KENWOOD

HI/FI STEREO COMPONENTS

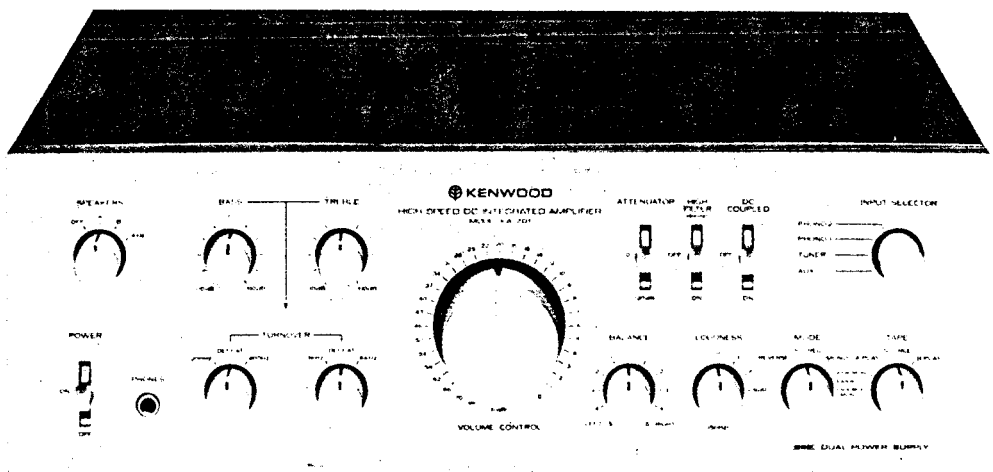
SERVICE MANUAL

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, Francais et Allemand.

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



HIGH SPEED DC INTEGRATED AMPLIFIER

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CONTENTS

EXTERNAL VIEW 3
INTERNAL VIEW 4
BLOCK & LEVEL DIAGRAM 4
DISASSEMBLY FOR REPAIR 5
EXPLODED VIEW 6
EXPLODED VIEW PARTS LIST 7
PARTS LIST 7
ADJUSTMENT
- ADJUSTMENT 10
- RÉGLAGES 11
- ABGLEICH 11

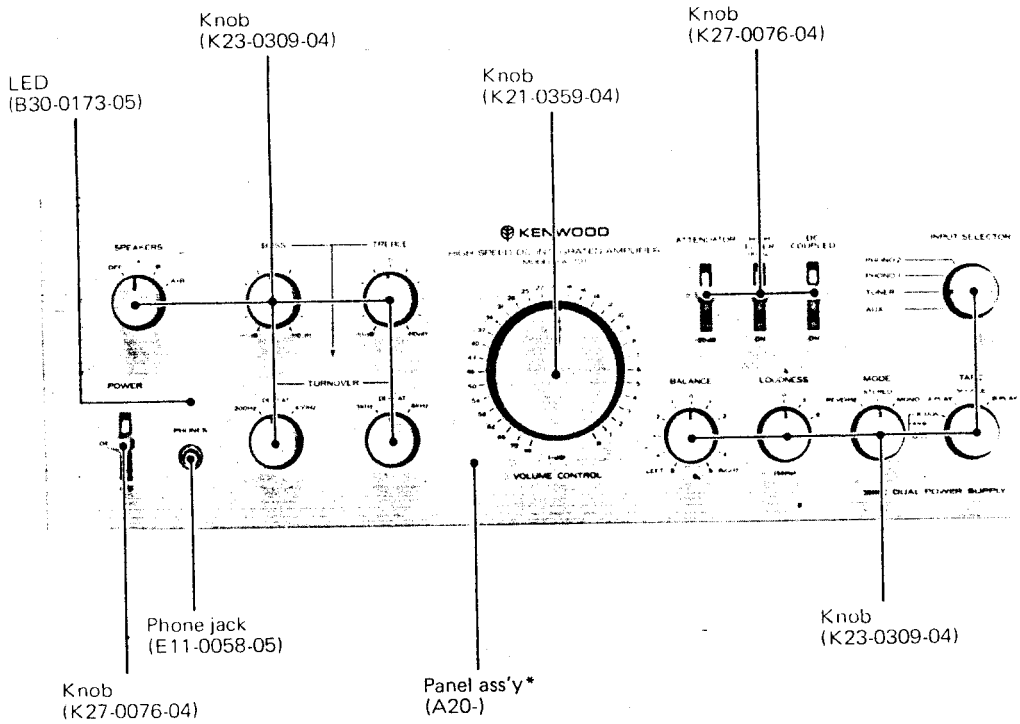
SEMICONDUCTOR SUBSTITUTIONS 11
PC BOARD 12
SCHEMATIC DIAGRAM 15
SPECIFICATIONS 15

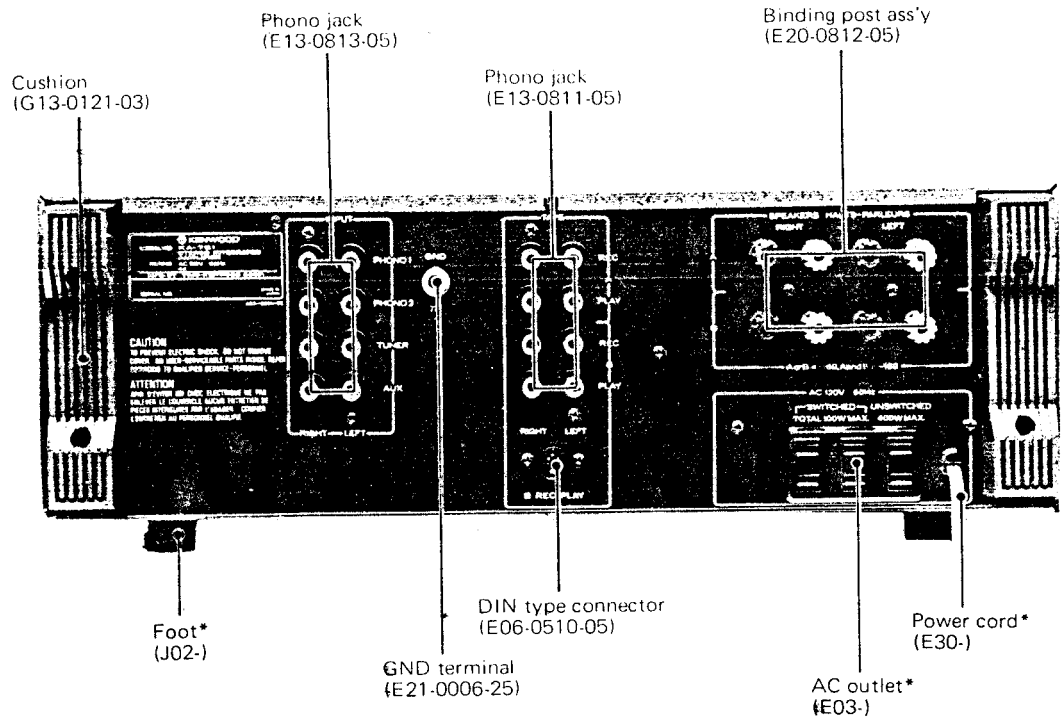
Note:

