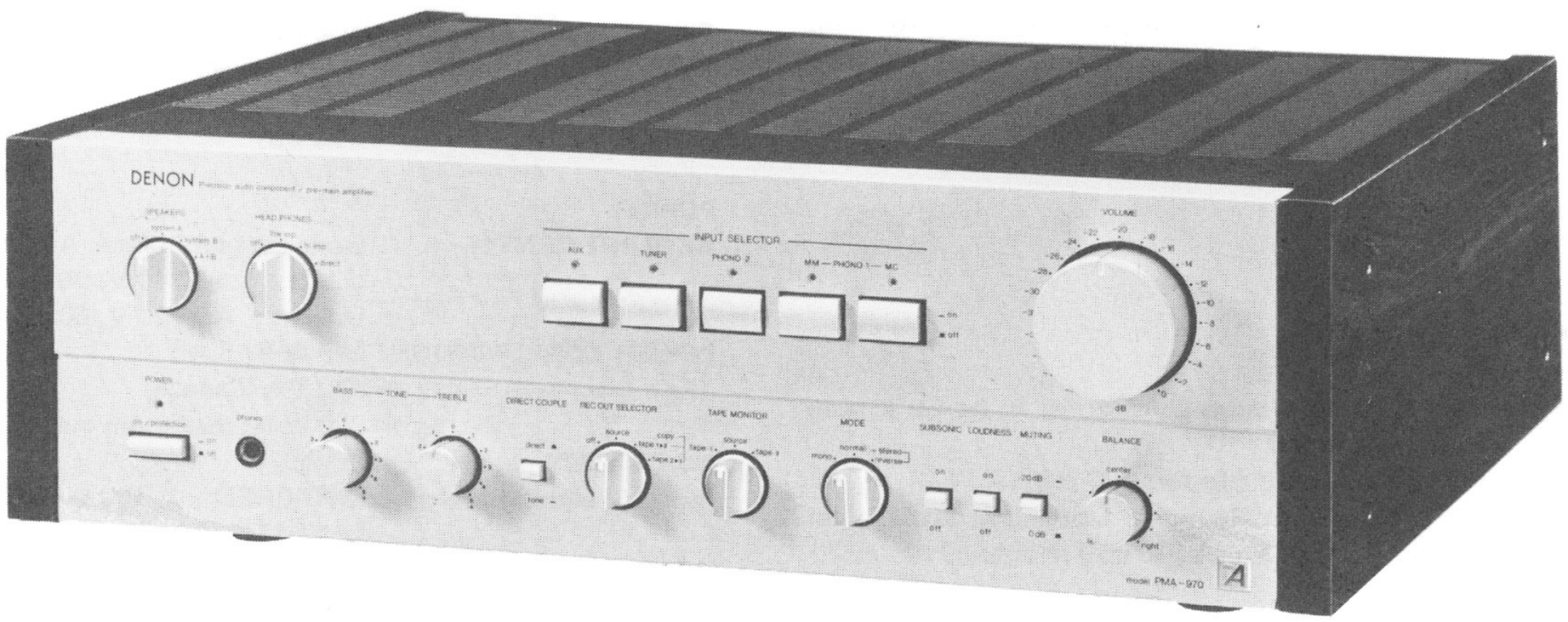
DENON

Hi-Fi Component Amplifier

SERVICE MANUAL
MODEL PMA-970



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SPECIFICATIONS

POWER AMPLIFIER SECTION (TUNER → SP OUT)

Circuit System:	All stage direct DC servo circuit
Rated Output Power:	Both channel drive 20 Hz to 20 kHz/100 W + 100 W (8 ohm Load T.H.D. 0.003%) 1 kHz/80 W + 80 W (4 ohm Load T.H.D. 0.003%)
Total Harmonic Distortion:	Less than 0.003% (20 Hz to 20 kHz)
Intermodulation Distortion:	7 kHz/60 Hz: 1/4 lower than 0.005% (at amplitude output equivalent to rated output)
Power Band Width:	5 Hz to 100 kHz (IHF, T.H.D. 0.02%)
Transmission Characteristics:	1 Hz to 400 kHz $^{+0}_{-3}$ dB (at 1 W output)
Input Sensitivity:	150 mV
Input Impedance:	40 k ohm
Output Impedance:	0.08 ohm
Signal to Noise Ratio: (IHFA Network)	108 dB (input terminals short-circuited)
Output Terminals:	Speaker: A & B load: 4 – 16 ohm; A + B: 8 – 16 ohm (with impedance change-over switch) Headphone: for Stereo Headphone (with impedance change-over switch)

PREAMPLIFIER SECTION

Equalizer Amplifier Output:	Maximum Output: 18 V (at 50 k ohm load)			
(REC OUT Terminals):	Rated Output: 150 mV Total Harmonic Distortion: Lower than 0.002% (at 1 kHz, 8 V output)			
Input Sensitivity/Input Impedance:	PHONO-1	MM	2.5 mV	50 k ohm
		MC	0.2 mV	100 ohm
	PHONO-2	MM	2.5 mV	50 k ohm
	TUNER		150 mV	40 k ohm
	AUX, TAPE		150 mV	40 k ohm
Maximum Input Level:	PHONO-1	MM	300 mV	(1 kHz)
		MC	23 mV	(1 kHz)
	PHONO-2	MM	300 mV	(1 kHz)

RIAA Deviation:	PHONO-1	MM within ±0.2 dB (20 Hz to 100 kHz) MC within ±0.2 dB (20 Hz to 100 kHz)
	PHONO-2	MM within ±0.2 dB (20 Hz to 100 kHz)

OVERALL CHARACTERISTICS

Signal-to-Noise Ratio: (IHF A Network)	PHONO-1	MM 90 dB (input terminal short-circuited with input of 2.5 mV) MC 75 dB (input terminal short-circuited with input of 250 μV)
	TUNER TAPE AUX	more than 108 dB (input terminals short-circuited)
Tone Control Adjustable Range:	BASS	100 Hz ±8 dB
	TREBLE	10 kHz ±8 dB
Filter Characteristic:	SUBSONIC	18Hz, 6 dB/oct
Loudness Characteristics:	Low frequency	100 Hz + 7 dB
	High frequency	10 kHz + 6 dB
Muting:	–20 dB	

POWER REQUIREMENT:	Germany and France: AC 220 V, 50 Hz	
	U.K.: AC 240 V, 50 Hz	
	U.S.A.: AC 120 V, 60 Hz	
POWER CONSUMPTION:	340 W (U.S.A.)	(UL)
	670 VA (Canada)	(CSA)
	800 W (at maximum output)	(IEC)
AC OUTLET (for U.S. and Canada):	SWITCHED x 2, 100 W (total) UNSWITCHED x 1, 250 W	
DIMENSIONS:	506mm (W) x 168mm (H) x 451mm (D) (including rubber feet, knobs and terminals)	
WEIGHT:	23.0 kg	

Design and specifications subject to change without notice because of improvement.

NOTE: The following codes correspond to the appropriate models.
E2 for Europe, EG for Germany, EF for France, EK for U.K.

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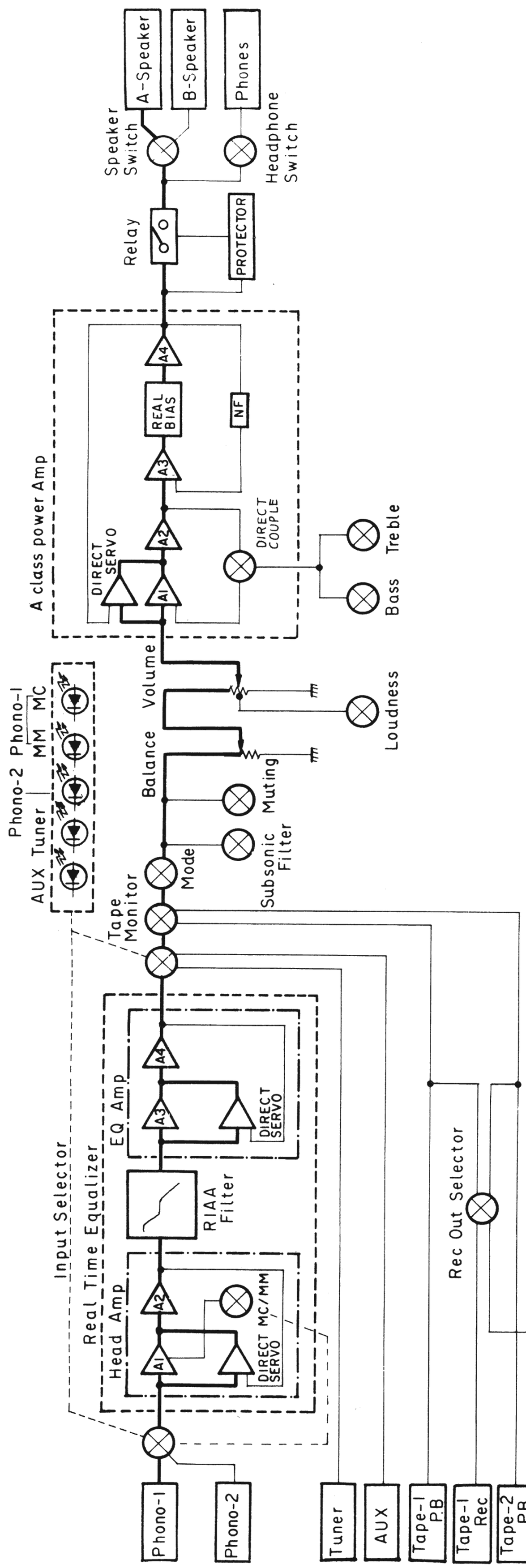
BLOCK DIAGRAM



METHOD OF ADJUSTMENT

NOTE: Before servicing PUX-027 POWER AMP P.C.B., be sure discharge Capacitor C1 and C2 (33,000μF) through resistor.

N.B: When cross point of R213 and R214 (100kΩ) on PUX-027 POWER AMP is short circuited to ground, output from differential amplifier which consists of TR53 and TR54 (μPA68H) will stop, and usually no idle current exists in the power transistor. Then, in the event excessive current, due to Class A bias circuit malfunction prior to TR53, 54 stage, exists at Power Transistors, ground the above mentioned cross point to locate the trouble.

1. PUX-027 (POWER AMP PCB) CLASS A BIAS CIRCUIT ADJUSTMENT

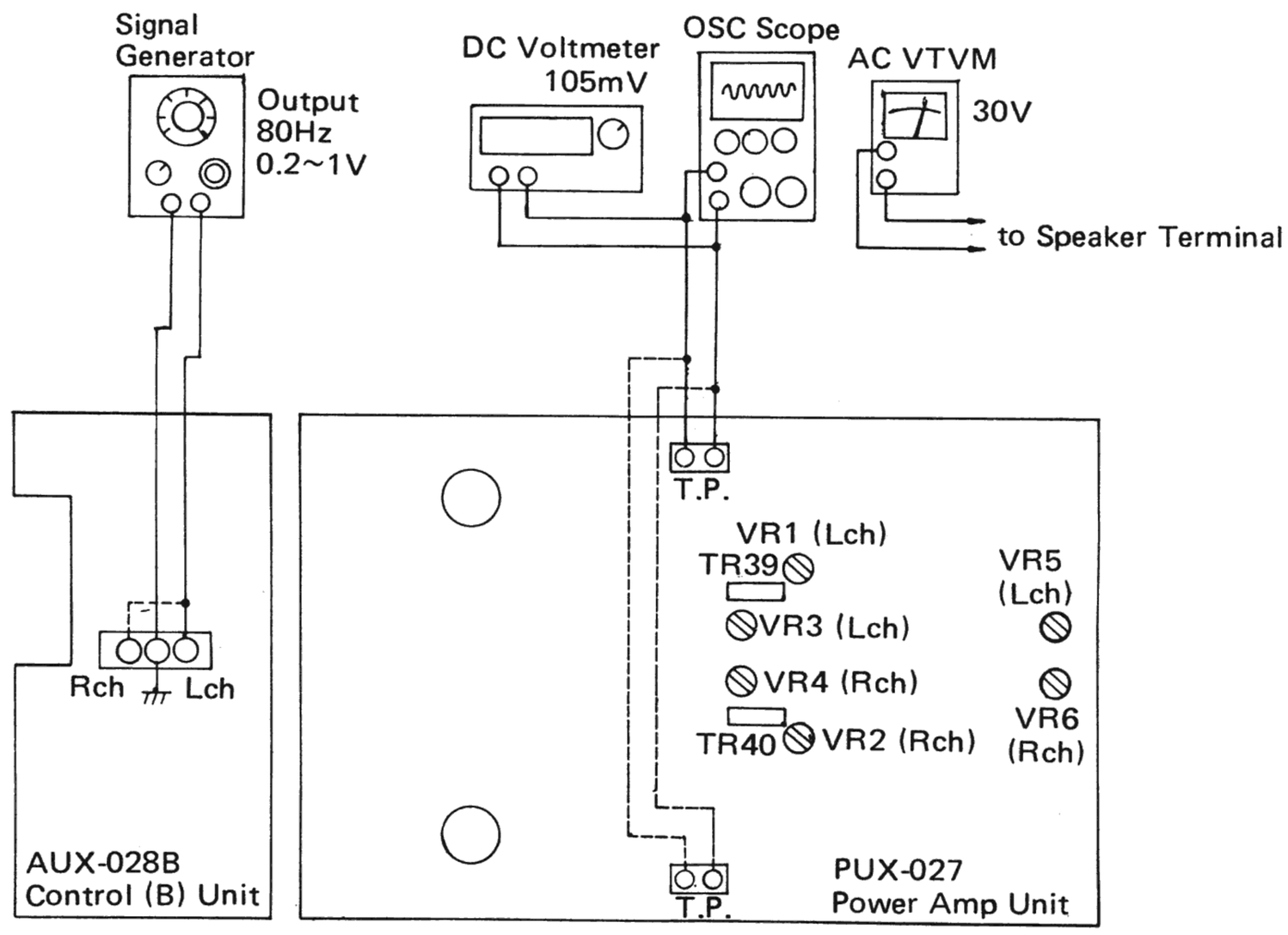


Fig. 1

(1) Attenuator Balance Adjustment (Remove Equalizer Amp P.C.B.; AUE-008 and detach shield case so as the parts side of PUX-027 is visible).

1 Set each switch as per,
POWER → off, VOLUME → – ∞ dB, MODE → normal
LOUDNESS → off, MUTING → 0 dB, BALANCE → center
DIRECT COUPLE → direct, SPEAKERS → A+B
SP. IMP. → HIGH (BACK PANEL)

2 Connect measuring instruments as per, (Refer to Fig. 1.)
- Signal generator to 9 10 11 terminals of AUX-028 (Control B).
- Set the S.G. output to 0.2 ~ 1V, 80Hz.
- Connect DC voltmeter and Oscilloscope to T.P. terminals of PUX-027.
- Connect AC voltmeter only to speaker terminal.

3 Turn power switch on. After one minute, adjust VR5 (L CH) and VR6 (R CH) so as DC voltage at T.P. terminals shows 105mV.

4 Connect bases of TR39 (L CH) and TR40 (R CH) (μPA77V) together.
Adjust VOLUME so as the voltage at speaker terminal shows 30V.
Observing Oscilloscope, adjust VR1 (L CH) and VR2 (R CH) so as AC voltage at T.P. terminals become minimum (smaller than 10 mVp-p).
Then, remove the connection from bases of TR39 (L CH) and TR40 (R CH), and adjust VR3 (L CH) or VR4 (R CH) so as AC voltage at T.P. terminals become minimum (smaller than 20 mVp-p).

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(2) Idling Current Adjustment (Set the unit upright, and do not remove bottom cover and EQ shield case.)

1 Set each switch as per,
POWER → off, VOLUME → – ∞ dB,
SPEAKERS → off, SP. IMP → HIGH (BACK PANEL)

2 Connect DC voltmeter to T.P. terminals of PUX-027. (solder DC voltmeter leads to T.P. terminals, or use a pair of jig through available space between power radiator and EQ shield case to extend T.P. outward.)

