

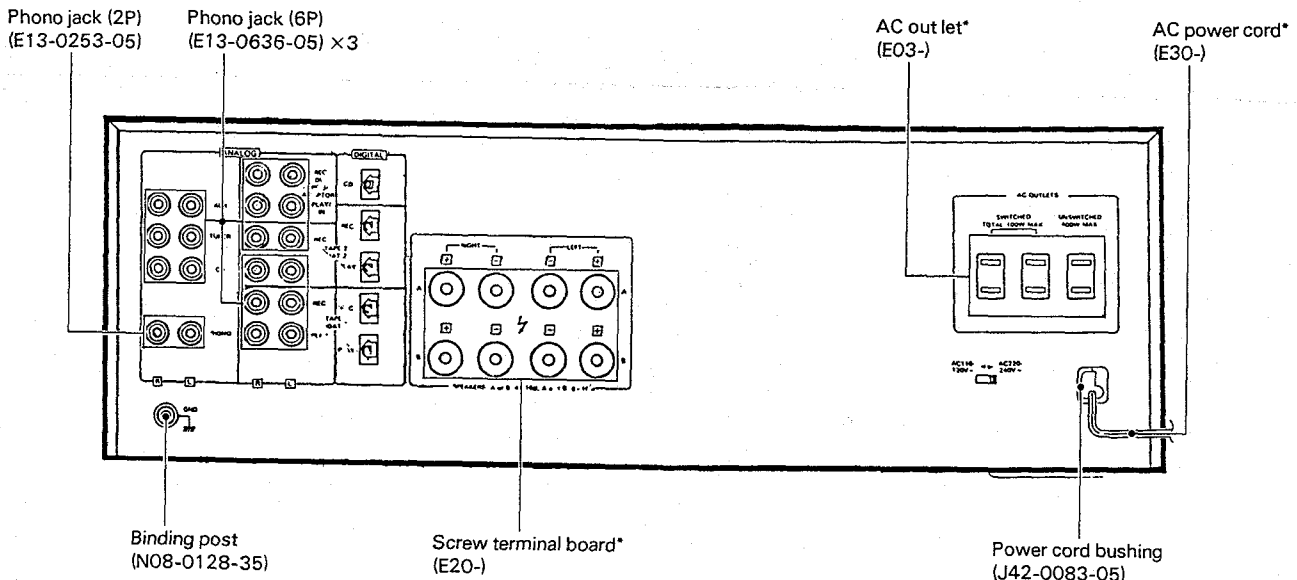
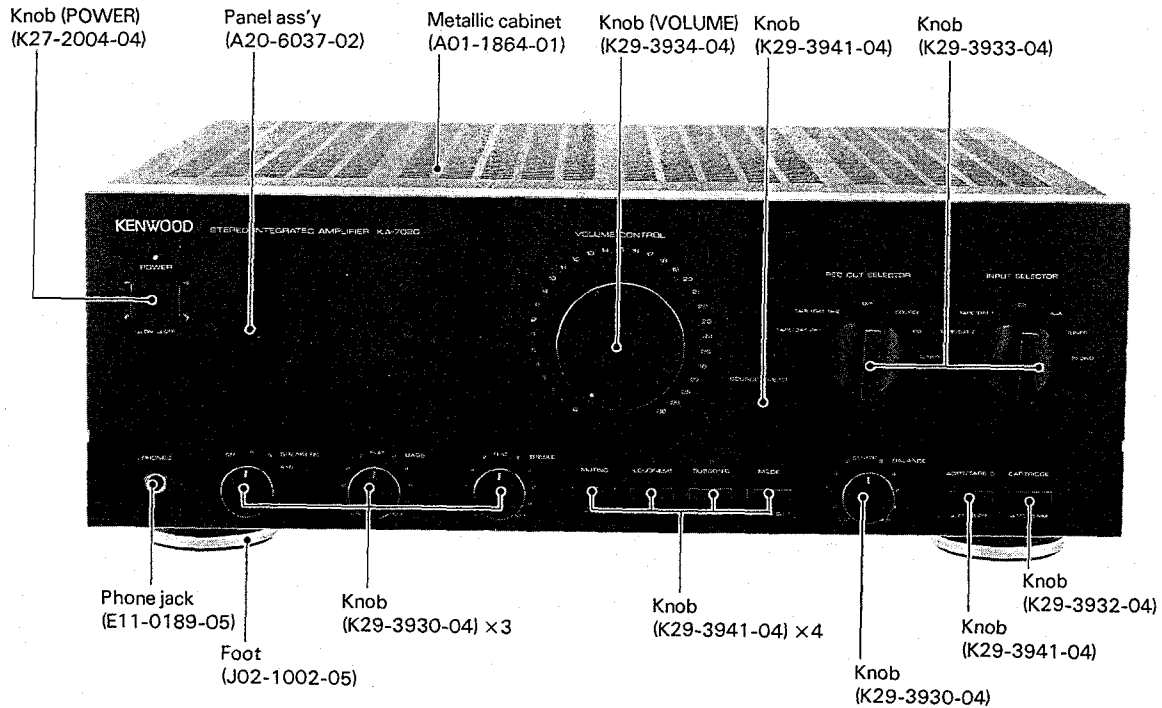
STEREO INTEGRATED AMPLIFIER

KA-7020

SERVICE MANUAL

KENWOOD

©1990-5 PRINTED IN JAPAN
B51-4048-00(S)1621



* Refer to parts list on page 15.

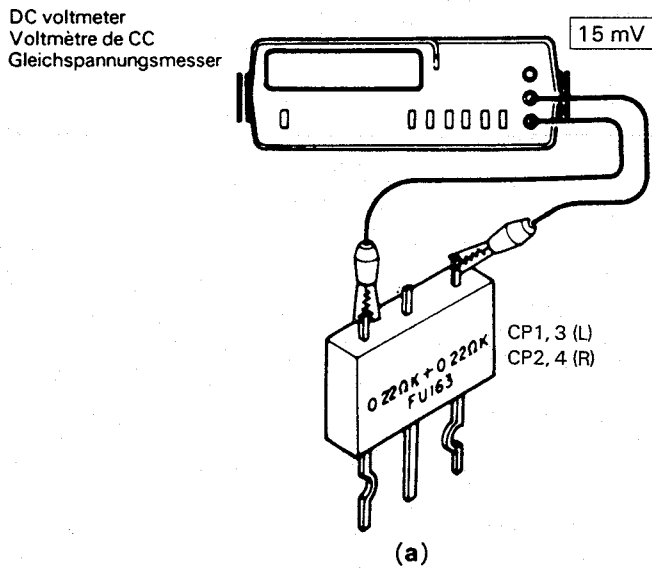
KA-7020

ADJUSTMENT/REGLAGE/ABGLEICH

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
1	IDLE CURRENT	—	Connect a DC voltmeter across CP1 (CP3) CP2 (CP4)	VOLUME: 0	VR1 (L) VR2 (R)	15 mV	(a)

