

KENWOOD
HI/FI STEREO COMPONENTS

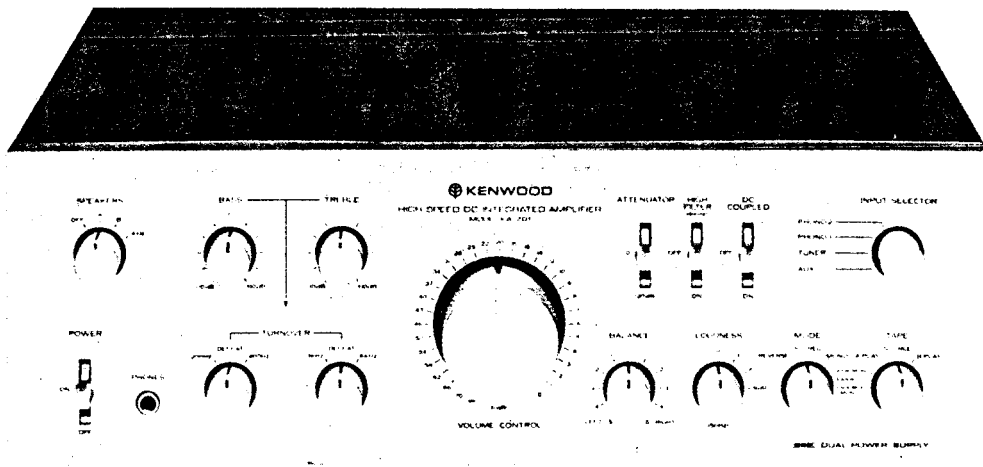
SERVICE MANUAL

KA-701 (KA-7011)

An item of adjustment is written in three languages — English, French and German.

Un article sur réglages est écrit en trois langues, Anglais, Français et Allemand.

Ein Artikel der Abgleich wird auf drei Sprachen, Englische, Französisch und Deutsch geschrieben.



HIGH SPEED DC INTEGRATED AMPLIFIER

CONTENTS

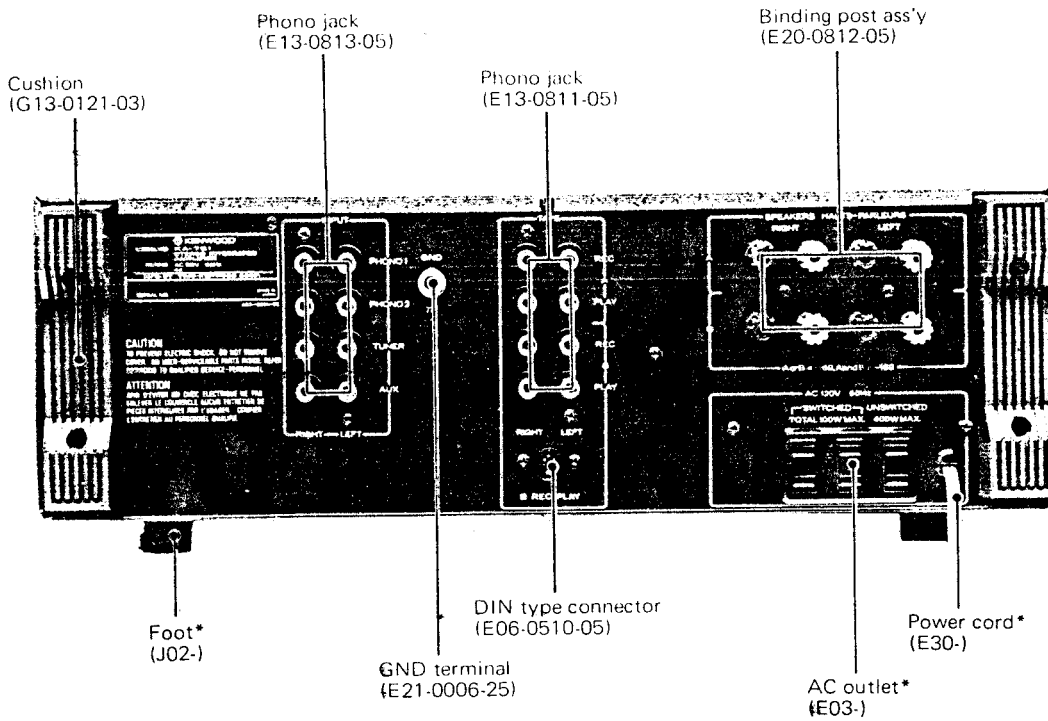
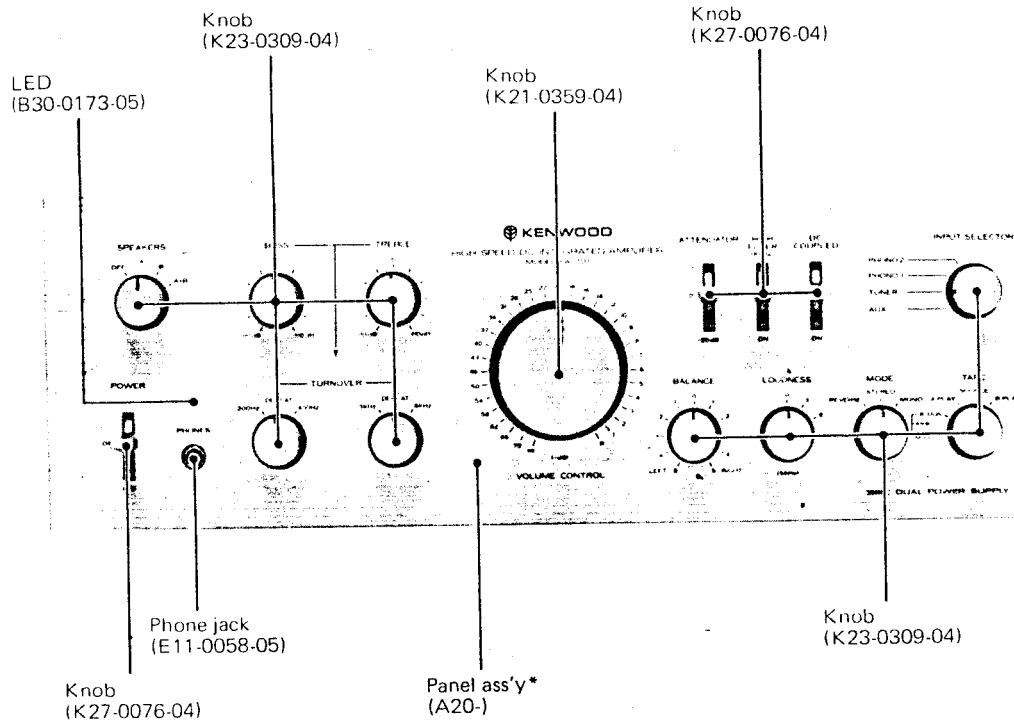
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Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the U.S. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

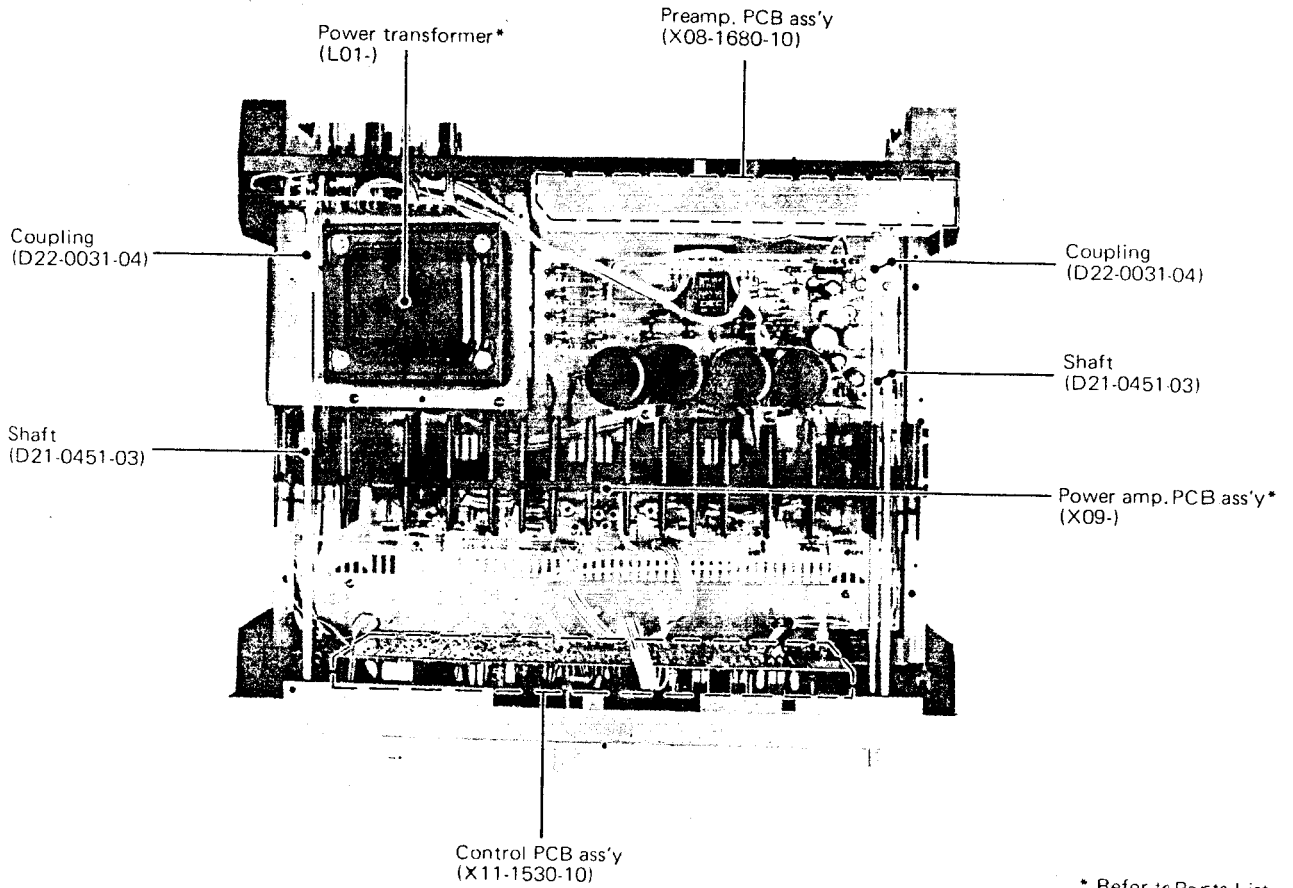
Region	Code
U.S.A.	K
Canada	P
PX	U
Australia	X
Europe & Scandinavia	E
England	T
South Africa	S
Other Areas	M
Audio Club (KA-7011)	H

