

REALISTIC[®]
Service Manual

SA-2001
STEREO AMPLIFIER
Catalog Number 31-1962



CUSTOM MANUFACTURED FOR RADIO SHACK  A DIVISION OF TANDY CORPORATION

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SPECIFICATIONS

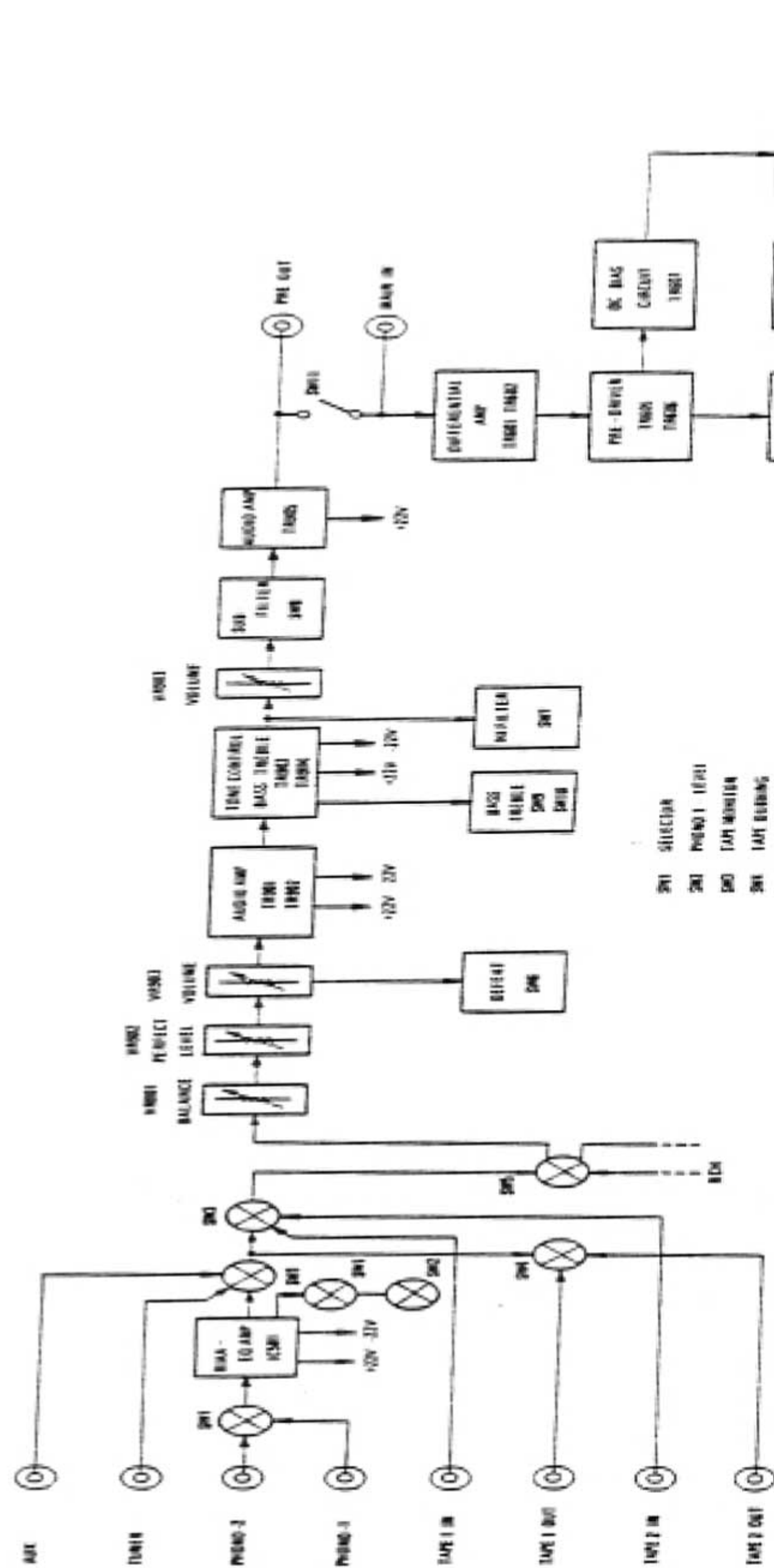
	NOMINAL	LIMIT	UNIT
1. RMS OUTPUT POWER At 0.2% THD for 20–20,000 Hz into 8 ohms (per channel, both channels driven)	65	60	W
2. IM DISTORTION (at 50 W, 60/7,000 4/1)	0.02	0.2	%
3. HARMONIC DISTORTION (at 50 W)	0.02	0.1	%
	20 Hz	0.02	%
	1 kHz	0.02	%
	20 kHz	0.05	%
4. FREQUENCY RESPONSE (Aux at 1 W, 8 ohm)	20–20,000		Hz
	±1.5 dB		
5. INPUT SENSITIVITY (for 65 W) PHONO 1	6	6±1.5	mV
	3	3±0.5	mV
	1.5	1.5±0.3	mV
	3	3±0.5	mV
	3	3±0.5	mV
	200	200±30	mV
6. INPUT IMPEDANCE	47K		ohm
	50K		ohm
	50K		ohm
	50K		ohm
7. PHONO EQUALIZATION	RIAA±1	RIAA±1.5	dB
8. PHONO AMP OVER-LOAD CAPABILITY (at 1% distortion)	180	150	mV
9. TONE CONTROL			
BASS turn-over 125 Hz at 100 Hz:	±4	±4±1.5	dB
turn-over 400 Hz at 100 Hz:	±12	±12±2	dB
TREBLE turn-over 3 kHz at 10 kHz:	±9	±9±2	dB
turn-over 7 kHz at 10 kHz:	±5	±5±1.5	dB
10. HIGH FILTER	-6	-6±2	dB
11. SUB FILTER	42	42±7	Hz
	-8	-8±2	dB
12. LOUDNESS COMPENSATION			
	+10	+10±2	dB
	+7	+7±2	dB
13. CHANNEL SEPARATION (AUX input, 100–10,000 Hz, 20 volts output at 8 ohm load)	50	45	dB
14. SIGNAL-TO-NOISE RATIO (Input shorted)			
	70	65	dB
	65	60	dB
	60	55	dB
	65	60	dB
	85	75	dB
15. TAPE OUTPUT LEVEL (at PHONO input 3 mV)	200	200±30	mV
16. RESIDUAL NOISE (at minimum VOLUME)	0.5	1.5	mV
17. LOAD IMPEDANCE		4–16	ohms
18. POWER SOURCE AC120 volts, 60 Hz*			
20 watts, no signal			
400 watts, full signal (8 ohms, both channels 65 watts)			

* 220/240V AC, 50 Hz for European and Australian Models.

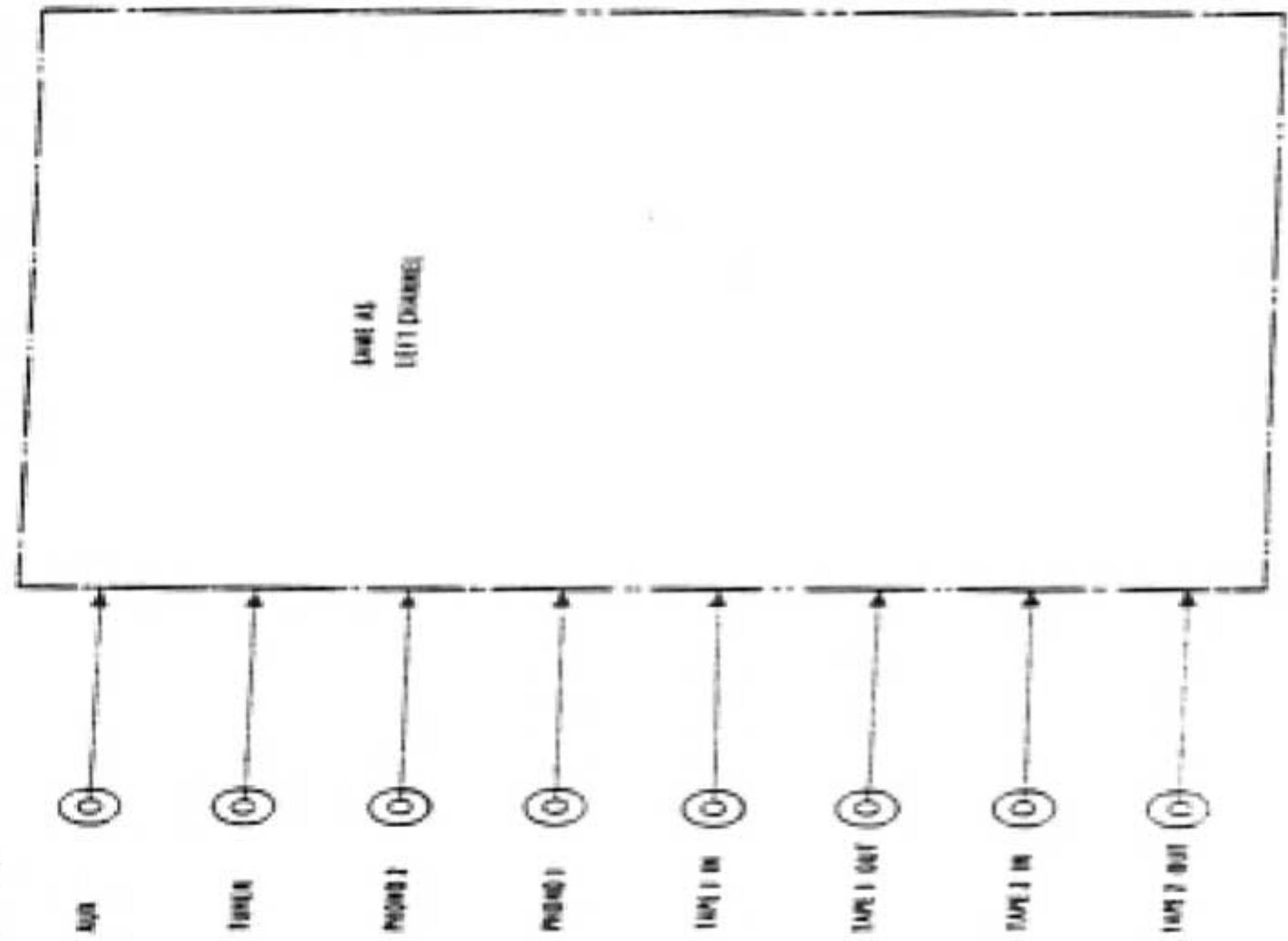
NOTE: Nominal Specs represent the design specs; all units should be able to approximate these—some will exceed and some may drop slightly below these specs. Limit Specs represent the absolute worst condition which still might be considered acceptable; in no case should a unit perform to less than within any Limit Spec.

BLOCK DIAGRAM

LEFT CHANNEL



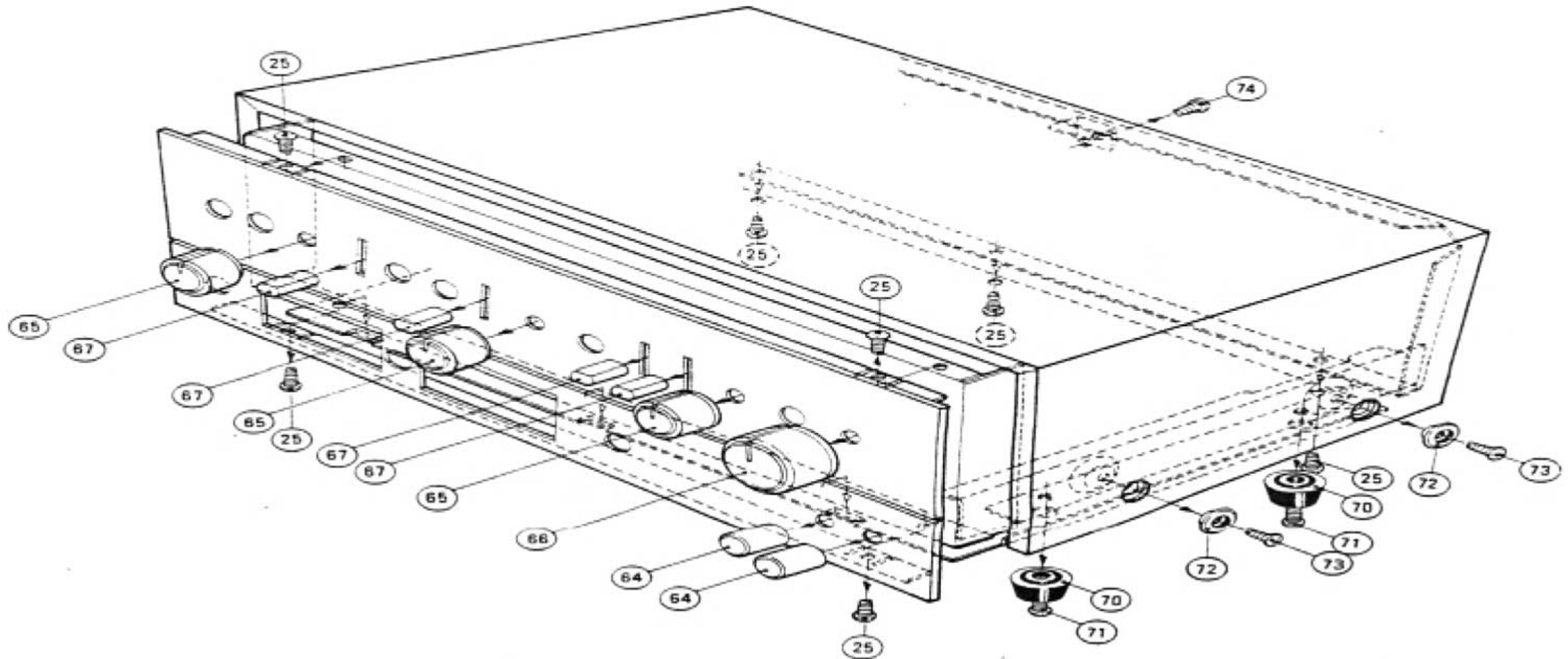
RIGHT CHANNEL



- SW1 SELECTION
- SW2 PHONO 1 LEVEL
- SW3 TAP POSITION
- SW4 TAP BUBBLING
- SW5 MUTE
- SW6 BEEP
- SW7 METER
- SW8 SUB FILTER
- SW9 14 Jumper
- SW10 LOW TRANSDUCER
- SW11 NORMAL-SEPARATE SWITCH
- SW12 POWER METER LEVEL SWITCH
- SW13 A SPEAKER
- SW14 B SPEAKER
- SW15 THERMAL SWITCH
- SW16 POWER

DISASSEMBLY INSTRUCTIONS

1. Removing chassis from wooden cabinet
 - a) Remove the five screws (#73 & #74) from sides and back.
2. Removing the front panel
 - a) Remove the knobs from BASS, TREBLE, TAPE MONITOR, SELECTOR, VOLUME, PERFECT LEVEL, BALANCE and both turn-over switch controls.
 - b) Remove four screws (#25) from top and bottom of front panel then remove the front panel.
3. Removing the bottom plate
 - a) Remove four plastic foot's screws (#71) and three screws (#25) from the bottom.