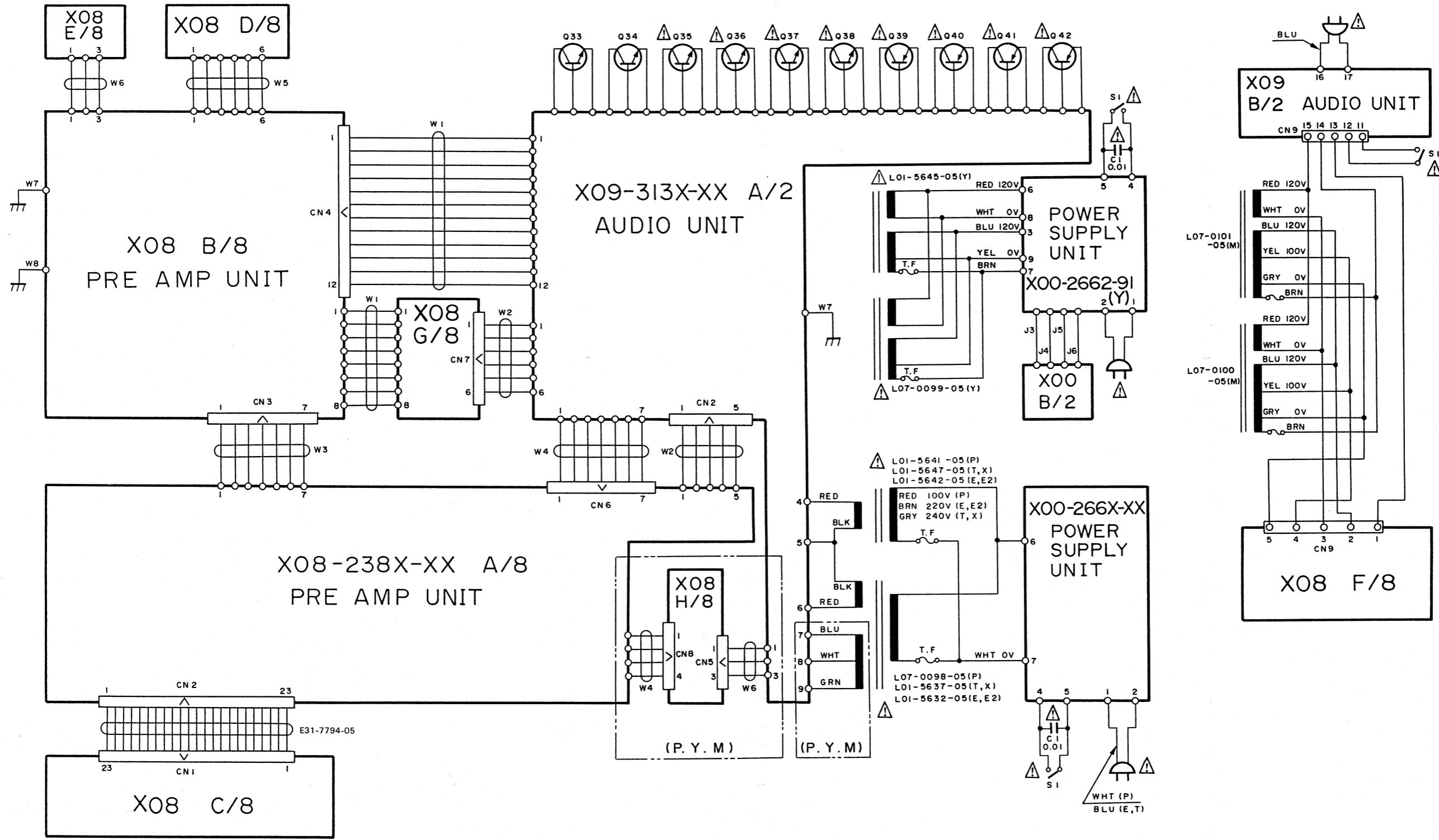
N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DE L'AMPLIFICATEUR	POINT L'ALIGNEMENT	ALIGNER POUR	FIG.
1	COURANT DE POLARISATION	—	Connecter un voltmètre de CC sur CP1 (G) (CP3) CP2 (D) (CP4)	VOLUME: 0	VR1 (G) VR2 (D)	15 mV	(a)

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	VERSTÄRKER EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
1	LEERLAUFSTROM	—	Einen Gleichspannungsmesser über CP1 (L) (CP3) CP2 (R) (CP4) anschließen.	VOLUME: 0	VR1 (L) VR2 (R)	15 mV	(a)



