

GX-286

SERVICE MANUAL

PARTS LIST

PRIDE IN QUALITY

AKAI STEREO TAPE RECORDER

MODEL **GX-286**

ALSO APPLICABLE TO MODEL GX-286D, GX-286DB

STEREO TAPE RECORDER

MODEL GX-286

ALSO APPLICABLE TO MODEL GX-286D
AND GX-286DB STEREO TAPE DECKS

SECTION 1	SERVICE MANUAL	1
SECTION 2	PARTS LIST	27
SECTION 3	SCHEMATIC DIAGRAM	56



SECTION 1

SERVICE MANUAL

TABLE OF CONTENTS

I.	SPECIFICATIONS	2
II.	DISMANTLING OF UNIT	4
III.	ARRANGEMENT OF PRINCIPAL PARTS	6
IV.	MECHANISM ADJUSTMENT	7
	1. BRAKE SOLENOID POSITION ADJUSTMENT	7
	2. MICRO SWITCH SW2 POSITION ADJUSTMENT	7
	3. BRAKE TENSION ADJUSTMENT	7
	4. REEL TABLE HEIGHT ADJUSTMENT	7
	5. PINCH WHEEL SOLENOID POSITION ADJUSTMENT	8
	6. PINCH WHEEL PRESSURE ADJUSTMENT	8
V.	HEAD ADJUSTMENTS	9
VI.	AMPLIFIER ADJUSTMENTS	10
VII.	DOLBY NOISE REDUCTION CIRCUIT ADJUSTMENTS	12
	1. RECORDING DOLBY N.R. CIRCUIT ADJUSTMENT	13
	2. PLAYBACK DOLBY N.R. CIRCUIT ADJUSTMENT	13
VIII.	D.C. RESISTANCE OF VARIOUS COILS	14
IX.	CLASSIFICATION OF VARIOUS P.C. BOARDS	15
	1. P.C. BOARD INTERCHANGEABILITY CHART	15
	2. COMPOSITE VIEWS OF COMPONENTS	15
X.	TOUCH BUTTON SYSTEM OPERATION	25
	1. TOUCH BUTTON SYSTEM CIRCUIT MECHANISM	26
	2. WHEN TOUCH BUTTON TOUCHED WITH FINGER, OPERATION IS SAME AS MICRO SWITCH SYSTEM USED TO DATE	26
	3. WHEN A BUTTON IS TOUCHED WITH A FINGER AND AT THE SAME TIME THE DECK CHASSIS IS TOUCHED WITH ANOTHER FINGER OR A HAND	26

I. SPECIFICATIONS

An asterisk next to a figure indicates the minimum guaranteed performance.

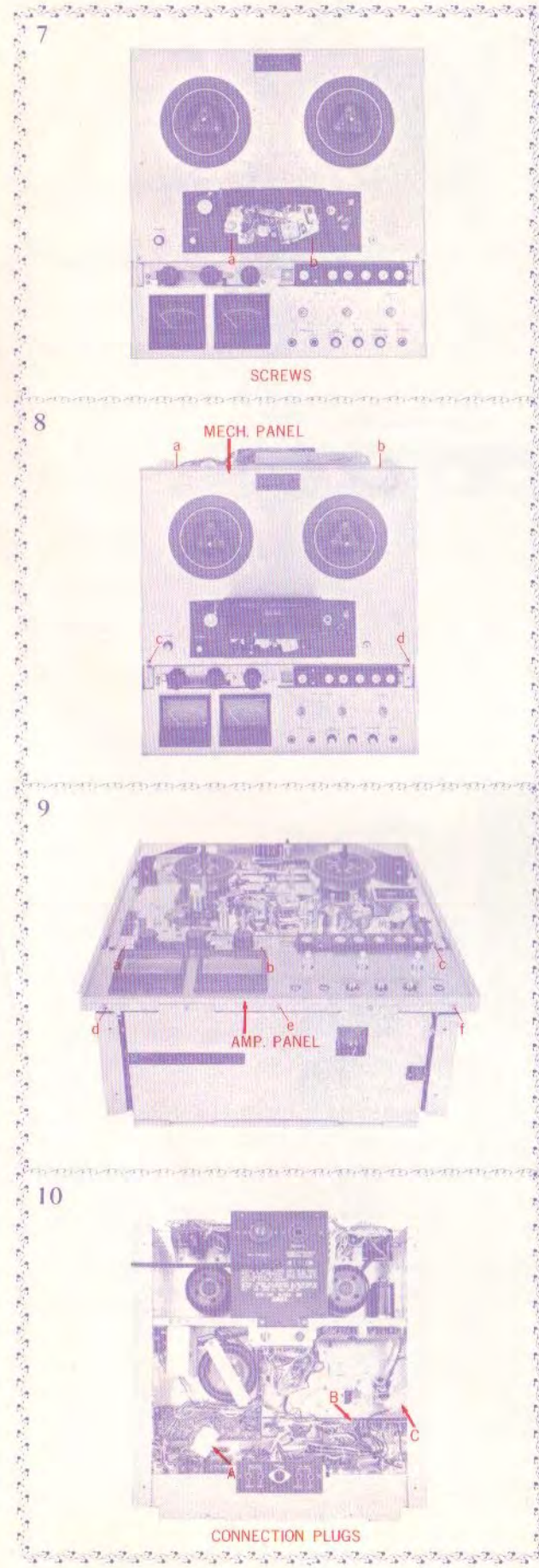
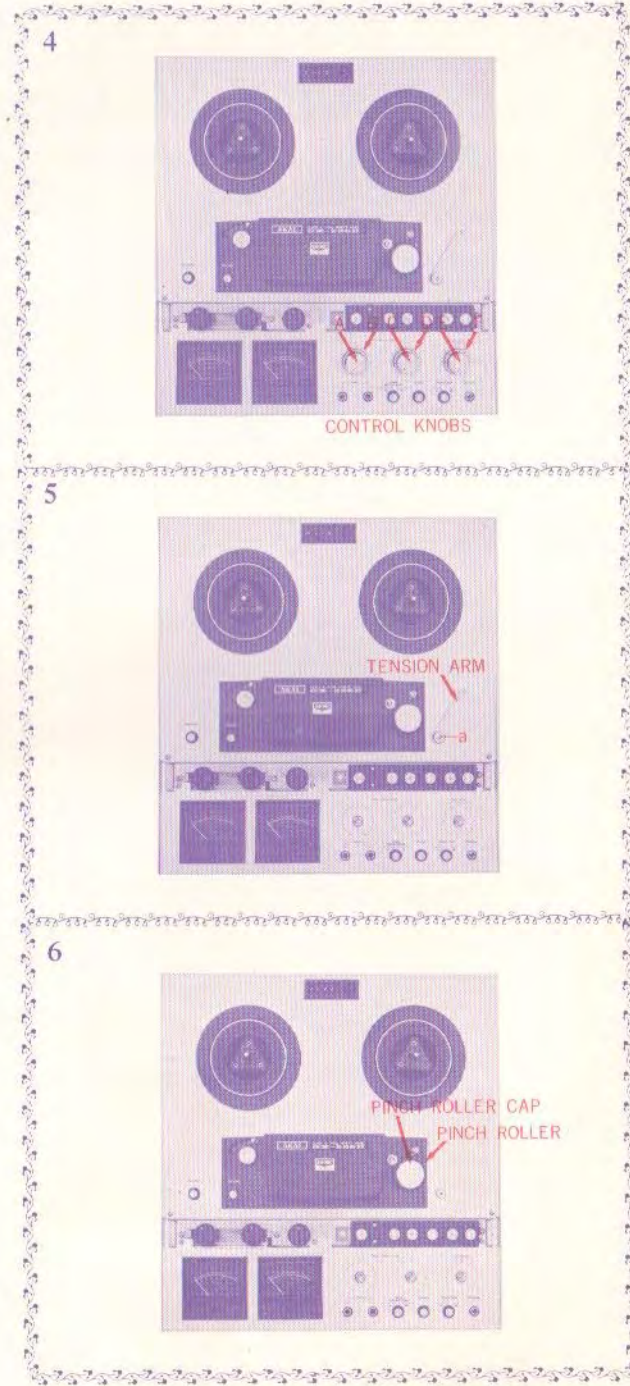
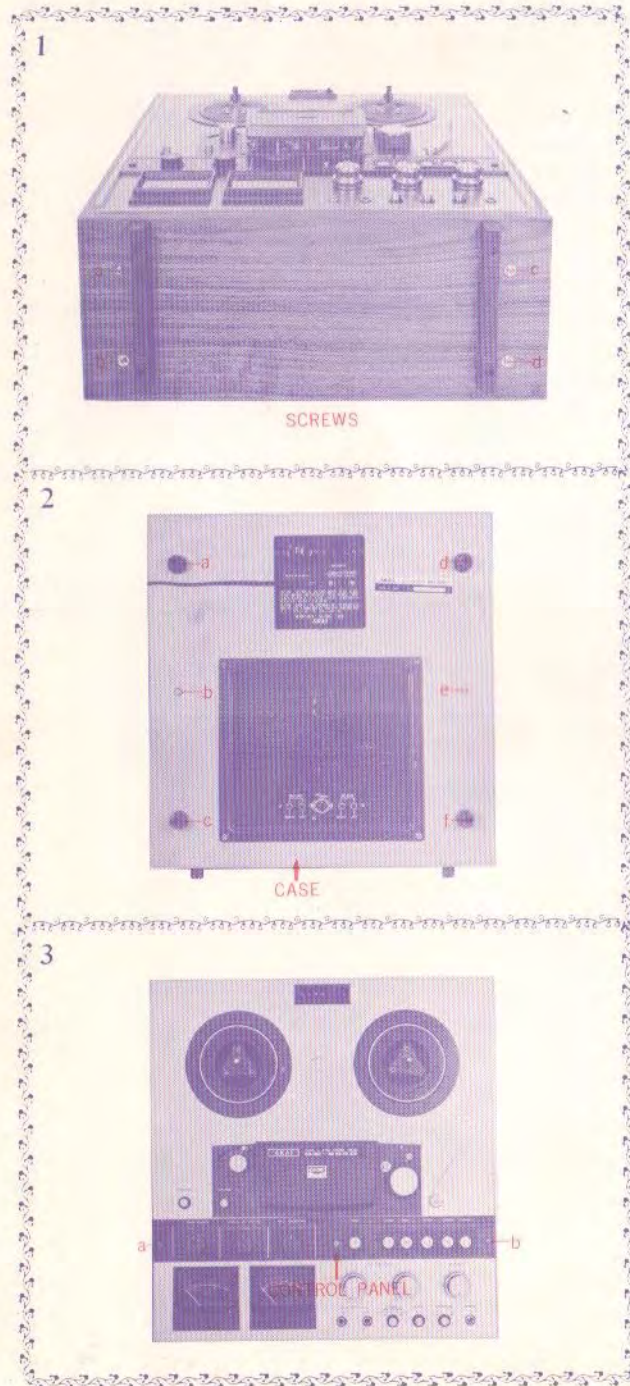
TRACK SYSTEM	4-track 2-channel stereo, monaural system	
TAPE SPEED	7-1/2 ips. (19 cm/sec.) ±1% 3-3/4 ips. (9.5 cm/sec.) ±1.5%	
WOW AND FLUTTER	Less than 0.07% R.M.S. at 7-1/2 ips. Less than 0.09% R.M.S. at 3-3/4 ips. *Less than 0.10% at 7-1/2 ips. FWD *Less than 0.12% at 7-1/2 ips. REV *Less than 0.15% at 3-3/4 ips. FWD *Less than 0.18% at 3-3/4 ips. REV	
TOTAL WOW AND FLUTTER	*Less than 0.12% at 7-1/2 ips. FWD *Less than 0.18% at 3-3/4 ips. REV	
FREQUENCY RESPONSE	30 to 24,000 Hz ±3 dB at 7-1/2 ips. *30 to 22,000 Hz ±3 dB at 7-1/2 ips. *30 to 18,000 Hz ±3 dB at 3-3/4 ips. (SCOTCH #211 Tape, Low noise position, -20 VU recording)	
DISTORTION FACTOR	Less than 0.4%	
TOTAL DISTORTION FACTOR	*Less than 1.5% at 7-1/2 ips. *Less than 2% at 3-3/4 ips. (SCOTCH #211 Tape, 1,000 Hz "0" VU recording, playback)	
SIGNAL TO NOISE RATIO	Better than 58 dB (with Dolby Process: 66 dB at 5 kHz Models GX-286 and GX-286DB only) *Better than 50 dB	
TOTAL SIGNAL TO NOISE RATIO	*Better than 47 dB	
OUTPUTS	LINE OUTPUT	0.775V (0 ± 1 dB/0 ± 1.5 dB, FWD/REV) Using a 700 Hz "0" VU pre-recorded tape, output volume max.
	DIN OUTPUT	0.5V
INPUTS	MIC INPUT	More than 0.35 mV
	LINE INPUT	More than 90 mV
	DIN INPUT	More than 4 mV
RECORDING PLAYBACK LEVEL	0.775V (0 ± 1.5 dB) using a SCOTCH #211 Tape	
CROSS TALK	Better than 59 dB (stereo) Better than 67 dB (monaural) *Better than 40 dB (stereo) *Better than 55 dB (monaural) (1,000 Hz +3 VU recording)	
ERASE RATIO	Better than 70 dB	
RECORDING BIAS FREQUENCY	100 kHz ±5%	
BIAS LEAK	Better than -45 dB Better than -30 dB (GX-286D only)	
HIGH FREQUENCY DEVIATION	Within 3 dB, 8,000 Hz 3-3/4 ips. tape at 7-1/2 ips.	
RECORDING CAPACITY	90 min. stereo recording using a 1,800 ft. tape at 7-1/2 ips.	
F.FWD AND RWD TIME	125 sec.: F.FWD/115 sec.: RWD using a 1,800 ft. tape at 50 Hz.	
MOTORS	CAPSTAN MOTOR	2 speed A.C. servo control outer rotor motor Type: SCM2-24KJ 4 pole Revolutions: 615 r.p.m at 7-1/2 ips. (19 cm/sec.) 307.5 r.p.m at 3-3/4 ips. (9.5 cm, sec.)
	REEL MOTOR	Two 6-pole eddy current outer rotor motors Type: 24XO-MR Revolutions: 930 r.p.m. at 50 Hz 1,120 r.p.m. at 60 Hz
HEADS	ERASE HEAD	Type: E4-260 Gap: Double Gap Impedance: 210Ω ±10% at 100 kHz D.C. Resistance: 2Ω
	RECORDING HEAD	Type: R4-200 Gap: 4 microns Impedance: 1,870Ω at 100 kHz D.C. Resistance: 8Ω
	PLAYBACK HEAD	Type: P4-202 Gap: 1.7 ± 0.5 microns Impedance: 1,400Ω at 1 kHz D.C. Resistance: 268Ω

TRANSISTORS AND F.E.T.	2SA564(Q)(R) 1 2SC1312(G)(H) ... 18 2SC1098(K)(L) ... 1 Dolby N.R. P.C. Board (GX-286, DB Type only) 2SA564(Q) 4 2SK30A(GR) 6	2SC1247A(V) 3 2SC945(P)(Q)(R) ..47 2SK30A(GR) 6 2SC458(C) 12	2SC783(O)(P) 1 2SD360(D1)(D2) ... 1 2SC1211(D)(E) 1 2SC458LG(C)(D) ..12
DIODES	1N34A 2 10D4 1 10D05 9 (Deck Type) 10D05 13(Recorder Type) Dolby N.R. P.C. BOARD (GX-286, DB Type only) 1N34A 8	10D2 6 1S1588 63 WG085 4	1S1587 1 RD5A(M) 1 YZ088A 2 1S2473VE 12
POWER SUPPLY	100 to 240V A.C. 50/60 Hz Universal models 220V A.C. 50 Hz CEE models 120V A.C. 60 Hz CSA models 100V A.C. 50/60 Hz JPN models		
POWER CONSUMPTION	90W		
DIMENSIONS	445(W) x 460(H) x 233(D) mm (17.5" x 18.1" x 9.2")		
WEIGHT	22.8 kg (50.2 lbs) GX-286 20.0 kg (44.0 lbs) GX-286D 20.6 kg(45.3 lbs) GX-286DB		

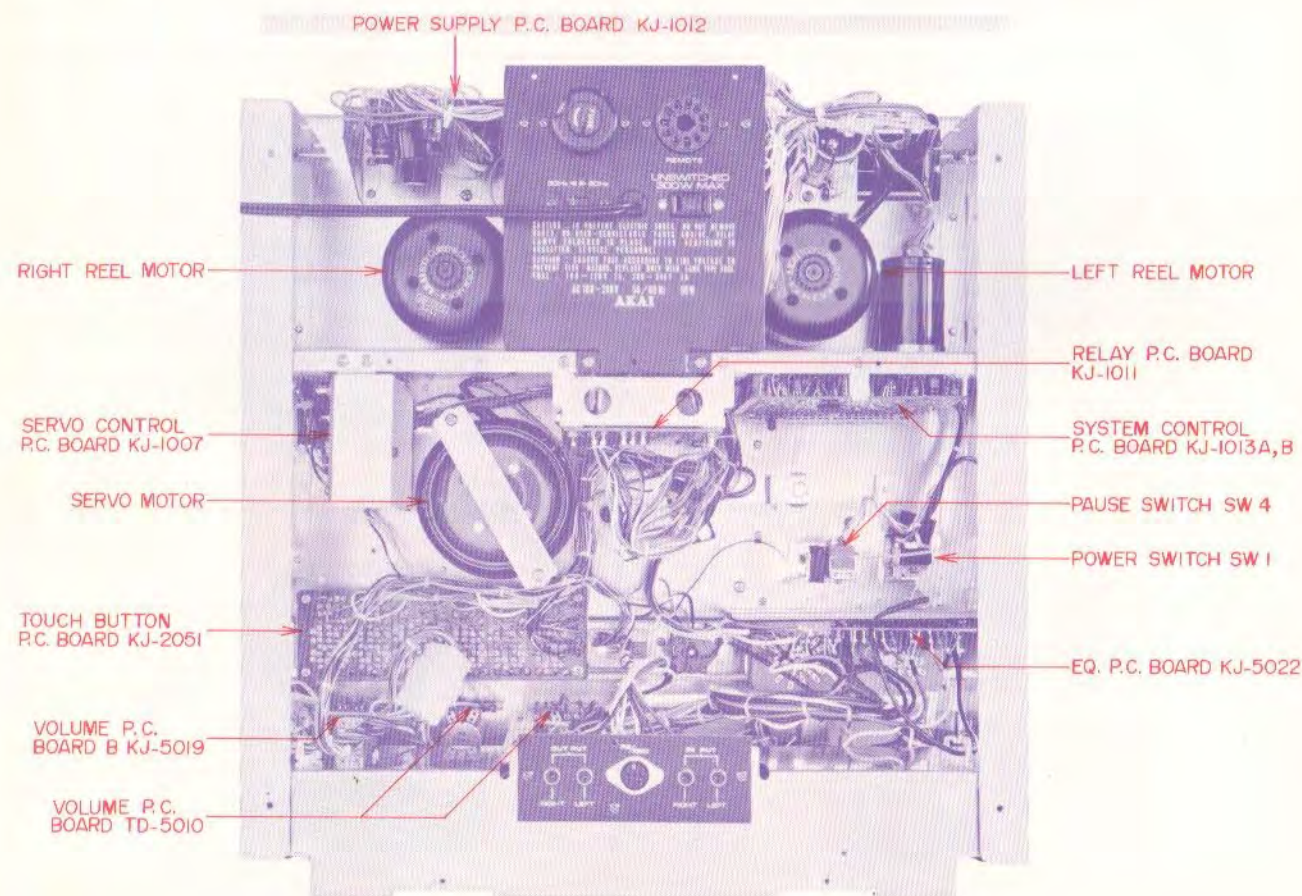
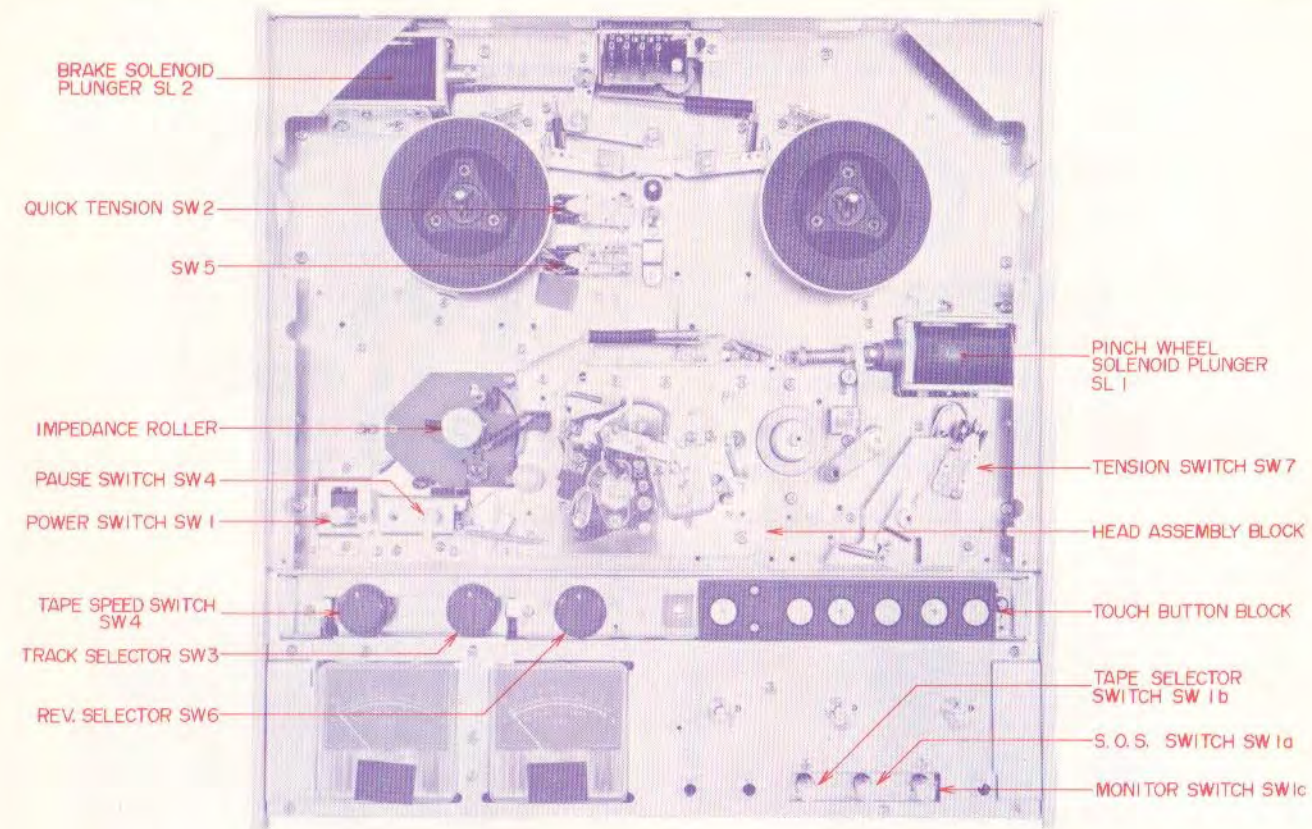
NOTE: Specifications subject to change without notice.

II. DISMANTLING UNIT

In case of trouble, etc. necessitating disassembly, please disassemble in the order shown in photographs. Reassemble in reverse order.



III. ARRANGEMENT OF PRINCIPAL PARTS



IV. MECHANISM ADJUSTMENT

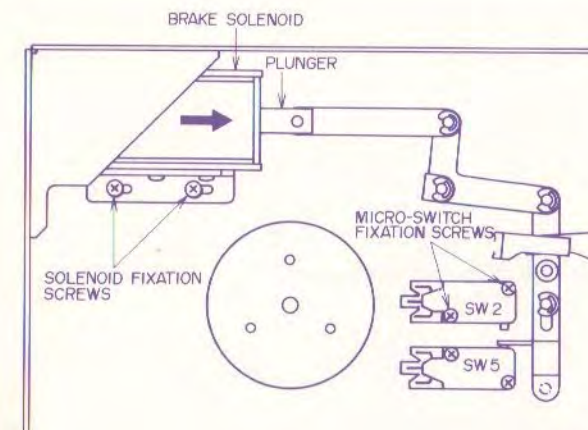


Fig. 1.

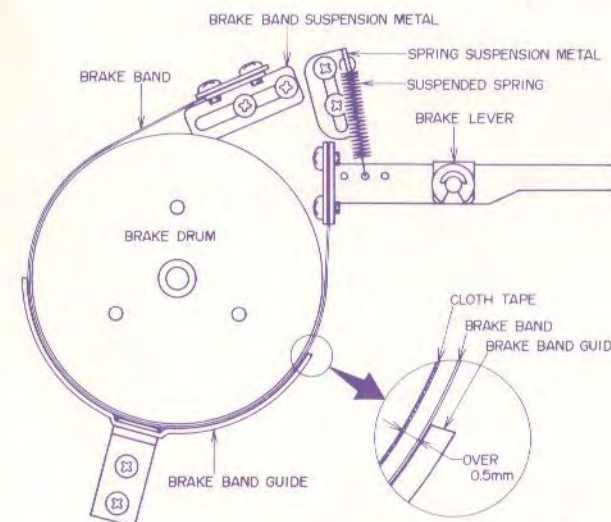


Fig. 2

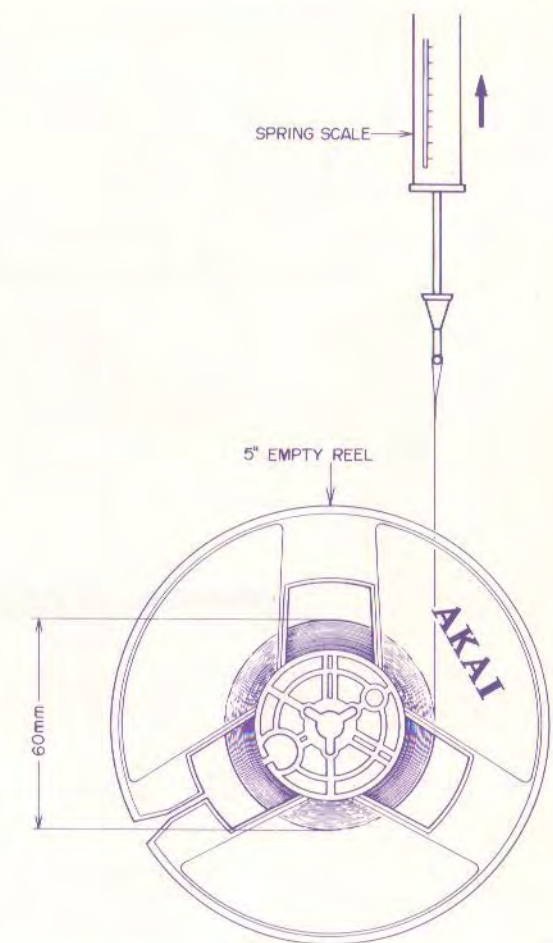


Fig. 3

1. BRAKE SOLENOID POSITION ADJUSTMENT (Refer to Fig. 1)

Loosen the Solenoid Fixation Screws and re-tighten at point at which the brake solenoid comes to the furthest inner position (direction indicated by arrow mark in figure).

2. MICRO SWITCH SW2 POSITION ADJUSTMENT (Refer to Fig. 1)

Loosen the Micro Switch Fixation Screws. Move Micro Switch and tighten Fixation Screws at position at which the Micro Switch is activated when the brake solenoid plunger operates.

Note: Confirm that the actuator does not contact the body of the micro switch.

3. BRAKE TENSION ADJUSTMENT (Refer to Figs. 2, 3)

- As shown in Fig. 3, use a 60 mm diameter tape wound on a 5" reel and measure brake tension with a spring scale. Ideal brake tension is 350 gr.
- Brake tension can be adjusted by changing the position of suspended spring and adjusting the position of spring suspension metal.

Note: Following brake tension adjustment, confirm that the difference in left/right brake tension is within 50 gr, and confirm that at all modes (except stop mode), the brake band completely separates from the cloth tape on the brake drum.

4. REEL TABLE HEIGHT ADJUSTMENT (Refer to Fig. 4)

Properly load a tape and move the reel table as indicated by the arrow mark in Fig. 4, position so that at F.FWD and RWD modes, the tape winds on the center of the reel. Tighten reel fixation screws to maintain optimum position.

Note: Tape should wind on center of reel regardless of type reel used.

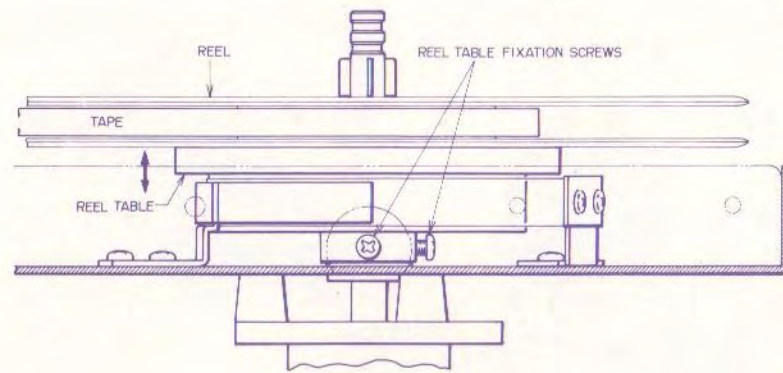


Fig. 4

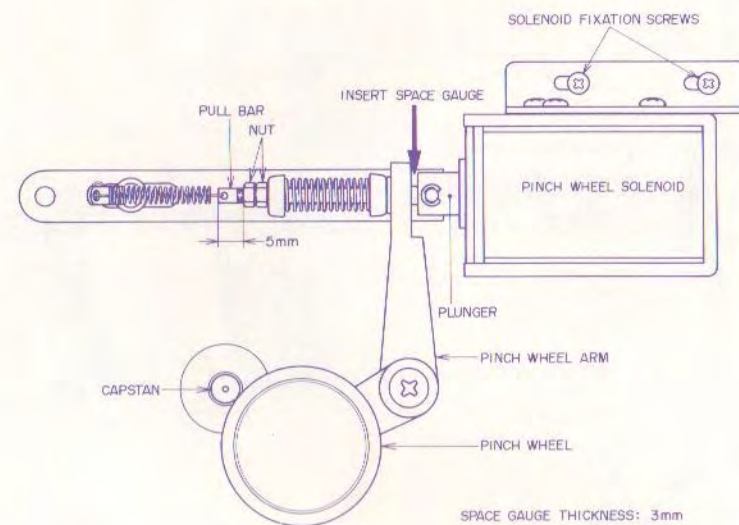


Fig. 5

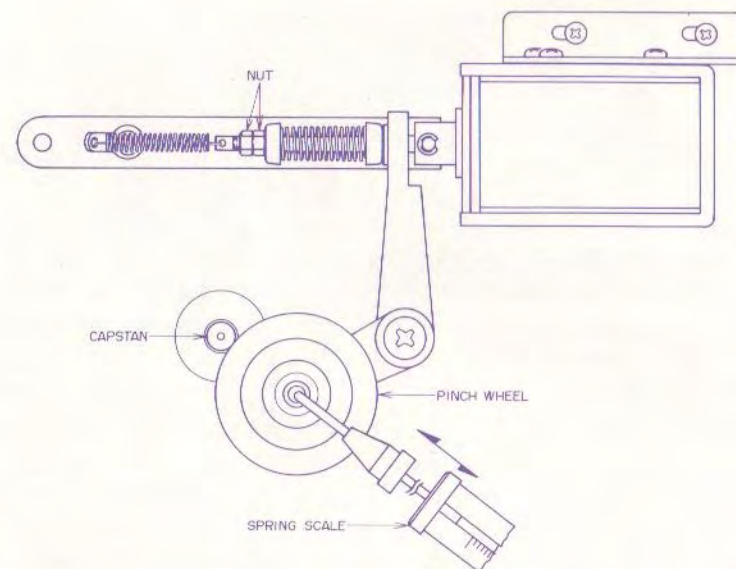


Fig. 6

5. PINCH WHEEL SOLENOID POSITION ADJUSTMENT (Refer to Fig. 5)

- 1) Set nut so that the screw part of the pull bar protrudes from the nut by 5 mm.
- 2) Insert a space gauge between the plunger and the pinch wheel arm (a minus driver etc. can also be used) and fix solenoid at position at which pinch wheel contacts the capstan.

6. PINCH WHEEL PRESSURE ADJUSTMENT (Refer to Fig. 6)

Measure pinch wheel pressure with a spring scale as shown in Fig. 6. Pull pinch wheel with spring scale and gently return. Adjust pinch wheel pressure adjustment nut to obtain a 1.35 kgr-cm spring scale indication as the pinch wheel touches the capstan when being returned.

Note: The pinch wheel pressure at this time must definitely not exceed 1.4 kgr-cm.

