STEREO INTEGRATED AMPLIFIER

KA-45

SERVICE MANUAL

KENWOOD

KENWOOD CORPORATION

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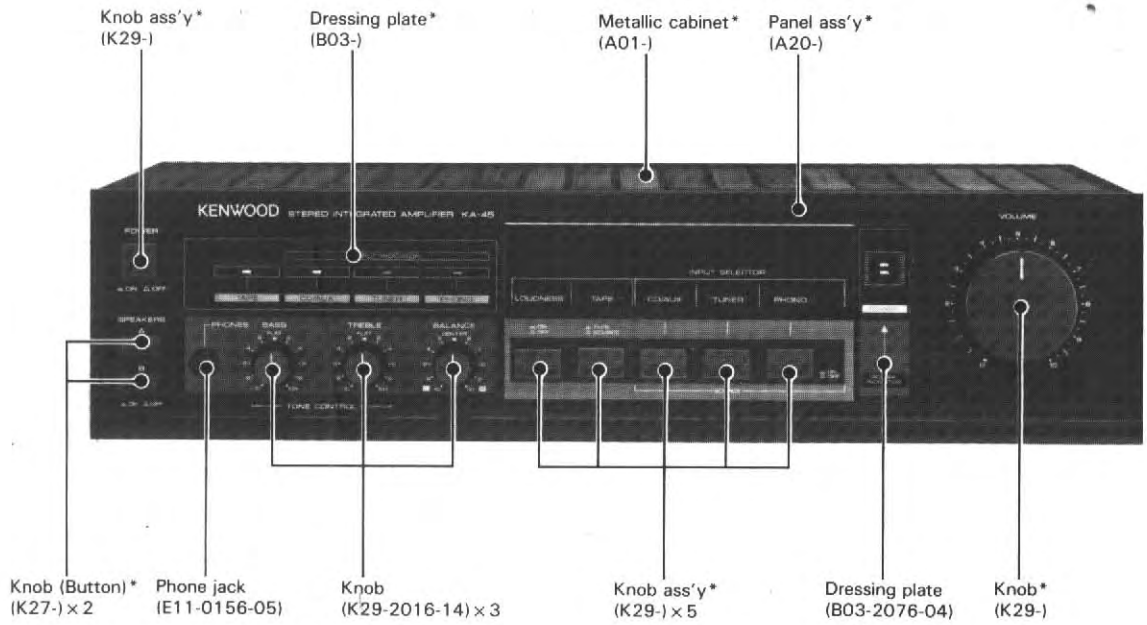
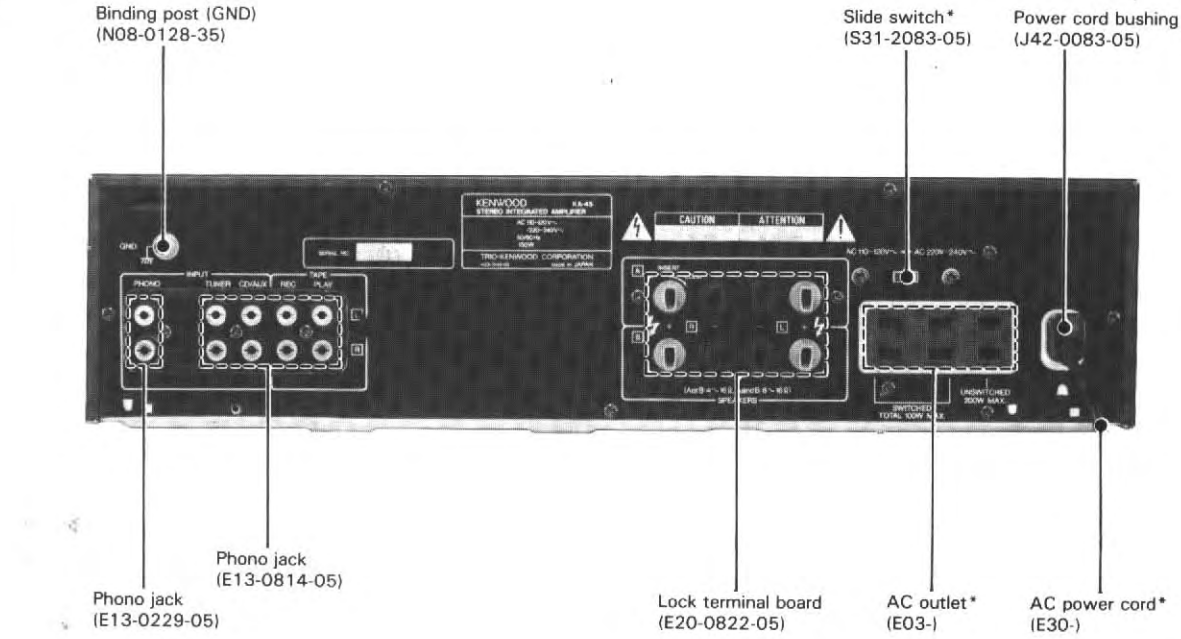
B51-1928-00(T)100



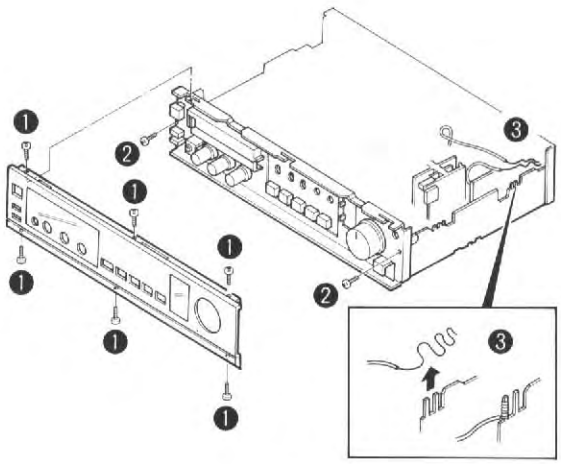


* Refer to Parts List on page 6.

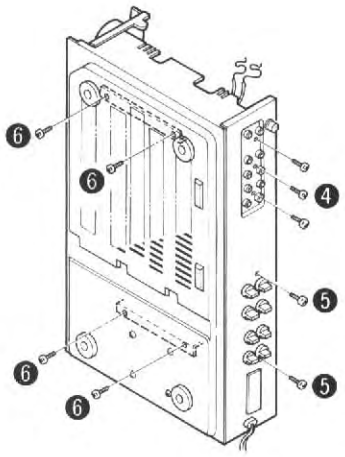
DISASSEMBLY FOR REPAIR

1. Remove the metallic case and remove 6 screws retaining the panel assembly (❶).
2. Remove the panel assembly and remove 2 screws at the ends of the sub panel (❷). Unwrap the ground leads from the chassis (❸).

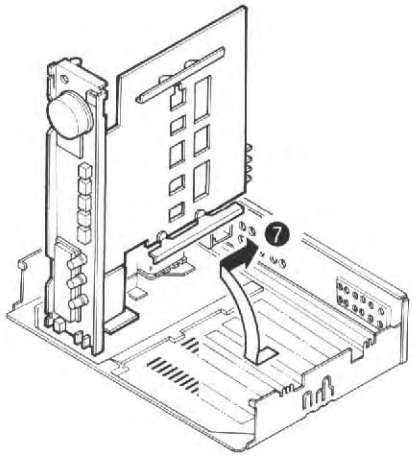
(Note) When checking the pc board, these leads should be grounded.



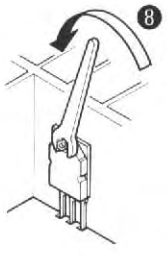
3. Remove 3 screws at phono jacks and 2 screws at speaker terminal (❹, ❺).
4. Remove 4 screws retaining the mounting hardware from the bottom (❻).