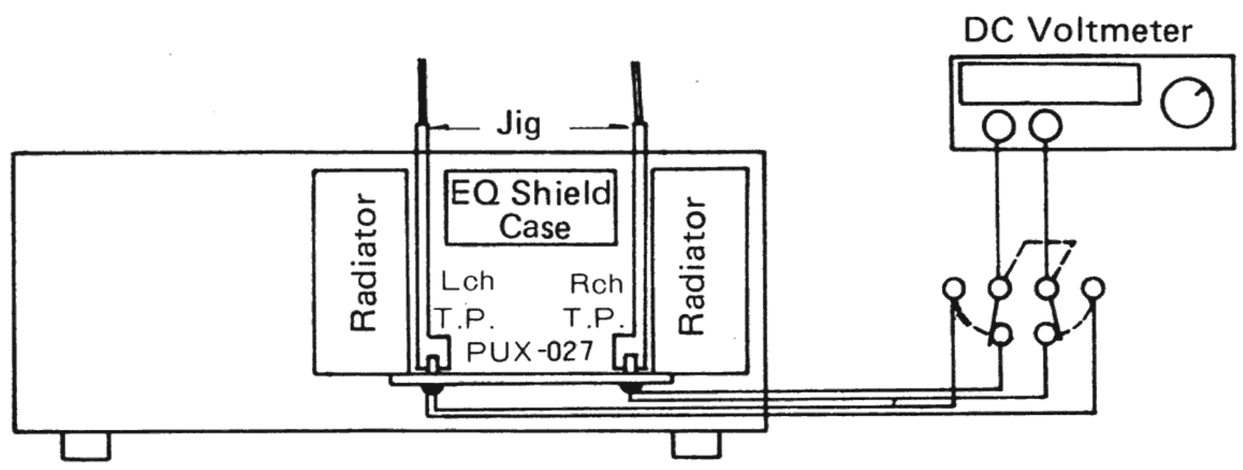

Fig. 2

3 Turn power switch on. After 2 to 5 minutes, adjust VR5 (L CH) and VR6 (R CH) so as the terminal voltage shows 105±5mV. Insert a – screwdriver through the holes on back panel to adjust VR5 and VR6.

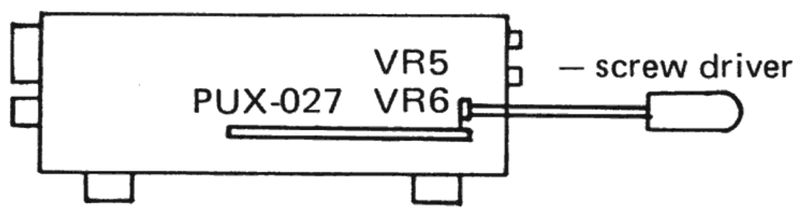

Fig. 3

2. EQUALIZER AMPLIFIER NEUTRAL ADJUSTMENT

1 Set each switch as per,
PHONO-1 INPUT JACK → Insert Short Pin
TAPE-1 REC INPUT JACK → Connect DC voltmeter
INPUT SELECTOR → PHONO-1 MM
REC OUT SELECTOR → off, POWER → off

2 Turn power switch on. After 10 seconds, set REC OUT SELECTOR to SOURCE, and after 3 minutes, adjust VR1 (L CH) and VR2 (R CH) on the Equalizer servo P.C.B. so as the DC voltage at REC terminal shows 0±0.5mV. (Refer to Fig. 4.)

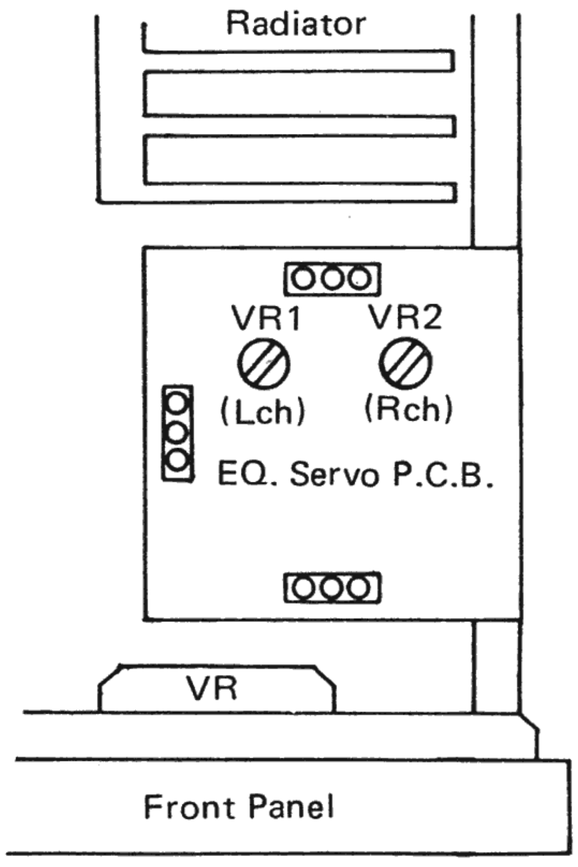

Fig. 4

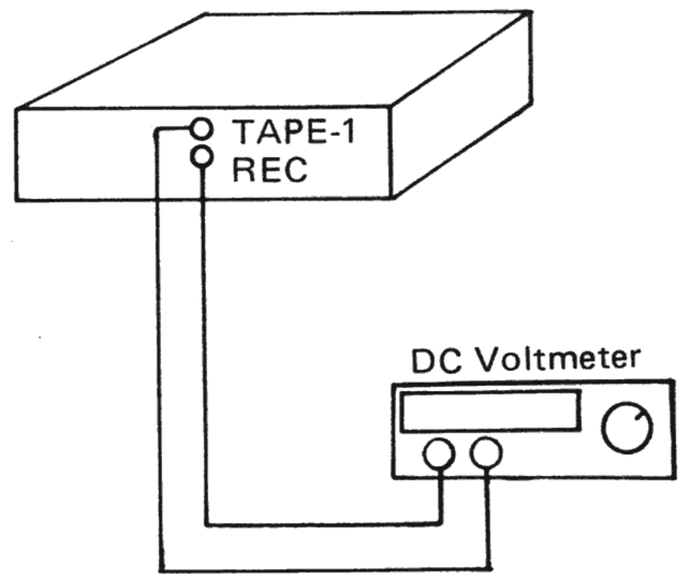

Fig. 5

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PRECAUTION TO USE PMA970

1. RADIO RECEPTION

When connecting AM, FM tuner to the unit, it is preferable to place the tuner more than 10cm away from the PMA970 unit. It is especially true when the Field Strength is weak, since the small pulse noise from the PMA970 could be amplified in the tuner and come out through speaker.

2. SPEAKER IMPEDANCE MATCHING

Use care to match speaker system impedance to that of the Unit. Observe the table below.

Table 1

Impedance switching and speaker impedance / Speaker switching	High	Low
System A	8 ~ 16Ω	4Ω
B	8 ~ 16Ω	4Ω
A+B	16Ω	8Ω

The unit is designed to work at Class A characteristic curve with the load impedance listed above. In the event the load impedance is low, bias current will increase and temperature of power transistors will rise.

2-1 To hook 8 to 16Ω speaker system, with speaker switch set to A or B, use "High".

2-2 To hook two pairs of 8Ω speaker systems, set speaker switch on the front panel to A+B, and set speaker impedance switch on the back panel to "Low".

2-3 To hook 4Ω speaker system, with speaker switch set to A or B, use "Low".

2-4 NEVER HOOK 4Ω speaker systems to A and B and operate A+B at the same time, or could invite power amplifier damage due to excessive current and heat rise.

Positively observe the instruction above. In the event of mismatching, protector flashes warning LED. Then, turn power switch off, and see to it and correct the mismatching.

3. PRECAUTION TO USE HEAD PHONE

Low, High is switchable to HEAD PHONE impedance, and also DIRECT switching to power amplifier is provided to fully use the best performance of HEAD PHONE. However, wrong connection could invite damage to ear as well as HEAD PHONE due to intense sound.

3-1 Always set Main Volome to MIN prior to use HEAD PHONE.

3-2 Set impedance switch to HEAD PHONE impedance. (100W + 100W output could be delivered to HEAD PHONE terminals, on Direct position)

3-3 Gradually turn Main Volume to the desired sound level.

3-4 When not using HEAD PHONE, be sure to set impedance switch to OFF or Low.

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PROTECTOR AND PRINCIPLE OF FUNCTION

It provides a function to protect expensive speaker system from possible damage which due to power switch on/off surge, amplifier malfunction and abnormal temperature rise of the power radiator, by isolating the speaker system from power amplifier output.
It consists of an IC which covers all function. Refer to figure 6.

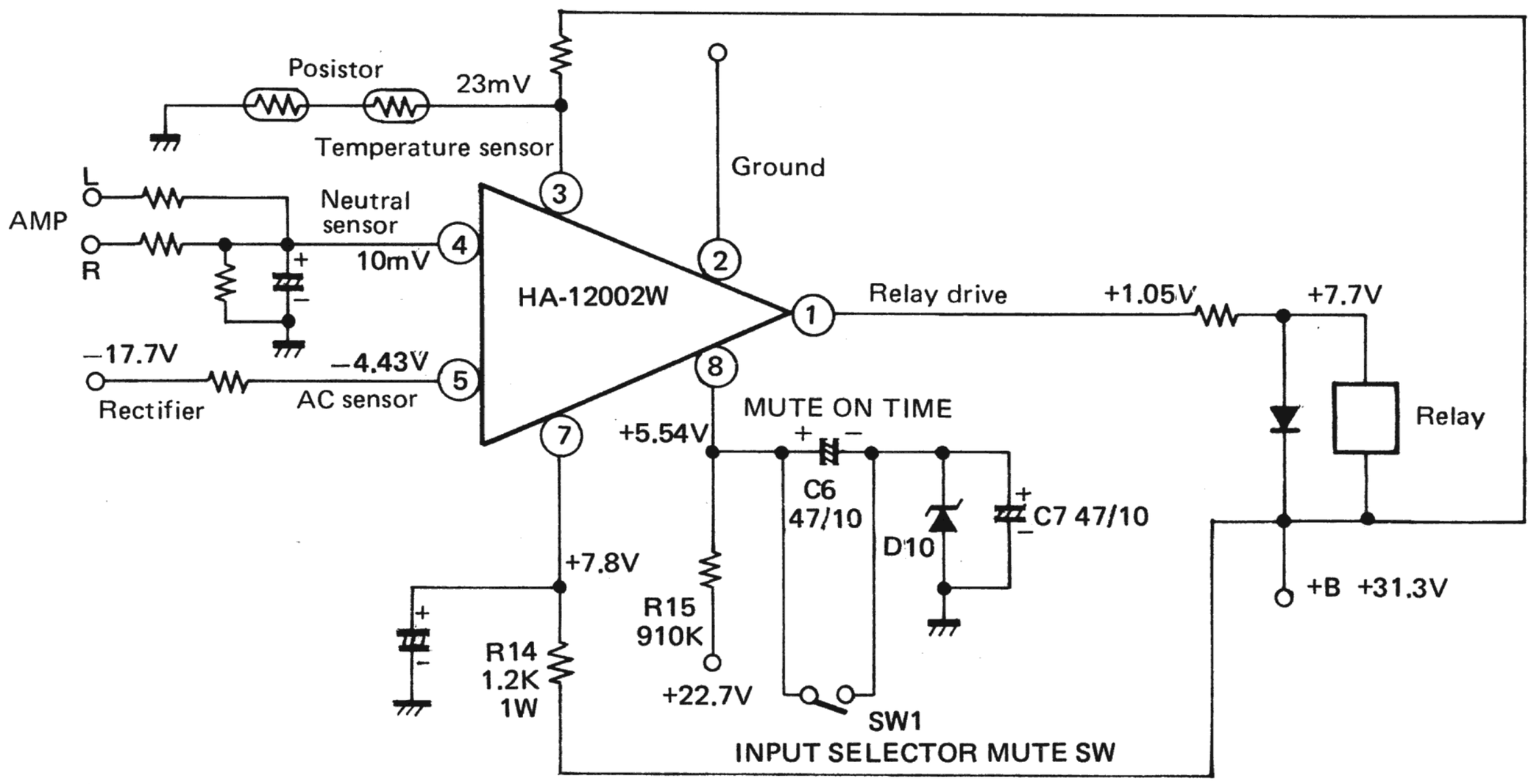

Fig. 6

- **Mute ON Time**
  PIN 8 of IC determines OFF/ON time of MUTING. Relay turns ON about 6 ~ 8 seconds after the power source switch turned on, according to time constant determined by R15, C6 and C7.
  When power switch is turned on with MC, MM position, click output voltage from Equalizer is applied to PIN 4 of IC, and MUTING TIME is elongated, which delays MUTING TIME at the Main volume.
  Also, when INPUT SELECTOR MUTE SW is pressed C6 is shorted momentarily, and 1.5V which determined by D10, is applied to PIN 8 and activates the relay (OFF), and after about 1 ~ 2 seconds, relay turns on in relative to charging time constant.
- **Neutral Sensor**
  When more than ±1.2V DC is applied to Pin 4 of IC, the relay activates (OFF).
- **Temperature Sensor**
  In the event RADIATOR temperature rises above 105°C, posistor activates the relay (OFF).
- **AC Sensor**
  When power switch turned off, voltage at Pin 5 of IC drops to 0, and activates relay (OFF).

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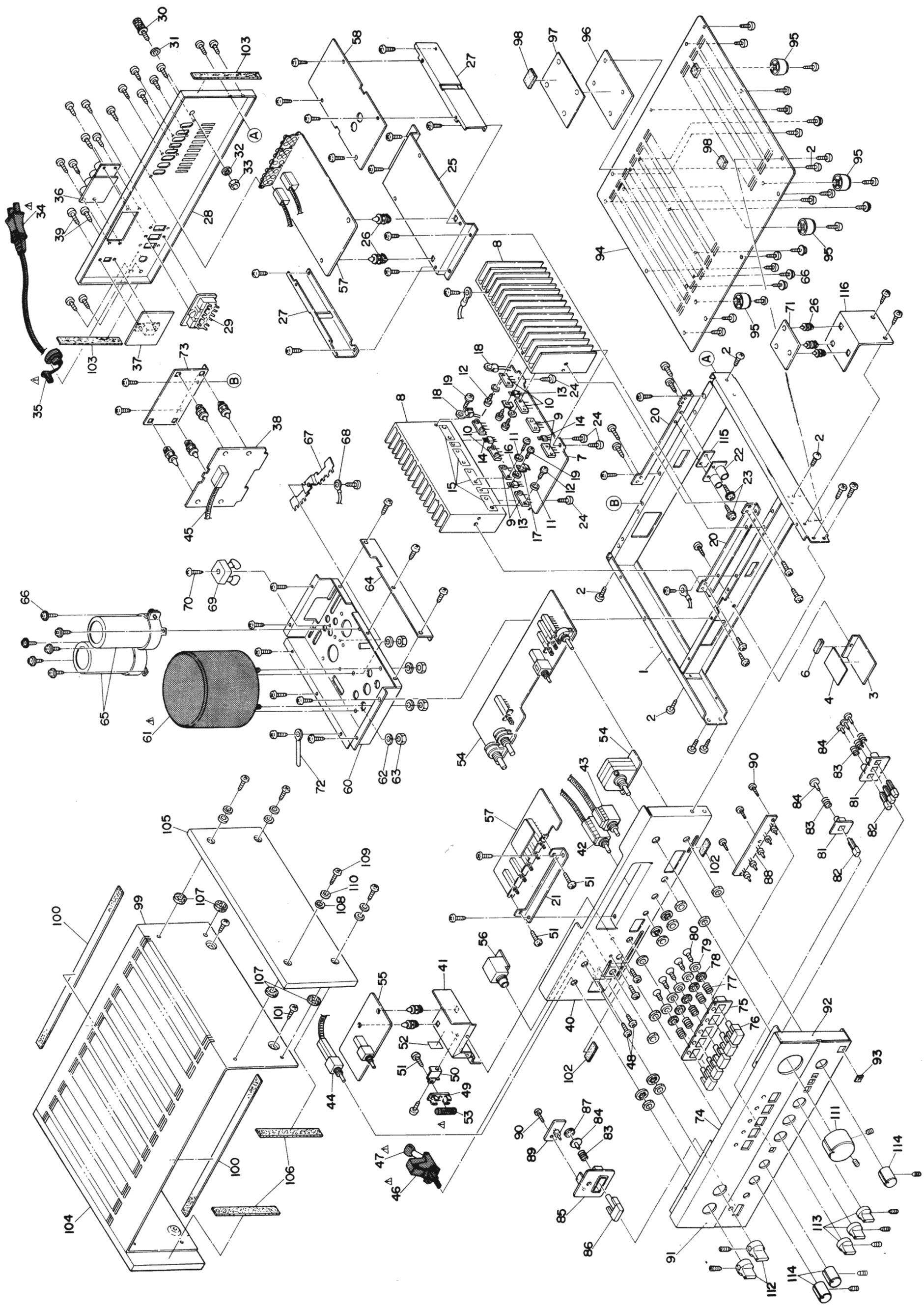
EXPLODED VIEW OF CHASSIS A/---- CABINET

⚠ ▩ Means important safety item, which must be replaced, when necessary, by a part specified or meeting the specification by the manufacturer.