V. HEAD ADJUSTMENT

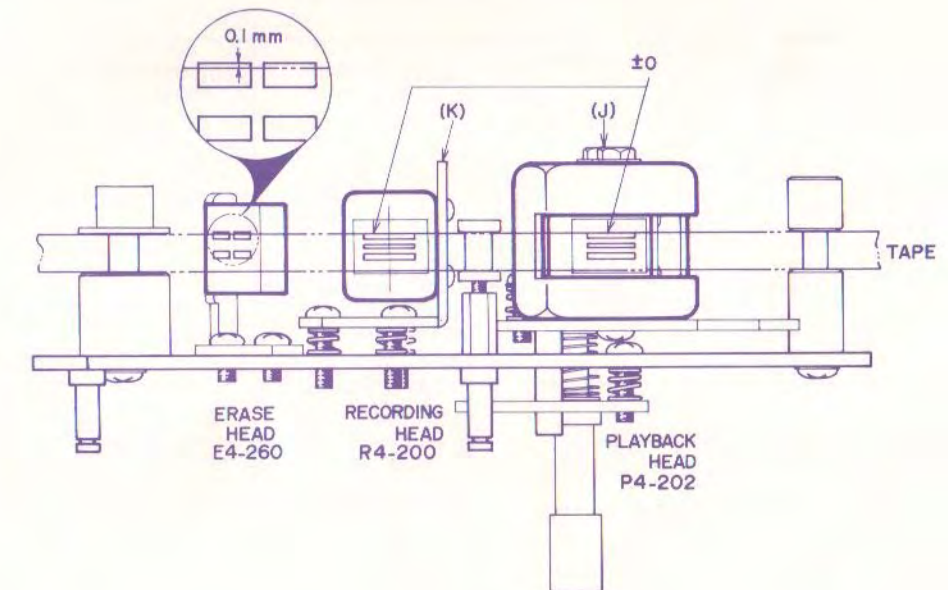
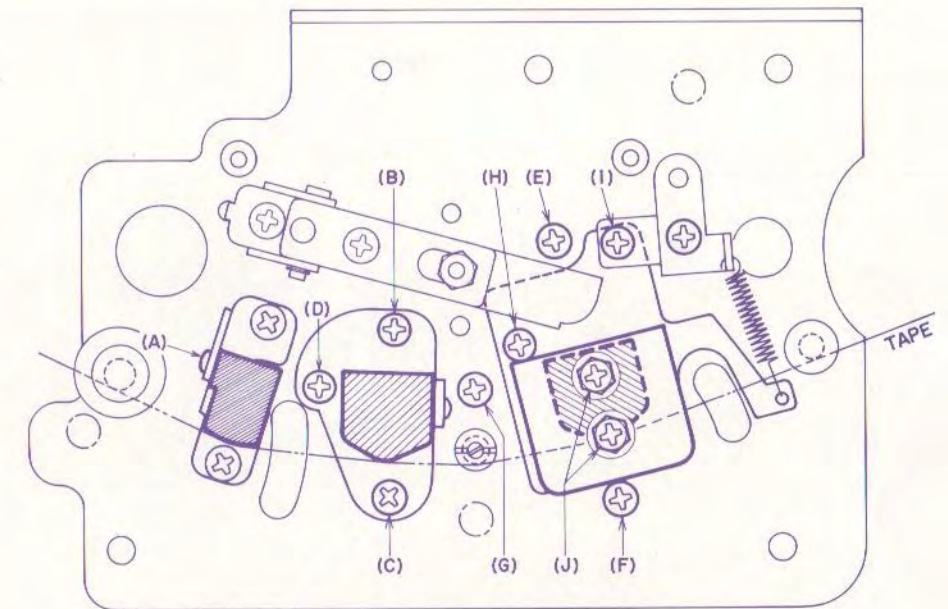


Fig. 7

NOTES:

- 1) As perfect head adjustments are vital in attaining top tape deck performance, please be sure that these adjustments are properly carried out.
- 2) Be careful not to use a magnetized screw driver or other magnetized tools in the vicinity of the heads.
- 3) Use only new tape as level variation is likely to occur when using old tape.
- 4) Demagnetize heads with a Head Demagnetizer before and after head adjustment.

VI. AMPLIFIER ADJUSTMENTS

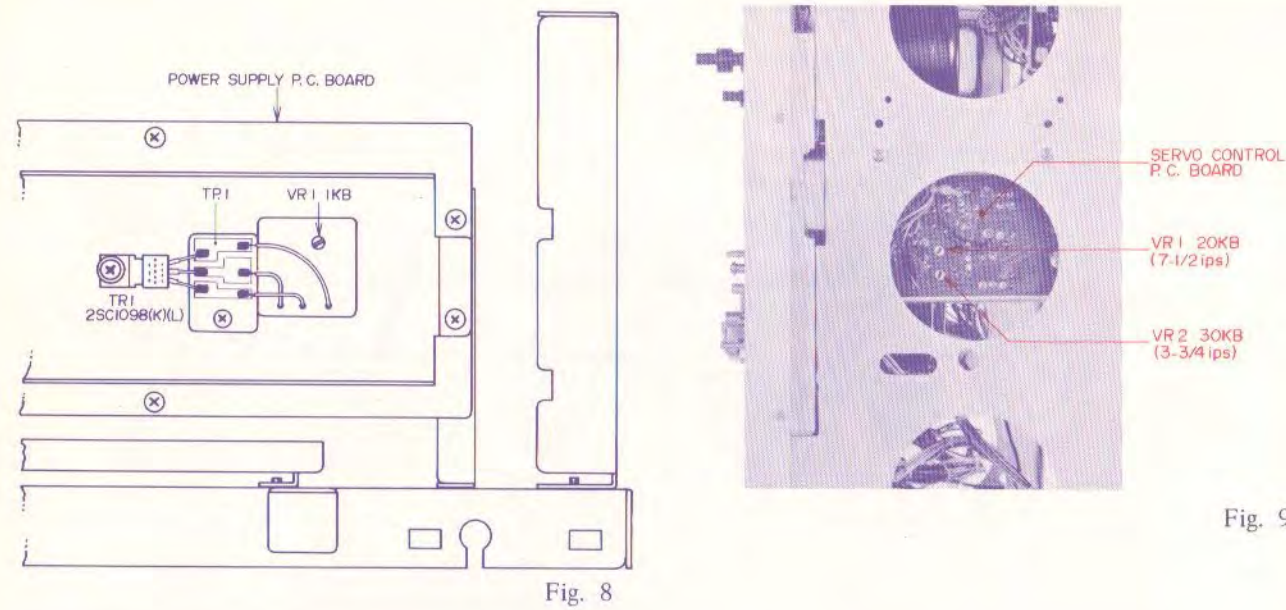


Fig. 8

(Refer to Fig. 7)

Adjustment Item	Test Tape, Supply Signal	Measuring Instrument Connections	Mode	Tape Speed	Adjustment Point	Remarks
ERASE HEAD HEIGHT	Optional		FWD	Optional	(A)	Upper edge of Ch. 1 head core is 0.1 mm higher than the upper edge of the tape.
RECORDING HEAD HEIGHT	Optional		FWD	Optional	(B)(C)(D)	Upper edge of Ch. 1 head core and upper edge of tape is the same height.
PLAYBACK HEAD HEIGHT	Optional		FWD	Optional	(I)	Upper edge of Ch. 1 head core and upper edge of tape is same height.
PLAYBACK HEAD HEIGHT	Optional		REV	Optional	(H)	Lower edge of Ch. 1 head core and lower edge of tape is same height.
PLAYBACK HEAD AZIMUTH ALIGNMENT	8,000 Hz. 3-3/4 ips. test tape	High Sensitivity V.T.V.M. to Line Output terminals	FWD	7-1/2 ips.	(G)	Maximum output, both channels.
PLAYBACK HEAD TAPE CONTACT	8,000 Hz. 3-3/4 ips. test tape	High Sensitivity V.T.V.M. to Line Output terminals	FWD	7-1/2 ips.	(J)	Move playback head surface (head gap) to left and right and adjust so that there is no change in playback level when tension is applied to supply reel table.
RECORDING HEAD AZIMUTH ALIGNMENT	Scotch #211 tape 15,000 Hz -20 dBm	Audio Frequency Oscillator to Line Input and High Sensitivity V.T.V.M. to Line Output terminals	REC	7-1/2 ips.	(D)	Maximum Output, both channels.
RECORDING HEAD AZIMUTH ALIGNMENT	Scotch #211 tape 15,000 Hz -20 dBm	Audio Frequency Oscillator to Line Input and High Sensitivity V.T.V.M. to Line Output terminals	REC.	7-1/2 ips.	(K)	Move recording head surface (head gap) to left and right and adjust so that there is no change in line output level when tension is applied to the supply reel table.

Chart 1

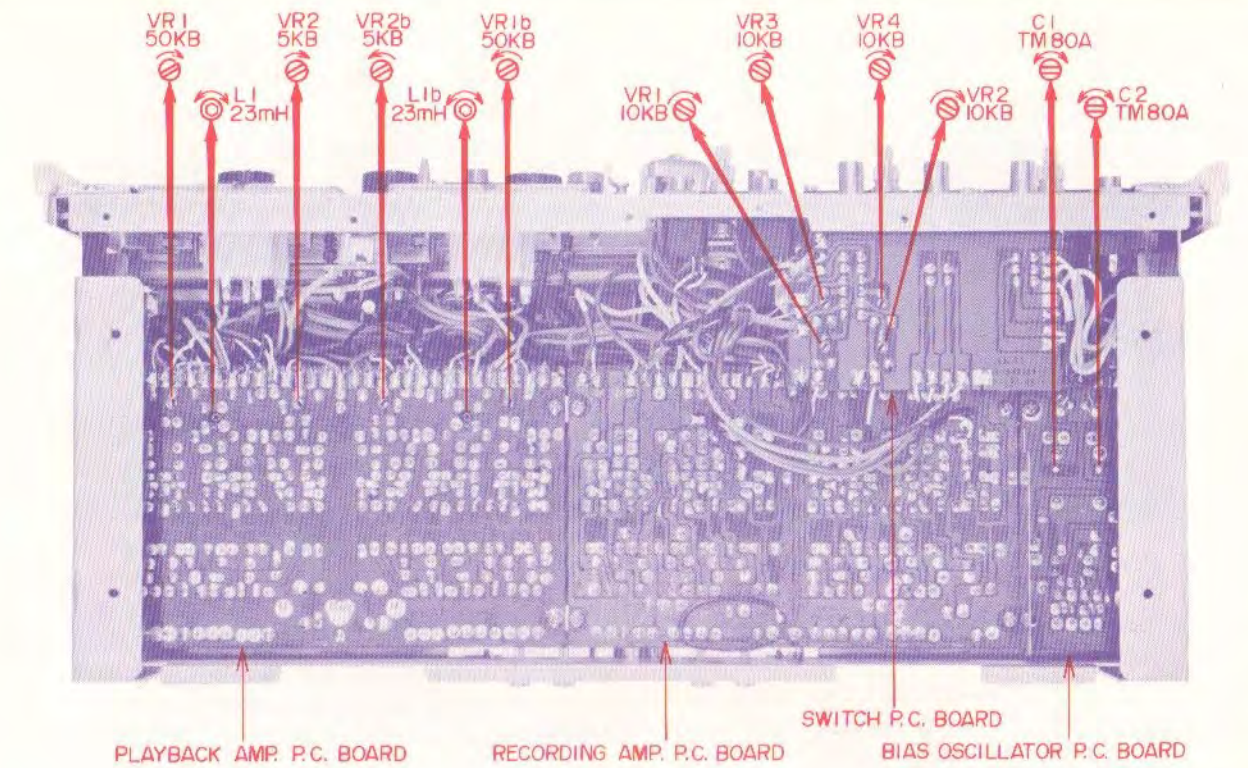


Fig. 10

Adjustment Item	Test Tape Supply Signal	Measuring Instrument Connections	Mode	Tape Speed	Adjustment Point	Result	Ref. Diagram	Remarks
POWER SUPPLY P.C. BOARD VOLTAGE ADJUSTMENT		V.T.V.M. or tester between TP1 and Ground			VR1 1 kB	+24.0V	Fig. 8	
7-1/2 ips. TAPE SPEED ADJUSTMENT	1,000 Hz 7-1/2 ips. test tape	Frequency Counter to Line Output	FWD	7-1/2 ips.	VR1 20 kB	1,000 Hz $\pm 1\%$	Fig. 9	
3-3/4 ips. TAPE SPEED ADJUSTMENT	1,000 Hz 7-1/2 ips. test tape	Frequency Counter to Line Output	FWD	3-3/4 ips.	VR2 30 kB	500 Hz $\pm 1.5\%$	Fig. 9	
PLAYBACK LEVEL ADJUSTMENT	700 Hz 7-1/2 ips. 0 VU test tape	High Sensitivity V.T.V.M. to Line Output	FWD	7-1/2 ips.	VR1 50 kB	0 ± 1 dB	Fig. 10	Within 0 ± 1.5 dB at Reverse mode.
VU METER SENSITIVITY ADJUSTMENT	700 Hz 7-1/2 ips. 0 VU test tape		FWD	7-1/2 ips.	VR2 5 kB	0 VU	Fig. 10	
RECORDING LEVEL ADJUSTMENT (low noise)	Scotch #211 tape 1,000 Hz 0 VU recording	Audio Frequency Oscillator to Line Input and High Sensitivity V.T.V.M. to Line Output	REC	7-1/2 ips.	VR3 10 kB (left) VR4 10 kB (right)	0 ± 1.5 dB	Fig. 10	Set Tape Selector to LOW NOISE.
RECORDING LEVEL ADJUSTMENT (wide range)	Scotch #211 tape 1,000 Hz 0 VU recording	Audio Frequency Oscillator to Line Input and High Sensitivity V.T.V.M. to Line Output	REC	7-1/2 ips.	VR1 10 kB (left) VR2 10 kB (right)	0 ± 1.5 dB	Fig. 10	Set Tape Selector to WIDE RANGE.
FREQUENCY RESPONSE ADJUSTMENT	Scotch #211 tape 1,000 Hz, 10,000 Hz, -20 VU recording	Audio Frequency Oscillator to Line Input and High Sensitivity V.T.V.M. to Line Output	REC	7-1/2 ips.	C1 TM 80A (left) C2 TM 80A (right)	flat from 1,000 Hz to 10,000 Hz	Fig. 10	Recheck recording level by changing bias.
BIAS LEAK ADJUSTMENT		High Sensitivity V.T.V.M. to Line Output	REC	7-1/2 ips.	L1 23 mH	Less than -30 dB	Fig. 10	Built in Dolby less than -45 dB.

Chart 2

VII. DOLBY NOISE REDUCTION CIRCUIT ADJUSTMENTS

GX-286, GX-286DB only

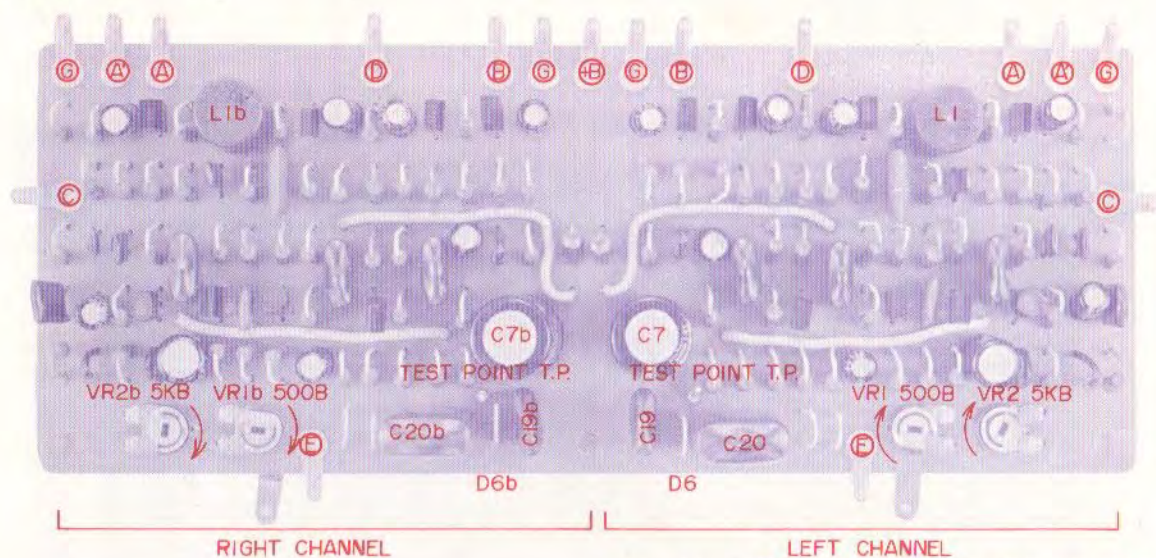


Fig. 11 DOLBY N.R. P.C. BOARD TD-5310 (Face)

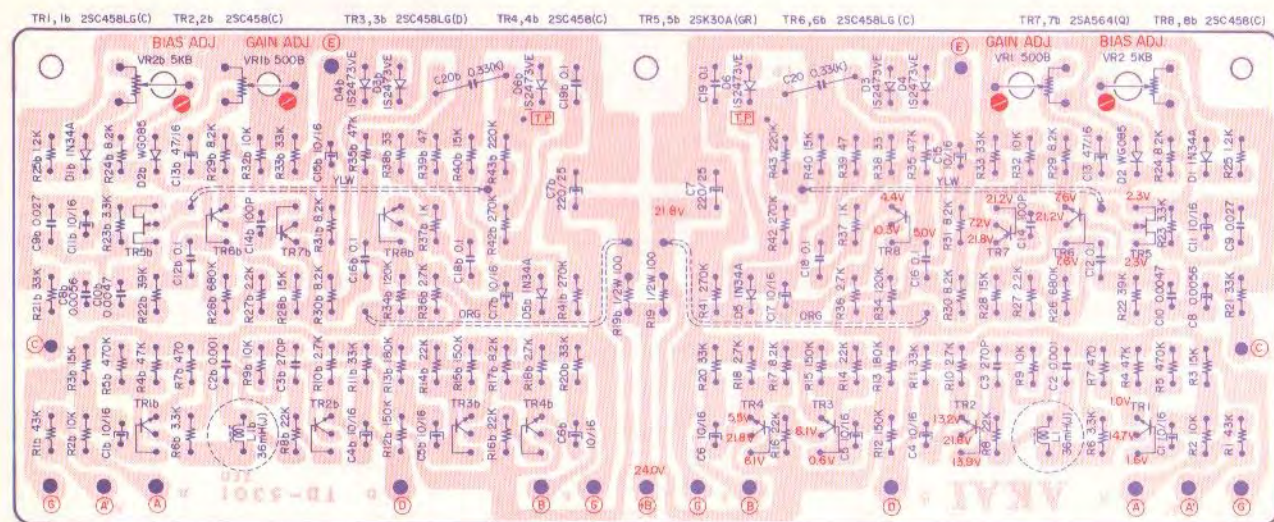


Fig. 12 DOLBY N.R. P.C. BOARD TD-5301 (Reverse)

NOTE:

Identical P.C. Boards are utilized for Recording Dolby N.R. and Playback Dolby N.R. The Recording Dolby N.R. P.C. Board is located on the Recording Amp. P.C. Board, and the Playback Dolby N.R. P.C. Board is located on the Playback Amp. P.C. Board. Adjust left and right channels respectively.

1. RECORDING DOLBY N.R. CIRCUIT ADJUSTMENT (Refer to Fig. 11)

Disconnect the wire connected to dolby circuit input and output terminals (A) and (B). Connect an Audio frequency oscillator to terminal (A) and connect a High-sensitivity V.T.V.M to terminal (B).

- 1) Turn semi-fixed resistors VR1 500B and VR2 5 kB fully clockwise (Fig. 11)
- 2) Ground test points T.P (Fig. 11)
- 3) Set Dolby Switch to OFF position.
- 4) Supply a 5 kHz, -10 dBm signal which has been verified with a frequency counter from the audio frequency oscillator and confirm that at this time the indication of the high-sensitivity V.T.V.M. connected to terminal (B) is 0 dBm.
- 5) Reduce the output of the audio frequency oscillator by -30.5 dB from the condition outlined in item 1-4) (5 kHz, -40.5 dB) and at this time confirm that the indication of the high-sensitivity V.T.V.M. connected to terminal (B) is -30.5 dB.
- 6) Set Dolby Switch to ON position and adjust semi-fixed resistor VR1 500B to obtain a -20.5 dBm indication on the high-sensitivity V.T.V.M. connected terminal (B).
- 7) Disconnect ground wire from test point T.P (grounded in item 1-2) and at this time adjust semi-fixed resistor VR2 5 kB to obtain a -22.5 dBm indication on the high-sensitivity V.T.V.M. connected to terminal (B).

2. PLAYBACK DOLBY N.R. CIRCUIT ADJUSTMENT

This adjustment is carried out in essentially the same way as the recording dolby circuit adjustment. Disconnect the wire connected to input and output terminals (A') and (B), connect an audio frequency oscillator to terminal (A'), and connect a high-sensitivity V.T.V.M. to terminal (B). Turn semi-fixed resistor VR1 500B and VR2 5 kB fully clockwise, and ground test points T.P.

- 1) Set Dolby Switch to OFF position and supply a 5 kHz, -10 dBm signal which has been verified with a frequency counter from the audio frequency oscillator. Confirm that the high-sensitivity V.T.V.M. indication at this time is 0 dBm. Next, lower the oscillator output by -22.5 dB and confirm that the high-sensitivity V.T.V.M. indication is -22.5 dB.
- 2) Set Dolby Switch to ON position and at this time adjust semi-fixed resistor VR1 500B to obtain a -32.5 dB high-sensitivity V.T.V.M. indication. Next, disconnect ground wire from test points T.P and adjust semi-fixed resistor VR2 5 dB to obtain a -30.5 dBm indication.

VIII. D. C. RESISTANCE OF VARIOUS COILS

Part	Designation	D.C. Resistance
CAPSTAN MOTOR	SCM2-24KJ	Between BLU and RED 100Ω Between YLW and GRN 180Ω Pick-up coil 635Ω
REEL MOTOR	24XO-MR	Between BLU and RED 74Ω Between YLW and GRN 166Ω
BRAKE SOLENOID	SDC-10CM-100V	1,300Ω
PINCH WHEEL SOLENOID	1660THT1-100V	1,064Ω
HEAD SHIFTER SOLENOID	1051PHT-DC24V	95Ω
RELAY	MY-4-OU-AD4 DC24V	650Ω
RELAY	LC1-C	1,650Ω
RELAY	TECK-36	1,000Ω
HEADPHONE OUTPUT TRANSFORMER	N16-535S	Primary 565Ω±15% Secondary 0.95Ω±15%
OSCILLATOR COIL	OT-204	Between 1 and 3 0.3Ω Between 4 and 6 0.7Ω Between 7 and 9 8.2Ω
4 TRACK ERASE HEAD	E4-260	2.0Ω
4 TRACK RECORDING HEAD	R4-200	8.0Ω
4 TRACK PLAYBACK HEAD	P4-202	268Ω

NOTE: The resistance values shown in this chart are average values.

IX. CLASSIFICATION OF VARIOUS P. C. BOARDS

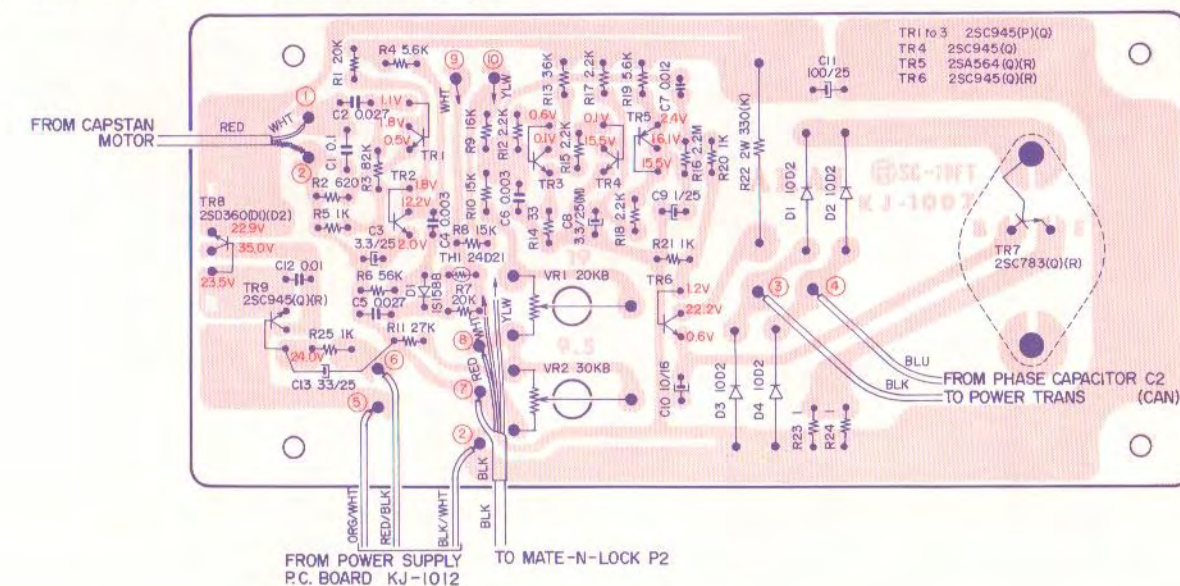
1. P. C. BOARD INTERCHANGEABILITY CHART

P. C. BOARD	GX-286	GX-286D	GX-286DB
SERVO CONTROL P. C. BOARD	KJ-1007	KJ-1007	KJ-1007
POWER AMP. P. C. BOARD	KJ-1010		
RELAY P. C. BOARD	KJ-1011	KJ-1011	KJ-1011
POWER SUPPLY P. C. BOARD	KJ-1012*	KJ-1012	KJ-1012
SYSCON P. C. BOARD	KJ-1013 A,B	KJ-1013 A,B	KJ-1013 A,B
TOUCH BUTTON P. C. BOARD	KJ-2051	KJ-2051	KJ-2051
MUTE P. C. BOARD	KJ05017	KJ-5017	KJ-5017
VR P. C. BOARD B	KJ-5019	KJ-5019	KJ-5019
SW. P. C. BOARD A		KJ-5020	KJ-5020
SW. P. C. BOARD B	KJ-5021		
EQUALIZER P. C. BOARD	KJ-5022	KJ-5022	KJ-5022
OSCILLATOR P. C. BOARD	KJ-5023	KJ-5023	KJ-5023
RECORDING AMP. P. C. BOARD	KJ-5024	KJ-5024*	KJ-5024
PLAYBACK AMP. P. C. BOARD	KJ-5025	KJ-5025	KJ-5025
VR P. C. BOARD	TD-5010	TD-5010	TD-5010
DOLBY NR P. C. BOARD	TD-5301		TD-5301