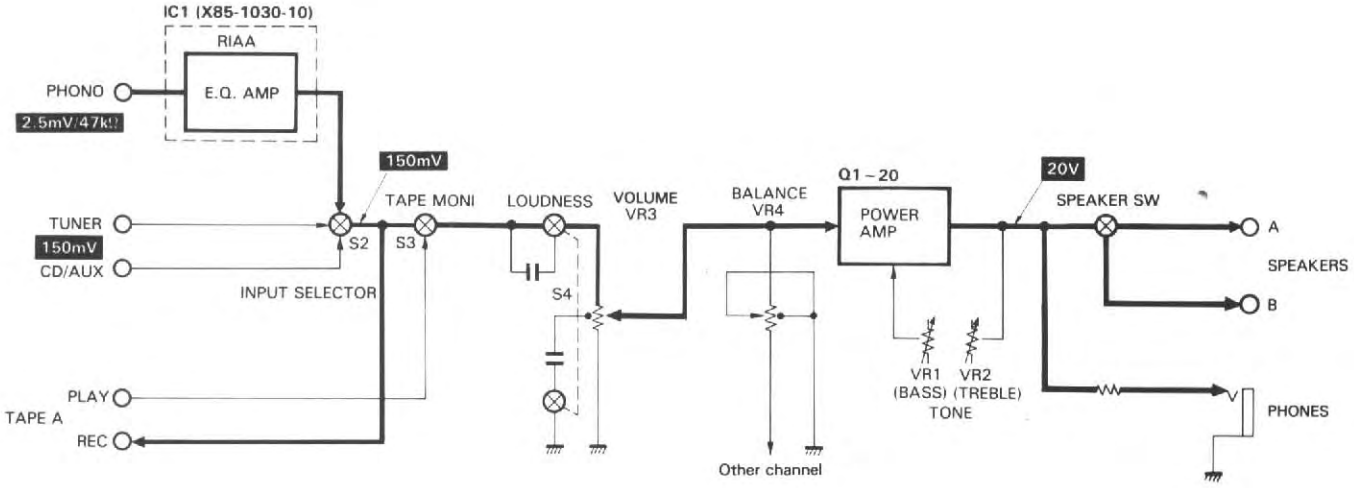
5. Turn the sub panel with the pc board as shown by the arrow and put the rear side of the pc board on the rear panel (❼). Now components on the pc board can be replaced.



6. For replacement of the power transistors, use a hex-wrench (W05-0022-00) (❽).



BLOCK LEVEL DIAGRAM/CIRCUIT DESCRIPTION



CIRCUIT DESCRIPTION

PRE/MAIN amp unit (X09-2150-11)

Components	Functions	Operations
Q1	Overcurrent detection (protection)	Turns ON with overcurrent due to short circuit of speaker terminals.
Q2	Overcurrent detection (protection)	Turns ON with overcurrent due to short circuit of speaker terminals.
Q3	Final transistor	+ side final
Q4	Final transistor	+ side final
Q5	Final transistor	– side final
Q6	Final transistor	– side final
Q7	Driver	+ side driver
Q8	Driver	+ side driver
Q9	Driver	– side driver
Q10	Driver	– side driver
Q11	Power limiter	Turns ON when current flows to the output.
Q12	Power limiter	Turns ON when current flows to the output.
Q15	Class A + Power supply	When Power is switched ON, rises with the time constant of R68 and C45. When Power is switched OFF, falls with the time constant of R95 and C45.
Q16	Protection	Turns ON when the output is short-circuited, turns OFF when Power is switched OFF.
Q17		
Q18	LED/lamp power supply	Power supply
Q19	BIAS Tr. (thermal compensation)	For L ch thermal compensation. Turns ON when the final transistor heats up.
Q20	BIAS Tr. (thermal compensation)	For R ch thermal compensation. Turns ON when the final transistor heats up.

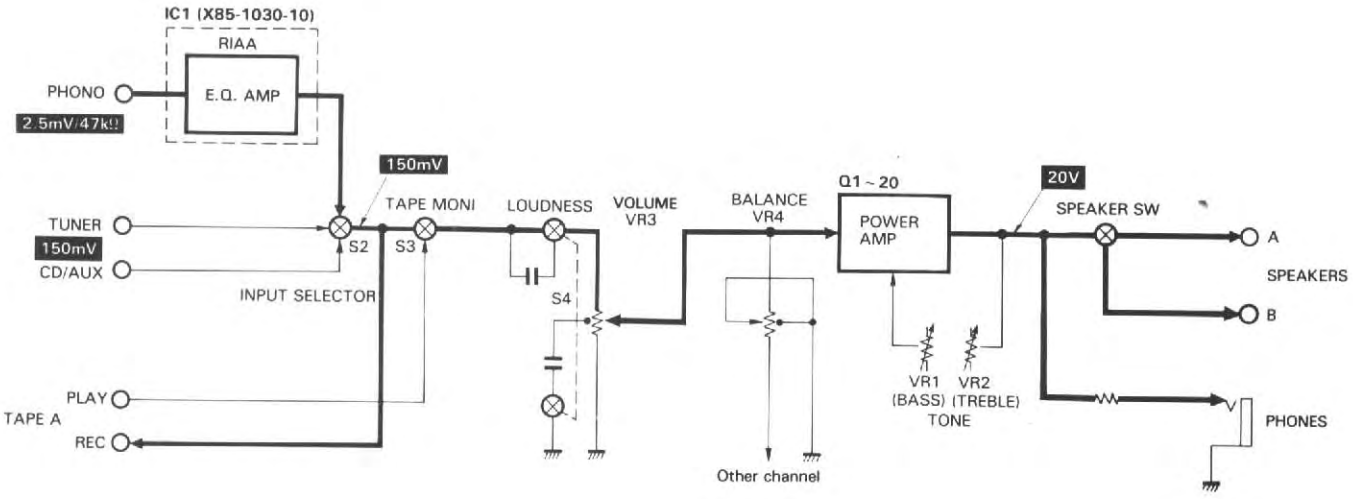
EQ amp unit (X85-1030-10)

Components	Functions	Operations
IC1	Equalizer amp	

Class A amp unit (X85-1040-10)

Components	Functions	Operations
Q1 - Q4	1st stage differential amp	Class A amp
Q5 - Q8	2nd stage differential amp	Class A amp

BLOCK LEVEL DIAGRAM/CIRCUIT DESCRIPTION



CIRCUIT DESCRIPTION

PRE/MAIN amp unit (X09-2150-11)

Components	Functions	Operations
Q1	Overcurrent detection (protection)	Turns ON with overcurrent due to short circuit of speaker terminals.
Q2	Overcurrent detection (protection)	Turns ON with overcurrent due to short circuit of speaker terminals.
Q3	Final transistor	+ side final
Q4	Final transistor	+ side final
Q5	Final transistor	− side final
Q6	Final transistor	− side final
Q7	Driver	+ side driver
Q8	Driver	+ side driver
Q9	Driver	− side driver
Q10	Driver	− side driver
Q11	Power limiter	Turns ON when current flows to the output.
Q12	Power limiter	Turns ON when current flows to the output.
Q15	Class A + Power supply	When Power is switched ON, rises with the time constant of R68 and C45. When Power is switched OFF, falls with the time constant of R95 and C45.
Q16	Protection	Turns ON when the output is short-circuited, turns OFF when Power is switched OFF.
Q17		
Q18	LED/lamp power supply	Power supply
Q19	BIAS Tr. (thermal compensation)	For L ch thermal compensation. Turns ON when the final transistor heats up.
Q20	BIAS Tr. (thermal compensation)	For R ch thermal compensation. Turns ON when the final transistor heats up.

