Service Manual

4-CHANNEL STEREO
TAPE DECK

QT-6600/F

PIONEER®

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1. SPECIFICATIONS

Duizza and control	1 material control delication with automatic manner					
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					
Hack	4-track 2-channel stereo					
	4-track 1-channel mono					
Head	4-track 4-channel recording/playback head x 1					
Ticau	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)					
Tapo Speca	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 20,000 Hz (50 to 15,000 Hz, ±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 $0.3\mathrm{mV}/50\mathrm{k}\Omega$					
	Line input					
Output level/load impedance	Line output $0.775\mathrm{V}/50\mathrm{k}\Omega$					
	(Level meter "0" position) 1.2V (Max)					
	Headphone output $0.2\mathrm{mW/8}\Omega$					
	(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	75 W					
Overall dimensiones	$17''(W) \times 8-3/8''(D) \times 18-3/8''(H)$					
	434 (W) × 212 (D) × 478 (H) mm					
	(including body-height dust cover and feet)					
Weight	With package 46 lb 4 oz (21 kg)					
	Without package 37lb 7oz (17kg)					
Furnished accessory	Empty reel					
	Reel cap 2					
	Connection cord 4					
	Motor pulley (50Hz or 60Hz) 1					
	Hexagon wrench					
	Splicing tape 1					
	Sensing foil					
	Cleaning kit					
	-					
	Operating instructions copy 1					

NOTE: Specifications and the design subject to possible modification without notice due to improvements

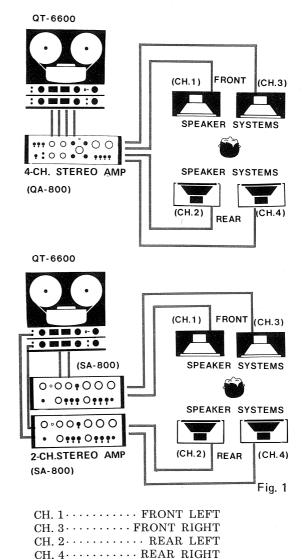
2. SETTING UP 4-CHANNEL STEREO SYSTEM

STEREO AMPLIFIER

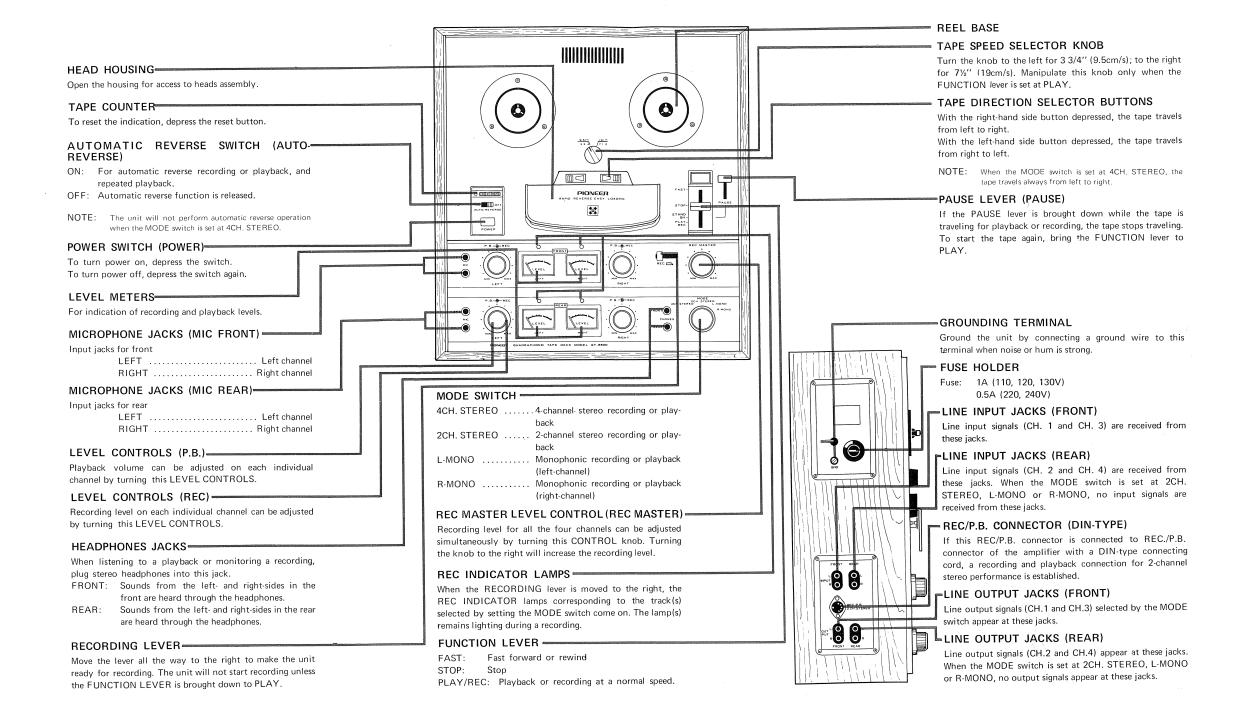
A 4-channel stereo system can be set up with QT-6600 combined with a 4-channel stereo amplifier (Pioneer QA-800, for instance) or two units of 2-channel stereo amplifier (Pioneer SA-800, for instance) and four speaker systems installed as illustrated in Fig. 1.

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.



3. PARTS IDENTIFICATION



6

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 \$2.5

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.

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.

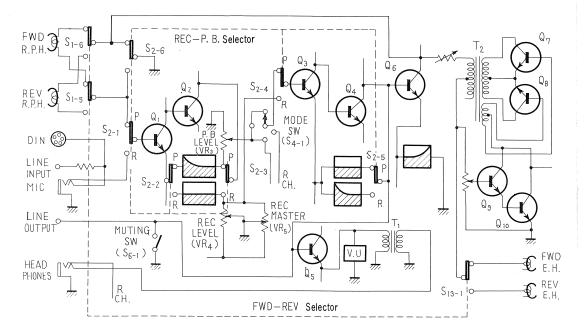


Fig. 2

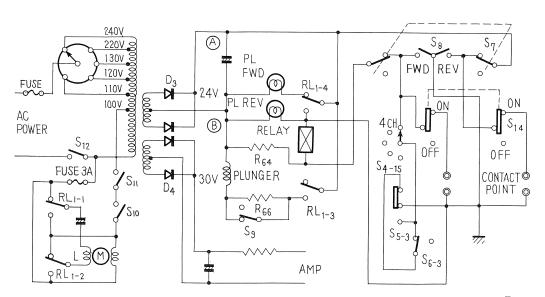


Fig. 3

5. DISASSEMBLY

5-1. DECK PANEL

For mechanism checks:

- 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.