KA-7020 KA-7020

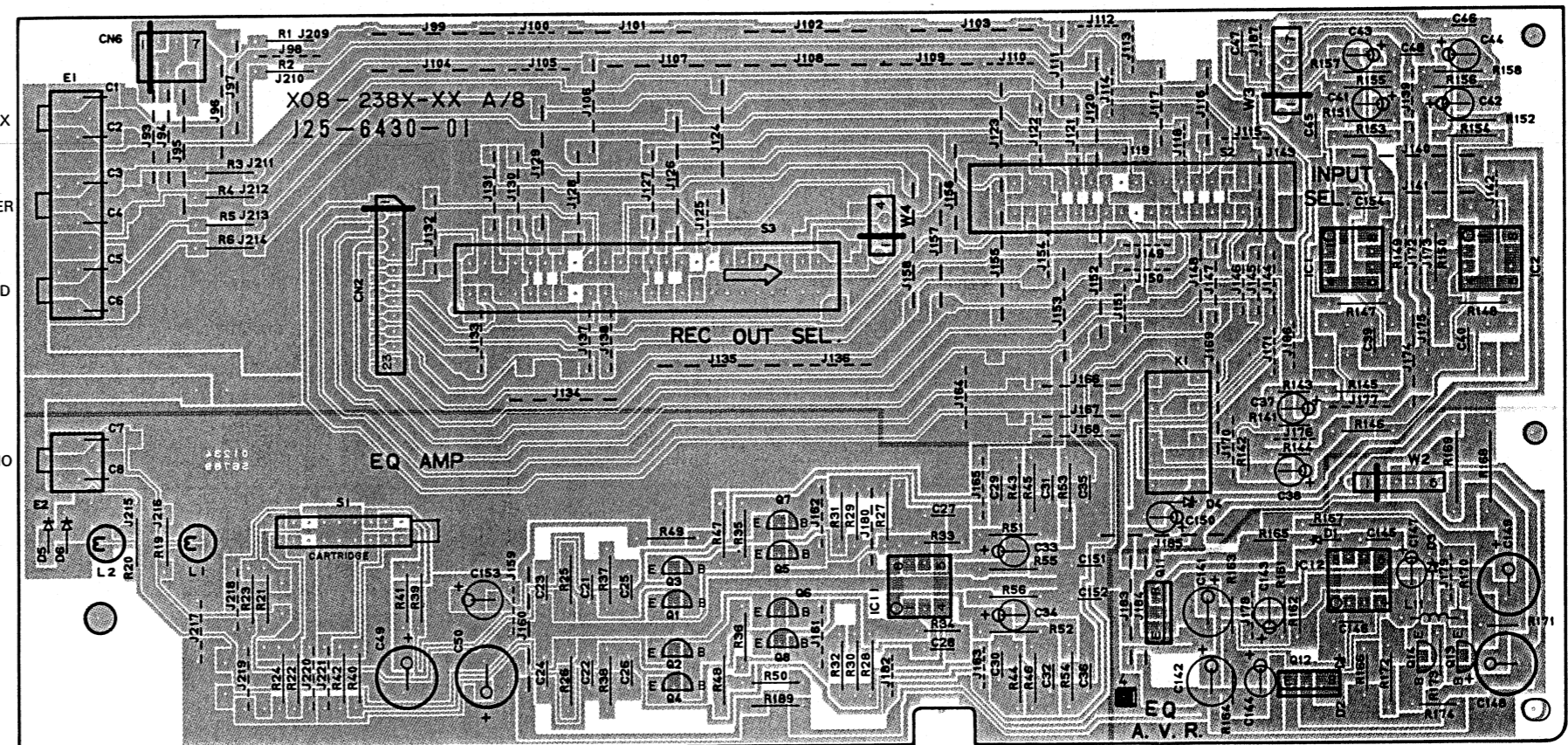
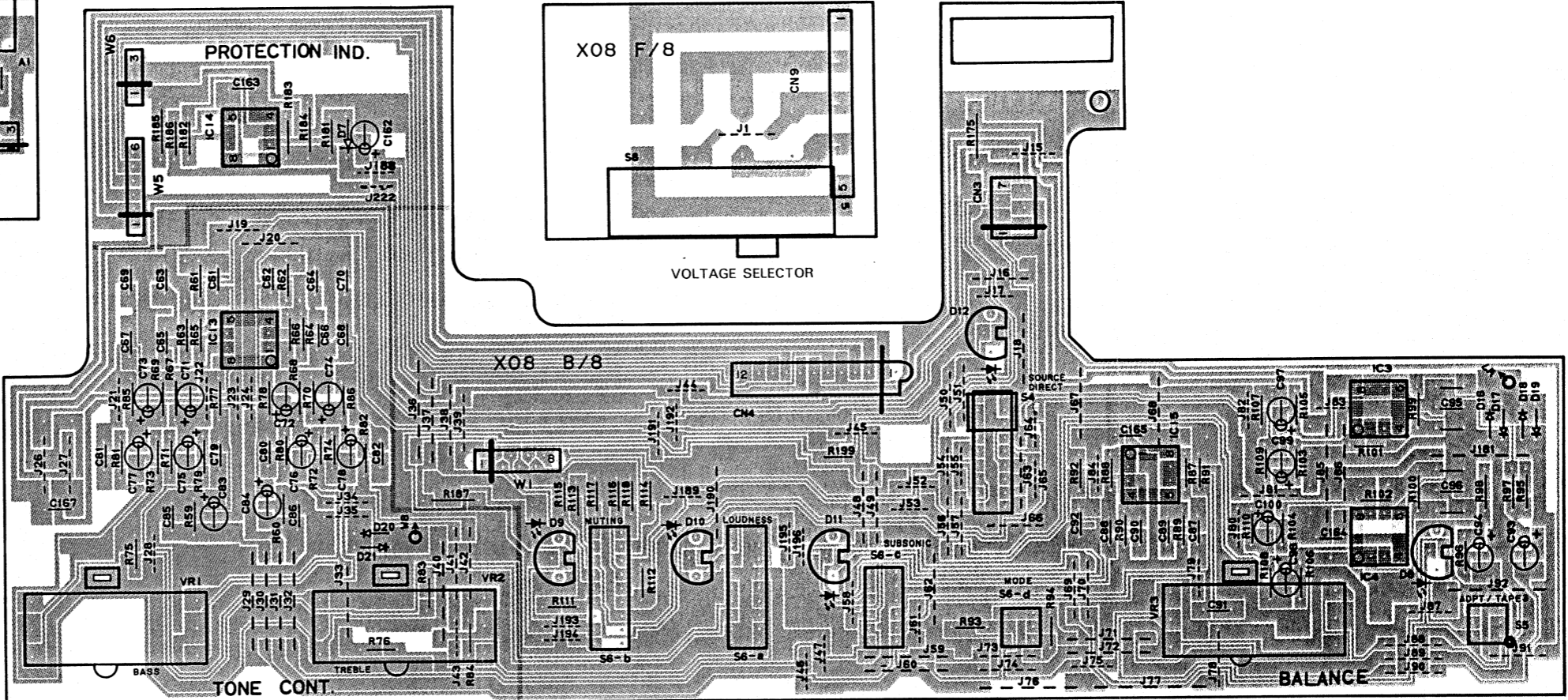
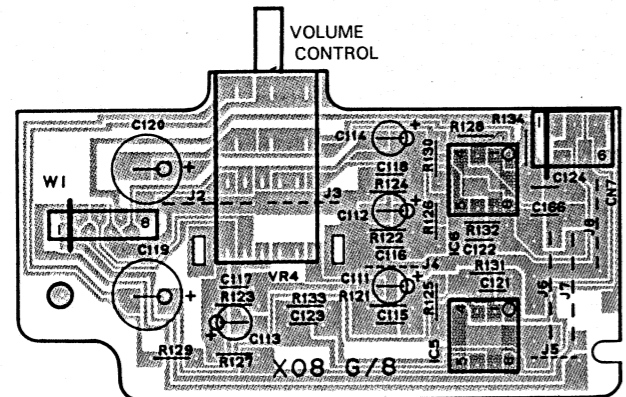
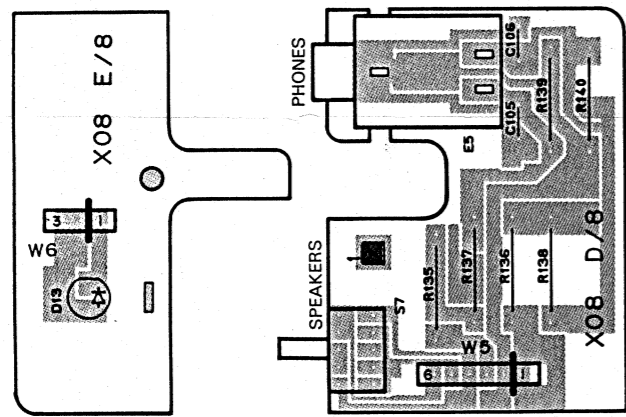
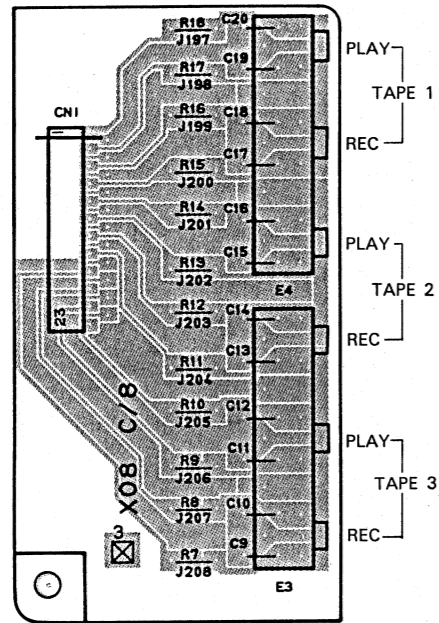
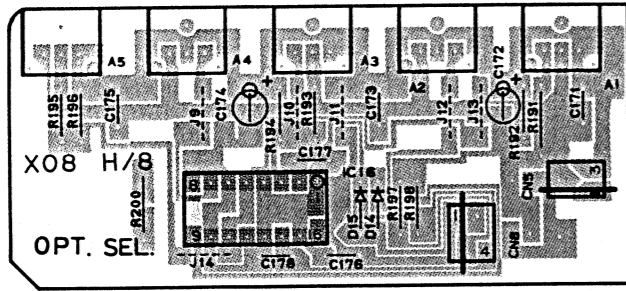
WIRING DIAGRAM