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

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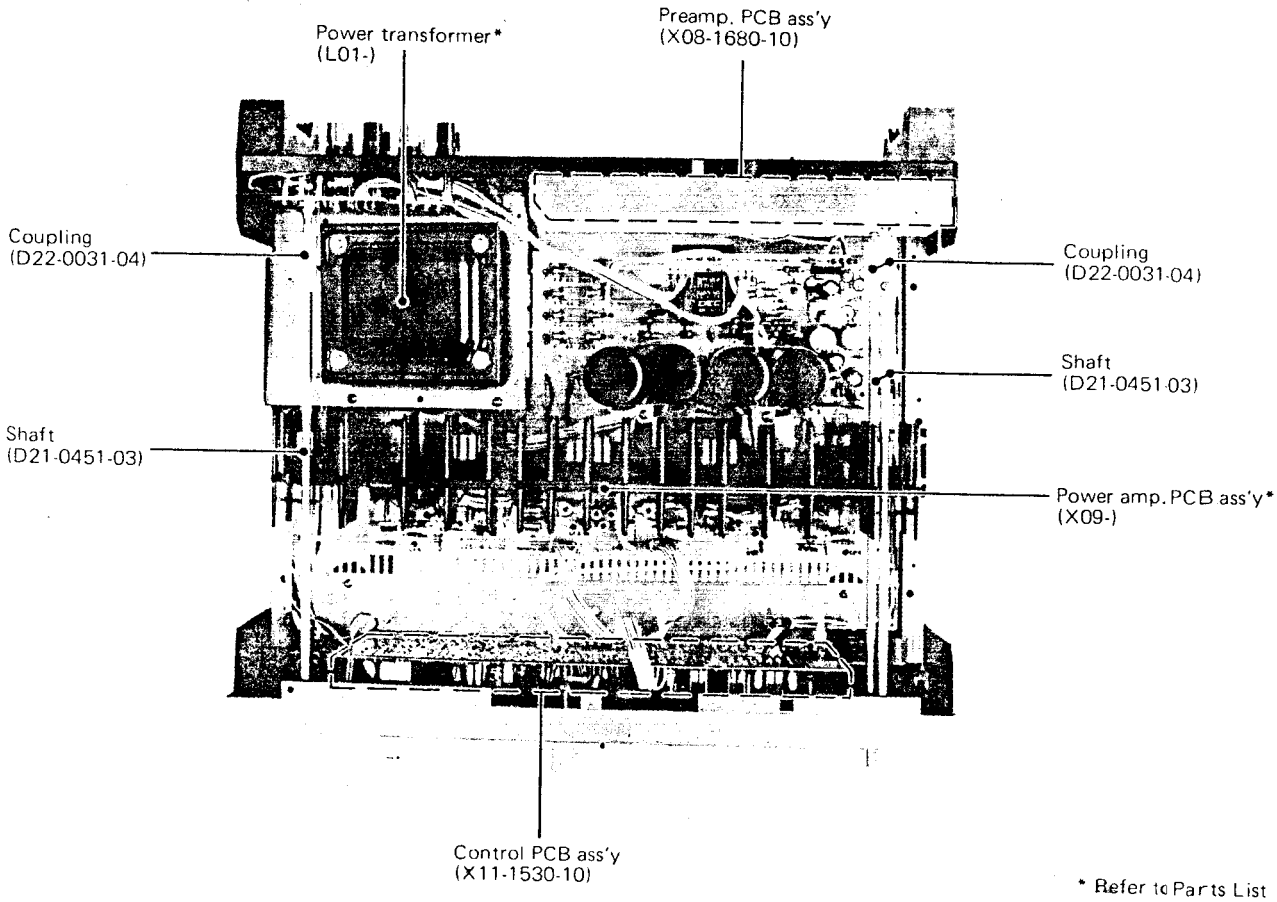
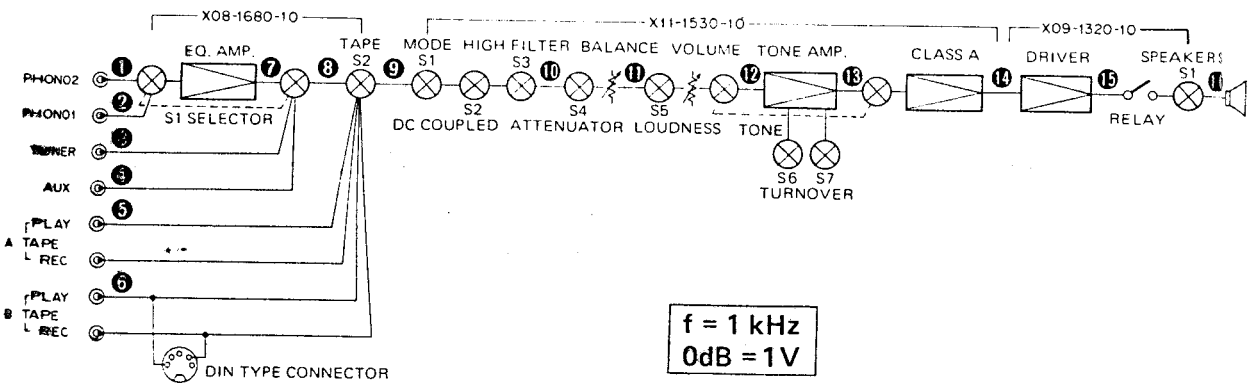
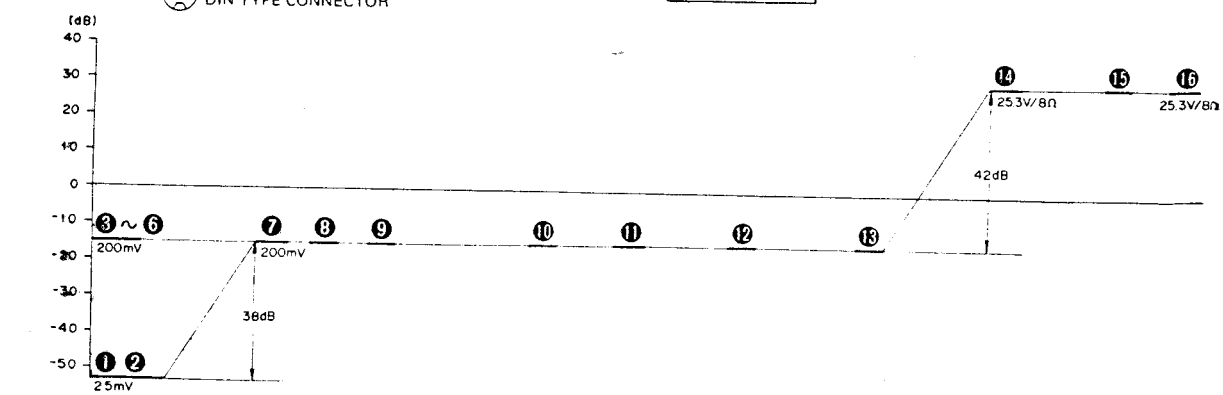
INTERNAL VIEW/BLOCK & LEVEL DIAGRAM