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.

5-3. BOTTOM PANEL

For checking motor, plunger and power supply: Remove the six screws ($1 \sim 6$) shown in Fig. 6, then remove the hard board bottom panel.

5-4. WOODEN CABINET

For checks and alignments of electric circuits:

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

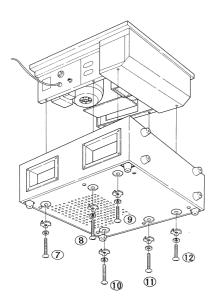
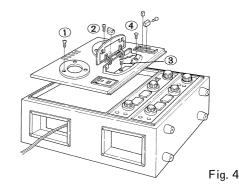


Fig. 7



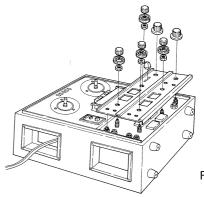


Fig. 5

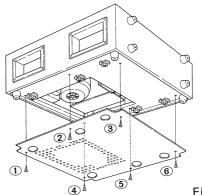


Fig. 6

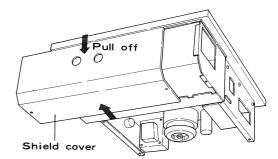


Fig. 8

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	Slack tape loading Voltages across motor winding, switch contacts in the motor circuits Motor bearing wear
Capstan does not rotate	 Motor rotation Capstan bearing wear Driving belt between flywheel and motor pulley
Inconsistent speed or failure to travel in playback function	 Friction of supply reel This is source of back tension for tape See page 12 Pressure between capstan and pinch roller See page 14 Dust or deformation on pinch roller, capstan and heads, also rotating parts such as bearings and belts Function of take-up pulley clutch (Nos. 11, 23 in page 35)
Does not take-up in playback function	 Function of take-up pulley clutch Belt condition of take-up side and bearing
Does not fast wind	 Take-up belt for dust or slipping Take-up tension See page 12 Take-up and supply brakes Back tension of supply reel in fast winding See page 13
Malfunction of tape direction selector	 TAPE DIRECTION SELECTOR switch AUTOMATIC REVERSE switch Relay coil and contact on P.C.B. of power supply unit 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	Brake shoe, spring (Nos. 3, 31 page 35) 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) 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) 2. Counter (No.62 page 36)
Mechanical noise	1. Contact between belts and speed selector arm (Nos. 50, 51 page 35) 2. Bearings
PAUSE lever sticks	1. Pause cam spring (No. 46 page 35)



6-2. ELECTRICAL CIRCUIT

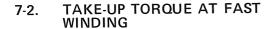
PROBLEM	CHECK POINTS
Does not playback	 B plus voltage from power supply unit Head winding and signal path wiring and switch connections Muting switch located on back of amplifier chassis (No. 33 page 41)
Playback level too small	1. Dust on head surface
Highly-distorted sound	 Recorded tape sound quality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

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7. MECHANICAL ADJUSTMENTS

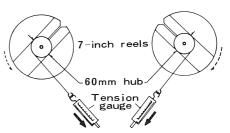
7-1. BACK TENSION AT NORMAL-SPEED TAPE TRAVEL (Supply reel friction)

- 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.).
- 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 (7½ ips). Proper reading should be between 60 and 80 grams.
- 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.



- 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.
 - After this adjustment, tighten locking nut securely.
- Repeat this adjustment for both reels, twice on each side.



Pull at approx. 7½ ips

Fig. 9

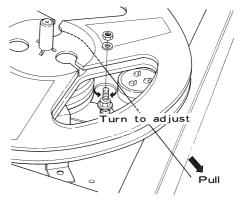


Fig. 10

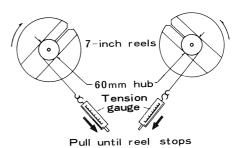


Fig. 11

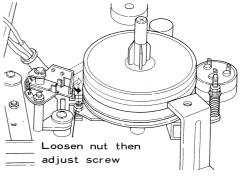
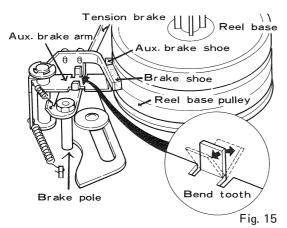
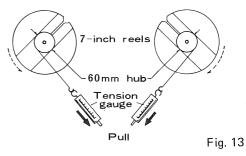


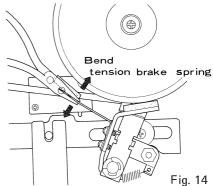
Fig. 12

7-3. BACK TENSION AT FAST WINDING

- 1. Follow steps 1 thru 3 of section 7-2, above.
- Pull tension gauge until reel begins to turn in opposite direction (Fig. 13).
 Gauge reading should be between 7 and 20 grams.
- 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.





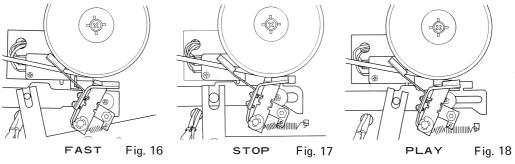


7-4. BRAKE ADJUSTMENT

- Turn power off. See table below and Figs. 16, 17 and 18 for brake positions according to different tape travel functions.
- 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,	$0.5-1\mathrm{mm}$ gap	Contact	1.5 — 2mm gap	Brake pole
Reel base				
Aux. brake shoe,	Contact	Contact	$0.5-1\mathrm{mm}$ gap	Aux. brake arm
Reel base pulley				tooth
Tension brake,	$3-4\mathrm{mm}$ gap	5 mm gap	Contact	Tension brake
Reel base				

These figures illustrate brake positions.



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.
- 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 climension (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.
- 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.