NOTE:
All screws without symbol numbers are fixing screws (Refer to exploded view parts list Ref. No. 5).

ADDENDUM LIST

Ref. No.	Part Name & Descriptions	EG for Germany	EF for France	EK for U.K.	
28	BACK PANEL	1050343004	1050343004		
⚠ 34	AC CORD	2062016001	20621016001		
⚠ 35	CORD BUSH	4450020005	4450020005		
⚠ 46	PUSH SWITCH	2124202012	2124202012		
⚠ 61	POWER TRANS	2335242007	2335242007		
74	FRONT PANEL	1440631009	1440631009		

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EXPLODED VIEW OF PARTS LIST

Note: See addendum list below for the parts with asterisk (*) on the Ref. No. and the other parts not included in this list.

Ref. No.	Part No.	Part Name & Descriptions
1	4110225409	CHASSIS ASS.
2	4730354035	TAPPING SCREW (2) 3x8 BLACK
3	4140206100	SHIELD PLATE
4	4150166104	INSULATING SHEET
5	4770064107	FIXING SCREW
6	—	—
7	PUX0027B	POWER AMP UNIT
8	4170119102	POWER RADIATOR
9	2730230025	TRANSISTOR 2SC2588A(Q)/(R)
10	2710127022	TRANSISTOR 2SA1108A(Q)/(R)
11	4751003006	3 WASHER
12	4700012006	CROSS PAN SCREW WITH S. WASHER 3x12
13	2730199027	TRANSISTOR 2SC2238(Y)/(O)
14	2710104029	TRANSISTOR 2SA968(Y)/(O)
15	4150180009	INSULATING SHEET
16	4150182007	BUSH
17	4410326008	HOLDER
18	2760289004	DIODE PTH487A01BD222TS
19	4700010008	CROSS PAN SCREW WITH S. WASHER 3x8
20	4120660203	RADIATOR BRACKET
21	—	—
22	—	—
23	4700025006	—
24	4730354019	TAPPING SCREW (2) 3x8
25	4140202104	SHIELD PLATE
26	MD-5271	P.C.B. SUPPORT
27	4140204005	SHIELD BRACKET
*28	1050343004	BACK PANEL
29	—	—
30	2050043109	GND TERMINAL
31	4700088002	4.1 WASHER
32	4753100004	4 TOOTH WASHER
33	4700006000	4 NUT
⚠*34	2062016001	AC CORD
⚠*35	4450020005	CORD BUSH
36	SUX00253	SPEAKER TERMINAL UNIT
37	SUX00254	IMPEDANCE SELECT UNIT
38	SUX00251	POWER SUPPLY UNIT
39	4711304033	CROSS PAN SCREW 3x8
40	4110223207	FRONT CHASSIS ASS.
41	4120658105	SHIELD BRACKET
42	2120164002	ROTARY REMOTE (A) SWITCH FOR REC OUT
43	2120165001	ROTARY REMOTE (B) SWITCH FOR TAPE MONITOR
44	2120161005	ROTARY REMOTE (C) SWITCH FOR SPEAKER
45	4350045012	FLEXIBLE SLIDER
⚠46	2124202012	PUSH SWITCH
47	2518001007	OIL CAPACITOR 0.01μF 450WV
48	4700042005	CROSS PAN SCREW WITH S. WASHER 3x8 BLACK
49	2020013004	FUSE HOLDER
50	4120238130	BRACKET
51	4700009006	CROSS PAN SCREW WITH S. WASHER 3x6
52	5130159172	FUSE LABEL
53	2061015090	FUSE (5A)
54	AUX0028B	CONTROL (B) UNIT
55	SUX00252	PRE POWER SOURCE UNIT
56	SUX00256	HEADPHONE UNIT
57	AUE0008B1	EQ UNIT
58	4140205101	SHIELD PLATE
59	—	—

Ref. No.	Part No.	Part Name & Descriptions
60	4110240109	TRANS CHASSIS
⚠*61	2335242007	POWER TRANS
62	4752006002	6 SPRING WASHER
63	4756012005	6 NUT
64	4120691007	BRACKET
65	2546050004	ELECTROLYTIC CAP. 33000μF
66	—	—
67	2050117006	EARTH PLATE
68	2050003000	3 PLUG
69	2760257007	DIODE 15D4B41
70	4730459011	TAPPING SCREW (2) 4x16
71	—	—
72	EP-4772	CORD HOLDER
73	4120663003	PWB BRACKET
*74	1440631009	FRONT PANEL
75	1140049001	PANEL BUSH (A)
76	1130190106	PUSH KNOB ASS.
77	4630226001	SPRING
78	1240029031	FELT SHEET (A)
79	1190022007	STOPPER
80	4712303017	FLAT HEAD SCREW 3x6
81	1140050003	PANEL BUSH (B)
82	1130191005	PUSH KNOB
83	4630226014	SPRING
84	1190014002	STOPPER
85	1140051002	PANEL BUSH (C)
86	1130192007	PUSH KNOB ASS.
87	1240030004	FELT SHEET (B)
88	AUE0008B2	INPUT LED UNIT
89	AUE0008B3	POWER LED UNIT
90	4730304014	TAPPING SCREW (1) 3x8
91	1460240001	SIDE ESC. (L)
92	1460241000	SIDE ESC. (R)
93	1350035012	MARK
94	1050308104	BOTTOM COVER
95	1040027107	FOOT
96	4140215007	SHIELD PLATE
97	4150172004	INSULATING SHEET
98	4610136014	RUBBER SHEET
99	1020094202	TOP COVER
100	1220064045	SPACER
101	4734801005	TAPPING SCREW TRUSS (2) 4x8
102	1250004020	SPACER
103	1240019054	FELT SHEET
104	1010729008	WOOD BOARD (L)
105	1010730107	WOOD BOARD (R)
106	1220064032	SPACER
107	1240032002	FELT SHEET
108	4751006016	5 WASHER
109	4734461034	TAPPING SCREW TRUSS (2) 4x25
110	4752004004	4 SPRING WASHER
111	1120285005	KNOB ASS. (FOR VOL.)
112	1120286004	KNOB ASS. (FOR SPEAKER, HEAD PHONE)
113	1120287003	KNOB ASS. (FOR TAPE REC. MOD)
114	1120288002	KNOB ASS. (FOR BALANCE, BASS, TREBLE)
115	—	—
116	4120703005	PWB BRACKET
117	2050089008	7P WIRING TERMINAL
118	4150088004	INSULATING SHEET
119	4711104039	CROSS PAN SCREW 2x8 BLACK
120	4140220005	SHIELD COVER
121	2048069001	5P CONNECTOR (DIN)

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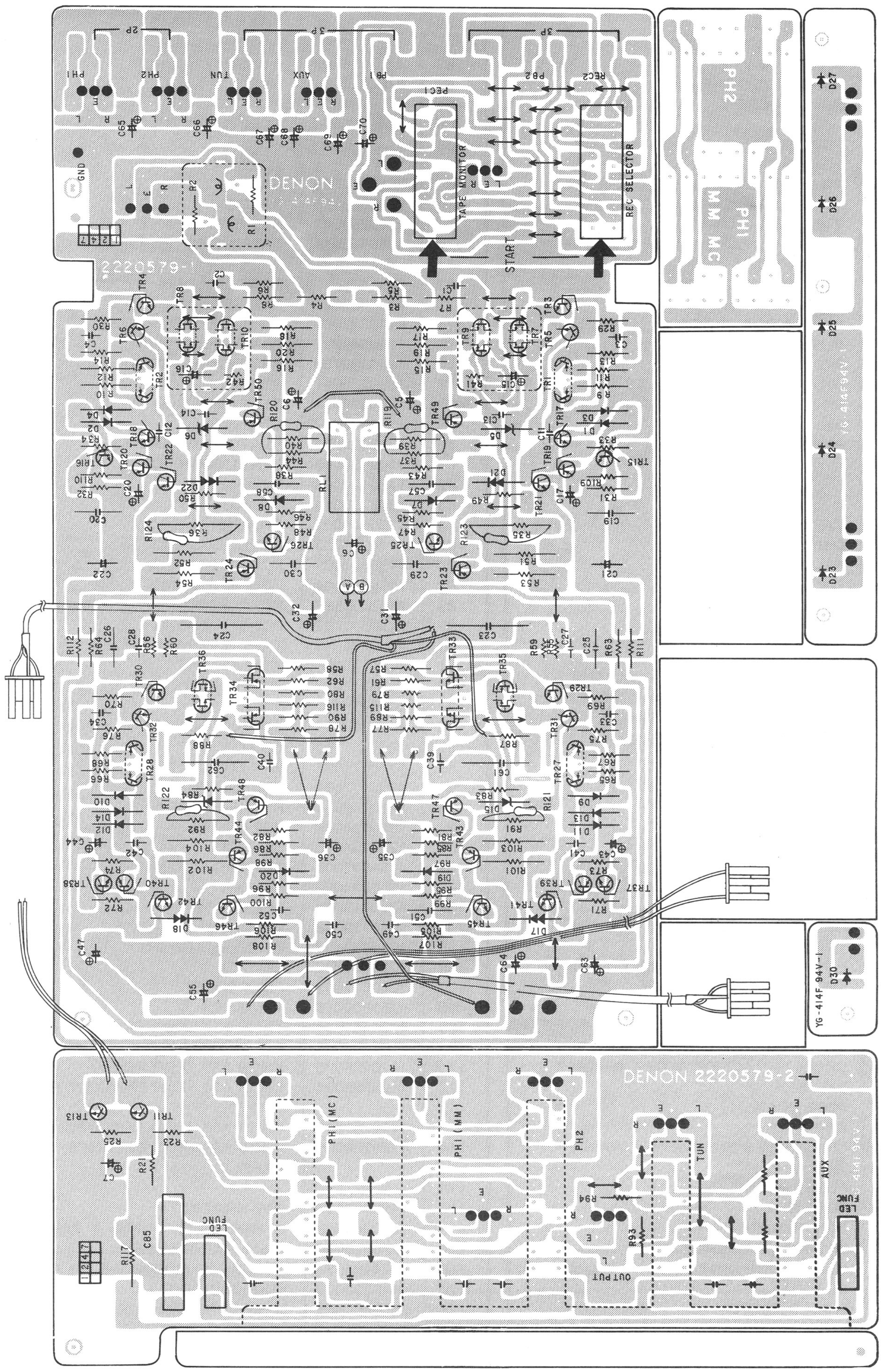
PRINTED CIRCUITBORD PATTERNS AND PARTS LIST

AUE-008B EQ. UNIT



NOTE:
Please be noted the following difference between the print on the AUE-008B P.C. Board and actual parts utilized.

- Polarity of TR24 is reversed. Actually B → E, E → B.
- Polarities of C5, C6 are reversed.
- VR1, VR2 are not utilized. These portions are jumpered with lead.
- RL2 is not employed.
- Refer to pattern side for R119, 120 (RD14B2E391J), R121, 122, 123, 124 (RD14B2H200), C85 (CE04W1E101).

AUE-008B PARTS LIST

Ref. No.	Part No.	Part Name & Descriptions
		SEMICONDUCTORS
TR01	2710126049	μPA-77V(P)/(F)/(E) TRANSISTOR
TR02	2710126049	μPA-77V(P)/(F)/(E) TRANSISTOR
TR03	2730186001	2SC1940(L) TRANSISTOR
TR04	2730186001	2SC1940(L) TRANSISTOR
TR05	2730186001	2SC1940(L) TRANSISTOR
TR06	2730186001	2SC1940(L) TRANSISTOR
TR07	2750026057	2SK146GR/BL FIELD EFFECT TRANSISTOR
TR08	2750026057	2SK146GR/BL FIELD EFFECT TRANSISTOR
TR09	2750026057	2SK146GR/BL FIELD EFFECT TRANSISTOR
TR10	2750026057	2SK146GR/BL FIELD EFFECT TRANSISTOR
TR11	2730198002	2SC1815(Y) TRANSISTOR
TR12	2730198002	2SC1815(Y) TRANSISTOR
TR13	2730198002	2SC1815(Y) TRANSISTOR
TR14	2730198002	2SC1815(Y) TRANSISTOR
TR15	2730207003	2SC1845(F) TRANSISTOR
TR16	2730207003	2SC1845(F) TRANSISTOR
TR17	2730207003	2SC1845(F) TRANSISTOR
TR18	2730207003	2SC1845(F) TRANSISTOR
TR19	2710111009	2SA992(F) TRANSISTOR
TR20	2710111009	2SA992(F) TRANSISTOR
TR21	2730199001	2SC2238(Y) TRANSISTOR
TR22	2730199001	2SC2238(Y) TRANSISTOR
TR23	2710104003	2SA968(Y) TRANSISTOR
TR24	2710104003	2SA968(Y) TRANSISTOR
TR25	2730207003	2SC1845(F) TRANSISTOR
TR26	2730207003	2SC1845(F) TRANSISTOR
TR27	2710126049	μPA-77V(P)/(F)/(E) TRANSISTOR
TR28	2710126049	μPA-77V(P)/(F)/(E) TRANSISTOR
TR29	2730207003	2SC1845(F) TRANSISTOR
TR30	2730207003	2SC1845(F) TRANSISTOR
TR31	2730207003	2SC1845(F) TRANSISTOR
TR32	2730207003	2SC1845(F) TRANSISTOR
TR33	2750024004	μPA68H(K) FIELD EFFECT TRANSISTOR
TR34	2750024004	μPA68H(K) FIELD EFFECT TRANSISTOR
TR35	2750026057	2SK146GR/BL FIELD EFFECT TRANSISTOR
TR36	2750026057	2SK146GR/BL FIELD EFFECT TRANSISTOR
TR37	2730207003	2SC1845(F) TRANSISTOR
TR38	2730207003	2SC1845(F) TRANSISTOR
TR39	2710111009	2SA992(F) TRANSISTOR
TR40	2710111009	2SA992(F) TRANSISTOR
TR41	2730187013	2SC2240(BL) TRANSISTOR
TR42	2730187013	2SC2240(BL) TRANSISTOR
TR43	2710094016	2SA968(Y) TRANSISTOR
TR44	2710094016	2SA968(Y) TRANSISTOR
TR45	2730207003	2SC1845(F) TRANSISTOR
TR46	2730207003	2SC1845(F) TRANSISTOR
TR47	2710111009	2SA992(F) TRANSISTOR
TR48	2710111009	2SA992(F) TRANSISTOR
TR49	2710111009	2SA992(F) TRANSISTOR
TR50	2710111009	2SA992(F) TRANSISTOR
D01	2760049008	1S2076 DIODE
D02	2760049008	1S2076 DIODE
D03	2760049008	1S2076 DIODE
D04	2760049008	1S2076 DIODE
D05	2760173000	HZ6A DIODE
D06	2760173000	HZ6A DIODE
D07	2760237001	RV06 DIODE
D08	2760237001	RV06 DIODE
D09	2760237001	RV06 DIODE
D10	2760237001	RV06 DIODE