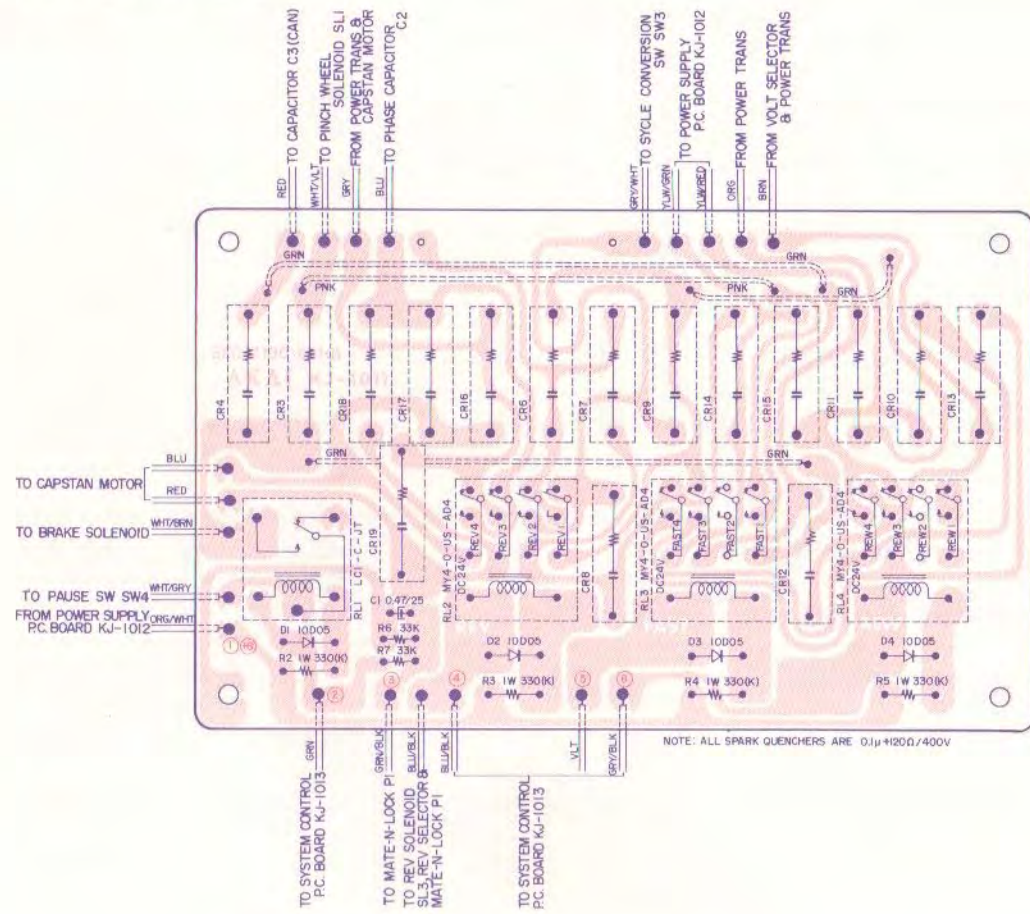
* Not interchangeable

2. COMPOSITE VIEWS OF COMPONENTS

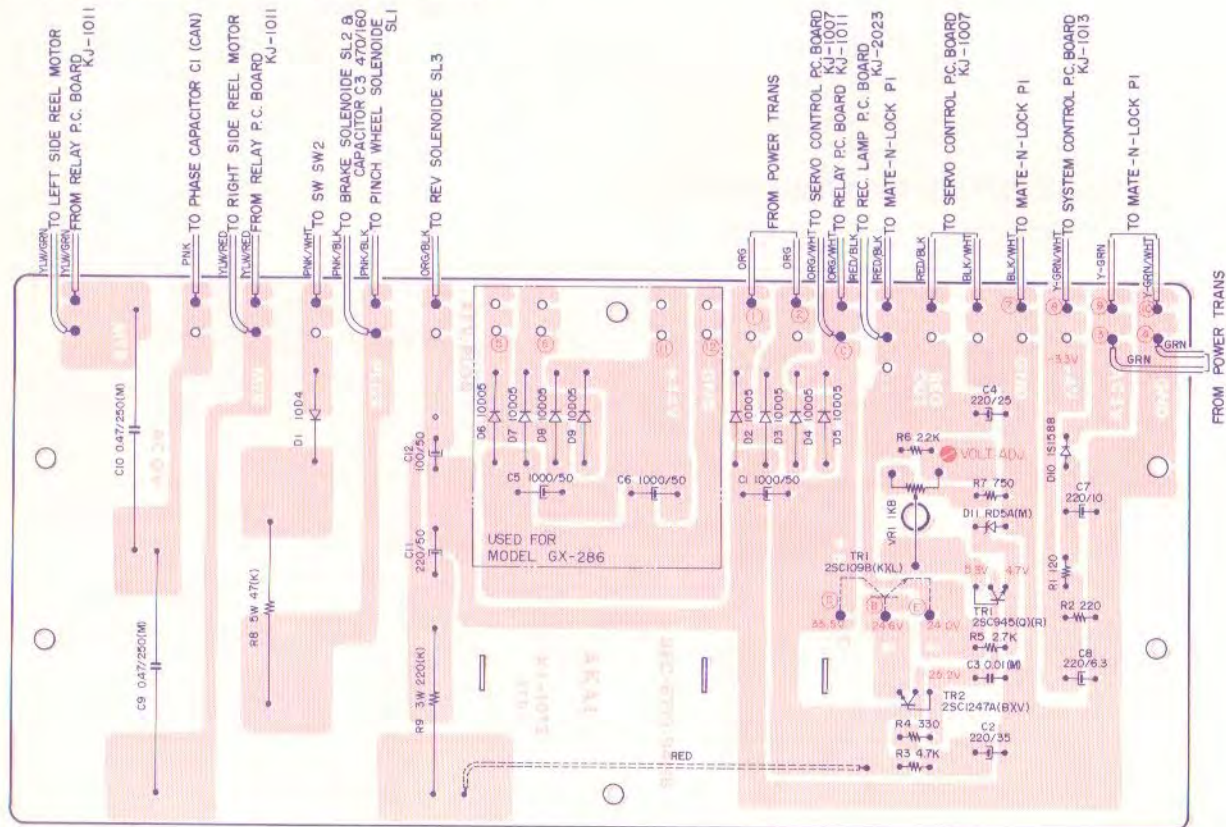
1) SERVO CONTROL P. C. BOARD KJ-1007



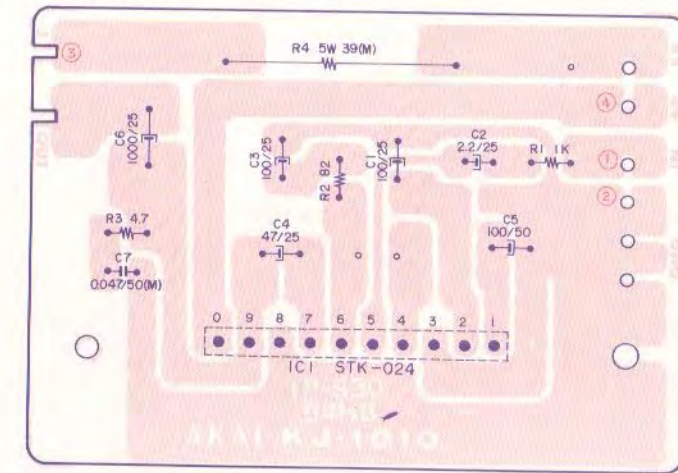
2) RELAY P.C. BOARD KJ-1011



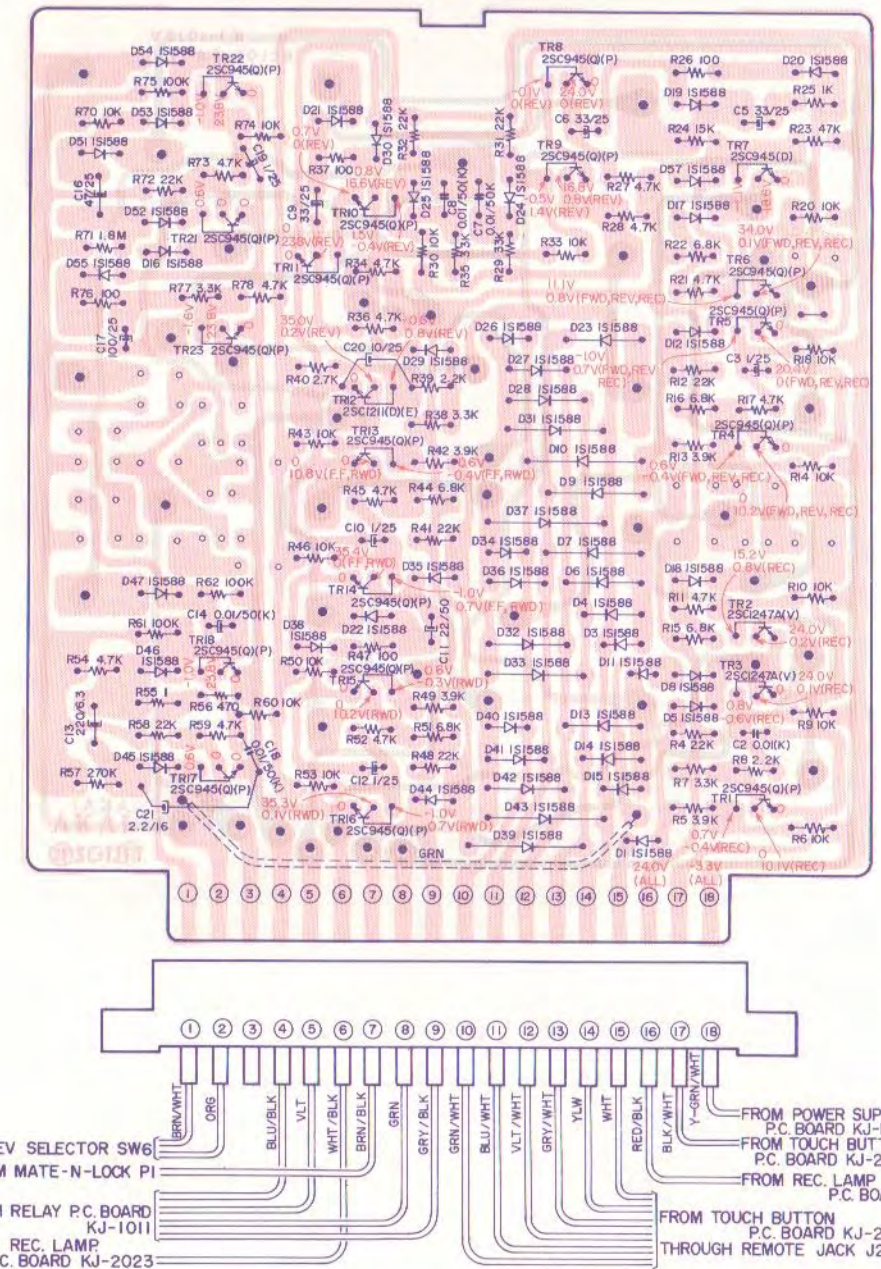
3) POWER SUPPLY P.C. BOARD KJ-1012



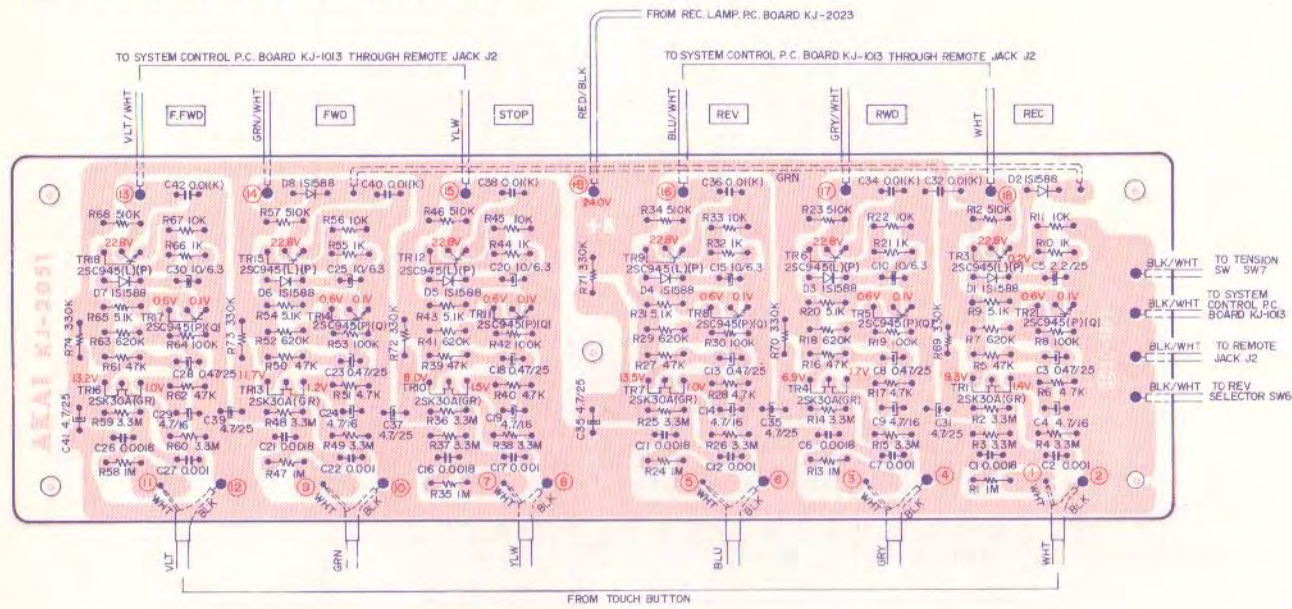
4) POWER AMP. P.C. BOARD KJ-1010



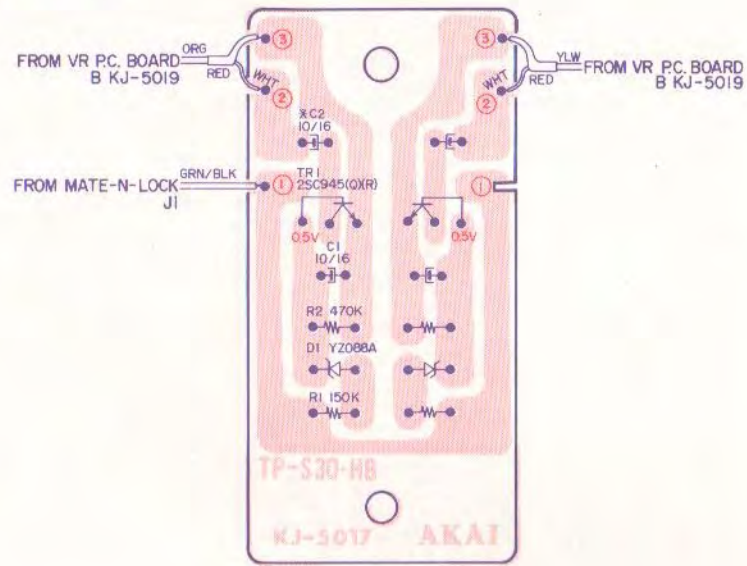
5) SYS. CON. P.C. BOARD KJ-1013A, B



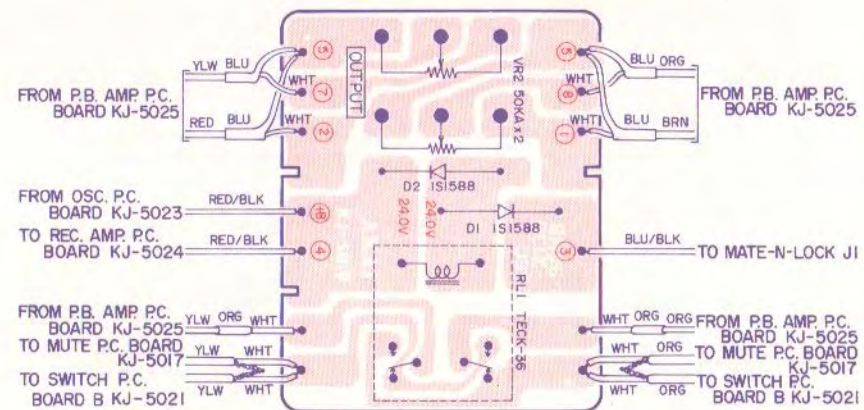
6) TOUCH BUTTON P.C. BOARD KJ-2051



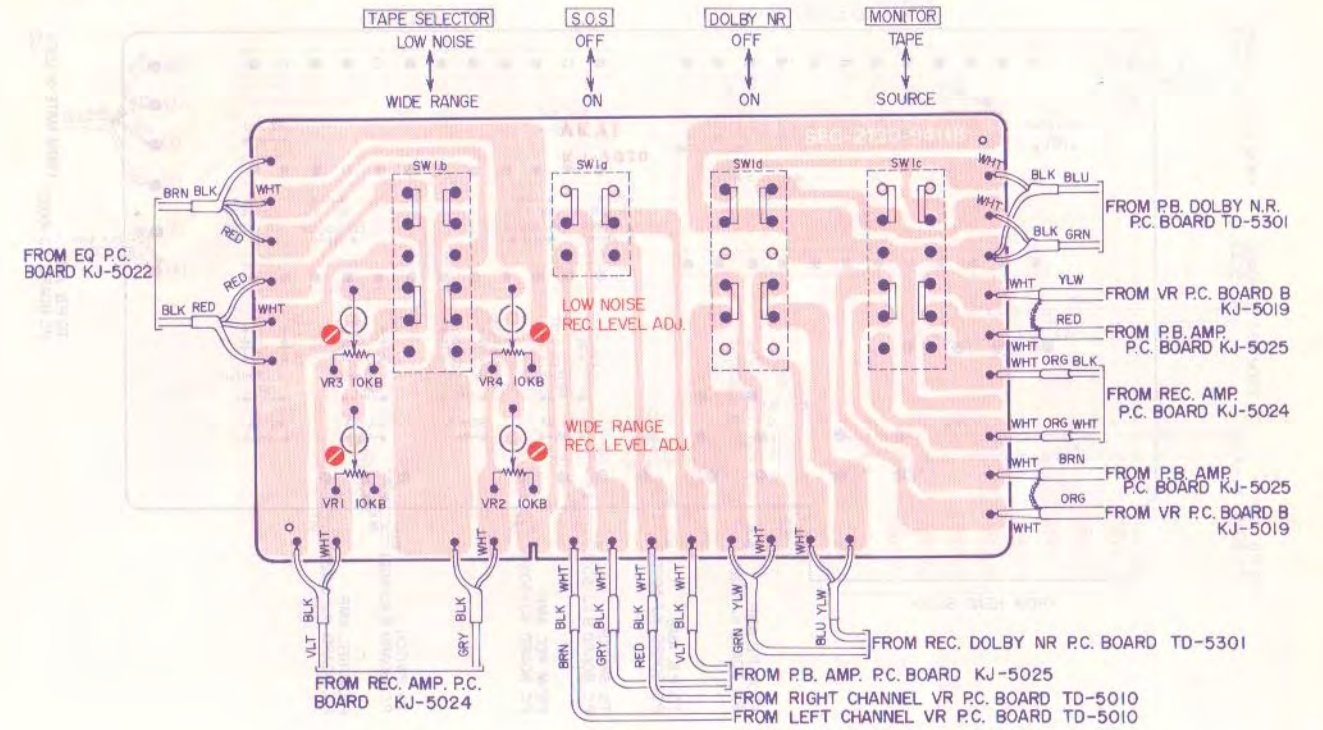
7) MUTE P.C. BOARD KJ-5017



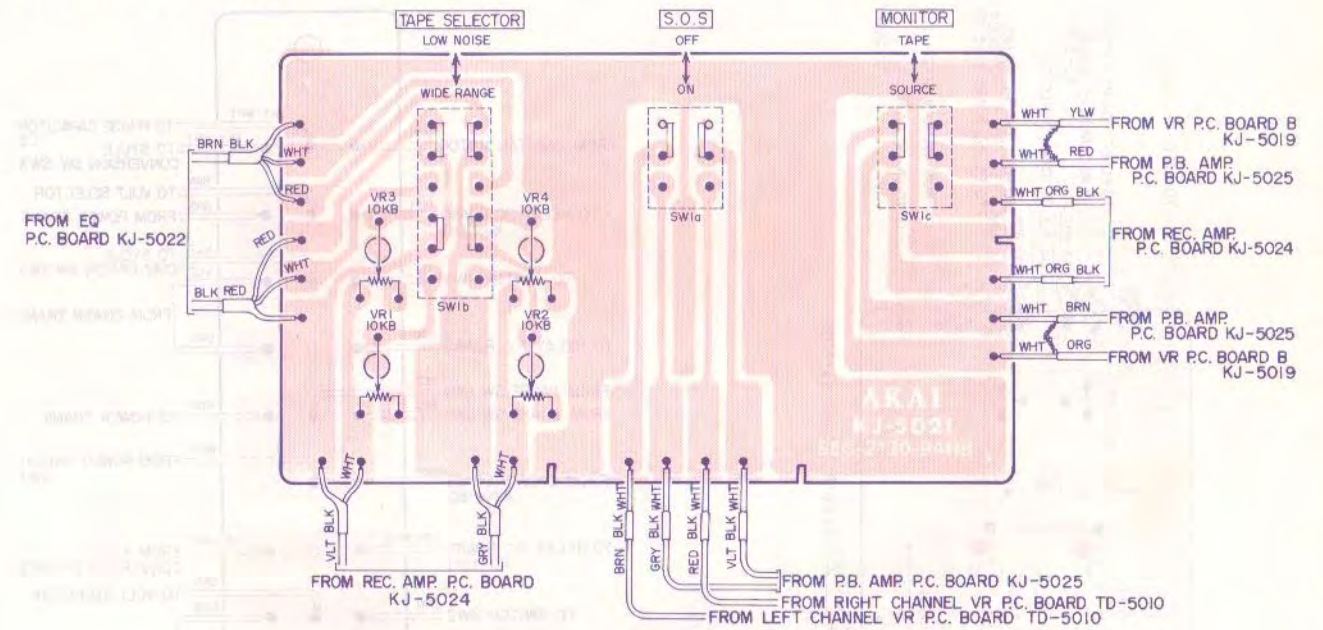
8) VR P.C. BOARD B KJ-5019



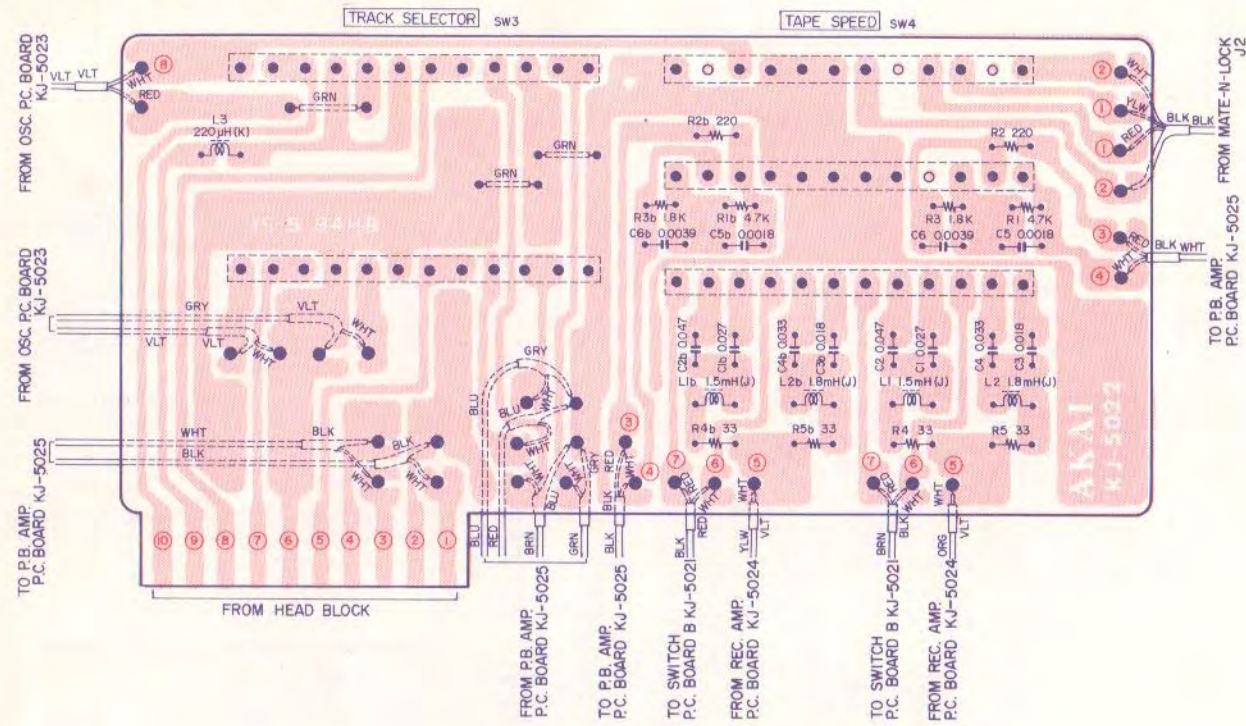
9) SW. P.C. BOARD A KJ-5020



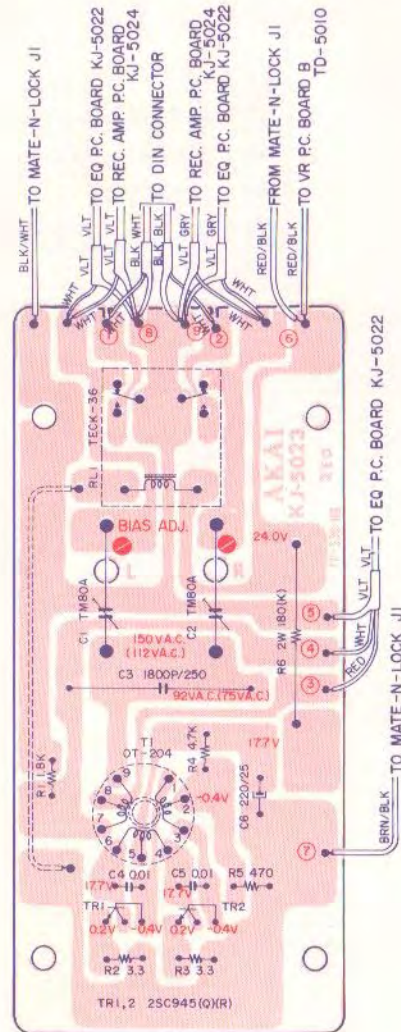
10) SW. P.C. BOARD B KJ-5021



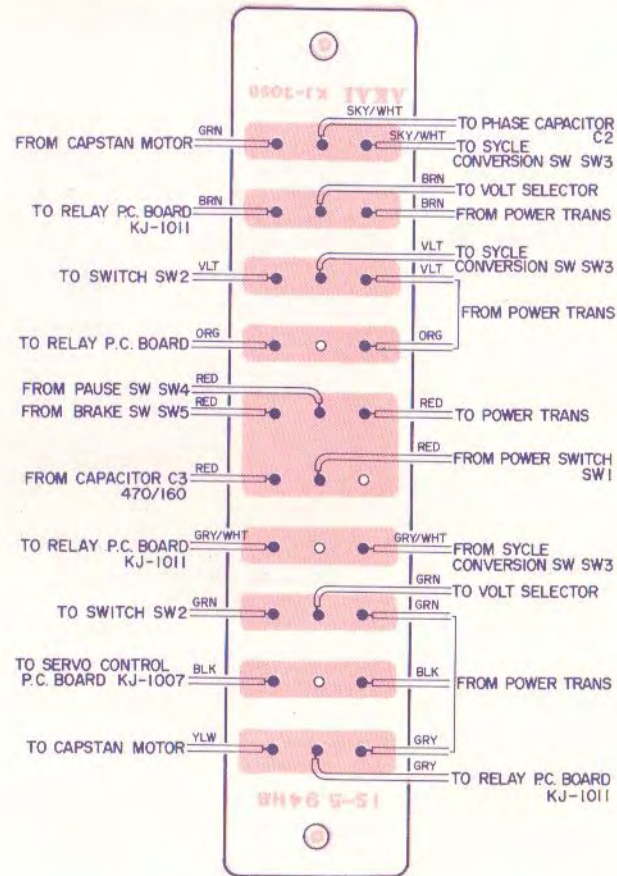
11) EQUALIZER P.C. BOARD KJ-5022



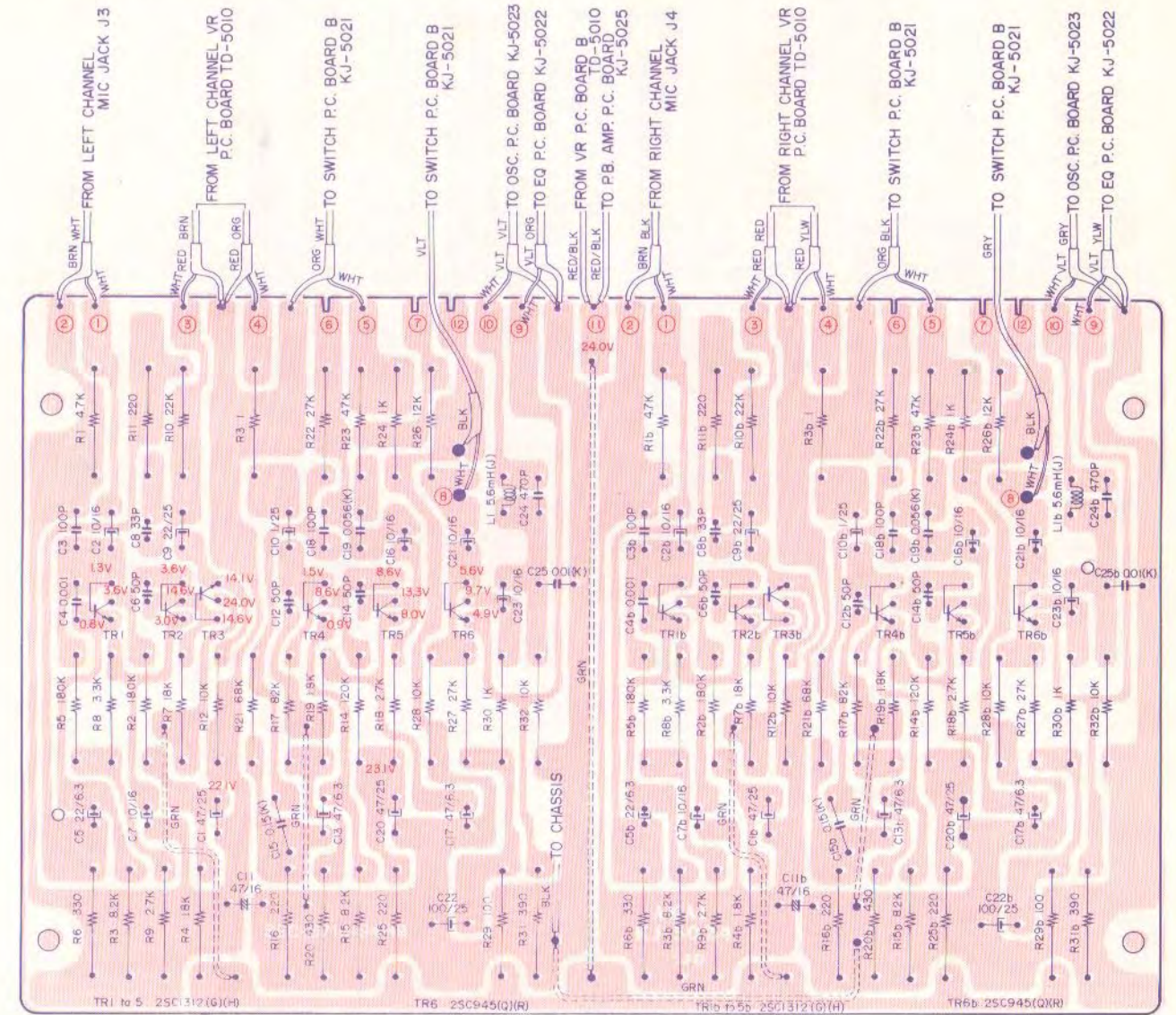
12) OSCILLATOR P.C. BOARD KJ-5023



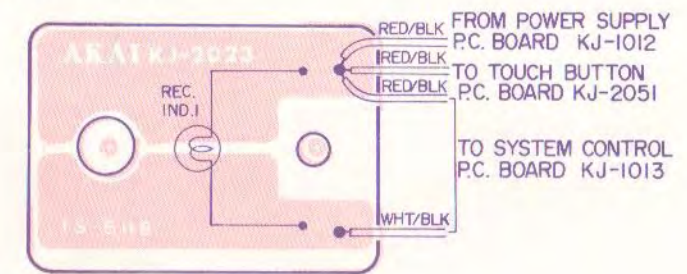
13) TERMINAL P.C. BOARD KJ-2050



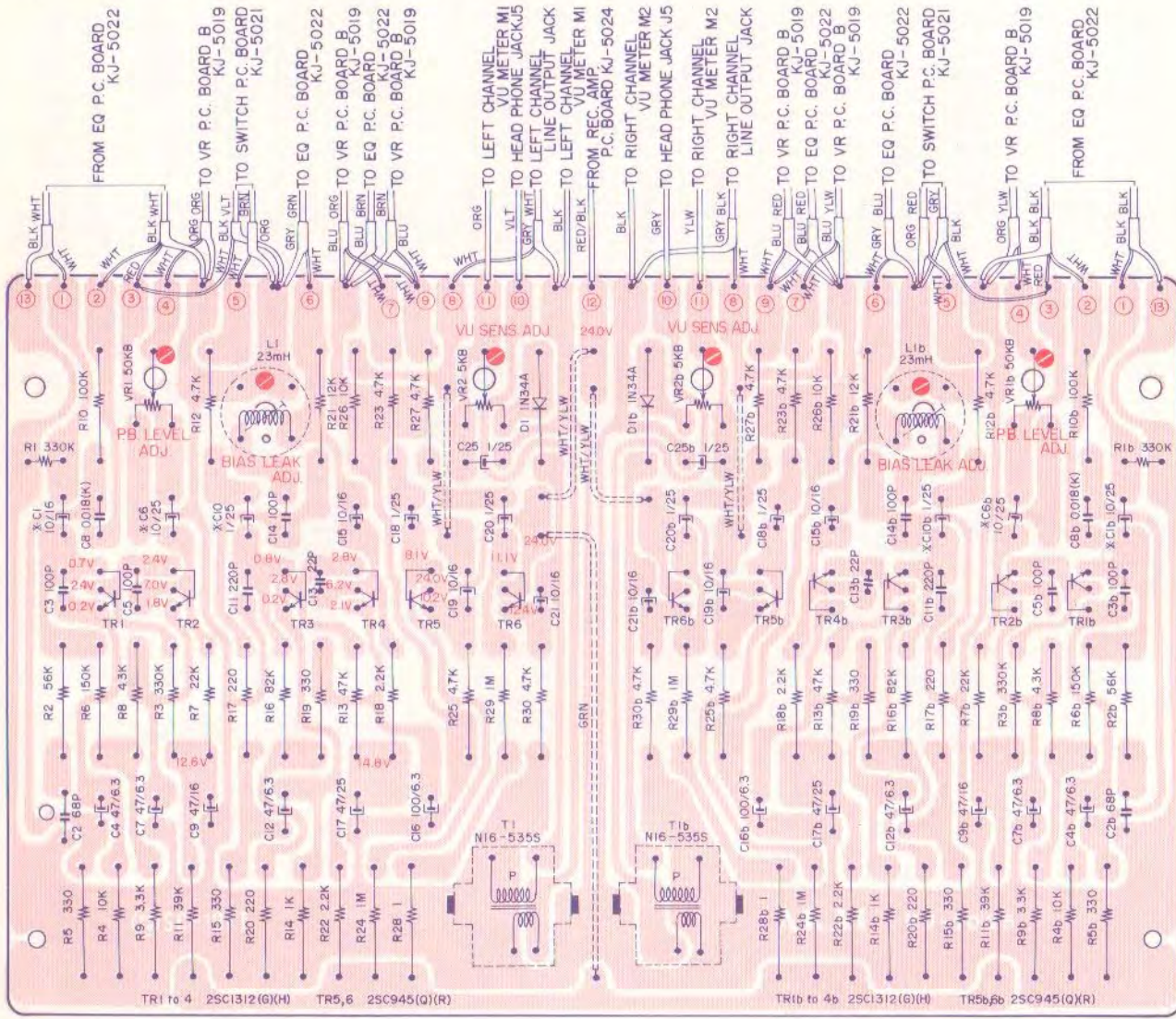
14) RECORDING AMP. P.C. BOARD KJ-5024



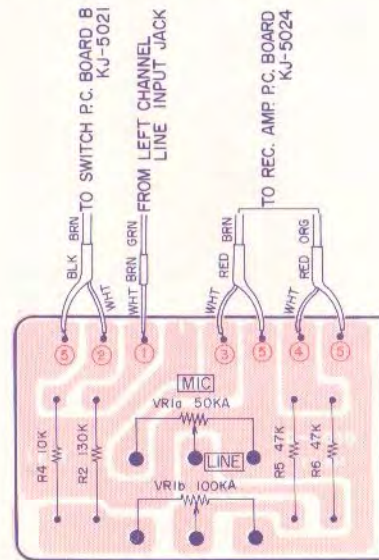
15) REC. LAMP P.C. BOARD KJ-2023



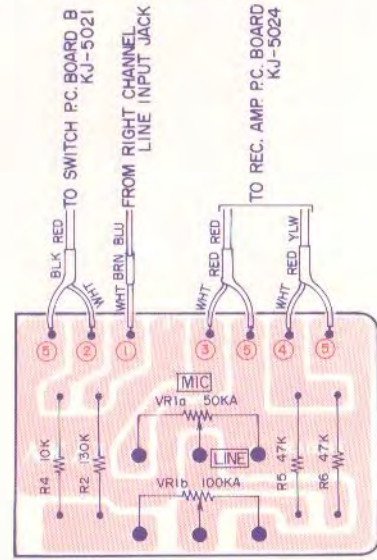
16) PLAYBACK AMP. P.C. BOARD KJ-5025



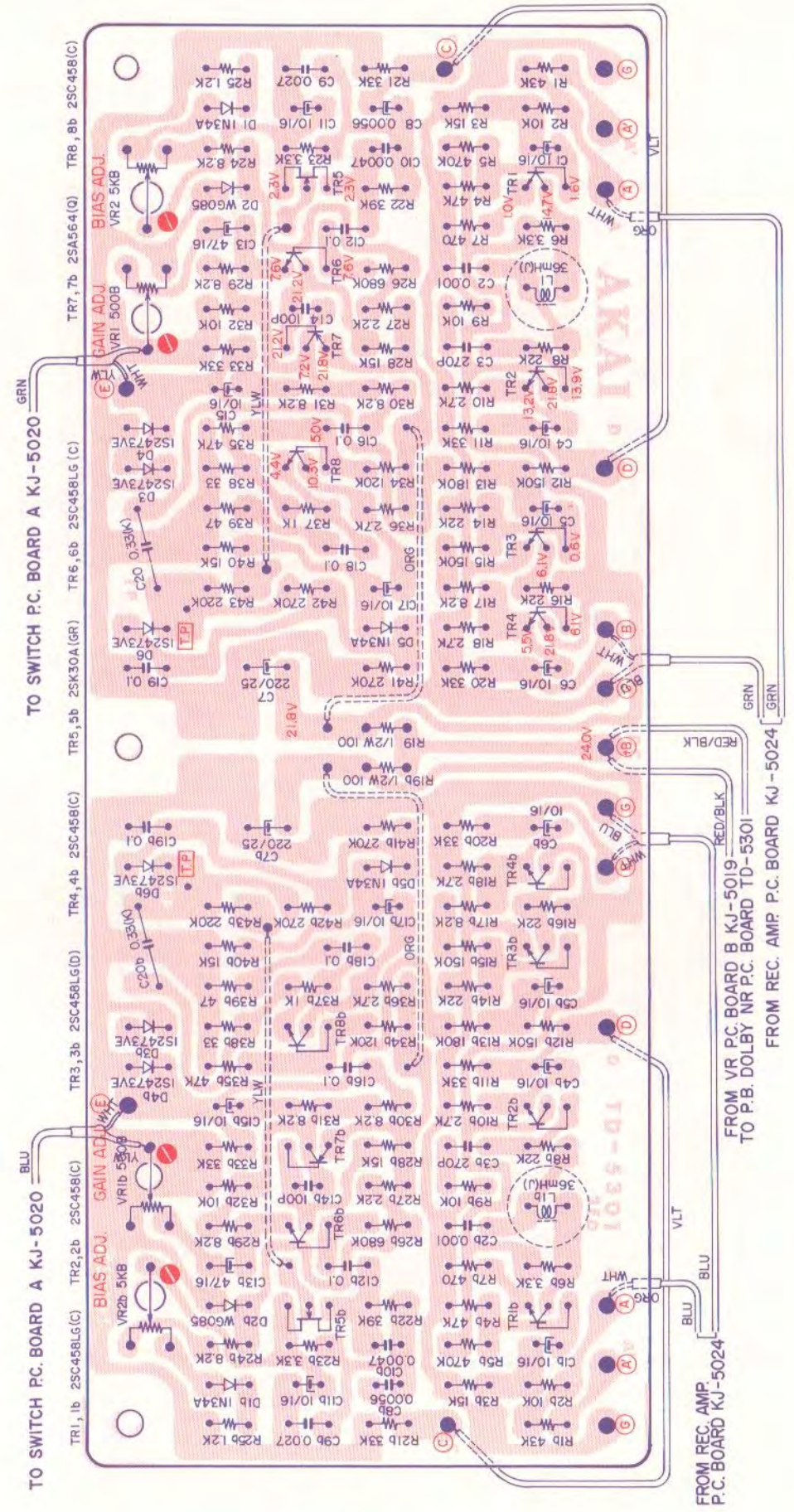
17) VR P.C. BOARD (Left) TD-5010

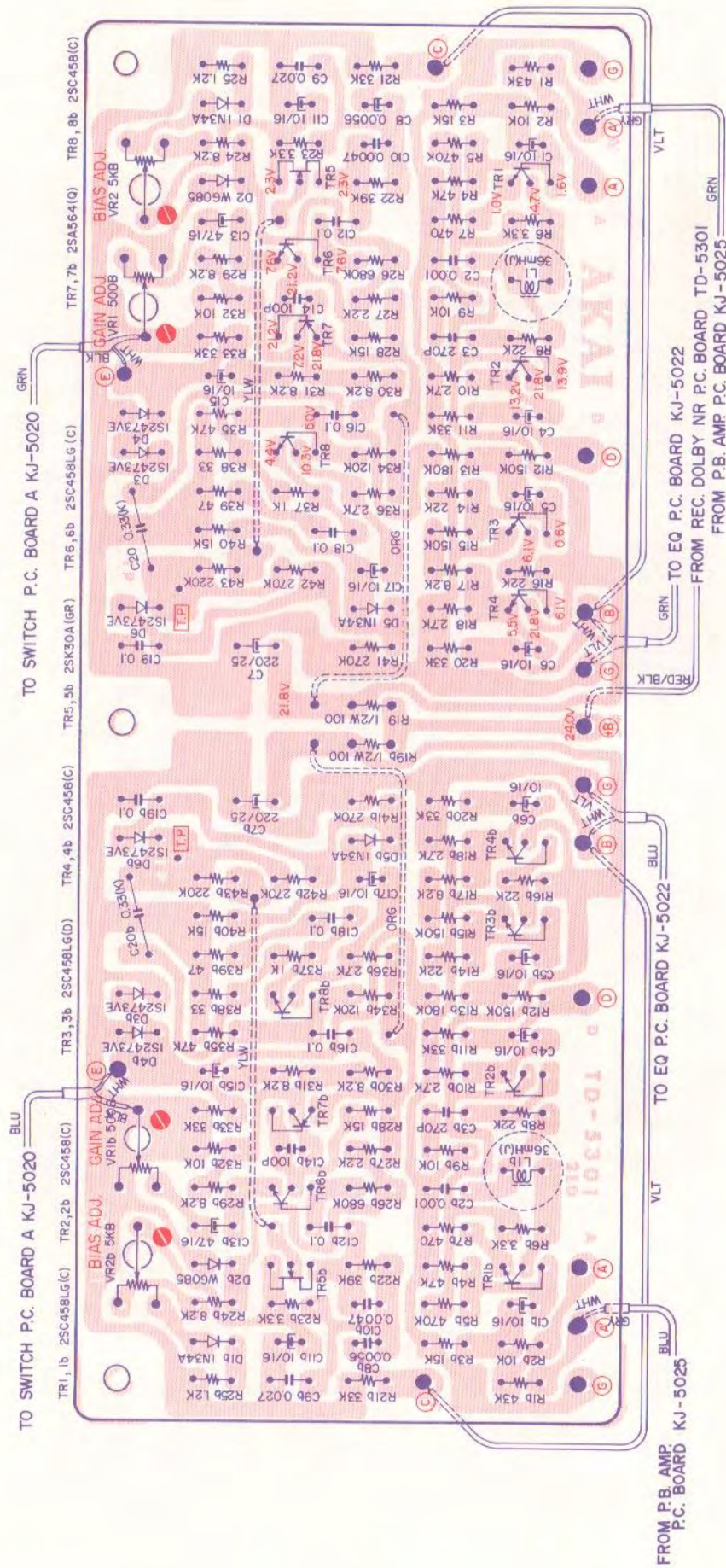


18) VR P.C. BOARD (Right) TD-5010



19) REC. DOLBY NR P.C. BOARD TD-5301





X. TOUCH BUTTON SYSTEM OPERATION

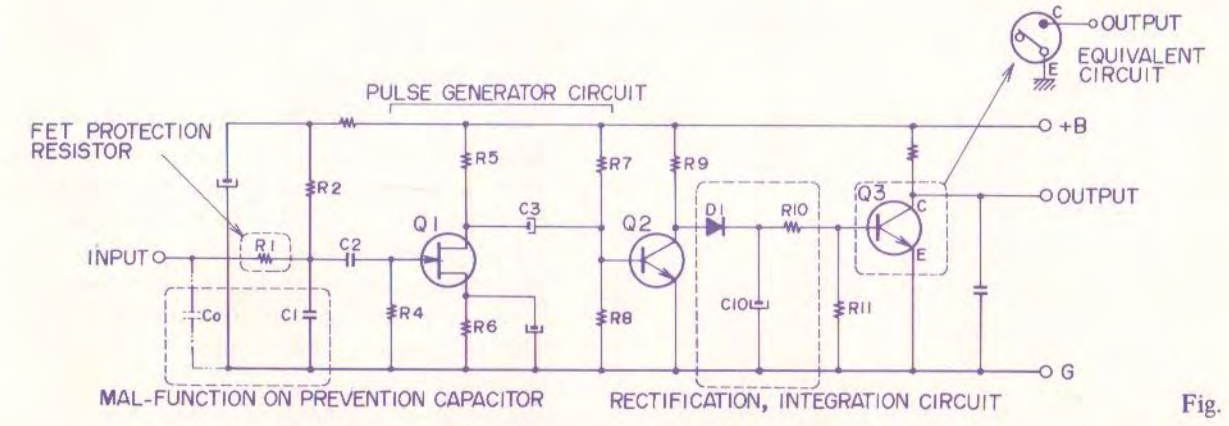


Fig. 13

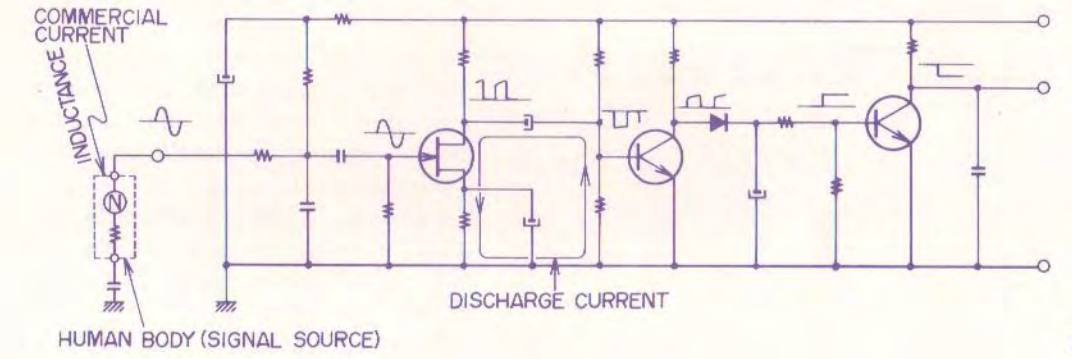


Fig. 14

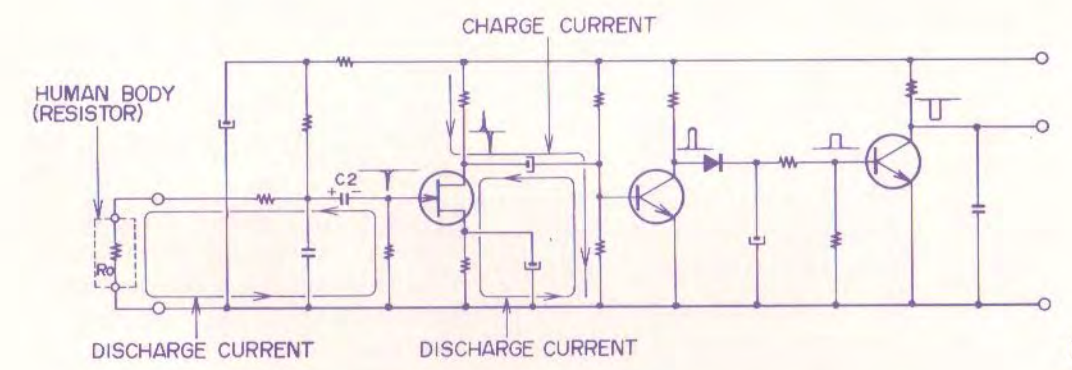


Fig. 15

1. TOUCH BUTTON SYSTEM CIRCUIT COMPONENT (Refer to Fig. 13)

As shown in Fig. 13, generally divided, the touch button system circuit is comprised of a pulse generator circuit, a rectifier circuit, and an integration circuit and includes a malfunction prevention capacitor and FET protection resistor, etc. Because it is necessary for the malfunction prevention capacitor shown by the dotted line to have a fairly high voltage, a shielded wire distribution capacitor is used with a capacitance of 50 to 60 PF. As shown by the equivalent circuit in the diagram, last stage transistor Q3 performs the exact same function as a micro switch.

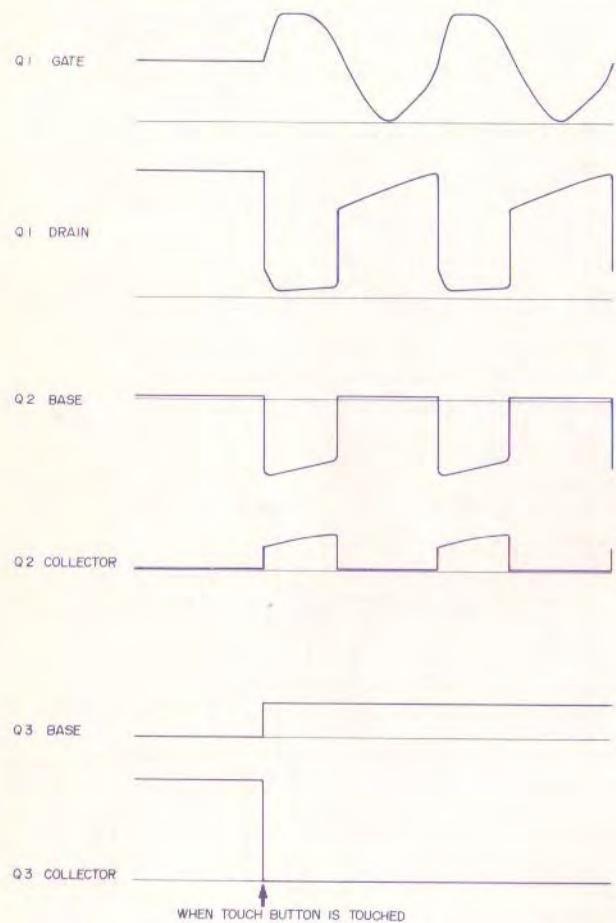


Fig. 16

2. WHEN TOUCH BUTTON IS TOUCHED WITH FINGER, OPERATION IS SAME AS MICRO SWITCH SYSTEM USED TO DATE (Refer to Figs. 14,16)

Because of inductance in our bodies from commercial power supply (50 Hz or 60 Hz), if we touch one of the touch buttons with our finger, our body becomes a signal source as shown in Fig. 14 and the same thing takes place as in the case of a micro switch system to date. Therefore, when a button is touched with a finger, a signal is supplied to FET Q1 gate as shown in Fig. 14.

The charge at C3 when a signal is not supplied is only equivalent to the drain voltage. Base bias is supplied to Q2 from R7 and R8 and no signal is emitted at Q2 collector. Consequently, Q3 base becomes unbiased and Q3 does not function.

The signal supplied to Q1 gate works to reduce the impedance between FET drain and source, and the electric charge charged at C3 passes Q1→R6→and R8 and is discharged.

C3 discharge causes a large minus bias at Q2 base, collector voltage increases, and this pulse is rectified at D1 and integrated at C10, R10 and supplied to Q3 as base bias. Consequently, Q3 is turned ON and functions in exactly the same way as a micro switch has functioned to date.

3. WHEN A BUTTON IS TOUCHED WITH A FINGER AND AT THE SAME TIME THE DECK CHASSIS IS TOUCHED WITH ANOTHER FINGER OR A HAND (See Fig. 15)

As previously explained our body acts as a signal source to operate the touch buttons, but when considering that in this case the high resistance of the human body is utilized, the Q1 gate circuit operation is different.

As shown in Fig. 15, when a button is touched with a finger and the chassis is touched simultaneously, by means of the resistors shown in the circuit diagram, C2 electric charge passes R1→R0→R4 and is discharged. From looking at the circuit, it can be understood that discharge is completed in an extremely short time. In this very short discharge time period, FET is cut, the drain voltage increases, and condenser C3 is charged. When C2 discharge is complete and the voltage of both terminals becomes equal, FET drain current flows and the electric charge charged at C3 is discharged.

Consequently, Q2 base is minus biased and ceases to operate. Thus, Q3 functions in the same way as a micro switch as outlined in item 2) above.

SECTION 2

PARTS LIST

TABLE OF CONTENTS

FIG. 1	HEAD BLOCK	30
FIG. 2	REEL MOTOR/REEL TABLE BLOCK	32
FIG. 3	MAIN MOTOR BLOCK	33
FIG. 4	IMPEDANCE ROLLER BLOCK	33
FIG. 5	PAUSE SW./TENSION ARM BLOCK	34
FIG. 6	OPERATION BLOCK	34
FIG. 7	MECH. ASEMBLY BLOCK	37
FIG. 8	POWER SUPPLY BLOCK	38
FIG. 9	BUTTON P.C. BOARD (KJ-2051) BLOCK	40
FIG. 10	SERVO P.C. BOARD (KJ-1007) BLOCK	41
FIG. 11	SYS. CON. P.C. BOARD (KJ-1013) BLOCK	41
FIG. 12	RELAY P.C. BOARD (KJ-1011) BLOCK	42
FIG. 13	POWER AMP. P.C. BOARD (KJ-1010) BLOCK	42
FIG. 14	POWER SUPPLY P.C. BOARD (KJ-1012) BLOCK	44
FIG. 15	DOLBY P.C. BOARD (TD-5301) BLOCK	44
FIG. 16	P.B. AMP. P.C. BOARD (KJ-5025) BLOCK	45
FIG. 17	REC. AMP. P.C. BOARD (KJ-5024) BLOCK	46
FIG. 18	OSC. P.C. BOARD (KJ-5023) BLOCK	46
FIG. 19	EQ. P.C. BOARD (KJ-5022) BLOCK	47
FIG. 20	MUTE P.C. BOARD (KJ-5017) BLOCK	46
FIG. 21	VOL. P.C. BOARD (TD-5010) BLOCK	48
FIG. 22	VOL. P.C. BOARD (B) (KJ-5019) BLOCK	48
FIG. 23	SW. P.C. BOARD (A) (KJ-5020) BLOCK	49
FIG. 24	SW. P.C. BOARD (B) (KJ-5021) BLOCK	49
FIG. 25	AMP. ASSEMBLY BLOCK	50
FIG. 26	FINAL ASSEMBLY BLOCK	52
INDEX		53

HOW TO USE THIS PARTS LIST

1. This parts list is compiled by various individual blocks based on assembly process.
2. When ordering parts, please describe parts number, serial number, and model number in detail.
3. How to read list.

The reference number corresponds with illustration or photo number of that particular parts list.

This number corresponds with the Figure Number.

This number corresponds with the individual parts index number in that figure.

A small "x" indicates the inability to show that particular part in the Photo or Illustration.

12-115x

Schematic Diagram Number of individual manufactured part.
(not required for parts order)

Quantity of particular part required.

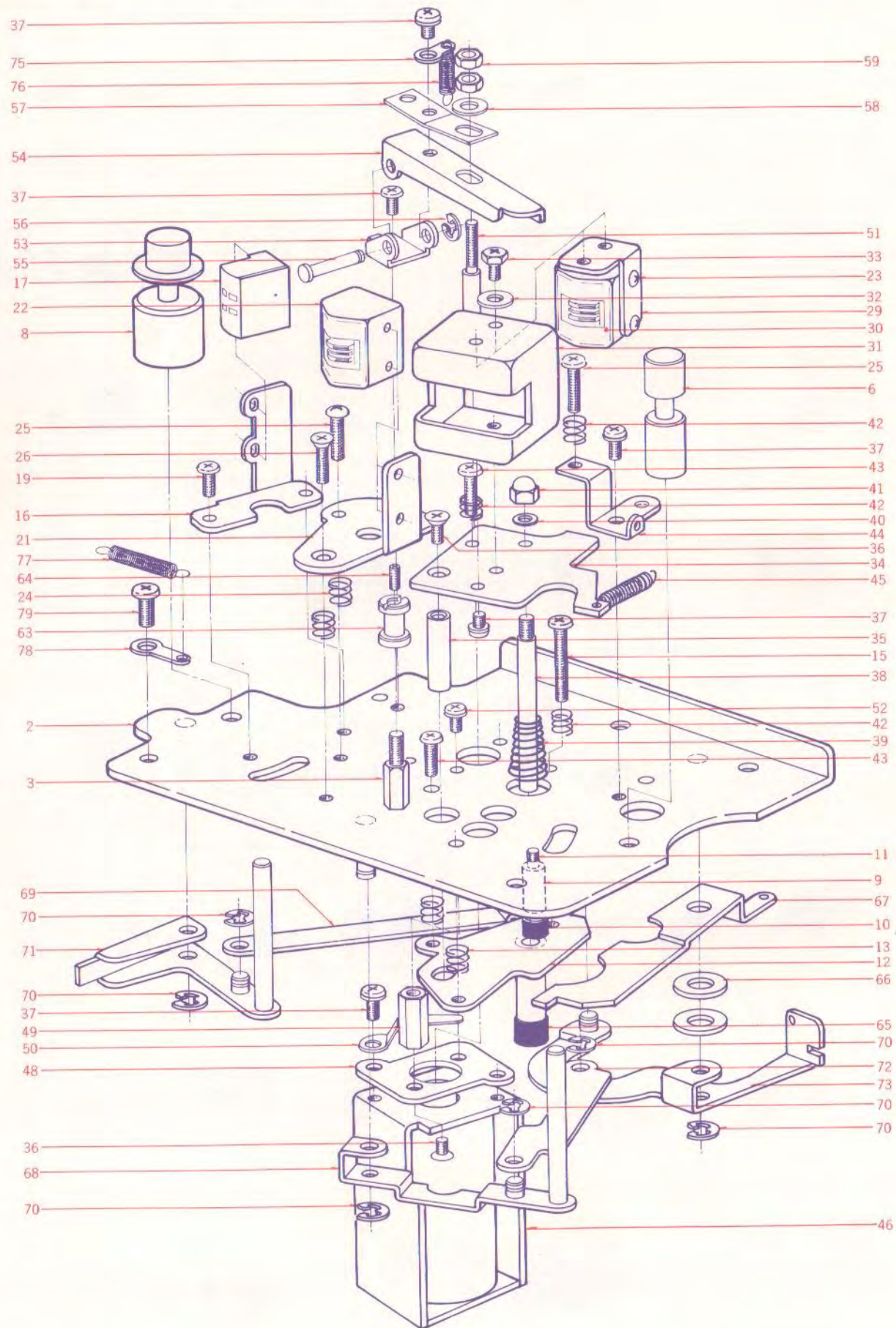
Ref. No.	Parts No.	Description	Schematic No.	Q'ty
FLYWHEEL BLOCK #13				