EXTERNAL VIEW

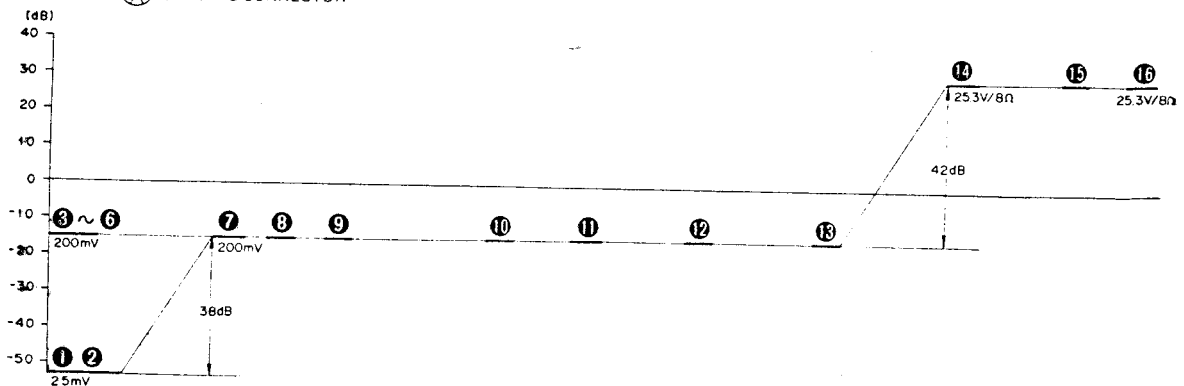
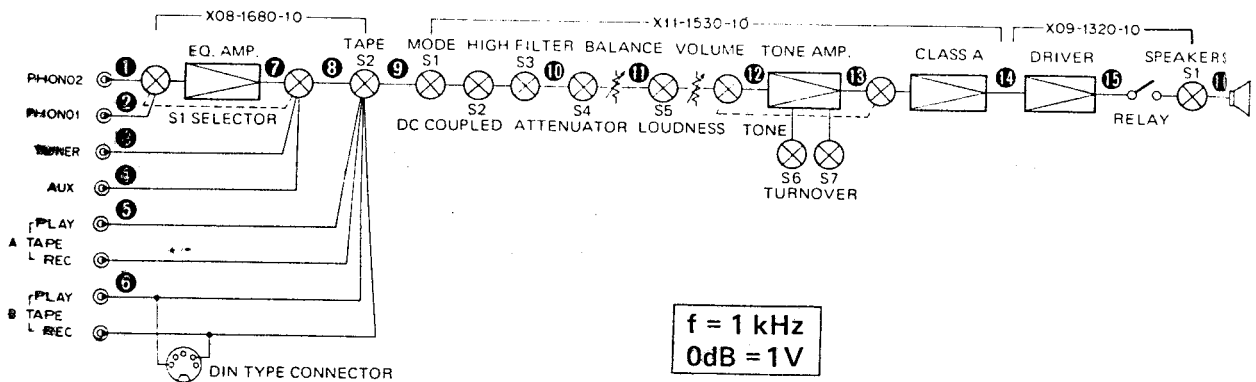


* Refer to Parts List

INTERNAL VIEW/BLOCK & LEVEL DIAGRAM



BLOCK & LEVEL DIAGRAM

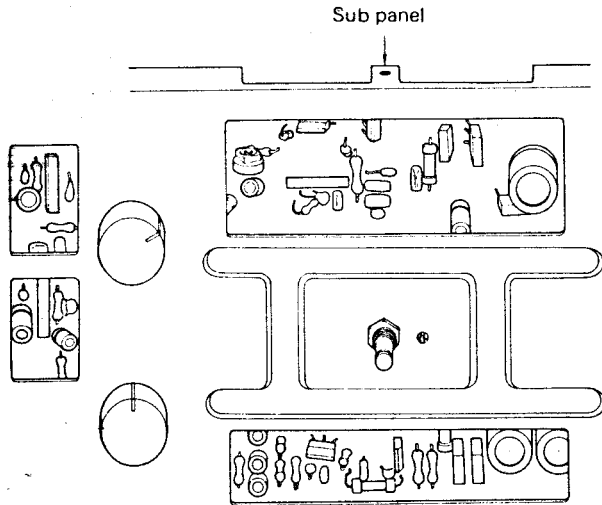


DISASSEMBLY FOR REPAIR

Control PCB ass'y (1)

When replacing parts

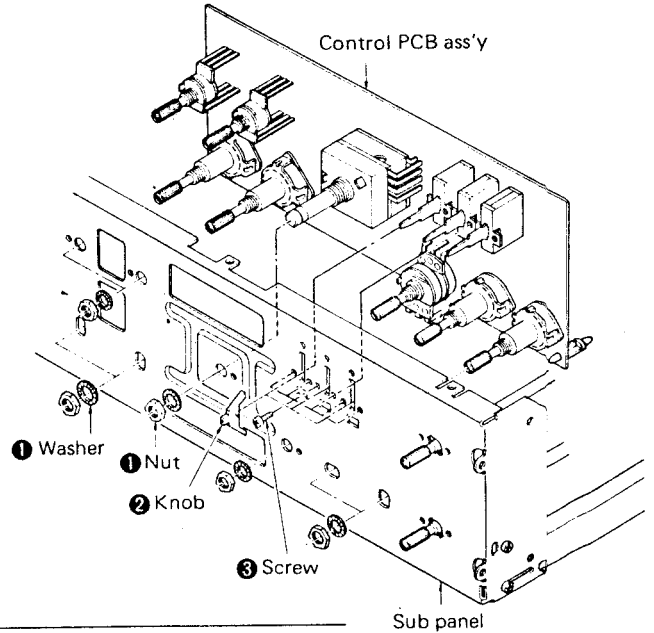
- 1 Remove the panel ass'y.
- 2 Replace faulty parts from cutouts of sub panel.
You can make to replace faulty parts without removing PCB ass'y from the sub panel.



Control PCB ass'y (2)

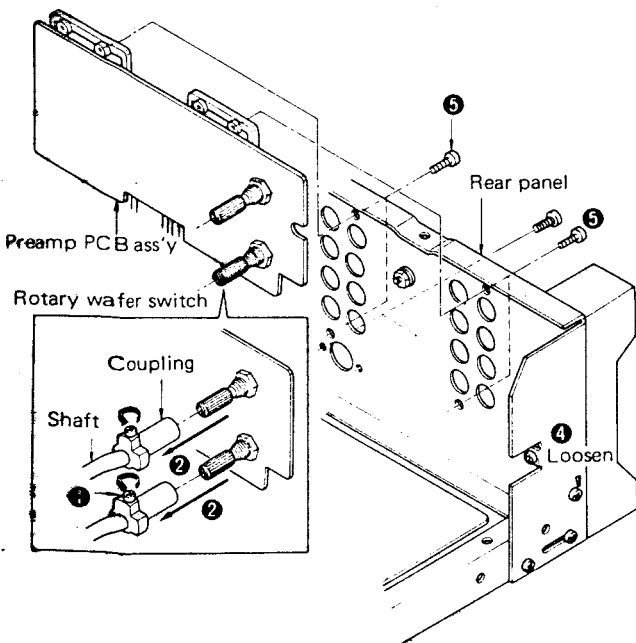
When removing PCB ass'y

- 1 Remove the nuts of switches and potentiometers.
- 2 Pull out the knobs of lever switches.
- 3 Remove the screws fixing lever switches to the sub panel.



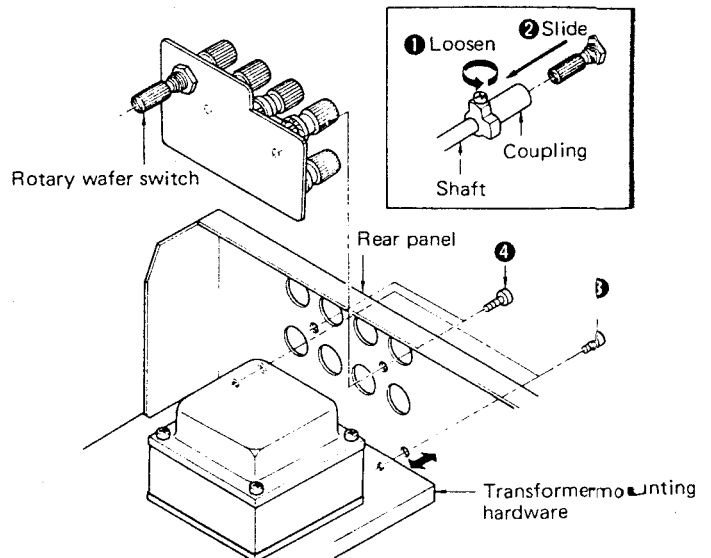
Preamp. PCB ass'y

- 1 Loosen the screws fixing coupling to shaft.
- 2 Slide the coupling.
- 3 Remove the shield cover.
- 4 Loosen the screws fixing PCB ass'y to the rear panel.
- 5 Remove the screws fixing phono jack to the rear panel.