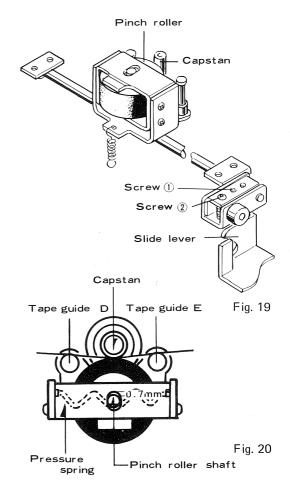
Re-adjustment will be required after replacement or adjustment of the pinch roller assembly.

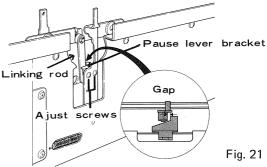
- 1. Load a tape. Set tape deck in PLAY mode at 7½ ips or 3¾ ips (19 or 9.5 cm/sec).
- 2. While observing the tape's traveling height, reverse the travel direction.
- 3. If the traveling height changes, refer to the following table. Tilt the tape guides D or E in the directions indicated by arrows in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

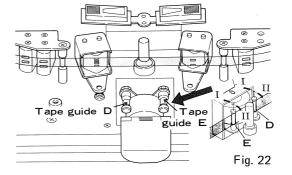
Note that even a very slight tilt will result in a major change in the tape's traveling behavior.

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

 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

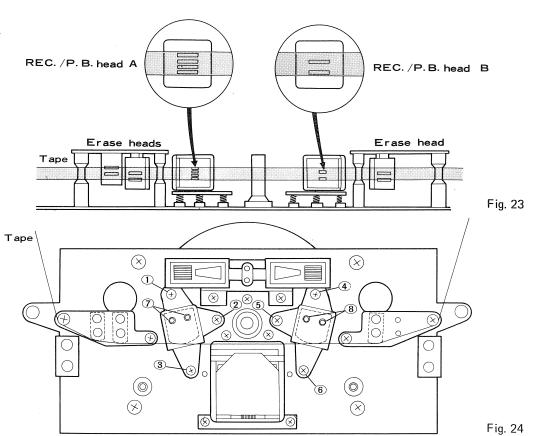
- 1. Distance between the lower tape edge and the bottom edge of track 4 should be the same as in case of head A.
- 2. To readjust, turn screws 4 and 6 in Fig. 24.

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.
- Trun 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.
- 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.

- 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 $7\frac{1}{2}$ 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.

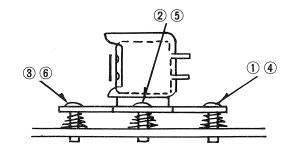
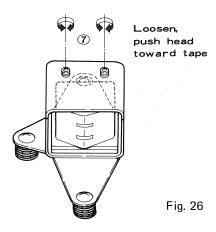


Fig. 25



8-3. SLIT ANGLE ADJUSTMENT

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

- Connect two voltmeters (VTVMs) to LINE OUTPUT FRONT L and R. Load test tape TT-500A.
- 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.

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.
- 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.
- Amplitude at TP1 (Fig. 27) should be 3V or less. Adjust by L3 (front) and L103 (rear).
 Note that there are a total of four check points designated TP1, two for the front
- points designated TP1, two for the front and two for the rear channels.
 4. voltage level at TP2 (total of four TP2
- check points) should be 8.5 mV. 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
ТР2-с	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. STE-REO, 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 8.5 mV.

- 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

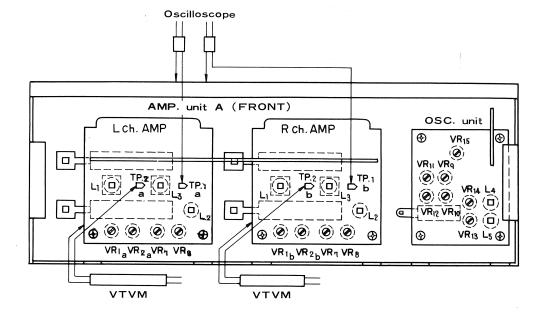
- Connect two voltmeters (VTVMs) to the LINE OUTPUT of the FRONT L and R channels.
- Set unit in recording mode, MODE switch in 4-CH.STEREO position. Turn REC MASTER level and the level controls (REC) for each channel to maximum.
- 3. Adjust L1-a and L1-b to obtain minimum (less than 80 mV) meter readings.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

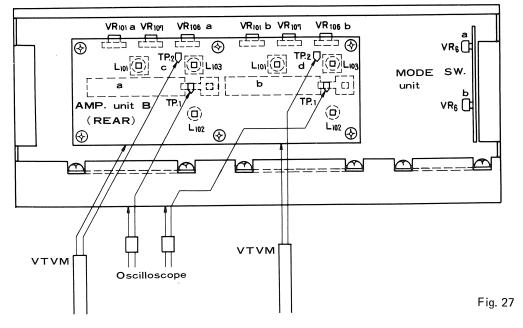
10. PLAYBACK AMPLIFIER ALIGNMENT

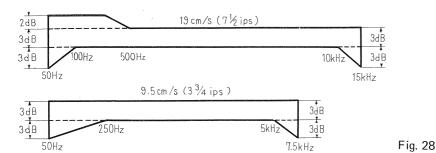
10-1. PLAYBACK EQUALIZATION CHECK

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.
- 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.







10-2. EQUALIZER ADJUSTMENT

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

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		$\begin{array}{c} \text{MODE} \\ \text{selector} \end{array}$	Tape direction	Level control (P.B.) knobs	Test tape frequency	Meter reading
LINE OUTPUT	L	4-CH.STEREO	Forward		700 Hz	0.775V
FRONT	R	4-CH.STEREO	Forward	Adjust for	700 Hz	0.775V
LINE OUTPUT	L	4-CH.STEREO	Forward	0.775V	700 Hz	0.775V
REAR	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	L	4-CH.STEREO	Forward		5,000Hz	VR1-a	0.775V
FRONT	R	4-CH.STEREO	Forward	-	5,000Hz	VR1-b	0.775V
LINE OUTPUT	L	4-CH.STEREO	Forward		5,000Hz	VR101-a	0.775V
REAR	R	4-CH.STEREO	Forward		5,000Hz	VR101-b	0.775V
LINE OUTPUT	L	2-CH.STEREO	Reverse		5,000Hz	VR2-a	0.775V
FRONT	R	2-CH.STEREO	Reverse		5,000Hz	VR2-b	0.775V

For confirmation, test according to following chart. If different readings are obtained at \nearrow