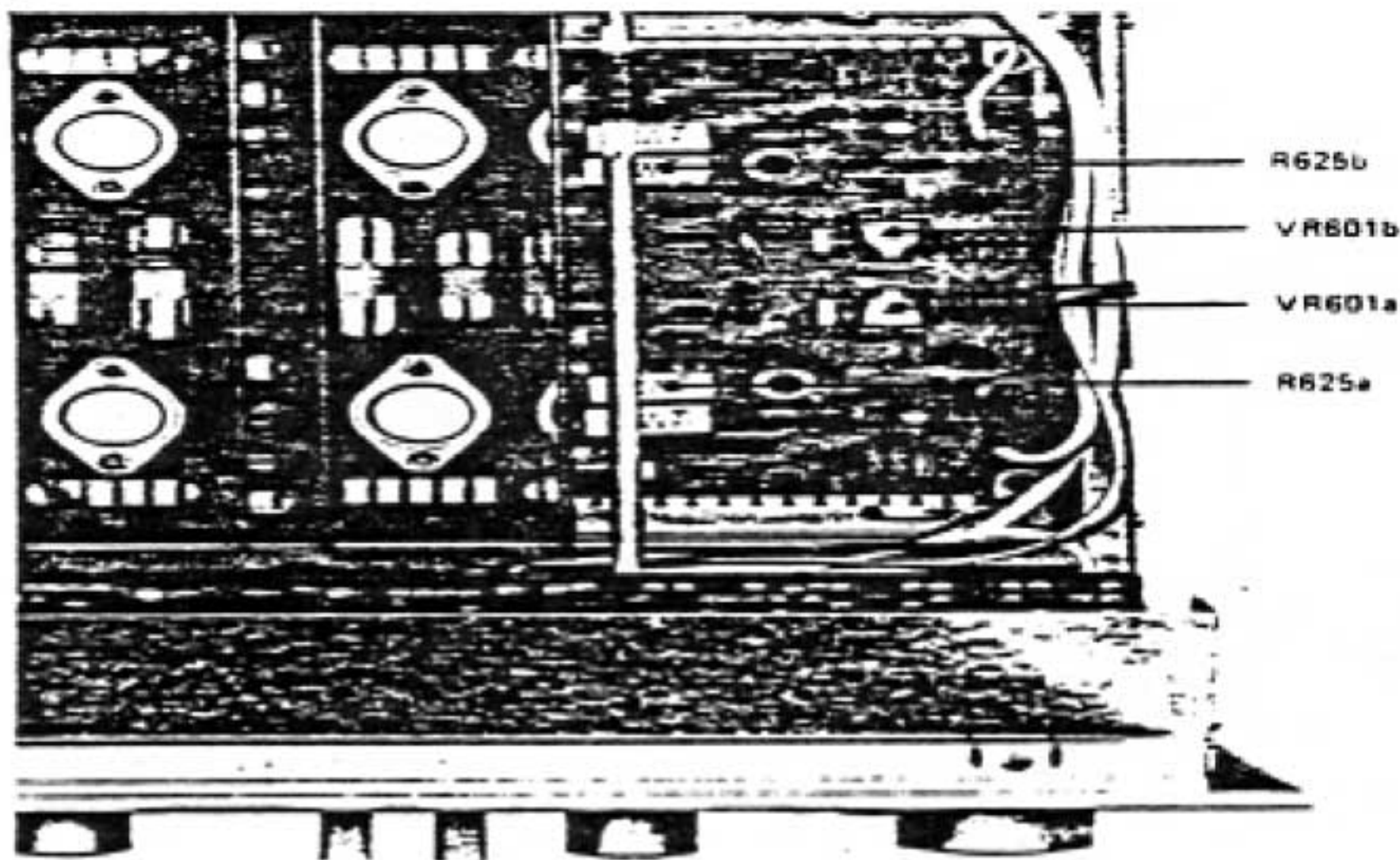


ADJUSTMENT PROCEDURE

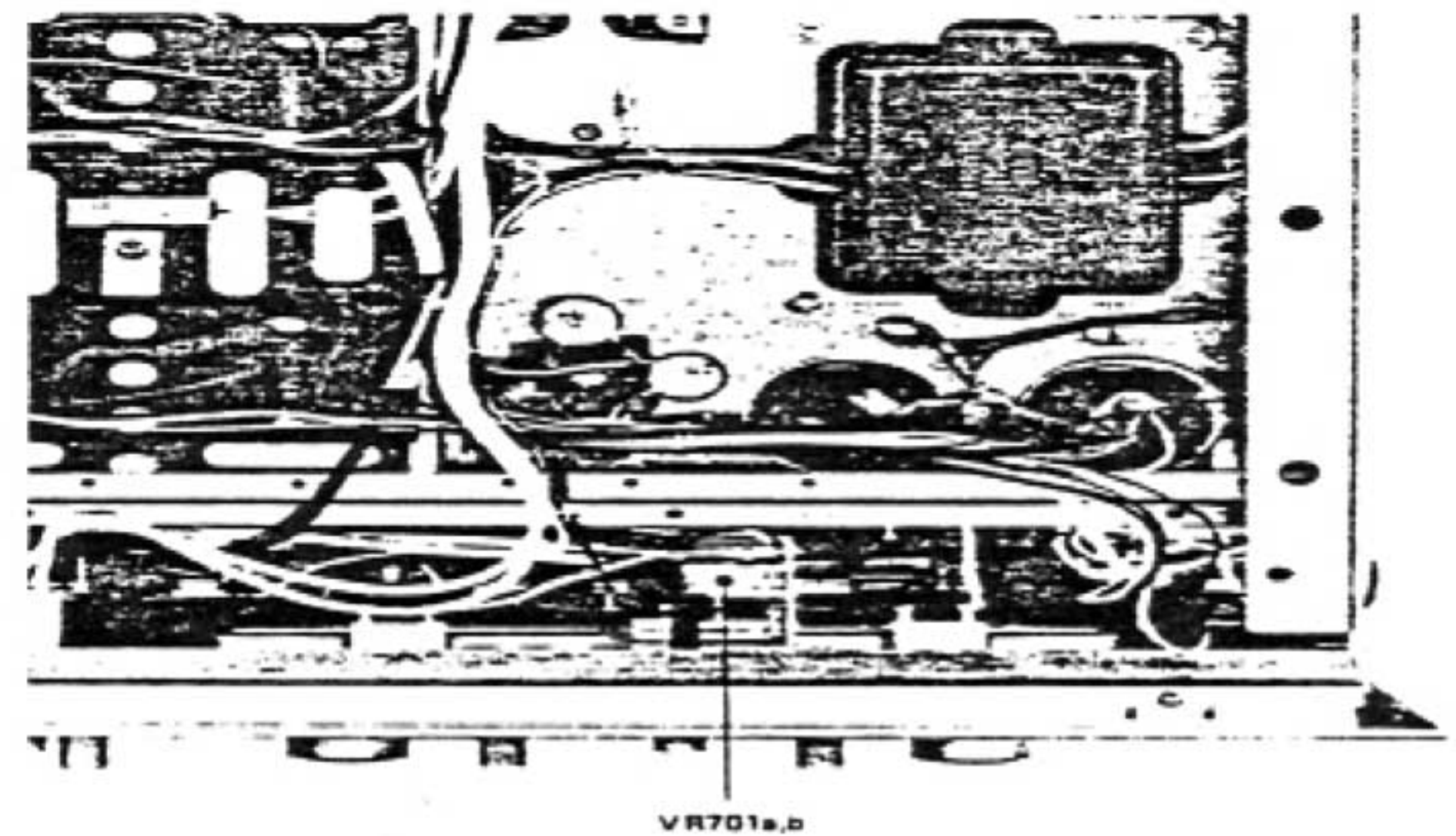
MAIN AMPLIFIER

INDICATOR	ADJUSTMENT	REMARKS
DC Voltmeter	VR601 a, b (1 k Ω /B)	Adjust for 0.005 ~ 0.014 volt across R625 a, b (0.39 Ω) with no signal
POWER METER	VR701 a, b (1 k Ω /B)	Adjust for 1 watt reading on Power Meter with speaker output of 2.82 V RMS at 1 kHz, 8 ohm load. Tone Controls should be in center or OUT position.

ADJUSTMENT & CHECK POINTS



(TOP VIEW)



(BOTTOM VIEW)

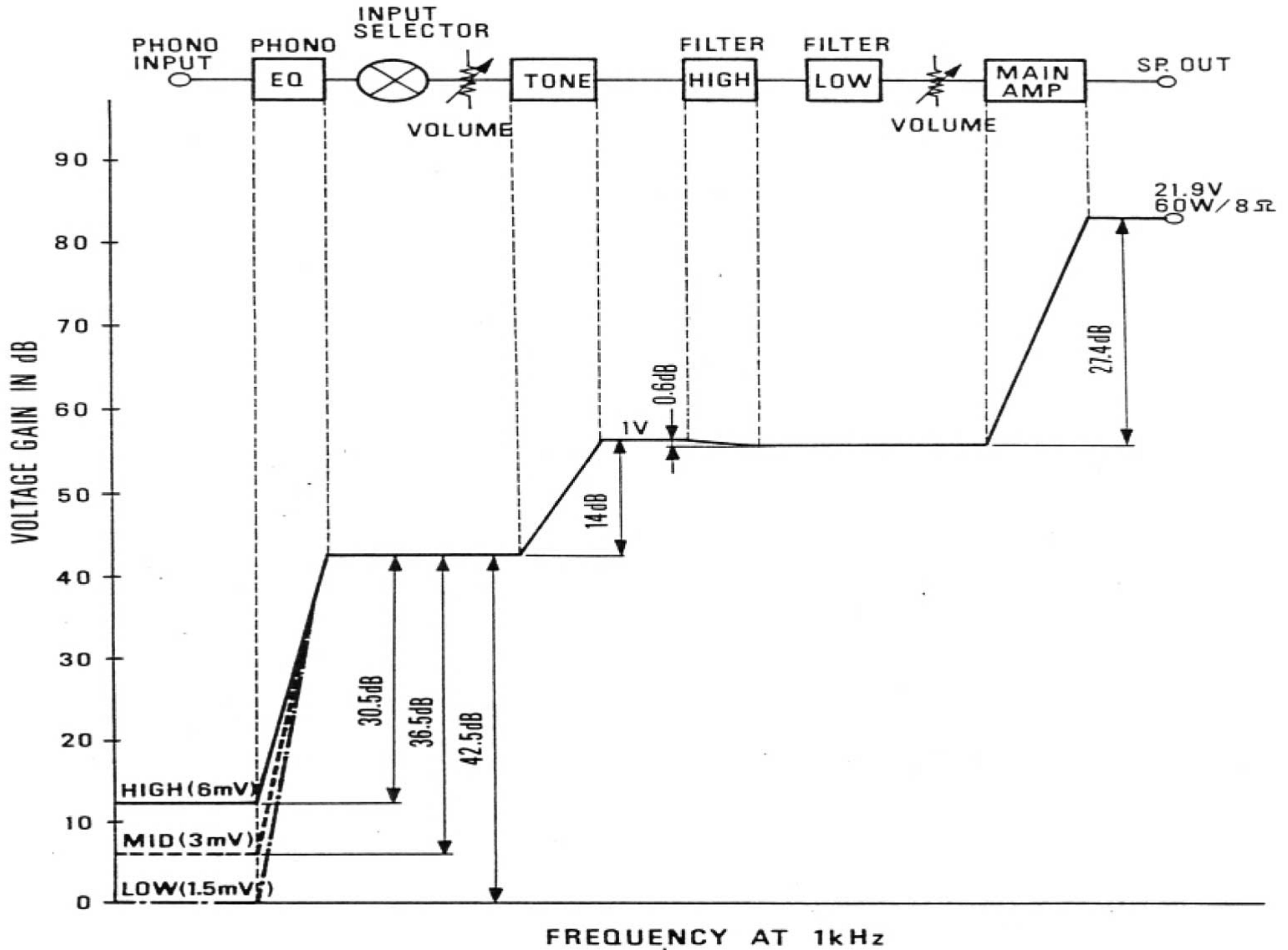
TROUBLESHOOTING

Symptom	Cause and Remedy
1) Amplifier not operative; pilot lamp (behind the WATTS meters) does not light.	A) Faulty AC power cord Replace the cord. B) Defect in power switch SW16 Replace the switch. C) Blown power fuse Replace the fuse. D) Defective thermal switch Replace the thermal switch.
2) Fuse blows when power is turned ON.	A) Power transformer T851 defective Replace the transformer. B) Short in the primary or secondary of the transformer circuitry Repair the short. C) Damaged rectifier D851 Replace the rectifier. D) Short circuit in the power supply circuit Repair the short. E) Short circuit in the power transistor TR612a, b or TR613a, b Replace the defective transistor(s) and check circuit.
3) Pilot lamp lights but no sound from both channels.	A) Resistor R511, R512, R934, R935 or R936 damaged (open) Replace the damaged resistor(s). B) Rectifier D851 damaged (open) Replace the rectifier. C) Open in secondary winding of the power transformer T851 Replace the transformer.
4) A speakers do not work.	A) Speaker switch SW13 defective Replace the switch.
5) B speakers do not work.	B) Speaker switch SW14 defective Replace the switch.
6) Both A and B speakers do not work.	A) Relay RL801 defective Replace the relay. B) When DC Voltage is read at output (pin #5 and/or #6 of Main Amp Board 6055), the relay RL801 will automatically cut off the output. If so, the Main Amp circuit or power supply circuit is defective. Locate and correct the defect.