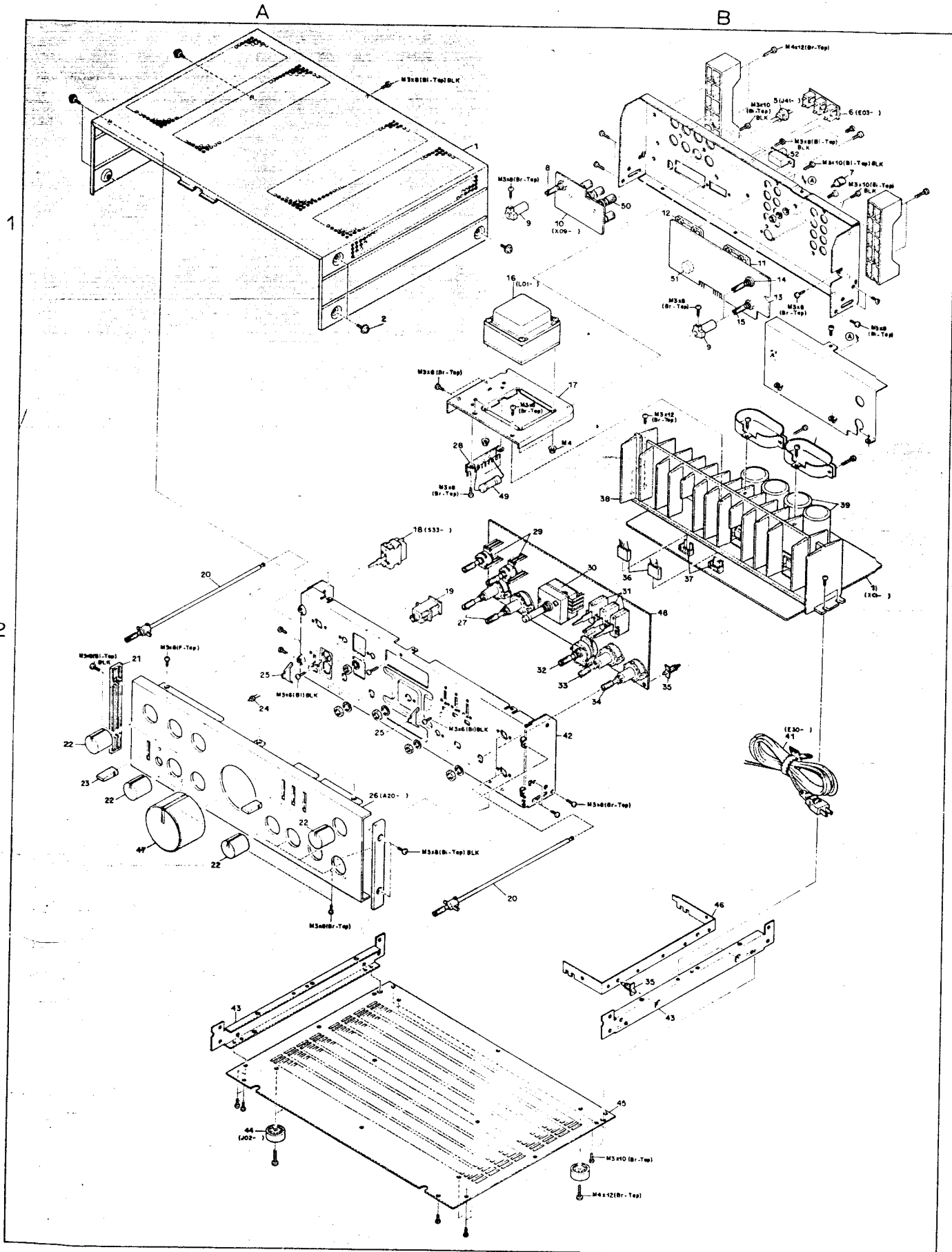


Speaker selector PCB ass'y

- 1 Loosen the screw fixing the coupling to the shaft.
- 2 Slide the coupling.
- 3 Remove the screws fixing power transformer mounting hardware to the rear panel.
- 4 Remove the screws fixing PCB ass'y to the rear panel.
- 5 Slide the rear panel and pull up the PCB ass'y.



EXPLODED VIEW



EXPLODED VIEW PARTS LIST/PARTS LIST

*: Refer to Parts List. ☆: New Parts.

Fig.No.	Parts No.	Description	Remarks
1	A01-0346-13	Case	1A
2	N08-0125-05	Dress screw	1A
3	G13-0121-03	Cushion	1B
4	-	Rear panel	☆ 1B
5	J41-*	Power cord bushing	1B
6	E03-*	AC outlet	☆ 1B
7	E21-0006-25	GND terminal	1B
8	S01-1055-05	Rotary wafer switch (SPEAKERS)	1B
9	D22-0031-04	Coupling	1B
10	X09-*	Power amp. PCB ass'y	☆ 1B, 2B
11	E13-0813-05	Phono jack (INPUT)	☆ 1B
12	E13-0811-05	Phono jack (TAPE)	1B
13	X08-1680-10	Priamp. PCB ass'y	☆ 1B
14	S29-1101-05	Slide-rotary switch (INPUT SELECTOR)	1B
15	S29-1098-05	Slide-rotary switch (TAPE)	1B
16	L01-*	Power transformer	☆ 1B
17	-	Power transformer mounting hardware	☆ 1B
18	S33-*	Lever switch (POWER)	2A
19	E11-0058-05	Phone jack	2A
20	D21-0451-03	Shaft	☆ 2A, 3B
21	-	Panel escutcheon	2A, 3B
22	K23-0309-04	Knob	☆ 2A, 3A
23	K27-0076-04	Knob (Lever)	2A
24	B30-0173-05	LED	☆ 2A
25	K27-0077-04	Knob (Lever dress)	2A
26	A20-*	Panel ass'y	☆ 2A
27	S01-1057-05	Rotary wafer switch (TURNOVER)	☆ 2A
28	-	Terminal board	2A
29	RO6-3016-05	Potentiometer (BASS, TREBLE)	☆ 2B
30	R10-5003-05	Potentiometer (VOLUME)	2B
31	S33-2041-05	Lever switch	2B
32	RO6-6001-05	Potentiometer (BALANCE)	☆ 2B
33	S01-1058-05	Rotary wafer switch (LOUDNESS)	☆ 2B
34	S01-1052-05	Rotary wafer switch (MODE)	☆ 2B
35	-	Unit holder	2B, 3B
36	-	Wire harness	2B
37	-	Pin ass'y	2B
38	-	Heat sink	☆ 2B
39	C90-0386-05	Electrolytic cap. 10000μF	☆ 2B
40	-	Electrolytic cap. mounting hardware	☆ 2B
41	E30-*	Power cord	2B
42	-	Sub panel	2B
43	-	Flame	☆ 3A, 3B
44	JO2-*	Foot	3A, 3B
45	-	Bottom plate	☆ 3B
46	-	Lead plate	☆ 3B
47	K21-0359-04	Knob (VOLUME)	3A
48	X11-1530-10	Control PCB ass'y	☆ 2B
49	FO5-*	Fuse (4A)	1B
50	E20-0812-05	Binding post ass'y	1B
51	EO6-0510-05	DIN type connector	1B
52*	S31-2050-05	Slide switch (Power voltage selector)	1B

☆: New parts
 FP: Flame proof
 RD: Carbon film resistor
 RC: Carbon composition resistor
 RW: Wire wound power resistor
 RN: Metal film resistor
 RS: Metal oxide film resistor

TOTAL

Ref. No.	Parts No.	Description	Remarks
-	A01-0346-13	Case	
-	A20-1376-12	Panel ass'y	K,P,U,M,S,X,E ☆
-	A20-1377-12	Panel ass'y	H ☆
-	A20-1378-12	Panel ass'y	T ☆
-	B01-0124-04	Panel escutcheon x2	
-	B07-0247-04	Escutcheon (triple)	
-	B07-0252-04	Escutcheon (single)	
-	B30-0173-05	LED	☆
-	B46-0055-20	Warranty card	P
-	B46-0060-00	Warranty card	T
-	B46-0061-20	Warranty card	K
-	B46-0062-20	Warranty card	U,H
-	B46-0063-00	Warranty card	U
-	B46-0064-00	Warranty card	X
-	B50-1821-00	Instruction manual	K,US ☆
-	B50-1822-00	Instruction manual	P,M,X ☆
-	B50-1823-00	Instruction manual	H ☆
-	B50-1824-00	Instruction manual	E ☆
-	B50-1825-00	Instruction manual	T ☆
C1 ~ 3	C54-3310-39	Ceramic 0.01μF 2kV	E,T
C1, 2	C90-0145-05	Metalized polyester 0.01μF 125V	K
C1, 2	C91-0023-05	Ceramic 0.01μF 250V	U,M,H,S,X
C1, 2	C91-0025-05	Metal film 0.01μF 125V	P
-	D21-0451-03	Shaft x3	☆
-	D22-0031-04	Coupling x3	
-	E03-0013-05	AC outlet	K,U,M,H,S,X ☆
-	E03-0014-05	AC outlet	P ☆
-	E11-0058-05	Phone jack	
-	E21-0006-25	GND terminal	
-	E30-0181-05	Power cord	K,P
-	E30-0185-05	Power cord	X
-	E30-0515-05	Power cord	UM
-	E30-0580-05	Power cord	T,E
-	E30-0602-05	Power cord	S,T
-	G13-0121-03	Cushion x2	
-	H01-1875-04	Carton box	K,U,M,S,X,E ☆
-	H01-1876-04	Carton box	P ☆
-	H01-1877-04	Carton box	I ☆
-	H01-1878-04	Carton box	T ☆
-	H10-1520-02	Polystyrene foamed fixture x2	
-	H20-0448-04	Protection cover	M
-	H20-0453-04	Protection cover	K,P,U,H,S,X,I,T
-	H25-0078-04	Polyethylen bag	
-	H40-0004-04	Anti-rust paper	M
-	JO2-0049-14	Foot x4	K
-	JO2-0073-04	Foot x4	P,U,M,H,S,X,I,T
-	J41-0024-15	Power cord bushing	S,I,T