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	L	2-CH.STEREO	Forward	Adjust for	700Hz	0.775V
FRONT	R	2-CH.STEREO	Forward	Adjust for 0.775 V	700Hz	0.775V
LINE OUTPUT	L	2-CH.STEREO	Reverse		700Hz	0.775V
FRONT	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).
- 7 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, overtape 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 0 dB 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.
- Apply 1,000 Hz 100 mV signal to LINE IN-PUT.
- 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

AMP. unit A

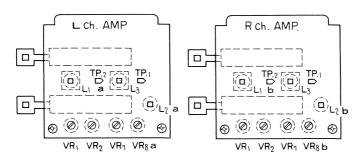


Fig. 29

AMP. unit B

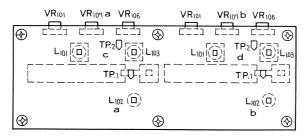


Fig. 30

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.
- Connect audio generator in parallel to LINE INPUT FRONT L and R.
- 4. Adjust audio generator for 10 mV output. Record frequencies from 50 Hz to 15 kHz on standard tape at 7½ ips (19cm/sec). Then play this tape.
- 5. Take meter readings on VTVMs. They should be within the specified response range shown in Fig. 31.
- Repeat this procedure at 3¾ips (9.5 cm/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:

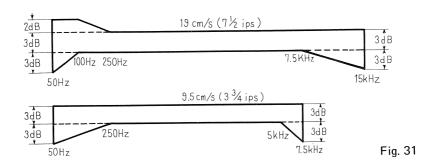
TAPE SPEED SELECTOR 7½ ips (19 cm/sec),

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, 7.8 mV.
- 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

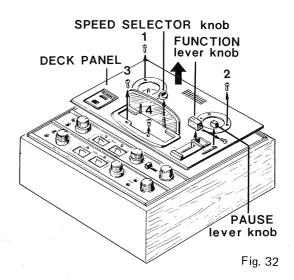
7. At 3¾ ips (9.5 cm/sec) tape speed, maximum VTVM reading will be obtained at a frequency of approximately 11 kHz. No adjustment is possible.



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 sequency:

- Unplug the QT-6600 power cord from an power outlet.
- Remove the PAUSE lever knob and TAPE SPEED SELECTOR knob.
- 3. Remove the FUNCTION lever by unscerwing the set screws.
- 4. Remove the four screws $(1 \sim 4)$ 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.



FOR 60Hz USE

FOR 50Hz USE

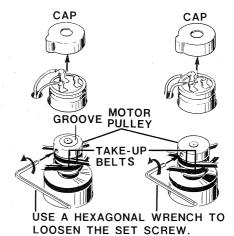
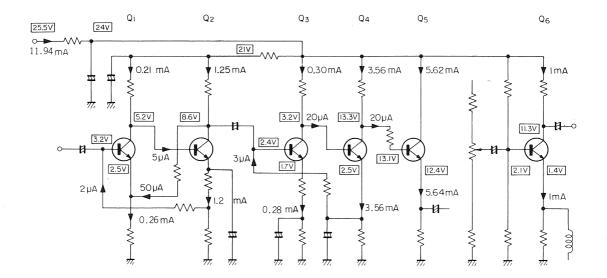


Fig. 33

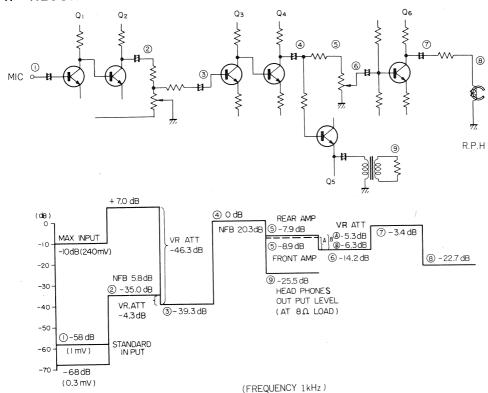
13. CURRENT AND VOLTAGE DIAGRAM



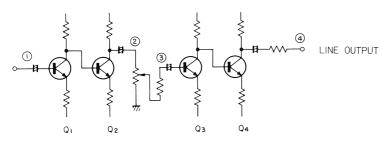
- $Q_1 \sim Q_3$ 2SC458LG B
- Q₄~Q₆ 2SC458 ©

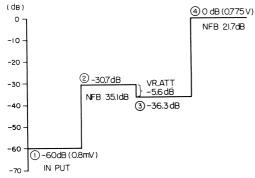
14. LEVEL DIAGRAM

14-1. RECORDING



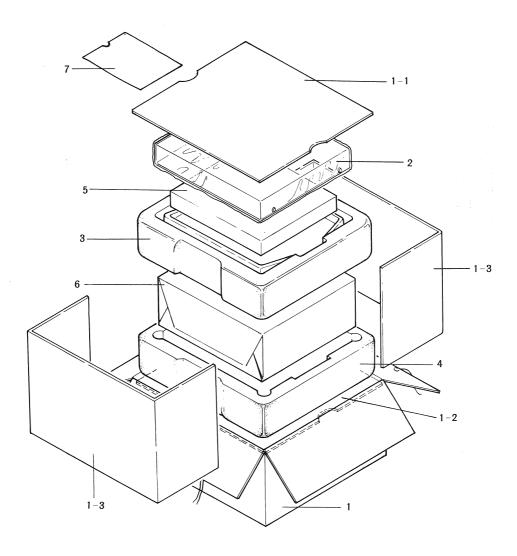
14-2. PLAYBACK





(FREQUENCY 1kHz)

15. PACKING METHOD AND PARTS LIST



Key No.	Description	Part No.	
1	Packing case	RHK-058-0	
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-001-0	
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
Р	Pan head screw
В	Binding head screw
Т	Truss head screw
С	Countersunk head screw
ос	Oval countersunk head screw
TS	Tapping screw
PS	Pan head sems screw
СТ	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-004-0	
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 cabient 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)

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PARTS LIST OF EXPLODED VIEW 2