12-115x	800425	Flywheel Block Assy. Comp.	RDG #13	1
12-116	244506	Flywheel Only	RD-233	1
12-117x	244754	Felt, Flywheel	RD-275	1
12-118	251324	Main Metal Case	RD-236	1
12-119	253080	Main Metal	RD-237	1

4. The symbol numbers shown on the P.C. Board list can be matched with the Composite Views of components of the Schematic Diagram or Service Manual.
5. The indications of Resistors and Capacitors in the photos of P.C. Board are being eliminated.
6. The shape of the parts and parts name, etc. can be confirmed by comparing them with the parts shown on the Electrical Parts Table of P.C. Board.
7. Please utilize separate "Common List for Service Parts" for Resistor parts orders.
8. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List.
It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index. (meaning of ref. no. outlined in Item 3 above).
9. Utilize separate "Price List for Parts" to determine unit price. The most simple method of finding parts Price is to utilize the reference number.

ELECTRICAL PARTS TABLE

Because the indication of resistors and capacitors in the P. C. Board photos are being eliminated, please confirm parts name and shape by comparing them with the parts shown in this table.	1  Solid Resistor	2 Stopper Type  Carbon Resistor	3  Metal Oxide Film Resistor
	4  Cement Resistor	5  Wire-Wound Resistor	6  Thermister
1  MP Capacitor (Tubular Type)	2  Plastic Capacitor	3  Mylar Capacitor	4  VFM (Hi-Q) Capacitor
5  Mylar Capacitor	6  Tantalum Capacitor	7  Oil Capacitor (Tubular Type)	8 Vertical Type (Tubular Type)  Styrol Capacitor
9  Electrolytic Capacitor (Tubular Type)	10 Vertical Type (Tubular Type)  Electrolytic Capacitor	11  Ceramic Capacitor	12  Metalized Mylar (Paper) Capacitor
13  Trimmer Condenser	VR  Semi-Fixed Volume		
L  Ferri Inductor	TR  Transistor		
CR  Spark Quencher	D  Diode (Silicon, Zener, Germanium)		

FIG. 1 ILLUSTRATION OF HEAD BLOCK



HEAD BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
1-1x	BH600344	Head Block Comp.	KJ	1
1-2	HZ426486	Head Chassis, w/shaft A	KD-A0001	1
1-3	HZ412637	Tape Guide Post	RD-A30	1
1-4x	ZW273802	Toothed Lock Washer M3		2
1-5x	ZW273756	Nut M3		1
1-6	HZ803597	Tape Guide A	RD-3	1
1-7x	ZS434250	Screw, pan head 4x8, w/washer		2
1-8	MS609906	Tape Guide S	KJ-0001	1
1-9	HZ434272	Shifter Stopper Collar	KD-A0010	1
1-10	MZ428343	Stopper Rubber, KD	KD-1088	1
1-11	ZS593842	Screw, pan head 3x15, w/washer		1
1-12	HZ426666	PH Adjust Base, w/metal	KD-A0004	1
1-13	ZG206144	Angle Adjust Spring	RD-16	3
1-14x	ZW344338	Screw, pan head 3x12		2
1-15	ZS593853	Screw, pan head 3x20, w/washer		1
1-16	HZ382680	Erase Head Base	RD-A5	1
1-17	HE563220	ERASE HEAD E4-260		1
1-18x	ZS201464	Screw, pan head 2x3		2
1-19	ZS356793	Screw, pan head 3x5		3
1-20x	ZW562476	Earth Lug M3		1
1-21	HA382691	RH Head Angle	RD-A6	1
1-22	HR384513	REC. HEAD R4-200		1
1-23	ZS383646	Screw, pan head 2x4		4
1-24	ZG382757	Angle Adjust Spring D	RD-A12	3
1-25	ZS336868	Screw, round head 3x12		3
1-26	ZS200226	Screw, countersunk head 3x12 D=5		1
1-27x	EA463206	Terminal P.C. Board A	RD-A36	3
1-28x	EA466547	Terminal P.C. Board B	KD-A0013	1
1-29	HA382656	PH Head Angle	RD-A2	1
1-30	HP536501	PB HEAD P4-202		1
1-31	HZ382667	Triple-shield	RD-A3	11
1-32	ZW426622	Washer D3.4x7.8x0.5t (SPC)		2
1-33	ZS403312	Hexagon Bolt (+) 3x4		2
1-34	HZ426497	PH Head Base	KD-A0002	1
1-35	HZ426508	PH Hold-down Guide	KD-A0003	1
1-36	ZS200362	Screw, countersunk Head 3x5 D=5		3
1-37	ZS592536	Screw, pan head 3x5, w/washer		6
1-38	MS809987	PH Hold-down Base Shaft	RD-15	1
1-39	ZG321445	Reverse Spring, RD	RD-18	1
1-40	ZW259648	Washer D3x5x0.1t (PBP)		1
1-41	ZW482758	Cap Nut M3 (special)		1
1-42	ZG303300	Angle Adjust Spring B	RD-55	2
1-43	ZS345914	Screw, round head 3x10		1
1-44	HZ810011	PH Base Stopper B	RD-19	1
1-45	ZG810055	PH Hold-down Pull Spring	RD-52	1
1-46	EP601514	Plunger Solenoid SDC-1051PHT	44-1-71	1
1-47x	ED494583	Silicon Diode 10D05	45-2-42	1
1-48	HZ317698	Plunger Base	RD-21	1
1-49	HZ321344	Plunger Retaining Prop	RD-7	2
1-50	HZ321366	Retaining Plate	3A-72	1
1-51	HZ321377	Plunger Joint A	RD-22	1
1-52	ZS593886	Screw, pan head 3x8, w/washer		2
1-53	HZ320940	PH Hold-down Lever Support	RD-23	1
1-54	HL809998	PH Hold-down Lever	RD-24	1
1-55	MH257477	Connecting Pin	RD-211	1
1-56	ZW270088	'E' Ring 1.9M	6-1-9	1
1-57	ZG246857	Pull Lever Spring	RD-25	1
1-58	ZW425002	Washer D3.1x8x0.5t (SPC)		1
1-59	ZW273835	Nut M3		2
1-60x	EJ292961	Multi-jack 10P 500-010-005	31-4-4	1
1-61x	EJ373318	Nylon Clip HP-3N	2-7-37	1
1-62x	ZS593908	Screw, pan head 3x6		1
1-63	HZ231884	Tape Guide B	RD-5	1
1-64	ZS492917	Set Screw, hexagon Socket 3x5 (cup/p.)		1
1-65	HZ321434	Dust-proof Cap B	RD-54	1
1-66	ZW260201	Washer D6.2x13x1t (nylon)		2
1-67	HZ433890	Shifter Stopper B	KD-A0011	1
1-68	HL426510	Shifter Lever (1), w/pin	KD-A0005	1
1-69	HZ426543	Shifter Joint (1)	KD-A0008	1
1-70	ZW270101	'E' Ring 3M	6-1-9	1
1-71	HL426521	Shifter Lever (2), w/pin	KD-A0006	1
1-72	HZ426554	Shifter Joint (2)	KD-A0009	1
1-73	HL426565	Shifter Lever (3), w/pin	KD-A0007	1
1-74x	MZ810191	Cushion Rubber, RD	RD-278	1
1-75	ZW273778	Earth Lug M3		2
1-76	ZG469315	Take-up Lever Spring	CG-1091	1
1-77	ZG366761	Spring, slider D	RCC-1209	1
1-78	ZW273881	Earth Lug M4		1
1-79	ZS413201	Screw, pan head 4x8		4

REEL MOTOR/REEL TABLE BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
2-1	BM314741	Reel Motor Block (24X0-2) Comp. MR, KD, MS		1
2-2x	BR398430	Supply Reel Table Block Comp. KD, KF		1
2-3x	BR398441	Take-up Reel Table Block Comp. KD, KF		1
2-4	MT488147	Reel Table Disk B, RD	RD-272	1
2-5	MT255420	Reel Retainer	3R-102	1
2-6	MS342000	Reel Shaft	3R-108	1
2-7	ZG255633	Reel Spring	3R-109	1
2-8	MT297663	3R 'O' Ring 2.9x1.65M	3R-139	1
2-9	ZW270088	'E' Ring 1.9M	6-1-9	1
2-10	MT397225	Reel Table Rubber	KD-2017	1
2-11	MT495606	Brake Drum (R) A (Take-up)	MR-216	1
2-12x	MT495617	Brake Drum (L) A (Supply)	MR-216	1
2-13	MT405268	Reel Table Spacer	KD-2018	1
2-14x	ZW273778	Earth Lug M3		2
2-15x	ZS425981	Screw, binding head 3x3		2
2-16	MT436860	Brake Cloth Comp.	MR-269	1
2-17	MT317485	U Metal Fitting	MR-218	1
2-18	ZG317496	Felt Tension Spring	MR-260	1
2-19	MR317507	Counter Pulley (Take-up)	MR-217	1
2-20	ZS516644	Screw, countersunk head 2.3x10 (Take-up)		2
2-21	ZS424056	Screw, pan head 4x10		2
2-22	ZS403222	Screw, countersunk head 3x10		3
2-23	MB303535	Counter Belt D91x1.6	3A-617	1
2-24	MS607151	Brake Band Guide (New)	MU-1016	2
2-25	ML314976	Brake Lever A	MR-210	1
2-26	MT314987	Brake Band	MR-213	2
2-27	MZ314998	Brake Band Retaining Plate	MR-212	4
2-28	MZ315000	Brake Band Support	MR-214	2
2-29	ZG315011	Brake Lever Spring	MR-116	1
2-30	ZW290283	'U' Ring 2.85M	6-1-1	1
2-31	MH317373	Brake Lever Prop	MR-102	2