PARTS LIST

Ref. No.	Parts No.	Description	U,M,H,S,X	Re- marks
-	J41-0033-05	Power cord bushing	U,M,H,E	
-	J41-0034-05	Power cord bushing	K,P	
-	K21-0359-04	Knob (VOLUME)		☆
-	K23-0309-04	Knob x10		☆
-	K27-0076-04	Knob (Lever) x4		
-	K27-0077-04	Knob (Lever dress) x4		
-	L01-1701-05	Power transformer	K	☆
-	L01-1702-05	Power transformer	T	☆
-	L01-1705-05	Power transformer	U,M,H,S,X	☆
-	L01-1706-05	Power transformer	E	☆
-	L01-1707-05	Power transformer	P	☆
-	N08-0125-05	Dress screw (Case) x6		
S1	S33-2042-05	Lever switch (POWER)	E,T	
S1	S33-2046-05	Lever switch (POWER)	K,P	
S1	S33-2047-05	Lever switch (POWER)	U,M,H,S,X	
S2	S31-2050-05	Slide switch (Power voltage selector)	U,M,H,S,X,E	
-	X08-1680-10	Preamp PCB ass'y		☆
-	X09-1320-10	Power amp PCB ass'y	K,P	☆
-	X09-1320-21	Power amp PCB ass'y	U,M,H,S,X	☆
-	X09-1320-51	Power amp PCB ass'y	T	☆
-	X09-1322-71	Power amp PCB ass'y	E	☆
-	X11-1530-10	Control PCB ass'y		☆

Ref. No.	Parts No.	Description	U,M,H,S,X	Re- marks
R67, 68	R48-2212-15	RN 120Ω ±5% 1/4W		
R77, 78	R48-2233-15	RN 330Ω ±5% 1/4W		
Q9, 10	V03-0348-05	Transistor 2SC945 (Q,P)		
Q11, 12	V09-0144-20	FET 2SK163 (M,N)		☆
Q13, 14	V01-0733-60	Transistor 2SA733A (P,K)		
Q15, 16	V01-1023-20	Transistor 2SA1023 (Q,P)		
Q17, 18	V03-2378-20	Transistor 2SC2378 (Q,P)		
Q19, 20	V03-2003-20	Transistor 2SC2003 (M,L)		
Q21, 22	V01-0954-20	Transistor 2SA954 (M,L)		
D1 ~ 6	V11-0271-05	Diode 1S2076		
D9, 10	V11-4104-10	Zener diode XZ-100		
S1	S29-1101-05	Slide-Rotary switch (INPUT SELECTOR)		
S2	S29-1098-05	Slide-Rotary switch (TAPE)		

POWER AMP. PCB ASS'Y
(X09-1320-10.-21.-51, X09-1322-71)

Ref. No.	Parts No.	Description	U,M,H,S,X	Re- marks
C1	C24-1822-51	Electrolytic 2.2μF 63WV		
C7, 8	C46-1718-36	Mylar 0.018μF ±10%		
C9 ~ 12	C54-2710-39	Ceramic 0.01μF +100, -0%		
C13 ~ 16	C90-0386-05	Electrolytic 10000μF 56WV		☆
C17, 18	C24-1822-71	Electrolytic 220μF 63WV		
C19, 20	C24-6510-71	Electrolytic 100μF 35WV		
C21, 22	C90-0397-05	Electrolytic 100μF 35WV		
C23	C90-0394-05	NP-Electrolytic 47μF 25WV		
C24	C25-1222-77	Electrolytic 220μF 16WV		
C25	C24-1210-61	Electrolytic 10μF 16WV		
C26	C24-1847-51	Electrolytic 4.7μF 63WV		
C27, 28	C46-1747-37	Mylar 0.047μF ±20%		
-	E20-0812-05	Binding post ass'y		
-	F05-4021-05	Fuse (4A) x4		KP
-	F05-4022-05	Fuse (4A) x4		U,M,H,S,X
-	F05-4024-05	Fuse (4A) x4		E,T
L1, 2	L39-0085-05	Phase compensation coil		
L3 ~ 8	L33-0275-05	Ferri-inductor 120μH		☆
VR1, 2	R12-0052-05	Trimming potentiometer 100Ω (B) Bias		
R1 ~ 4	R43-1227-05	FP-RD 27Ω ±5% 1/4W		
R5, 6	R43-1233-05	FP-RD 33Ω ±5% 1/4W		
R19 ~ 22	R43-1247-95	FP-RD 4.7Ω ±5% 1/4W		
R23, 24	R43-1282-05	FP-RD 82Ω ±5% 1/4W		
R25 ~ 28	R92-0113-05	Metal plate 0.33Ω ±10% 3W		
R29, 30	R47-5415-05	FP-RS 15Ω ±5% 1W		
R31, 32	R47-5410-05	FP-RS 10Ω ±5% 1W		
R33, 34	R47-5456-15	FP-RS 560Ω ±5% 1W		
R35, 36	R47-5539-95	FP-RS 3.9Ω ±5% 2W		
R37 ~ 40	R43-5210-25	FP-RD 1kΩ ±5% 1/4W		
R46	R47-5433-25	FP-RS 3.3kΩ ±5% 1W		
R47	R47-5568-15	FP-RS 680Ω ±5% 2W		
R49	R47-5418-25	FP-RS 1.8kΩ ±5% 1W		

PREAMP. PCB ASS'Y (X08-1680-10)

Ref. No.	Parts No.	Description	U,M,H,S,X	Re- marks
C21, 22	C91-0056-05	Polystyrene 33pF ±10%		
C23, 24	C52-1718-26	Ceramic 1800pF ±10%		
C25, 26	C90-0396-05	Electrolytic 1000μF 6.3WV		☆
C27 ~ 30	C24-1233-61	Electrolytic 33μF 16WV		
C31, 32	C24-0822-71	Electrolytic 220μF 6.3WV		
C33, 34	C71-1747-05	Ceramic 47pF ±5%		
C35, 36	C49-2027-34	Film 0.027μF ±2%		
C37, 38	C46-1710-26	Mylar 0.001μF ±10%		
C39, 40	C49-2010-44	Film 0.1μF ±2%		
C41, 42	C90-0404-05	NP-Electrolytic 10μF 35WV		☆
C43, 44	C48-1710-25	Polystyrene 1000pF ±5%		
C45, 46	C90-0397-05	Electrolytic 100μF 35WV		☆
C51, 52	C71-1710-15	Ceramic 100pF ±5%		
C53, 54	C91-0061-05	Polystyrene 82pF ±10%		
C59	C90-0398-05	Electrolytic 1μF 50WV		
-	E06-0510-05	DIN type connector		
-	E13-0811-05	Phono jack (8P) TAPE		
-	E13-0813-05	Phono jack (8P) INPUT		☆
R27, 28	R48-2210-05	RN 10Ω ±5% 1/4W		
R29, 30	R48-2251-35	RN 51kΩ ±5% 1/4W		
R33, 34	R48-2430-93	RN 43Ω ±1% 1/4W		
R57, 60	R43-1210-05	FP-RD 10Ω ±5% 1/4W		
R61, 62	R48-2270-13	RN 2.7kΩ ±1% 1/4W		
R63, 64	R48-2330-23	RN 33kΩ ±1% 1/4W		

PARTS LIST

Ref. No.	Parts No.	Description	Re- marks
S1	S01-1055-05	Rotary wafer switch (SPEAKERS)	
RL1	S51-4034-05	Relay switch	
Q1, 2	V03-1845-20	Transistor 2SC1845	
Q3, 4	V03-0297-05	Transistor 2SC945	
Q5	V01-1023-20	Transistor 2SA1023	
Q7, 8	V01-0199-05	Transistor 2SA733A	
Q9, 10	V03-1913-10	Transistor 2SC1913 (S) or	
	V03-1913-20	Transistor 2SC1913 (R)	
Q11, 12	V01-0913-10	Transistor 2SA913 (S) or	
	V01-0913-20	Transistor 2SA913 (R)	
Q13, 14	V03-2525-10	Transistor 2SC2525*1 (G) or	☆
	V03-2525-20	Transistor 2SC2525*1 (B)	☆
Q15, 16	V01-1075-10	Transistor 2SA1075*1 (G) or	☆
	V01-1075-20	Transistor 2SA1075*1 (B)	☆
Q17	V04-0855-10	Transistor 2SD855 (BD)	☆
Q18	V02-0760-10	Transistor 2SB760(BD)	☆
D1, 2	V11-5100-40	Varistor STV-4H (G)	
D7, 8	V11-0271-05	Diode 1S2076	
D9~16	V11-0465-05	Diode GP25D or	
	V11-2100-10	Diode U05C (S)	
D17, 18	V11-4100-20	Zener diode WZ-300	
D19, 20	V11-0295-05	Diode W06B	
IC1	V30-0291-10	IC HA12002	