EQ amp unit (X85-1030-10)

Components	Functions	Operations
IC1	Equalizer amp	

Class A amp unit (X85-1040-10)

Components	Functions	Operations
Q1 - Q4	1st stage differential amp	Class A amp
Q5 - Q8	2nd stage differential amp	Class A amp

ADJUSTMENT/REGLAGE/ABGLEICH

ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
1	IDLE CURRENT	—	Connect a DC voltmeter across CP1 (L) CP2 (R).	VOLUME: 0	VR1 (L) VR2 (R)	22mV	(a)

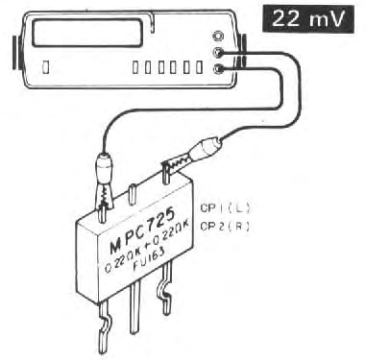
REGLAGE

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DE L'AMPLIFICATEUR	POINS L'ALIGNEMENT	ALIGNER POUR	FIG.
1	COURANT DE POLARISATION	—	Connecter un voltmètre CC sur CP1 (G) CP2 (D).	VOLUME: 0	VR1 (G) VR2 (D)	22mV	(a)

ABGLEICH

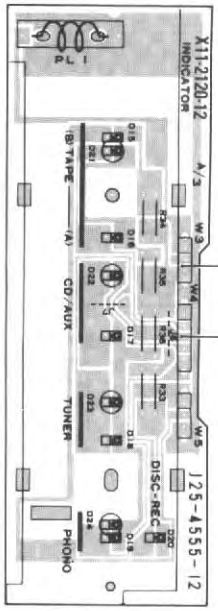
NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	VORSTÄRKER EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
1	LEERLAUFSTROM	—	Einen Gleichspannungs-messer über CP1 (L) CP2 (R) anschließen.	VOLUME: 0	VR1 (L) VR2 (R)	22mV	(a)

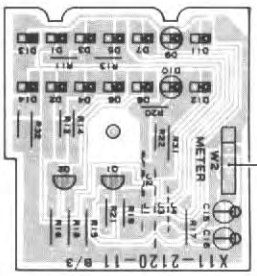
(a)



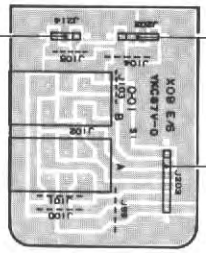
PC BOARD

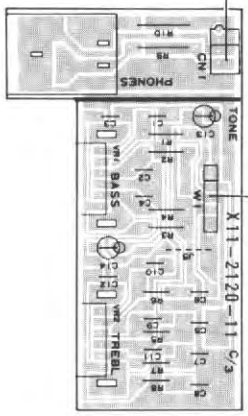
CONTROL UNIT
(X11-2120-12)
Component side view