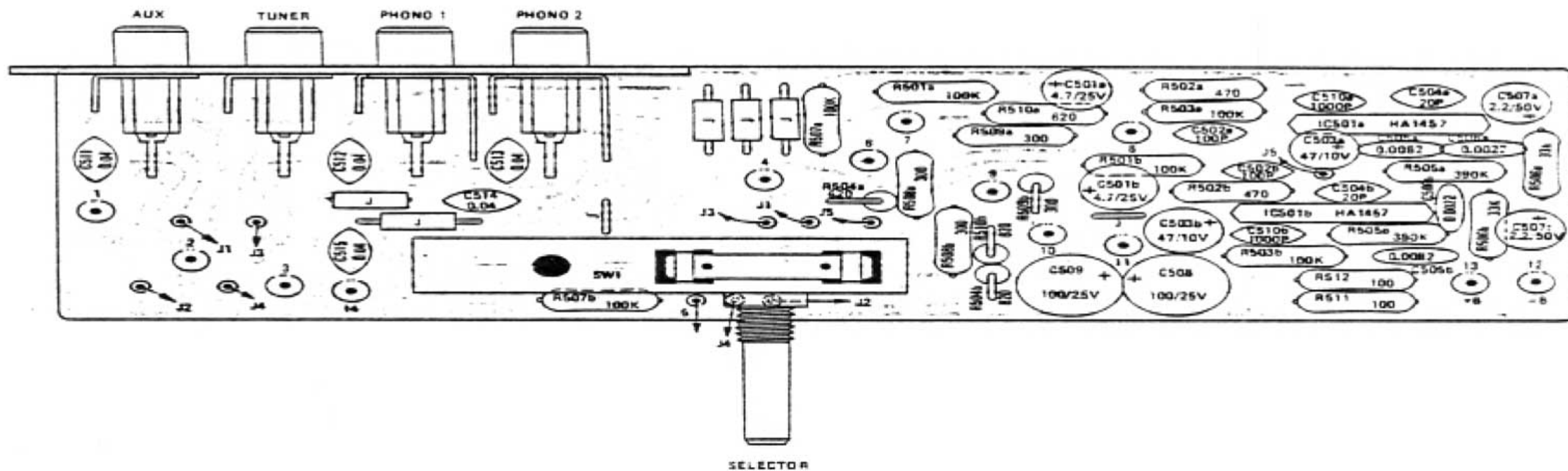
Symptom	Cause and Remedy
7) One channel does not work with VOLUME at maximum with a test signal applied to the center terminal of VOLUME control of the dead channel.	<p>A) Defect in transistor TR601-TR613 of Main Amp Board 6055 Locate and correct the defect.</p> <p>B) Defect in transistor TR901-TR905 of Tone Control Board 9037 Replace the defective transistor(s).</p> <p>C) Short in speaker output terminal Repair the short.</p> <p>D) Defective resistor R901-R903, R905-R909, R918-R922, R927-R930, R932, R601, R603, R606-R625 Replace the defective resistor(s).</p>
8) Same as 7 above but channel operates when test signal is applied as 7.	<p>A) Defective SELECTOR switch SW1 or TAPE MONITOR switch SW3 Repair or replace the defective switch(es).</p> <p>B) Faulty resistor R502, R503, R511, R512 Replace the faulty resistor(s).</p> <p>C) Defective VOLUME control VR903 or PERFECT LEVEL control VR902. Replace the defective one(s).</p> <p>D) Poor contact in AUX or TUNER input jacks Repair or replace jacks.</p>
9) Same as 8 above but PHONO does not operate.	<p>A) Poor contact in PHONO jacks Repair or replace jacks.</p> <p>B) IC IC501 (HA1457) defective Replace the IC.</p> <p>C) Resistor R502, R503, R504, R508, R509 defective Replace the defective resistor(s).</p>
10) Same as 8 above but TUNER or AUX do not operate.	<p>A) Poor contact in input jacks Repair or replace the jacks.</p> <p>B) Defective SELECTOR switch SW1 Repair or replace the switch.</p>
11) Speaker works normally but headphones do not operate.	<p>A) Headphone plug does not mate with jack Replace the plug.</p> <p>B) Defective resistor R755a, b Replace the resistor(s).</p>
12) TAPE OUT not operative	<p>A) Poor contact in TAPE OUT jack Repair or replace the jack.</p> <p>B) Defective resistor R701 or R702 (open) Replace the defective resistor(s).</p> <p>C) Defective TAPE DUBBING switch Replace the switch.</p>
13) PERFECT LOUDNESS has no effect.	<p>A) Defective DEFEAT switch SW6 Replace the switch.</p> <p>B) Defective capacitor C914a, b Replace the capacitor.</p> <p>C) Defective VOLUME control VR903a-d Replace.</p>

Symptom	Cause and Remedy
14) STEREO-MONO not effective	A) Defective MONO switch SW5 Replace the switch.
15) TAPE MONITOR not effective	A) Defective TAPE MONITOR switch SW3 Replace the switch. B) Poor contact in TAPE IN jacks Repair or replace jacks.
16) BASS control has no effect.	A) VR905 defective Replace the variable resistor. B) Defective C907-C910 of Tone Control Board 9037. Replace the defective capacitor(s). C) Defective turn-over switch SW10 Replace the switch.
17) TREBLE control has no effect.	A) VR904 defective Replace the variable resistor. B) Defective capacitor C905, C906 of Tone Control Board 9037 Replace the defective capacitor(s). C) Defective turn-over switch SW9 Replace the switch.
18) Excessive noise with PHONO input	A) Faulty IC501 Replace the IC. B) Defective resistor R501-R506, R508, R509 or capacitor C501, C503, C505-C507 Replace the defective component(s).
19) SUB-FIL not effective	A) Defective SUB-FIL switch SW8 Replace the switch. B) Resistor R926 or capacitor C916, C917 defective Replace the defective component(s).
20) HI-FIL not effective	A) Defective HI-FIL switch SW7 Replace the switch. B) Capacitor C915 or resistor R923 defective Replace the defective component(s).
21) Noisy VOLUME control	A) Defective VOLUME control VR903a-d Replace. B) Defective capacitor C505 (PHONO only) or C901 Replace the defective capacitor(s).
22) WATTS Meter(s) not functioning	A) WATTS Meter(s) defective Replace the meter(s). B) Defective diode D701a, b Replace the defective diode(s). C) Resistor R751, R752, R754 defective Replace the defective resistor(s).

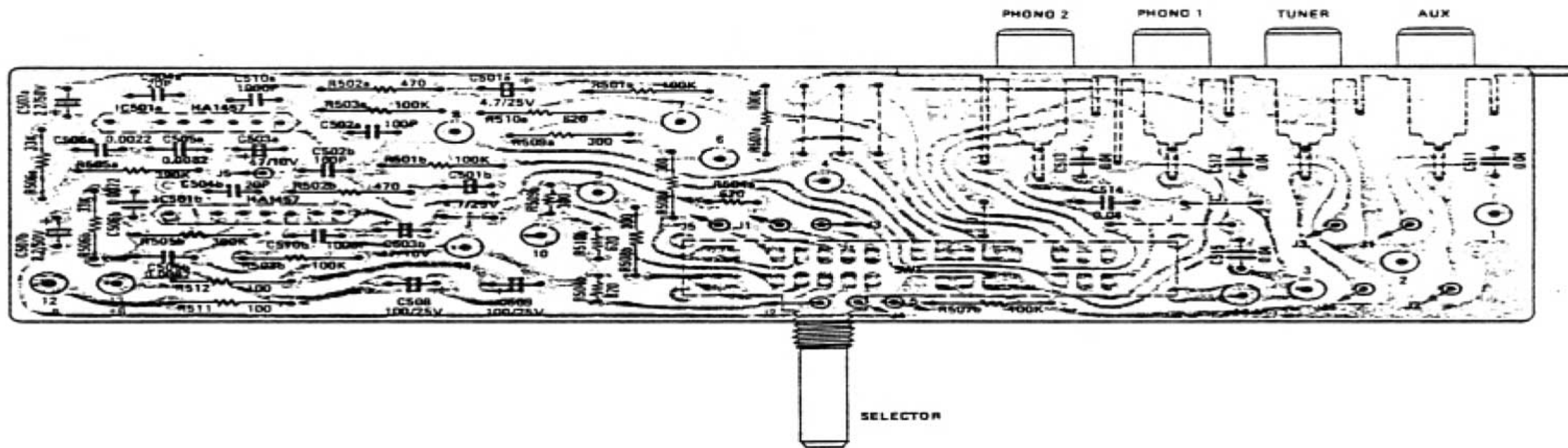
LEVEL DIAGRAM



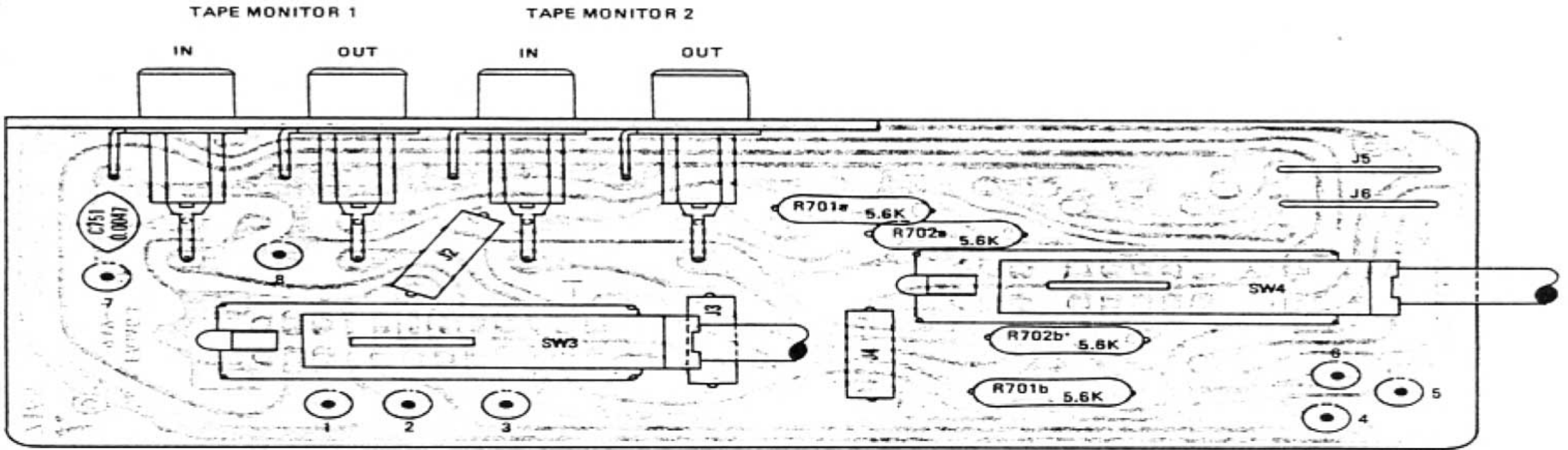
5037 PRE AMP BOARD (TOP VIEW)