Ref. No.	Parts No.	Description	Re- marks
VR1	R06-6001-05	Potentiometer 250kΩ (MN) BALANCE	☆
VR2	R10-5003-05	Potentiometer 100kΩ (A) VOLUME	
VR3, 4	R06-3016-05	Potentiometer 10kΩ (B) BASS, TREBLE	☆
VR5, 6	R12-0501-05	Trimming potentiometer 100Ω (B) OFFSET adj.	
R13, 14	R48-2282-25	RN 8.2kΩ ±5% 1/4W	
R17, 18	R48-2227-45	RN 270kΩ ±5% 1/4W	
R41, 42	R48-2210-15	RN 100Ω ±5% 1/4W	
R43, 44	R48-2227-45	RN 270kΩ ±5% 1/4W	
R45, 46	R48-2256-25	RN 5.6kΩ ±5% 1/4W	
R53, 54	R48-2222-25	RN 2.2kΩ ±5% 1/4W	
R55, 56	R48-3230-05	RN 5.6kΩ ±5% 1/4W	
R59, 60	R48-2230-05	RN 30Ω ±5% 1/4W	
R61	R48-3230-05	RN 30Ω ±5% 1/4W	
R62	R48-2230-05	RN 30Ω ±5% 1/4W	
R63, 64	R47-5427-25	RS 2.7kΩ ±5% 1W	
R65, 66	R48-2243-05	RN 43Ω ±5% 1/4W	
R67, 68	R43-1227-25	FP-RD 2.7kΩ ±5% 1/4W	
R69, 70	R43-1291-15	FP-RD 910Ω ±5% 1/4W	
R71, 72	R43-1233-25	FP-RD 3.3kΩ ±5% 1/4W	
R73, 74	R43-1291-15	FP-RD 910Ω ±5% 1/4W	
R75, 76	R47-5418-25	RS 1.8kΩ ±5% 1W	
R77, 78	R47-5447-25	RS 4.7kΩ ±5% 1W	
R79, 80	R43-1220-15	FP-RD 200Ω ±5% 1/4W	
R81, 82	R43-1210-15	FP-RD 100Ω ±5% 1/4W	
R83, 84	R43-1220-15	FP-RD 200Ω ±5% 1/4W	
R85, 86	R48-6211-35	RN 11kΩ ±5% 1/4W	
R87, 88	R48-6210-35	RN 10kΩ ±5% 1/4W	
R89, 90	R47-5433-25	RS 3.3kΩ ±5% 1/4W	
R91, 92	R48-2233-15	RN 330Ω ±5% 1/4W	
R93, 94	R40-8310-68	RC 10MΩ ±20% 1/2W	

CONTROL PCB ASS'Y (X11-1530-10)

Ref. No.	Parts No.	Description	Re- marks
C1, 2	C46-1722-45	Mylar 0.22μF ±5%	
C3, 4	C46-1710-35	Mylar 0.01μF ±5%	
C5, 6	C46-1739-35	Mylar 0.039μF ±5%	
C7, 8	C81-6510-47	Tantalum 0.1μF 35WV	
C9, 10	C24-1210-61	Electrolytic 10μF 16WV	
C11, 12	C71-1722-05	Ceramic 22pF ±5%	
C13, 14	C71-1715-05	Ceramic 15pF ±5%	
C15, 16	C24-1210-61	Electrolytic 10μF 16WV	
C17~22	C46-1733-45	Mylar 0.33μF ±5%	
C23~28	C46-1712-35	Mylar 0.012μF ±5%	
C31, 32	C90-0400-05	Electrolytic 100μF 25WV	☆
C33, 34	C24-1210-61	Electrolytic 10μF 16WV	
C35, 36	C24-1410-61	Electrolytic 10μF 25WV	
C37, 38	C91-0055-05	Polystyrene 27pF ±10%	
C39, 40	C52-1768-16	Ceramic 680pF ±10%	
C41, 42	C90-0401-05	Electrolytic 0.47μF 50WV	☆
C43, 44	C71-1701-01	Ceramic 1pF ±0.25pF	
C45, 46	C24-1410-61	Electrolytic 10μF 25WV	
C47, 48	C71-1715-15	Ceramic 150pF ±5%	
C49, 50	C71-1722-05	Ceramic 22pF ±5%	
C51, 52	C90-0398-05	Electrolytic 1μF 50WV	
C53, 54	C71-1712-05	Ceramic 12pF ±5%	
C55, 56	C91-0052-05	Polystyrene 15pF ±10%	
C57, 58	C52-1722-16	Ceramic 220pF ±10%	
C59, 60	C71-1710-02	Ceramic 10pF ±0.5pF	
C61~64	C24-1810-71	Electrolytic 100μF 63WV	
C65~68	C24-1410-71	Electrolytic 100μF 25WV	
C69, 70	C91-0058-05	Polystyrene 47pF ±10%	
C83, 84	C47-1722-15	Polystyrene 220pF ±5%	

S1	S01-1052-05	Rotary wafer switch MODE	☆
S2 ~ 4	S33-2041-05	Lever switch DC COUPLED, HIGH FILTER, ATTENUATOR	
S5	S01-1058-05	Rotary wafer switch LOUDNESS	☆
S6, 7	S01-1057-05	Rotary wafer switch TURNOVER	☆
Q1, 2	V03-2291-10	Transistor 2SC2291 (G, H)	
Q3, 4	V09-0137-50	FET 2SK150A (GR, BL)	
Q5, 6	V03-2259-10	Transistor 2SC2259 (G, H)	
Q7~10	V01-0206-05	Transistor 2SA899 (B, V)	
Q11, 12	V03-0460-05	Transistor 2SC1904 (B, V)	
D1, 2	V11-0287-05	Zener diode WZ-240	
D3, 4	V11-4103-60	Zener diode XZ-051	
D5 ~ 8	V11-0051-05	Diode 1N60	
D9, 10	V11-0287-05	Zener diode WZ-240	
D11, 12	V11-0271-05	Diode 1S2076	
D13, 14	V11-0287-05	Zener diode WZ-240	
IC1, 2	V30-0264-10	IC HA1457	

ADJUSTMENT

POWER AMP OFFSET VOLTAGE ADJUSTMENT

1. Connect the dc voltmeter between the positive and negative speaker terminals.
2. Adjust the trimming pot VR1 (VR2), as shown in figure 1, for a 0V reading of the dc voltmeter.

BIAS CURRENT ADJUSTMENT

1. Turn the volume control knob fully counter clockwise.
2. Connect the dc voltmeter between the adjusting points CP3 and CP5 (CP4 and CP6) of power amp pc board ass'y (X09-1320-10).
3. Adjust the BIAS CURRENT trimming pot VR1 (VR2), for a 26 mV reading of the voltmeter.

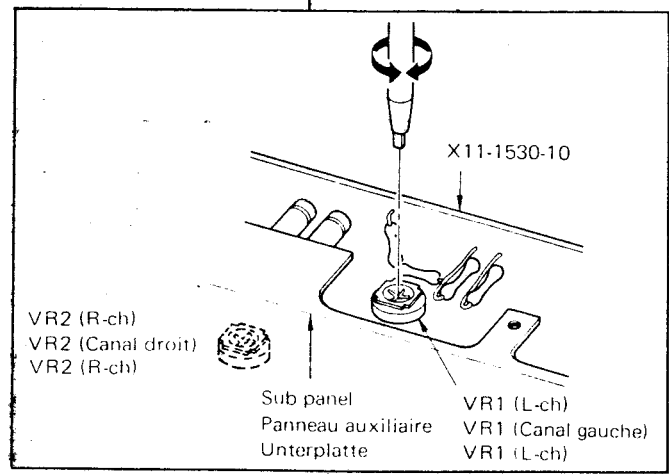
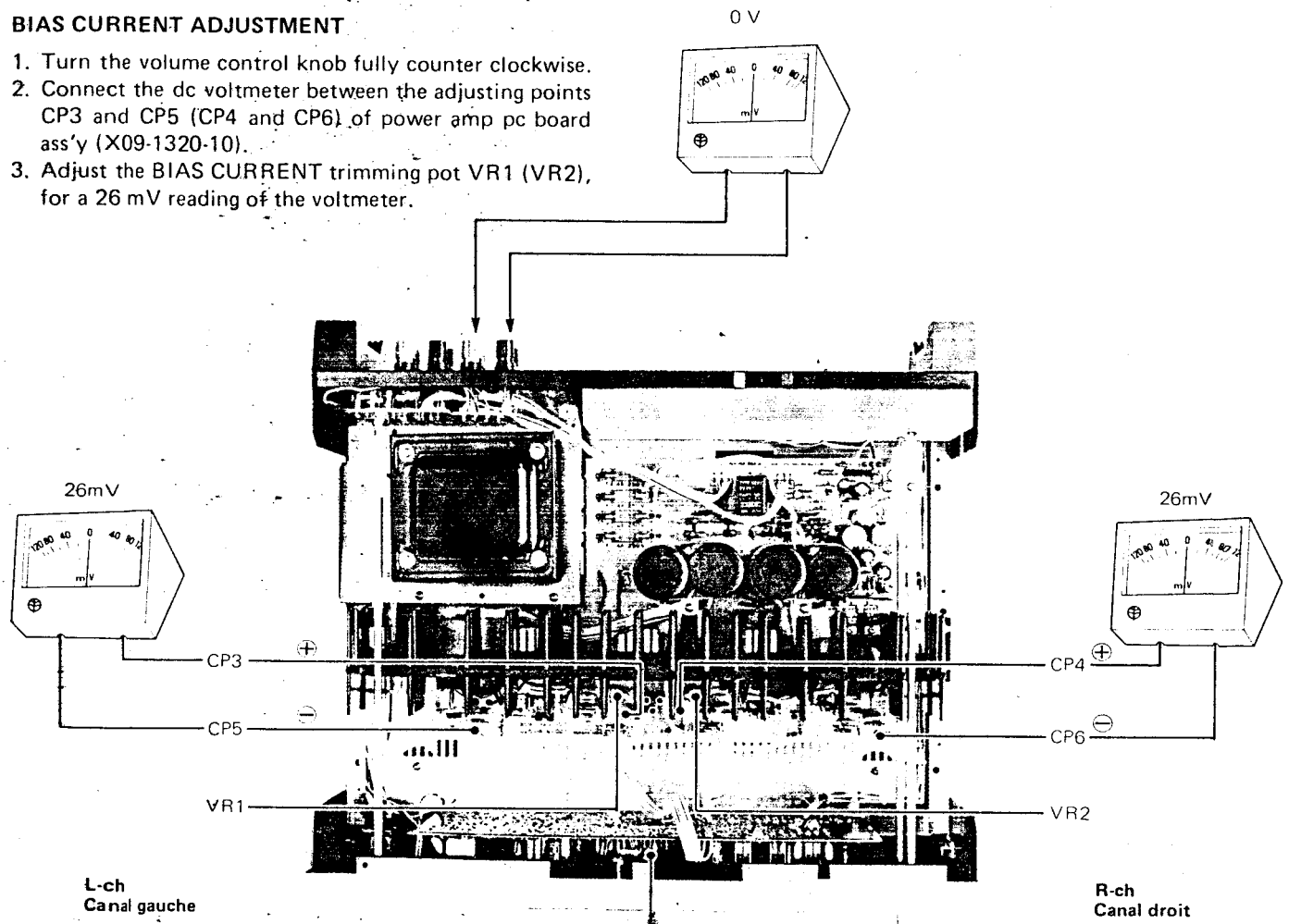