* Refer to Parts List

BLOCK & LEVEL DIAGRAM





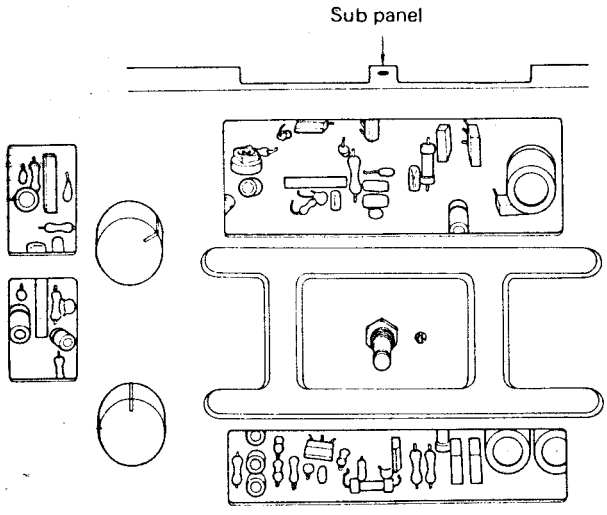
DISASSEMBLY FOR REPAIR

Control PCB ass'y (1)

When replacing parts . . . .

❶ Remove the panel ass'y.

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



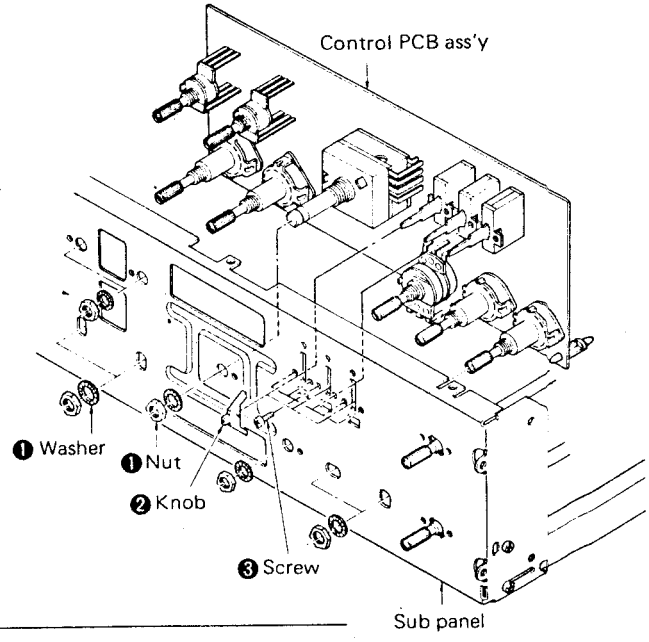
Control PCB ass'y (2)

When removing PCB ass'y . . . .

❶ Remove the nuts of switches and potentiometers.

❷ Pull out the knobs of lever switches.

❸ Remove the screws fixing lever switches to the sub panel.



Preamp. PCB ass'y

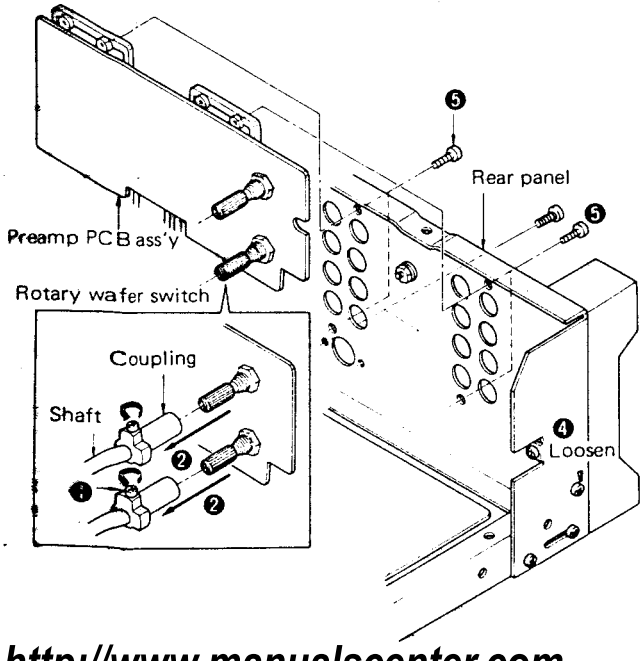
❶ Loosen the screws fixing coupling to shaft.