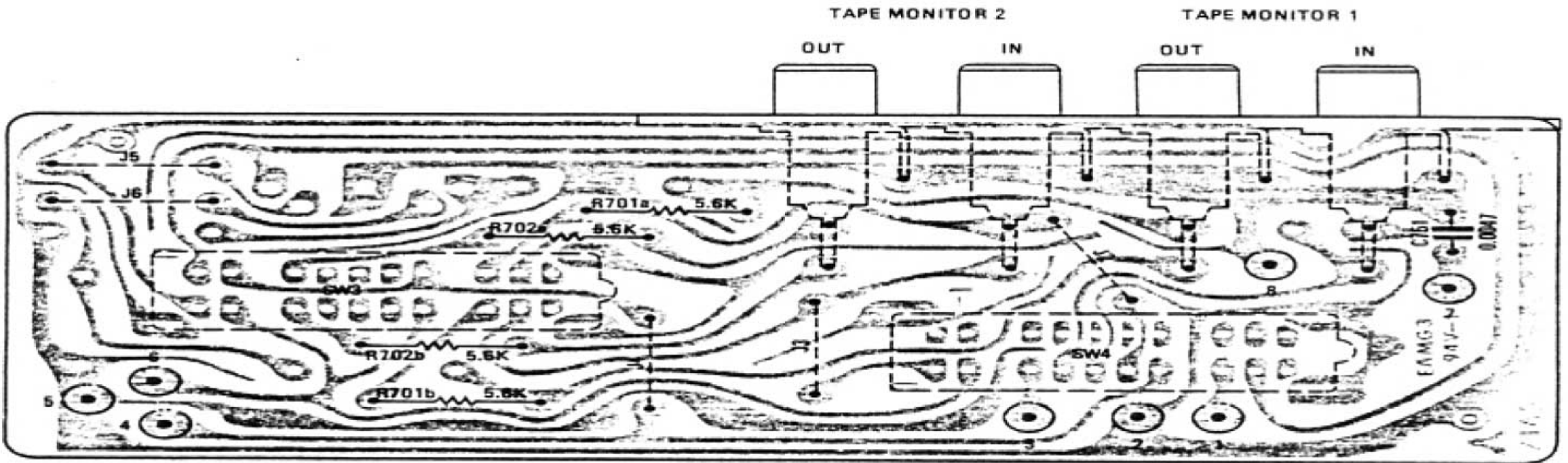
5037 PRE AMP BOARD (BOTTOM VIEW)



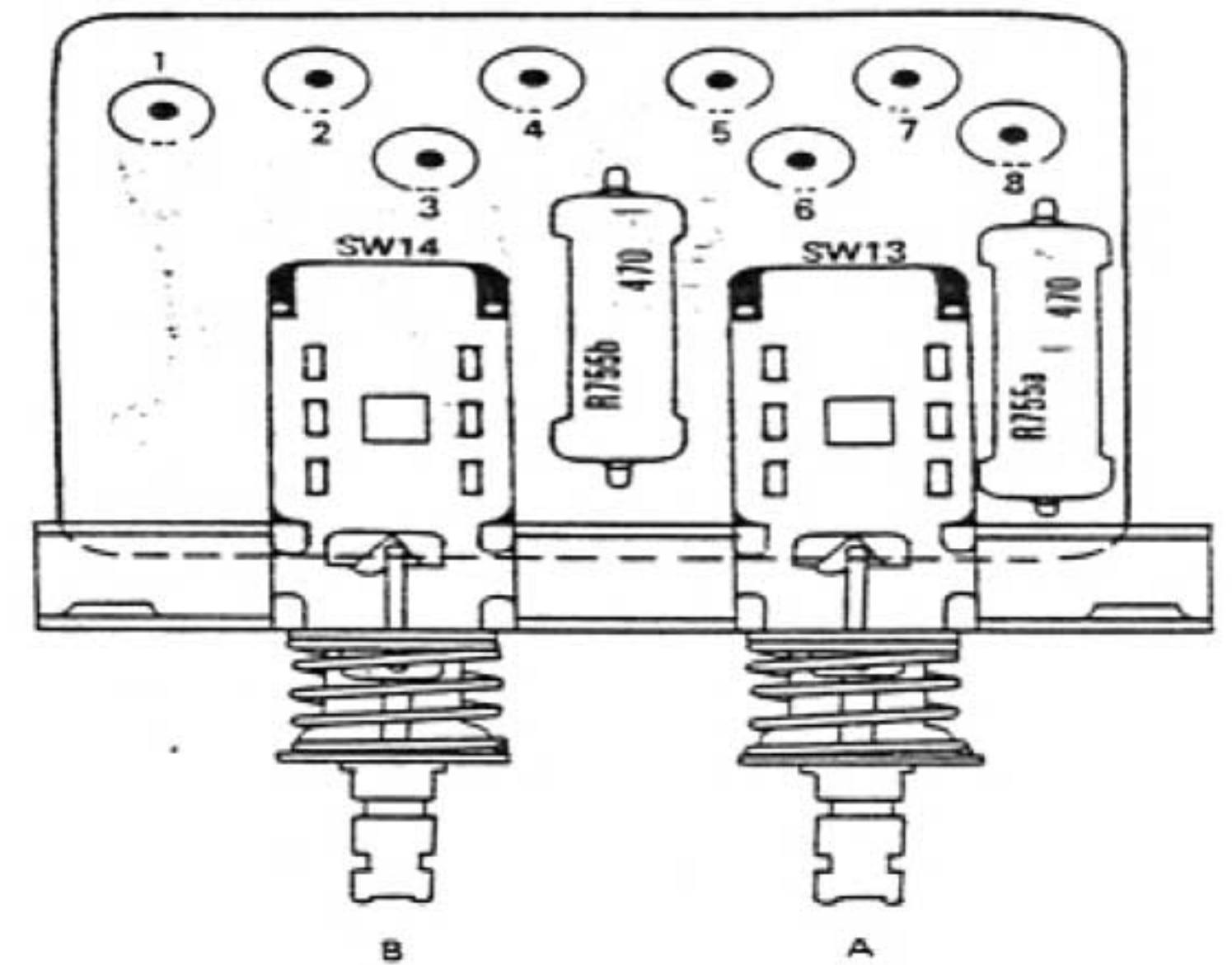
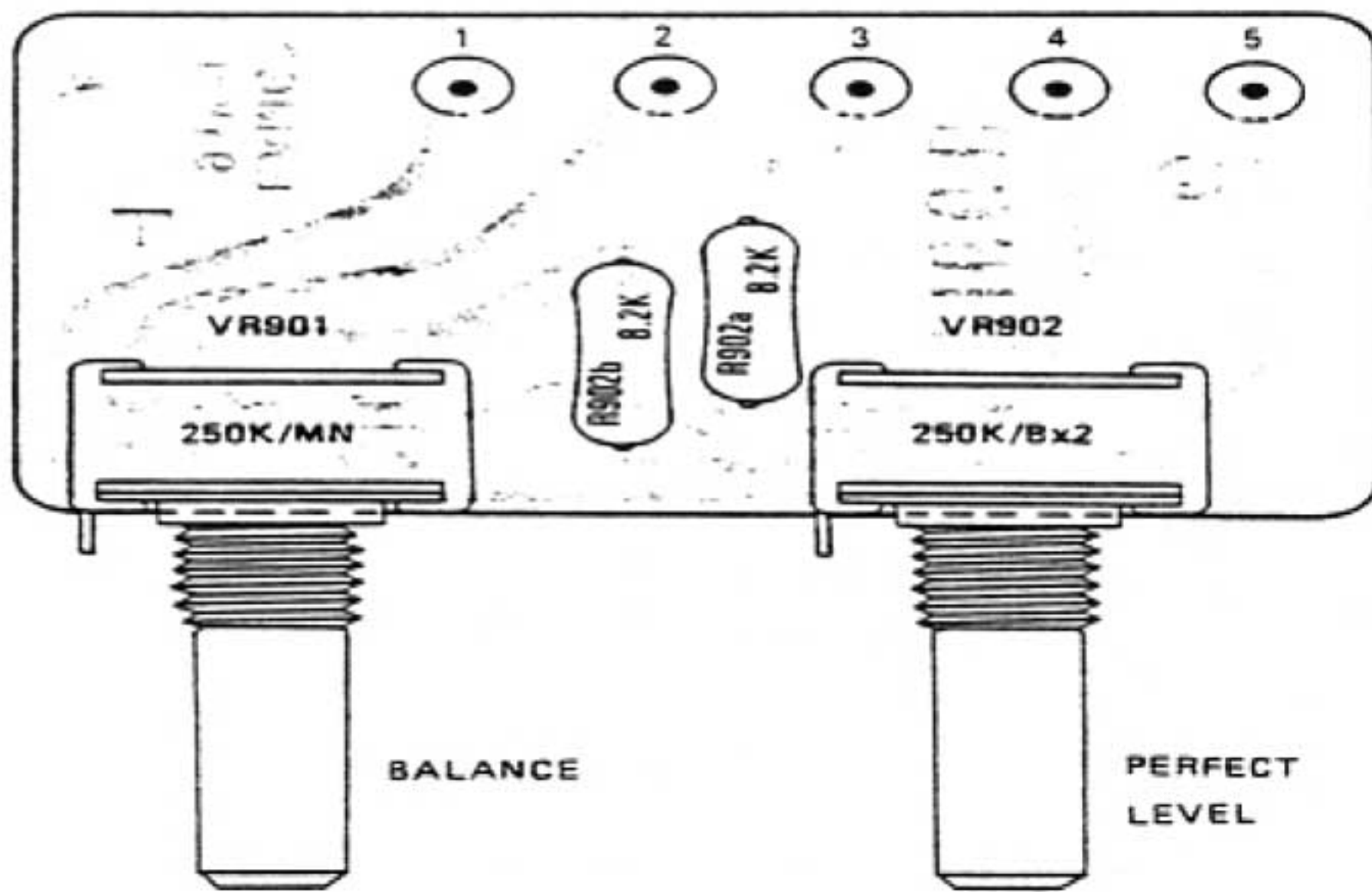
7165 TAPE SWITCH BOARD (TOP VIEW)



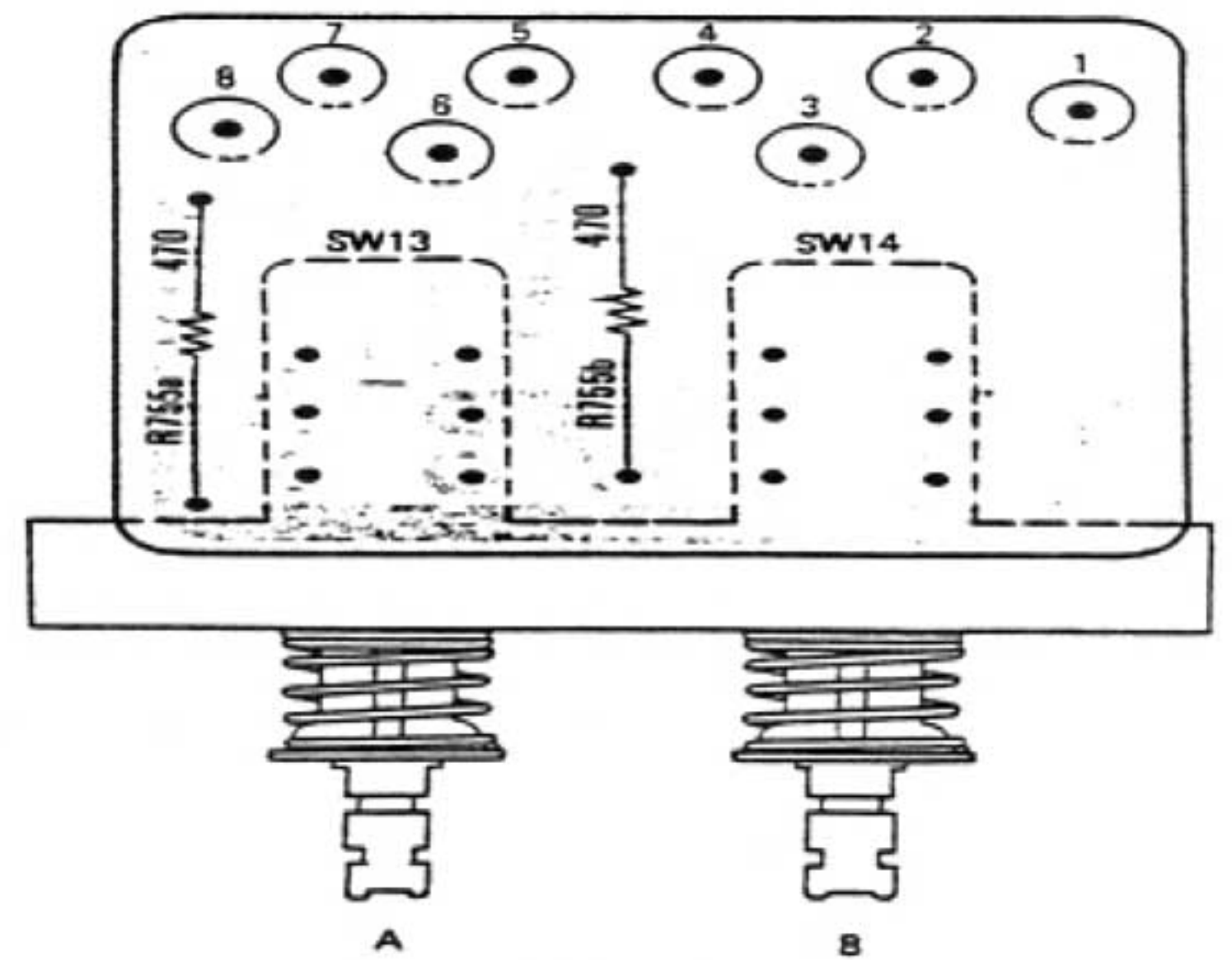
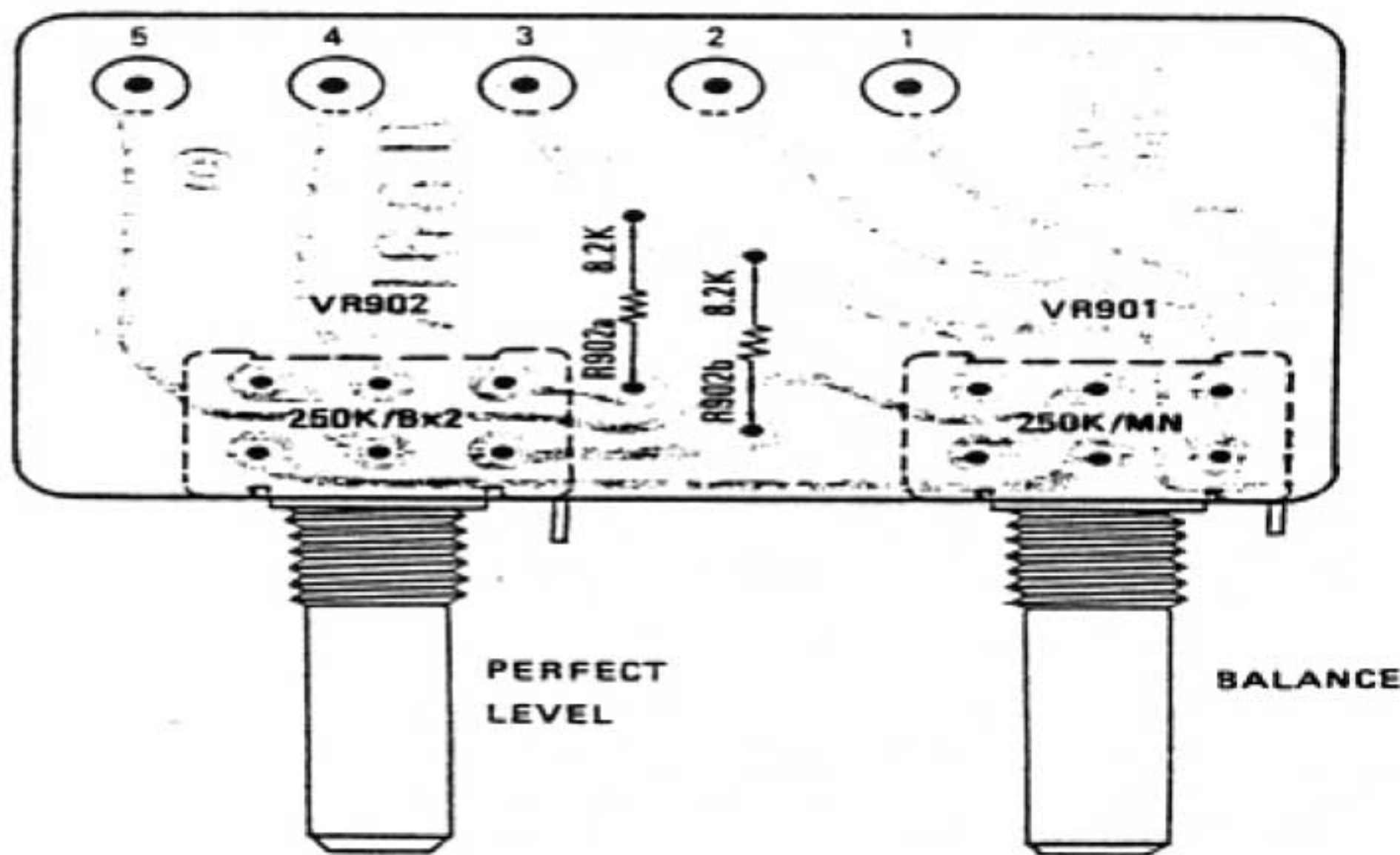
7165 TAPE SWITCH BOARD (BOTTOM VIEW)