Fig. 1. OFFSET VOLTAGE ADJUSTMENT
 Fig. 1. REGLAGES DE LA TENSION DE DECALAGE (OFFSET)
 Abb. 1. OFFSET-SPANNUNG DER ENDVERSTÄRKER

RÉGLAGES/ABGLEICH/SEMICONDUCTOR SUBSTITUTIONS

RÉGLAGE DE LA TENSION DE DECALAGE (OFFSET)

1. Brancher le voltmètre de c.c. aux bornes de sortie + et -.
2. Régler le potentiomètre ajustable VR1 (VR2) pour que la tension de sortie soit nulle, comme le montre ce figure 1.

RÉGLAGE DU COURANT DE DEPLACEMENT

1. Tourner le bouton de commande de volume à fond dans le sens invers de celui des aiguilles d'une montre.
2. Brancher le voltmètre de c.c. aux points d'alignement CP3 et CP5 (CP4 et CP6), sur la plaque circuit imprimé d'ampli de puissance (X09-1320-10).
3. Réguler le potentiomètre ajustable VR1 (VR2) de façon à ce que le voltmètre de c.c. indique 26 mV.

OFFSET-SPANNUNG DER ENDVERSTÄRKER

1. Den Gleichspannungsmesser zwischen den Lautsprecherklemmen + und - der endverstärker anschließen. (Abb. 1)
2. Die Regelstange durch das Unterplattenloch einführen und den halbeingebetteten Widerstand VR1 (VR2) so regulieren, daß die Gleichspannungsmesser-Ablesung 0V ist.

LEERLAUFS

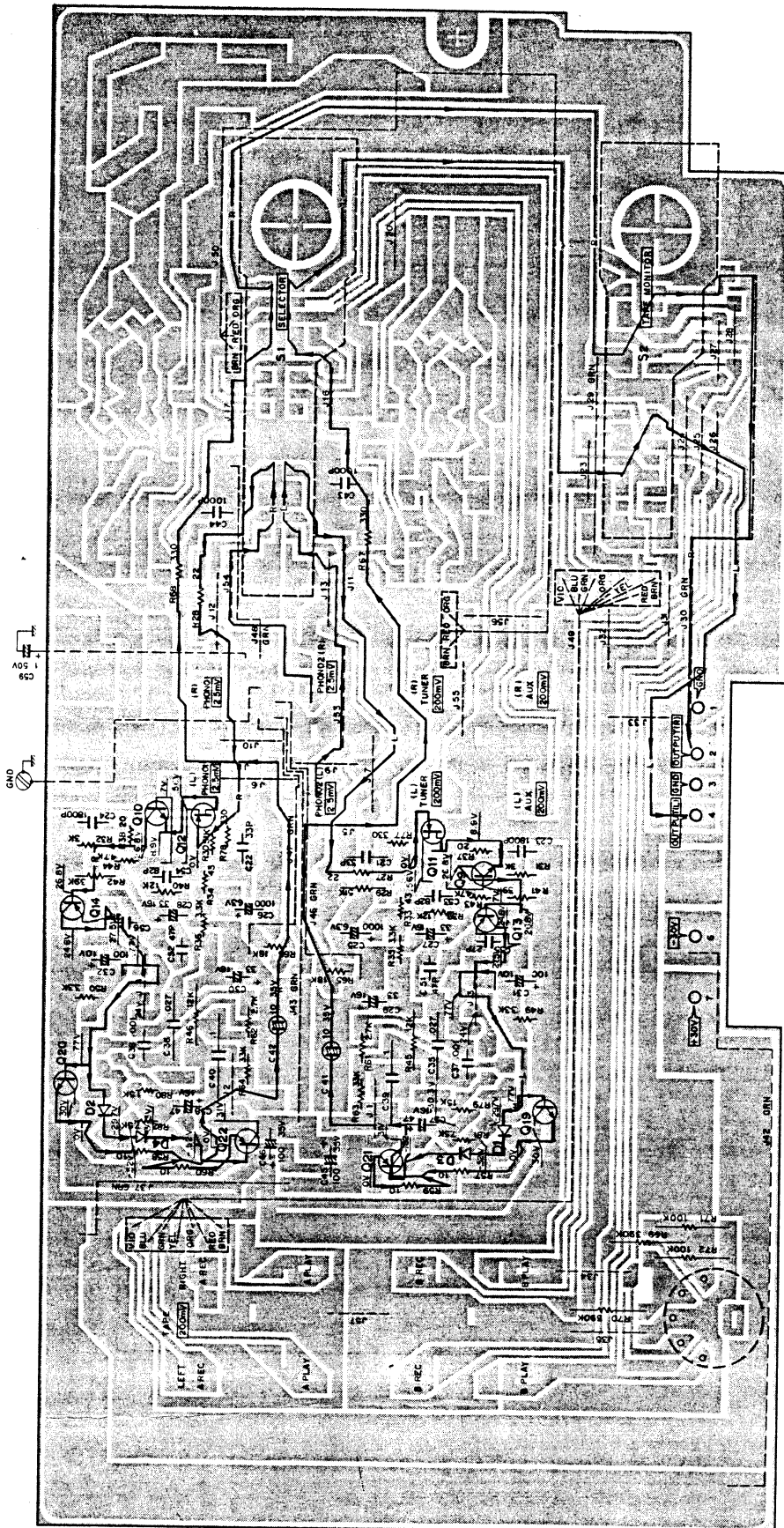
1. Den Lautstärkereger (VOLUME) drehen um die Leistungsverstärker-Aufnahme auf Null zu reduzieren.
2. Den Gleichspannungsmesser zwischen der Regulierungs-Punkte CP3 und CP5 (CP4 und CP6) der endverstärker anschließen.
3. Den halbeingebetteten Widerstand VR1 (VR2) der Leistungsverstärker so regulieren, daß die Gleichspannungsmesser-Ablesung 26 mV ist.

SEMICONDUCTOR SUBSTITUTIONS

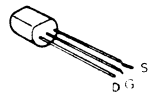
PC BOARD ASS'Y	SEMICONDUCTOR	SUBSTITUTIONS
X08-1680-10	2SA733	2SA992 (E, F), 2SA872 (D, E), 2SA921 (S, T)
	2SA954	2SA850 (D, E), 2SA777 (Q, R)
	2SA1023	2SA872 (E, F)
	2SC945	2SC1980 (S, T), 2SC1845 (F, E), 2SC1775 (D, E)
	2SC2003	2SC1735 (D, F), 2SC1509 (Q, R)
	2SC2378	2SC1775 (D, F), 2SC1845 (F, E), 2SC1980 (S, T)
	2SK163	-
	-	-
X09-1320-10,-21,-51 X09-1322-71	2SA733	2SA992 (E, F), 2SA872 (D, E), 2SA921 (S, T)
	2SA913	-
	2SA1023	2SA872 (E, F)
	2SA1075*1	-
	2SB760BD	2SB514T-AL, 2SB596
	2SC945	2SC1980 (S, T), 2SC1845 (F, E), 2SC1775 (D, E)
	2SC1845	2SC1775, 2SC1775A, 2SC1980
	2SC1913	-
	2SC2525*1	-
	2SD855BD	2SD313T-AL, 2SD526
HA-12002	-	
X11-1530-10	2SA899	-
	2SC1904	-
	2SC2259	-
	2SC2291	-
	2SK150A	μPA68H (L, M)
	HA-1457	-

PC BOARD

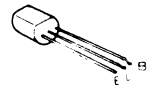
▼PREAMP PCB (X08-1680-10) Foil Side View