❷ Slide the coupling.

❸ Remove the shield cover.

❹ Loosen the screws fixing PCB ass'y to the rear panel.

❺ Remove the screws fixing phono jack to the rear panel.



Speaker selector PCB ass'y

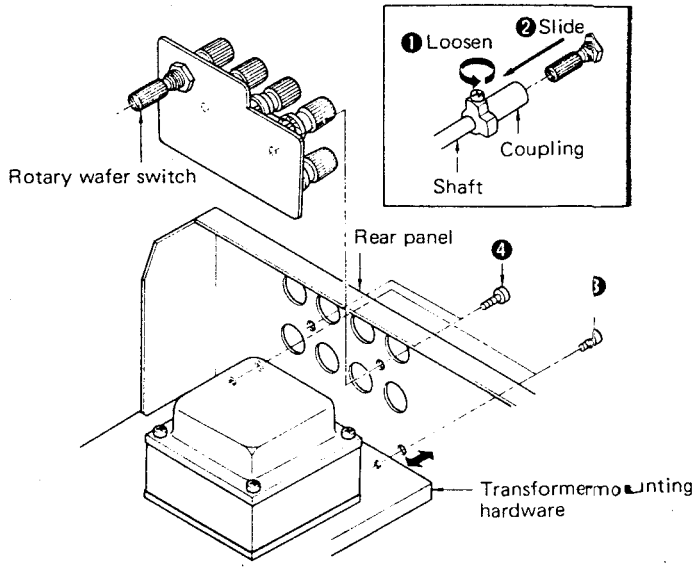
❶ Loosen the screw fixing the coupling to the shaft.

❷ Slide the coupling.

❸ Remove the screws fixing power transformer mounting hardware to the rear panel.

❹ Remove the screws fixing PCB ass'y to the rear panel.

❺ Slide the rear panel and pull up the PCB ass'y.



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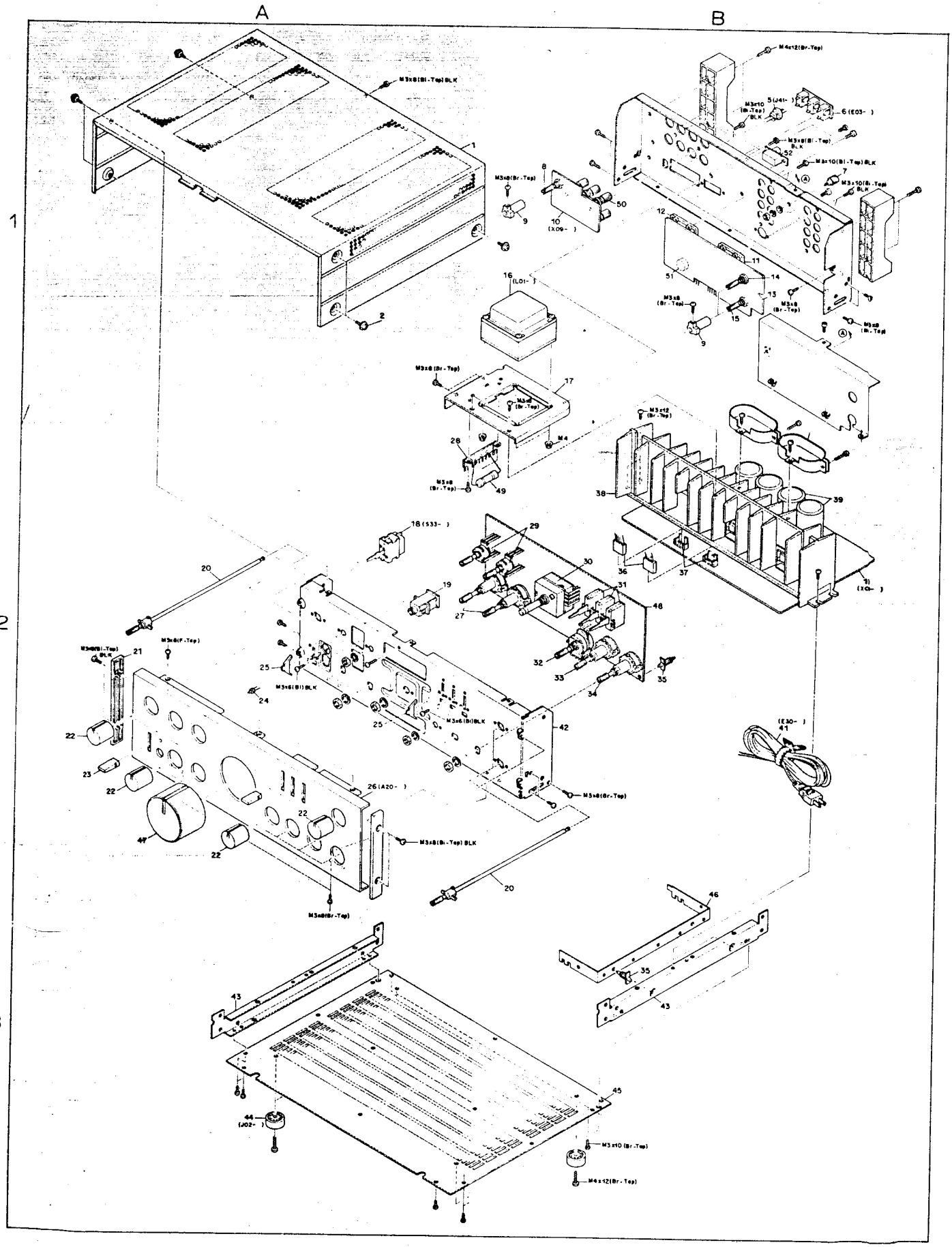
EXPLODED VIEW



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	R06-3016-05	Potentiometer (BASS, TREBLE)	☆ 2B
30	R10-5003-05	Potentiometer (VOLUME)	2B
31	S33-2041-05	Lever switch	2B
32	R06-6001-05	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	J02-*	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	F05-*	Fuse (4A)	1B
50	E20-0812-05	Binding post ass'y	1B
51	E06-0510-05	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,U,S	☆
–	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 H,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 H	☆
–	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,E,T	
–	H25-0078-04	Polyethylen bag	
–	H40-0004-04	Anti-rust paper M	
–	J02-0049-14	Foot x4 K	
–	J02-0073-04	Foot x4 P,U,M,H,S,X,E,T	
–	J41-0024-15	Power cord bushing S,E,T	

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PARTS LIST

Ref. No.	Parts No.	Description		Remarks
–	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		☆

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

Ref. No.	Parts No.	Description			Remarks
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	

Ref. No.	Parts No.	Description			Remarks
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			Remarks
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		K,P	
–	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	

PARTS LIST

Ref. No.	Parts No.	Description	Remarks
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	

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

Ref. No.	Parts No.	Description	Remarks
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%	

Ref. No.	Parts No.	Description	Remarks
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	
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	

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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.

