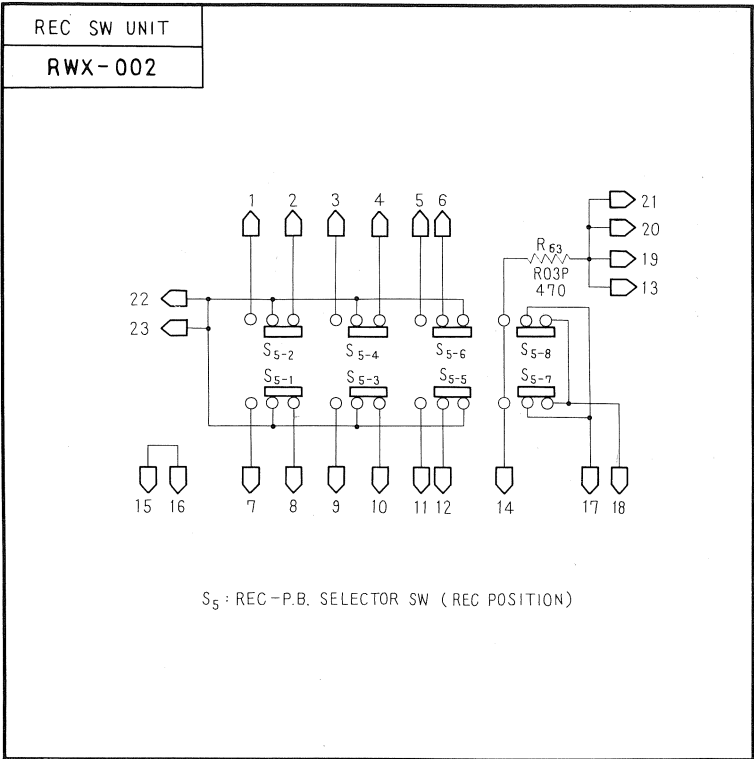
### SWITCH

| Symbol | Description  | Part No.  |  |
|--------|--------------|-----------|--|
| S13    | Slide switch | S41-856-B |  |

### TRANSFORMER, COILS

| Symbol | Description            | Part No.  |  |
|--------|------------------------|-----------|--|
| T2     | Oscillator transformer | RTD-001-O |  |
| L4     | Dummy coil A           | RTD-002-O |  |
| L5     | Dummy coil B           | RTD-003-O |  |