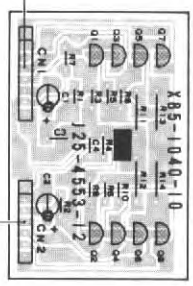


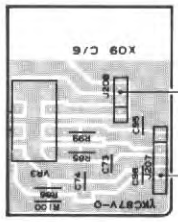
FRONT



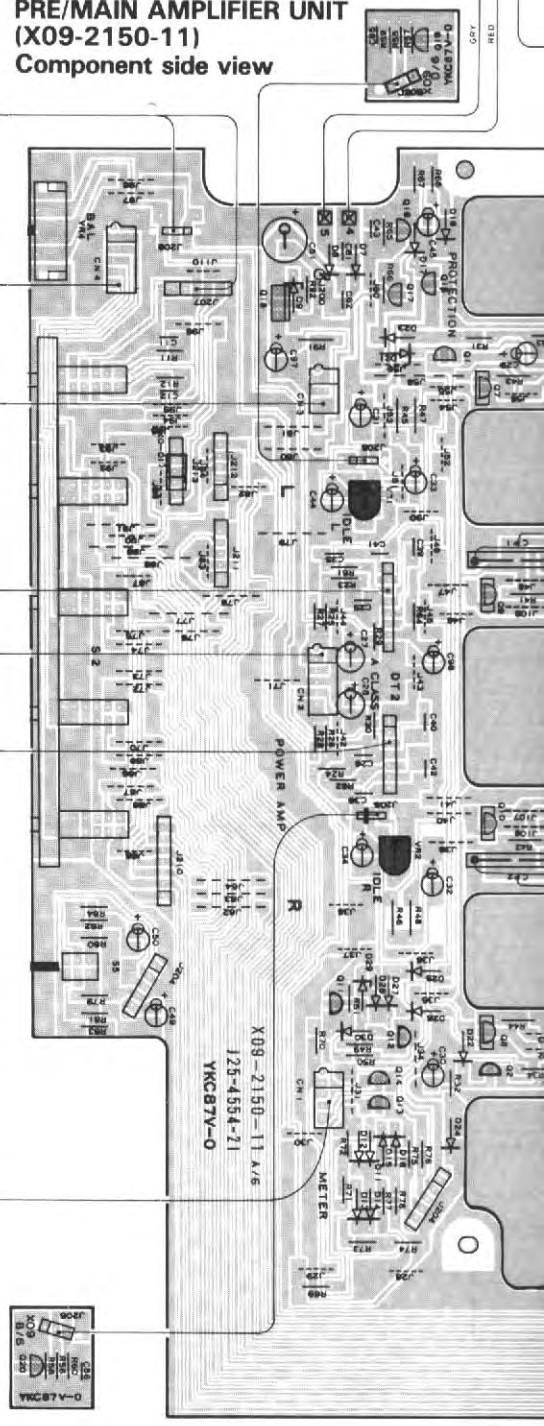


PRE AMPLIFIER UNIT
(X85-1040-10)
Component side view



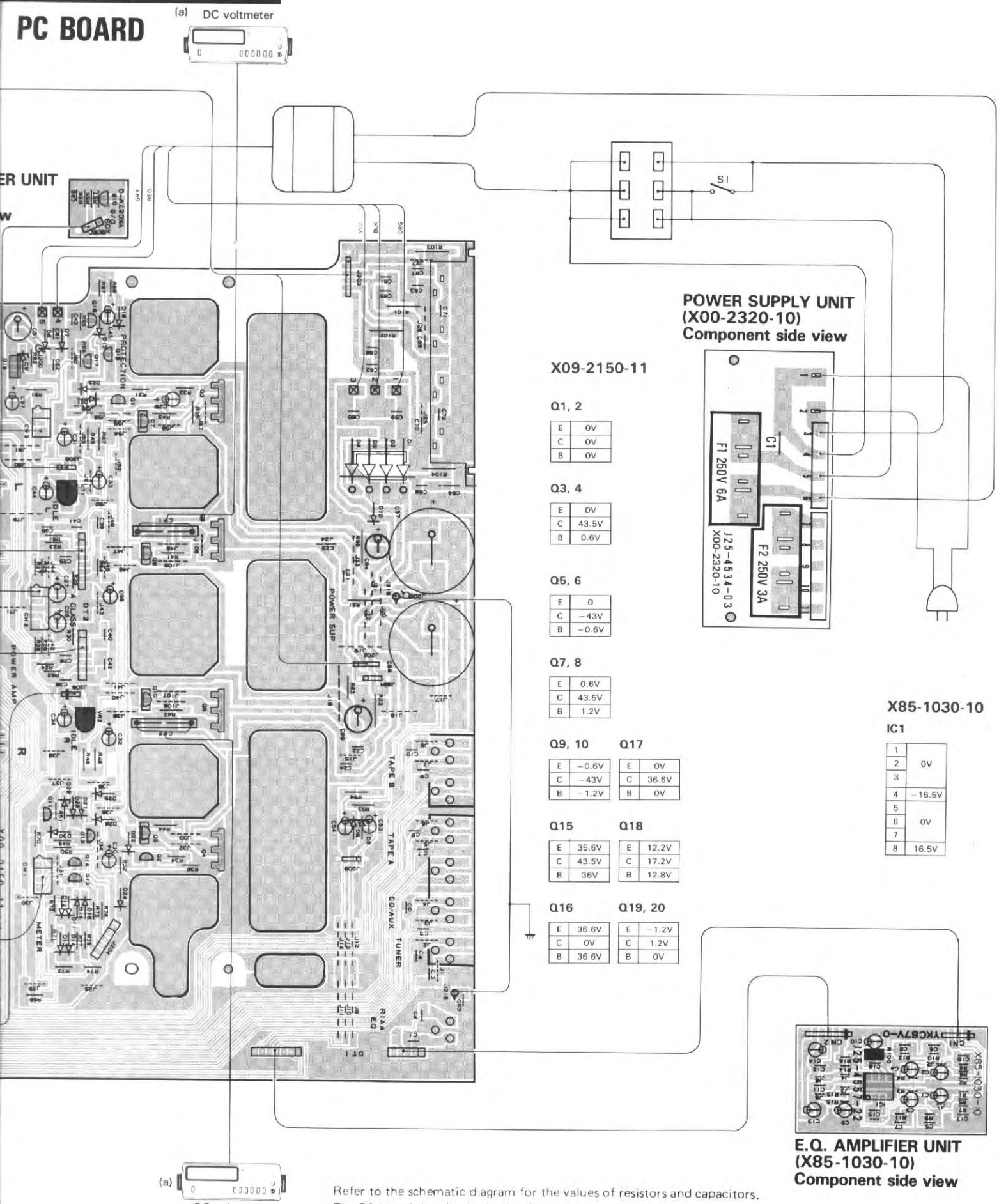


PRE/MAIN AMPLIFIER UNIT
(X09-2150-11)
Component side view

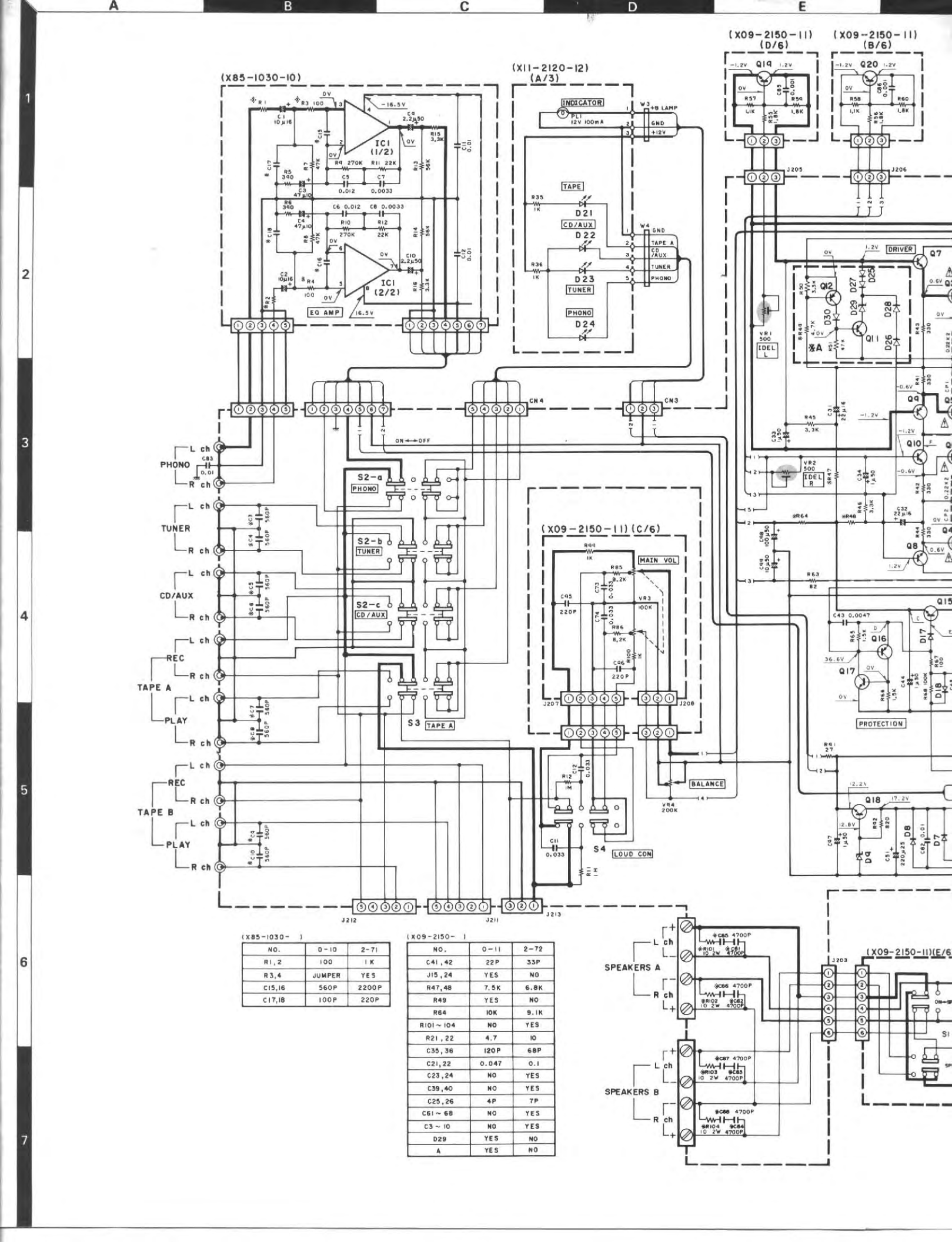


(a)

PC BOARD



Refer to the schematic diagram for the values of resistors and capacitors.
The PC board drawing is viewing from the side easy to check.