Key No.	Description	Part No.	
1	Push switch button assembly	RAA-008-O	
2	Push switch assembly	RXE-010-0	
3	Pilot lamp tube	REB-022-O	
4	Pilot lamp	E22-851-B	
5	Lamp grommet	REB-039-O	
6	Lamp socket	RKK-005-0	
7	E. head mounting metal (Left side)	RNE-241-0	
8	E. head	RPB-005-A	
9	E. head spacer	RLA-035-0	
10	E. head	RPB-005-A	
11	Tape guide 8M	RLA-036-0	
12	Tape guide 6M	RLA-037-0	
13	Contact lever mounting base	N93-857-O	
14	REC/P.B. head (4 channel) assembly	RXX-001-0	
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-240-0	
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-069-0	
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-131-0	
40	Drive belt	N28-851-O	

^ω 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	RXA-235-O	
"	60Hz	RXA-238-0	
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-001-0	
29	Power cord	D11-003-E	
30	Model name plate	RAL-037-0	

Key No.	Description	Part No.	
31	P.C.B. stay	RNE-064-0	
32	Capacitor cap	N93-438-0	

$^{\circ}_{\sigma}$ 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	E17-403-0	
8	Oil shielding washer (B)	E31-857-O	
9	Reel mount pulley assembly	E17-408-0	
10	Nylon washer	B22-424-O	
11	Take-up pulley (B) assembly	E17-402-O	
12	Take-up belt	REB-051-0	
13	Take-up pulley spacer	RLA-197-0	
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	1.20,.0	
	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-167-0	
36 37	Speed selector cam assembly	E17-512-O	
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			

)				
١.	Key No.	Description	Part No.	
	61			
	62	Counter	RAW-001-0	
	63	Counter belt	N28-853-O	
	64	Counter mounting plate	RNE-034-0	
	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-102-0	
	71	Speed selector assembly	RXX-053-O	
	72	Arm shaft	N54-862-O	-
	73	Reel mount shaft	RLA-102-0	
	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-032-0	
	81	Rotary switch holder	RNE-083-0	
	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		
		DC 1.4kV	C43-003-O	

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PS·M2.6×6

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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-004-0
10	Bracket	RNE-091-O
11	Unit holder (Right side)	RNE-143-0
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 75 Ω 10W	RCN-001-O
24	2P terminal strip	RKC-004-0
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 5.6k Ω ½W	RD½PS 562J
29	1P terminal strip	RKC-002-O
30	Plunger	N15-852-O

Key No.	Description	Part No.	
31	Slide metal	RNE-092-0	
32	REC. SW. unit	RWX-002-0	
33	Muting SW.unit	RWX-003-O	
34	AMP. chassis	RNB-007- G	
35	Terminal name plate	RAK-001-O	
36	DIN type socket	К93-003-В	
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. PATTERNSAND ELECTROLYTIC PARTS LISTS

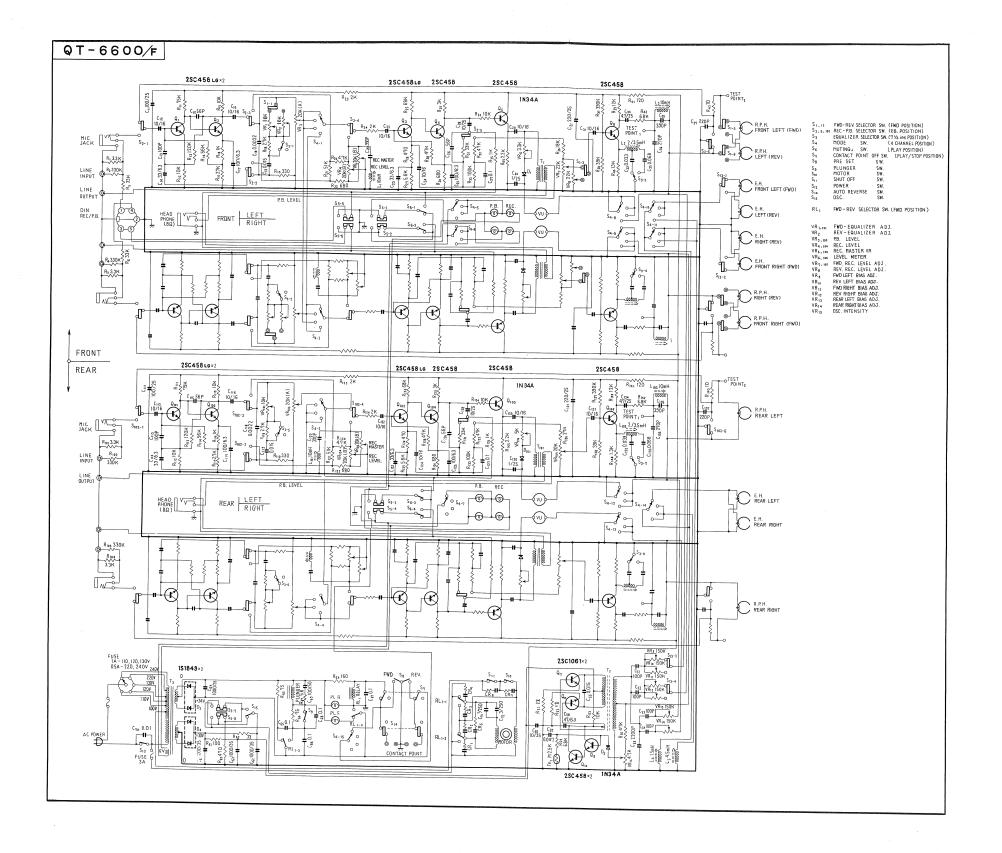
17-1. MISCELLANEOUS

Symbol	Description	Part No.	
	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-003-0	
	Lamp unit	RWX-004-0	
Т3	Power transformer	RTT-007-A	
	REC/P.B. head (4 channel)	RPB-003-O	
	REC/P.B. head (2 channel)	RPB-004-0	
	E. head	RPB-005-A	
	Line voltage selector switch	AKR-001-0	
	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	
	2P lug terminal strip	RKC-004-0	
	1P lug terminal strip	RKC-002-0	
	Pilot lamp (Lever meter)	REL-002-0	
	Pilot lamp (push button)	E22-851-B	
	1A fuse	E21-004-O	
	Motor	RXM-003-A	
	Plunger	N15-852-O	
C71~C72	MP capacitor	C22-403-A	

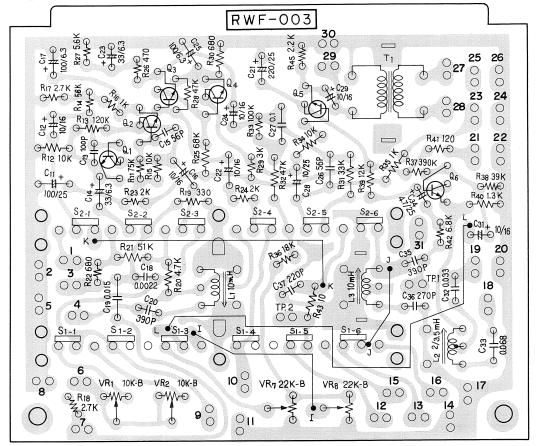
RESISTORS

IN Ω , ¼W UNLESS OTHERWISE NOTED, k:k Ω , M:M Ω .