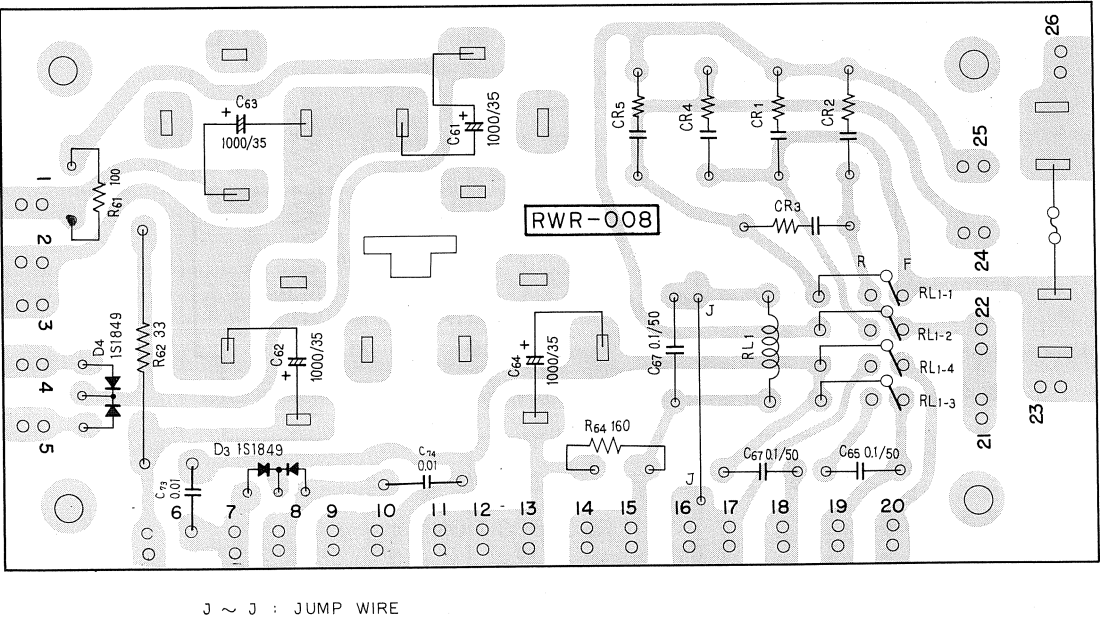
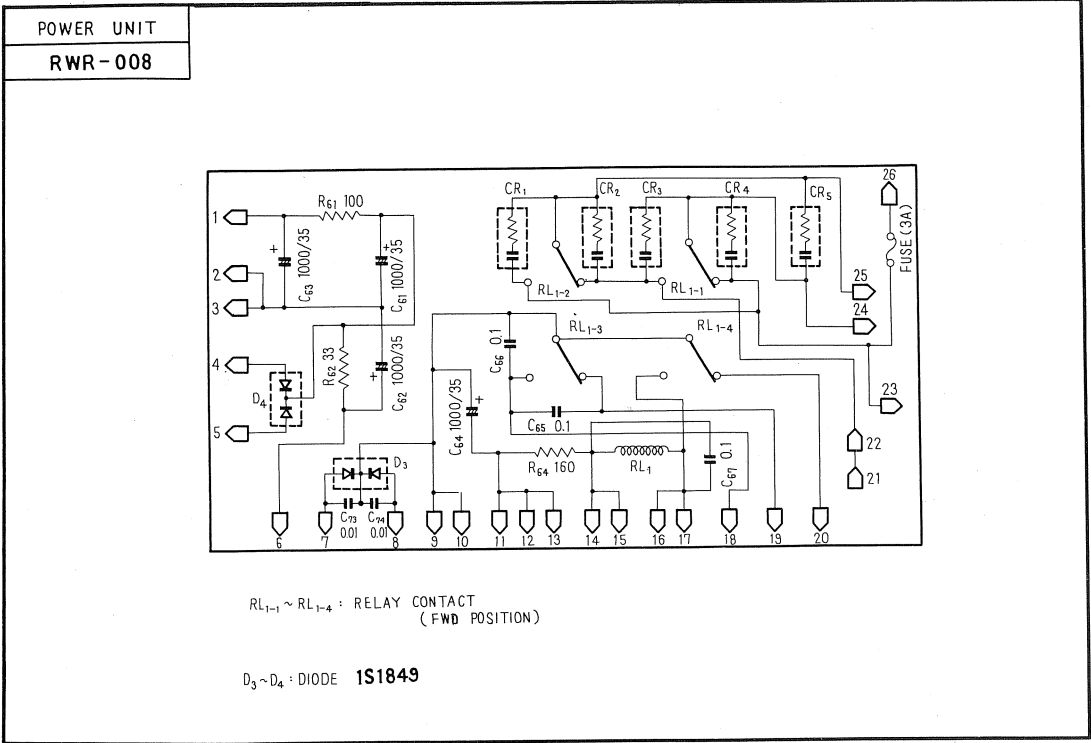
17-6. REC. SW. UNIT (RWX-002)



S<sub>5</sub> : REC - P.B. SELECTOR SW  
( REC POSITION )

| Symbol | Description |     |    | Part No.  |  |
|--------|-------------|-----|----|-----------|--|
| S5     | REC. SW.    |     |    | RSH-004-A |  |
| R63    | Metal oxide | 470 | 3W | RS3P 471K |  |

17-7. POWER SUPPLY UNIT (RWR-008)



## POWER SUPPLY UNIT

### CAPACITORS

| Symbol | Description  |      |         |  | Part No.     |  |
|--------|--------------|------|---------|--|--------------|--|
| C61    | Electrolytic | 1000 | 35V     |  | C52-068-O    |  |
| C62    | Electrolytic | 1000 | 35V     |  | C52-068-O    |  |
| C63    | Electrolytic | 1000 | 35V     |  | C52-068-O    |  |
| C64    | Electrolytic | 1000 | 35V     |  | C52-068-O    |  |
| C65    | Mylar        | 0.1  | 50V     |  | CQMA 104K 50 |  |
| C66    | Mylar        | 0.1  | 50V     |  | CQMA 104K 50 |  |
| C67    | Mylar        | 0.1  | 50V     |  | CQMA 104K 50 |  |
| C73    | Ceramic      | 0.01 | DC1.4kV |  | C43-003-O    |  |
| C74    | Ceramic      | 0.01 | DC1.4kV |  | C43-003-O    |  |