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

FIG. 2 ILLUSTRATION OF REEL MOTOR/REEL TABLE BLOCK

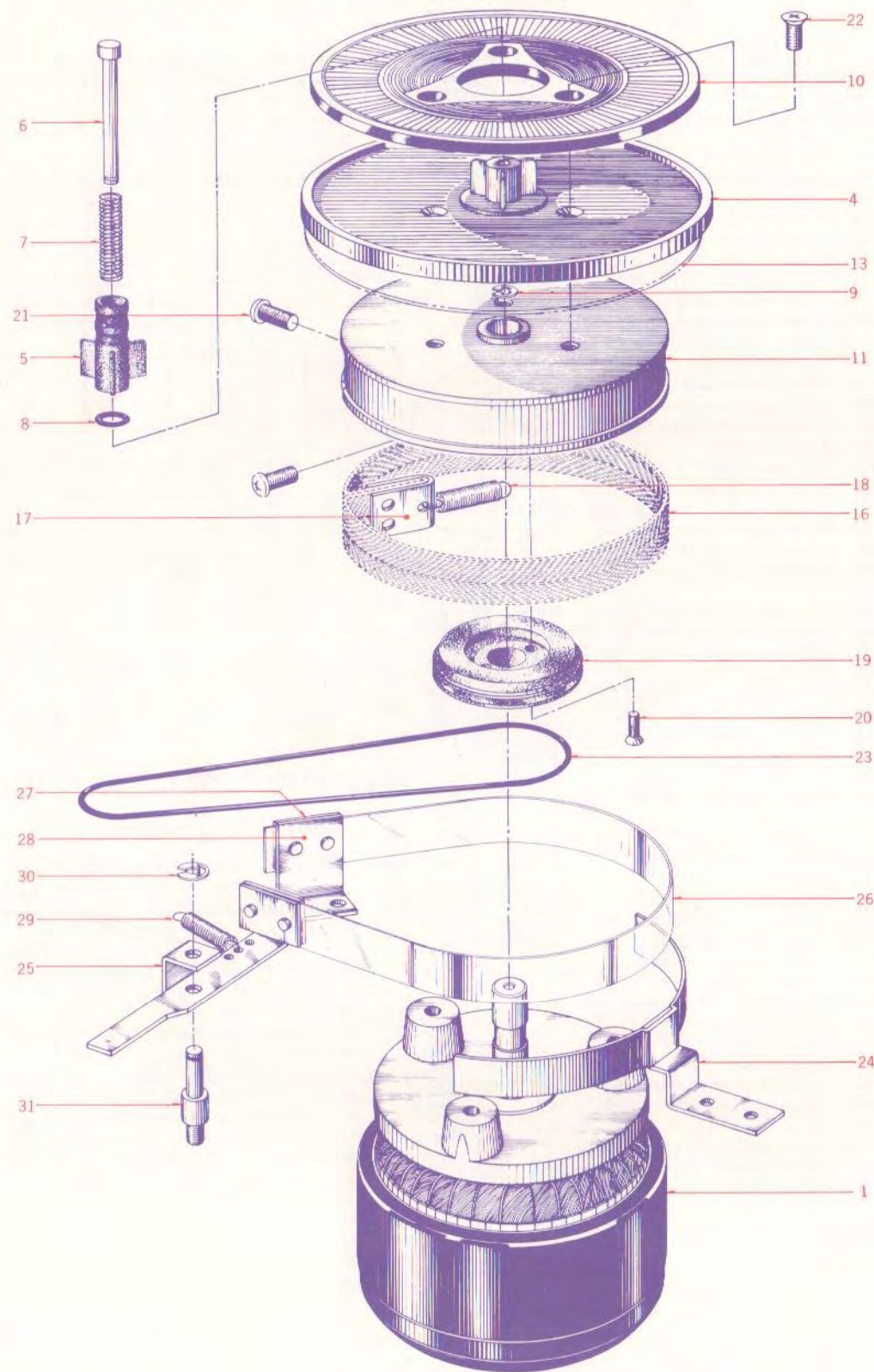


FIG. 3 ILLUSTRATION OF MAIN MOTOR BLOCK

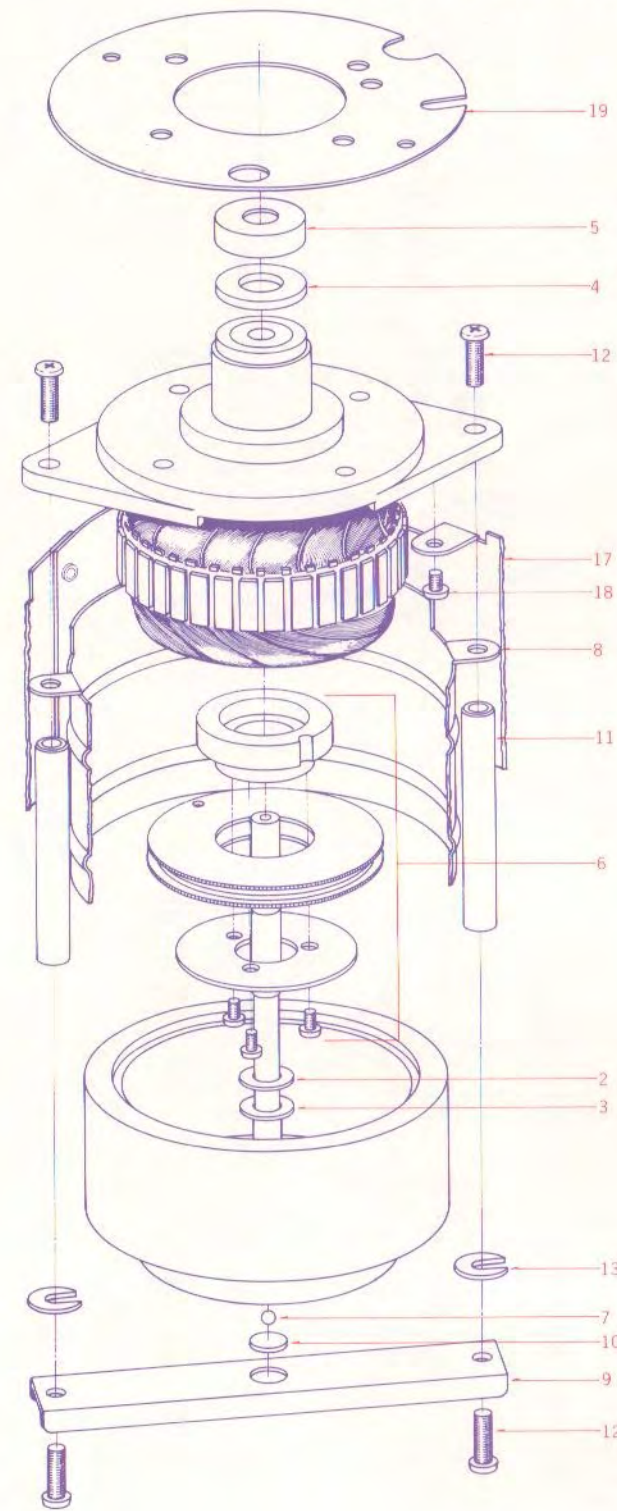


FIG. 4 ILLUSTRATION OF IMPEDANCE ROLLER BLOCK

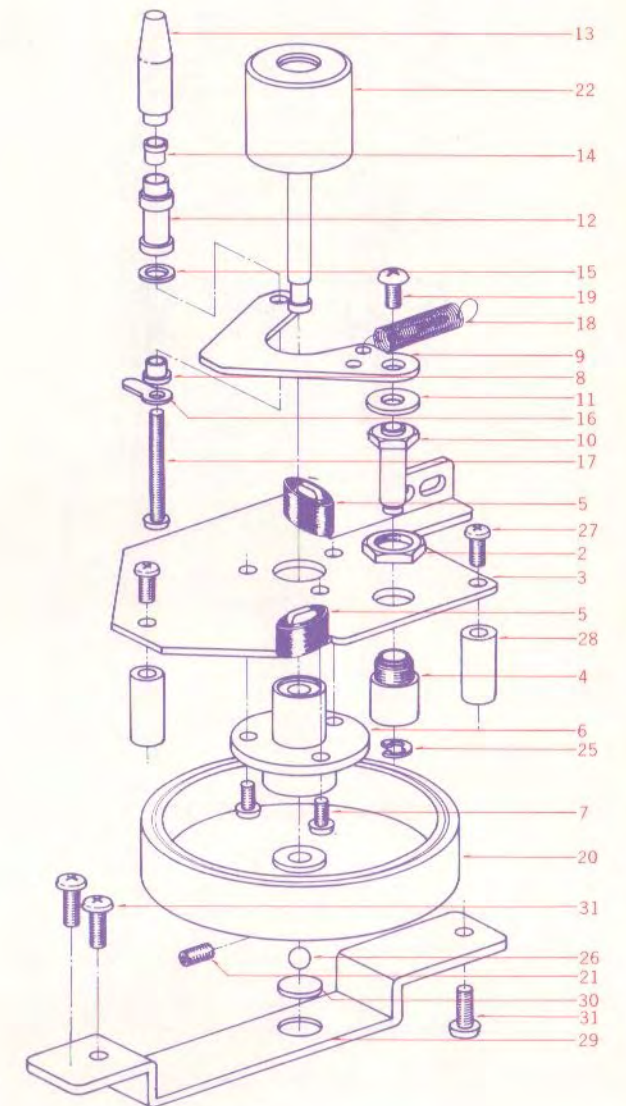


FIG. 5 ILLUSTRATION OF PAUSE SW./TENSION ARM BLOCK

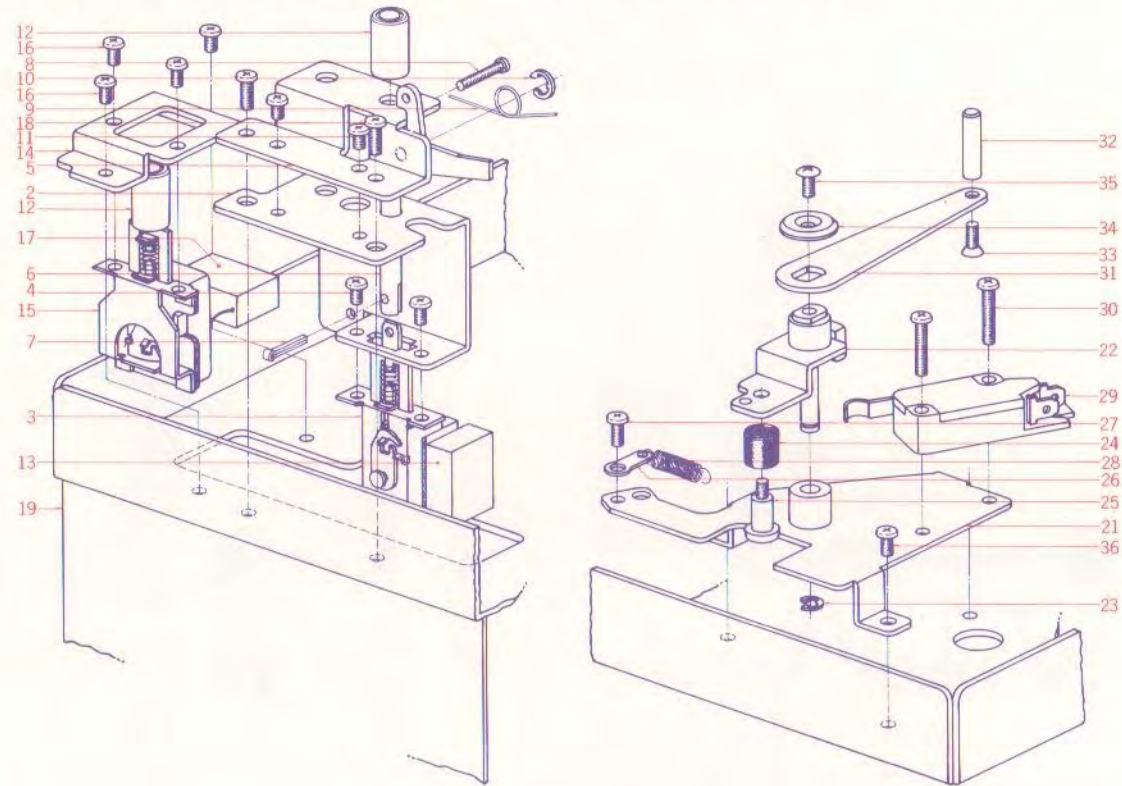
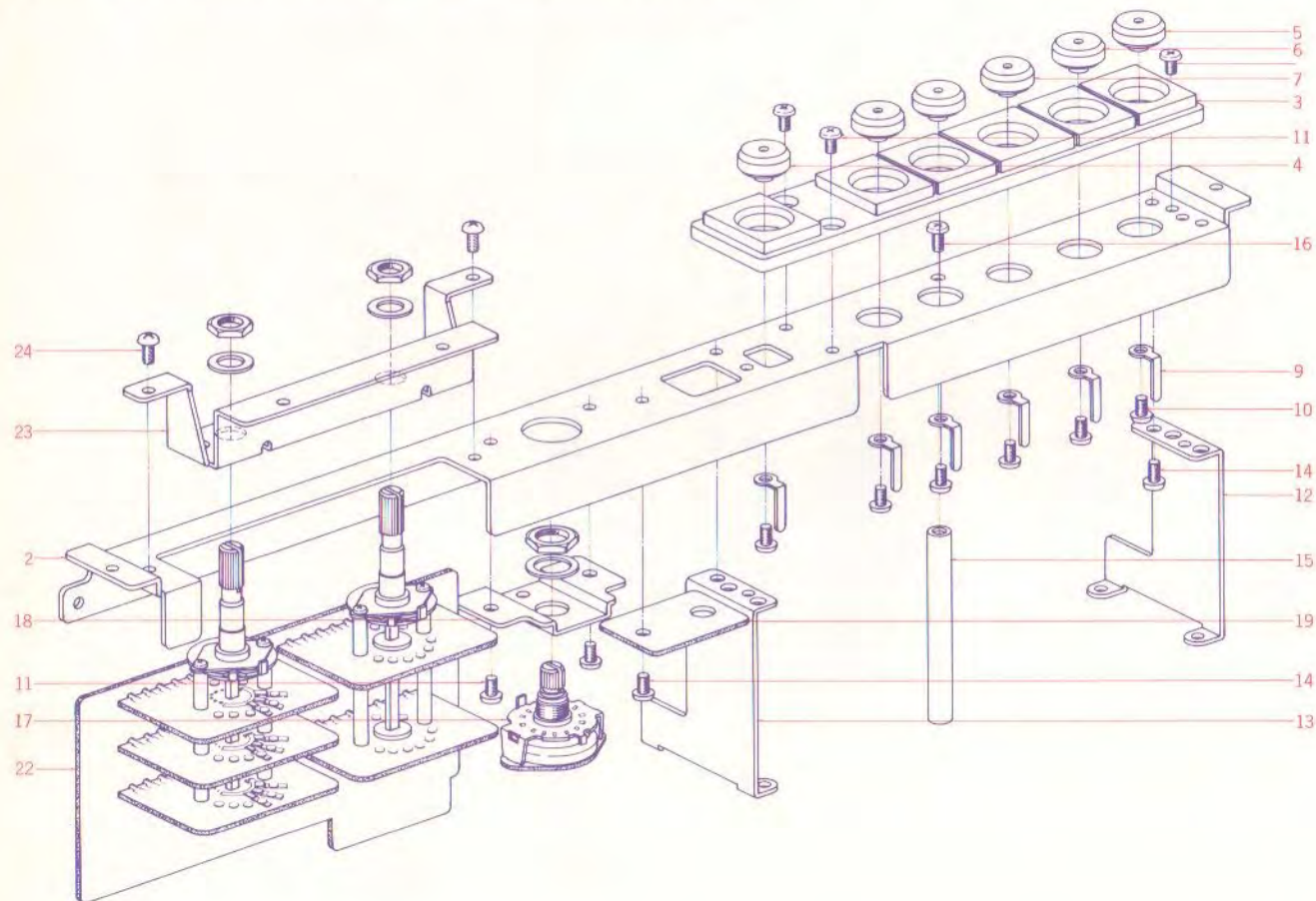


FIG. 6 ILLUSTRATION OF OPERATION BLOCK



MAIN MOTOR BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
3-1x	BM600298	Main Motor Block (SCM2-24) Comp.	KJ, MY	1
3-2	ZW597543	Thrust Washer A	KJ-7009	1
3-3	ZW605698	Thrust Washer B	KJ-7009	1
3-4	ZW597622	Felt Washer	KJ-7022	1
3-5	SK597633	Cap	KJ-7023	1
3-6	BZ600300	Detector Gear Block Comp.	KJ	1
3-7	MV368886	Steel Ball D3		1
3-8	MZ597666	Motor Shield Plate	KJ-7026	1
3-9	MZ597644	Thrust Support Angle	KJ-7024	1
3-10	MZ597690	Ball Holder	KJ-7029	1
3-11	MS597655	Thrust Holding Prop	KJ-7025	2
3-12	ZS413234	Screw, pan head 4x12		4
3-13	ZW603786	Adjust. Washer (U) D4x13x0.2t		2
3-14x	ZW603797	Adjust. Washer (U) D4x13x0.5t		2
3-15x	ZW603764	Adjust. Washer (U) D4x13x1.2t		2
3-16x	ZW603775	Adjust. Washer (U) D4x13x1.6x		2
3-17	MZ610762	Motor Shield Plate C	KJ-7035	2
3-18	ZS417216	Screw, pan head 3x4		2
3-19	MZ596878	Motor Shield Plate B	KJ-1017	1

IMPEDANCE ROLLER BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
4-1x	BI600355	Impedance Roller Block Comp.	KJ	1
4-2	MZ603990	Metal Nut	6-3-9	1
4-3	MZ597071	Impedance Base	KJ-2027	1
4-4	MV597082	Sensing Shaft Metal	KJ-2028	1
4-5	MZ606712	Stopper Rubber KJ	KJ-2060	2
4-6	MZ597093	Metal Case, w/metal	KJ-2029	1
4-7	ZS499331	Screw, pan head 2.3x5		3
4-8	EZ606701	Insulator Collar (L)	KJ-2039	1
4-9	MZ597137	Sensing Arm	KJ-2036	1
4-10	MS597148	Sensing Shaft	KJ-2037	1
4-11	ZW604012	Washer D4.3x11x0.1t		3
4-12	MZ597172	Sensing Post (Lower)	KJ-2040	1
4-13	MZ597150	Sensing Post (Upper)	KJ-2038	1
4-14	SE597161	Insulated Collar (S)	KJ-2039	1
4-15	ZW601075	Washer D4.1x7x0.1t		1
4-16	ZW273633	Earth Lug M2.3		1
4-17	ZS554962	Screw, pan head 2.3x25		1
4-18	ZG227452	Spring D	900-118	1
4-19	ZS201150	Screw, truss head 3x6 (black)		1
4-20	M1597183	Flywheel	KJ-2041	1
4-21	ZS593796	Set Screw, hexagon socket 3x6 (flat/P.)		2
4-22	MR597115	Impedance Roller, w/shaft	KJ-2033	1
4-23x	MZ597126	Roller Plate	KJ-2035	1
4-24x	ZW161116	Washer D4x10x1t		1
4-25	ZW270101	'E' Ring 3M	6-1-9	1
4-26	MV269965	Steel Ball D4		1
4-27	ZS379350	ISO Screw, pan head 3x6		3
4-28	MH596790	Prop	KJ-1001	3
4-29	MZ596823	Thrust Plate	KJ-1004	1
4-30	ZW583212	Washer D8x1t		1
4-31	ZS421806	Screw, pan head 3x8		3

PAUSE SW./TENSION ARM BLOCK

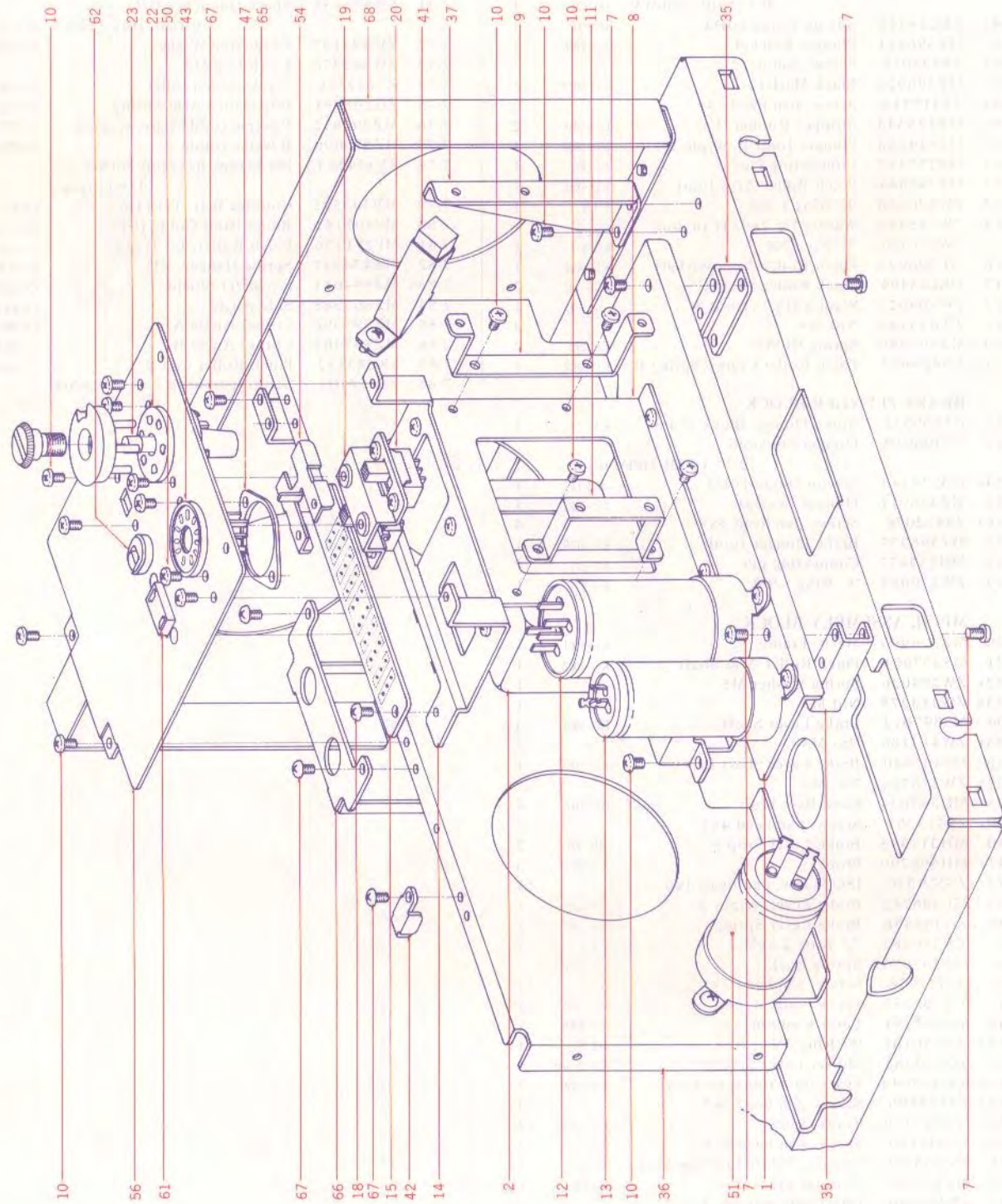
Ref. No.	Parts No.	Description	Schematic No.	Q'ty
PAUSE SW. BLOCK				
5-1	BS600333	Pause SW. Block Comp.	KJ	1
5-2	MZ609930	P.S. SW. Base B	KJ-A2201	1
5-3	ES524790	Push SW. JH-3A	25-5-79	1
5-4	ZS422076	Screw, pan head 3x5		2
5-5	MZ596880	Pause SW. Base B	KJ-2001	1
5-6	MS596891	Pause Shaft	KJ-2003	1
5-7	ZW314728	Cotter Pin 1.6x8		1
5-8	ZS497733	Screw, round head 2x15		1
5-9	ZG496438	P Spring	KJ-A2213	1
5-10	ZW270123	'E' Ring 4M	6-1-9	1
5-11	ZS467908	Screw, pan head 3x4, w/washer		2
5-12	SK598397	Push Button Knob C	91-5051	2
5-13	ER450786	Spark Quencher U/L 0.1μ+120Ω 400WV	41-1-33	1
5-14	MZ397394	Power SW. Table	KJ-2028	1
5-15	ES246025	Push SW. SDF1PBP1 (UEH-12BP U/L)	25-5-11	1
5-16	ZS422076	Screw, pan head 3x5		2
5-17	ER376435	Spark Quencher U/L 0.1μ+120Ω 250WV	41-1-35	1
5-18	ES421806	Screw, pan head 3x8		2
5-19	MZ594011	Equalizer Shield	KJ-1019	1
TENSION ARM BLOCK				
5-20x	BZ600366	Tension Arm Block Comp.	KJ	1
5-21	MZ597194	SW. Table, w/metal	KJ-2043	1
5-22	ML597216	T SW. Lever, w/shaft	KJ-2045	1
5-23	ZW270101	'E' Ring 3M	6-1-9	1
5-24	MZ606712	Stopper Rubber KJ	KJ-2060	1
5-25	ZS478697	Graduated Screw, CG	CG-1093	1
5-26	ZW273778	Earth Lug M3		1
5-27	ZS422076	Screw, pan head 3x5		1
5-28	MZ606723	Spring T	KJ-2059	1
5-29	ES593807	Micro SW. K1L13	25-1-33	1
5-30	ZS422965	Screw, pan head 3x15		2
5-31	MZ597238	T Arm	KJ-2047	1
5-32	MS597240	T Guide	KJ-2048	1
5-33	ZW572242	Screw, countersunk head 2.6x6		1
5-34	ZW535094	Decorative Washer	TW-2077	1
5-35	ZS593133	Screw, oval countersunk head 3x6		1
5-36	ZS379350	ISO Screw, pan head 3x6		3

OPERATION BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
6-1x	BZ600377	Operation block Comp.	KJ	1
6-2	MZ593037	Operation Frame	KJ-2021	1
6-3	SZ597870	Button Base	KJ-2026	1
6-4	SB597014	Touch Button 1 (red)	KJ-2024	1
6-5	SB597025	Touch Button 2 (yellow)	KJ-2024	2
6-6	SB597036	Touch Button 3 (green)	KJ-2024	2
6-7	SB597047	Touch Button 4 (white)	KJ-2024	1
6-8x	EJ553948	Wire Band B	2-35-3	1
6-9	ZW273767	Earth Lug D3x20L		6
6-10	ZS468358	Screw, truss head 3x5		6
6-11	ZS422076	Screw, pan head 3x5		6
6-12	MZ597060	B.P. Holder (L)	KJ-2025	1
6-13	MZ597058	B.P. Holder (R)	KJ-2025	1
6-14	ZS325495	Tapping Screw #2 3x6		2
6-15	UM541978	P.C. Board Prop	CZ-5012	1
6-16	ZS379350	ISO Screw, pan head 3x6		1
6-17	ES593818	Rotary SW. M33S-KOO-15	25-6-71	1
6-18	MZ596992	Rotary SW. Plate	KJ-2022	1
6-19	EA597003	Lamp P.C. Board	KJ-2023	1
6-20x	EL562004	Pilot Lamp (L/T) 24V 50MA	28-2-34	1
6-21x	ED593403	Silicon Diode 1S1587	45-3-29	1
6-22	EA597947	EQ. P.C. Board	KJ-5022	1
6-23	MZ597328	SW. Plate W	KJ-5010	1
6-24	ZS325495	Tapping Screw #2 3x6		2

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

FIG. 8 ILLUSTRATION OF POWER SUPPLY BLOCK

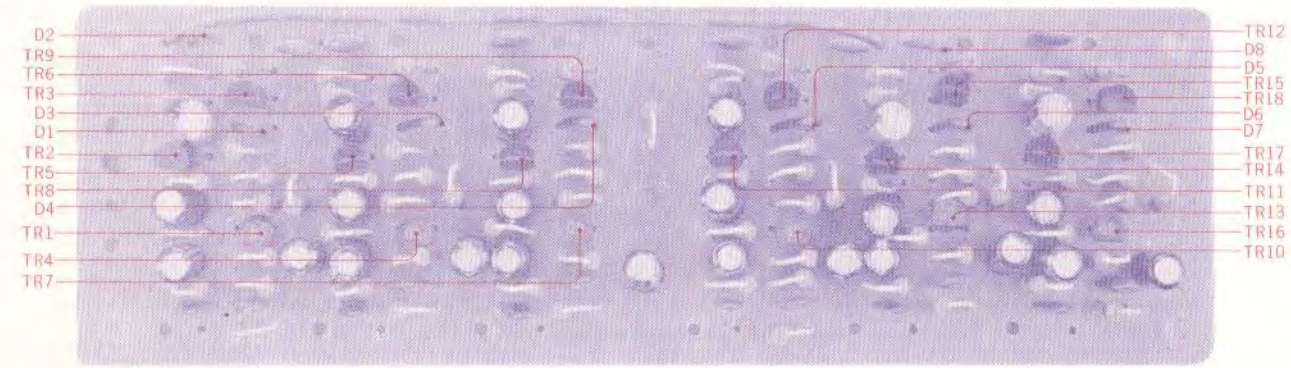


POWER SUPPLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
8-1	MZ597791	Trans. Base	KJ-2012	1	8-56	MZ599861	Connector Base A-2	KJ-2016	1
8-2	BT593717	Power Trans. KJT-1A	38-4-277	1	8-57x	MZ597802	Connector Base A-1	KJ-2016	1
8-3x	BT593728	Power Trnas. KJT-1D (D/DB-3 core)	38-4-276	1	8-58x	MZ597813	Connector Base B (D/DB-CEE)	KJ-2016	1
8-4x	BT593730	Power Trans. KJT-10 (D/DB-CSA)	38-4-278	1	8-59x	MZ597824	Connector Base C (D/DB-CSA)	KJ-2016	1
8-5x	BT593752	Power Trans. KJT-11 (D/DB-CEE)	38-4-279	1	8-60x	MZ597835	Connector Base D (D/DB-JPN)	KJ-2016	1
8-6x	BT593741	Power Trans. KJT-12 (D/DB-JPN)	38-4-280	1	8-61	EJ378944	Socket, AC U/L S-1-9122	31-1-47	1
8-7	ZS417150	Screw, pan head 4x6		6	8-62	EZ382263	Strain Relief SR-4K-4	2-7-12	1
8-8	MZ596968	Connector Base A	KJ-2013	1	8-63x	EZ246936	Strain Relief SR-6W-1 (3 core)	2-7-8	1
8-9	MZ596970	P.C. Board Holder B	KJ-2014	1	8-64x	EJ553948	Wire Band B	2-35-3	7
8-10	ZS472274	Tapping Screw #2 3x6 (bind)		13	8-65	MZ596957	Servo Holder	KJ-2011	1
8-11	MZ596981	P.C. Board Holder C	KJ-2015	1	8-66	MZ597857	Relay P.C. Board Supporter	KJ-2019	1
8-12	EC520626	MP/C. (3+1) μ Fx2 250WV AC (Lug Type Uni/D.)	24-9-74	1	8-67	ZS325495	Tapping Screw #2 3x6	KD-6002	1
8-13	EC593763	MP/C. 3.5+1.5 μ F 150WV AC (Lug Type Uni/D.)	24-9-88	1	8-68	SZ397495	Side Frame A (Right)	KD-6002	1
8-14	MZ596902	Connector Base B	KJ-2004	1	8-69x	SZ397506	Side Frame B (Left)	KD-6002	1
8-15	EZ597892	Terminal Plate	KJ-2050	1	8-70x	EW540112	AC Cord (CUL) 2.5M	26-3-19	1
8-16x	EJ594988	Terminal Plate, Fuse Holder (D/DB) (CSA,CEE,JPN)	KJ-2052	1	8-71x	EW315448	Australia Cord (3 Core)	26-3-11	1
8-17x	EJ592503	Fuse Clip, P.C. Board H0426 (JPN, CSA,CEE)		26	8-72x	ZW273881	Earth Lug M4		1
8-18	ZS422076	Screw, pan head 3x5		4	8-73x	ZW273802	Toothed Lock Washer M3		1
8-19	MZ596913	Cycle SW. Base	KJ-2005	1	8-74x	ZS472274	Tapping Screw #2 3x6 (bind)		1
8-20	ES479485	Slide SW. S-1	25-3-66	2					
8-21x	ZS417216	Screw, pan head 3x4		4					
8-22	EJ233370	Socket S-18010 (Volt. Selector)	40-2-3	1					
8-23	EF588420	Fuse 1A 125V (CSA, JPN)	39-1-52	2					
8-24x	EF593706	Fuse 500MAT (CEE)	39-1-53	5					
8-25x	EF602550	Fuse 1.25AT 250V (CEE)	39-1-53	1					
8-26x	EF277402	Fuse ST-2 1A (CSA)	39-1-26	1					
8-27x	EF601986	Fuse 1.5A 125V (JPN)	39-1-52	1					
8-28x	EA594990	Terminal P.C. Board, AC (CEE)	KJ-2056	1					
8-29x	EA607217	AC Fuse P.C. Board (CSA)	KJ-2058	1					
8-30x	MZ607195	Trans. Retaining Parts (CSA, CEE, JPN)	KJ-2057	2					
8-31x	EJ514822	Fuse Holder, P.C. Board S-N5051 (CSA)	40-1-28	2					
8-32x	EJ553948	Wire Band B (JPN)	2-35-3	2					
8-33x	MZ610942	Trans. Shield Plate D (JPN)	KJ-5035	1					
8-34x	EZ549314	Trans. Shield Cushion (JPN)	MU-5031	3					
8-35	MZ397170	Trans. Table C	KD-1065	2					
8-36	MZ598004	Center Frame	KJ-1006	1					
8-37	MZ596834	P.C. Board Holder A	KJ-1005	1					
8-38x	EZ597846	Power Supply Heat-Sink Plate	KJ-2018	1					
8-39x	EA597251	Transistor P.C. Board	KJ-2049	1					
8-40x	ET465208	Transistor 2SC1098(L,K)	45-1-122	1					
8-41	ER616498	Cement/R. H15B 150(K)	35-16-55	1					
8-42	MZ596935	Sys. Con. Retainer	KJ-2009	1					
8-43	EJ222748	Socket, Sub Magnale #311SG	31-1-39	1					
8-44x	EJ310871	Multi-Jack (J-2) 18P 3250-018-001	31-4-11	1					
8-45x	EJ299834	Mate-N-Lock Plug Housing 6P 1-480273-0	52-1-2	1					
8-46x	EJ373634	Socket Contact 61115-1	52-1-1	24					
8-47	MZ302400	Remote Control Socket Mt. Plate	PX-515	1					
8-48x	EJ293073	Mate-N-Lock Plug Housing 12P 1-480275-0	52-1-1	1					
8-49x	EJ368796	Mate-N-Lock Plug Housing 9P 1-480274-0 (D/DB)	52-1-2	1					
8-50	ZS355522	Screw, pan head 3x6 (Black)		6					
8-51	EC557190	Elect./C. 470 μ F/160WV (Lug Type)	24-10-88	1					
8-52x	EJ205986	Cramp Terminal 2-SD	32-1-8	4					
8-53x	EJ205775	Cramp Terminal 1-SD	32-1-7	4					
8-54	ML596924	Cycle SW. Lever	KJ-2006	1					
8-55x	EF563703	Fuse 2A 250V	39-1-50	1					

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

FIG. 9 PHOTO OF BUTTON P.C. BOARD (KJ-2051) BLOCK



BUTTON P.C. BOARD (KJ-2051) BLOCK

Symbol No.	Parts No.	Description	Q'ty	Symbol No.	Parts No.	Description	Q'ty
9-1x	BA600660	Button P.C. Board Comp. (KJ-2051)	1	9-C31	EC450527	Elect. 4.7μF 25WV	1
9-TR1	ET491051	FET 2SK30A (GR)	1	9-C32	EC250885	Mylar 0.01μF(K) 50WV	1
9-TR2	ET399846	Transistor 2SC945(Q)	1	9-C33	EC450527	Elect. 4.7μF 25WV	1
9-TR3	ET478001	Transistor 2SC945(P)(Q)	1	9-C34	EC250885	Mylar 0.01μF(K) 50WV	1
9-TR4	ET491051	FET 2SK30A (GR)	1	9-C35	EC450527	Elect. 4.7μF 25WV	1
9-TR5	ET399846	Transistor 2SC945(Q)	1	9-C36	EC250885	Mylar 0.01μF(K) 50WV	1
9-TR6	ET478001	Transistor 2SC945(P) (Q)	1	9-C37	EC450527	Elect. 4.7μF 25WV	1
9-TR7	ET491051	FET 2SK30A(GR)	1	9-C38	EC250885	Mylar 0.01μF (K) 50WV	1
9-TR8	ET399846	Transistor 2SC945(Q)	1	9-C39	EC450527	Elect. 4.7μF 25WV	1
9-TR9	ET478001	Transistor 2SC945(P)(Q)	1	9-C40	EC250885	Mylar 0.01μF(K) 50WV	1
9-TR10	ET491051	FET 2SK30A(GR)	1	9-C41	EC450527	Elect. 4.7μF 25WV	1
9-TR11	ET399846	Transistor 2SC945(Q)	1	9-C42	EC250885	Mylar 0.01μF(K) 50WV	1
9-TR12	ET478001	Transistor 2SC945(P) (Q)	1	Carbon resistor omitted			
9-TR13	ET491051	FET 2SK30A(GR)	1				
9-TR14	ET399846	Transistor 2SC945(Q)	1				
9-TR15	ET478001	Transistor 2SC945(P)(Q)	1				
9-TR16	ET491051	FET 2SK30A(GR)	1				
9-TR17	ET399846	Transistor 2SC945(Q)	1				
9-TR18	ET478001	Transistor 2SC945(P)(Q)	1				
9-D1to8	ED557447	Silicon Diode 1S1588	8				
Capacitor, Vertical Type							
9-C1	EC362068	Mylar 0.0018μF(K) 50WV	1				
9-C2	EC250604	Mylar 0.001μF(K) 50WV	1				
9-C3	EC368256	Elect. 0.47μF 25WV	1				
9-C4	EC350706	Elect. 4.7μF 16WV	1				
9-C5	EC220432	Elect. 2.2μF 25WV	1				
9-C6	EC362068	Mylar 0.0018μF(K) 50WV	1				
9-C7	EC250604	Mylar 0.001μF(K) 50WV	1				
9-C8	EC368256	Elect. 0.47μF 25WV	1				
9-C9	EC350706	Elect. 4.7μF 16WV	1				
9-C10	EC307506	Elect. 10μF 6.3WV	1				
9-C11	EC362068	Mylar 0.0018μF(K) 50WV	1				
9-C12	EC250604	Mylar 0.001μF(K) 50WV	1				
9-C13	EC368256	Elect. 0.47μF 25WV	1				
9-C14	EC350706	Elect. 4.7μF 16WV	1				
9-C15	EC307506	Elect. 10μF 6.3WV	1				
9-C16	EC362068	Mylar 0.0018μF(K) 50WV	1				
9-C17	EC250604	Mylar 0.001μF(K) 50WV	1				
9-C18	EC368256	Elect. 0.47μF 25WV	1				
9-C19	EC350706	Elect. 4.7μF 16WV	1				
9-C20	EC307506	Elect. 10μF 6.3WV	1				
9-C21	EC362068	Mylar 0.0018μF(K) 50WV	1				
9-C22	EC250604	Mylar 0.001μF(K) 50WV	1				
9-C23	EC368256	Elect. 0.47μF 25WV	1				
9-C24	EC350706	Elect. 4.7μF 16WV	1				
9-C25	EC307506	Elect. 10μF 6.3WV	1				
9-C26	EC362068	Mylar 0.0018μF(K) 50WV	1				
9-C27	EC250604	Mylar 0.001μF(K) 50WV	1				
9-C28	EC368256	Elect. 0.47μF 25WV	1				
9-C29	EC350706	Elect. 4.7μF 16WV	1				
9-C30	EC307506	Elect. 10μF 6.3WV	1				