Symbol	Description			Par	t No.	
VR3 VR4	>20k dual (RE	EC/P.B. le	evel)	RCV-002	2-0	
VR103 VR104	>20k dual (RE	EC/P.B. Ie	evel)	RCV-002	2-0	
VR5 VR105	>20k 4-gang (REC MAS	STER)	RCV-001	I-O	
R1	Carbon film	3.3k		RD14PS	332K	
R2	Carbon film	330k		RD%PS	334K	
R3	Carbon film	3.3k		RD1/4PS	332K	
R4	Carbon film	330k		RD%PS	334K	
R5	Carbon film	33k		RD%PS	333K	
R6	Carbon film	33k		RD%PS	333K	
R101	Carbon film	3.3k		RD%PS	332K	
R102	Carbon film	33 0 k		RD%PS	334K	
R103	Carbon film	330k		RD%PS	334K	
R104	Carbon film	3.3k		RD%PS	332K	
R65	Wire wound	75	10W	RCN-001	I-O	
R66	Wire wound	75	10W	RCN-001	1-0	







 $Q_1 \sim Q_3$ 2SC458 LG B or ©

TI: MATCHING TRANSFORMER

Q4~Q6 2SC458© or ®

 ${\sf Si}$: FWD-REV SELECTOR SW (FWD POSITION)

S2: REC-P.B SELECTOR SW(P.B. POSITION)

Li: TRAP. COIL

L2: PEAKING COIL

L3: TRAP COIL

CAPACITORS

IN μ F, UNLESS OTHERWISE NOTED, p: $\mu\mu$ 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-004-0	
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	25 V	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 Ω , $\frac{1}{4}$ W UNLESS OTHERWISE NOTED, k: $k\Omega$.

Symbol	Des	cription	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%VS 753K
R12	Carbon film	10k	RD%VS 103K
R13	Carbon film	120k	RD¼VS 124K
R14	Carbon film	56k	RD%VS 563K
R15	Carbon film	10k	RD%VS 103K
R16	Carbon film	1k	RD%VS 102K
R17	Carbon film	2.7k	RD%VS 272K
R18	Carbon film	2.7k	RD¼VS 272K
R19	Carbon film	330	RD%VS 331K
R20	Carbon film	4.7k	RD¼VS 472K
R21	Carbon film	51k	RD%VS 513K
R22	Carbon film	680	RD%VS 681K
R23	Carbon film	2k	RD¼VS 202K
R24	Carbon film	2k	RD¼VS 202K
R25	Carbon film	68k	RD¼VS 683K
R26	Carbon film	470	RD¼VS 471K
R27	Carbon film	5.6k	RD%VS 562K
R28	Carbon film	47 k	RD%VS 473K
R29	Carbon film	3k	RD¼VS 302K
R30	Carbon film	680	RD¼VS 681K
R31	Carbon film	33k	RD¼VS 333K
R32	Carbon film	47k	RD¼VS 473K
R33	Carbon film	100k	RD%VS 104K
R34	Carbon film	10k	RD%VS 103K
R35	Carbon film	1k	RD¼VS 102K
R36	Carbon film	18k	RD%VS 183K

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Symbol	Desc	cription	Part I	No.	
R37	Carbon film	390K	RD%VS	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		
Ω4	2SC458	C or D	Transistor		
Ω5	2SC458	C or D	Transistor		
Ω6	2SC458	C or D	Transistor		

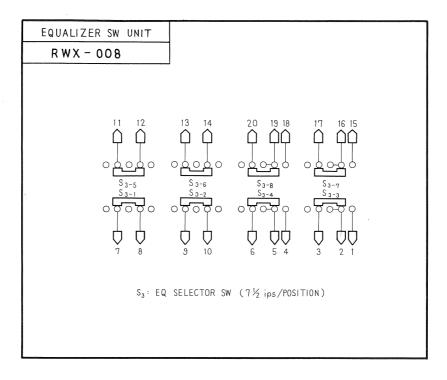
SWITCHES

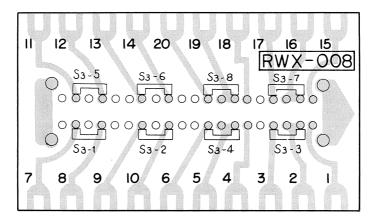
Symbol	Description	Part No.	
S1	Slide switch	S41-852-A	
S2	Slide switch	S41-852-A	

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	

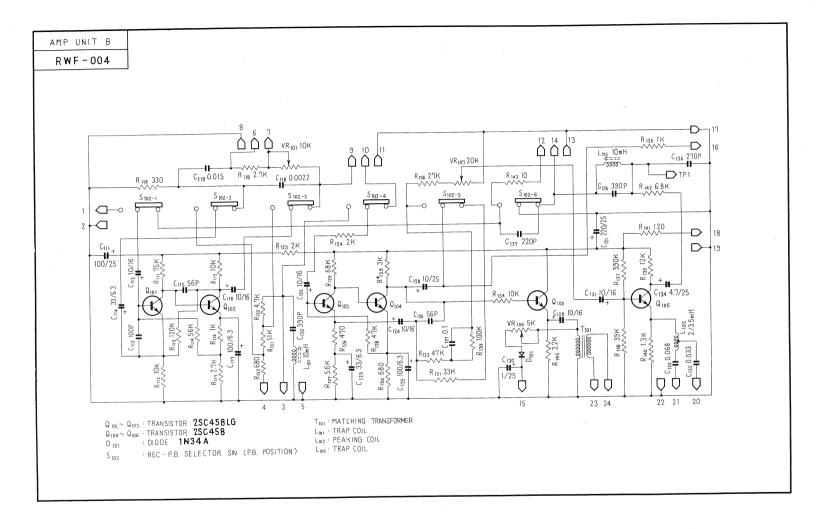
17-3. EQUALIZER SW. UNIT (RWX-008)