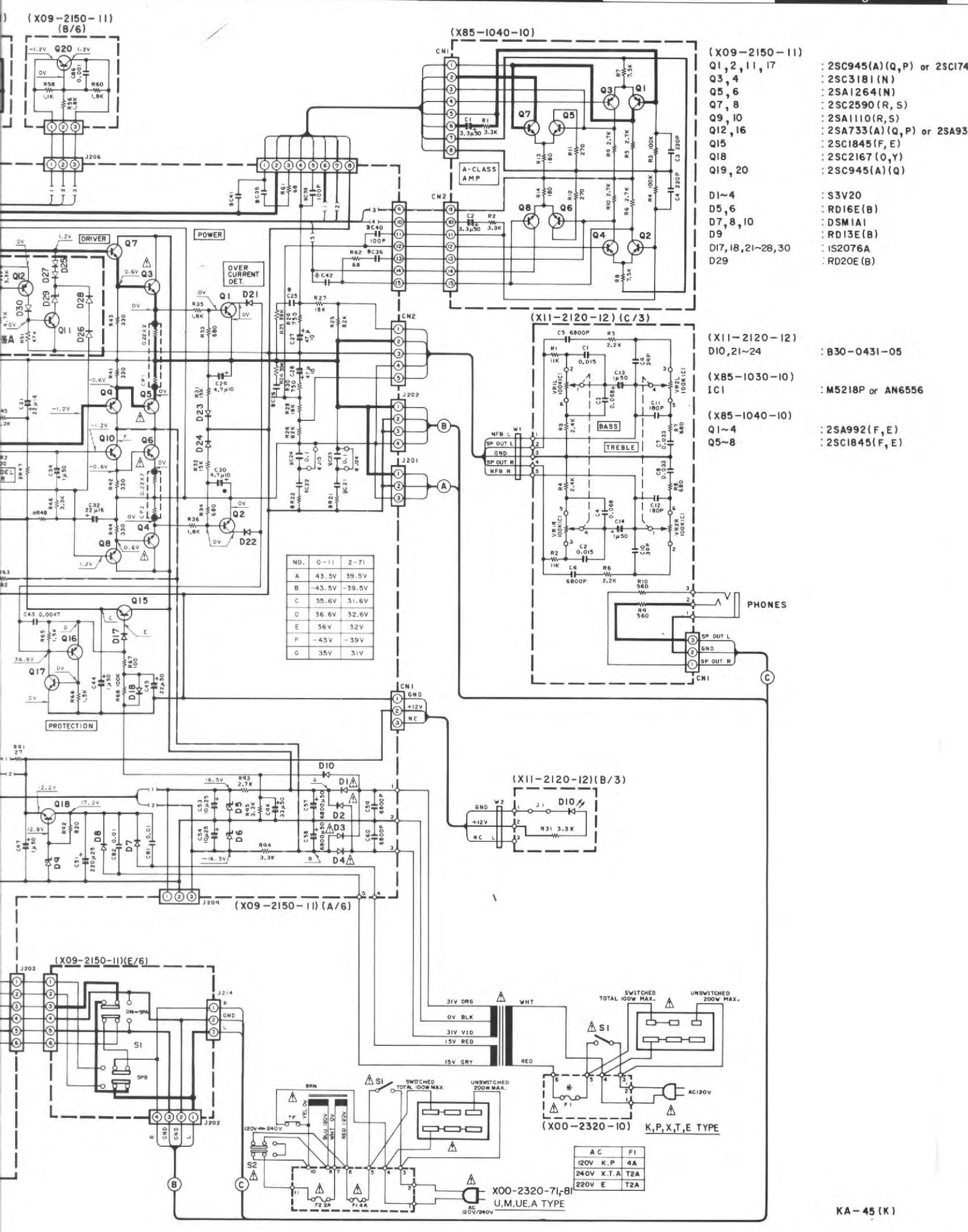


(X85-1030-)

NO.	0-10	2-71
R1,2	100	1K
R3,4	JUMPER	YES
C15,16	560P	2200P
C17,18	100P	220P

(X09-2150-)

NO.	0-11	2-72
C41,42	22P	33P
J15,24	YES	NO
R47,48	7.5K	6.8K
R49	YES	NO
R64	10K	9.1K
R101~104	NO	YES
R21,22	4.7	10
C35,36	120P	68P
C21,22	0.047	0.1
C23,24	NO	YES
C39,40	NO	YES
C25,26	4P	7P
C61~68	NO	YES
C3~10	NO	YES
D29	YES	NO
A	YES	NO


(X09-2150-11) (B/6)
(X85-1040-10)
(X09-2150-11)
Q1,2,11,17 : 2SC945(A)(Q,P) or 2SC1740
Q3,4 : 2SC3181(N)
Q5,6 : 2SA1264(N)
Q7,8 : 2SC2590(R,S)
Q9,10 : 2SA1110(R,S)
Q12,16 : 2SA733(A)(Q,P) or 2SA933
Q15 : 2SC1845(F,E)
Q18 : 2SC2167(O,Y)
Q19,20 : 2SC945(A)(Q)
D1~4 : S3V20
D5,6 : RD16E(B)
D7,8,10 : DSM1A1
D9 : RD13E(B)
D11,18,21~28,30 : IS2076A
D29 : RD20E(B)
A-CLASS AMP
DRIVER
POWER
OVER CURRENT DET.
PROTECTION
(X11-2120-12)(C/3)
(X11-2120-12)
D10,21~24 : B30-0431-05
(X85-1030-10)
IC1 : M5218P or AN6556
(X85-1040-10)
Q1~4 : 2SA992(F,E)
Q5~8 : 2SC1845(F,E)
BASS
TREBLE
PHONES
NO. 0-11 2-71
A 43.5V 39.5V
B -43.5V -39.5V
C 35.6V 31.6V
D 36.6V 32.6V
E 36V 32V
F -43V -39V
G 35V 31V
(X09-2150-11)(A/6)
(X09-2150-11)(E/6)
(X11-2120-12)(B/3)
(X00-2320-10) K,P,X,T,E TYPE
X00-2320-71-81 U,M,UE,A TYPE
AC 120V/240V
SWITCHED TOTAL 100W MAX.
UNSWITCHED 200W MAX.
AC 120V
120V⇔240V
AC FI
120V K.P 4A
240V X.T.A T2A
220V E T2A
KA-45(K)

945(A)(Q,P) or 2SC1740S(Q,R)
3181(N)
1264(N)
2590(R,S)
1110(R,S)
733(A)(Q,P) or 2SA933S(Q,R)
1845(F,E)
2167(O,Y)
945(A)(Q)

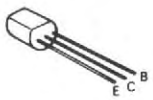
20
GE(B)
IAI
GE(B)
76A
DE(B)

-0431-05

18P or AN6556

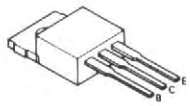
992(F,E)
1845(F,E)

2SA733(A)
2SA992
2SC1845
2SC945(A)