FIG. 10 PHOTO OF SERVO P.C. BOARD (KJ-1007) BLOCK

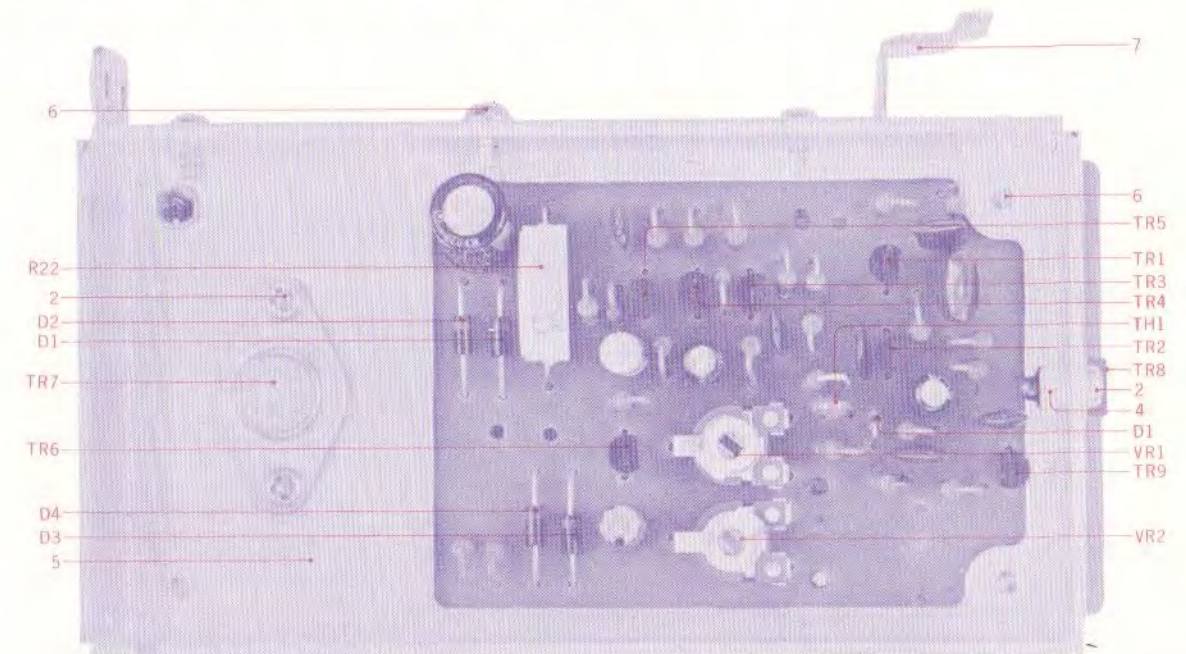


FIG. 11 PHOTO OF SYS. CON. P.C. BOARD (KJ-1013) BLOCK

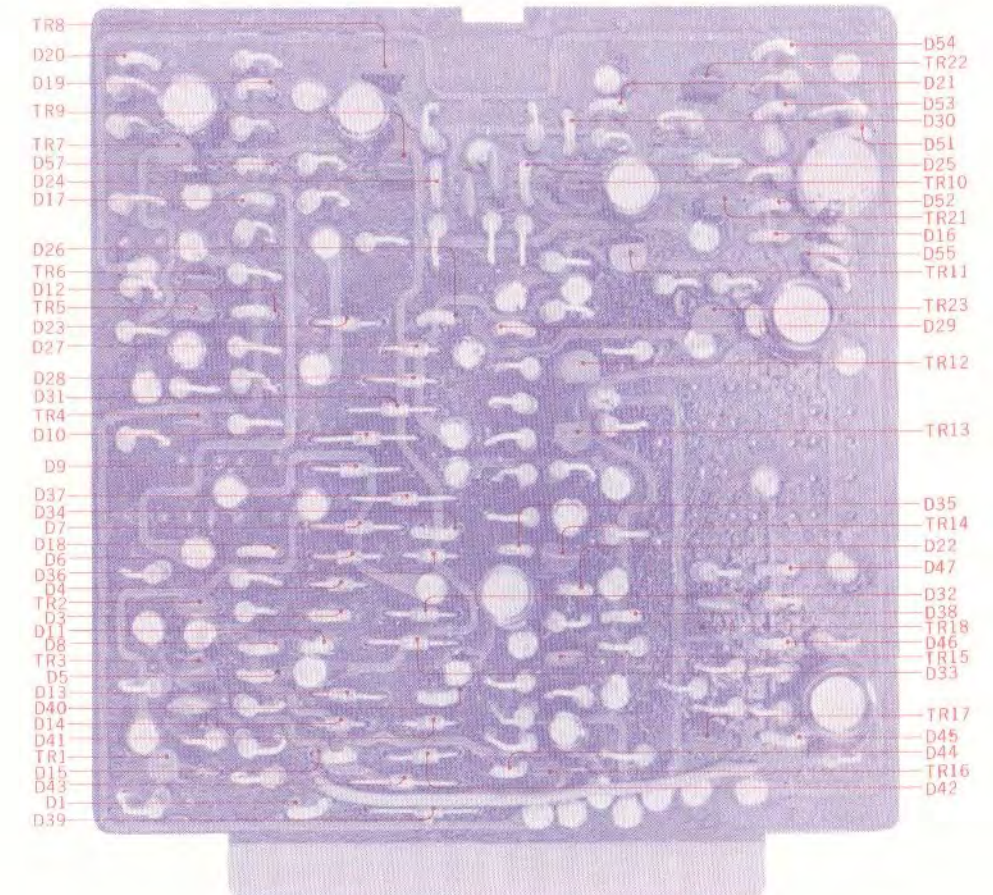


FIG. 12 PHOTO OF RELAY P.C. BOARD (KJ-1011) BLOCK

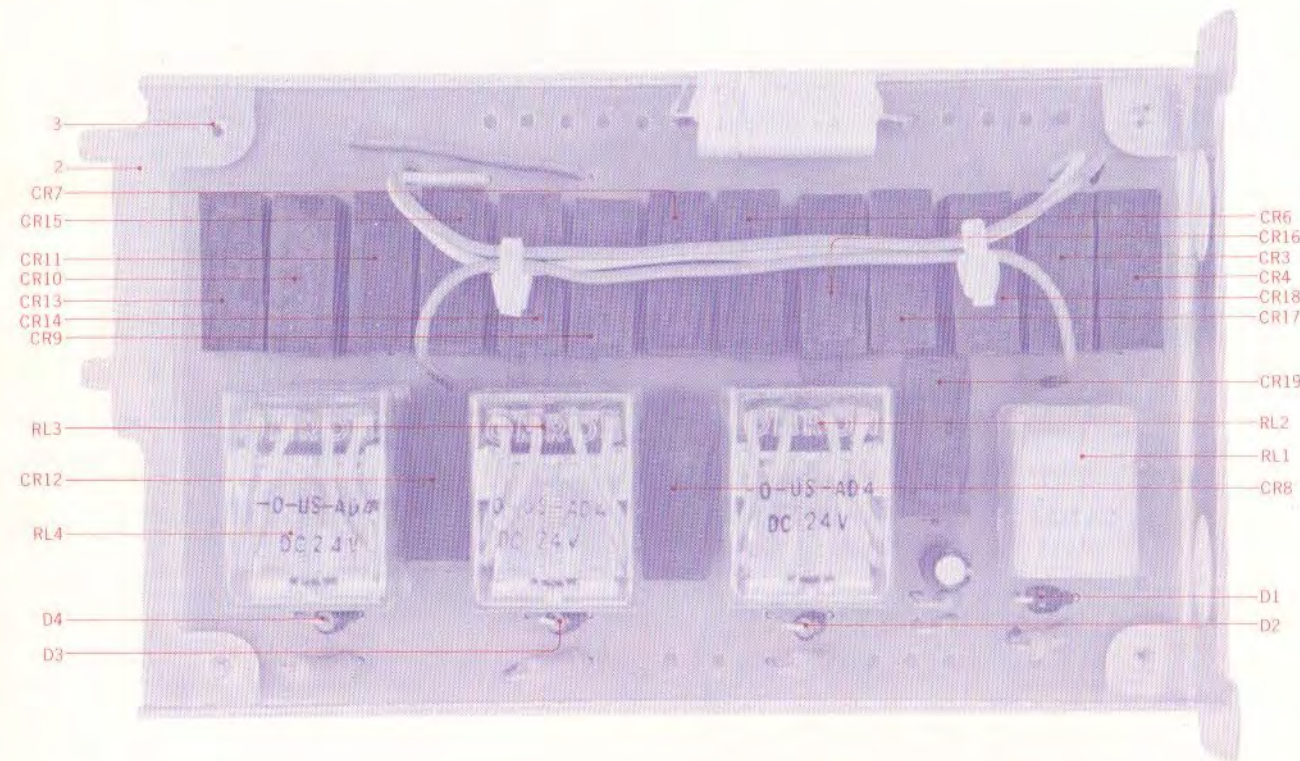
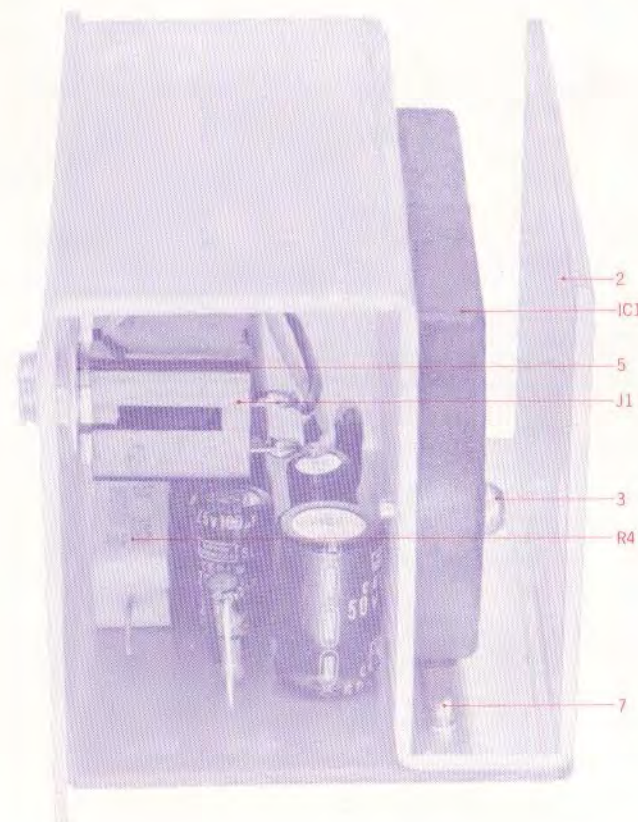


FIG. 13 PHOTO OF POWER AMP. P.C. BOARD (KJ-1010) BLOCK



SERVO P.C. BOARD (KJ-1007) BLOCK

Symbol No.	Parts No.	Description	Q'ty
10-1x	BA600467	Servo P.C. Board Comp (KJ-1007)	1
10-TR1,2,3	ET478001	Transistor 2SC945(P)(Q)	3
10-TR4	ET399846	Transistor 2SC945(Q)	1
10-TR5	ET538154	Transistor 2SA564(Q)(R)	1
10-TR6	ET398711	Transistor 2SC945(Q)(R)	1
10-TR7	ET593335	Transistor 2SC783(O)(R)	1
10-TR8	ET558178	Transistor 2SD360(D1)(D2)	1
10-TR9	ET398711	Transistor 2SC945(Q)(R)	1
10-D1	ED557447	Silicon Diode 1S1588	1
10-D2to5	ED224548	Silicon Diode 10D2	4
10-TH1	ED593357	Thermister 34D21	1
10-VR1	EV560136	Semi-fixed/Vol. V10K8-4-2 20 k Ω	1
10-VR1	EV593368	Semi-fixed/Vol. V10K8-4-2 30 k Ω	1
10-2	ZS421806	Screw, pan head 3x8	3
10-3	ZW273802	Toothed Lock Washer M3	2
10-4	ZW273756	Nut M3	3
10-5	EZ596845	Servo Heat-sink Plate	1
10-6	ZS325495	Tapping Screw #2 3x6	7
10-7	MZ596957	Servo Holder	1
10-R22	ER622045	Cement 2W 330(K) (Metal Ox. Film/T)	1

Capacitor, Vertical Type			
10-C1	EC251291	Mylar 0.1 μ F(K) 50WV	1
10-C2	EC251122	Mylar 0.027 μ F(K) 50WV	1
10-C3	EC331828	Elect. 3.3 μ F 25WV	1
10-C4	EC250582	Mylar 0.0033 μ F(K) 50WV	1
10-C5	EC251122	Mylar 0.027 μ F(K) 50WV	1
10-C6	EC250582	Mylar 0.0033 μ F(K) 50WV	1
10-C7	EC311793	Mylar 0.012 μ F(J) 50WV	1
10-C8	EC557166	Solid Aluminum 3.3 μ F 25WV	1
10-C9	EC450055	Elect. 1 μ F 25WV	1
10-C10	EC320051	Elect. 10 μ F 16WV	1
10-C11	EC220151	Elect. 100 μ F 25WV	1
10-C12	EC250885	Mylar 0.01 μ F(K) 50WV	1
10-C13	EC220612	Elect. 33 μ F 25WV	1

Carbon resistor omitted

SYS. CON. P.C. BOARD (KJ-1013) BLOCK

Symbol No.	Parts No.	Description	Q'ty
11-1x	BA600480	Sys. Con P.C. Board Comp. (KJ-1013)	1
11-TR1	ET478001	Transistor 2SC945(P)(Q)	1
11-TR2,3	ET520288	Transistor 2SC1247A(V)	1
11-TR4,5,6	ET478001	Transistor 2SC945(P)(Q)	3
11-TR7	ET495483	Transistor 2SC945(P)	1
11-TR8to11	ET478001	Transistor 2SC945(P) (Q)	4
11-TR12	ET511694	Transistor 2SC1211(D)(E)	1
11-TR13to18	ET478001	Transistor 2SC945(P) (Q)	6
11-TR21to23	ET478001	Transistor 2SC945(P)(Q)	3
11-D1	ED557447	Silicon Diode 1S1588	1
11-D3to47	ED557447	Silicon Diode 1S1588	45
11-D51to55	ED557447	Silicon Diode 1S1588	5
11-D57	ED593403	Silicon Diode 1S1587	1

Capacitor, Vertical Type			
11-C2	EC250885	Mylar 0.01 μ F(K) 50WV	1
11-C3	EC450055	Elect. 1 μ F 25WV	1
11-C5, 6	EC220612	Elect. 33 μ F 25WV	2
11-C7, 8	EC250885	Mylar 0.01 μ F(K) 50WV	2
11-C9	EC220612	Elect. 33 μ F 25WV	1
11-C10	EC450055	Elect. 1 μ F 25WV	1
11-C11	EC357840	Elect. 22 μ F 50WV	1
11-C12	EC450055	Elect. 1 μ F 25WV	1
11-C13	EC324516	Elect. 220 μ F 6.3WV	1
11-C14	EC250885	Mylar 0.01 μ F(K) 50WV	1
11-C16	EC336126	Elect. 47 μ F 25WV	1
11-C17	EC220151	Elect. 100 μ F 25WV	1
11-C18	EC250885	Mylar 0.01 μ F(K) 50WV	1
11-C19	EC450055	Elect. 1 μ F 25WV	1
11-C20	EC220994	Elect. 10 μ F 25WV	1
11-C21	EC556007	Elect. 2.2 μ F 16WV	1

Carbon resistor omitted

RELAY P.C. BOARD (KJ-1011) BLOCK

Symbol No.	Parts No.	Description	Q'ty
12-1x	BA600478	Relay P.C. Board Comp. (KJ-1011)	1
12-D1to4	ED494583	Silicon Diode 10D05	4
12-CR3, 4	ER450786	Spark Quencher U/L 0.1 μ +120 Ω 400WV	2
12-CR6to19	ER450786	Spark Quencher U/L 0.1 μ +120 Ω 400WV	14
12-RL1	EP616500	Relay LC1-C-JT DC24V	1
12-RL2to4	ER344136	Relay MY4-O-US-AD4 24V	3
12-C1	EC368256	Elect. 0.47 μ F 25WV (Vert. Type)	1
12-R2to5	ER435868	Metal Oxide Film/R. 1W 330(K)	4
12-R6, 7	ER349007	Carbon RD1/4 33k(J)	2
12-2	MZ597857	Relay P.C. Board Supporter	1
12-3	ZS325495	Tapping Screw #2 3x6	4

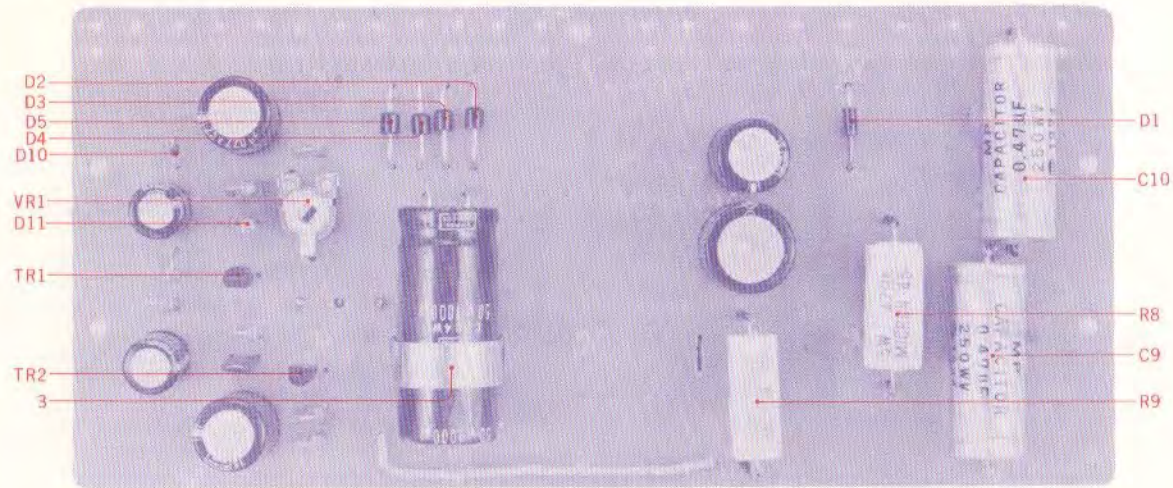
POWER AMP. P.C. BOARD (KJ-1010) BLOCK

Symbol No.	Parts No.	Description	Q'ty
13-1x	BA600456	Power Amp. P.C. Board Comp. (KJ-1010)	1
13-IC1	EI593324	I.C. STK-024	1
13-J1	EJ454858	Mic. Jack 2PMJ1	1
13-2	EZ597868	Amp. Heat-sink Plate	1
13-3	ZS447805	Tapping Screw #2 3x12(BR)	2
13-4	ZW272722	Toothed Lock Washer M9 D9.3x13x0.5t	1
13-5	ZW224976	Jack Thin Washer	1
13-6	ZW554624	E Jack Nut	1
13-7	ZS325495	Tapping Screw #2 3x6	2
13-R4	ER593291	Cement 5W 39(M) (Wire-wound Type)	1

Capacitor, Vertical Type			
13-C1	EC220151	Elect. 100 μ F 25WV	1
13-C2	EC220432	Elect. 2.2 μ F 25WV	1
13-C3	EC220151	Elect. 100 μ F 25WV	1
13-C4	EC336126	Elect. 47 μ F 25WV	1
13-C5	EC321221	Elect. 100 μ F 50WV	1
13-C6	EC450270	Elect. 1000 μ F 25WV	1
13-C7	EC593302	Mylar 0.047 μ F(M) 50WV	1

Carbon resistor omitted

FIG. 14 PHOTO OF POWER SUPPLY P.C. BOARD (KJ-1012) BLOCK



POWER SUPPLY P.C. BOARD (KJ-1012) BLOCK

Symbol No.	Parts No.	Description	Q'ty	Symbol No.	Parts No.	Description	Q'ty
14-1x	BA600434	Power Supply P.C. Board Comp. (KJ-1012)	1				
14-2x	BA600445	Power Supply P.C. Board Comp. (KJ-1012) (D/DB)	1				
14-TR1	ET398711	Transistor 2SC945(Q)(R)	1				
14-TR2	ET511920	Transistor 2SC1247A(B)(V)	1				
14-D1	ED224550	Silicon Diode 10D4	1				
14-D2 to 9	ED494583	Silicon Diode 10D05	8				
14-D10	ED557447	Silicon Diode 1S1588	11				
14-D11	ED357794	Zener Diode RD-5A(M)	1				
14-VR1	EV484863	Semi-fixed/Vol. V10K8-4-2 1 kB (Metalized Film)	1				
14-3	EZ596856	Condenser Band A (D/DB)	1				
14-4	EZ596867	Condenser Band B	1				
14-R8	ER465974	Cement 5W 47(K) (Wire-wound Type)	1				
14-R9	ER435587	Cement 3W 220(K) (Metal Oxide Type)	1				
						Capacitor, Vertical Type	
				14-C1	EC565345	Elect. 1000 μ F 50WV	1
				14-C2	EC372148	Elect. 220 μ F 35WV	1
				14-C3	EC250918	Mylar 0.01 μ F(M) 50WV	1
				14-C4	EC336115	Elect. 220 μ F 25WV	1
				14-C5, 6	EC565345	Elect. 1000 μ F 50WV	2
				14-C7	EC329782	Elect. 220 μ F 10WV	1
				14-C8	EC324516	Elect. 220 μ F 6.3WV	1
				14-C9, 10	EC350987	MP 0.47 μ F(M) 250V AC	2
				14-C11	EC337533	Elect. 220 μ F 50WV	1
				14-C12	EC321221	Elect. 100 μ F 50WV	1
						Carbon resistor omitted	

FIG. 15 PHOTO OF DOLBY P.C. BOARD (TD-5301) BLOCK

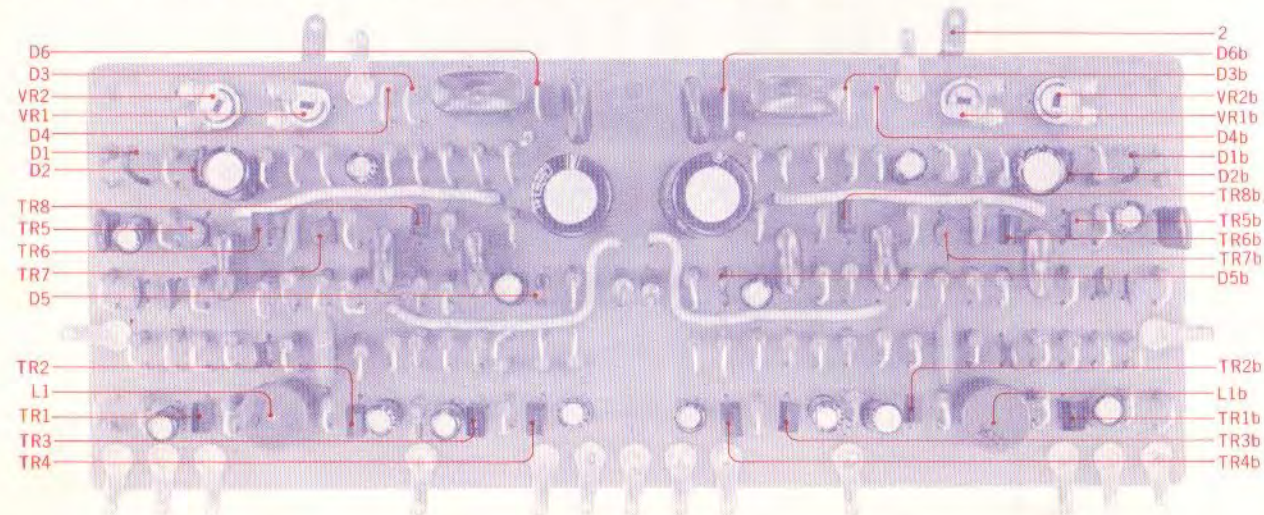
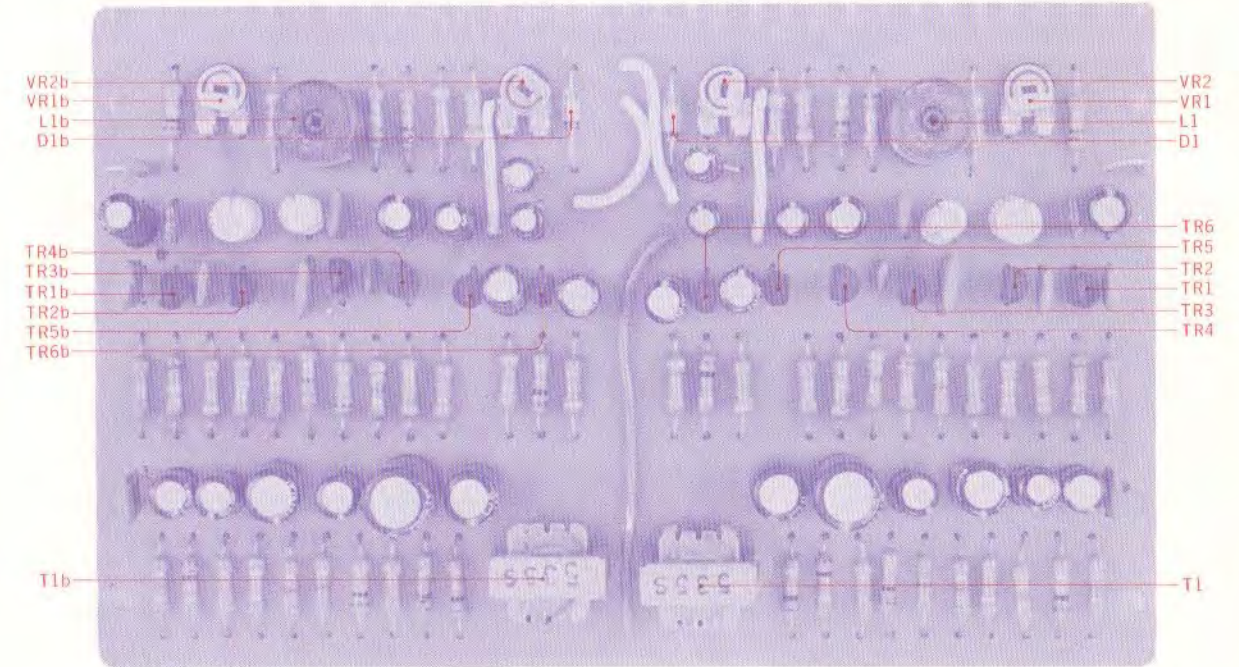


FIG. 16 PHOTO OF P.B. AMP. P.C. BOARD (KJ-5025) BLOCK



DOLBY P.C. BOARD (TD-5301) BLOCK

Symbol No.	Parts No.	Description	Q'ty
15-1x	BA588003	Dolby P.C. Board Comp. (TD-5301)	1
15-TR1	ET234854	Transistor 2SC458LG(C)	2
15-TR2	ET329218	Transistor 2SC458(C)	2
15-TR3	ET352146	Transistor 2SC458LG(D)	2
15-TR4	ET329218	Transistor 2SC458(C)	2
15-TR5	ET491051	FET 2SK30A(GR)	2
15-TR6	ET234854	Transistor 2SC458LG(C)	2
15-TR7	ET350335	Transistor 2SA564(Q)	2
15-TR8	ET329218	Transistor 2SC458(C)	2
15-D1	ED219464	Germanium Diode 1N34A	2
15-D2	ED491130	Zener Diode WZ-085	2
15-D3, 4	ED560913	Silicon Diode 1S2473 VE	4
15-D5	ED219464	Germanium Diode 1N34A	2
15-D6	ED560913	Silicon Diode 1S2473 VE	2
15-VR1	EV523620	Semi-fixed/Vol. V8K4-1 500 Ω B	2
15-VR2	EV464207	Semi-fixed/Vol. V8K4-1 5 kB	2
15-L1	EO496350	Inductor 146LY 36MH(J)	2
15-2	EJ363126	P.C. Board Terminal	2
		Capacitor, Vertical Type	
15-C1	EC320051	Elect. 10 μ F 16WV	2
15-C2	EC350875	Mylar 0.001 μ F (J) 50WV	2
15-C3	EC336194	VFM 270PF(J) 50WV	2
15-C4, 5, 6	EC320051	Elect. 10 μ F 16WV	6
15-C7	EC313121	Elect. 220 μ F 25WV	2
15-C8	EC329883	Mylar 0.0056 μ F(J) 50WV	2
15-C9	EC329861	Mylar 0.027 μ F(J) 50WV	2
15-C10	EC337500	Mylar 0.0047 μ F(J) 50WV	2
15-C11	EC320051	Elect. 10 μ F 16WV	2
15-C12	EC379170	Mylar 0.1 μ F(J) 50WV	2
15-C13	EC320040	Elect. 47 μ F 16WV	2
15-C14	EC290520	VFM 100PF(J) 50WV	2
15-C15	EC320051	Elect. 10 μ F 16WV	2
15-C16	EC379170	Mylar 0.1 μ F (J) 50WV	2
15-C17	EC320051	Elect. 10 μ F 16WV	2
15-C18, 19	EC379170	Mylar 0.1 μ F(J) 50WV	4
15-C20	EC395504	Mylar 0.33 μ F(K) 50WV	2
		Carbon resistor omitted	

P.B. AMP. P.C. BOARD (KJ-5025) BLOCK

Symbol No.	Parts No.	Description	Q'ty
16-1x	BA600568	P.B. Amp. P.C. Board Comp. (KJ-5025)	1
16-TR1 to 4	ET517263	Transistor 2SC1312(G) (H)	8
16-TR5, 6	ET398711	Transistor 2SC945(Q)(R)	4
16-D1	ED219464	Germanium Diode 1N34A	2
16-T1	BT517274	Headphone Trans. N16-535S	2
16-L1	EO496361	Inductor 6070GE 23MH(J)	2
16-VR1	EV464220	Semi-fixed/Vol. V8K4-1 50kB	2
16-VR2	EV464207	Semi-fixed/Vol. V8K4-1 5kB	2
		Capacitor, Vertical Type	
16-C1	EC432810	Elect. 10 μ F 16WV NL	2
16-C2	EC467133	VFM 68PF(J) 50WV	2
16-C3	EC290520	VFM 100PF(J) 50WV	2
16-C4	EC329771	Elect. 47 μ F 6.3 WV	2
16-C5	EC290520	VFM 100PF(J) 50WV	2
16-C6	EC517138	Elect. 10 μ F 25WV NL	2
16-C7	EC329771	Elect. 47 μ F 6.3WV	2
16-C8	EC302297	Mylar 0.018 μ F(K) 50WV	2
16-C9	EC320040	Elect. 47 μ F 16WV	2
16-C10	EC493323	Elect. 1 μ F 25WV NL	2
16-C11	EC329850	VFM 220PF(J) 50WV	2
16-C12	EC329771	Elect. 47 μ F 6.3WV	2
16-C13	EC399565	VFM 22PF(J) 50WV	2
16-C14	EC290520	VFM 100PF(J) 50WV	2
16-C15	EC320051	Elect. 10 μ F 16WV	2
16-C16	EC220364	Elect. 100 μ F 6.3WV	2
16-C17	EC336126	Elect. 47 μ F 25WV	2
16-C18	EC450055	Elect. 1 μ F 25WV	2
16-C19	EC320051	Elect. 10 μ F 16WV	2
16-C20	EC450055	Elect. 1 μ F 25WV	2
16-C21	EC320051	Elect. 10 μ F 16WV	2
16-C22	EC450055	Elect. 1 μ F 25WV	2
		Carbon resistor omitted	