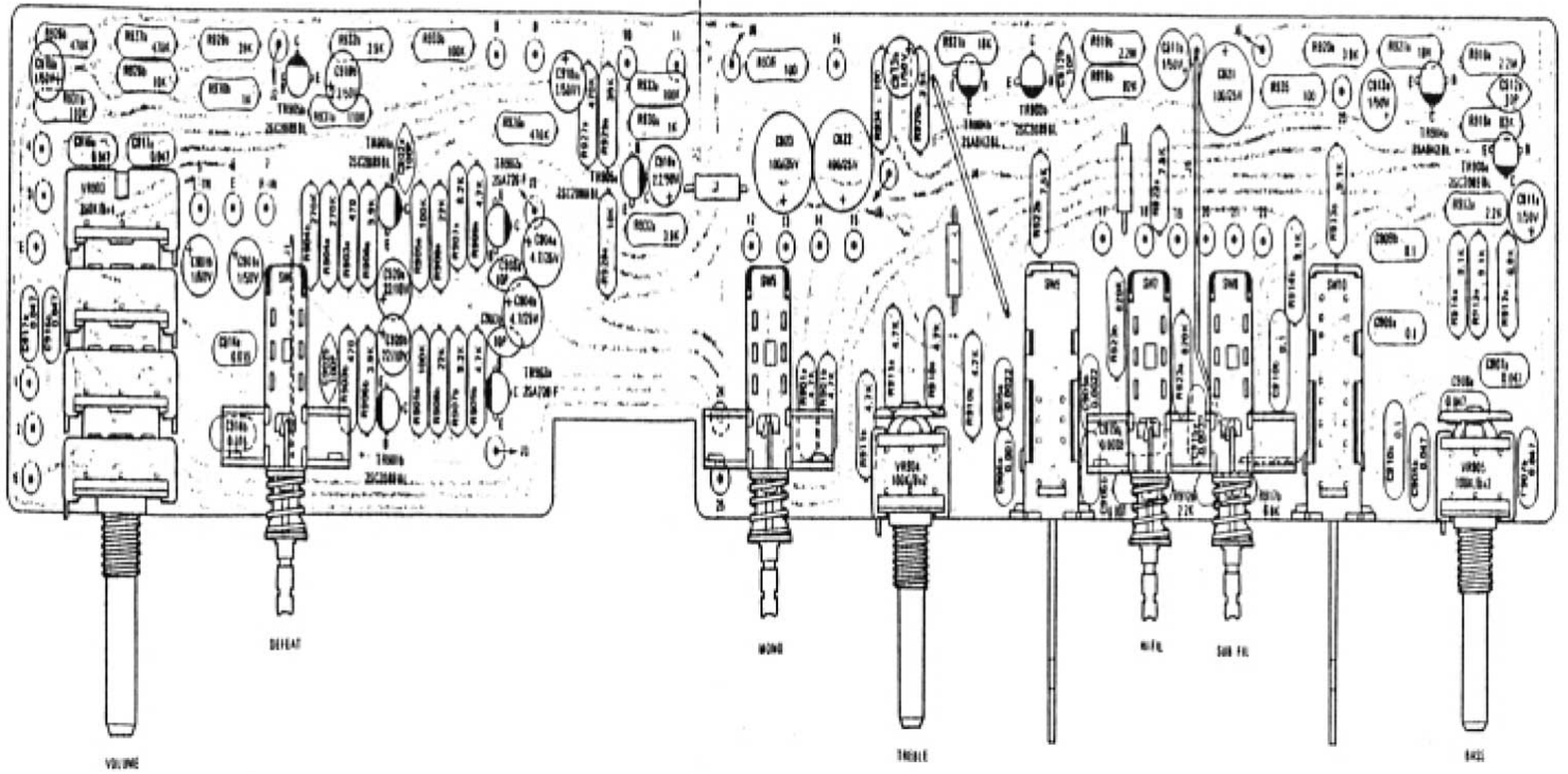
7166 SPEAKER SWITCH BOARD (TOP VIEW)



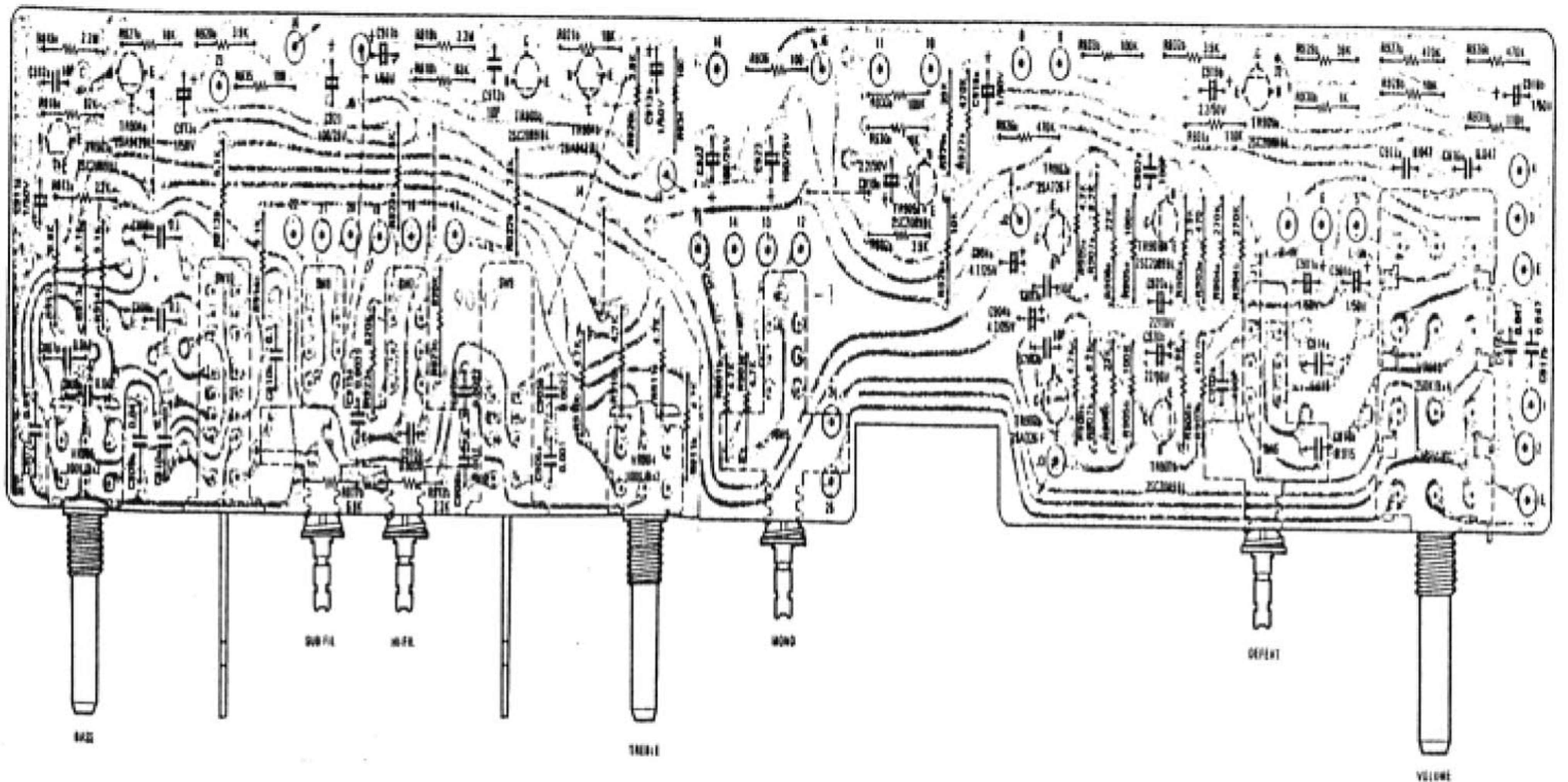
7166 SPEAKER SWITCH BOARD (BOTTOM VIEW)