DESTINATION UNIT NO.	P	Y	M	X,T	E	E2
X00-266	1-01	2-91	NO.		2-71	
X08-238	0-00			2-72	2-71	2-72
X09-313	1-01		0-21	2-71		

PC BOARD (Component Side View)

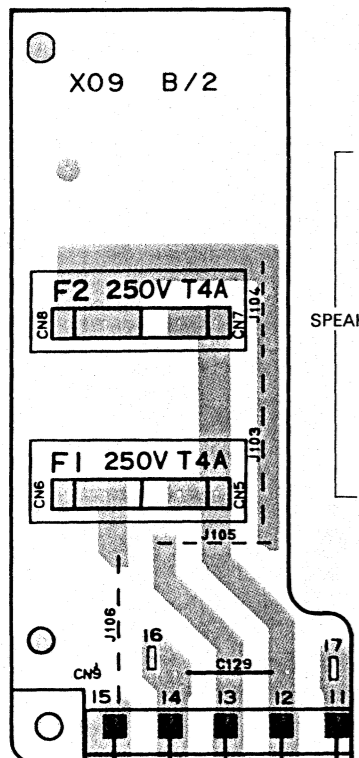
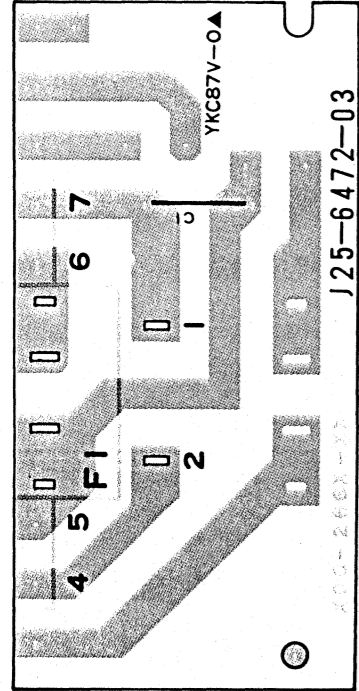
PRE AMPLIFIER UNIT



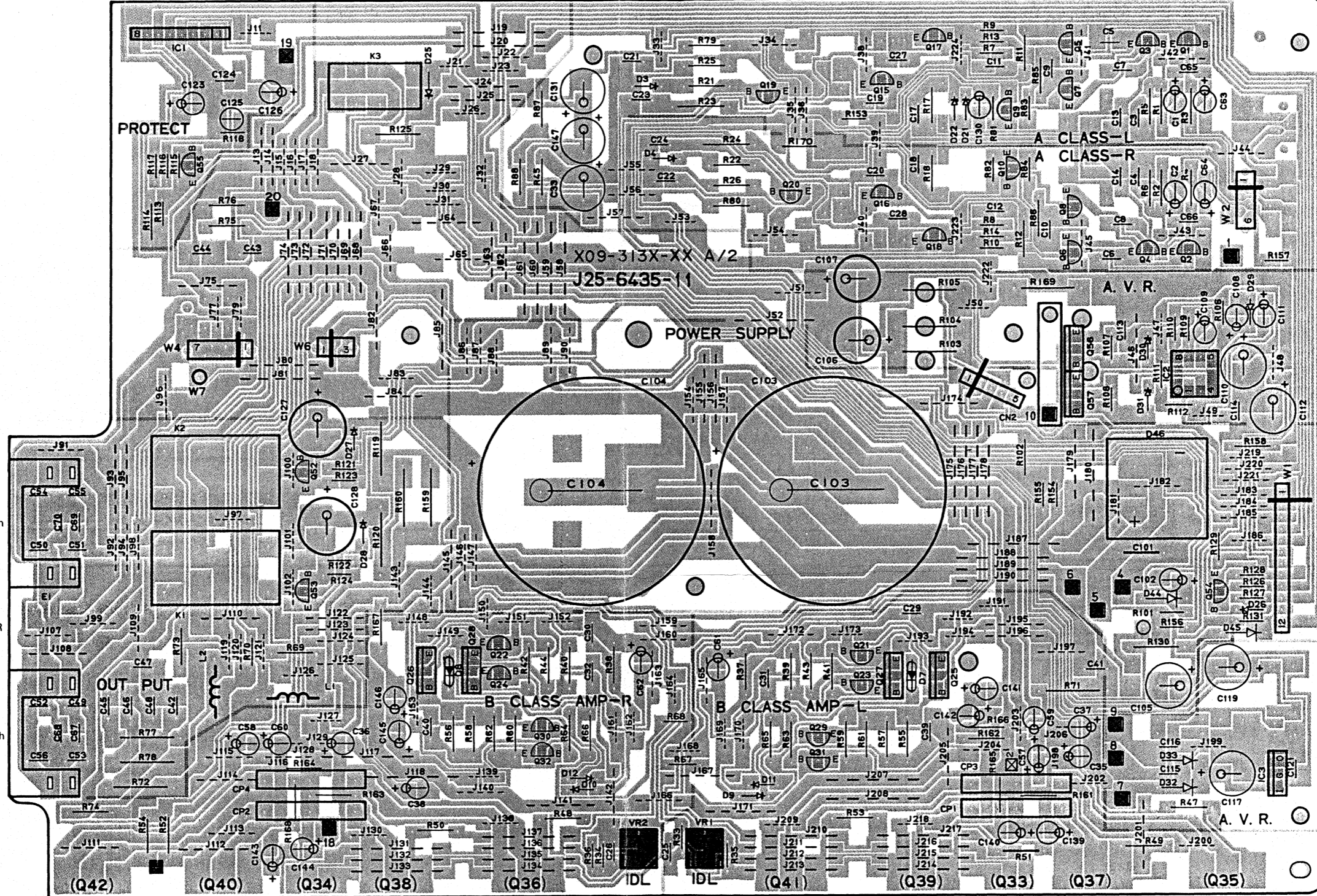
Refer to the schematic diagram for the values of resistors and capacitors.