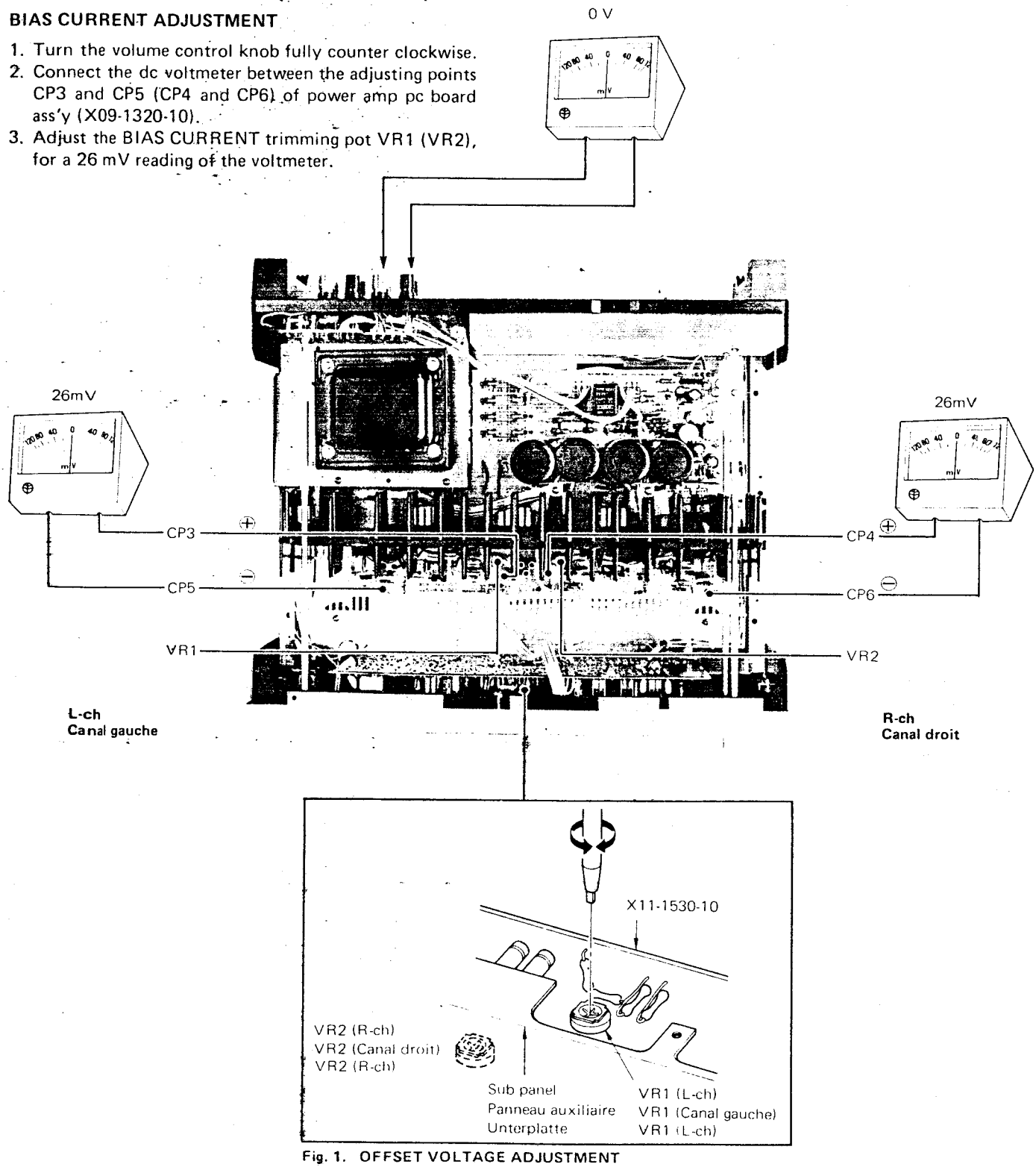

Fig. 1. OFFSET VOLTAGE ADJUSTMENT

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 Lautstärkeregler (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	2SA733	2SA992 (E, F), 2SA872 (D, E), 2SA921 (S, T)
X09-1322-71	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	—