2SK163



2SA733A 2SC954
 2SA954 2SC2003
 2SA1023 2SC2378

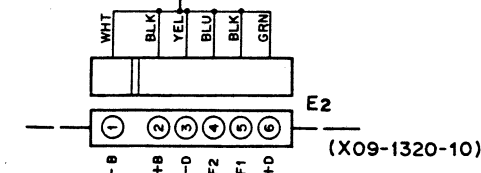
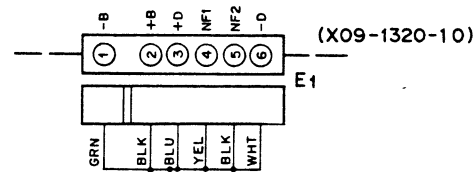
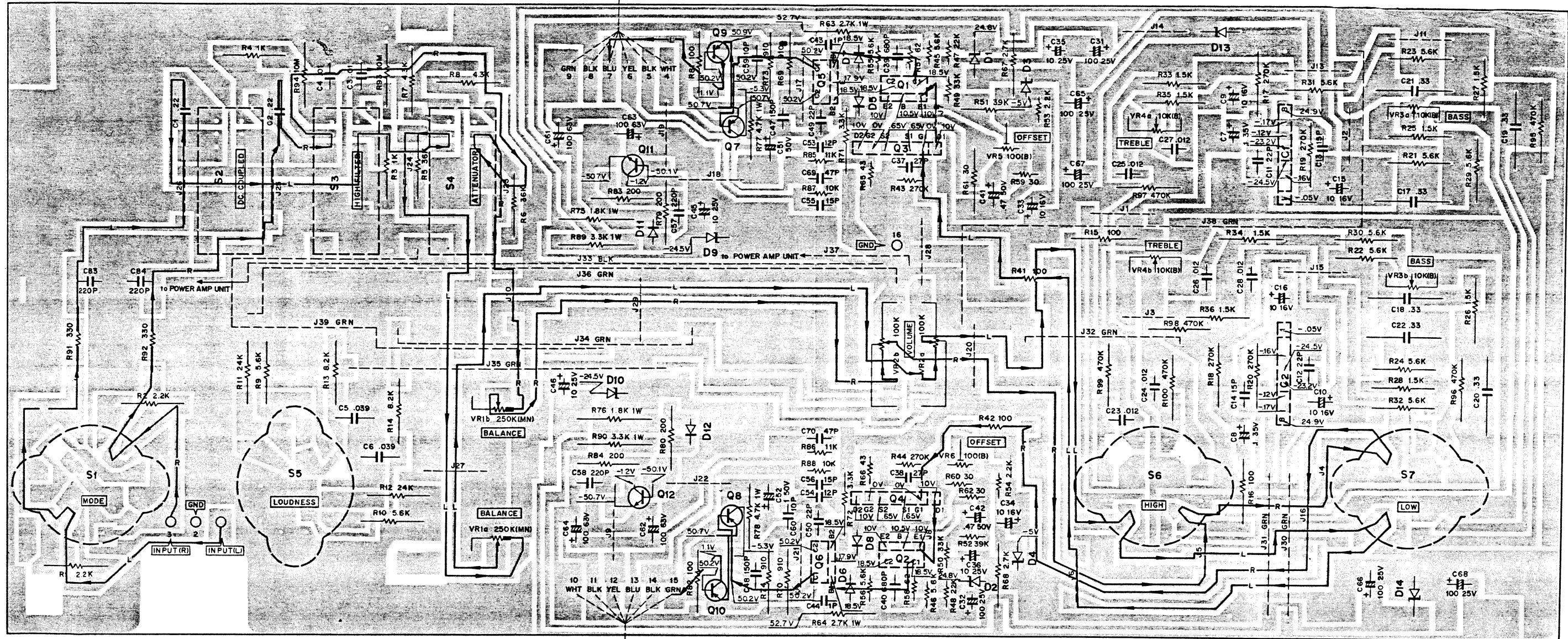


- Q9,10 : 2SC945 (Q, P)
- Q11,12 : 2SK163 (M, N)
- Q13,14 : 2SA733A (I, K)
- Q15,16 : 2SA1023 (C, P)
- Q17,18 : 2SC2378 (C, P)
- Q19,20 : 2SC2003 (N, L)
- Q21,22 : 2SA954 (M, L)
- D1~6 : 1S2076
- D9,10 : XZ-100

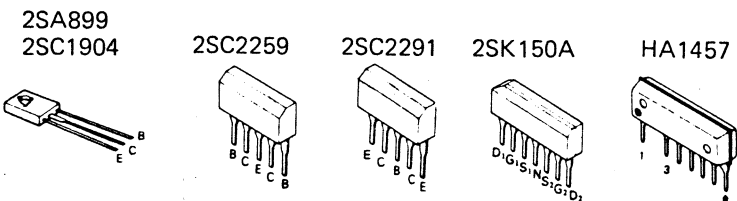
PC BOARD

▼CONTROL PCB (X11-1530-10) Foil Side View

NOTE: Red line means signal paths.



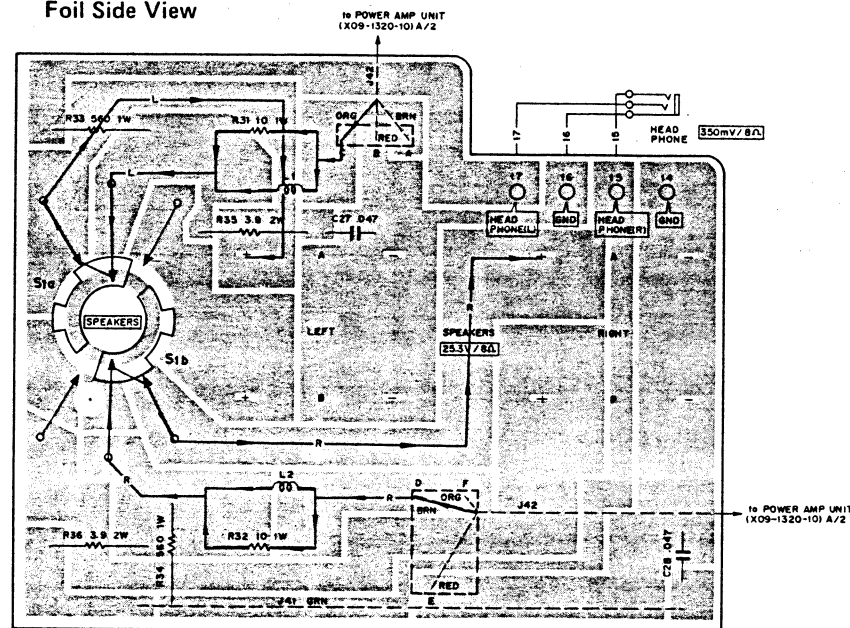
- Q1,2 : 2SC2291 (G, H)
- Q3,4 : 2SK150A (GR, BL)
- Q5,6 : 2SC2259 (G, H)
- Q7~10 : 2SA899 (B, V)
- Q11,12 : 2SC1904 (B, V)
- IC1,2 : HA1457
- D1,2,9,10,13,14 : WZ-240
- D3,4 : XZ-051
- D5~8 : 1N60
- D11,12 : 1S2076



PC BOARD

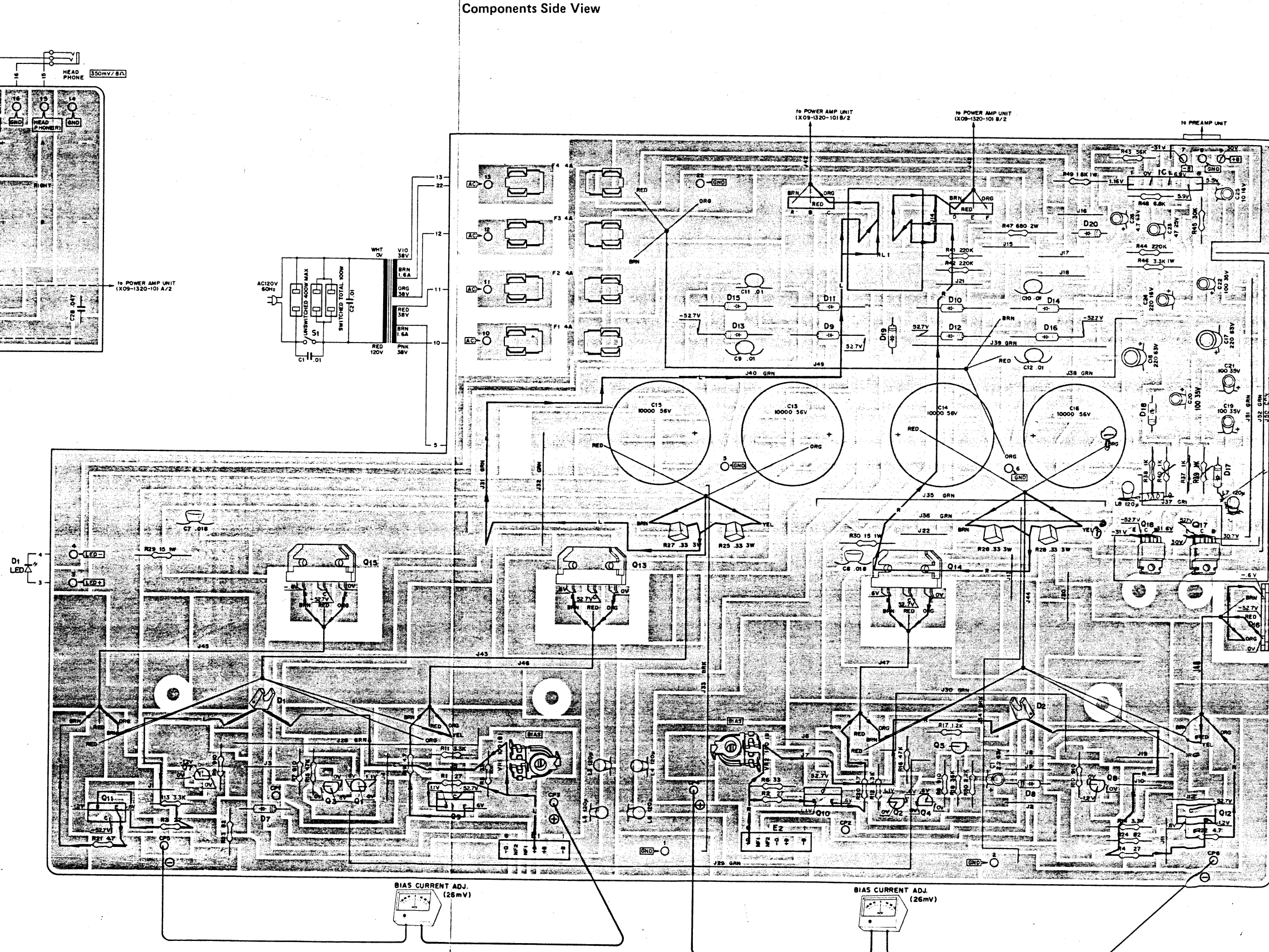
▼POWER AMP PCB (X09-1320-10) (B/2)