PC BOARD (Component Side View)

POWER SUPPLY UNIT



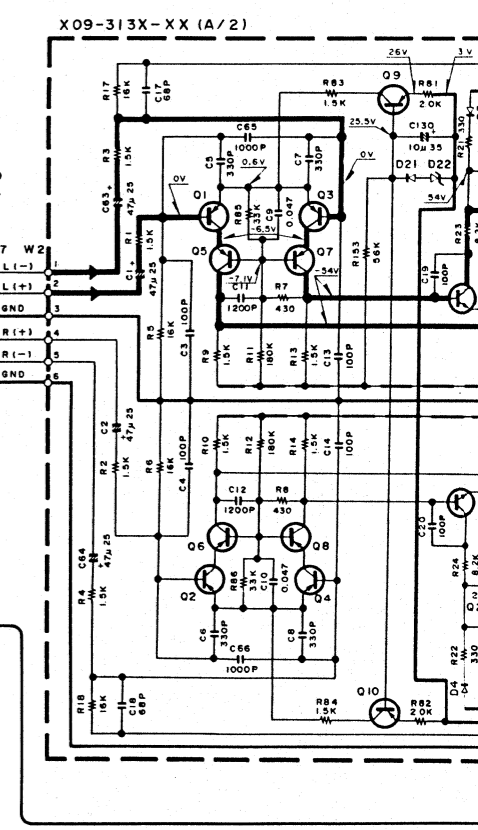
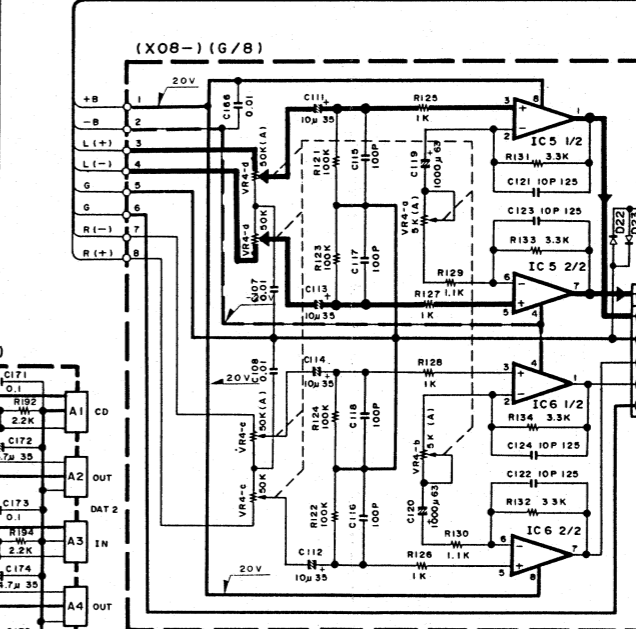
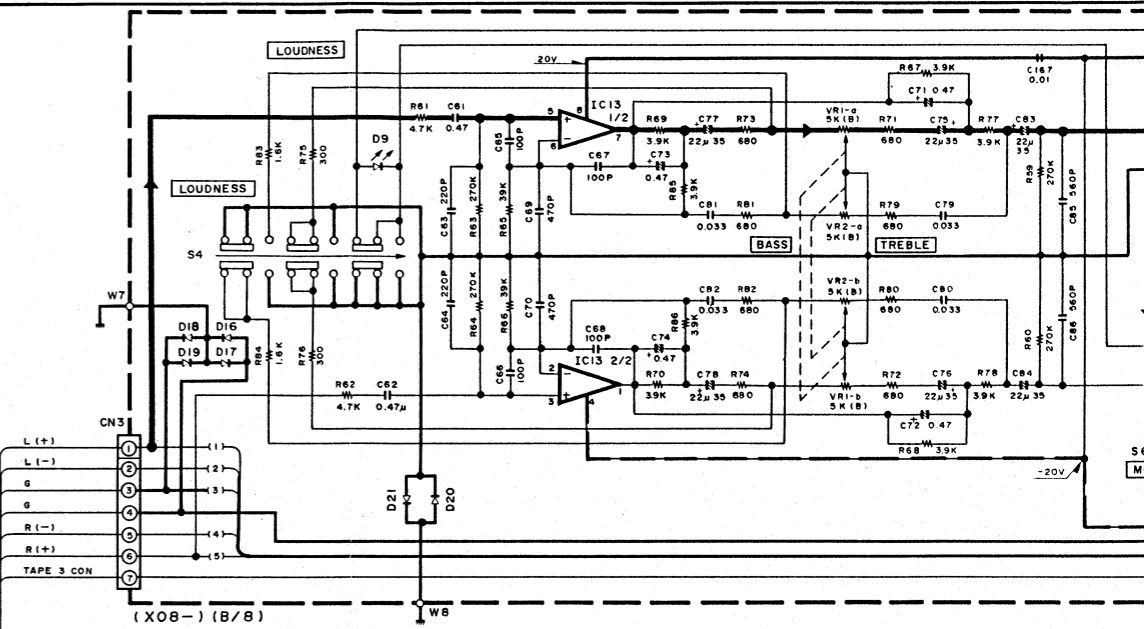
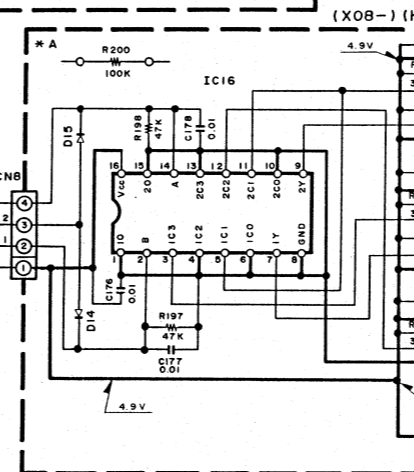
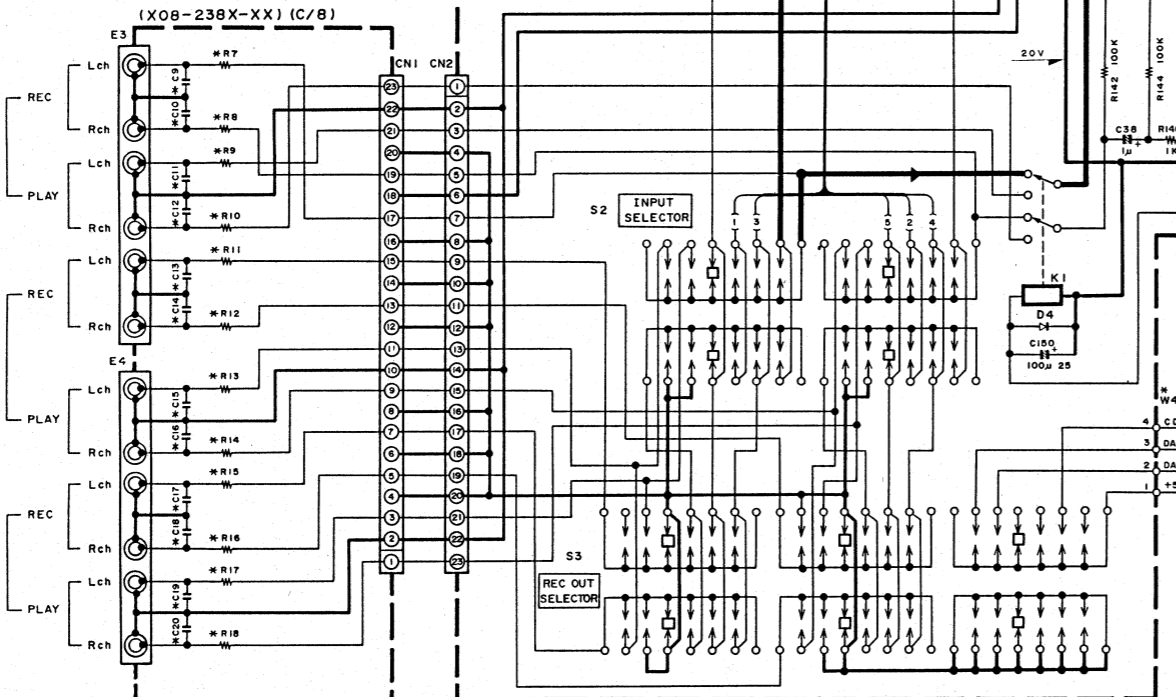
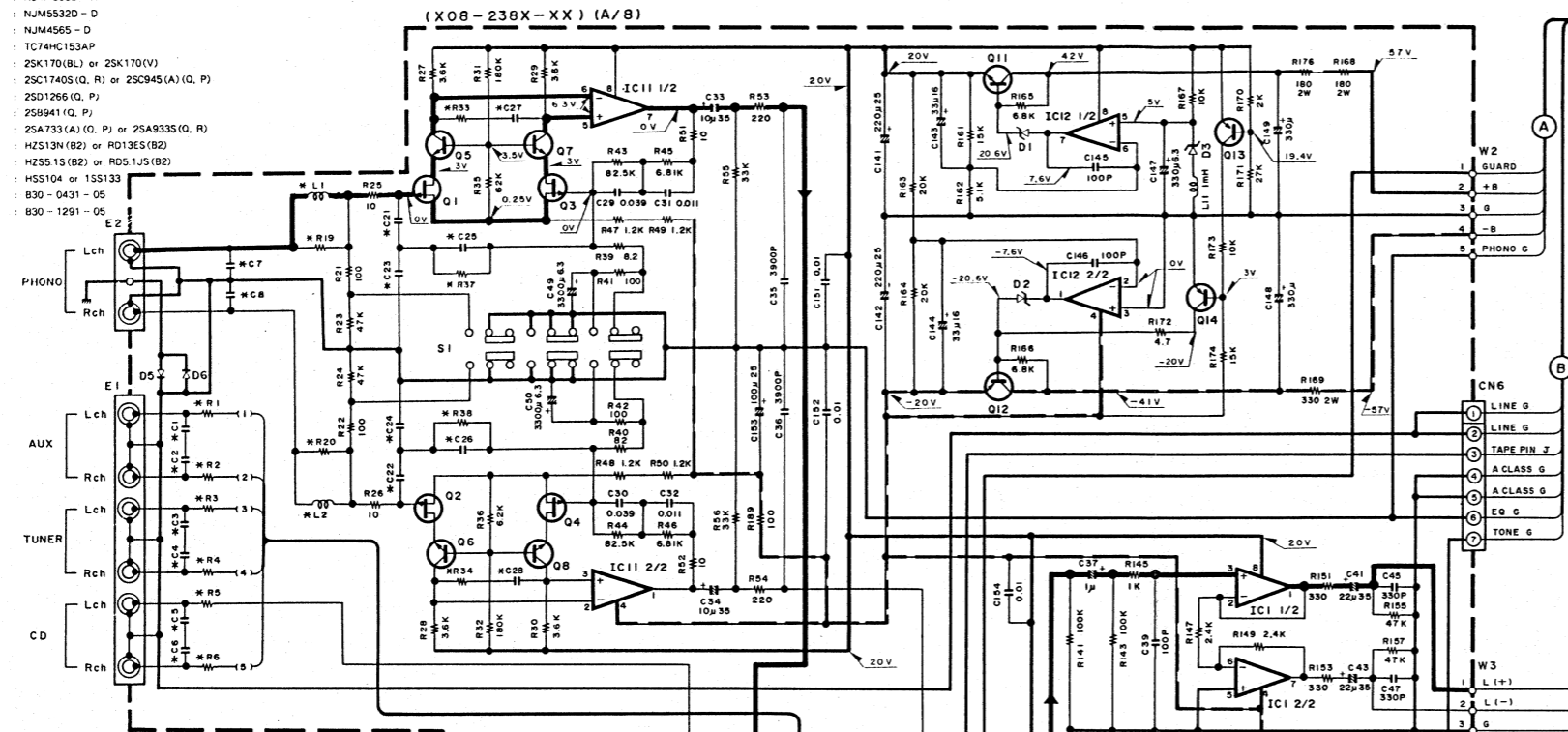
AUDIO UNIT