Ref. No.	Part No.	Part Name & Descriptions
D11	2760049008	1S2076 DIODE
D12	2760049008	1S2076 DIODE
D13	2760049008	1S2076 DIODE
D14	2760049008	1S2076 DIODE
D15	2760173000	HZ6A DIODE
D16	2760173000	HZ6A DIODE
D17	2760200009	MV-11 DIODE
D18	2760200009	MV-11 DIODE
D19	2760237001	RV06 DIODE
D20	2760237001	RV06 DIODE
D21	2760200009	MV-11 DIODE
D22	2760200009	MV-11 DIODE
D23	3939040002	TLG206 LIGHT EMITTING DIODE
D24	3939040002	TLG206 LIGHT EMITTING DIODE
D25	3939040002	TLG206 LIGHT EMITTING DIODE
D26	3939040002	TLG206 LIGHT EMITTING DIODE
D27	3939040002	TLG206 LIGHT EMITTING DIODE
D30	3939032007	TLR206 LIGHT EMITTING DIODE
		RESISTORS
R01	2412211906	220 ohm ±5% ¼W CARBON FILM
R02	2412211906	220 ohm ±5% ¼W CARBON FILM
R05	2412268904	51 kohm ±5% ¼W CARBON FILM
R06	2412268904	51 kohm ±5% ¼W CARBON FILM
R07	2412179909	10 ohm ±5% ¼W CARBON FILM
R08	2412179909	10 ohm ±5% ¼W CARBON FILM
R09	2410178009	510 ohm ±5% ½W CARBON FILM
R10	2410178009	510 ohm ±5% ½W CARBON FILM
R11	2410178009	510 ohm ±5% ½W CARBON FILM
R12	2410178009	510 ohm ±5% ½W CARBON FILM
R13	2412215902	330 ohm ±5% ¼W CARBON FILM
R14	2412215902	330 ohm ±5% ¼W CARBON FILM
R15	2410202001	5.1 kohm ±5% ½W CARBON FILM
R16	2410202001	5.1 kohm ±5% ½W CARBON FILM
R17	2410202001	5.1 kohm ±5% ½W CARBON FILM
R18	2410202001	5.1 kohm ±5% ½W CARBON FILM
R19	2412310001	2.2 kohm ±5% 1W CARBON FILM
R20	2412310001	2.2 kohm ±5% 1W CARBON FILM
R21	2412281907	180 kohm ±5% ¼W CARBON FILM
R23	2412191903	33 ohm ±5% ¼W CARBON FILM
R25	2412251908	10 kohm ±5% ¼W CARBON FILM
R29	2412275900	100 kohm ±5% ¼W CARBON FILM
R30	2412275900	100 kohm ±5% ¼W CARBON FILM
R31	2412275900	100 kohm ±5% ¼W CARBON FILM
R32	2412275900	100 kohm ±5% ¼W CARBON FILM
R33	2412273902	82 kohm ±5% ¼W CARBON FILM
R34	2412273902	82 kohm ±5% ¼W CARBON FILM
R35	2410192001	2 kohm ±5% ½W CARBON FILM
R36	2410192001	2 kohm ±5% ½W CARBON FILM
R37	2442011040	20 ohm ±5% ½W METAL OXIDE FILM
R38	2442011040	20 ohm ±5% ½W METAL OXIDE FILM
R39	2442011011	1.5 ohm ±5% ½W METAL OXIDE FILM
R40	2442011011	1.5 ohm ±5% ½W METAL OXIDE FILM
R41	2420199007	4.7M ohm ±10% ¼W CARBON COMPOSIT
R42	2420199007	4.7M ohm ±10% ¼W CARBON COMPOSIT
R43	2412273902	82 kohm ±5% ¼W CARBON FILM
R44	2412273902	82 kohm ±5% ¼W CARBON FILM
R45	2412259900	22 kohm ±5% ¼W CARBON FILM
R46	2412259900	22 kohm ±5% ¼W CARBON FILM
R47	2412243903	4.7 kohm ±5% ¼W CARBON FILM
R48	2412243903	4.7 kohm ±5% ¼W CARBON FILM
R49	2412217900	390 ohm ±5% ¼W CARBON FILM
R50	2412217900	390 ohm ±5% ¼W CARBON FILM
R51	2410153008	47 ohm ±5% ½W CARBON FILM
R52	2410153008	47 ohm ±5% ½W CARBON FILM
R53	2410153008	47 ohm ±5% ½W CARBON FILM
R54	2410153008	47 ohm ±5% ½W CARBON FILM

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Ref. No.	Part No.	Part Name & Descriptions
R55	2452011014	4.7 kohm ±1% ½W METAL OXIDE FILM
R56	2452011014	4.7 kohm ±1% ½W METAL OXIDE FILM
R57	2412262900	30 kohm ±5% ¼W CARBON FILM
R58	2412262900	30 kohm ±5% ¼W CARBON FILM
R59	2452019003	680 ohm ±1% ¼W METAL OXIDE FILM
R60	2452019003	680 ohm ±1% ¼W METAL OXIDE FILM
R61	2412299902	1M ohm ±5% ¼W CARBON FILM
R62	2412299902	1M ohm ±5% ¼W CARBON FILM
R63	2442012081	39 ohm ±5% ½W METAL OXIDE FILM
R64	2442012081	39 ohm ±5% ½W METAL OXIDE FILM
R65	2412211906	220 ohm ±5% ¼W CARBON FILM
R66	2412211906	220 ohm ±5% ¼W CARBON FILM
R67	2412211906	220 ohm ±5% ¼W CARBON FILM
R68	2412211906	220 ohm ±5% ¼W CARBON FILM
R69	2412275900	100 kohm ±5% ¼W CARBON FILM
R70	2412275900	100 kohm ±5% ¼W CARBON FILM
R71	2412273902	82 kohm ±5% ¼W CARBON FILM
R72	2412273902	82 kohm ±5% ¼W CARBON FILM
R73	2412257902	18 kohm ±5% ¼W CARBON FILM
R74	2412257902	18 kohm ±5% ¼W CARBON FILM
R75	2412209905	180 ohm ±5% ¼W CARBON FILM
R76	2412209905	180 ohm ±5% ¼W CARBON FILM
R79	2452011030	330 ohm ±1% ¼W METAL OXIED FILM
R80	2452011030	330 ohm ±1% ¼W METAL OXIDE FILM
R81	2412244902	5.1 kohm ±5% ¼W CARBON FILM
R82	2412244902	5.1 kohm ±5% ¼W CARBON FILM
R83	2412244902	5.1 kohm ±5% ¼W CARBON FILM
R84	2412244902	5.1 kohm ±5% ¼W CARBON FILM
R85	2412227903	1 kohm ±5% ¼W CARBON FILM
R86	2412227903	1 kohm ±5% ¼W CARBON FILM
R87	2420198008	3.9M ohm ±10% ½W CARBON COMPOSIT
R88	2420198008	3.9M ohm ±10% ½W CARBON COMPOSIT
R89	2412203901	100 ohm ±5% ¼W CARBON FILM
R90	2412203901	100 ohm ±5% ¼W CARBON FILM
R91	2410192001	2 kohm ±5% ½W CARBON FILM
R92	2410192001	2 kohm ±5% ½W CARBON FILM
R93	2412203901	100 ohm ±5% ¼W CARBON FILM
R94	2412203901	100 ohm ±5% ¼W CARBON FILM
R95	2412265907	39 kohm ±5% ¼W CARBON FILM
R96	2412265907	39 kohm ±5% ¼W CARBON FILM
R97	2412240906	3.6 kohm ±5% ¼W CARBON FILM
R98	2412240906	3.6 kohm ±5% ¼W CARBON FILM
R99	2412236907	2.4 kohm ±5% ¼W CARBON FILM
R100	2412236907	2.4 kohm ±5% ¼W CARBON FILM
R101	2410153008	47 ohm ±5% ½W CARBON FILM
R102	2410153008	47 ohm ±5% ½W CARBON FILM
R103	2410153008	47 ohm ±5% ½W CARBON FILM
R104	2410153008	47 ohm ±5% ½W CARBON FILM
R105	2412191903	33 ohm ±5% ¼W CARBON FILM
R106	2412191903	33 ohm ±5% ¼W CARBON FILM
R107	2412275900	100 kohm ±5% ¼W CARBON FILM
R108	2412275900	100 kohm ±5% ¼W CARBON FILM
R109	2412244902	5.1 kohm ±5% ¼W CARBON FILM
R110	2412244902	5.1 kohm ±5% ¼W CARBON FILM
R111	2442012081	39 ohm ±5% ½W METAL OXIDE FILM
R112	2442012081	39 ohm ±5% ½W METAL OXIDE FILM
R115	2452011030	330 ohm ±1% ¼W METAL OXIDE FILM
R116	2452011030	330 ohm ±1% ¼W METAL OXIDE FILM
R117	2440043023	1.5 kohm ±5% 1W METAL OXIDE FILM
R119	2412082009	390 ohm ±5% ¼W CARBON FILM
R120	2412082009	390 ohm ±5% ¼W CARBON FILM
R121	2410192001	2 kohm ±5% ½W CARBON FILM
R122	2410192001	2 kohm ±5% ½W CARBON FILM
R123	2410192001	2 kohm ±5% ½W CARBON FILM
R124	2410192001	2 kohm ±5% ½W CARBON FILM

Ref. No.	Part No.	Part Name & Descriptions
		CAPACITORS
C01	2556077006	120 pF ±5% 50V PLASTIC FILM
C02	2556077006	120 pF ±5% 50V PLASTIC FILM
C03	2556088008	360 pF ±5% 50V PLASTIC FILM
C04	2556088008	360 pF ±5% 50V PLASTIC FILM
C05	2544059007	100 μF 63V ELECTROLYTIC
C06	2544059007	100 μF 63V ELECTROLYTIC
C07	2549015004	22 μF ±10% 10V ELECTROLYTIC
C09	2544030000	330 μF 25V ELECTROLYTIC
C10		
C11	2556152028	24 pF ±5% 250V PLASTIC FILM
C12	2556152028	24 pF ±5% 250V PLASTIC FILM
C17	2544015009	10 μF 16V ELECTROLYTIC
C18	2544015009	10 μF 16V ELECTROLYTIC
C19	2561017019	0.01 μF ±10% 630V METALIZED
C20	2561017019	0.01 μF ±10% 630V METALIZED
C21	2544059010	220 μF 63V ELECTROLYTIC
C22	2544059010	220 μF 63V ELECTROLYTIC
C23	2554083021	0.47 μF ±2% 100V PLASTIC FILM
C24	2554083021	0.47 μF ±2% 100V PLASTIC FILM
C25	2554070092	0.15 μF ±1% 100V PLASTIC FILM
C26	2554070092	0.15 μF ±1% 100V PLASTIC FILM
C27	2554079048	0.01 μF ±5% 100V PLASTIC FILM
C28	2554079048	0.01 μF ±5% 100V PLASTIC FILM
C29	2561017019	0.01 μF ±10% 630V METALIZED
C30	2561017019	0.01 μF ±10% 630V METALIZED
C31	2544059010	220 μF 63V ELECTROLYTIC
C32	2544059010	220 μF 63V ELECTROLYTIC
C33	2556091008	470 pF ±5% 50V PLASTIC FILM
C34	2556091008	470 pF ±5% 50V PLASTIC FILM
C35	2544077021	100 μF 50V ELECTROLYTIC
C36	2544077021	100 μF 50V ELECTROLYTIC
C39	2556075008	100 pF ±5% 50V PLASTIC FILM
C40	2556075008	100 pF ±5% 50V PLASTIC FILM
C41	2556152086	33 pF ±5% 250V PLASTIC FILM
C42	2556152086	33 pF ±5% 250V PLASTIC FILM
C43	2544015009	10 μF 16V ELECTROLYTIC
C44	2544015009	10 μF 16V ELECTROLYTIC
C47	2544077021	100 μF 50V ELECTROLYTIC
C49	2556099000	0.001 μF ±5% 50V PLASTIC FILM
C50	2556099000	0.001 μF ±5% 50V PLASTIC FILM
C51	2554079048	0.01 μF ±5% 100V PLASTIC FILM
C52	2554079048	0.01 μF ±5% 100V PLASTIC FILM
C55	2544077021	100 μF 50V ELECTROLYTIC
C57	2554079048	0.01 μF ±5% 100V PLASTIC FILM
C58	2554079048	0.01 μF ±5% 100V PLASTIC FILM
C63	2544059081	10 μF 63V ELECTROLYTIC
C64	2544059081	10 μF 63V ELECTROLYTIC
C65	2544044009	1 μF 50V ELECTROLYTIC
C66	2544044009	1 μF 50V ELECTROLYTIC
C67	2544044009	1 μF 50V ELECTROLYTIC
C68	2544044009	1 μF 50V ELECTROLYTIC
C69	2544044009	1 μF 50V ELECTROLYTIC
C70	2544015009	10 μF 16V ELECTROLYTIC
C75	2561016007	0.068 μF ±10% 400V METALIZED
C76	2561016007	0.068 μF ±10% 400V METALIZED
C77	2561016007	0.068 μF ±10% 400V METALIZED
C78	2561016007	0.068 μF ±10% 400V METALIZED
		OTHER PARTS
	220579209	P.W. BOARD
	2050112056	5P CONNECTOR BASE
	2050112030	3P CONNECTOR BASE

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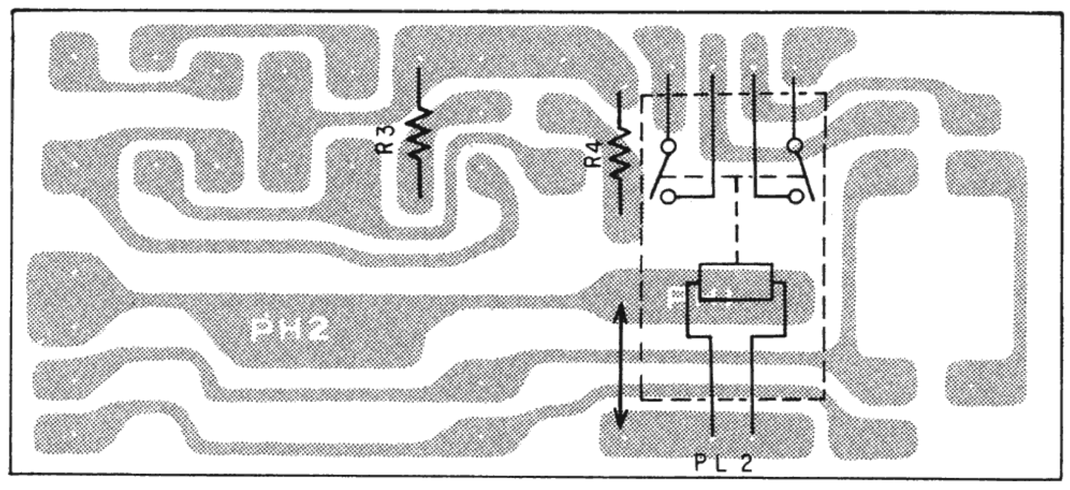
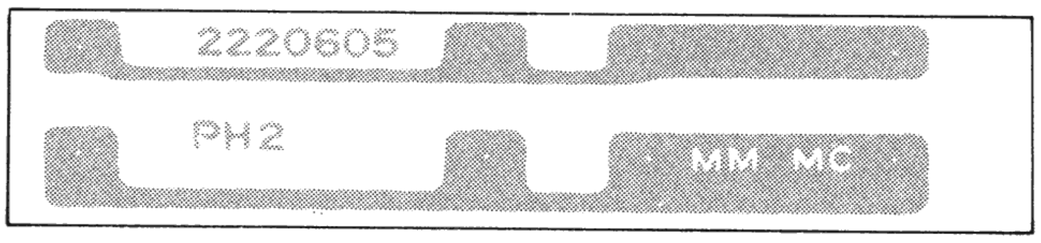
Ref. No.	Part No.	Part Name & Descriptions
	2090008133	JUMPER SHORT LEAD P=7.5mm USED 2
	2090008120	JUMPER SHORT LEAD P=10mm USED 25
	2090008117	JUMPER SHORT LEAD P=12.5mm USED 2
	2090008104	JUMPER SHORT LEAD P=15mm USED 7
	4140116106	SHIELD COVER
	2048050007	4P TERMINAL
	2040061007	6P CONNECTOR BASE
SW01	2124205103	5P PUSH SWITCH
SW02	2124187001	SLIDE SWITCH 4 CIRCUIT 3 POSITION
SW03	2124187001	SLIDE SWITCH 4 CIRCUIT 3 POSITION
RL01	2140039007	RELAY
	4170124003	MINI RADIATOR FOR TR21, 22, 23, 24
	4730354035	TAPPING SCREW (2) 3x8 BLACK FOR TR21, 22, 23, 24
L01	2318017000	INDUCTOR
L02	2318017000	INDUCTOR
	2034119088	3P CONTACT WIRE ASS FOR EQ OUTPUT
	2034119033	3P CONTACT WIRE ASS FOR EQ OUTPUT
	2034141014	3P CONTACT WIRE ASS FOR EQ INPUT
	2034119091	3P CONTACT WIRE ASS FOR PH-2
	2034145007	3P CONTACT WIRE ASS FOR TUNER
	2034145010	3P CONTACT WIRE ASS FOR AUX
	2034140015	3P CONTACT WIRE ASS FOR TAPE
RL02	2140015005	REED RELAY