Foil Side View



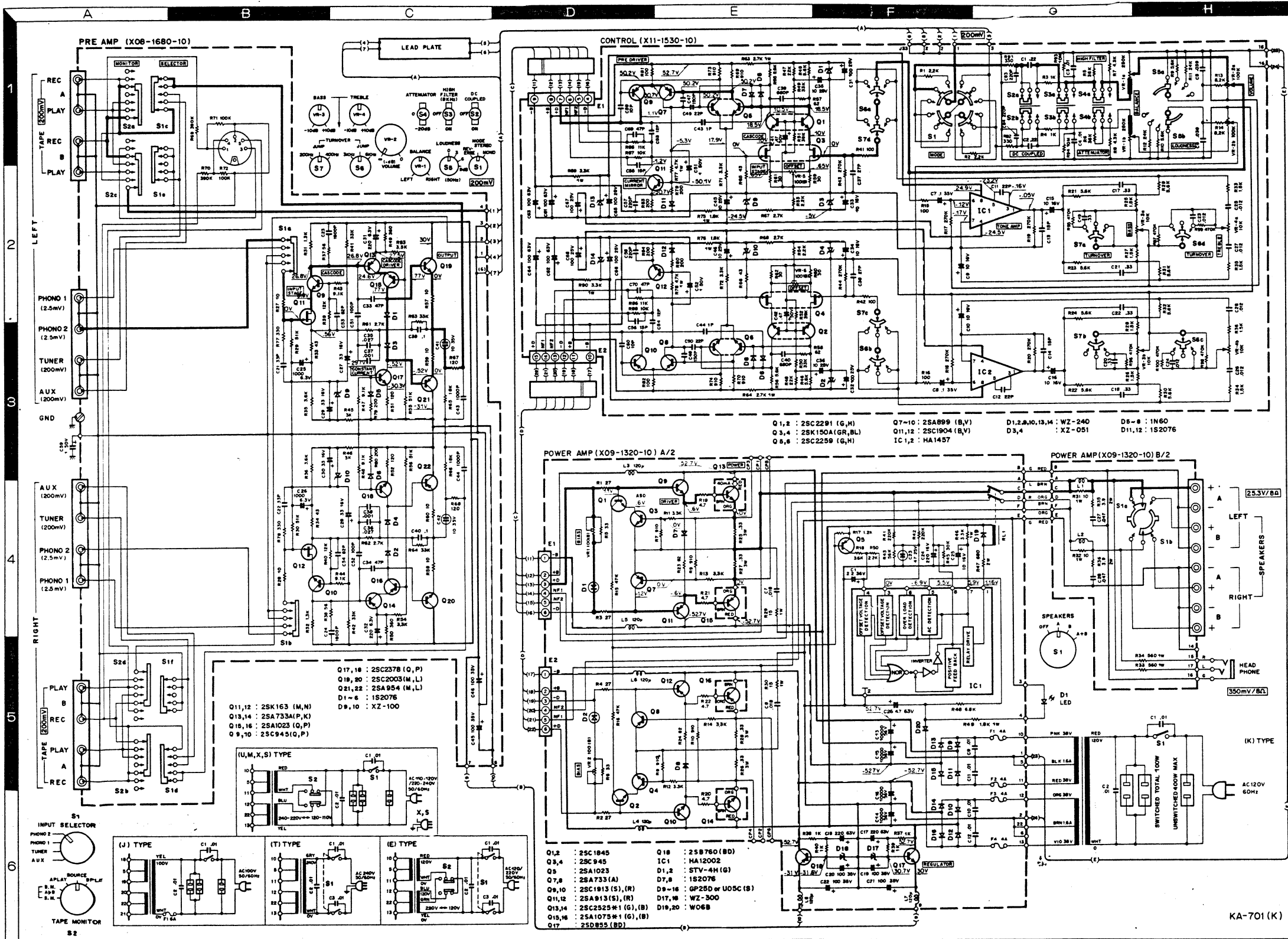
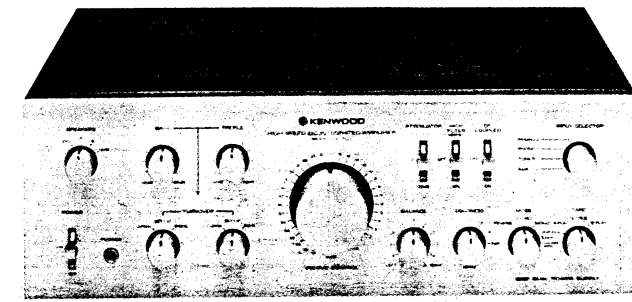
▼POWER AMP PCB (X09-1320-10) (A/2)

Components Side View



NOTE: Red line means signal paths.

- Q1,2 : 2SC1845
- Q3,4 : 2SC945
- Q5 : 2SA1023
- Q7,8 : 2SA733A
- Q9,10 : 2SC1913 (S, R)
- Q11,12 : 2SA913 (S, R)
- Q13,14 : 2SC2525*1 (G, B)
- Q15,16 : 2SA1075*1 (G, B)
- Q17 : 2SD855 (BD)
- Q18 : 2SB760 (BD)
- IC1 : HA12002
- D1,2 : STV-4H (G)
- D7,8 : 1S2076
- D9~16 : GP25D or U05C (S)
- D17,18 : XZ-300
- D19,20 : W06B



Power Output
80 watts* per channel minimum RMS, both channels driven, at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.02% total harmonic distortion.

Both Channels Driven 85 + 85 watts 8 ohms at 1,000 Hz
..... 100 + 100 watts 4 ohms at 1,000 Hz

Total Harmonic Distortion
(20 Hz to 20,000 Hz)
AUX input to SPEAKER output 0.02% at rated power into 8 ohms
..... 0.008% at 1/2 rated power into 8 ohms
PHONO input to SPEAKER output 0.02% at rated power with VOLUME - 20 dB
..... 0.003% at rated power into 8 ohms

Intermodulation Distortion
(60 Hz : 7 kHz = 4 : 1)
..... 100, DC - 20,000 Hz into 8 ohms

Damping Factor 100, DC - 20,000 Hz into 8 ohms

Transient Response
Rise Time 0.9 μs
Slew Rate ± 120 V/μs

Power Bandwidth 5 Hz to 65 kHz at 0.03% T.H.D.
Frequency Response (DC COUPLED at ON) DC to 400 kHz, +0 dB, -3 dB
Frequency Response (DC COUPLED at OFF) 18 Hz to 400 kHz, +0 dB, -3 dB

Speaker Impedance Accept 4 ohms to 16 ohms

Input Sensitivity/Impedance
Phono 2.5 mV/50 kohms
Tuner 200 mV/50 kohms
AUX 200 mV/50 kohms
Tape A, B 200 mV/50 kohms

Signal to Noise Ratio (IHF, A)
Phono 89 dB for 2.5 mV input
..... 95 dB for 5.0 mV input
..... 101 dB for 10 mV input
..... 110 dB for 220 mV input
Tuner AUX, Tape A, B 220 mV (RMS), T.H.D. 0.02% at 1,000 Hz

Maximum Input Level for Phono 200 mV/120 ohms
Tape Rec (PIN) 30 mV/80 kohms

Frequency Response for Phono RIAA standard curve ± 0.2 dB
(20 Hz to 20,000 Hz)

Tone Control
Bass Turnover Freq. 200 Hz -10 dB at 25 Hz
..... -10 dB at 50 Hz
400 Hz -10 dB at 20 kHz
3 kHz -10 dB at 40 kHz
6 kHz -10 dB at 80 kHz

Loudness Control (at VOLUME - 30 dB) +3 dB, +6 dB, +9 dB at 50 Hz
High Filter 8 kHz, 6 dB/oct

GENERAL
Power Consumption 200 watts at full power
..... Switched, Unswitched
A.C. Outlet W 440 mm (17.10/32")
..... H 153 mm (6.03/32")
..... D 407 mm (16.03/32")
Dimensions
Net Weight 13.5 kg (29.8 lbs)

* Measured pursuant to Federal Trade Commission's Trade Regulation rule in U.S.A. on Power Output Claims for Amplifier.

Note: Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

- | | | | | | | | | | | | | | | | | |
|---------|---------|--------|---------|------------|------------|-----------|-----------|--------|---------|--------|---------|---------|---------|--------|--------|----------|
| 2SA733A | 2SC945 | 2SA913 | 2SC1913 | 2SB514T-AL | 2SD313T-AL | 2SA1075*1 | 2SC2525*1 | 2SA899 | 2SC1904 | 2SK163 | 2SC2259 | 2SC2291 | 2SK150A | μPA68H | HA1457 | HA-12002 |
| 2SA777 | 2SC1509 | 2SA850 | 2SC1735 | 2SA872 | 2SC1775 | 2SA921 | 2SC1845 | 2SA922 | 2SC1980 | 2SA954 | 2SC2003 | 2SA1023 | 2SC2378 | | | |

DC voltage measured with 20 kΩ/V VOM under no signal.