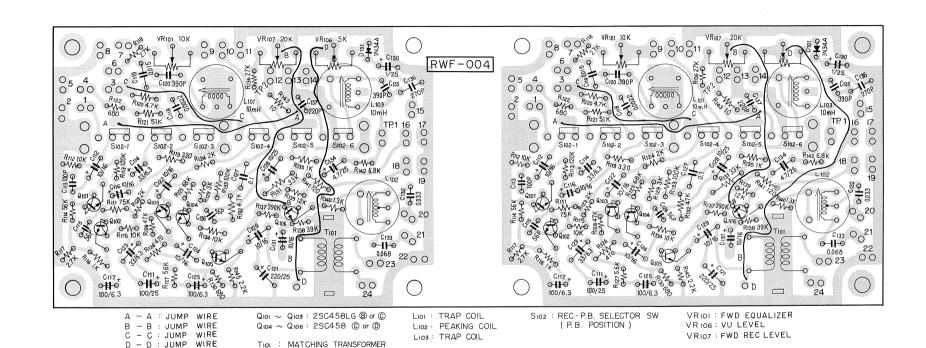




S3 : EQUALIZER SELECTOR SW (7 1/2 ips POSITION)

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





CAPACITORS

Symbol	Des	cription		Part No.	
C111	Electrolytic	100	25V	CEA 101P 25	
C112	Electrolytic	10	16V	CEA 100P 16	
C113	Styrol	100p	50V	RCE-003-0	
C114	Electrolytic	33	6.3V	CEA 330P 6R3	
C115	Styrol	56p	5 0 V	RCE-004-0	
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	39 0 p	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	5 0 V	RCE-004-0	
C127	Mylar	0.1	50V	CQMA 104K 50	
C128	Electrolytic	10	25V	CEA 100P 25	
C129	Electorlytic	10	16V	CEA 100P 16	
C130	Electroltyic	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	27 0 p	50V	RCE-002-O	
C137	Stryol	220p	50V	RCE-006-O	

RE	SI	ST	O	R	S
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Γ				
Symbol	Desc	cription	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	RD%VS 753K	
R112	Carbon film	10k	RD%VS 103K	
R113	Carbon film	120k	RD%VS 124K	
R114	Carbon film	56k	RD¼VS 563K	
R115	Carbon film	10k	RD%VS 103K	
R116	Carobn film	1k	RD%VS 102K	
R117	Carbon film	2.7k	RD%VS 272K	
R118	Carbon film	2.7k	RD¼VS 272K	
R119	Carbon film	330	RD%VS 331K	
R120	Carbon film	4.7k	RD¼VS 472K	
R121	Carbon film	51k	RD%VS 513K	
R122	Caron film	680	RD%VS 681K	
R123	Carbon film	2k	RD%VS 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	RD%VS 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	RD%VS 104K	
R134	Carbon film	10k	RD¼VS 103K	
R135	Carbon film	1k	RD%VS 102K	
R136	Carbon film	27k	RD%VS 273K	
R137	Carbon film	390k	RD¼VS 394K	

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

TRANSFORMER, COILS

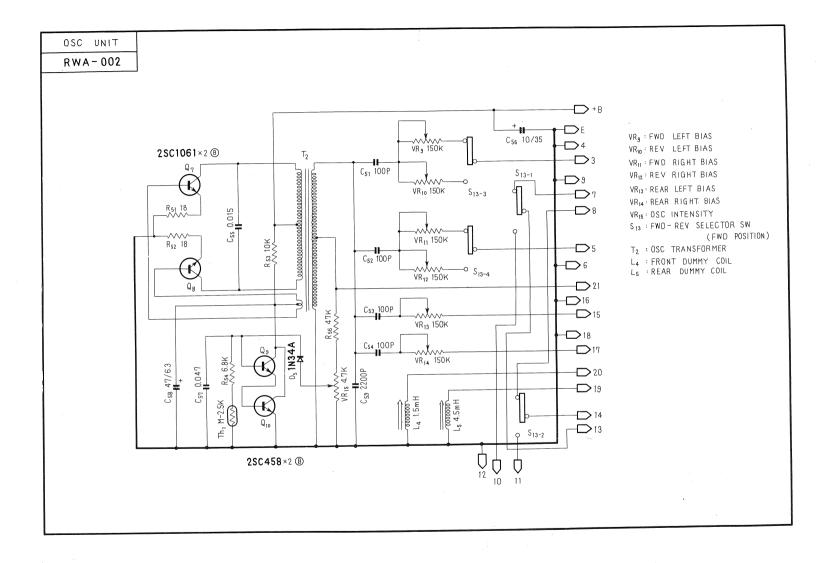
Symbol	Description	Part No.	
T101	Matching transformer	T61-408-A	
L101	Trap coil	T84-401-A	
L102	Peaking coil	T84-402-A	
L103	Trap coil	T84-401-A	

SEMICONDUCTORS

Symbol	De	escription		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		

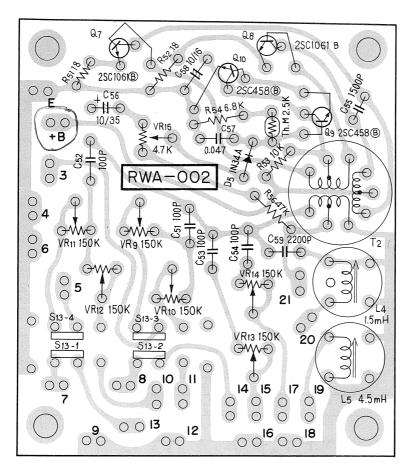
SWITCH

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



T2: OSC TRANSFORMER

L4 : FRONT DUMMY COIL L5 : REAR DUMMY COIL



VR9 : FWD LEFT BIAS ADJ

VRIO: REV LEFT BIAS ADJ VRII: FWD RIGHT BIAS ADJ

VR12: REV RIGHT BIAS ADJ

VR13: REAR LEFT BIAS ADJ

VR14: REAR RIGHT BIAS ADJ

VRIS: OSC INTENSITY

S13 : FWD-REV SELECTOR SW (FWD POSITION)