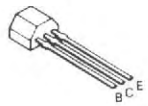


2SA1110
2SC2590

2SC2167

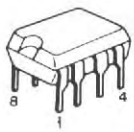


2SA9335
2SC1740S



2SA1264
2SC3181

AN6556
M5218P



DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

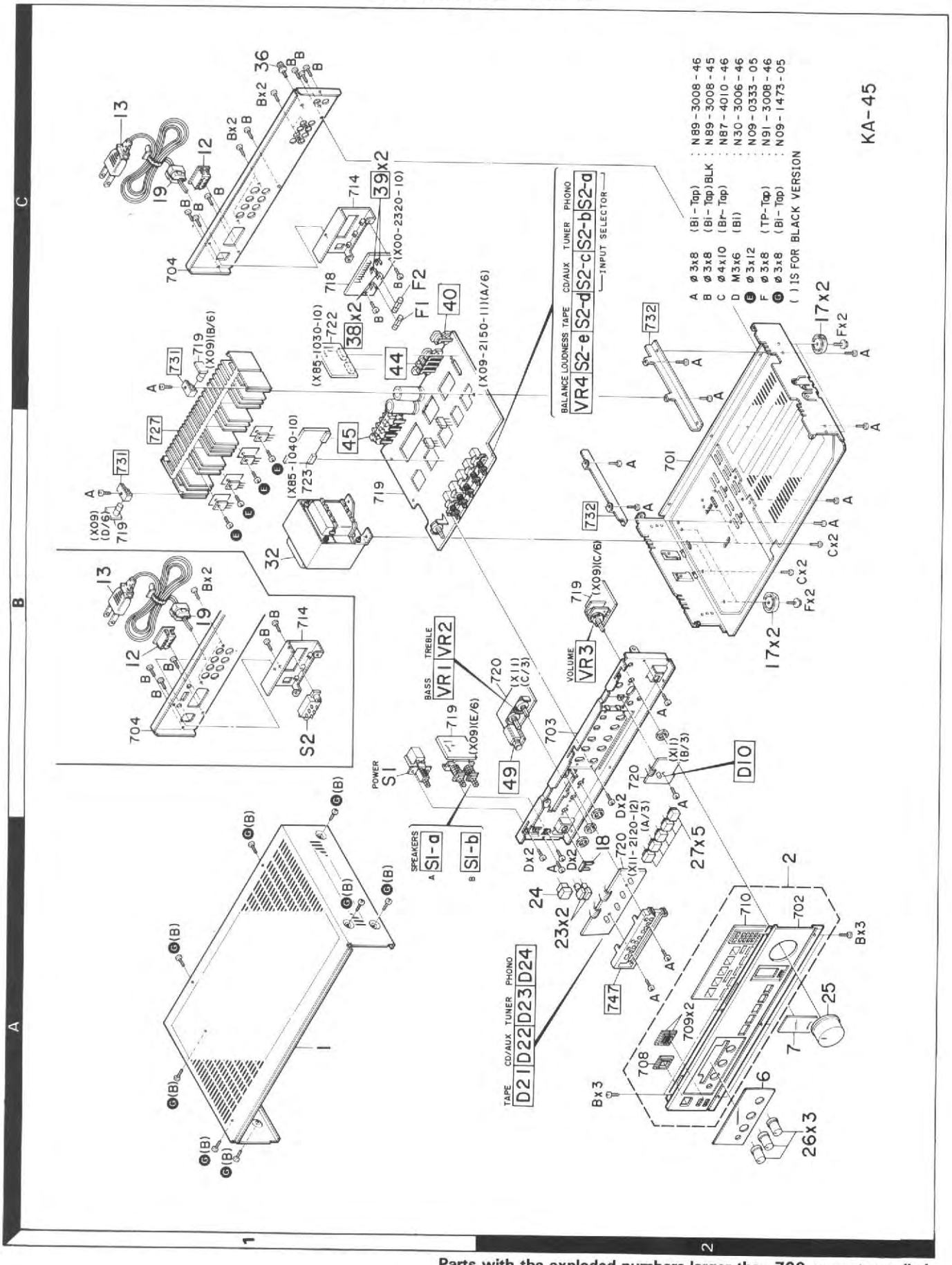
Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance sans signal d'entrée. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser ohne Eingangssignal gemessen. Dabei schwanden die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u.U. geringfügig.

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

KA-45
KENWOOD

EXPLODED VIEW



Parts with the exploded numbers larger than 700 are not supplied.

PARTS LIST

* New Parts
Parts without **Parts No.** are not supplied.
Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.
Teile ohne **Parts No.** werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
			KA-45			
1	1A		A01-1319-02	METALLIC CABINET	M2A2	
1	1A		A01-1481-02	METALLIC CABINET	KPUM1	
1	1A		A01-1481-02	METALLIC CABINET	UEXA1	
2	2A	*	A20-4907-02	PANEL ASSY	KPUM1	
2	2A	*	A20-4907-02	PANEL ASSY	UEXA1	
2	2A	*	A20-4908-02	PANEL ASSY	M2A2	
6	2A		B03-2072-03	DRESSING PLATE	KPUM1	
6	2A		B03-2072-03	DRESSING PLATE	UEXA1	
6	2A		B03-2073-03	DRESSING PLATE	M2A2	
7	2A		B03-2076-04	DRESSING PLATE		
-			B46-0092-03	WARRANTY CARD	K	
-			B46-0094-03	WARRANTY CARD	UUE	
-			B46-0095-03	WARRANTY CARD	UUE	
-			B46-0096-13	WARRANTY CARD	X	
-			B46-0121-03	WARRANTY CARD	P	
-		*	B50-6218-00	INSTRUCTION MANUAL(ENGLISH)		
-		*	B50-6219-00	INSTRUCTION MANUAL(FRENCH)	A1A2	
-		*	B50-6219-00	INSTRUCTION MANUAL(FRENCH)	PM1XM2	
-		*	B50-6220-00	INSTRUCTION MANUAL(SPANISH)	A1A2	
-		*	B50-6220-00	INSTRUCTION MANUAL(SPANISH)	M1M2	
-		*	B50-6221-00	INSTRUCTION MANUAL(ARABIC)	A1A2	
-		*	B50-6221-00	INSTRUCTION MANUAL(ARABIC)	M1M2	
-			B58-0223-04	CAUTION CARD (PRE-SET 120V)	U	
-			B58-0269-04	CAUTION CARD	K	
-			B58-0513-04	CAUTION CARD (PRESET220-240)	UE	
-			B59-0092-00	SERVICE DIRECTORY	UUE	
⚠ 12	1B,1C		E03-0068-05	AC OUTLET	KP	
⚠ 12	1B,1C		E03-0069-05	AC OUTLET	M2	
⚠ 12	1B,1C		E03-0069-05	AC OUTLET	UM1UE	
⚠ 13	1B,1C		E30-0459-05	AC POWER CORD	A1A2	
⚠ 13	1B,1C		E30-0812-05	AC POWER CORD	M2	
⚠ 13	1B,1C		E30-0812-05	AC POWER CORD	UM1UE	
⚠ 13	1B,1C		E30-0974-05	AC POWER CORD	KP	
⚠ 13	1B,1C		E30-1341-05	AC POWER CORD	X	
⚠ F1	1C		F05-4022-05	FUSE (250V 4A)	M2	
⚠ F1	1C		F05-4022-05	FUSE (250V 4A)	UM1UE	
⚠ F1	1C		F05-4025-05	FUSE (SEMKO) (250V T4A)	A1A2	
⚠ F1	1C		F06-4024-05	FUSE (UL) (250V 4A)	KP	
⚠ F2	1C		F05-2023-05	FUSE (250V 2A)	M2	
⚠ F2	1C		F05-2023-05	FUSE (250V 2A)	UM1UE	
⚠ F2	1C		F06-2021-05	FUSE (SEMKO) (250V T2A)	XA1A2	
-		*	H01-7190-04	ITEM CARTON CASE	KPUM1	
-		*	H01-7190-04	ITEM CARTON CASE	UEXA1	
-		*	H01-7229-04	ITEM CARTON CASE	M2A2	
-			H10-3317-02	POLYSTYRENE FOAMED FIXTURE		
-			H25-0223-04	PROTECTION BAG (750X350)		
-			H25-0232-04	PROTECTION BAG (235X350)		
17	2B,2C		J02-0161-04	FOOT		
18	2A		J21-3326-05	JACK MOUNTING HARDWARE		
⚠ 19	1B,1C		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		

E: Scandinavia & Europe H:Audio Club K: USA P: Canada W:Europe
T: England U: PX(Far East, Hawaii) UE : AAFES(Europe)
X: Australia A: Saudi Arabia M: Other Areas

M2 and **A2** are Silver type

⚠ indicates safety critical components.