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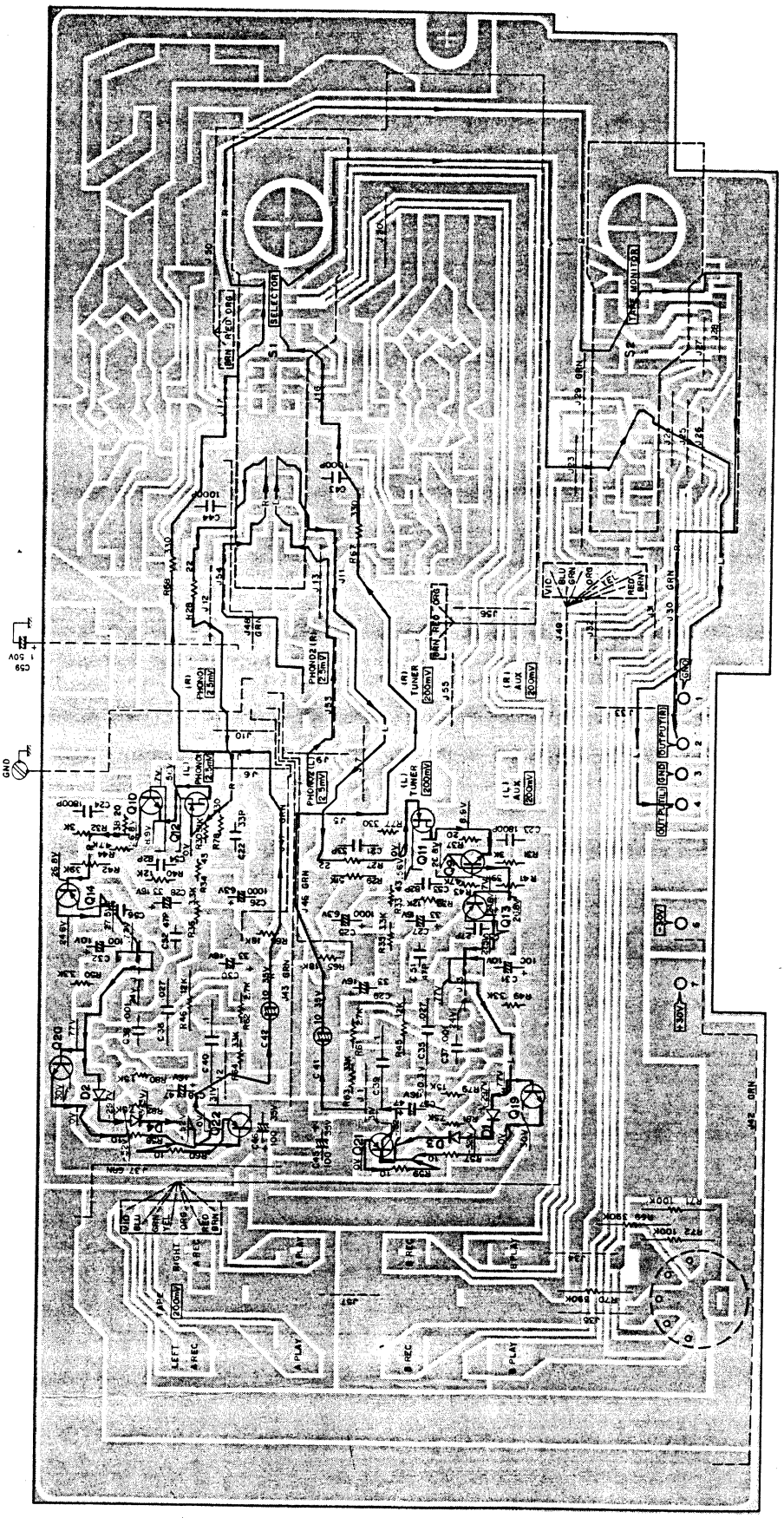
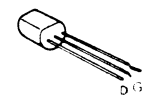
PC BOARD

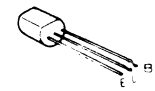
▼PREAMP PCB (X08-1680-10) Foil Side View



2SK163



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



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

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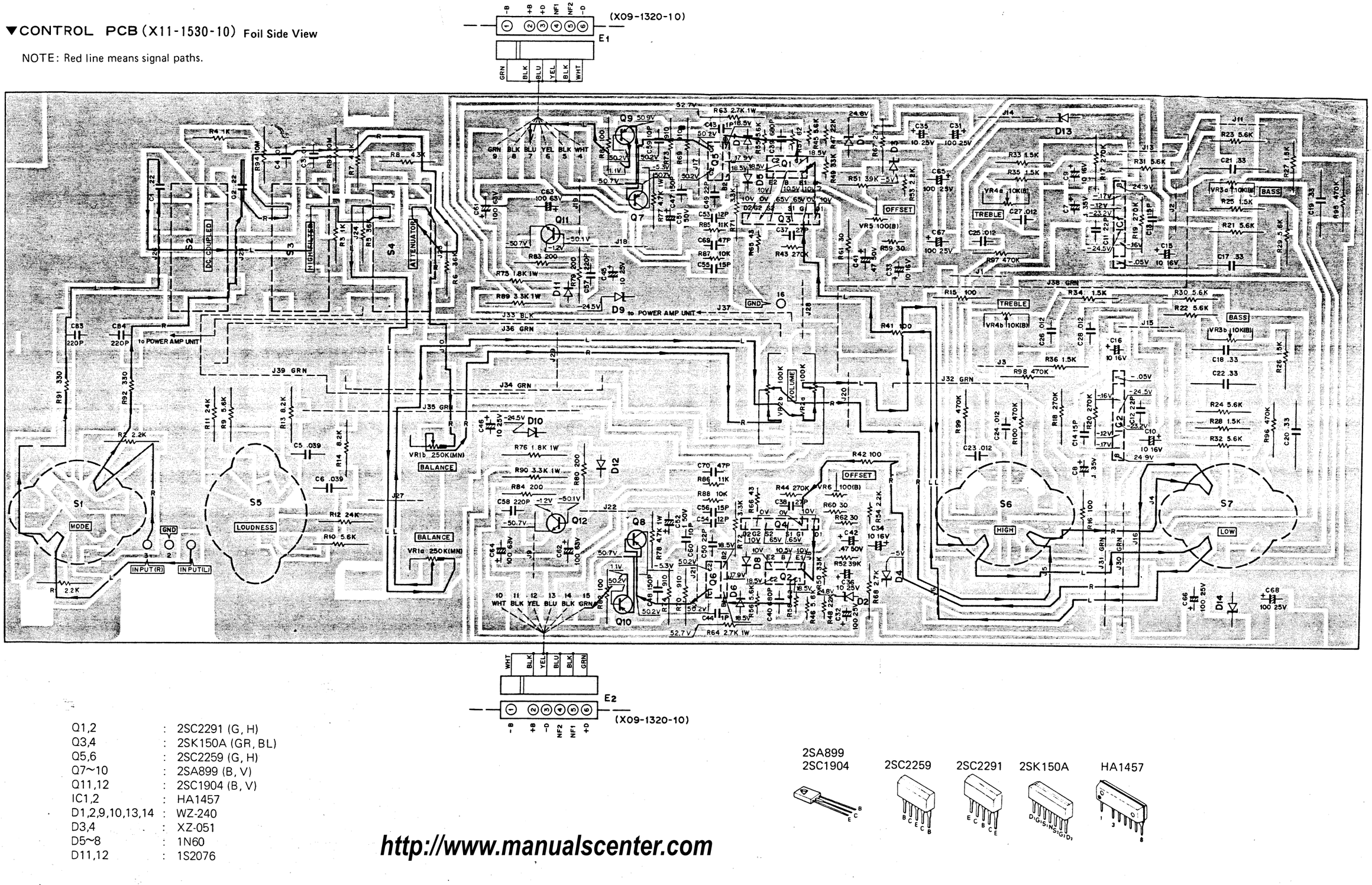
PC BOARD