EQ. MUTING UNIT (included SUX-025)





EQ. MUTING UNIT PARTS LIST

Ref. No.	Part No.	Part Name & Descriptions
		GENERAL
	2220605004	P.W. BOARD
	2090008120	JUMPER SHORT LEAD P=10mm USED 1
RL02	2140015005	REED RELAY
R03	2412068007	100 ohm ±5% ¼W CARBON FILM
R04	2412068007	100 ohm ±5% ¼W CARBON FILM
C15	2541035011	2.2 μF ±20% 35V PLASTIC FILM
C16	2541035011	2.2 μF ±20% 35V PLASTIC FILM
C61	2541035011	0.47 μF ±10% 250V METALIZED
C62	2541035011	0.47 μF ±10% 250V METALIZED

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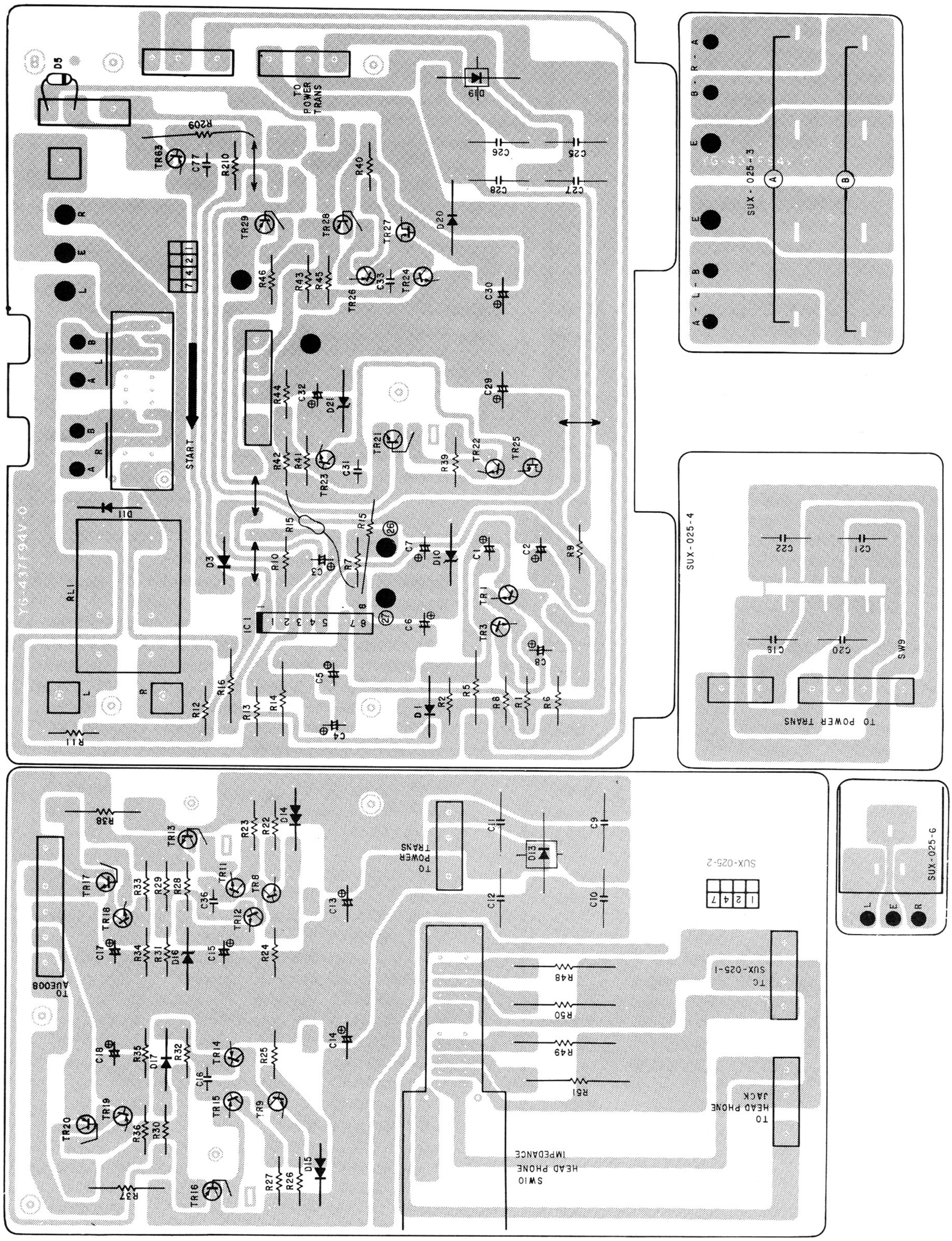
SUX-025 POWER SUPPLY UNIT



NOTE:
Please be noted the following difference between the print on the SUX-025 P.C. Board and actual parts utilized.

- Refer to pattern side for D5 (IS2076A) and R15 (4B2E914).
- Color indications for terminals 26, 27 on the SUX-025-1 board are contrary. Actually the terminals 26 - yellow and 27 - white.
- Color indications for SUX-025-6 board red, white are contrary. Actually, white, red.

SUX-025 PARTS LIST

Ref. No.	Part No.	Part Name & Descriptions
		SEMICONDUCTORS
IC01	2630102004	HA12002W INTEGRATED CIRCUIT
TR01	2730198015	2SC1815(BL) TRANSISTOR
TR03	2730198015	2SC1815(BL) TRANSISTOR
TR07	2730177007	2SC1626(Y) TRANSISTOR

Ref. No.	Part No.	Part Name & Descriptions
TR08	2710094032	2SA970(BL)/(GR) TRANSISTOR
TR09	2730187039	2SC2240(BL)/(GR) TRANSISTOR
TR11	2730187039	2SC2240(BL)/(GR) TRANSISTOR
TR12	2730187039	2SC2240(BL)/(GR) TRANSISTOR
TR13	2740044036	2SD478(C)/(D) TRANSISTOR
TR14	2710094032	2SA970(BL)/(GR) TRANSISTOR

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SUX-025 PARTS LIST

Ref. No.	Part No.	Part Name & Descriptions
TR15	2710094032	2SA970(BL)/(GR) TRANSISTOR
TR16	2720031027	2SB568(C)/(D) TRANSISTOR
TR18	2730187039	2SC2240(BL)/(GR) TRANSISTOR
TR19	2710094032	2SA970(BL)/(GR) TRANSISTOR
TR20	2710088006	2SA816(Y) TRANSISTOR
TR21	2730177007	2SC1626(Y) TRANSISTOR
TR22	2730198031	2SC1815(BL)/(GR) TRANSISTOR
TR23	2730198031	2SC1815(BL)/(GR) TRANSISTOR
TR24	2710102005	2SA1015(Y) TRANSISTOR
TR25	2750018007	2SK30A(R) FIELD EFFECT TRANSISTOR
TR26	2710102005	2SA1015(Y) TRANSISTOR
TR27	2750018007	2SK30A(R) FIELD EFFECT TRANSISTOR
TR28	2710088006	2SA816(Y) TRANSISTOR
TR29	2730177007	2SC1626(Y) TRANSISTOR
TR63	2730198002	2SC1815(Y) TRANSISTOR
D01	2760049011	1S2076A DIODE
D03	2760254000	HZ7B-3 DIODE
D05	2760049011	1S2076A DIODE
D10	2760244007	MZ303A DIODE
D11	2760237001	RV06 DIODE
D13	2760239009	S1RBA20F DIODE
D14	2760200009	MV-11 DIODE
D15	2760200009	MV-11 DIODE
D16	2760220018	HZ24-1 DIODE
D17	2760049008	1S2076 DIODE
D19	2760239009	S1RBA20F DIODE
D20	2760158009	W06A DIODE
D21	2760253001	HZ15-2 DIODE
		RESISTORS
R01	2412219908	470 ohm ±5% ¼W CARBON FILM
R02	2412286902	300 kohm ±5% ¼W CARBON FILM
R05	2440045021	2.2 kohm ±5% 1W METAL OXIDE FILM
R06	2412286902	300 kohm ±5% ¼W CARBON FILM
R07	2412179909	10 ohm ±5% ¼W CARBON FILM
R08	2412247909	6.8 kohm ±5% ¼W CARBON FILM
R09	2412243903	4.7 kohm ±5% ¼W CARBON FILM
R10	2412251908	10 kohm ±5% ¼W CARBON FILM
R11	2412264908	36 kohm ±5% ¼W CARBON FILM
R12	2412264908	36 kohm ±5% ¼W CARBON FILM
R13	2412287901	330 kohm ±5% ¼W CARBON FILM
R14	2440042024	1.2 kohm ±5% 1W METAL OXIDE FILM
R15	2412163009	910 kohm ±5% ¼W CARBON FILM
R16	2440032021	180 ohm ±5% 1W METAL OXIDE FILM
R22	2412227903	1 kohm ±5% ¼W CARBON FILM
R23	2412219908	470 ohm ±5% ¼W CARBON FILM
R24	2412261901	27 kohm ±5% ¼W CARBON FILM
R25	2412261901	27 kohm ±5% ¼W CARBON FILM
R26	2412227903	1 kohm ±5% ¼W CARBON FILM
R27	2412219908	470 ohm ±5% ¼W CARBON FILM
R28	2412261901	27 kohm ±5% ¼W CARBON FILM
R29	2412264908	36 kohm ±5% ¼W CARBON FILM
R30	2412268904	51 kohm ±5% ¼W CARBON FILM
R31	2412260902	24 kohm ±5% ¼W CARBON FILM
R32	2412268904	51 kohm ±5% ¼W CARBON FILM
R33	2412259900	22 kohm ±5% ¼W CARBON FILM
R34	2412261901	27 kohm ±5% ¼W CARBON FILM
R35	2412261901	27 kohm ±5% ¼W CARBON FILM
R36	2412259900	22 kohm ±5% ¼W CARBON FILM
R37	2440041025	1 kohm ±5% 1W METAL OXIDE FILM
R38	2440041025	1 kohm 1W METAL OXIDE FILM
R39	2412219908	470 ohm ±5% ¼W CARBON FILM
R40	2412219908	470 ohm ±5% ¼W CARBON FILM
R41	2412249907	8.2 kohm ±5% ¼W CARBON FILM
R42	2412248908	7.5 kohm ±5% ¼W CARBON FILM
R43	2412260902	24 kohm ±5% ¼W CARBON FILM

Ref. No.	Part No.	Part Name & Descriptions
R44	2412255904	15 kohm ±5% ¼W CARBON FILM
R45	2412259900	22 kohm ±5% ¼W CARBON FILM
R46	2412219908	470 ohm ±5% ¼W CARBON FILM
R48	2440087021	120 ohm ±5% 2W METAL OXIDE FILM
R49	2440087021	120 ohm ±5% 2W METAL OXIDE FILM
R50	2440078027	22 ohm ±5% 2W METAL OXIDE FILM
R51	2440078027	22 ohm ±5% 2W METAL OXIDE FILM
R200	2412275900	100 kohm ±5% 2W METAL OXIDE FILM
		CAPACITORS
C01	2544034006	4.7 μF 35V ELECTROLYTIC
C02	2544066003	2.2 μF 50V ELECTROLYTIC
C03	2544005006	330 μF 6.3V ELECTROLYTIC
C04	2544044009	1 μF 50V ELECTROLYTIC
C05	2544035005	10 μF 35V ELECTROLYTIC
C06	2549015017	47 μF ±10% 10V ELECTROLYTIC
C07	2549015017	47 μF ±10% 10V ELECTROLYTIC
C08	2544034006	4.7 μF 35V ELECTROLYTIC
C09	2561017019	0.01 μF ±10% 630V METALIZED
C10	2561017019	0.01 μF ±10% 630V METALIZED
C11	2561017019	0.01 μF ±10% 630V METALIZED
C12	2561017019	0.01 μF ±10% 630V METALIZED
C13	2546037001	470 μF 100V ELECTROLYTIC
C14	2546037001	470 μF 100V ELECTROLYTIC
C15	2544027000	47 μF 25V ELECTROLYTIC
C16	2521018003	22 pF ±10% 50V MICA FILM
C17	2544044009	1 μF 50V ELECTROLYTIC
C18	2544044009	1 μF 50V ELECTROLYTIC
C19	2561017019	0.01 μF ±10% 630V METALIZED
C20	2561017019	0.01 μF ±10% 630V METALIZED
C21	2561017019	0.01 μF ±10% 630V METALIZED
C22	2561017019	0.01 μF ±10% 630V METALIZED
C25	2561017019	0.01 μF ±10% 630V METALIZED
C26	2561017019	0.01 μF ±10% 630V METALIZED
C27	2561017019	0.01 μF ±10% 630V METALIZED
C28	2561017019	0.01 μF ±10% 630V METALIZED
C29	2544065017	2200 μF 35V ELECTROLYTIC
C30	2544041002	470 μF 35V ELECTROLYTIC
C31	2521018003	22 pF ±10% 50V MICA FILM
C32	2544017007	47 μF 16V ELECTROLYTIC
C33	2521018003	22 pF ±10% 16V MICA FILM
C36	2521018003	22 pF ±10% 16V MICA FILM
C77	2531004007	0.001 μF ±10% 50V CERAMIC
		OTHER PARTS
	2220576105	P.W. BOARD
	2050112030	3P CONNECTOR BASE
	2050112043	4P CONNECTOR BASE
	2050112056	5P CONNECTOR BASE
	2032068005	2P CONNECTOR
	2036079003	4P CONNECTOR BASE
	EP-6071	BASE PIN
RL01	2140041008	RELAY
	2090008120	JUMPER SHORT LEAD P=10mm USED 2
SW09	2124207004	SLIDE SWITCH (POWER)
SW10	2120160006	ROTARY SWITCH (B)
SW11	2124206005	SLIDE SWITCH (REMOTE)
	2050070004	8P TERMINAL
	2048047007	HEAD PHONE JACK
	4170021009	RADIATOR FOR TR16, TR13
	4730354019	TAPPING SCREW
	2034138014	3P CONNECTOR CORD FOR H.P. JACK
	2034131037	3P CONNECTOR CORD FOR H.P. SWITCH
	2038086007	5P CONNECTOR CORD FOR EQ. MUT.