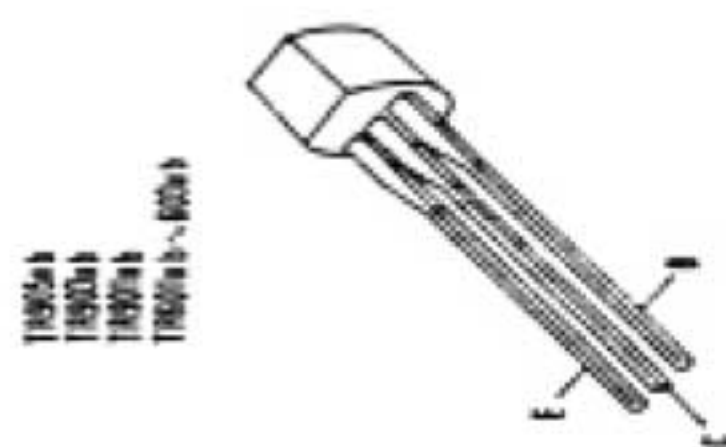
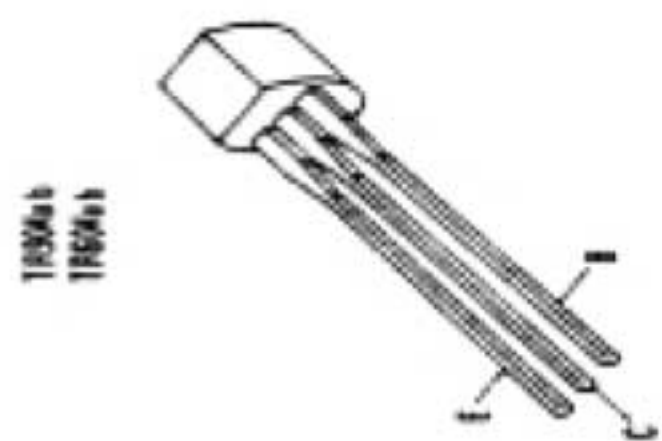
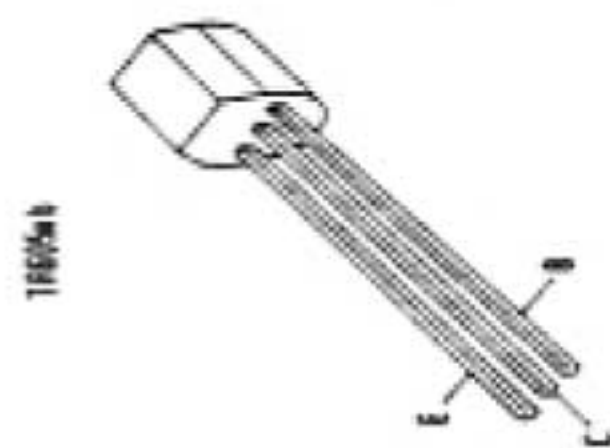
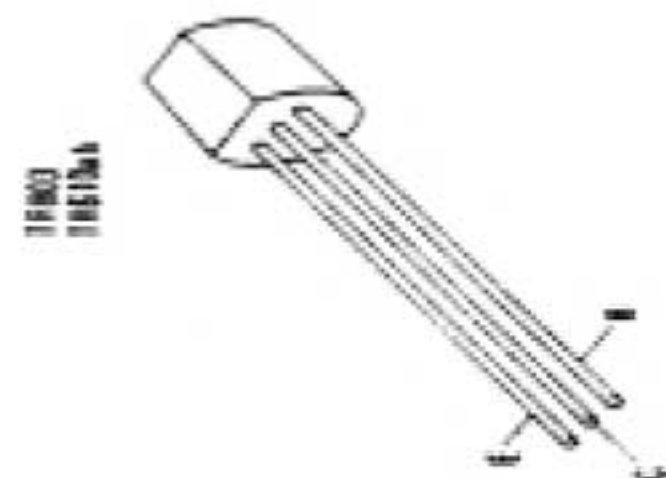
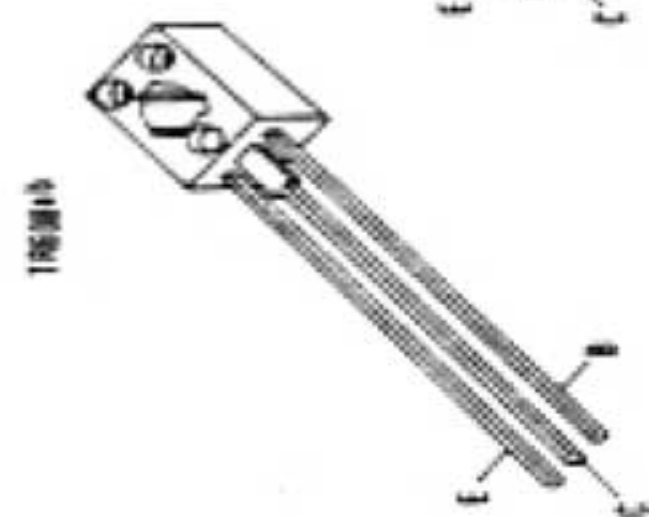
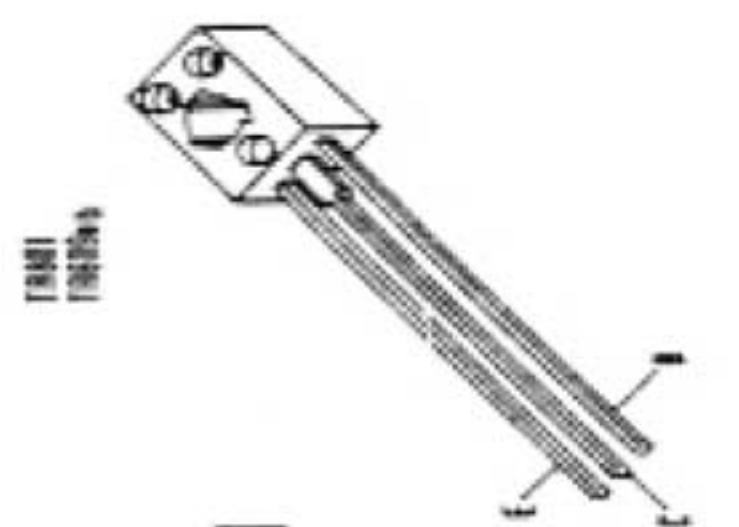
9037 TONE CONTROL BOARD (TOP VIEW)



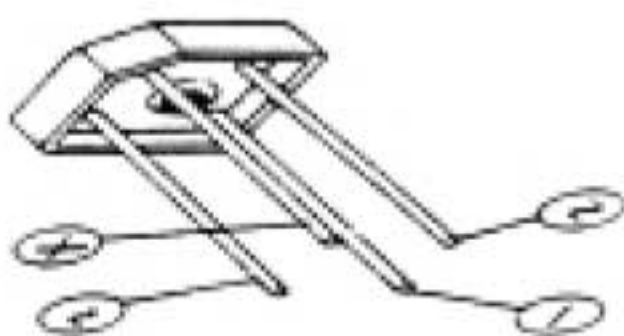
9037 TONE CONTROL BOARD (BOTTOM VIEW)



SEMICONDUCTOR LEAD IDENTIFICATION



0R51



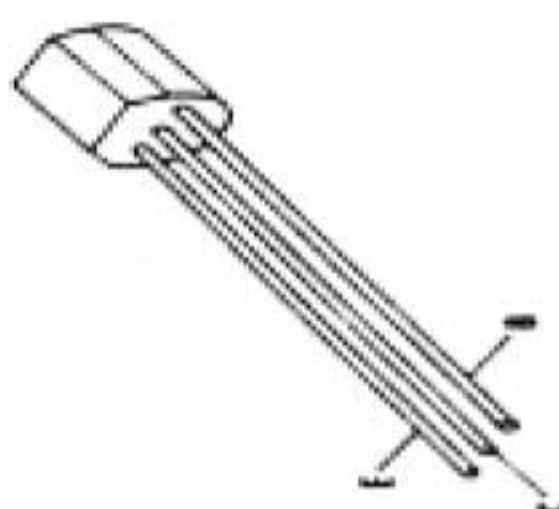
1R83A
1R83B



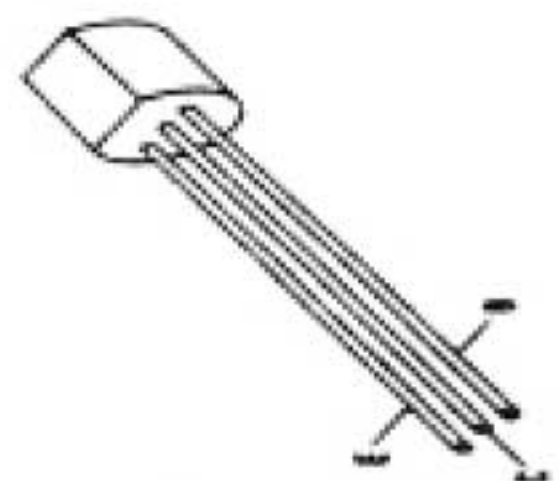
1R83



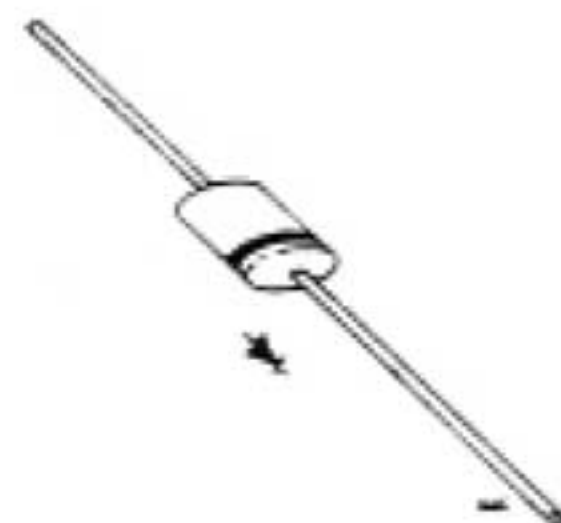
1R83A



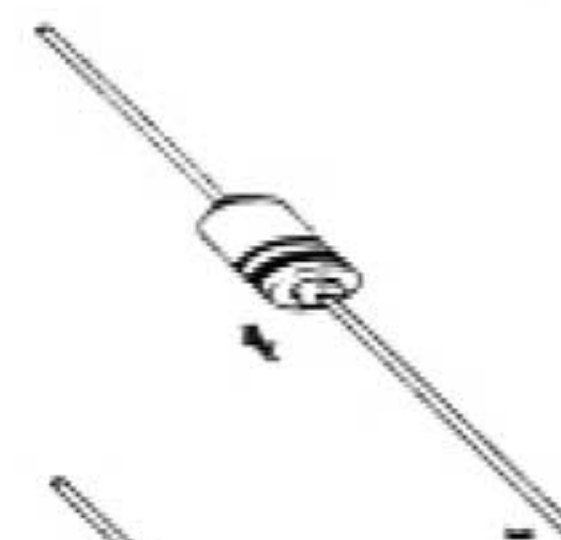
1R83-INT
1R83
1R83A
1R83B



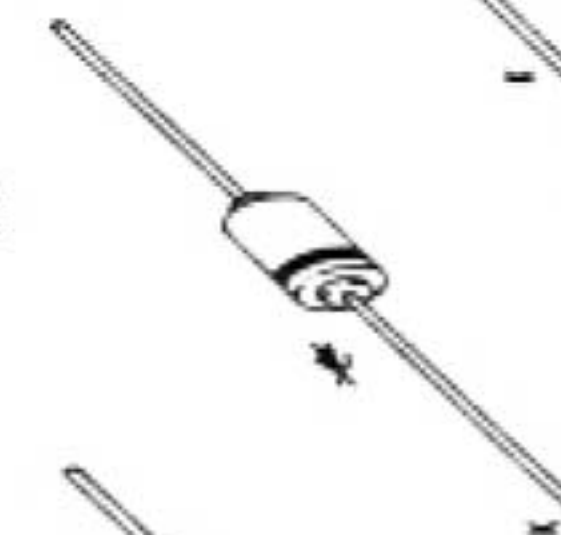
0R10A



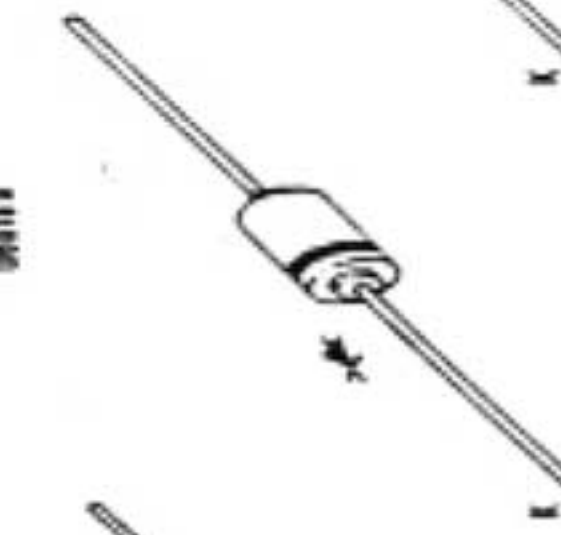
0R10-INT



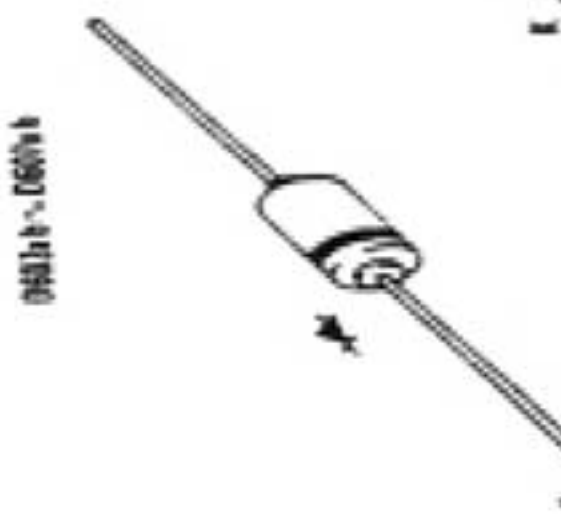
0R10



0R10A



0R10A-INT



ELECTRICAL PARTS LIST

CAPACITORS				
Ref. No.	Value (F)	Voltage (V)	Tolerance (%)	Material
C501 a,b	4.7 μ	25	± 20	Electrolytic
C502 a,b	100P	50	± 10	Ceramic
C503 a,b	47 μ	10	± 50	Electrolytic
C504 a,b	20P	50	± 10	Ceramic
C505 a,b	8200P	50	± 5	Polyester
C506 a,b	2200P	50	± 5	Polyester
C507 a,b	2.2 μ	50	± 20	Electrolytic
C508	100 μ	25	± 50	Electrolytic
C509	100 μ	25	± 50	Electrolytic
C510 a,b	1000P	50	± 20	Ceramic
C511	0.04 μ	25	± 80	Ceramic
C512	0.04 μ	25	± 80	Ceramic
C513	0.04 μ	25	± 80	Ceramic
C514	0.04 μ	25	± 80	Ceramic
C515	0.04 μ	25	± 80	Ceramic
C601 a,b	2.2 μ	50	± 75	Electrolytic
C602	Not Used			
C603 a,b	120P	50	± 10	Ceramic
C604 a,b	33 μ	6.3	± 50	Electrolytic
C605 a,b	33P	500	± 10	Ceramic
C606 a,b	330P	50	± 10	Ceramic
C607 a,b	1000P	50	± 10	Ceramic
C608 a,b	1000P	50	± 10	Ceramic
C609 a,b	270P	500	± 10	Ceramic
C610 a,b	1000P	50	± 10	Ceramic
C611 a,b	1000P	50	± 10	Ceramic
C612 a,b	0.1 μ	50	± 10	Polyester
C613 a,b	1P	50	± 0.5 PF	Ceramic
C614 a,b	0.04 μ	25	± 80	Ceramic
C615 a,b	330P	50	± 10	Ceramic
C616 a,b	180P	500	± 10	Ceramic
C617 a,b	0.04 μ	25	± 80	Ceramic
C618 a,b	15P	500	± 10	Ceramic
C751	4700P	50	± 10	Ceramic
C752	0.04 μ	25	± 80	Ceramic
C801	47 μ	25	± 50	Electrolytic
C802	47 μ	25	± 50	Electrolytic