FIG. 17 PHOTO OF REC. AMP. P.C. BOARD (KJ-5024) BLOCK

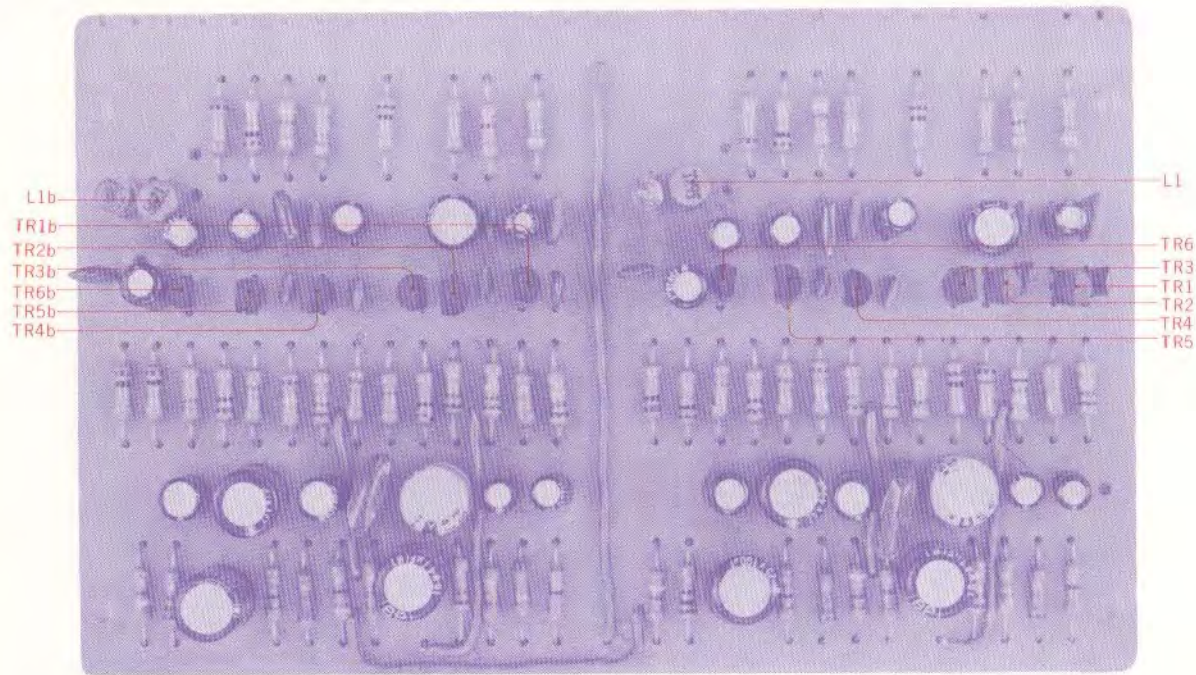


FIG. 18 PHOTO OF OSC. P.C. BOARD (KJ-5023) BLOCK

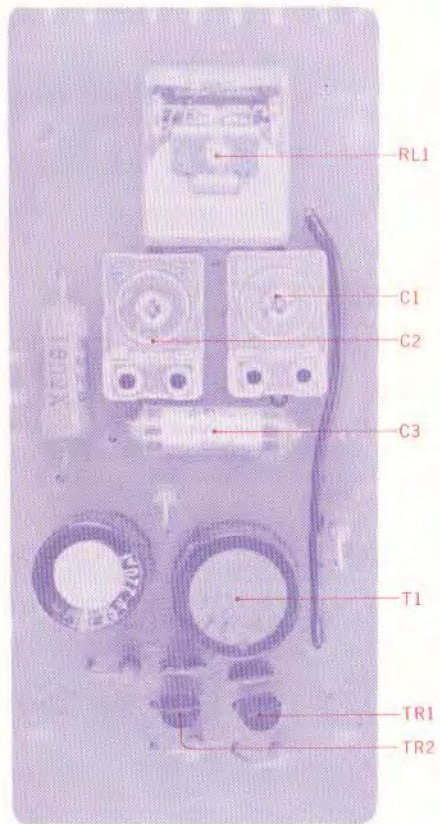


FIG. 20 PHOTO OF MUTE P.C. BOARD (KJ-5017) BLOCK

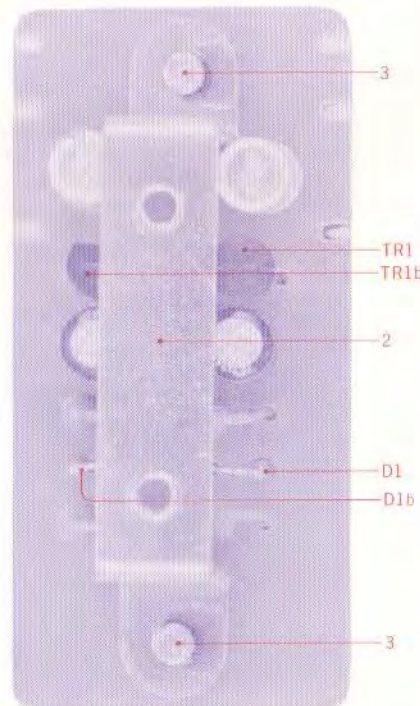
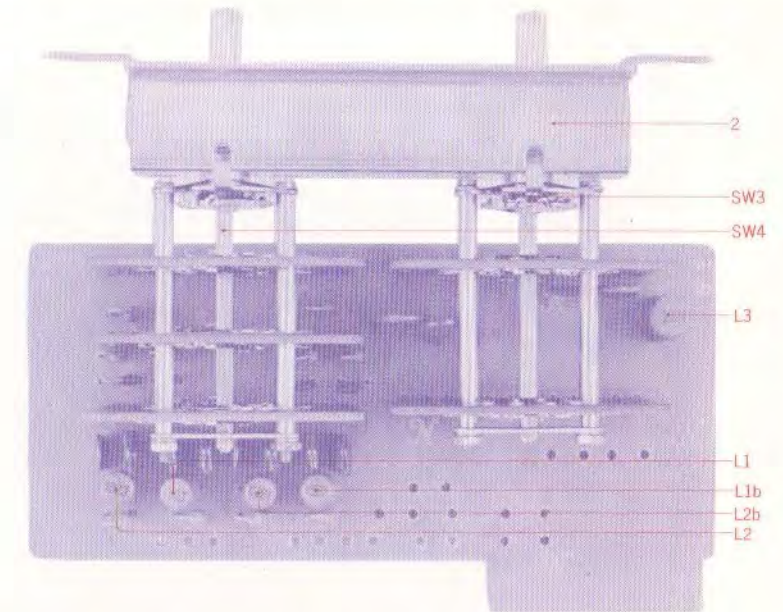


FIG. 19 PHOTO OF EQ. P.C. BOARD (KJ-5022) BLOCK



REC. AMP. P.C. BOARD (KJ-5024) BLOCK

Symbol No.	Parts No.	Description	Q'ty
17-1x	BA600557	Rec. Amp. P.C. Board Comp. (KJ-5024)	1
17-TR1 to 5	ET517263	Transistor 2SC1312(G)(H)	10
17-TR6	ET398711	Transistor 2SC945(Q)(R)	2
17-L1	EO321254	Ferri Inductor FL7H 5.6MH(J)	2
Capacitor, Vertical Type			
17-C1	EC336126	Elect. 47 μ F 25WV	2
17-C2	EC320051	Elect. 10 μ F 16WV	2
17-C3	EC290520	VFM 100PF(J) 50WV	2
17-C4	EC250604	Mylar 0.001 μ F(K) 50WV	2
17-C5	EC220465	Elect. 22 μ F 6.3WV	2
17-C6	EC350616	VFM 50PF(J) 50WV	2
17-C7	EC320051	Elect. 10 μ F 16WV	2
17-C8	EC399690	VFM 33PF(J) 50WV	2
17-C9	EC350684	Elect. 22 μ F 25WV	2
17-C10	EC450055	Elect. 1 μ F 25WV	2
17-C11	EC593458	NP 47 μ F 10WV	2
17-C12	EC350616	VFM 50PF(J) 50WV	2
17-C13	EC329771	Elect. 47 μ F 6.3WV	2
17-C14	EC350616	VFM 50PF(J) 50WV	2
17-C15	EC302253	Mylar 0.15 μ F(K) 50WV	2
17-C16	EC320051	Elect. 10 μ F 16WV	2
17-C17	EC329771	Elect. 47 μ F 6.3WV	2
17-C18	EC290520	VFM 100PF(J) 50WV	2
17-C19	EC251201	Mylar 0.056 μ F(K) 50WV	2
17-C20	EC336126	Elect. 47 μ F 25WV	2
17-C21	EC320051	Elect. 10 μ F 16WV	2
17-C22	EC220151	Elect. 100 μ F 25WV	2
17-C23	EC320051	Elect. 10 μ F 16WV	2
17-C24	EC405898	Styrol 470PF(J) 50WV	2
17-C25	EC250885	Mylar 0.01 μ F(K) 50WV	2
Carbon resistor omitted			

OSC. P.C. BOARD (KJ-5023) BLOCK

Symbol No.	Parts No.	Description	Q'ty
18-1x	BA600546	Osc. P.C. Board Comp. (KJ-5023)	1
18-TR1,2	ET398711	Transistor 2SC945(Q)(R)	2
18-RL1	EP383321	Relay TECK-36 DC22V 1000 Ω	1
18-T1	EO383365	Osc. Coil OT-204	1
18-R6	ER593447	Metal Oxide Film 2W 180(K)	1
Capacitor			
18-C1, 2	EC558202	Trimmer TM-80A	2
18-C3	EC558235	Styrol 1800PF(J) 250WV (Tub. Type)	1
18-C4, 5	EC250841	Mylar 0.01 μ F(J) 50WV (Vert. Type)	2
18-C6	EC313121	Elect. 220 μ F 25WV	1
Carbon resistor omitted			

EQ. P.C. BOARD (KJ-5022) BLOCK

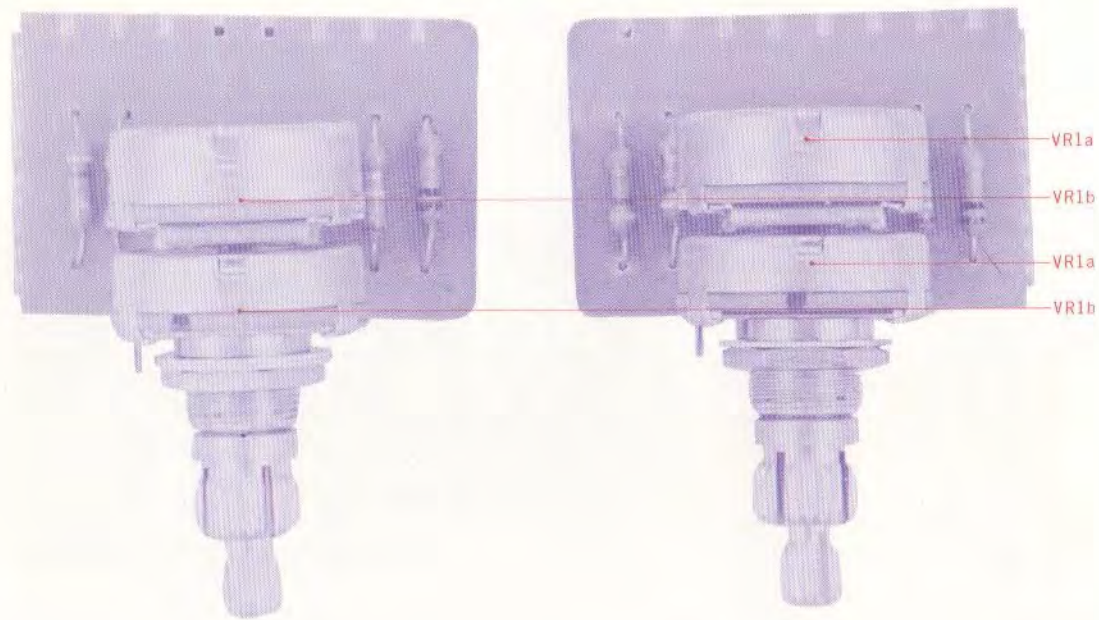
Symbol No.	Parts No.	Description	Q'ty
19-1x	BA600647	EQ. P.C. Board Comp. (KJ-5022)	1
19-L1	EO369178	Ferri Inductor FL1.7H 1.5MH(J)	2
19-L2	EO380564	Ferri Inductor FL7H 1.8MH(J)	2
19-L3	EO390622	Ferri Inductor FL9H 220 μ H(K)	1
19-SW3	ES593673	Rotary SW. SRE-3122 (Special)	1
19-SW4	ES593684	Rotary SW. SRE-263	1
19-2	MZ597328	SW. Plate W	1
Capacitor, Vertical Type			
19-C1	EC329861	Mylar 0.027 μ F(J) 50WV	2
19-C2	EC379214	Mylar 0.047 μ F(J) 50WV	2
19-C3	EC389485	Mylar 0.018 μ F(J) 50WV	2
19-C4	EC379157	Mylar 0.033 μ F(J) 50WV	2
19-C5	EC424708	Mylar 0.0018 μ F(J) 50WV	2
19-C6	EC379787	Mylar 0.0039 μ F(J) 50WV	2
Carbon resistor omitted			

MUTE P.C. BOARD (KJ-5017) BLOCK

Symbol No.	Parts No.	Description	Q'ty
20-1x	BA600658	Mute P.C. Board Comp. (KJ-5017)	1
20-TR1	ET398711	Transistor 2SC945(Q)(R)	2
20-D1	ED520762	Zener Diode YZ-088A	2
20-2	MZ597330	Mute P.C. Board Holder	1
20-3	ZS379350	ISO Screw, pan head 3x6	2
Capacitor, Vertical Type			
20-C1	EC320051	Elect. 10 μ F 16WV	2
20-C2	EC432810	Elect. 10 μ F 16WV NL	2
Carbon resistor omitted			

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

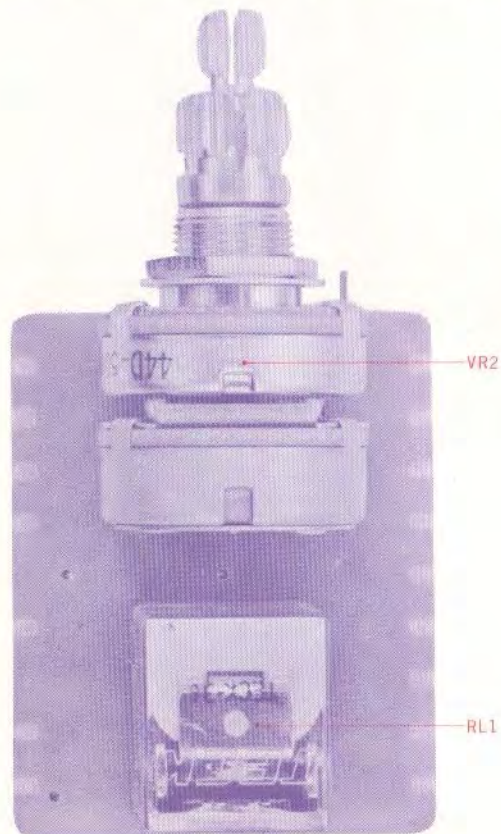
FIG. 21 PHOTO OF VOL. P.C. BOARD (TD-5010) BLOCK



VOL. P.C. BOARD (TD-5010) BLOCK

Symbol No.	Parts No.	Description	Q'ty
21-1x	BA600603	Vol. P.C. Board Comp. (TD-5010)	1
21-VR1	EV593638	Double/Vol. DJ60R 100KA 50 kA	1
Carbon resistor omitted			

FIG. 22 PHOTO OF VOL. P.C. BOARD (B) (KJ-5019) BLOCK



VOL. P.C. BOARD (B) (KJ-5019) BLOCK

Symbol No.	Parts No.	Description	Q'ty
22-1x	BA600614	Vol. P.C. Board (B) comp. (KJ-5019)	1
22-D1, 2	ED557447	Silicon Diode 1S1588	2
22-RL1	EP383321	Relay TECK-36 DC22V 1000Ω	1
22-VR2	EV593640	Double/Vol. DJ60R 50kAx2	1

FIG. 23 PHOTO OF SW. P.C. BOARD (A) (KJ-5020) BLOCK

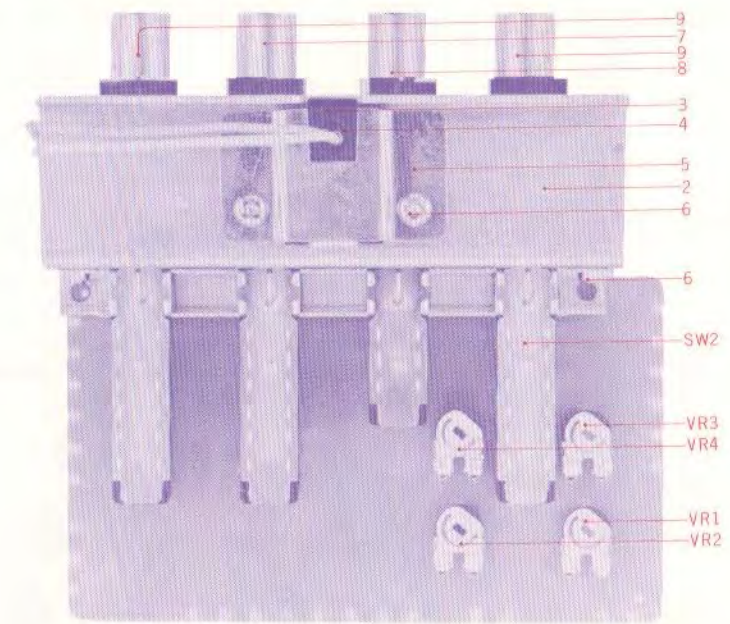
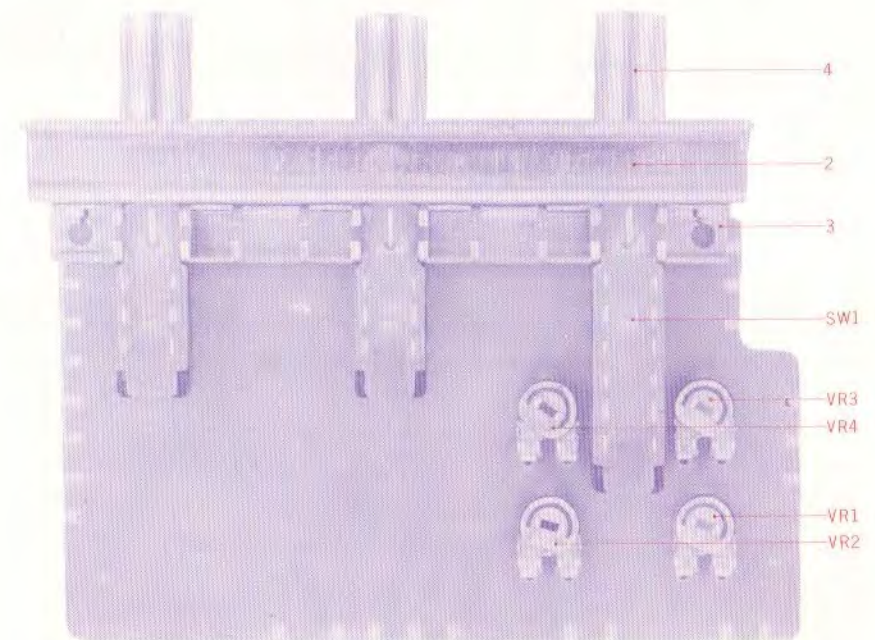


FIG. 24 PHOTO OF SW. P.C. BOARD (B) (KJ-5021) BLOCK



SW. P.C. BOARD (A) (KJ-5020) BLOCK

Symbol No.	Parts No.	Description	Q'ty
23-1x	BA600625	SW. P.C. Board (A) Comp. (KJ-5020)	1
23-SW2	ES593651	Push SW. 4FT-0001 FF-1320	1
23-VR2, 3	EV520806	Semi-fixed/Vol. V8K4-1 10kB	4
23-IND3	EL593662	Cord Lamp 5.5V 60MA(220MMx2)	1
23-2	MZ597352	SW. Base	1
23-3	SE580983	Lamp Mask	1
23-4	EZ580994	Lamp Holder	1
23-5	EZ581005	Lamp Holder Retainer	1
23-6	ZS417216	Screw, pan head 3x4	4
23-7	SB581016	Lamp Button A (Green)	1
23-8	SB581027	Lamp Button B (Orange)	1
23-9	SB598274	Lamp Button C	2

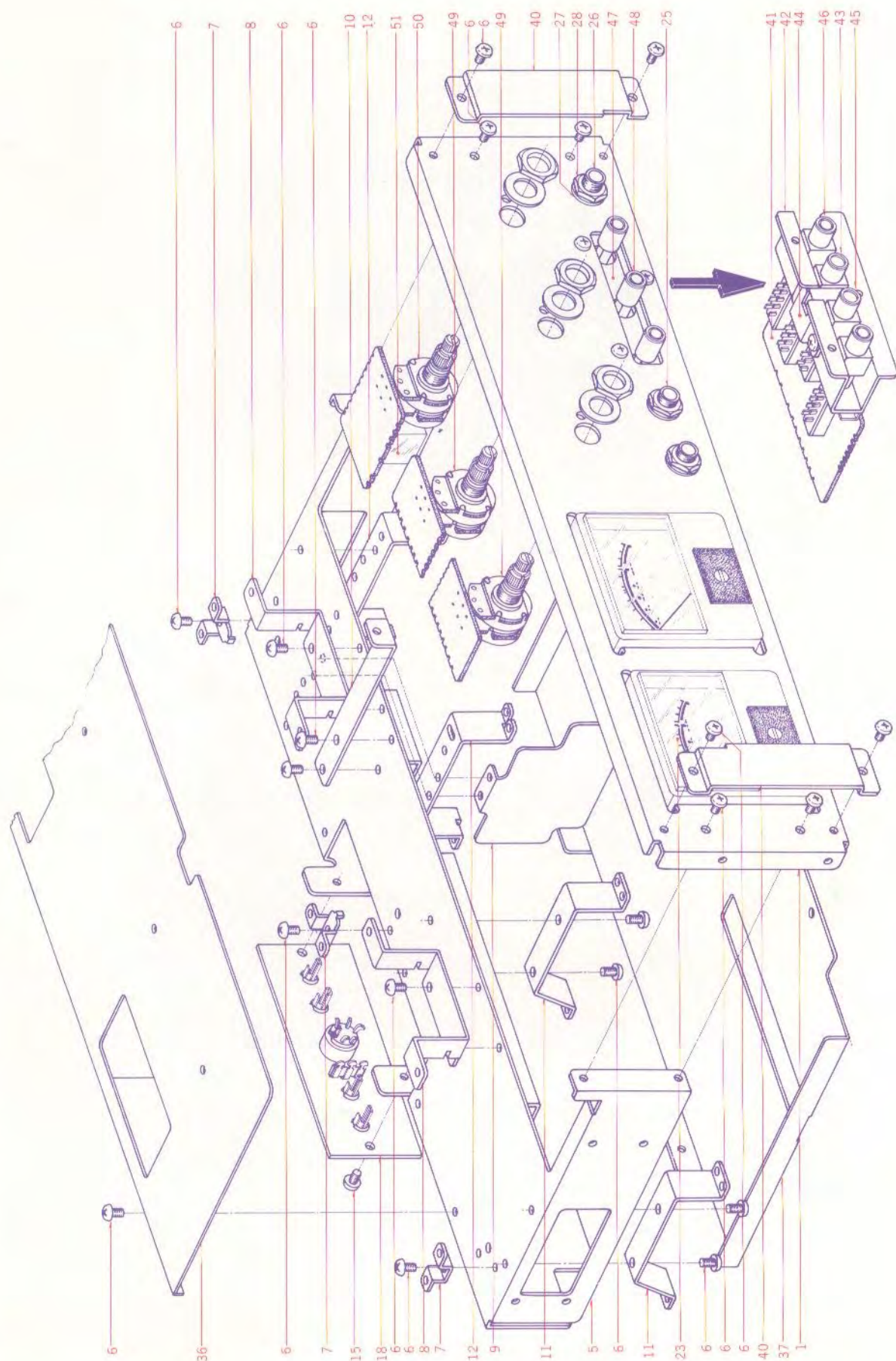
SW. P.C. BOARD (B) (KJ-5021) BLOCK

Symbol No.	Parts No.	Description	Q'ty
24-1x	BA600636	SW. P.C. Board (B) Comp. (KJ-5021) (286D)	1
24-SW1	ES593436	Push SW. 3FT-0002 DF-1320	1
24-VR2, 3	EV520806	Semi-fixed/Vol. V8K4-1 10kB	4
24-2	MZ597341	SW. Base B	1
24-3	ZS417216	Screw, pan head 3x4	2
24-4	SK531224	Push Button Knob	3

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

FIG. 25 ILLUSTRATION OF AMP. ASSEMBLY BLOCK

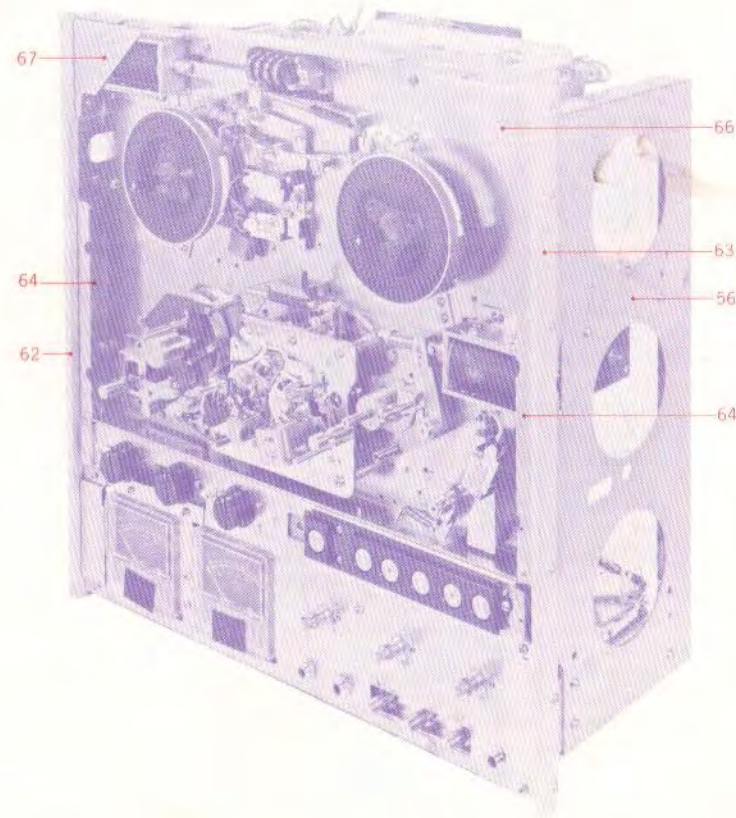


AMP. ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
FRONT CHASSIS BLOCK				
25-1	MZ598048	Amp. Front Chassis	KJ-5001	1
25-2x	ZS325495	Tapping Screw #2 3x6		7
25-3x	ZS455207	Tapping Screw #2 3x5 (BR)		1
25-4x	ZW273767	Earth Lug D3x20L		1
AMP. CHASSIS BLOCK				
25-5	EZ598050	Amp. Chassis	KJ-5002	1
25-6	ZS325495	Tapping Screw #2 3x6		37
25-7	MZ597284	P.C. Board Holder 2	KJ-5005	3
25-8	MZ597273	P.C. Board Holder 1	KJ-5004	2
25-9	MZ597317	Shield Plate C	KJ-5009	1
25-10	MZ597262	Chassis Reinforce Plate	KJ-5003	1
25-11	MZ597295	P.C. Board Holder 4	KJ-5007	2
25-12	MZ597306	P.C. Board Holder 5	KJ-5008	2
25-13x	ZW273778	Earth Lug M3		2
25-14x	ZW273802	Toothed Lock Washer M3		2
25-15	ZS447761	Tapping Screw #2 3x6 (BR) (Black)		3
25-16x	EJ514607	Wire Clip 220-JD485210-01 (Nylon)	2-7-18	2
JACK PLATE BLOCK				
25-17x	EJ600570	Jack Plate Block Comp.	KJ	1
25-18	EJ621191	Jack Plate KJ	31-5-118	1
25-19x	ER440921	Carbon/R. RD1/4 27k(J) (Insu. Type)	35-9-5	2
25-20x	ER214290	Carbon/R. RD1/4 4.7k(J) (Insu. Type)	35-9-5	2
25-21x	ER345677	Carbon/R. RD1/4 15k(J) (Insu. Type)	35-9-5	2
25-22x	ER324685	Carbon RD1/4 33k(J) (Insu. Type)	35-9-5	2
AMP. ASSEMBLY BLOCK				
25-23	EM561756	VU Meter KL-250B-27 (Black)	46-1-79	2
25-24x	EM573748	VU Meter KL-280B-28 (Yellow)(D,JPN)	46-1-86	2
25-25	EJ592435	Mic. Jack 2PMJ4	31-2-44	2
25-26	EJ601481	Mic. Jack 3PMJ4	31-2-45	1
25-27	ZW272722	Toothed Lock Washer M9 D9.3x13x0.5t		3
25-28	ZW554624	E Jack Nut	7-1-56	3
25-29x	SE529457	Meter Mask	ND-5043	2
25-30x	EJ293062	Mate-N-Lock Cap Housing 12P 1-480278-0	52-1-1	1
25-31x	EJ373691	Mate-N-Lock Cap Housing 9P 1-480277-0 (D/DB/D,JPN)	52-1-2	11
25-32x	EJ373623	Pin Contact 61116-1	52-1-1	11
25-33x	ZG290878	VU Meter Spring	DX-504	4
25-34x	ZW272756	Nut M3		4
25-35x	ZW465715	Washer D3.2x6x0.5t(SPC)		4
25-36	MZ597903	Shield Plate A	KJ-5015	1
25-37	MZ597914	Shield Plate B	KJ-5016	1
25-38x	EJ299823	Mate-N-Lock Cap Housing 6P 1-480276-0	52-1-2	1
25-39x	EJ373623	Pin Contact 61116-1	52-1-1	4
25-40	MZ597374	Reinforcement Bracket	KJ-6003	2
25-41	BA600625	SW. P.C. Board A (KJ-5020) Comp.	KJ-5020	1
25-42	MZ597352	SW. Base	KJ-5013	1
25-43	SB581016	Lamp Button A (Green)	TD-5024	1
25-44	EZ581005	Lamp Holder Retainer	TD-5023	1
25-45	SB581027	Lamp Button B (Orange)	TD-5024	1
25-46	SB598274	Lamp Button C	TD-5024	2
25-47	BA600636	SW. P.C. Board B (KJ-5021) Comp.	KJ-5021	1
25-48	SK531224	Push Button Knob	91-5051	3
25-49	BA600603	Vol. P.C. Board (TD-5010) Comp.	TD-5010	1
25-50	BA600614	Vol. P.C. Board B (KJ-5019) Comp.	KJ-5019	1
25-51	EP383321	Relay TECK-36 DC22V 1000Ω	47-2-20	1

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

FIG. 26 PHOTO OF FINAL ASSEMBLY BLOCK



FINAL ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
MECH. PANEL BLOCK					FINAL ASSEMBLY				
26-1x	BZ600120	Mech. Panel Block Comp.	KJ	1	26-42x	SZ382230	Ventilator (Upper)	RD-A404	1
26-2x	BZ600131	Mech. Panel Block Comp. (DB)	KJ	1	26-43x	ZS601470	Screw, truss head (without hollow3x15)		4
26-3x	BZ600142	Mech. Panel Block Comp. (Deck)	KJ	1	26-44x	ZW516993	Nut M3		4
26-4x	SP598094	Mech. Panel B	KJ-6007	1	26-45x	SZ382241	Ventilator Retaining Plate	RD-A405	1
26-5	SP598083	Mech. Panel A (Deck)	KJ-6007	1	26-46x	ZS200610	Tapping Screw #1 4x12 (Truss)		1
26-6	MT597982	Reel Table Escutcheon	KJ-6009	2	26-47x	ZW259503	Washer D3.1x8x0.5t (Nylon)		4
26-7x	ZW575730	P Type Speed Nut 3	6-3-6	8	26-48x	ZW406247	Washer D3.2x10x0.5t(SUP)		4
26-8	SE397618	Counter Escutcheon	KD-6008	1	26-49x	SZ549516	Foot For ND	ND-6041	2
26-9	SC598105	Head Cover Base	KJ-6010	1	26-50x	ZS593166	Wood Screw, round head 4.1x20		4
26-10x	ZS422076	Screw, pan head 3x5		4	26-51x	SE424945	Speaker Grill	MS-6004	2
26-11	SE597418	Capstan Escutcheon	KJ-6012	1	26-52x	SZ424967	Reflection Plate	MS-6006	2
26-12	SC598116	Head Cover	KJ-6013	1	26-53x	SZ237508	Reflection Plate Retaining Parts (4)	3A-419	4
26-13	SM598983	GX-Symbol Plate	KJ-6021	1	26-54x	ZS201183	Screw, truss head 3x8(Black)		4
26-14x	SM597464	Model Name Plate GX-286	KJ-6019	1	26-55x	ZS447963	Tapping Screw #1 3x10 (Truss)		8
26-15x	SM597475	Model Name Plate GX-286DB	KJ-6020	1	CASE BLOCK				
26-16	SM597453	Model Name Plate GX-286D	KJ-6018	1	26-29x	BZ600153	Amp. Panel Block Comp.	KJ	1
26-17x	SZ473646	Stopper Rubber	KH-1020	2	26-30x	BZ600164	Amp. Panel Block Comp.(DB)	KJ	1
26-18x	MZ597442	Hinge Bracket	KJ-6016	1	26-31x	BZ600175	Amp. Panel Block Comp. (Deck)	KJ	1
26-19x	ZS369145	ISO Screw, countersunk head 3x5 D=5		2	26-32x	SP594187	Amp. Panel C	KJ-6023	1
26-20x	MS597431	Hinge Shaft	KJ-6015	1	26-33x	SP598138	Amp. Panel B (DB)	KJ-6023	1
26-21x	SE597420	Collar	KJ-6014	1	26-34	SP598127	Amp. Panel A (Deck)	KJ-6023	1
36-22x	MZ598263	Hinge Angle, w/ball sleeve	KJ-6017	1	26-35	SE597993	Meter Escutcheon	KJ-6026	2
26-23x	MV537862	Steel Ball D4		1	26-36x	ZS524812	Screw, countersunk head 2x4		4
26-24x	ZG249107	Ball Retaining Spring	RD-632	1	26-37	SE569744	Knob Escutcheon	TU-6017	4
26-25x	ZS593188	Set Screw 5x4 (Flat/P.)		1	AMP. PANEL BLOCK				
26-26x	ZS379350	ISO Screw, pan head 3x6		2	26-29x	BZ600153	Amp. Panel Block Comp.	KJ	1
26-27	SE569744	Knob Escutcheon	TD-6017	1	26-30x	BZ600164	Amp. Panel Block Comp.(DB)	KJ	1
26-28x	SZ594000	Panel Cloth	KJ-6030	2	26-31x	BZ600175	Amp. Panel Block Comp. (Deck)	KJ	1
26-29x	BZ600153	Amp. Panel Block Comp.	KJ	1	26-32x	SP594187	Amp. Panel C	KJ-6023	1
26-30x	BZ600164	Amp. Panel Block Comp.(DB)	KJ	1	26-33x	SP598138	Amp. Panel B (DB)	KJ-6023	1
26-31x	BZ600175	Amp. Panel Block Comp. (Deck)	KJ	1	26-34	SP598127	Amp. Panel A (Deck)	KJ-6023	1
26-32x	SP594187	Amp. Panel C	KJ-6023	1	26-35	SE597993	Meter Escutcheon	KJ-6026	2
26-33x	SP598138	Amp. Panel B (DB)	KJ-6023	1	26-36x	ZS524812	Screw, countersunk head 2x4		4
26-34	SP598127	Amp. Panel A (Deck)	KJ-6023	1	26-37	SE569744	Knob Escutcheon	TU-6017	4
26-35	SE597993	Meter Escutcheon	KJ-6026	2	26-38x	BC600107	Case Block Comp.	KJ	1
26-36x	ZS524812	Screw, countersunk head 2x4		4	26-39x	BC600118	Case Block Comp. (DB/D)	KJ	1
26-37	SE569744	Knob Escutcheon	TU-6017	4	26-40x	SC598151	Wood Case A (286)	KJ-6031	1
26-38x	BC600107	Case Block Comp.	KJ	1	26-41	SC598162	Wood Case B (D/DB)	KJ-6031	1
26-39x	BC600118	Case Block Comp. (DB/D)	KJ	1					
26-40x	SC598151	Wood Case A (286)	KJ-6031	1					
26-41	SC598162	Wood Case B (D/DB)	KJ-6031	1					
26-42x	SZ382230	Ventilator (Upper)			26-56	SE597971	Sash L, w/knock pin	KJ-6006	1
26-43x	ZS601470	Screw, truss head (without hollow3x15)			26-57	SE599872	Sash R, w/knock pin	KJ-6006	1
26-44x	ZW516993	Nut M3			26-58x	MZ597960	Connector Plate (286)	KJ-6001	1
26-45x	SZ382241	Ventilator Retaining Plate			26-59	ZW526577	Collar B, Jack	MC-5006	3
26-46x	ZS200610	Tapping Screw #1 4x12 (Truss)			26-60	SK597486	Selector Knob	KJ-6022	3
26-47x	ZW259503	Washer D3.1x8x0.5t (Nylon)			26-61	SP598140	Operation Panel	KJ-6029	1
26-48x	ZW406247	Washer D3.2x10x0.5t(SUP)			26-62	SE594180	Lamp Lens C-1	EG-6008	1
26-49x	SZ549516	Foot For ND			26-63	WM549988	Lens Holder C	PG-6009	1
26-50x	ZS593166	Wood Screw, round head 4.1x20			26-64	SZ483737	Panel Washer B	ED-6029	2
26-51x	SE424945	Speaker Grill			26-65	ZS482815	Screw, oval Countersunk head 3x8		2
26-52x	SZ424967	Reflection Plate			26-66	ZW535094	Decorative Washer	TW-2077	1
26-53x	SZ237508	Reflection Plate Retaining Parts (4)			26-67	ZS593133	Screw, oval countersunk head 3x6		1
26-54x	ZS201183	Screw, truss head 3x8(Black)			26-68	SK583132	Pinch Roller Cap B,w/screw	MS-6020	1
26-55x	ZS447963	Tapping Screw #1 3x10 (Truss)			26-69	SK549843	Double Knob A	TW-6304	3
					26-70	MB549865	Double Knob Rubber Ring A	TW-6306	3
					26-71	SK549876	Double Knob B	TW-6307	3
					26-72	MB548627	Double Knob (upper) Rubber Ring	MU-6215	3
					26-73x	SZ598173	Ventilator (Rear)	KJ-6032	1
					26-74x	ZS392365	Tapping Screw #1 6x12(truss)		4
					26-75	SA377190	Rubber Foot, LM	LM-404	4
					26-76x	ZS593155	Screw, pan head 4x40		4
					26-77x	ZW562757	Washer D4.3x11x0.8t		6
					26-78x	ZS554771	Screw, pan head 4x20		2
					26-79x	SS616465	Speaker KJ-1 (286)	29-5-16	2
					26-80x	EF563681	Fuse 1A 250V	39-1-50	1
					26-81	MP271170	Pinch Roller, LC D=38	LC-321	1