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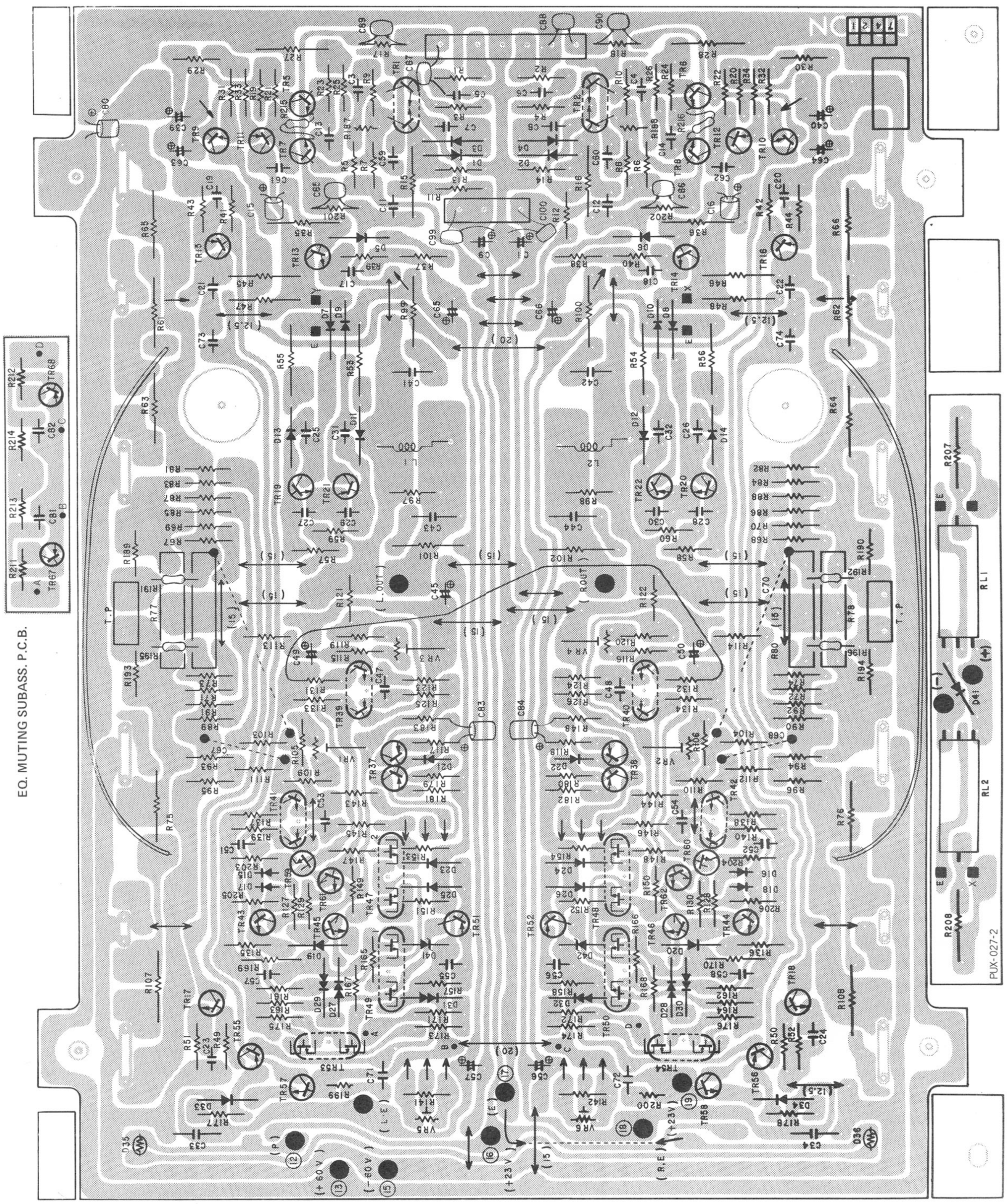
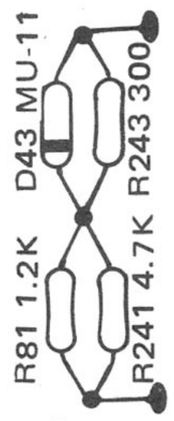
PUX-027B POWER AMP UNIT





NOTE:
Please be noted the following difference between the print on the PUX-027B P.C. Board and actual parts utilized.

- Instead of R155 and R156, D41 and D42 (Hz24-1) are employed.
- Polarity of D31, D32 is reversed.
- R181, R182 portion is using sub-processed component
- Refer to pattern side for R191, 192, 195, 196 (Carbon Film 100 ohm ±5%), R215, 216 (Carbon Film 47 ohm ±5%), C83, 84 (Electrolytic 4.7μ/25V), C80 (Electrolytic 0.47μ/100V), C85, 86 (Mica Film 1pF/50V ±0.25P), C89, 90 (Mica Film 5pF/50V ±0.5P), C87, 88 (Mica Film 15pF/50V ±5%), C15, 16 (Electrolytic 1μF/100V), C99, 100 (Metalized 0.01μF/630V ±5%).

The lead in the center of TR37~TR42 (MPA-77V) must be cut off entirely before inserting to the board.

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PUX-027B PARTS LIST

Ref. No.	Part No.	Part Name & Descriptions
		SEMICONDUCTORS
TR01	2730181019	2SC1583(G)/(F) TRANSISTOR
TR02	2730181019	2SC1583(G)/(F) TRANSISTOR
TR05	2730235004	2SC1841(F) TRANSISTOR
TR06	2730235004	2SC1841(F) TRANSISTOR
TR07	2730235004	2SC1841(F) TRANSISTOR
TR08	2730235004	2SC1841(F) TRANSISTOR
TR09	2710110000	2SA916(L) TRANSISTOR
TR10	2710110000	2SA916(L) TRANSISTOR
TR11	2710110000	2SA916(L) TRANSISTOR
TR12	2710110000	2SA916(L) TRANSISTOR
TR13	2730205005	2SC1941(L) TRANSISTOR
TR14	2730205005	2SC1941(L) TRANSISTOR
TR15	2710110000	2SA916(L) TRANSISTOR
TR16	2710110000	2SA916(L) TRANSISTOR
TR17	2730205005	2SC1941(L) TRANSISTOR
TR18	2730205005	2SC1941(L) TRANSISTOR
TR19	2730212001	2SC2655(Y) TRANSISTOR
TR20	2730212001	2SC2655(Y) TRANSISTOR
TR21	2710117003	2SA1020(Y) TRANSISTOR
TR22	2710117003	2SA1020(Y) TRANSISTOR
TR37	2710115005	2SA995(G) TRANSISTOR
TR38	2710115005	2SA995(G) TRANSISTOR
TR39	2710126036	μPA-77V(F)/(E) TRANSISTOR
TR40	2710126036	μPA-77V(F)/(E) TRANSISTOR
TR41	2710126036	μPA-77V(F)/(E) TRANSISTOR
TR42	2710126036	μPA-77V(F)/(E) TRANSISTOR
TR43	2730198015	2SC1815(BL) TRANSISTOR
TR44	2730198015	2SC1815(BL) TRANSISTOR
TR45	2730198015	2SC1815(BL) TRANSISTOR
TR46	2730198015	2SC1815(BL) TRANSISTOR
TR47	2750024020	μPA68H(M) FIELD EFFECT TRANSISTOR
TR48	2750024020	μPA68H(M) FIELD EFFECT TRANSISTOR
TR49	2750024020	μPA68H(M) FIELD EFFECT TRANSISTOR
TR50	2750024020	μPA68H(M) FIELD EFFECT TRANSISTOR
TR51	2710102005	2SA1015(Y)FIELD EFFECT TRANSISTOR
TR52	2710102005	2SA1015(Y)FIELD EFFECT TRANSISTOR
TR53	2750024020	μPA68H(M) FIELD EFFECT TRANSISTOR
TR54	2750024020	μPA68H(M) FIELD EFFECT TRANSISTOR
TR55	2710110000	2SA916(L) TRANSISTOR
TR56	2710110000	2SA916(L) TRANSISTOR
TR57	2730205005	2SC1941(L) TRANSISTOR
TR58	2730205005	2SC1941(L) TRANSISTOR
TR67	2710102005	2SA1015(Y) TRANSISTOR
TR68	2710102005	2SA1015(Y) TRANSISTOR
D01	2760049008	1S2076 DIODE
D02	2760049008	1S2076 DIODE
D03	2760049008	1S2076 DIODE
D04	2760049008	1S2076 DIODE
D05	2760171028	HV-23G(YL) DIODE
D06	2760171028	HV-23G(YL) DIODE
D07	2760049011	1S2076A DIODE
D08	2760049011	1S2076A DIODE
D09	2760049011	1S2076A DIODE
D10	2760049011	1S2076A DIODE
D11	2760049011	1S2076A DIODE
D12	2760049011	1S2076A DIODE
D13	2760049011	1S2076A DIODE
D14	2760049011	1S2076A DIODE
D15	2760049008	1S2076 DIODE
D16	2760049008	1S2076 DIODE
D17	2760049008	1S2076 DIODE
D18	2760049008	1S2076 DIODE
D19	2760049008	1S2076 DIODE
D20	2760049008	1S2076 DIODE
D21	2760049008	1S2076 DIODE
D22	2760049008	1S2076 DIODE
D23	2760049008	1S2076 DIODE
D24	2760049008	1S2076 DIODE
D25	2760049008	1S2076 DIODE
D26	2760049008	1S2076 DIODE
D27	2760200009	MV-11 DIODE
D28	2760200009	MV-11 DIODE
D29	2760200009	MV-11 DIODE
D30	2760200009	MV-11 DIODE
D31	2760253001	HZ15-2 DIODE
D32	2760253001	HZ15-2 DIODE

Ref. No.	Part No.	Part Name & Descriptions
D33	2760253001	HZ15-2 DIODE
D34	2760253001	HZ-15-2 DIODE
D41	2760049011	1S2076A DIODE
D41	2760220018	HZ-24-1 DIODE
D42	2760220018	HZ-24-1 DIODE
D43	2760200009	MV-11 DIODE
D44	2760200009	MV-11 DIODE
		RESISTORS
R05	2412012095	2.2 kohm ±2% ¼W CARBON FILM
R06	2412012095	2.2 kohm ±2% ¼W CARBON FILM
R07	2412012095	2.2 kohm ±2% ¼W CARBON FILM
R08	2412012095	2.2 kohm ±2% ¼W CARBON FILM
R13	2442021085	360 ohm ±5% ½W METAL OXIDE FILM
R14	2442021085	360 ohm ±5% ½W METAL OXIDE FILM
R15	2452014040	10 kohm ±5% ½W METAL OXIDE FILM
R16	2452014040	10 kohm ±5% ½W METAL OXIDE FILM
R17	2420203003	10M ohm ±10% ½W CARBON COMPOSIT
R18	2420203003	10M ohm ±10% ½W CARBON COMPOSIT
R19	2442021069	240 ohm ±5% ½W METAL OXIDE FILM
R20	2442021069	240 ohm ±5% ½W METAL OXIDE FILM
R21	2442021069	240 ohm ±5% ½W METAL OXIDE FILM
R22	2442021069	240 ohm ±5% ½W METAL OXIDE FILM
R27	2442013022	1.3 kohm ±5% 1W METAL OXIDE FILM
R28	2442013022	1.3 kohm ±5% 1W METAL OXIDE FILM
R29	2442021072	51 ohm ±5% ½W METAL OXIDE FILM
R30	2442021072	51 ohm ±5% ½W METAL OXIDE FILM
R35	2440050029	5.6 kohm ±5% 1W METAL OXIDE FILM
R36	2440050029	5.6 kohm ±5% 1W METAL OXIDE FILM
R39	2412068007	100 ohm ±5% 1W METAL OXIDE FILM
R40	2412068007	100 ohm ±5% 1W METAL OXIDE FILM
R45	2440033020	220 ohm ±5% 1W METAL OXIDE FILM
R46	2440033020	220 ohm ±5% 1W METAL OXIDE FILM
R47	2440033020	220 ohm ±5% 1W METAL OXIDE FILM
R48	2440033020	220 ohm ±5% 1W METAL OXIDE FILM
R53	2440041025	1 kohm ±5% 1W METAL OXIDE FILM
R54	2440041025	1 kohm ±5% 1W METAL OXIDE FILM
R55	2440041025	1 kohm ±5% 1W METAL OXIDE FILM
R56	2440041025	1 kohm ±5% 1W METAL OXIDE FILM
R61	2440029021	100 ohm ±5% 1W METAL OXIDE FILM
R62	2440029021	100 ohm ±5% 1W METAL OXIDE FILM
R63	2440013024	4.7 ohm ±5% 1W METAL OXICE FILM
R64	2440013024	4.7 ohm ±5% 1W METAL OXIDE FILM
R65	2440013024	4.7 ohm ±5% 1W METAL OXIDE FILM
R66	2440013024	4.7 ohm ±5% 1W METAL OXIDE FILM
R67	2442007070	39 ohm ±5% ¼W METAL OXIDE FILM
R68	2442007070	39 ohm ±5% ¼W METAL OXIDE FILM
R69	2442007070	39 ohm ±5% ¼W METAL OXIDE FILM
R70	2442007070	39 ohm ±5% ¼W METAL OXIDE FILM
R71	2442007070	39 ohm ±5% ¼W METAL OXIDE FILM
R72	2442007070	39 ohm ±5% ¼W METAL OXIDE FILM
R73	2442007070	39 ohm ±5% ¼W METAL OXIDE FILM
R74	2442007070	39 ohm ±5% ¼W METAL OXIDE FILM
R75	2440013024	4.7 ohm ±5% 1W METAL OXIDE FILM
R76	2440013024	4.7 ohm ±5% 1W METAL OXIDE FILM
R77	2432029000	1 ohm/1 ohm ±5% 1W WIRE WOUND
R78	2432029000	1 ohm/1 ohm ±5% 1W WIRE WOUND
R79	2432029000	1 ohm/1 ohm ±5% 1W WIRE WOUND
R80	2432029000	1 ohm/1 ohm ±5% 1W WIRE WOUND
R85	2442007038	100 ohm ±5% 1W METAL OXIDE FILM
R86	2442007038	100 ohm ±5% 1W METAL OXIDE FILM
R87	2442007038	100 ohm ±5% 1W METAL OXIDE FILM
R88	2442007038	100 ohm ±5% 1W METAL OXIDE FILM
R89	2442007038	100 ohm ±5% 1W METAL OXIDE FILM
R90	2442007038	100 ohm ±5% 1W METAL OXIDE FILM
R91	2442007038	100 ohm ±5% 1W METAL OXIDE FILM
R92	2442007038	100 ohm ±5% 1W METAL OXIDE FILM
R99	2440022028	27 ohm ±5% 1W METAL OXIDE FILM
R100	2440022028	27 ohm ±5% 1W METAL OXIDE FILM
R101	2440017020	10 ohm ±5% 1W METAL OXIDE FILM
R102	2440017020	10 ohm ±5% 1W METAL OXIDE FILM
R103	2452014024	8.2 kohm ±5% ½W METAL OXIDE FILM
R104	2452014024	8.2 kohm ±5% ½W METAL OXIDE FILM
R105	2452014037	1.8 kohm ±5% ½W METAL OXIDE FILM
R106	2452014037	1.8 kohm ±5% ½W METAL OXIDE FILM
R107	2440013024	4.7 ohm ±5% 1W METAL OXIDE FILM
R108	2440013024	4.7 ohm ±5% 1W METAL OXIDE FILM

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(Con.)