Ref. No.	Value (F)	Voltage (V)	Tolerance (%)	Material
C803	33 μ	16	± 50	Electrolytic
C804	33 μ	16	± 50	Electrolytic
C805	2.2 μ	50	± 75	Electrolytic
C806	4.7 μ	50	± 75	Electrolytic
C851	10000 μ	50	± 50	Electrolytic
C852	10000 μ	50	± 50	Electrolytic
C853	0.01 μ	500	± 100	Ceramic
C854	0.01 μ	500	± 100	Ceramic
C855	0.01 μ	500	± 100	Ceramic
C856	0.01 μ	500	± 100	Ceramic
*C857	0.022 μ	250	± 20	Polyester
*C858	0.022 μ	250	± 20	Polyester
C901 a,b	1 μ	50	± 20	Electrolytic
C902 a,b	100P	50	± 10	Ceramic
C903 a,b	10P	50	± 10	Ceramic
C904 a,b	4.7 μ	25	± 75	Electrolytic
C905 a,b	2200P	50	± 5	Polyester
C906 a,b	1000P	50	± 5	Polyester
C907 a,b	0.047 μ	50	± 5	Polyester
C908 a,b	0.047 μ	50	± 5	Polyester
C909 a,b	0.1 μ	50	± 5	Polyester
C910 a,b	0.1 μ	50	± 5	Polyester
C911 a,b	1 μ	50	± 20	Electrolytic
C912 a,b	10P	50	± 10	Ceramic
C913 a,b	1 μ	50	± 20	Electrolytic
C914 a,b	0.015 μ	50	± 5	Polyester
C915 a,b	3900P	50	± 5	Polyester
C916 a,b	0.047 μ	50	± 5	Polyester
C917 a,b	0.047 μ	50	± 5	Polyester
C918 a,b	1 μ	50	± 20	Electrolytic
C919 a,b	2.2 μ	50	± 75	Electrolytic
C920 a,b	22 μ	10	± 50	Electrolytic
C921	100 μ	25	± 50	Electrolytic
C922	100 μ	25	± 50	Electrolytic
C923	100 μ	25	± 50	Electrolytic

*C857, C858: for European and Australian models only.

COIL & TRANSFORMERS			
Ref. No.	Description	R/S Part No.	Mfr's Part No.
L601 a,b	Choke Coil 1.5 μ H	CB-2405	35199007
T851	Power Transformer (UL)	TA-0680	35900274
T851	Power Transformer (CSA)		35900275
T851	Power Transformer (Europe/Australia)		35900288

CR COMPONENTS			
Ref. No.	Description	R/S Part No.	Mfr's Part No.
CR851	Spark Killer (UL)	C-0639	43000020
CR851	Spark Killer (CSA)		43000017

(Not used for European/Australian models)

DIODES				
Ref. No.	Type No.	R/S Part No.	Mfr's Part No.	Manufacturer
D601a,b	RD6.2E	DX-0408	30600691	NEC
D602a,b	1S2075K	DX-0297	30601001	Hitachi
D603a,b	1S2075K	DX-0297	30601001	Hitachi
D604a,b	1S2075K	DX-0297	30601001	Hitachi
D605a,b	1S2075K	DX-0297	30601001	Hitachi
D606a,b	1S2076A		30601271	Hitachi
D607a,b	1S2076A		30601271	Hitachi
D701a,b	1N60P	DX-0162	30600011	UNISON
D801	RD12E	DX-0403	30600650	NEC
D802	WO3C	DX-0526	30600871	Hitachi
D803	WO3C		30600871	Hitachi
D804	WO3C		30600871	Hitachi
D851	S5VB-20	DX-0447	30600981	SHINDENGEN

METER			
Ref. No.	Description	R/S Part No.	Mfr's Part No.
M701 a,b	WATTS Meter	M-0396	60500003

INTEGRATED CIRCUIT						
Ref. No.	Type No.	R/S Part No.	Mfr's Part No.	Manufacturer	Substitute	
					Type No.	Manufacturer
IC501a,b	HA1457	MX-3622	30900490	Hitachi		

LAMPS			
Ref. No.	Description	R/S Part No.	Mfr's Part No.
PL1	8V, 250mA (for WATTS Meter)		37008019
PL2	8V, 250mA (for WATTS Meter)		37008019

P.C. BOARD ASSEMBLIES			
Ref. No.	Description	R/S Part No.	Mfr's Part No.
5037	Pre-Amp Board	X-7799	97507310
6055	Main Amp Board	X-7800	97605510
7165	Tape Board	X-7801	97716510
8037	Power Supply Board	X-7802	97803710
9037	Tone Amp Board	X-7803	97903710
7169	Lamp Board		97716910
7166	Speaker Switch Board	X-7804	97716610
7167	Meter Board	X-7805	97716710

RELAY			
Ref. No.	Description	R/S Part No.	Mfr's Part No.
RL801	Relay UY4-24US-40L	R-8072	82000190

RESISTORS					
Ref. No.	Value (Ω)	R/S Part No.	Wattage (W)	Tolerance (%)	Material
R501a,b	100K		1/4	±5	Carbon
R502a,b	470		1/4	±5	Carbon
R503a,b	100K		1/4	±5	Carbon
R504a,b	620		1/4	±5	Carbon
R505a,b	390K		1/4	±5	Carbon
R506a,b	33K		1/4	±5	Carbon
R507a,b	100K		1/4	±5	Carbon
R508a,b	300		1/4	±5	Carbon
R509a,b	300		1/4	±5	Carbon
R510a,b	620		1/4	±5	Carbon
R511	100		1/4	±5	Carbon
R512	100		1/4	±5	Carbon
R514a,b	1K		1/4	±5	Carbon
R601a,b	2.2K		1/4	±5	Carbon
R602a,b	220K		1/4	±5	Carbon
R603a,b	47K		1/4	±5	Carbon
R604a,b	8.2K		1/4	±5	Carbon
R605a,b	4.7K		1/4	±5	Carbon
R606a,b	1K		1/4	±5	Carbon
R607a,b	1K		1/4	±5	Carbon
R608a,b	5.6K		1/4	±5	Carbon
R609a,b	33K		1/4	±5	Carbon
R610a,b	220		1/4	±5	Carbon
R611a,b	220		1/4	±5	Carbon
R612a,b	2.2K		1/4	±5	Carbon
R613a,b	47K		1/4	±5	Carbon
R614a,b	180		1/4	±5	Carbon
R615a,b	3.9K		1/4	±5	Carbon
R616a,b	6.8K		1/4	±5	Carbon
R617a,b	100		1/4	±5	Carbon
R618a,b	1K		1/4	±5	Carbon
R619a,b	1K		1/4	±5	Carbon
R620a,b	100		1/4	±5	Carbon
R621a,b	18		1/4	±5	Carbon
R622a,b	100		1/4	±5	Carbon
R623a,b	18		1/4	±5	Carbon
R624a,b	0.39	NFK-0006	5	±10	Cement
R625a,b	0.39	NFK-0006	5	±10	Cement
R626a,b	1.2K		1/4	±5	Carbon
R627a,b	1.2K		1/4	±5	Carbon
R628a,b	1K		1/4	±5	Carbon
R629a,b	1K		1/4	±5	Carbon
R630a,b	12K		1/4	±5	Carbon
R631a,b	12K		1/4	±5	Carbon
R632a,b	10	NEH-0063	2	±5	Metal Oxide
R633a,b	10	NEH-0063	2	±5	Metal Oxide
R701a,b	5.6K		1/4	±5	Carbon
R702a,b	5.6K		1/4	±5	Carbon
R751a,b	2.7K		1/4	±5	Carbon
R752a,b	7.5K		1/4	±5	Carbon
R753a,b	3.3K		1/4	±5	Carbon

Ref. No.	Value (Ω)	R/S Part No.	Wattage (W)	Tolerance (%)	Material
R754a,b	3.6K		1/4	±5	Carbon
R755a,b	470	NEH-0169	2	±5	Metal Oxide
R801	150		1/4	±5	Carbon
R802	150		1/4	±5	Carbon
R803	22K		1/4	±5	Carbon
R804	22K		1/4	±5	Carbon
R805	1K		1/4	±5	Carbon
R806	1K		1/4	±5	Carbon
R807	22K		1/4	±5	Carbon
R808	24K		1/4	±5	Carbon
R809	2.2K		1/4	±5	Carbon
R810	12K		1/4	±5	Carbon
R811	22K		1/4	±5	Carbon
R812	33K		1/4	±5	Carbon
R813	33K		1/4	±5	Carbon
R814	120K		1/4	±5	Carbon
R815	33K		1/4	±5	Carbon
R816	1M		1/4	±5	Carbon
R817	3.3K	NEG-0230	1	±5	Metal Oxide
R818	Not Used				
R819	560	NEH-0176	2	±5	Metal Oxide
R820	100		1	±5	Carbon
R851*	2.2M	NFF-0454	1/2	±10	Solid
R901a,b	4.7K		1/4	±5	Carbon
R902a,b	8.2K		1/4	±5	Carbon
R903a,b	470		1/4	±5	Carbon
R904a,b	270K		1/4	±5	Carbon
R905a,b	100K		1/4	±5	Carbon
R906a,b	3.9K		1/4	±5	Carbon
R907a,b	8.2K		1/4	±5	Carbon
R908a,b	22K		1/4	±5	Carbon
R909a,b	4.7K		1/4	±5	Carbon
R910a,b	4.7K		1/4	±5	Carbon
R911a,b	4.7K		1/4	±5	Carbon
R912a,b	2.2K		1/4	±5	Carbon
R913a,b	9.1K		1/4	±5	Carbon
R914a,b	9.1K		1/4	±5	Carbon
R915a,b	Not Used				
R916a,b	Not Used				
R917a,b	6.8K		1/4	±5	Carbon
R918a,b	82K		1/4	±5	Carbon
R919a,b	2.2M		1/4	±5	Carbon
R920a,b	3.9K		1/4	±5	Carbon
R921a,b	18K		1/4	±5	Carbon
R922a,b	7.5K		1/4	±5	Carbon
R923a,b	820K		1/4	±5	Carbon
R924	Not Used				
R925	Not Used				
R926a,b	470K		1/4	±5	Carbon
R927a,b	470K		1/4	±5	Carbon
R928a,b	10K		1/4	±5	Carbon
R929a,b	39K		1/4	±5	Carbon

* Not used for European/Australian models.

Ref. No.	Value (Ω)	R/S* Part No.	Wattage (W)	Tolerance (%)	Material
R930a,b	1K		1/4	± 5	Carbon
R931a,b	110K		1/4	± 5	Carbon
R932a,b	3.9K		1/4	± 5	Carbon
R933a,b	100K		1/4	± 5	Carbon
R934	100		1/4	± 5	Carbon
R935	100		1/4	± 5	Carbon
R936	100		1/4	± 5	Carbon
R937a,b	1K		1/4	± 5	Carbon

SWITCHES			
Ref. No.	Description	R/S Part No.	Mfr's Part No.
SW1	SELECTOR	S-0859	27100159
SW2	PHONO LEVEL	S-2461	27300012
SW3	TAPE MONITOR	S-0849	27300015
SW4	TAPE DUBBING	S-0849	27300015
SW5	MONO	S-7384	27200107
SW6	DEFEAT	S-7384	27200107
SW7,8	HI-FI, SUB-FIL	S-7385	27200109
SW9	TREBLE (turn-over)	S-5054	27600038
SW10	BASS (turn-over)	S-5055	27600039
SW11	SEPARATE-NORMAL	S-2460	27300011
SW12	METER RANGE	S-7384	27200108
SW13,14	SPEAKERS A,B	S-7385	27200109
SW15	THERMAL PROTEC- TOR 100°C	S-0841	30700260
SW16	POWER (UL)	S-0865	27200111
SW16	POWER (CSA)		27200082
SW16	POWER (Europe/ Australia)		27200112

TRANSISTORS

Ref. No.	Type No.	R/S Part No.	Part No.	Manufacturer	Substitute	
					Type No.	Manufacturer
TR601a,b	2SC2089 (BL)		30201401	Toshiba	2SC1313	Mitsubishi
TR602a,b	2SC2089 (BL)		30201401	Toshiba	2SC1313	Mitsubishi
TR603a,b	2SC2089 (BL)		30201401	Toshiba	2SC1313	Mitsubishi
TR604a,b	2SA942 (BL)		30000622	Toshiba	2SA858	Fujitsu
TR605a,b	2SC2363		30201445	Sanyo		
TR606a,b	2SA1017		30000655	Sanyo		
TR607a,b	2SC945		30201031	NEC		
TR608a,b	2SB631		30100081	Sanyo		
TR609a,b	2SD600		30300311	Sanyo	2SC1567	Matsushita
TR610a,b	2SA733		30000425	NEC	2SA608	Sanyo
TR611a,b	2SC945		30201031	NEC	2SC536	Sanyo
TR612a,b	2SC1116 (Y, O)		30200973	Sanken	2SD733	Sanyo
TR613a,b	2SC1116 (Y, O)		30200973	Sanken	2SD733	Sanyo
TR801	2SD600		30300311	Sanyo	2SC1567	Matsushita
TR802	2SC945		30201031	NEC	2SC536	Sanyo
TR803	2SA733		30000425	NEC	2SA608	Sanyo
TR804	2SB631		30100081	Sanyo	2SA794	Matsushita
TR805	2SC945		30201031	NEC	2SC536	Sanyo
TR806	2SC945		30201031	NEC	2SC536	Sanyo
TR807	2SC945		30201031	NEC	2SC536	Sanyo
TR808	2SD438		30300250	Sanyo	2SC1509	Matsushita
TR901a,b	2SC2089 (BL)		30201401	Toshiba	2SC1313	Matsushita
TR902a,b	2SA726 (F)		30000451	Mitsubishi	2SA942	Toshiba
TR903a,b	2SC2089 (BL)		30201401	Toshiba	2SC1313	Mitsubishi
TR904a,b	2SA942 (BL)		30000622	Toshiba	2SA726	Mitsubishi
TR905a,b	2SC2089 (BL)		30201401	Toshiba	2SC1313	Mitsubishi