Refer to the schematic diagram for the values of resistors and capacitors.

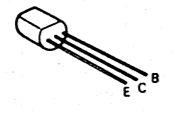
(X08-2380-00)

- IC1, 2, 11, 12 : NJM4565D - E
- IC3, 4, 15 : NJM4565D - X
- IC5, 6, 13 : NJM5532D - D
- IC14 : NJM4565 - D
- IC16 : TC74HC153AP
- Q1-4 : 2SK170(BL) or 2SK170(V)
- Q5-8 : 2SC1740S(Q, R) or 2SC945(A)(G, P)
- Q11 : 2SD1266(G, P)
- Q12 : 2S8941(G, P)
- Q13, 14 : 2SA733(A)(G, P) or 2SA933S(G, R)
- D1, 2 : HZ513M(B2) or RD13ES(B2)
- D3 : HZ5515(B2) or RDS1J5(B2)
- D4-7, 14-23 : H55104 or 155133
- D8-12 : 930-0431-05
- D13 : 930-1291-05

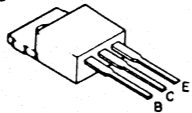


DESTINATION	P, Y	M	E	X, T, E2
Ref. No.	0-00	0-21	2-71	2-72
BLOCK A	YES	YES	NO	NO
BLOCK B	NO	YES	NO	NO
C1-6	NO	NO	150P	NO
C9-20	NO	NO	150P	NO
C21, 24	NO	NO	1200P	NO
C25, 26	NO	NO	56P	NO
C27, 28	2200P	2200P	3300P	200P
C105, 106	NO	YES	1000P	NO
J1	NO	YES	NO	NO
J9-14	YES	YES	NO	NO
J197-216	YES	YES	NO	YES
L1, 2	NO	NO	100µH	NO
R1-18	NO	NO	150	NO
R19, 20	NO	NO	2.2K/W	NO
R33, 34	180	180	390	180
R37, 38	NO	NO	430	NO

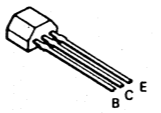
- 2SA1123
- 2SA1124
- 2SA733(A)
- 2SA992
- 2SC1845
- 2SC2631
- 2SC2632
- 2SC945(A)