Ref. No.	Part No.	Part Name & Descriptions
R109	2452014037	1.8 kohm ½W METAL OXIDE FILM
R110	2452014037	1.8 kohm ±5% ½W METAL OXIDE FILM
R111	2452014024	8.2 kohm ±5% ½W METAL OXIDE FILM
R112	2452014024	8.2 kohm ½W METAL OXIDE FILM
R113	2452014024	8.2 kohm ±5% ½W METAL OXIDE FILM
R114	2452014024	8.2 kohm ±5% ½W METAL OXIDE FILM
R115	2452014037	1.8 kohm ±5% ½W METAL OXIDE FILM
R116	2452014037	1.8 kohm ±5% ½W METAL OXIDE FILM
R119	2452014037	1.8 kohm ±5% ½W METAL OXIDE FILM
R120	2452014037	1.8 kohm ±5% ½W METAL OXIDE FILM
R121	2452014024	8.2 kohm ±5% ½W METAL OXIDE FILM
R122	2452014024	8.2 kohm ±5% ½W METAL OXIDE FILM
R169	2420203003	10M ohm ±10% ½W CARBON COMPOSIT
R170	2420203003	10M ohm ±10% ½W CARBON COMPOSIT
R181	2412094000	1.2 kohm ±5% ¼W CARBON COMPOSIT
R182	2412094000	1.2 kohm ±5% ¼W CARBON COMPOSIT
R187	2412002005	220 ohm ±5% ¼W CARBON COMPOSIT STANDING TYPE
R118	2412002005	220 ohm ±5% ¼W CARBON COMPOSIT STANDING TYPE
R191	2412068007	100 ohm ±5% ¼W CARBON COMPOSIT
R192	2412068007	100 ohm ±5% ¼W CARBON COMPOSIT
R195	2412068007	100 ohm ±5% ¼W CARBON COMPOSIT
R196	2412068007	100 ohm ±5% ¼W CARBON COMPOSIT
R199	2412028021	1.6 kohm ±5% ¼W CARBON COMPOSIT STANDING TYPE
R200	2412028021	1.6 kohm ±5% ¼W CARBON COMPOSIT STANDING TYPE
R201	2420203003	10M ohm ±10% ½W CARBON COMPOSIT
R202	2420203003	10M ohm ±10% ½W CARBON COMPOSIT
R207	2440042024	1.2 kohm ±5% 1W METAL OXIDE FILM
R208	2440042024	1.2 kohm ±5% 1W METAL OXIDE FILM
R211	2412068007	100 ohm ±5% ¼W CARBON FILM
R212	2412068007	100 ohm ±5% ¼W CARBON FILM
R213	2412140006	100 kohm±5% ¼W CARBON FILM
R214	2412140006	100 kohm±5% ¼W CARBON FILM
R215	2412060005	47 ohm ±5% ¼W CARBON FILM
R216	2412060005	47 ohm ±5% ¼W CARBON FILM
R241	2412108006	4.7 kohm ±5% ¼W CARBON FILM
R242	2412108006	4.7 kohm ±5% ¼W CARBON FILM
R243	2412079009	300 ohm ±5% ¼W CARBON FILM
R244	2412079009	300 ohm ±5% ¼W CARBON FILM
		CAPACITORS
C01	2544038002	100 μF 35V ELECTROLYTIC
C03	2554078065	0.0047 μF ±5% 100V PLASTIC FILM
C04	2554078065	0.0047 μF ±5% 100V PLASTIC FILM
C05	2556075008	100 pF ±5% 50V PLASTIC FILM
C06	2556075008	100 pF ±5% 50V PLASTIC FILM
C07	2554084004	0.0022 μF ±5% 100V PLASTIC FILM
C08	2554084004	0.0022 μF ±5% 100V PLASTIC FILM
C09	2544038002	100 μF 35V ELECTROLYTIC
C11	2521008000	8 pF ±0.5 pF 50V MICA FILM
C12	2521008000	8 pF ±0.5 pF 50V MICA FILM
C13	2521018003	22 pF ±5% 50V MICA FILM
C14	2521018003	22 pF ±5% 50V MICA FILM
C15	2544060025	1 μF 100V ELECTROLYTIC
C16	2544060025	1 μF 100V ELECTROLYTIC
C17	2521034003	100 pF ±5% 50V MICA FILM
C18	2521034003	100 pF ±5% 50V MICA FILM
C19	2521050003	470 pF ±5% 50V MICA FILM
C20	2521050003	470 pF ±5% 50V MICA FILM
C21	2554077008	0.001 μF ±5% 100V PLASTIC FILM
C22	2554077008	0.001 μF ±5% 100V PLASTIC FILM
C23	2521050003	470 pF ±5% 100V MICA FILM
C24	2521050003	470 pF ±5% 100V MICA FILM
C25	2554078065	0.0047 μF ±5% 100V PLASTIC FILM
C26	2554078065	0.0047 μF ±5% 100V PLASTIC FILM
C27	2554078065	0.0047 μF ±5% 100V PLASTIC FILM
C28	2554078065	0.0047 μF ±5% 100V PLASTIC FILM
C29	2554078065	0.0047 μF ±5% 100V PLASTIC FILM
C30	2554078065	0.0047 μF ±5% 100V PLASTIC FILM
C31	2554078065	0.0047 μF ±5% 100V PLASTIC FILM
C32	2554078065	0.0047 μF ±5% 100V PLASTIC FILM
C33	2544060038	0.47 μF 100V ELECTROLYTIC
C34	2544060038	0.47 μF 100V ELECTROLYTIC
C39	2544060038	0.47 μF 100V ELECTROLYTIC

Ref. No.	Part No.	Part Name & Descriptions
C40	2544060038	0.47 μF 100V ELECTROLYTIC
C41	2561017019	0.01 μF 10% 630V METALIZED
C42	2561017019	0.01 μF 10% 630V METALIZED
C43	2561017035	0.022 μF 10% 630V METALIZED
C44	2561017035	0.022 μF 10% 630V METALIZED
C45	2544035005	10 μF 35V ELECTROLYTIC
C47	2521046004	330 pF 5% 50V MICA FILM
C48	2521046004	330 pF 5% 50V MICA FILM
C49	2544035005	10 μF 35V ELECTROLYTIC
C50	2544035005	10 μF 35V ELECTROLYTIC
C51	2521050003	470 pF 5% 50V MICA FILM
C52	2521050003	470 pF 5% 50V MICA FILM
C53	2521042008	220 pF 5% 50V MICA FILM
C54	2521042008	220 pF 5% 50V MICA FILM
C55	2521022002	33 pF 5% 50V MICA FILM
C56	2521022002	33 pF 5% 50V MICA FILM
C57	2554078065	0.0047 μF ±5% 100V PLASTIC FILM
C58	2554078065	0.0047 μF ±5% 100V PLASTIC FILM
C59	2521010001	10 pF 0.5 pF 50V MICA FILM
C60	2521010001	10 pF 0.5 pF 50V MICA FILM
C61	2521081027	3 pF 0.5 pF 50V MICA FILM
C62	2521081027	3 pF 0.5 pF 50V MICA FILM
C63	2544060038	0.47 μF 100V ELECTROLYTIC
C64	2544060038	0.47 μF 100V ELECTROLYTIC
C65	2544060025	1 μF 100V ELECTROLYTIC
C66	2544060025	1 μF 100V ELECTROLYTIC
C71	2521042008	220 pF 5% 50V MICA FILM
C72	2521042008	220 pF 5% 50V MICA FILM
C73	2554077008	0.001 μF 5% 100V PLASTIC FILM
C74	2554077008	0.001 μF 5% 100V PLASTIC FILM
C80	2544060038	0.47 μF 100V ELECTROLYTIC
C81	2554077008	0.001 μF 5% 100V PLASTIC FILM
C82	2554077008	0.001 μF 5% 100V PLASTIC FILM
C83	2544024003	4.7 μF 25V ELECTROLYTIC
C84	2544024003	4.7 μF 25V ELECTROLYTIC
C85	2521001007	1 pF 0.25 pF 50V MICA FILM
C86	2521001007	1 pF 0.25 pF 50V MICA FILM
C87	2521014007	15 pF 5% 50V MICA FILM
C88	2521014007	15 pF 5% 50V MICA FILM
C89	2521005003	5 pF 0.5 pF 50V MICA FILM
C90	2521005003	5 pF 0.5 pF 50V MICA FILM
C99	2561017019	0.01 μF 10% 630V METALIZED
C100	2561017019	0.01 μF 10% 630V METALIZED
		OTHER PARTS
	2220577201	P.W. BOARD
	—	MUTING BOARD SUB ASS (SEE TABLE)
	2050126000	TERMINAL USED 4
	2090008146	JUMPER SHORT LEAD P=5mm USED 4
	2090008133	JUMPER SHORT LEAD P=7.5mm USED 1
	2090008120	JUMPER SHORT LEAD P=10mm USED 10
	2090008117	JUMPER SHORT LEAD P=12.5mm USED 3
	2090008104	JUMPER SHORT LEAD P=15mm USED 3
	2090008162	JUMPER SHORT LEAD P=20mm USED 4
VR01	2116025016	SEMI FIXED RESISTOR 100 OHM
VR02	2116025016	SEMI FIXED RESISTOR 100 OHM
VR03	2116025016	SEMI FIXED RESISTOR 100 OHM
VR04	2116025016	SEMI FIXED RESISTOR 100 OHM
VR05	2116027001	SEMI FIXED RESISTOR 1 KOHM
VR06	2116027001	SEMI FIXED RESISTOR 1 KOHM
RL01	2140029004	REED RELAY DC24V OPERAT.
RL02	2140029004	REED RELAY DC24V OPERAT.
L01	2320017001	INDUCTOR
L02	2320017001	INDUCTOR
	2050087026	2P TERMINAL FOR TEST POINT
	2050112030	3P CONNECTOR BASE
	2050112069	6P CONNECTOR BASE
	2034139013	3P CONNECTOR CORD FOR RESISTOR
	2036064089	4P CONNECTOR CORD FOR +, –B
	2030221006	1P CONNECTOR CORD FOR LCH SP OUT
	2030221019	1P CONNECTOR CORD FOR RCH SP OUT
	2036081004	4P CONNECTOR CORD FOR RAMD
	Muting Board	
	2220601009	P.W. BOARD
	2050126000	TERMINAL

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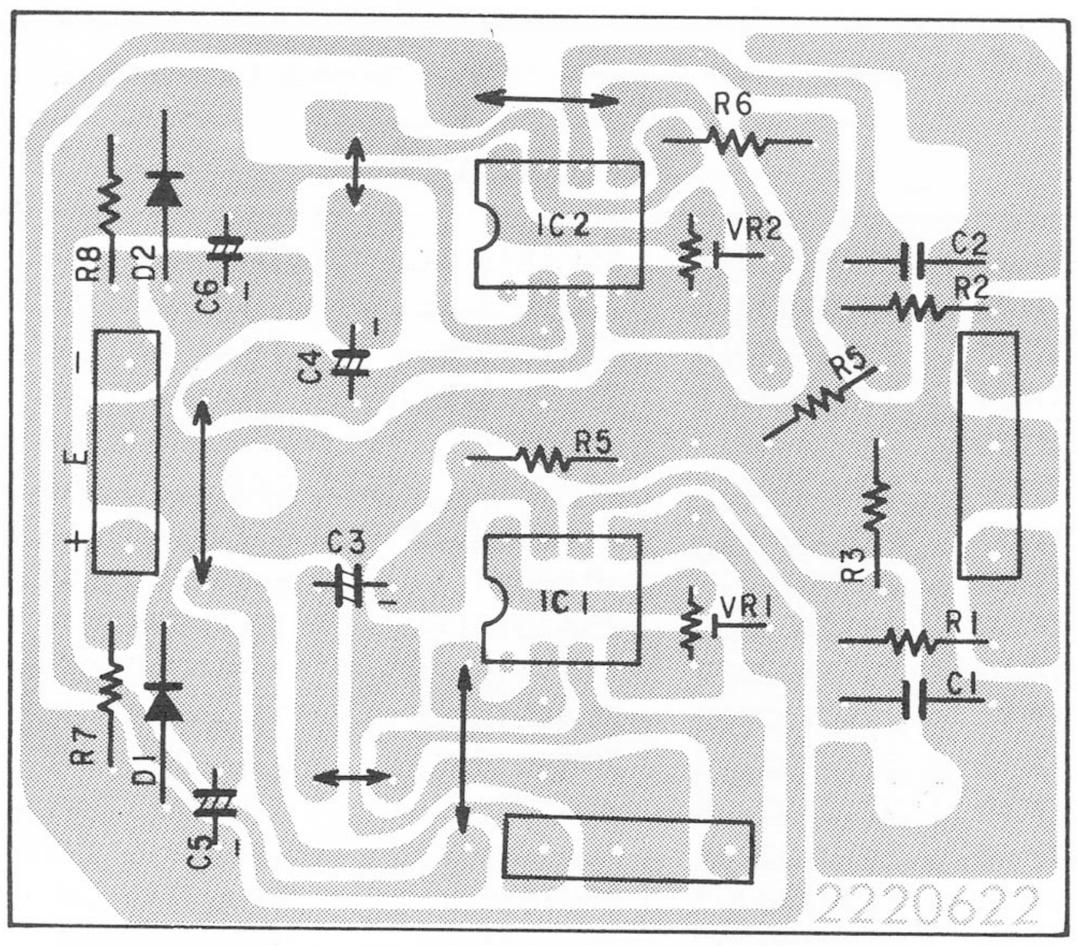
EQ. SERVO UNIT (PA-122)



EQ. SERVO UNIT PARTS LIST

Ref. No.	Part No.	Part Name & Descriptions
		SEMICONDUCTORS
IC01	2630133002	μPC741(C) INTEGRATED CIRCUIT
IC02	2630133002	μPC741(C) INTEGRATED CIRCUIT
D01	2760253001	HZ15-2 DIODE
D02	2760253001	HZ15-2 DIODE
		RESISTORS
R01	2412118009	12 kohm ±5% ¼W CARBON FILM
R02	2412118009	12 kohm ±5% ¼W CARBON FILM
R03	2412113004	7.5 kohm ±5% ¼W CARBON FILM
R04	2412113004	7.5 kohm ±5% ¼W CARBON FILM
R05	2412108006	4.7 kohm ±5% ¼W CARBON FILM
R06	2412108006	4.7 kohm ±5% ¼W CARBON FILM
R07	2412104000	3.3 kohm ±5% ¼W CARBON FILM
R08	2412104000	3.3 kohm ±5% ¼W CARBON FILM
		CAPACITORS
C01	2561017019	0.01 μF ±10% 630V METALIZED
C02	2561017019	0.01 μF ±10% 630V METALIZED
C03	2544005006	330 μF 6.3V ELECTROLYTIC
C04	2544005006	330 μF 6.3V ELECTROLYTIC
C05	2544015009	10 μF 16V ELECTROLYTIC
C06	2544015009	10 μF 16V ELECTROLYTIC
		OTHER PARTS
	2220622004	P.W. BOARD
	2050112030	3P CONNECTOR BASE
	2090008146	JUMPER SHORT LEAD P=5mm USED 2
	2090008120	JUMPER SHORT LEAD P=10mm USED 1
	2090008117	JUMPER SHORT LEAD P=12.5mm USED 2
VR1	EP-5462H13	SEMI FIXED RESISTOR 10 KOHM
VR2	EP-5462H13	SEMI FIXED RESISTOR 10 KOHM

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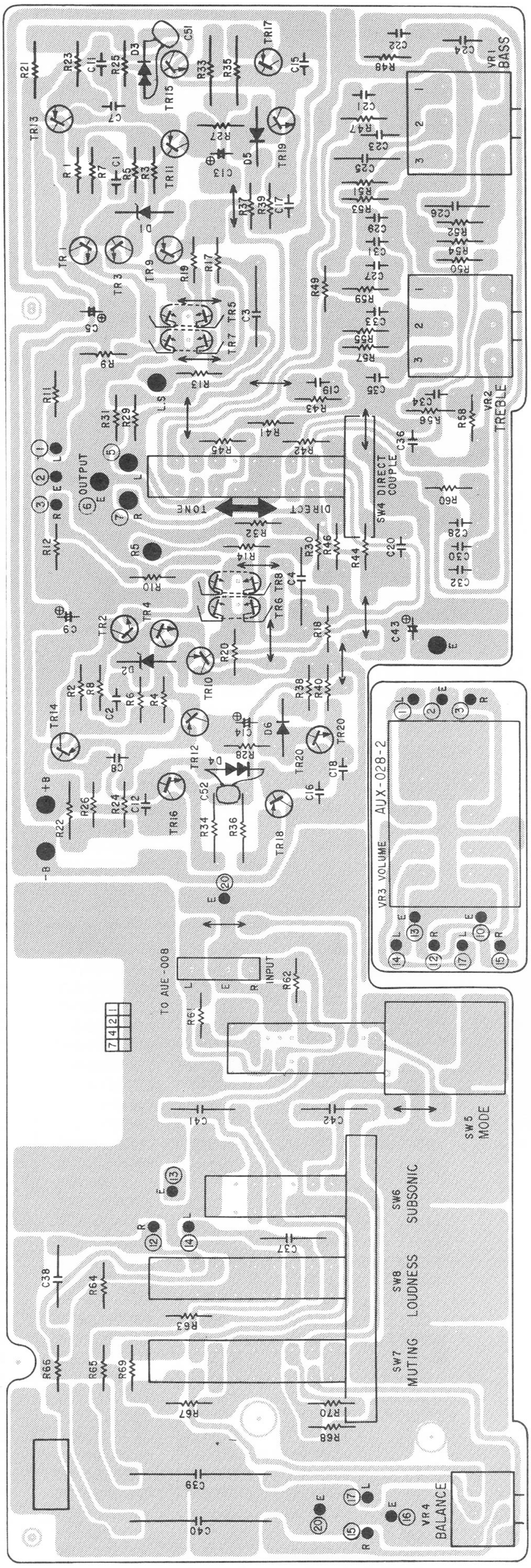
AUX-028 CONTROL (B) UNIT