INDEX

Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.
BA588003	15-1x	BA600603	21-1x	BA600660	9-1x	BT517274	16-T1	EZ600164	26-30x
BA600434	14-1x	BA600603	25-49	BC600107	26-38x	BT593717	8-2	BZ600175	26-31x
BA600445	14-2x	BA600614	22-1x	BC600118	26-39x	BT593728	8-3x	BZ600300	3-6
BA600456	13-1x	BA600614	25-50	BH600344	1-1x	BT593730	8-4x	BZ600311	7-1x
BA600467	10-1x	BA600625	23-1x	BI600355	4-1x	BT593741	8-6x	BZ600322	7-22x
BA600478	12-1x	BA600625	25-41	BM314741	2-1	BT593752	8-5x	BZ600366	5-20x
BA600480	11-1x	BA600636	24-1x	BM600298	3-1x	BZ600120	26-1x	BZ600377	6-1x
BA600546	18-1x	BA600636	25-47	BR398430	2-2x	BZ600131	26-2x	BA463206	1-27x
BA600557	17-1x	BA600647	19-1x	BR398441	2-3x	BZ600142	26-3x	EA466547	1-28x
BA600568	16-1x	BA600658	20-1x	BS600333	5-1x	BZ600153	26-29x	EA594990	8-28x

When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

INDEX

Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.
EA597003	6-19	EC324516	14-C8	EC517138	16-C6	EO369178	19-L1	ET491051	9-TR7
EA597251	8-39x	EC329771	16-C4	EC520626	8-12	EO380564	19-L2	ET491051	9-TR10
EA597947	6-22	EC329771	16-C7	EC556007	11-C21	EO383365	18-T1	ET491051	9-TR13
EA607217	8-29x	EC329771	16-C12	EC557166	10-C8	EO390622	19-L3	ET491051	9-TR16
EC220151	10-C11	EC329771	17-C13	EC557190	8-51	EO496350	15-L1	ET491051	15-TR5
EC220151	11-C17	EC329771	17-C17	EC558202	18-C1, 2	EO496361	16-L1	ET495483	11-TR7
EC220151	13-C1	EC329782	14-C7	EC558235	18-C3	EP383321	18-RL1	ET511694	11-TR12
EC220151	13-C3	EC329850	16-C11	EC565345	14-C1	EP383321	22-RL1	ET511920	14-TR2
EC220151	17-C22	EC329861	15-C9	EC565345	14-C5, 6	EP383321	25-51	ET517263	16-TR1to4
EC220364	16-C16	EC329861	19-C1	EC593302	13-C7	EP398610	7-23	ET517263	17-TR1to5
EC220432	9-C5	EC329883	15-C8	EC593458	17-C11	EP441990	7-2	ET520288	11-TR2,3
EC220432	13-C2	EC331828	10-C3	EC593763	8-13	EP601514	1-46	ET538154	10-TR5
EC220465	17-C5	EC336115	14-C4	ED219464	15-D1	EP616500	12-RL1	ET558178	10-TR8
EC220612	10-C13	EC336126	11-C16	ED219464	15-D5	ER214290	25-20x	ET593335	10-TR7
EC220612	11-C5, 6	EC336126	13-C4	ED219464	16-D1	ER324685	25-22x	EV464207	15-VR2
EC220612	11-C9	EC336126	16-C17	ED224548	7-4x	ER344136	12-RL2to4	EV464207	16-VR2
EC220994	11-C20	EC336126	17-C1	ED224548	7-24x	ER345677	25-21x	EV464220	16-VR1
EC250582	10-C4	EC336126	17-C20	ED224548	10-D2to5	ER349907	12-R6, 7	EV484863	14-VR1
EC250582	10-C6	EC336194	15-C3	ED224550	14-D1	ER376424	7-3x	EV520806	23-VR2,3
EC250604	9-C2	EC337500	15-C10	ED357794	14-D11	ER376435	5-17	EV520806	24-VR2,3
EC250604	9-C7	EC337533	14-C11	ED491130	15-D2	ER376435	7-71	EV523620	15-VR1
EC250604	9-C12	EC350616	17-C6	ED494583	1-47x	ER435587	14-R9	EV560136	10-VR1
EC250604	9-C17	EC350616	17-C12	ED494583	12-D1to4	ER435868	12-R2to5	EV593368	10-VR2
EC250604	9-C22	EC350616	17-C14	ED494583	14-D2to9	ER440921	25-19x	EV593638	21-VR1
EC250604	9-C27	EC350684	17-C9	ED520762	20-D1	ER450786	5-13	EV593640	22-VR2
EC250604	17-C4	EC350706	9-C4	ED557447	9-D1to8	ER450786	12-CR3, 4	EW315448	8-71x
EC250841	18-C4, 5	EC350706	9-C9	ED557447	10-D1	ER450786	12-CR6to19	EW540112	8-70x
EC250885	9-C32	EC350706	9-C14	ED557447	11-D1	ER465974	14-R8	EZ246936	8-63x
EC250885	9-C34	EC350706	9-C19	ED557447	11-D3to47	ER593291	13-R4	EZ383363	8-62
EC250885	9-C36	EC350706	9-C24	ED557447	11-D51to55	ER593447	18-R6	EZ549314	8-34x
EC250885	9-C38	EC350706	9-C29	ED557447	14-D10	ER616498	8-41	EZ580994	23-4
EC250885	9-C40	EC350875	15-C2	ED557447	22-D1,2	ER622045	10-R22	EZ581005	23-5
EC250885	9-C42	EC350987	14-C9,10	ED560913	15-D3,4	ES246025	5-15	EZ581005	25-44
EC250885	10-C12	EC357840	11-C11	ED560913	15-D6	ES421806	5-18	EZ596845	10-5
EC250885	11-C2	EC362068	9-C1	ED593357	10-TH1	ES479485	8-20	EZ596856	14-3
EC250885	11-C7, 8	EC362068	9-C6	ED593403	6-21x	ES524790	5-3	EZ596867	14-4
EC250885	11-C14	EC362068	9-C11	ED593403	11-D57	ES562465	7-69	EZ597846	8-38x
EC250885	11-C18	EC362068	9-C16	EF277402	8-26x	ES573456	7-70	EZ597868	13-2
EC250885	17-C25	EC362068	9-C21	EF563681	26-80x	ES593436	24-SW1	EZ597892	8-15
EC250918	14-C3	EC362068	9-C26	EF563703	8-55x	ES593651	23-SW2	EZ598050	25-5
EC251122	10-C2	EC368256	9-C3	EF588420	8-23	ES593673	19-SW3	EZ606701	4-8
EC251122	10-C5	EC368256	9-C8	EF593706	8-24x	ES593684	19-SW4	HA382656	1-29
EC251201	17-C19	EC368256	9-C13	EF601986	8-27x	ES593807	5-29	HA382691	1-21
EC251291	10-C1	EC368256	9-C18	EF602550	8-25x	ES593818	6-17	HE563220	1-17
EC290520	15-C14	EC368256	9-C23	EJ593324	13-IC1	ET234854	15-TR1	HL426510	1-68
EC290520	16-C3	EC368256	9-C28	EJ205775	8-53x	ET234854	15-TR6	HL426521	1-71
EC290520	16-C5	EC368256	12-C1	EJ205986	8-52x	ET329218	15-TR2	HL426565	1-73
EC290520	16-C14	EC372148	14-C2	EJ222748	8-43	ET329218	15-TR4	HL809998	1-54
EC290520	17-C3	EC379157	19-C4	EJ233370	8-22	ET329218	15-TR8	HP536501	1-30
EC290520	17-C18	EC379170	15-C12	EJ292961	1-60x	ET350335	15-TR7	HR384513	1-22
EC302253	17-C15	EC379170	15-C16	EJ293062	25-30x	ET352146	15-TR3	HZ231884	1-63
EC302297	16-C8	EC379170	15-C18,19	EJ293073	8-48x	ET398711	10-TR6	HZ315090	7-77
EC307506	9-C10	EC379214	19-C2	EJ299823	25-38x	ET398711	10-TR9	HZ317698	1-48
EC307506	9-C15	EC379787	19-C6	EJ299834	8-45x	ET398711	14-TR1	HZ320940	1-53
EC307506	9-C20	EC389485	19-C3	EJ310871	8-44x	ET398711	16-TR5, 6	HZ321344	1-49
EC307506	9-C25	EC395504	15-C20	EJ363126	15-2	ET398711	17-TR6	HZ321366	1-50
EC307506	9-C30	EC399565	16-C13	EJ368796	8-49x	ET398711	18-TR1, 2	HZ321377	1-51
EC311793	10-C7	EC399690	17-C8	EJ373318	1-61x	ET398711	20-TR1	HZ321434	1-65
EC313121	15-C7	EC405898	17-C24	EJ373623	25-32x	ET399846	9-TP2	HZ382667	1-31
EC313121	18-C6	EC424708	19-C5	EJ373623	25-39x	ET399846	9-TR5	HZ382680	1-16
EC320040	15-C13	EC432810	16-C1	EJ373634	8-46x	ET399846	9-TR8	HZ412637	1-3
EC320040	16-C9	EC432810	20-C2	EJ373691	25-31x	ET399846	9-TR11	HZ426486	1-2
EC320051	10-C10	EC450055	10-C9	EJ378944	8-61	ET399846	9-TR14	HZ426497	1-34
EC320051	15-C1	EC450055	11-C3	EJ454858	13-J1	ET399846	9-TR17	HZ426508	1-35
EC320051	15-C4,5,6	EC450055	11-C10	EJ514607	25-16x	ET399846	10-TR4	HZ426543	1-69
EC320051	15-C11	EC450055	11-C12	EJ514822	8-31x	ET465208	8-40x	HZ426554	1-72
EC320051	15-C15	EC450055	11-C19	EJ553948	6-8x	ET378001	9-TR3	HZ426666	1-12
EC320051	15-C17	EC450055	16-C18	EJ553948	8-32x	ET378001	9-TR6	HZ433890	1-67
EC320051	16-C15	EC450055	16-C20	EJ553948	8-64x	ET478001	9-TR9	HZ434272	1-9
EC320051	16-C19	EC450055	16-C22	EJ592435	25-25	ET478001	9-TR12	HZ803597	1-6
EC320051	16-C21	EC450055	17-C10	EJ592503	8-17x	ET478001	9-TR15	HZ810011	1-44
EC320051	17-C2	EC450270	13-C6	EJ594988	8-16x	ET478001	9-TR18	MB303535	2-23
EC320051	17-C7	EC450527	9-C31	EJ600570	25-17x	ET478001	10-TR1,2,3	MB303535	7-79
EC320051	17-C16	EC450527	9-C33	EJ601481	25-26	ET478001	11-TR1	MB548627	26-72
EC320051	17-C21	EC450527	9-C35	EJ621191	25-18	ET378001	11-TR4,5,6	MB549865	26-70
EC320051	17-C23	EC450527	9-C37	EL562004	6-20x	ET378001	11-TR8to11	MC593190	7-56
EC320051	20-C1	EC450527	9-C39	EL593662	23-IND3	ET378001	11-TR13to18	MH257477	1-55
EC321221	13-C5	EC450527	9-C41	EM561756	25-23	ET378001	11-TR21to23	MH257477	7-11
EC321221	14-C12	EC467133	16-C2	EM573748	25-24x	ET491051	9-TR1	MH257477	7-28
EC324516	11-C13	EC493323	16-C10	EO321254	17-L1	ET491051	9-TR4	MH317373	2-31

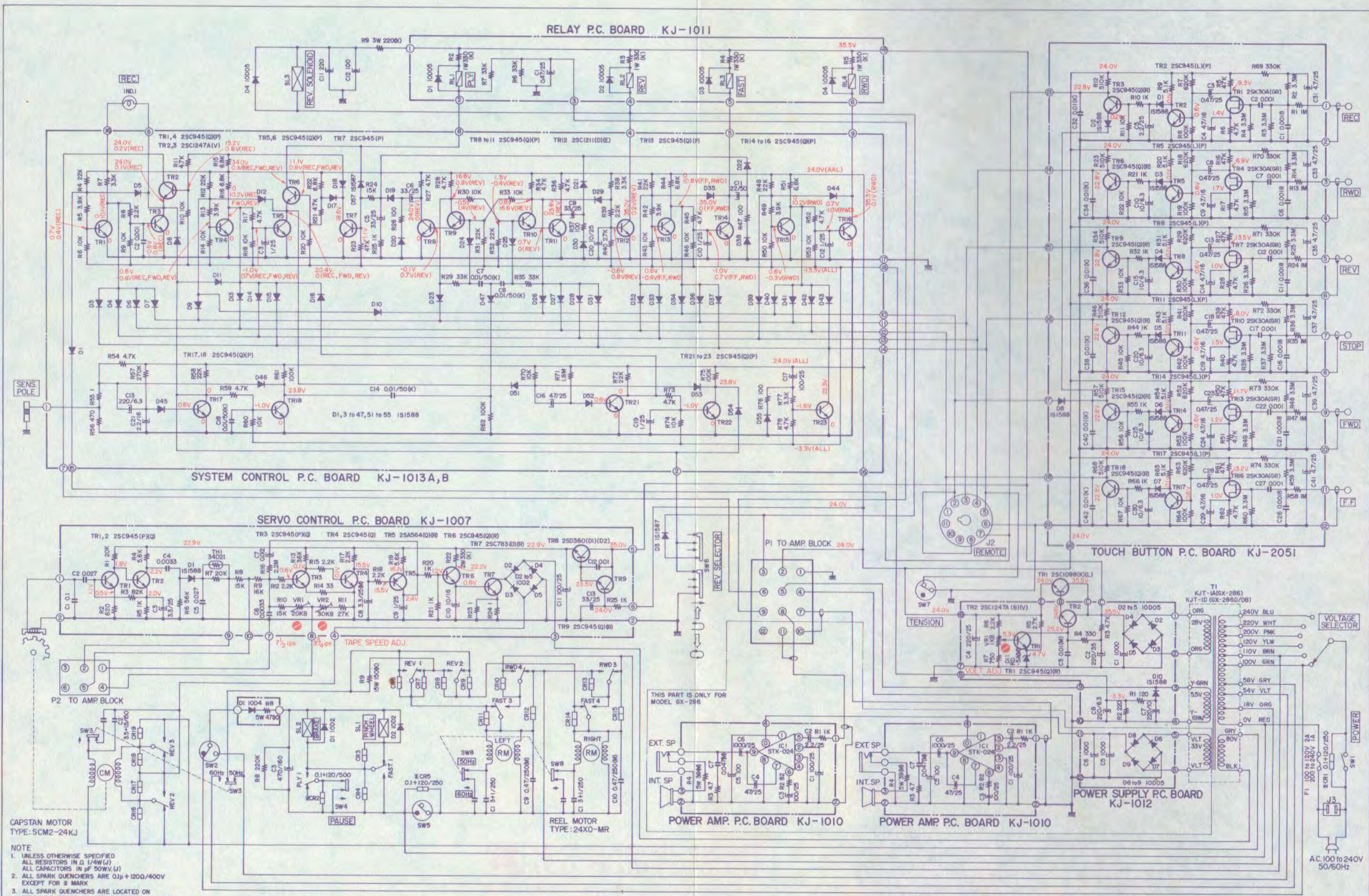
INDEX

Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.
MH317373	7-40	MZ596935	8-42	SE569744	26-27	ZS336868	1-25	ZW270088	7-13
MH397034	7-38	MZ596957	8-65	SE569744	26-37	ZS344463	7-78	ZW270088	7-29
MH397045	7-52x	MZ596957	10-7	SE580983	23-3	ZS345914	1-43	ZW270101	1-70
MH596790	4-28	MZ596968	8-8	SE594180	26-62	ZS355522	8-50	ZW270101	4-25
MH596790	7-41	MZ596970	8-9	SE597161	4-14	ZS356793	1-19	ZW270101	5-23
MI597183	4-20	MZ596981	8-11	SE597418	26-11	ZS369145	26-19x	ZW270101	7-15x
ML314976	2-25	MZ596992	6-18	SE597420	26-21x	ZS379350	4-27	ZW270101	7-50x
ML314976	7-61	MZ597058	6-13	SE597971	26-56	ZS379350	5-36	ZW270123	5-10
ML396742	7-43	MZ597060	6-12	SE597993	26-35	ZS379350	6-16	ZW272722	13-4
ML396810	7-66	MZ597071	4-3	SE599872	26-57	ZS379350	7-42	ZW272722	25-27
ML396933	7-16	MZ597093	4-6	SK531224	24-4	ZS379350	7-58	ZW272756	25-34x
ML596924	8-54	MZ597126	4-23x	SK531224	25-48	ZS379350	20-3	ZW273633	4-16
ML597216	5-22	MZ597137	4-9	SK549843	26-69	ZS379350	26-26x	ZW273756	1-5x
MP271170	7-81	MZ597150	4-13	SK549876	26-71	ZS383646	1-23	ZW273756	7-37x
MP271170	26-81	MZ597172	4-12	SK583132	7-87	ZS392365	26-74x	ZW273756	10-4
MR317507	2-19	MZ597194	5-21	SK583132	26-68				

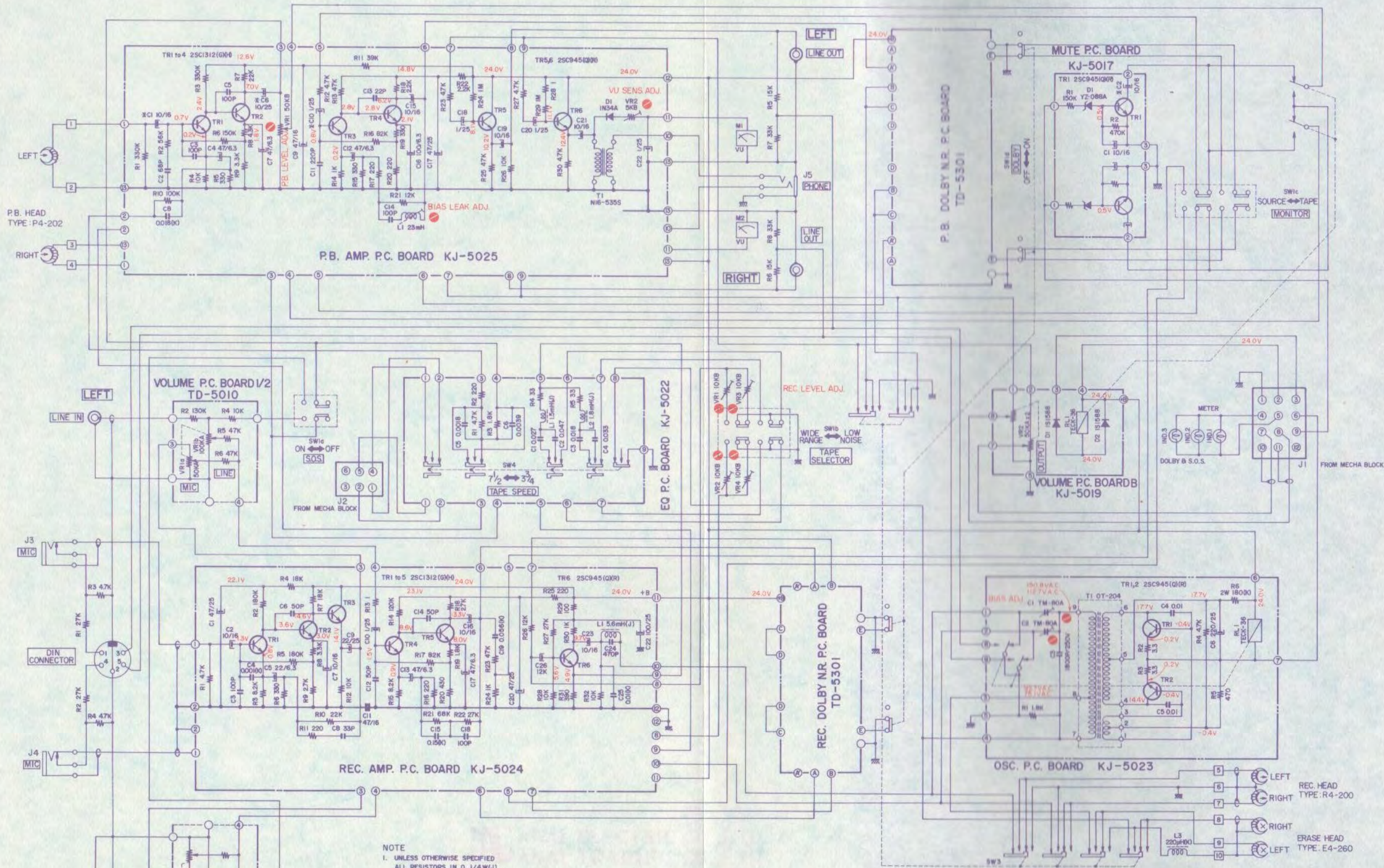
SECTION 3

SCHEMATIC DIAGRAM

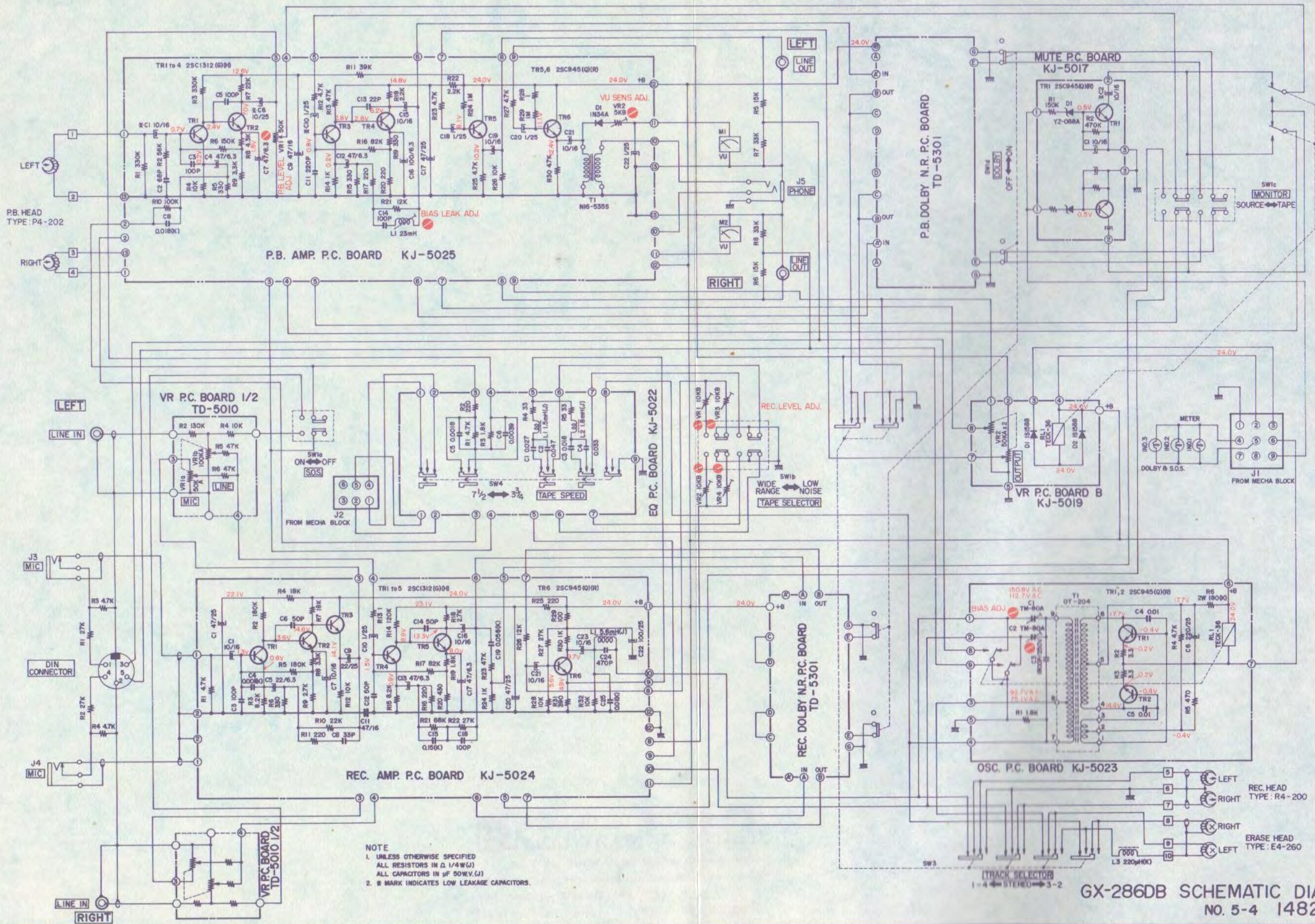
1. GX-286 SCHEMATIC DIAGRAM
2. GX-286 DB SCHEMATIC DIAGRAM
3. GX-286 D SCHEMATIC DIAGRAM



GX-286, DB, D SCHEMATIC DIAGRAM
NO.5-1 1482056A
2C



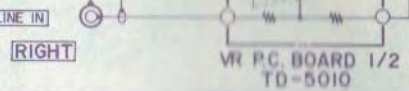
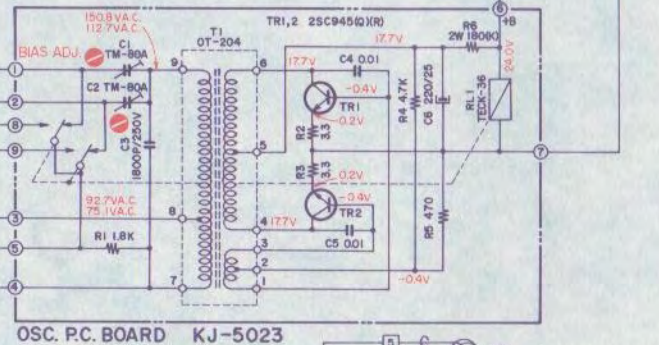
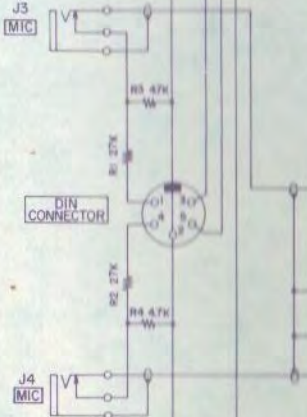
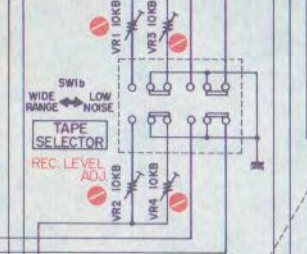
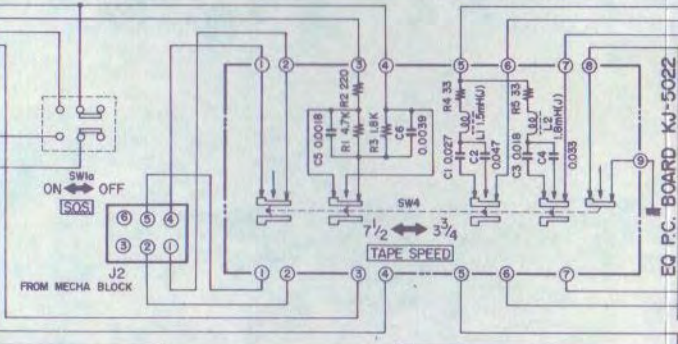
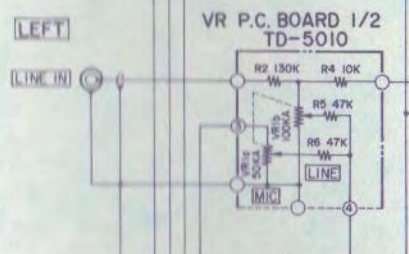
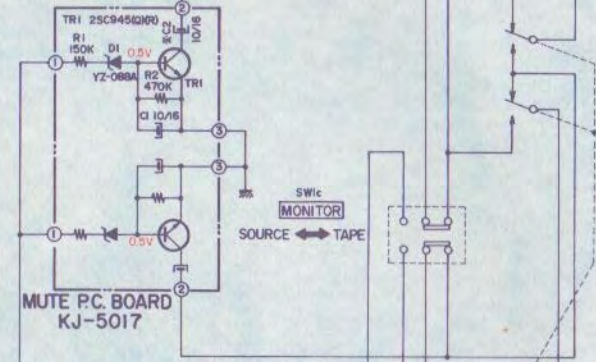
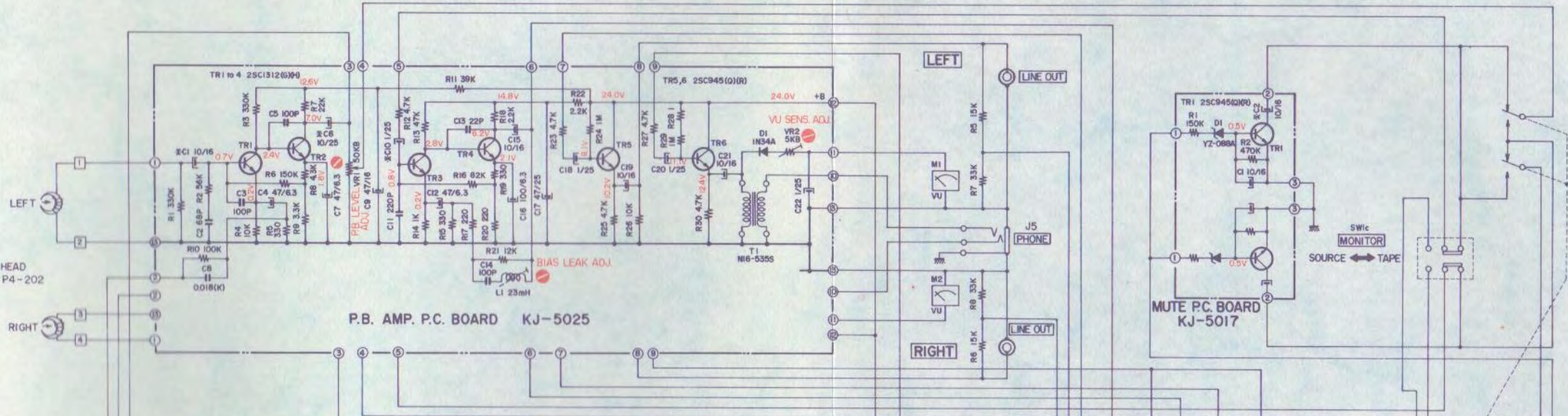
NOTE
 1. UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN Ω, 1/4W(J)
 ALL CAPACITORS IN μF 50WV(J)
 2. * MARK INDICATES LOW LEAKAGE CAPACITORS



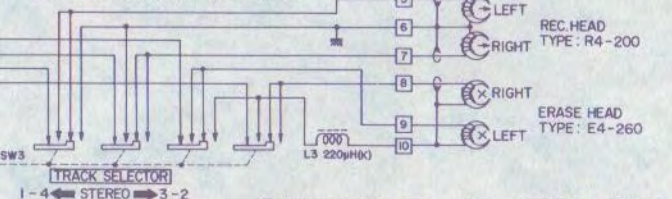
NOTE
 1. UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN Ω, 1/4W(U)
 ALL CAPACITORS IN μF 50WV(U)
 2. * MARK INDICATES LOW LEAKAGE CAPACITORS.

GX-286DB SCHEMATIC DIAGRAM
 NO. 5-4 1482059A

P.B. HEAD
TYPE : P4-202



NOTE
1. UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN Ω 1/4W(J)
ALL CAPACITORS IN μF 50WV(J)
2. X MARK INDICATES LOW LEAKAGE CAPACITORS



GX-286D SCHEMATIC DIAGRAM
NO. 5-5 1482060A