### RESISTORS

| Symbol | Description |     |    |  | Part No.   |  |
|--------|-------------|-----|----|--|------------|--|
| R61    | Carbon film | 100 | ½W |  | RD½PS 101K |  |
| R62    | Carbon film | 33  | 1W |  | RD1PS 330K |  |
| R64    | Metal oxide | 160 | 3W |  | RS3P 161K  |  |

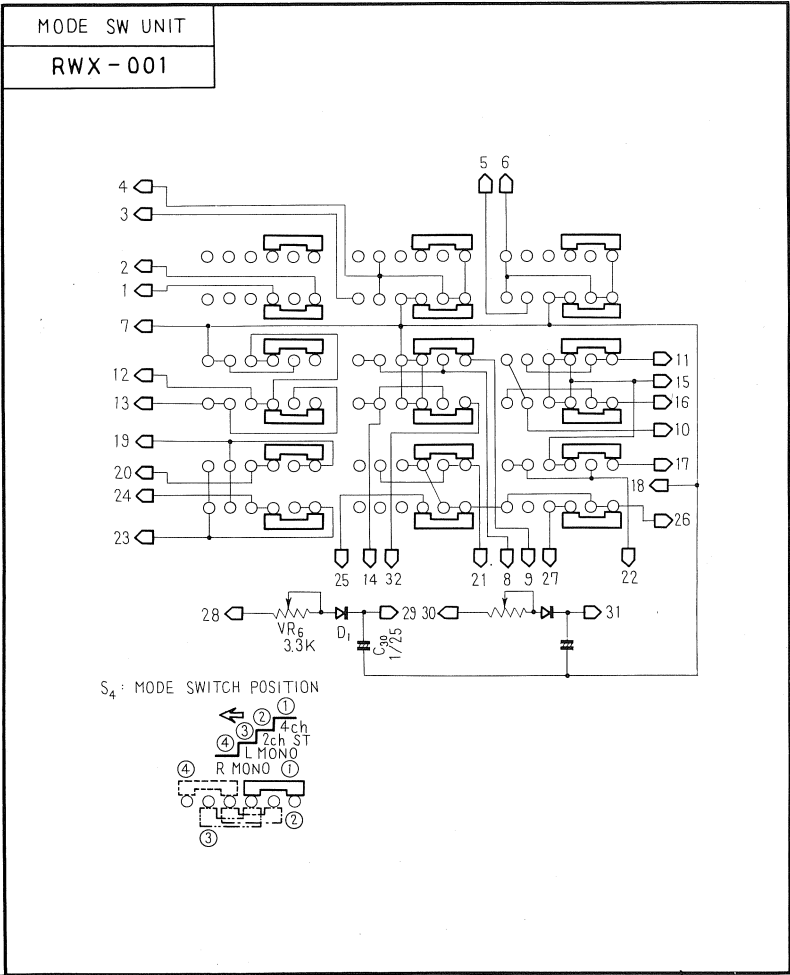
### SEMICONDUCTORS

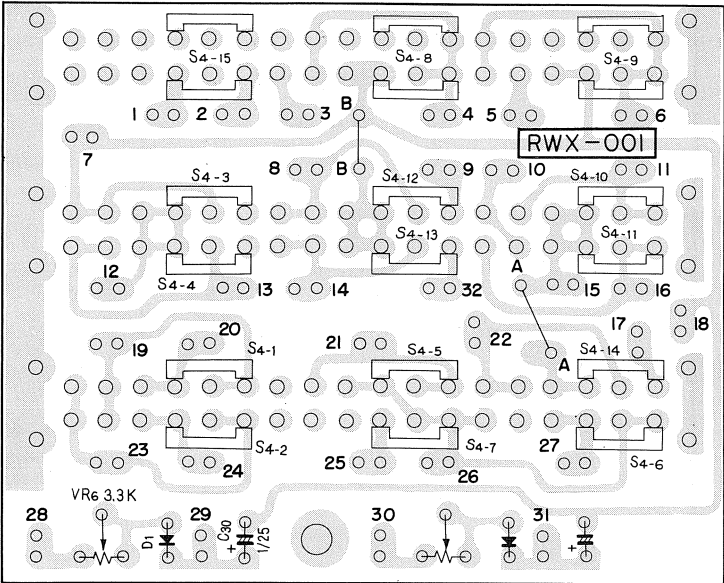
| Symbol | Description |       |  |  | Part No. |  |
|--------|-------------|-------|--|--|----------|--|
| D3     | 1S1849      | Diode |  |  |          |  |
| D4     | 1S1849      | Diode |  |  |          |  |