AUX-028 CONTROL (B) UNIT PARTS LIST

Ref. No.	Part No.	Part Name & Descriptions
		SEMICONDUCTORS
TR01	2730198015	2SC1815(BL) TRANSISTOR
TR02	2730198015	2SC1815(BL) TRANSISTOR
TR03	2730198015	2SC1815(BL) TRANSISTOR
TR04	2730198015	2SC1815(BL) TRANSISTOR
TR05	2750024017	μPA68H(L) FIELD EFFECT TRANSISTOR
TR06	2750024017	μPA68H(L) FIELD EFFECT TRANSISTOR
TR07	2750024017	μPA68H(L) FIELD EFFECT TRANSISTOR
TR08	2750024017	μPA68H(L) FIELD EFFECT TRANSISTOR
TR09	2710102005	2SA1015(Y) TRANSISTOR
TR10	2710102005	2SA1015(Y) TRANSISTOR
TR11	2710102005	2SA1015(Y) TRANSISTOR
TR12	2710102005	2SA1015(Y) TRANSISTOR
TR13	2710102005	2SA1015(Y) TRANSISTOR
TR14	2710102005	2SA1015(Y) TRANSISTOR
TR15	2730198002	2SC1815(Y) TRANSISTOR
TR16	2730198002	2SC1815(Y) TRANSISTOR
TR17	2710102005	2SA1015(Y) TRANSISTOR
TR18	2710102005	2SA1015(Y) TRANSISTOR
TR19	2730198002	2SC1815(Y) TRANSISTOR
TR20	2730198002	2SC1815(Y) TRANSISTOR
D01	2760185001	HZ-4-B3 DIODE
D02	2760185001	HZ-4-B3 DIODE
D03	2760200009	MV-11 DIODE
D04	2760200009	MV-11 DIODE
D05	2760171028	HV-23G(YL) DIODE
D06	2760171028	HV-23G(YL) DIODE
		RESISTORS
R01	2412244902	5.1 kohm ±5% ¼W CARBON FILM
R02	2412244902	5.1 kohm ±5% ¼W CARBON FILM
R03	2412244902	5.1 kohm ±5% ¼W CARBON FILM
R04	2412244902	5.1 kohm ±5% ¼W CARBON FILM
R05	2412259900	22 kohm ±5% ¼W CARBON FILM
R06	2412259900	22 kohm ±5% ¼W CARBON FILM
R07	2412202902	91 ohm ±5% ¼W CARBON FILM
R08	2412202902	91 ohm ±5% ¼W CARBON FILM
R09	2412219908	470 ohm ±5% ¼W CARBON FILM
R10	2412219908	470 ohm ±5% ¼W CARBON FILM
R11	2412292909	510 kohm ±5% ¼W CARBON FILM
R12	2412292909	510 kohm ±5% ¼W CARBON FILM
R13	2412275900	100 kohm ±5% ¼W CARBON FILM
R14	2412275900	100 kohm ±5% ¼W CARBON FILM
R17	2412248908	7.5 kohm ±5% ¼W CARBON FILM
R18	2412113004	7.5 kohm ±5% ¼W CARBON FILM
R19	2412248908	7.5 kohm ±5% ¼W CARBON FILM
R20	2412248908	7.5 kohm ±5% ¼W CARBON FILM
R21	2410182008	750 ohm ±5% ½W CARBON FILM
R22	2410182008	750 ohm ±5% ½W CARBON FILM
R23	2412195909	47 ohm ±5% ¼W CARBON FILM
R24	2412195909	47 ohm ±5% ¼W CARBON FILM
R25	2412195909	47 ohm ±5% ¼W CARBON FILM
R26	2412195909	47 ohm ±5% ¼W CARBON FILM
R27	2412224906	750 ohm ±5% ¼W CARBON FILM
R28	2412224906	750 ohm ±5% ¼W CARBON FILM
R29	2412299902	1M ohm ±5% ¼W CARBON FILM
R30	2412299902	1M ohm ±5% ¼W CARBON FILM
R31	2412275900	100 kohm ±5% ¼W CARBON FILM
R32	2412275900	100 kohm ±5% ¼W CARBON FILM
R33	2440021029	22 ohm ±5% 1W METAL OXIDE FILM
R34	2440021029	22 ohm ±5% 1W METAL OXIDE FILM
R35	2440021029	22 ohm ±5% 1W METAL OXIDE FILM
R36	2440021029	22 ohm ±5% 1W METAL OXIDE FILM
R37	2412231902	1.5 kohm ±5% ¼W CARBON FILM
R38	2412231902	1.5 kohm ±5% ¼W CARBON FILM
R39	2412231902	1.5 kohm ±5% ¼W CARBON FILM

(Con.)

Ref. No.	Part No.	Part Name & Descriptions
R40	2412231902	1.5 kohm ±5% ¼W CARBON FILM
R41	2412203901	100 ohm ±5% ¼W CARBON FILM
R42	2412203901	100 ohm ±5% ¼W CARBON FILM
R43	2412228902	1.1 kohm ±5% ¼W CARBON FILM
R44	2412228902	1.1 kohm ±5% ¼W CARBON FILM
R45	2412227903	1 kohm ±5% ¼W CARBON FILM
R46	2412227903	1 kohm ±5% ¼W CARBON FILM
R47	2412262900	30 kohm ±5% ¼W CARBON FILM
R48	2412262900	30 kohm ±5% ¼W CARBON FILM
R49	2412227903	1 kohm ±5% ¼W CARBON FILM
R50	2412227903	1 kohm ±5% ¼W CARBON FILM
R51	2412262900	30 kohm ±5% ¼W CARBON FILM
R52	2412262900	30 kohm ±5% ¼W CARBON FILM
R53	2412245901	5.6 kohm ±5% ¼W CARBON FILM
R54	2412245901	5.6 kohm ±5% ¼W CARBON FILM
R55	2412236907	2.4 kohm ±5% ¼W CARBON FILM
R56	2412236907	2.4 kohm ±5% ¼W CARBON FILM
R57	2420203003	10M ohm ±10% ¼W CARBON COMPOSIT
R58	2420203003	10M ohm ±10% ¼W CARBON COMPOSIT
R59	2412245901	5.6 kohm ±5% ¼W CARBON FILM
R60	2412245901	5.6 kohm ±5% ¼W CARBON FILM
R61	2412251908	10 kohm ±5% ¼W CARBON FILM
R62	2412251908	10 kohm ±5% ¼W CARBON FILM
R63	2412238905	3 kohm ±5% ¼W CARBON FILM
R64	2412238905	3 kohm ±5% ¼W CARBON FILM
R65	2412255904	15 kohm ±5% ¼W CARBON FILM
R66	2412255904	15 kohm ±5% ¼W CARBON FILM
R67	2412243903	4.7 kohm ±5% ¼W CARBON FILM
R68	2412243903	4.7 kohm ±5% ¼W CARBON FILM
R69	2412265907	39 kohm ±5% ¼W CARBON FILM
R70	2412265907	39 kohm ±5% ¼W CARBON FILM
		CAPACITORS
C01	2554077040	0.0015 μF ±5% 100V PLASTIC FILM
C02	2554077040	0.0015 μF ±5% 100V PLASTIC FILM
C03	2561018005	0.1 μF ±10% 250V METALIZED
C04	2561018005	0.1 μF ±10% 250V METALIZED
C05	2544035005	10 μF 35V ELECTROLYTIC
C07	2521034003	100 pF ±5% 50V MICA FILM
C08	2521034003	100 pF ±5% 50V MICA FILM
C09	2544035005	10 μF 35V ELECTROLYTIC
C11	2521034003	100 pF ±5% 50V MICA FILM
C12	2521034003	100 pF ±5% 50V MICA FILM
C13	2544044009	1 μF 50V ELECTROLYTIC
C14	2544044009	1 μF 50V ELECTROLYTIC
C15	2521034003	100 pF ±5% 50V MICA FILM
C16	2521034003	100 pF ±5% 50V MICA FILM
C17	2521017004	20 pF ±5% 50V MICA FILM
C18	2521017004	20 pF ±5% 50V MICA FILM
C19	2521050003	470 pF ±5% 50V MICA FILM
C20	2521050003	470 pF ±5% 50V MICA FILM
C21	2521014007	15 pF ±5% 50V MICA FILM
C22	2521014007	15 pF ±5% 50V MICA FILM
C23	2561020006	0.015 μF ±5% 630V METALIZED
C24	2561020006	0.015 μF ±5% 630V METALIZED
C25	2554081065	0.082 μF ±5% 100V PLASTIC FILM
C26	2554081065	0.082 μF ±5% 100V PLASTIC FILM
C27	2521030007	68 pF ±5% 50V MICA FILM
C28	2521030007	68 pF ±5% 50V MICA FILM
C29	2521034003	100 pF ±5% 50V MICA FILM
C30	2521034003	100 pF ±5% 50V MICA FILM
C31	2556103006	0.0015 μF ±5% 50V PLASTIC FILM

Ref. No.	Part No.	Part Name & Descriptions
C32	2556103006	0.0015 μF ±5% 50V PLASTIC FILM
C33	2521014007	15 pF ±5% 50V MICA FILM
C34	2521014007	15 pF ±5% 50V MICA FILM
C35	2554079064	0.012 μF ±5% 100V PLASTIC FILM
C36	2554079064	0.012 μF ±5% 100V PLASTIC FILM
C37	2554081081	0.1 μF ±5% 100V PLASTIC FILM
C38	2554081081	0.1 μF ±5% 100V PLASTIC FILM
C39	2556022006	750 pF ±5% 50V PLASTIC FILM
C40	2556022006	750 pF ±5% 50V PLASTIC FILM
C41	2554082048	0.18 μF ±5% 100V PLASTIC FILM
C42	2554082048	0.18 μF ±5% 100V PLASTIC FILM
C43	2544015009	10 μF 16V ELECTROLYTIC
C51	2561016007	0.068 μF ±10% 400V METALIZED
C52	2561016007	0.068 μF ±10% 400V METALIZED
		OTHER PARTS
	2220578006	P.W. BOARD
	2050112030	3P CONNECTOR BASE
	2090008120	JUMPER SHORT LEAD P=10mm USED 2
VR01	2110241027	VARIABLE RESISTOR 100 KOHM FOR BASS
VR02	2110239002	VARIABLE RESISTOR 100 KOHM FOR TREBLE
VR03	2110240101	VARIABLE RESISTOR 50 KOHM FOR VOLUME
VR04	211024200	VARIABLE RESISTOR 100 KOHM FOR BALANCE
SW04	2124203008	1P PUSH SWITCH FOR DIRECT
SW05	2120159004	ROTARY SWITCH (A) FOR MODE
SW06	2124204007	3P PUSH SWITCH FOR FIL.
SW07	2124204007	3P PUSH SWITCH FOR MUT.
SW08	2124204007	3P PUSH SWITCH FOR LOUD.
	2030170021	1P CONTACT ASS
	2034131040	3P CONNECTOR CORD FOR +, –B
	2040070001	6P CONNECTOR CORD FOR TONE OUT

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Notes

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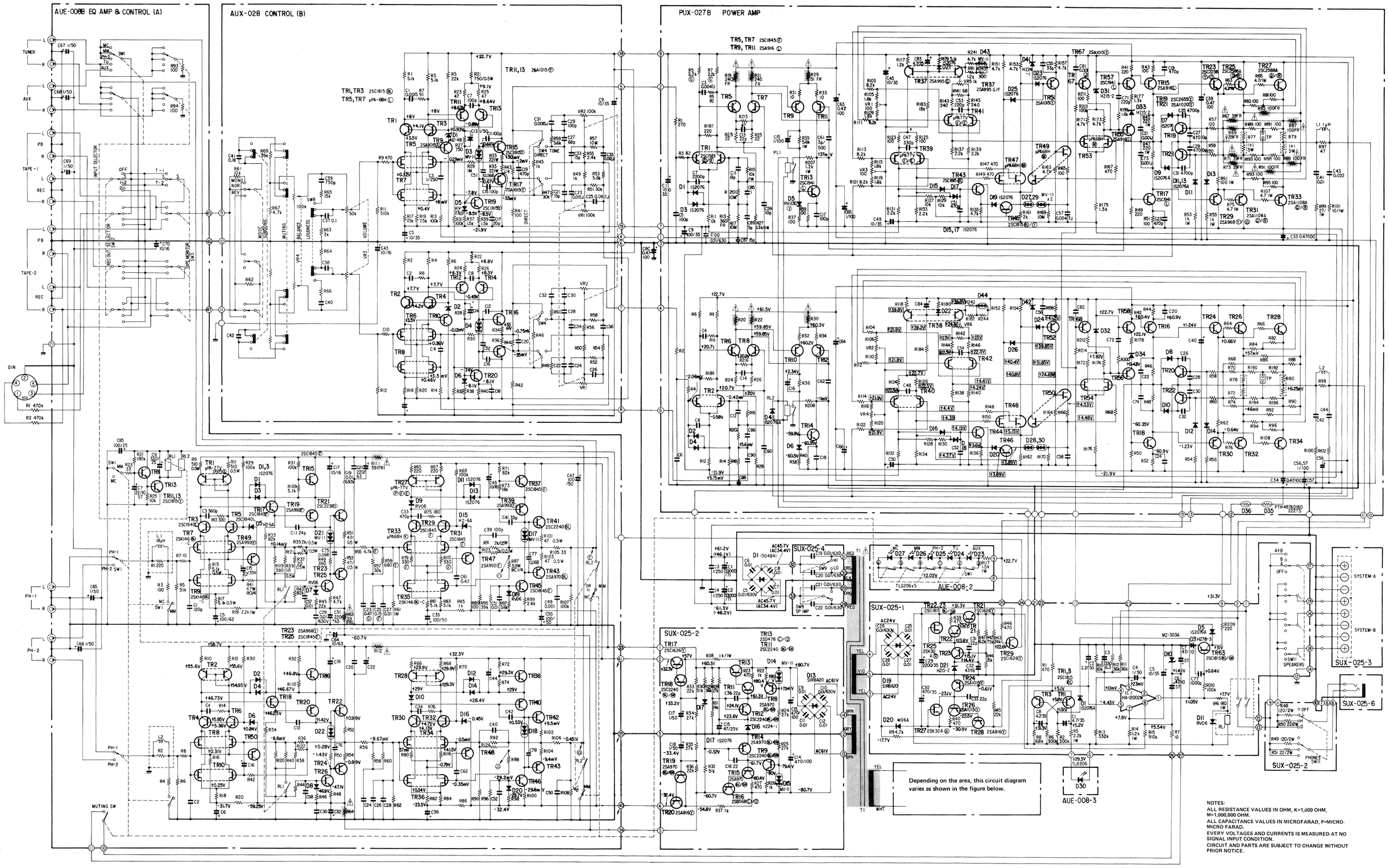
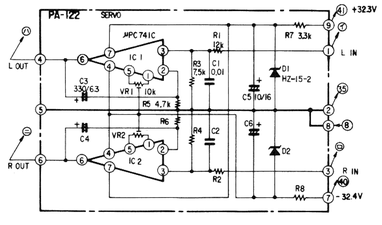
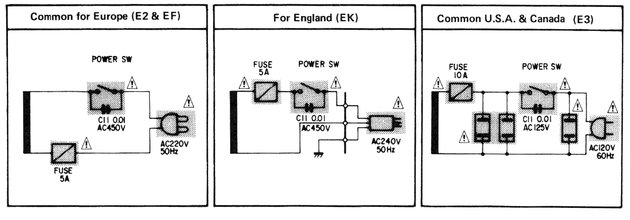
WIRING DIAGRAM

⚠ ▩ Means important safety item, which must be replaced, when necessary, by a part specified or meeting the specification by the manufacturer.







NOTES:
ALL RESISTANCE VALUES IN OHM, K=1,000 OHM, M=1,000,000 OHM.
ALL CAPACITANCE VALUES IN MICROFARAD, P=MICRO-MICRO FARAD.
EVERY VOLTAGES AND CURRENTS IS MEASURED AT NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

NOTE:
All voltage values in ▭ are measured between the specified points and negative (–) polarity power supply source.
Checking of the value in ▭ must be measured between the specified point and negative (–) polarity power supply source, or damage may invite to the unit.
This schematic diagram is standard and subject to change for improvement without notice.

DENON

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