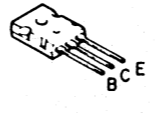
2SD1266



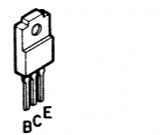
2SA933S
2SC1740S



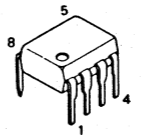
2SB1162BD-5
2SD1717BD-5



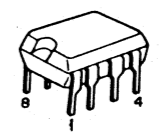
2SA1535
2S8941
2SC3944



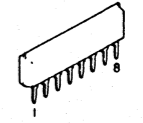
NJM4560D-N
NJM4560D-X
NJM5532D-D



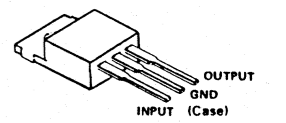
NJM4565D
NJM4565D-E

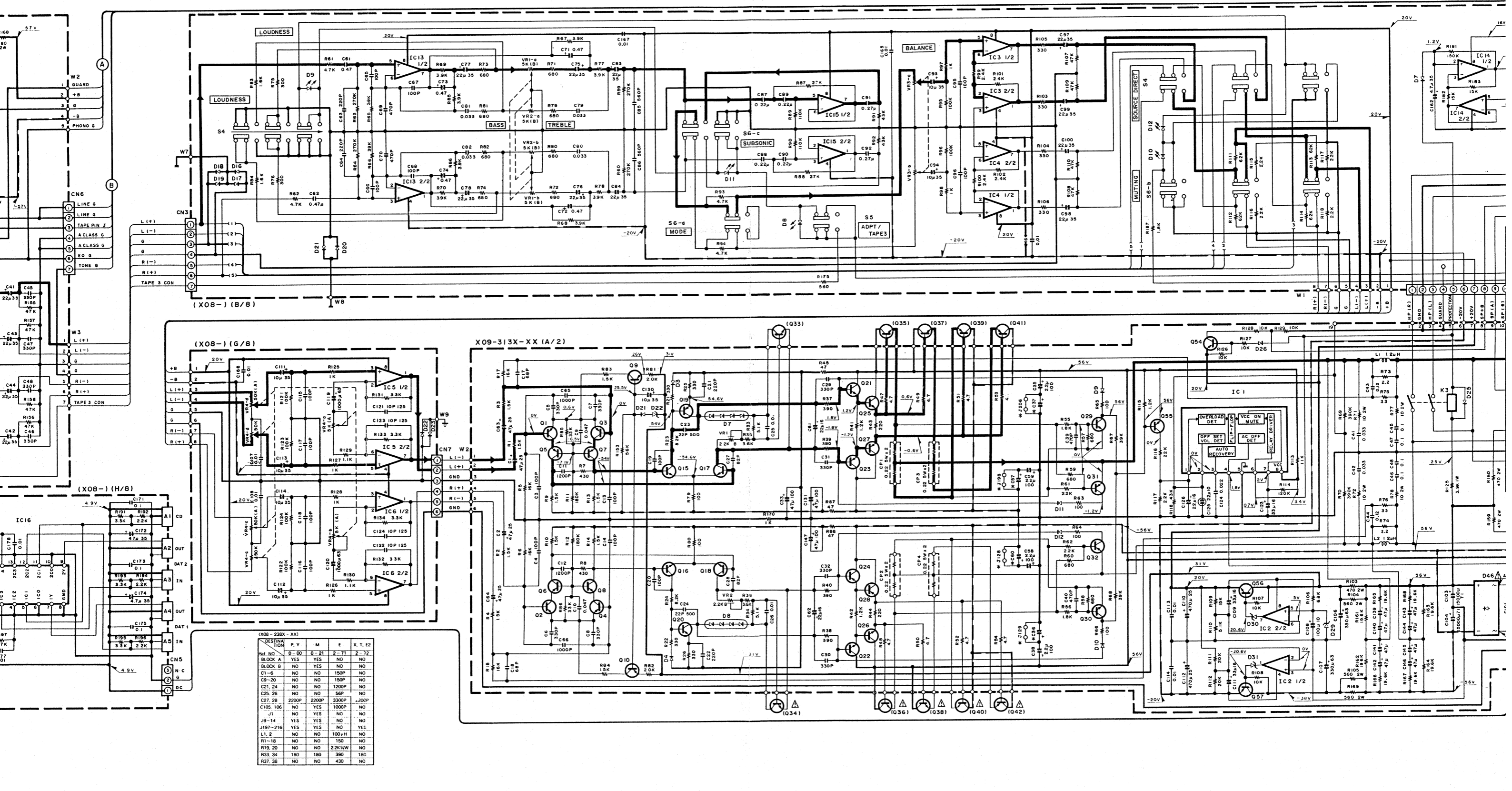


UPC1237HA

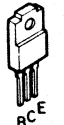
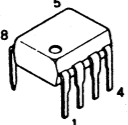
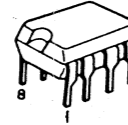
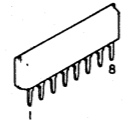
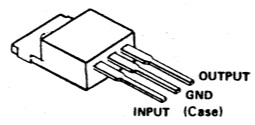
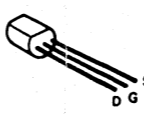


AN7805F





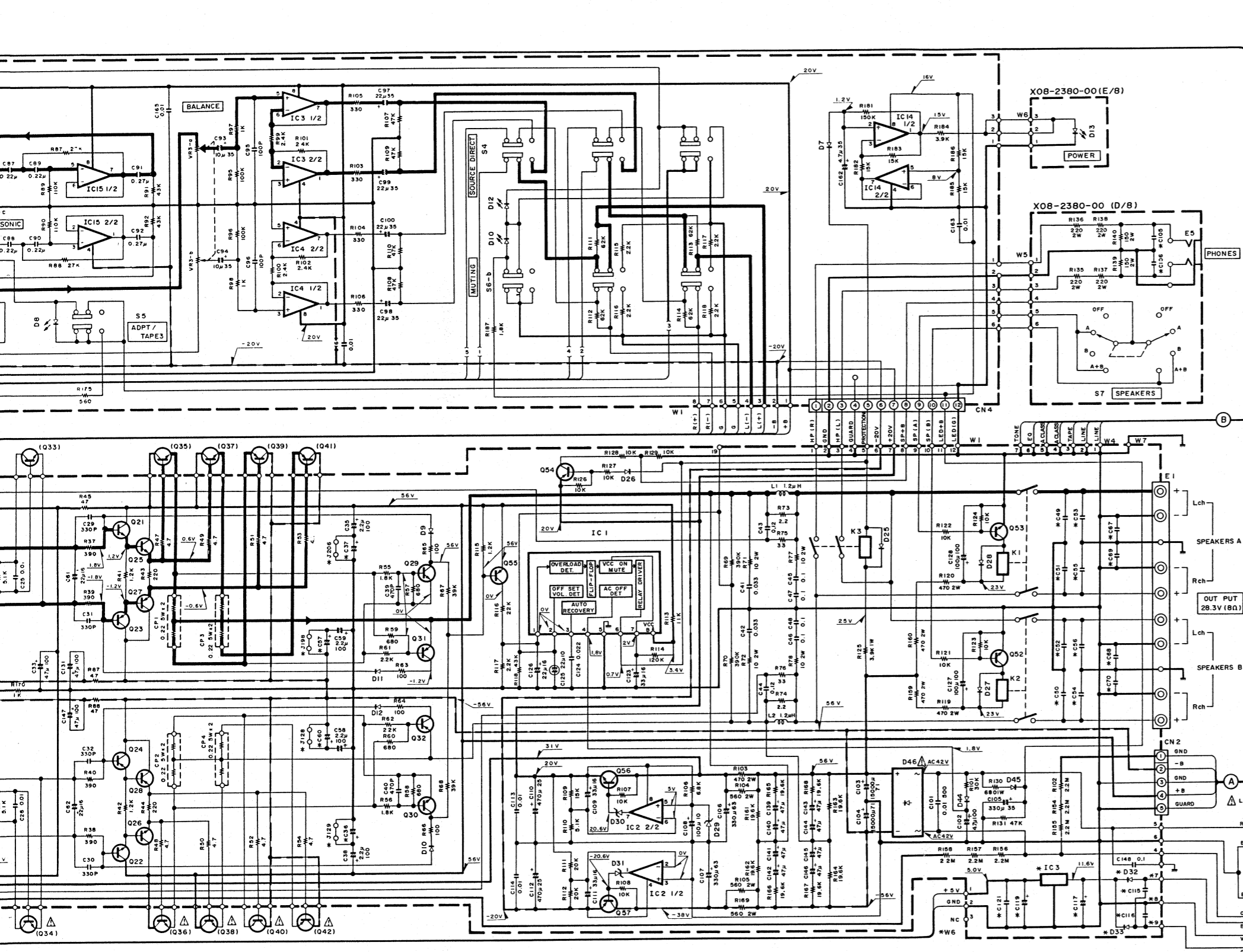
DESTINA	R	Y	M	E	X	T	12
0-00	0-21	2-71	2-72				
BLOCK A	YES	YES	NO	NO			
BLOCK B	NO	YES	NO	NO			
C1-6	NO	NO	150P	NO			
C9-20	NO	NO	150P	NO			
C21-24	NO	NO	1200P	NO			
C25-28	NO	NO	56P	NO			
C27-28	2200P	2200P	3300P	100P			
C105-106	NO	YES	1000P	NO			
J1	NO	YES	NO	NO			
J9-14	YES	YES	NO	NO			
J19-216	YES	YES	NO	YES			
LT. 2	NO	NO	100uH	NO			
R1-18	NO	NO	150	NO			
R19-20	NO	NO	22K5W	NO			
R33-34	180	180	390	180			
R37-38	NO	NO	430	NO			