PARTS LIST

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23	2A		K27-1290-04	KNOB (BUTTON) SPEAKER	M2A2	
23	2A		K27-1304-04	KNOB (BUTTON) SPEAKER	KPUM1	
23	2A		K27-1304-04	KNOB (BUTTON) SPEAKER	UEXA1	
24	2A		K29-1446-04	KNOB ASSY POWER	M2A2	
24	2A		K29-2001-04	KNOB ASSY POWER	KPUM1	
24	2A		K29-2001-04	KNOB ASSY POWER	UEXA1	
25	2A		K29-1683-04	KNOB VOLUME	M2A2	
25	2A		K29-2020-04	KNOB VOLUME	KPUM1	
25	2A		K29-2020-04	KNOB VOLUME	UEXA1	
26	2A		K29-2016-14	KNOB TONE/BALANCE		
27	2A		K29-2022-04	KNOB ASSY SELECTOR	KPUM1	
27	2A		K29-2022-04	KNOB ASSY SELECTOR	UEXA1	
27	2A		K29-2023-04	KNOB ASSY SELECTOR	M2A2	
⚠ 32	1B		L01-3981-05	POWER TRANSFORMER	KP	
⚠ 32	1B		L01-3982-05	POWER TRANSFORMER	X	
⚠ 32	1B		L01-3985-05	POWER TRANSFORMER	UM1UE	
⚠ 32	1B		L01-3985-05	POWER TRANSFORMER	M2A1A2	
36	1C		N08-0128-35	BINDING POST (GND)		
G	1A		N09-1473-05	TAPPING SCREW (M3X8)	M2A2	
⚠ S1	1B		S40-1073-05	PUSH SWITCH (POWER)		
⚠ S2	1B		S31-2083-05	SLIDE SWITCH (POWER TYPE)	UM1M2	
⚠ S2	1B		S31-2083-05	SLIDE SWITCH (POWER TYPE)	UEA1A2	
POWER SUPPLY UNIT (X00-2320-10)						
38 ,39	1C		J13-0041-05	FUSE CLIP	KPUM1	
38 ,39	1C		J13-0041-05	FUSE CLIP	UEM2	
39	1C		J13-0054-05	FUSE CLIP	XA1A2	
AUDIO (X09-2150-11)						
C3 -10			CK45FB1H561K	CERAMIC 560PF K	X	
C11 ,12			CF92FV1H333J	MF 0.033UF J		
C21 -24			CF92FV1H104J	MF 0.10UF J	X	
C21 ,22			CF92FV1H473J	MF 0.047UF J	A2	
C21 ,22			CF92FV1H473J	MF 0.047UF J	KPUUE	
C21 ,22			CF92FV1H473J	MF 0.047UF J	M1M2A1	
C25 ,26			CC45FSL1H040C	CERAMIC 4.0PF C	A2	
C25 ,26			CC45FSL1H040C	CERAMIC 4.0PF C	KPUUE	
C25 ,26			CC45FSL1H040C	CERAMIC 4.0PF C	M1M2A1	
C25 ,26			CC45FSL1H070D	CERAMIC 7.0PF D	X	
C27 -30			CE04FW1A470M	ELECTRO 47UF 10WV		
C31 ,32			CE04FW1C220M	ELECTRO 22UF 16WV		
C33 ,34			CE04FW1H010M	ELECTRO 1.0UF 50WV		
C35 ,36			CC45FSL1H121J	CERAMIC 120PF J	UEA2	
C35 ,36			CC45FSL1H121J	CERAMIC 120PF J	KPUM1	
C35 ,36			CC45FSL1H121J	CERAMIC 120PF J	M2A1	
C35 ,36			CC45FSL1H680J	CERAMIC 68PF J	X	
C39 ,40			CC45FSL1H101J	CERAMIC 100PF J	X	
C41 ,42			CC45FSL1H220J	CERAMIC 22PF J	UE	
C41 ,42			CC45FSL1H220J	CERAMIC 22PF J	KPUM1	
C41 ,42			CC45FSL1H220J	CERAMIC 22PF J	M2A1A2	
C41 ,42			CC45FSL1H330J	CERAMIC 33PF J	X	
C43			CF92FV1H472J	MF 4700PF J		
C44			CE04FW1H010M	ELECTRO 1.0UF 50WV		
C45			CE04FW1H220M	ELECTRO 22UF 50WV		
C51			CE04FW1E221M	ELECTRO 220UF 25WV		

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C53 ,54			CE04FW1E100M	ELECTRO 10UF 25WV		
C57 ,58			C90-0366-05	ELECTRO 6800UF 50WV		
C59 ,60			CK45FE2H682P	CERAMIC 6800PF P		
C61 -68			CF92FV1H472J	MF 4700PF J	X	
C73 ,74			CF92FV1H333J	MF 0.033UF J		
C81 -83			CK45FF1H103Z	CERAMIC 0.010UF Z		
C85 ,86			CF92FV1H102J	MF 1000PF J		
C94			CE04FW1H330M	ELECTRO 33UF 50WV		
C95 ,96			CC45FSL1H221J	CERAMIC 220PF J		
C97			CE04FW1H010M	ELECTRO 1.0UF 50WV		
C98			CE04FW1H100M	ELECTRO 10UF 50WV		
C99			CE04FW1H101M	ELECTRO 100UF 50WV		
40	1C		E13-0229-05	PHONO JACK (2P) PHONO		
44	1C		E13-0814-05	PHONO JACK (8P) INPUT,TAPE		
45	1B		E20-0822-05	LOCK TERMINAL BOARD(8P) SP		
E	1B		N09-0333-05	TAPPING SCREW (3X12)		
CP1 ,2			R90-0187-05	MULTI-COMP 0.22X2 K 5W		
R21 ,22			RS14DB3D100J	FL-PROOF RS 10 J 2W	X	
R21 ,22			RS14DB3D4R7J	FL-PROOF RS 4.7 J 2W	UE	
R21 ,22			RS14DB3D4R7J	FL-PROOF RS 4.7 J 2W	KPUM1	
R21 ,22			RS14DB3D4R7J	FL-PROOF RS 4.7 J 2W	M2A1A2	
R41 ,42			RD14AB2E331J	FL-PROOF RD 330 J 1/4W		
R43			RD14GB2E331J	FL-PROOF RD 330 J 1/4W		
R44			RD14AB2E331J	FL-PROOF RD 330 J 1/4W		
R45 ,46			RD14AB2E332J	FL-PROOF RD 3.3K J 1/4W		
R47			RD14AB2E682J	FL-PROOF RD 6.8K J 1/4W	X	
R47			RD14AB2E752J	FL-PROOF RD 7.5K J 1/4W	UE	
R47			RD14AB2E752J	FL-PROOF RD 7.5K J 1/4W	KPUM1	
R47			RD14AB2E752J	FL-PROOF RD 7.5K J 1/4W	M2A1A2	
R48			RD14GB2E682J	FL-PROOF RD 6.8K J 1/4W	X	
R48			RD14GB2E752J	FL-PROOF RD 7.5K J 1/4W	UE	
R48			RD14GB2E752J	FL-PROOF RD 7.5K J 1/4W	KPUM1	
R48			RD14GB2E752J	FL-PROOF RD 7.5K J 1/4W	M2A1A2	
R63			RD14AB2E820J	FL-PROOF RD 82 J 1/4W		
R91			RD14GB2E270J	FL-PROOF RD 27 J 1/4W		
R93 ,94			RS14DB3A272J	FL-PROOF RS 2.7K J 1W		
R95			RS14KB3D332J	FL-PROOF RS 3.3K J 2W		
R101-104			RS14DB3D100J	FL-PROOF RS 10 J 2W	X	
VR1 ,2			R12-0306-05	TRIMMING POT.(500) BIAS		
VR3	2B		R06-5131-05	POTENTIOMETER(100KX2) VOLUME		
VR4	2C		R01-5052-05	POTENTIOMETER(200K) BALANCE		
S1	1A		S42-2110-05	MULTIPLE PUSH SWITCH SPEAKER		
S2	2C		S42-5044-05	MULTIPLE PUSH SWITCH INPUT		
⚠ D1 -4			S3V20	DIODE		
D5 ,6			RD16E(B)	ZENER DIODE		
D7 ,8			DSM1A1	DIODE		
D9			RD13E(B)	ZENER DIODE		
D10			DSM1A1	DIODE		
D17 ,18			1S2076A	DIODE		
D21 -24			1S2076A	DIODE	X	
D21 -28			1S2076A	DIODE	UE	
D21 -28			1S2076A	DIODE	KPUM1	
D21 -28			1S2076A	DIODE	M2A1A2	