VARIABLE RESISTORS

Ref. No.	Description	R/S Part No.	Mfr's Part No.
VR601a,b	Idling Current 1 K Ω /B	P-6248	28104102
VR701a,b	Meter Adjust 2 K Ω /B		28112202
VR901a,b	BALANCE Control 250 K Ω /MN	P-3093	28000153
VR902a,b	PERFECT LEVEL 250 K Ω /B	P-3094	28000155
VR903a,b	VOLUME Control 250 K Ω /B	P-1894	28000154
VR904a,b	TREBLE Control 100 K Ω /B	P-4022	28000149
VR905a,b	BASS Control 100 K Ω /B	P-4022	28000149

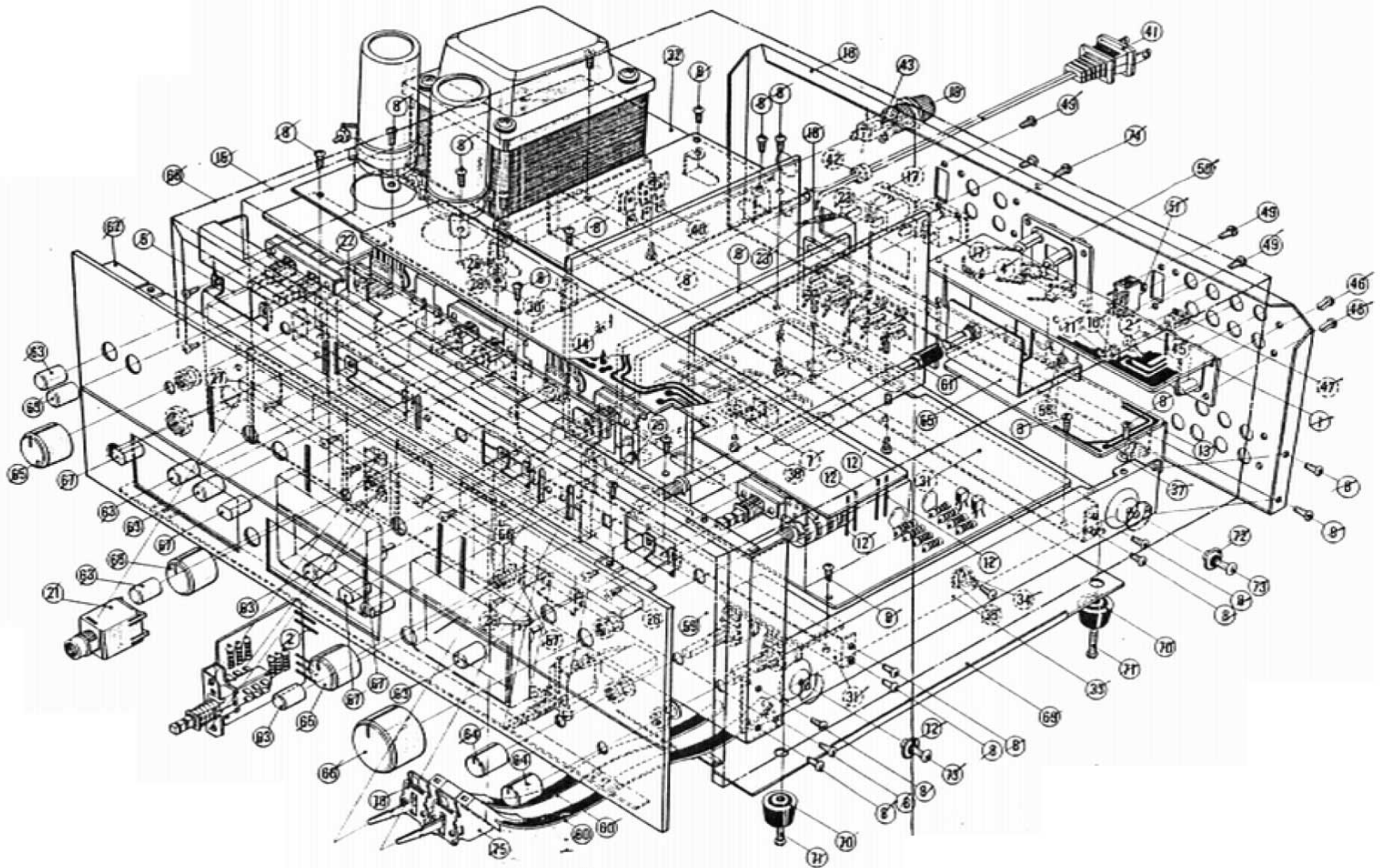
MISCELLANEOUS PARTS LIST

Ref. No.	Description	R/S Part No.	Mfr's Part No.
1	8P Phono Jack		33082000
2	Wire Wrap Pin 13 mm		19044001
3	Jumper Wire		92000001
4	UL Tube 1 x 5		31501061
5	Fiber Insulator		75098003
6	Head Sink	HH-0288	15099001
7	Thermal Protector Fit Metal	HB-7611	63359002
8	Binding Head Screw Tite B M3x8		40630081
10	Pan Head Screw M3x12		40330123
11	Spring Washer M3.5		42253543
12	Hex Nut M3		41113070
13	Wire Wrap Pin 19 mm		19043001
14	8P Phono Jack (Tape)	J-0975	33081900
15	Jumper Wire		92000002
16	Shield Plate		09076001
17	Back Panel Assembly	Z-4144	11625A02
18	AC Outlet IR-10		34048001
19	10P Speaker Terminal	J-4430	53100240
20	Fuseholder FH002 (UL)	F-1017	34032001
21	Fuseholder N3 (CSA)		34069001
22	Headphone Jack	J-0928	33031700
23	Meter Fit Metal	HB-7862	63406001
24	UL Tube 1x15		31501182
25	Sponge for Meter	HB-7864	74156001
26	Binding Head Screw Tite B M3x6		40630061
27	Pan Head Screw M3x6		40330061
28	Light Shield Fiber		73247001
29	Flat Washer M4		42120421
30	Spring Washer M4		42250441
31	Hex Nut M4		41114070
32	Center Chassis	Z-4146	01102001
33	Sub Chassis for Transformer	HB-7873	63403002
34	Side Chassis	Z-4133	04027001
35	Wire Clamper	H-3549	63075001
36	PVC Tube for Wire Clamper		31501426
37	Extension Shaft	Z-4134	19090002
38	Earth Lug		63408001
39	Lock Washer M3		42380331
40	Binding Head Screw Tite B M3x12		40630121
41	Terminal Strip 1P1L1P	J-4438	51025002
42	AC Cord with Plug		62110038
43	Cord Strain Relief SR-4P4		74089001
44	Fuse 4A 125V (UL)	HF-1087	38337140
45	Fuse 4A 125V (CSA)		38234140
46	Flat Washer for Earth Terminal		42100008
47	Plastic Rivet M3		84246001
48	Earth Terminal	HB-0953	53012300
49	Egg Shape Lug	H-3532	51036001
50	Pan Head Screw M2.6x4 Black		40326045

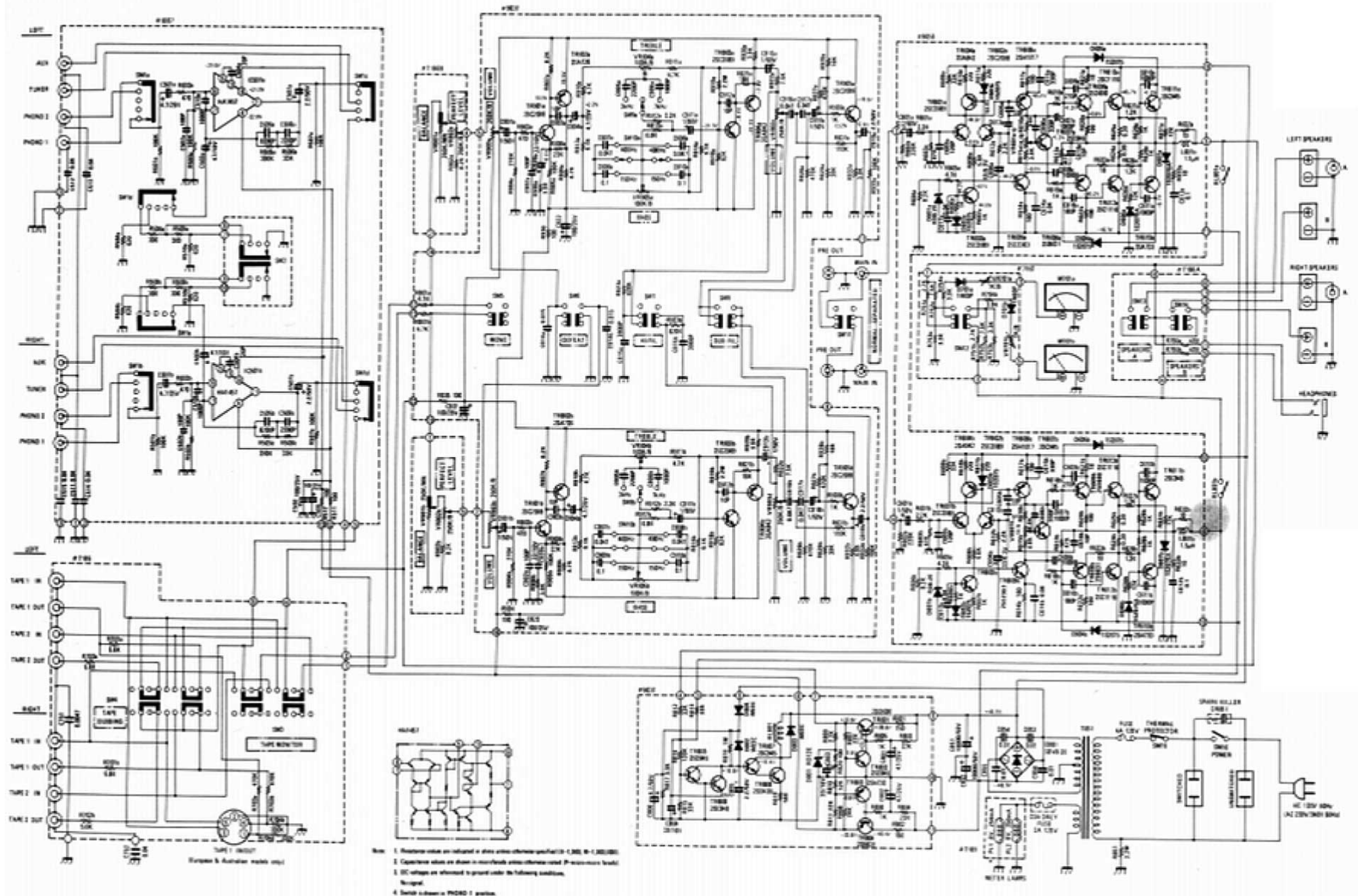
Ref. No.	Description	R/S Part No.	Mfr's Part No.
50	4P Pin Jack	J-0976	33040840
51	Stopper for PHONO-1 LEVEL Switch		84308001
	UL Tube 1.6x20		31501183
	UL Tube 1.6x15		31501182
54	Lock Rivet		84310001
55	SELECTOR Switch Fit Metal	HB-7856	63407001
56	Hex Nut M9		41000004
57	Flat Washer M9		42500003
58	Binding Head Screw M3x8 Black		40630085
58	Front Chassis	Z-4145	03085001
58	Remote Switch Cable		19093001
81	Shaft Coupler		84312001
62	Front Panel Assembly	Z-4148	10625A01
63	Push Button	K-3028	29295001
64	BALANCE, PERFECT LEVEL Knob	K-3025	29290001
65	BASS, TREBLE, SELECTOR Knob	K-3026	29291001
66	VOLUME Knob	K-3027	29292001
67	Lever Switch Knob	K-3032	29294001
68	Wooden Cabinet	Z-4137	85084002
69	Bottom Plate	Z-4147	05057001
70	Plastic Foot	F-0183	74074001
71	Pan Head Screw M5x15		40350151
72	Plastic Washer for Cabinet		84092001
73	Pan Head Screw Tite B M4x15 Black		40640155
74	Brazer Head Screw Tite C M3x8		40000120
75	Remote Switch Lever for TAPE		27600047
	Fuseholder (Europe/Australia)		34065001
	Fuse 2A, 250V (Europe/Australia)		38444220
	AC Cord with Plug (Europe)		62110039
	AC Cord with Plug (Australia)		62010013
	DIN Jack?		

EXPLODED VIEW

SA-2001
Cat No. 31-1962



SCHEMATIC DIAGRAM



RADIO SHACK  A DIVISION OF TANDY CORPORATION
U.S.A.: FORT WORTH, TEXAS 76102
CANADA: BARRIE, ONTARIO L4M 4W5

TANDY CORPORATION

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