▼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

2SA899
2SC1904

2SC2259

2SC2291

2SK150A

HA1457

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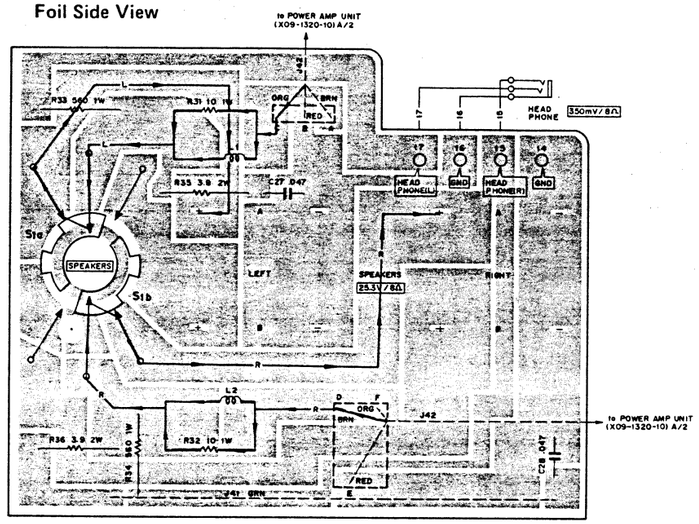
PC BOARD

▼POWER AMP PCB (X09-1320-10) (B/2)

Foil Side View

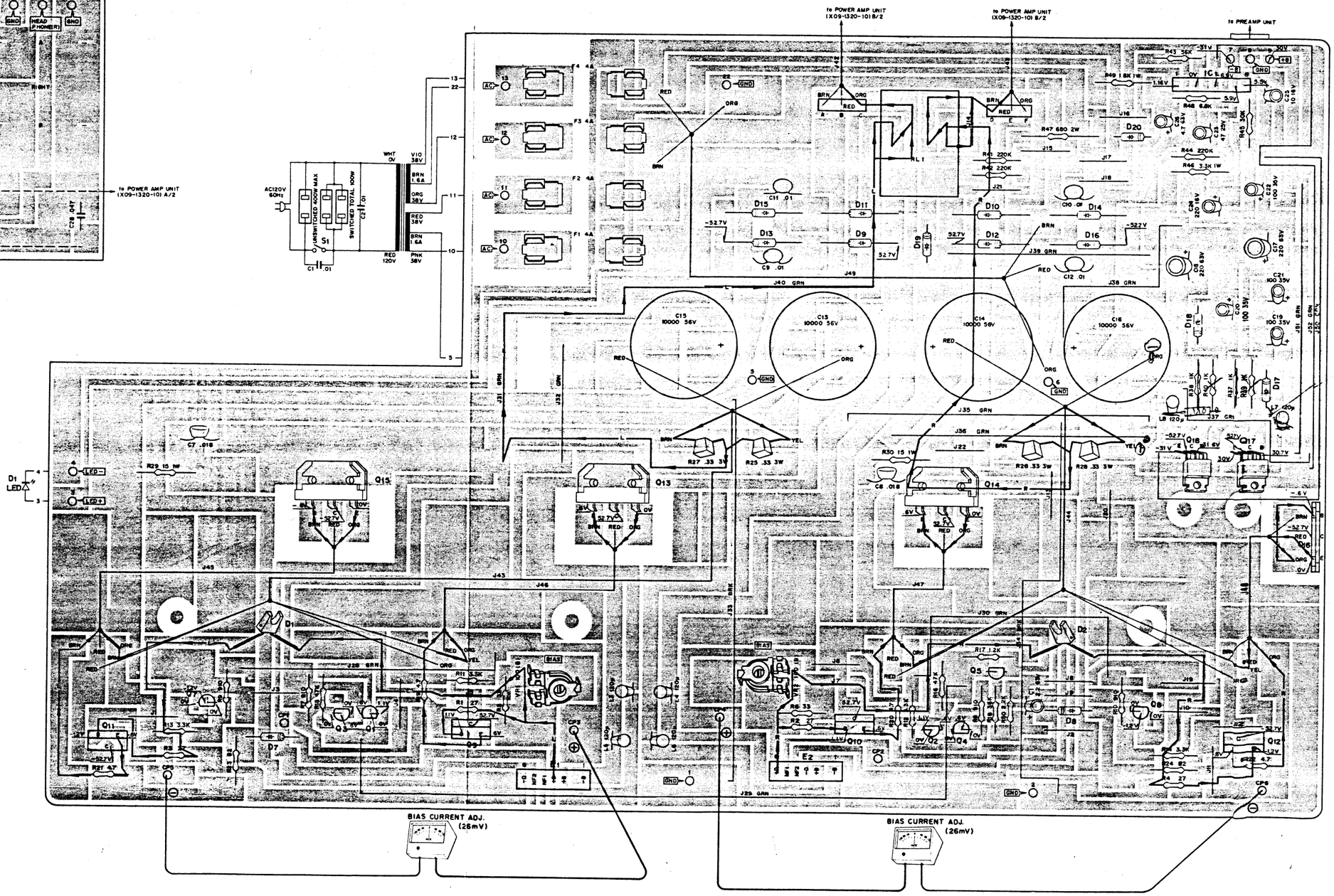


NOTE: Red line means signal paths.