## OTHERS

| Symbol | Description   | Part No.  |  |
|--------|---------------|-----------|--|
| RL1    | Relay (12V)   | S61-853-O |  |
| CR1    | Spark killer  | W53-045-O |  |
| CR2    | Spark killer  | W53-045-O |  |
| CR3    | Spark killer  | W53-045-O |  |
| CR4    | Spark killler | W53-045-O |  |
| CR5    | Spark killer  | W53-045-O |  |
|        | Fuse 3A       | E21-006-O |  |
|        | Fuse holder   | K91-006-O |  |

17-8. MODE SW. UNIT (RWX-001)



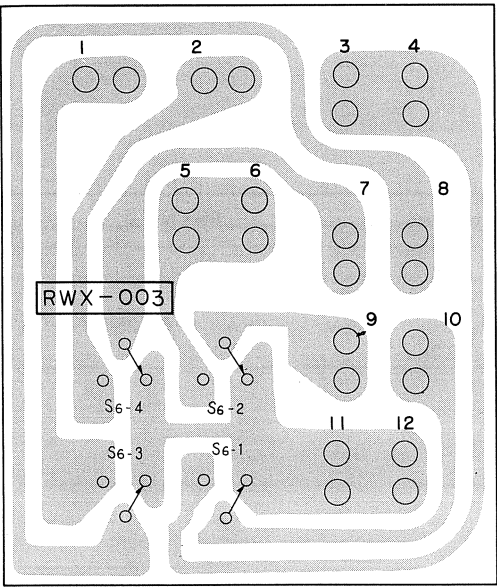
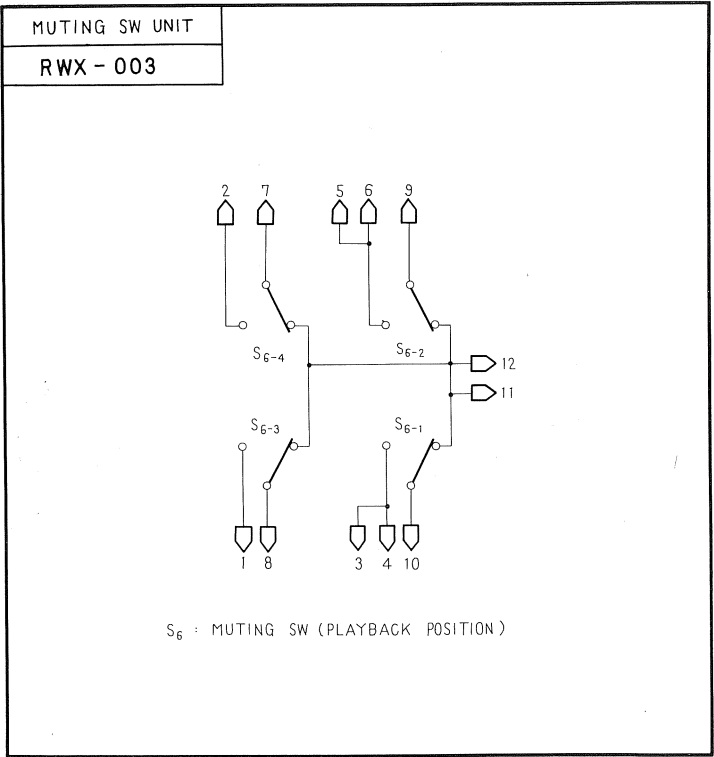


S4 : MODE SW ( 4CH STEREO POSITION )  
A - A : JUMP WIRE  
B - B : JUMP WIRE

MODE SW UNIT

| Symbol | Description  |       |     | Part No.    |  |
|--------|--------------|-------|-----|-------------|--|
| S4     | Mode switch  |       |     | RSH-003-O   |  |
| D1     | 1N34A        | Diode |     |             |  |
| C30    | Electrolytic | 1     | 25V | CEA 010P 25 |  |
| VR6    | Semi-fixed   | 3.3k  |     | C92-402-O   |  |

17-9. MUTING SW. UNIT (RWX-003)



S<sub>6</sub> : MUTING SW ( PLAY POSITION )

| Symbol | Description            | Part No.  |  |
|--------|------------------------|-----------|--|
| S6     | Muting switch assembly | RSK-008-O |  |

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