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D29			RD20E(B)	ZENER DIODE	UE	
D29			RD20E(B)	ZENER DIODE	KPUM1	
D29			RD20E(B)	ZENER DIODE	M2A1A2	
D30			1S2076A	DIODE	UE	
D30			1S2076A	DIODE	KPUM1	
D30			1S2076A	DIODE	M2A1A2	
Q1 ,2			2SC1740S(Q,R)	TRANSISTOR		
Q1 ,2			2SC945(A)(Q,P)	TRANSISTOR		
⚠ Q3 ,4			2SC3181(N)	TRANSISTOR		
⚠ Q5 ,6			2SA1264(N)	TRANSISTOR		
Q7 ,8			2SC2590(R,S)	TRANSISTOR		
Q9 ,10			2SA1110(R,S)	TRANSISTOR		
Q11			2SC1845(F,E)	TRANSISTOR	UE	
Q11			2SC1845(F,E)	TRANSISTOR	KPUM1	
Q11			2SC1845(F,E)	TRANSISTOR	M2A1A2	
Q12			2SA733(A)(Q,P)	TRANSISTOR	UE	
Q12			2SA733(A)(Q,P)	TRANSISTOR	KPUM1	
Q12			2SA733(A)(Q,P)	TRANSISTOR	M2A1A2	
Q12			2SA933S(Q,R)	TRANSISTOR	UE	
Q12			2SA933S(Q,R)	TRANSISTOR	KPUM1	
Q12			2SA933S(Q,R)	TRANSISTOR	M2A1A2	
Q15			2SC1845(F,E)	TRANSISTOR		
Q16			2SA733(A)(Q,P)	TRANSISTOR		
Q16			2SA933S(Q,R)	TRANSISTOR		
Q17			2SC1740S(Q,R)	TRANSISTOR		
Q17			2SC945(A)(Q,P)	TRANSISTOR		
Q18			2SC2167(O,Y)	TRANSISTOR		
Q19 ,20			2SC945(A)(Q)	TRANSISTOR		
CONTROL (X11-2120-12)						
D10	2B		B30-0431-05	LED(LN21CPH)		
D21 -24	2A		B30-0431-05	LED(LN21CPH)		
C1 ,2			CF92FV1H153J	MF 0.015UF J		
C3 ,4			CF92FV1H683J	MF 0.068UF J		
C5 ,6			CF92FV1H682J	MF 6800PF J		
C7 ,8			CF92FV1H333J	MF 0.033UF J		
C9 ,10			CC45FSL1H331J	CERAMIC 330PF J		
C11 ,12			CF92FV1H152J	MF 1500PF J		
C13 ,14			CE04FW1H010M	ELECTRO 1.0UF 50WV		
49	2B		E11-0156-05	PHONE JACK (3P) PHONES		
R9 ,10			RS14KB3D561J	FL-PROOF RS 560 J 2W		
VR1 ,2	1B		R06-5138-05	POTENTIOMETER(100KX2) TONE		
PREAMP (X85-1030-10)						
C1 ,2			CE04FW1C100M	ELECTRO 10UF 16WV		
C3 ,4			CE04FW1A470M	ELECTRO 47UF 10WV		
C5 ,6			CF92FV1H123J	MF 0.012UF J		
C7 ,8			CF92FV1H332J	MF 3300PF J		
C9 ,10			CE04FW1H2R2M	ELECTRO 2.2UF 50WV		
C11 ,12			CK45FF1H103Z	CERAMIC 0.010UF Z		
C15 ,16			CK45FB1H222K	CERAMIC 2200PF K	X	
C15 ,16			CK45FB1H561K	CERAMIC 560PF K	UE	
C15 ,16			CK45FB1H561K	CERAMIC 560PF K	KPUM1	
C15 ,16			CK45FB1H561K	CERAMIC 560PF K	M2A1A2	

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C17 ,18			CC45FSL1H101J	CERAMIC 100PF J	UE	
C17 ,18			CC45FSL1H101J	CERAMIC 100PF J	KPUM1	
C17 ,18			CC45FSL1H101J	CERAMIC 100PF J	M2A1A2	
C17 ,18			CC45FSL1H221J	CERAMIC 220PF J	X	
IC1			AN6556	IC(OP AMP X2)		
IC1			M5218P	IC(OP AMP X2)		
PREAMP (X85-1040-10)						
C1 ,2			CE04FW1H3R3M	ELECTRO 3.3UF 50WV		
C3 ,4			CC45FSL1H221J	CERAMIC 220PF J		
R11 ,12		*	RD14AB2E271J	FL-PROOF RD 270 J 1/4W		
R13 ,14			RD14AB2E181J	FL-PROOF RD 180 J 1/4W		
Q1 -4			2SA992(F,E)	TRANSISTOR		
Q5 -8			2SC1845(F,E)	TRANSISTOR		

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SPECIFICATIONS

(IHF'66)

Audio Section

Rated Power Output

50 watts per channel minimum RMS, both channels driven, at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.09% total harmonic distortion.

Both Channels Driven .....55 W + 55 W 8Ω at 1,000 Hz
55 W + 55 W 4Ω at 1,000 Hz
(Except USA and Canada)
Music Power Output at
8 ohms .....85 W + 85 W (Except some areas)
Total Harmonic Distortion
CD/AUX input to SPEAKER output
(20 Hz to 20,000 Hz) .....0.09% at rated power into 8 ohms
(20 Hz to 20,000 Hz) .....0.05% at 1/2 rated power into 8 ohms
(1 kHz).....0.03% at 1/2 rated power into 8 ohms
PHONO input to SPEAKER output (1 kHz) .....0.04% at rated power with VOLUME −20 dB
Intermodulation Distortion (60 Hz:7 kHz = 4:1) .....0.02% at rated output into 8 ohms
Damping Factor .....20 (1 kHz into 8 ohms)
Power Bandwidth.....10 Hz to 55 kHz at 0.2% T.H.D. 8Ω
Frequency Response.....10 Hz to 100 kHz, +0 dB, −3 dB
Input Sensitivity/Impedance
Phono (MM) .....2.5 mV/47 k ohms
Tuner, Tape Play, CD/AUX.....150 mV/27 k ohms
Signal-to-Noise Ratio (IHF, A)
Phono (MM) .....73 dB for 2.5 mV input
79 dB for 5.0 mV input
Tuner, Tape Play, CD/AUX.....100 dB
Phono Maximum Input Level.....140 mV (RMS), T.H.D. 0.05% at 1,000 Hz
Output Level/Impedance
Tape REC (Pin) .....150 mV/3.3 k ohms
Phono Frequency Response.....RIAA standard curve ±0.5 dB (30 Hz to 20,000 Hz)
Tone Control
Bass .....±10 dB at 100 Hz
Treble .....±8 dB at 10 kHz
Loudness Control ..... +8 dB at 100 Hz (at −30 dB VOLUME Level)

General

Power Requirements .....120 V, 60 Hz (U.S.A. & Canada models) or 110-120V/220-240V 50/60 Hz, switchable (Other countries)
Power Consumption .....2.2 A (U.S.A. & Canada models) 150 W (Other countries)
Dimensions.....W 420 mm (16-9/16")
H 109 mm (4-5/16")
D 280 mm (11")
Weight (Net) .....5.8 kg (12.8 lb)

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

Kenwood poursuit une politique de progrès constants en ce qui doncerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

Kenwood strebt ständige, Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.