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 AMP PCB (X09-1320-10) (A/2)

Components Side View



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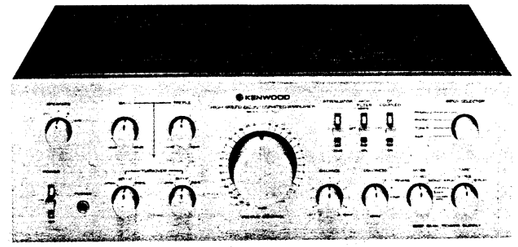
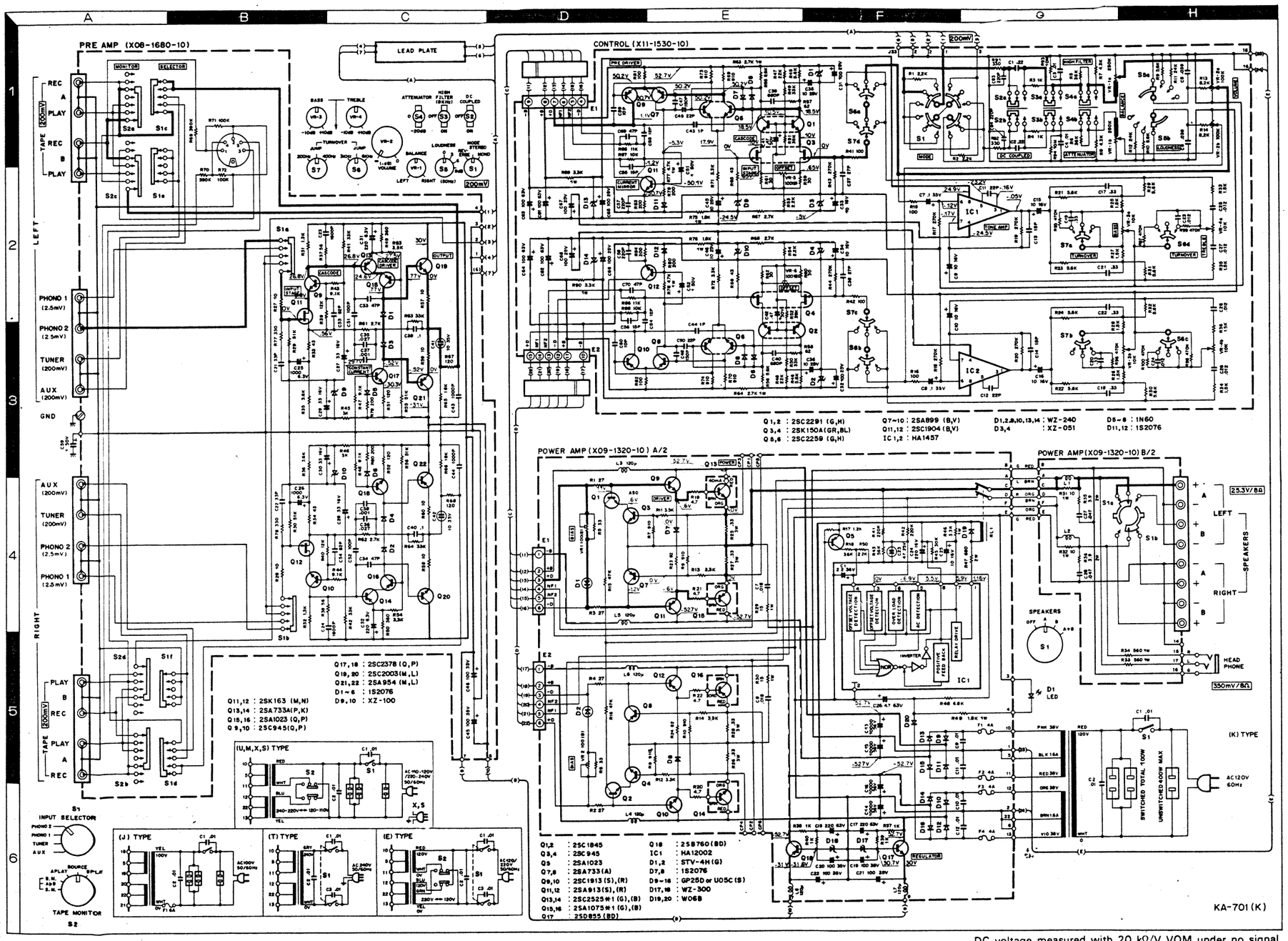
KENWOOD

HIGH SPEED DC INTEGRATED AMPLIFIER

[KA-7011] KA-701





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

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
Intermodulation Distortion (60 Hz : 7 kHz = 4 : 1)	0.003% at rated power 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
(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
Tuner AUX, Tape A, B	110 dB for 220 mV input
Maximum Input Level for Phono	220 mV (RMS), T.H.D. 0.02% at 1,000 Hz
Tape Rec (Pin)	200 mV/120 ohms
(DIN)	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
400 Hz	± 10 dB at 50 Hz
Treble Turnover Freq. 3 kHz	± 10 dB at 20 kHz
6 kHz	± 10 dB at 40 kHz
Loudness Control (at VOLUME – 30 dB)	+ 3 dB, + 6 dB, + 9 dB at 50 Hz
High Filter	8 kHz, 6 dB/oct

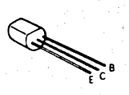
GENERAL

Power Consumption	200 watts at full power
A.C. Outlet	Switched, Unswitched
Dimensions	W 440 mm (17-10/32")
	H 153 mm (6-6/32")
	D 407 mm (16-6/32")
Net Weight	13.5 kg (29.8 lbs)

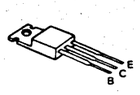
* Measured pursuant to Federal Trade Commission's Trade Regulation rule in U.S.A. on Power Output Claims for Amplifier.

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

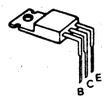
2SA733A	2SC945
2SA777	2SC1509
2SA850	2SC1735
2SA872	2SC1775
2SA921	2SC1845
2SA922	2SC1980
2SA954	2SC2003
2SA1023	2SC2378



2SA913 2SC1913
2SB596 2SD526



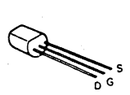
2SB514T-AL 2SD313T-AL
2SB760 2SD855



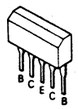
2SA1075*1
2SC2525*1

2SA899
2SC1904

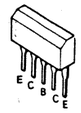
2SK163



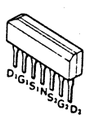
2SC2259



2SC2291

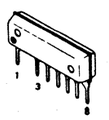
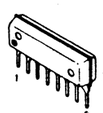


2SK150A



μPA68H

HA1457



HA-12002