55

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	COSA 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	Desc	cription		Part No.	
VR9	Semi-fixed	150k	type B	C92-860-O	
VR10	Semi-fixed	15 0 k	type B	C92-860-O	
VR11	Semi-fixed	15 0 k	type B	C92-860-O	
VR12	Semi-fixed	15 0 k	type B	C92-860-O	
VR13	Semi-fixed	15 0 k	type B	C92-860-O	
VR14	Semi-fixed	15 0 k	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		RD%VS 180K	
R53	Carbon film	10k		RD¼VS 103K	
R54	Carbon film	6.8k		RD¼VS 682K	
R56	Carbon film	47k		RD¼VS 473K	

SEMICONDUCTORS

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

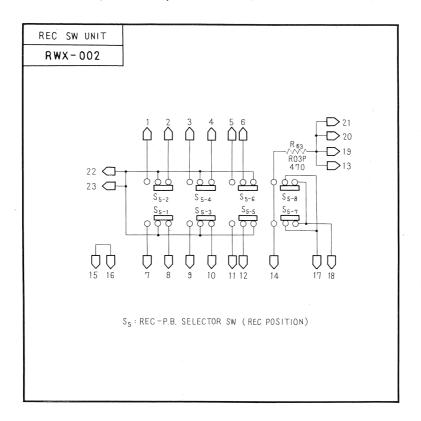
SWITCH

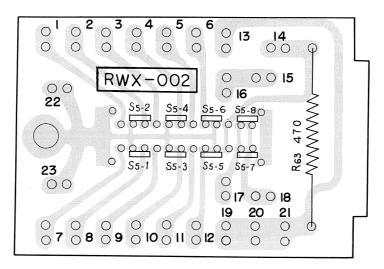
Symbol	Description	Part No.	
S13	Slide switch	S41-856-B	

TRANSFORMER, COILS

Symbol	Description	Part No.	
T2 L4	Oscillator transformer Dummy coil A	RTD-001-0 RTD-002-0	
L5	Dummy coil B	RTD-003-0	

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

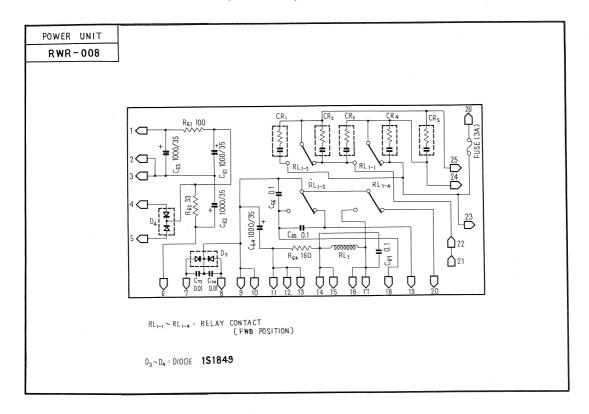


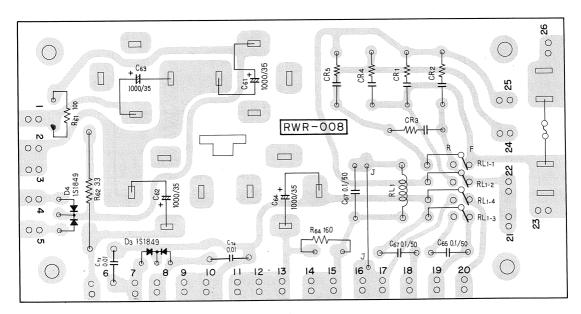


S5 : REC - P.B. SELECTOR SW (REC POSITION)

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

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





 $\mathrm{J}\sim\mathrm{J}$: JUMP WIRE

POWER SUPPLY UNIT

CAPACITORS

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

RESISTORS

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

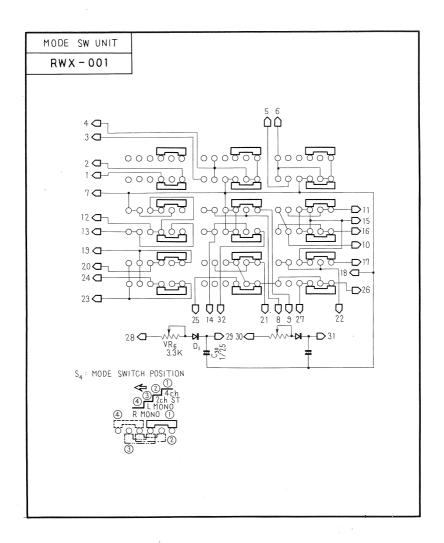
SEMICONDUCTORS

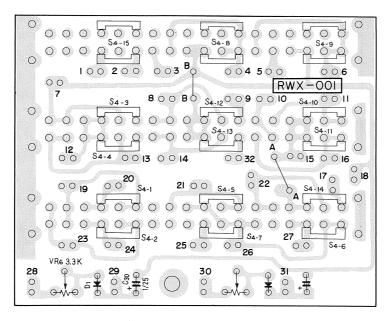
Symbol	Description		Part No.		
D3 D4	1S1849 1S1849	Diode Diode	4		

OTHERS

Symbol	Description	Part No.	
RL1	Relay (12V)	S61-853-O	
CR1	Spark killer	W53-045-O	1.
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)





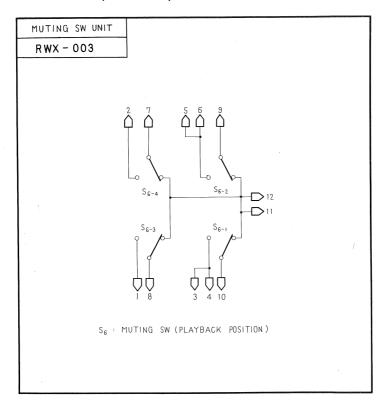
S4 : MODE SW (4CH STEREO POSITION)

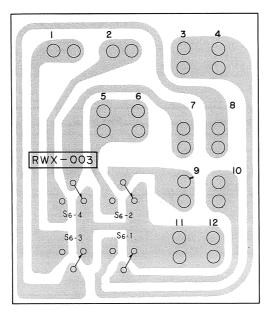
A - A : JUMP WIRE B - B : JUMP WIRE

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)





S6 : MUTING SW (PLAY POSITION)

Symbol	Description	Part No.	
S6	Muting switch assembly	R\$K-008-0	

PIONEER ELECTRONIC CORPORATION

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