- 535
41
1944

- NJM4560D-N
NJM4560D-X
NJM5532D-D

- NJM4565D
NJM4565D-E

- UPC1237HA

- AN7805F

- 2SK170


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.

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.

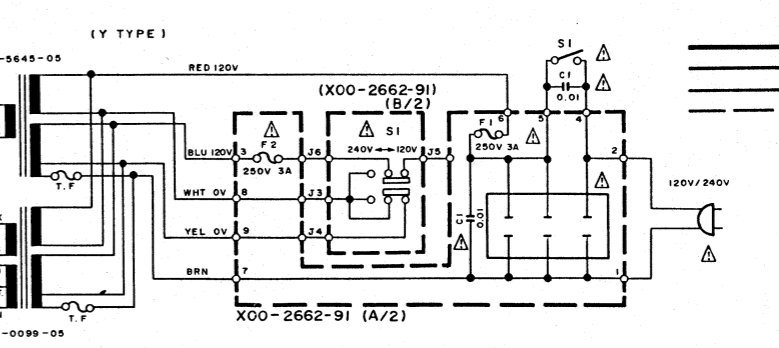
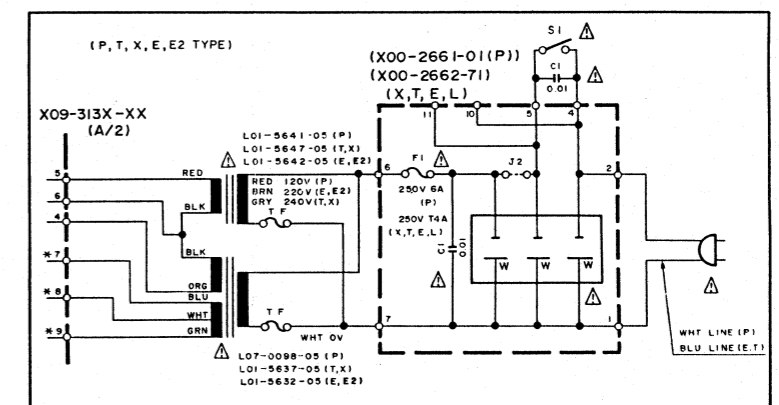
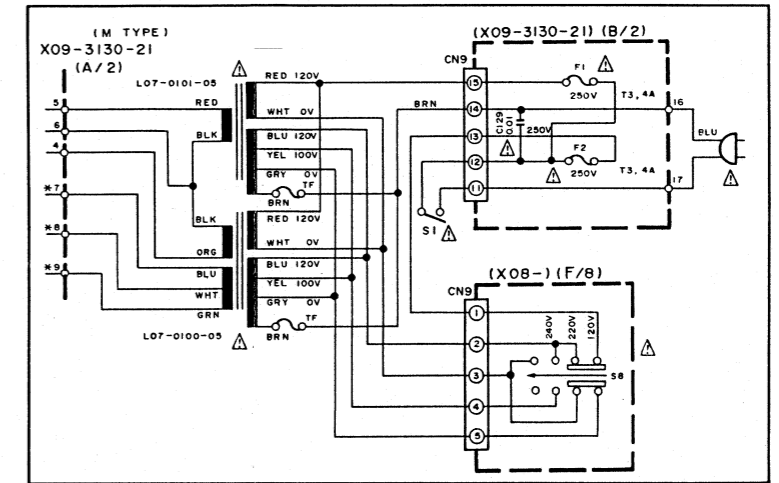
Les tensions c.c. doivent être mesurées avec un voltmètre haute impédance sans signal d'entrée. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.



- (X09-3130-00)
- IC1 : UPC1237HA
 - IC2 : NUM4560D-N
 - IC3 : AN7805F
 - 01-8, 31, 32, 55 : 2SA992(F, E)
 - 08, 10, 54 : 2SA733(A) (Q, P) or 2SA933S(Q, R)
 - 015-18 : 2SC2632(R, S)
 - 019, 20 : 2SA1124(R, S)
 - 021, 22 : 2SC2631(R, S)
 - 023, 24 : 2SA1123(R, S)
 - 025, 26 : 2SC3944(R, S)
 - 027, 28 : 2SA1535(R, S)
 - 029, 30, 52, 53 : 2SC1845(F, E)
 - 056 : 2SD1266(Q, P)
 - 057 : 2SB941(Q, P)
 - D1, 2, 21, 29 : HZ551S(B2) or RD51J5(B2)
 - D3, 4, 22, 26 : HSS104 or 1S5133
 - D7, 8 : MA270(A)
 - D9-12, 25, 27, 28 : HSS104A or 1S5131
 - D30, 31 : HZ513N(B2) or RD13ES(B2)
 - D32, 33, 44, 45 : S5566B
 - D46 : DSF820 *1

(X09-313X-XX)

DESTINATION	P, Y	M	X, T, E	E2
Ref. NO.	1-01	0-21	2-71	2-72
B/2	NO	YES	NO	NO
C36, 37, 57, 50	2.2µ100	NO	NO	NO
C48-52	NO	NO	4700P	NO
C53-56	NO	NO	560P	NO
C67-70	NO	NO	2200P	NO
C115, 116	0.01	0.01	NO	NO
C117	1000µ16	1000µ16	NO	NO
C119	1000µ6.3	1000µ6.3	NO	NO
C121	0.01	0.01	NO	NO
D32, 33	S5666B	S5566B	NO	NO
IC3	AN7805F	AN7805F	NO	NO
J128, 129, 198, 206	NO	YES	YES	YES
W6	YES	YES	NO	NO
Terminal 7-9	YES	YES	NO	NO



— SIGNAL LINE
 — GND LINE
 — +B LINE
 - - - -B LINE

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.

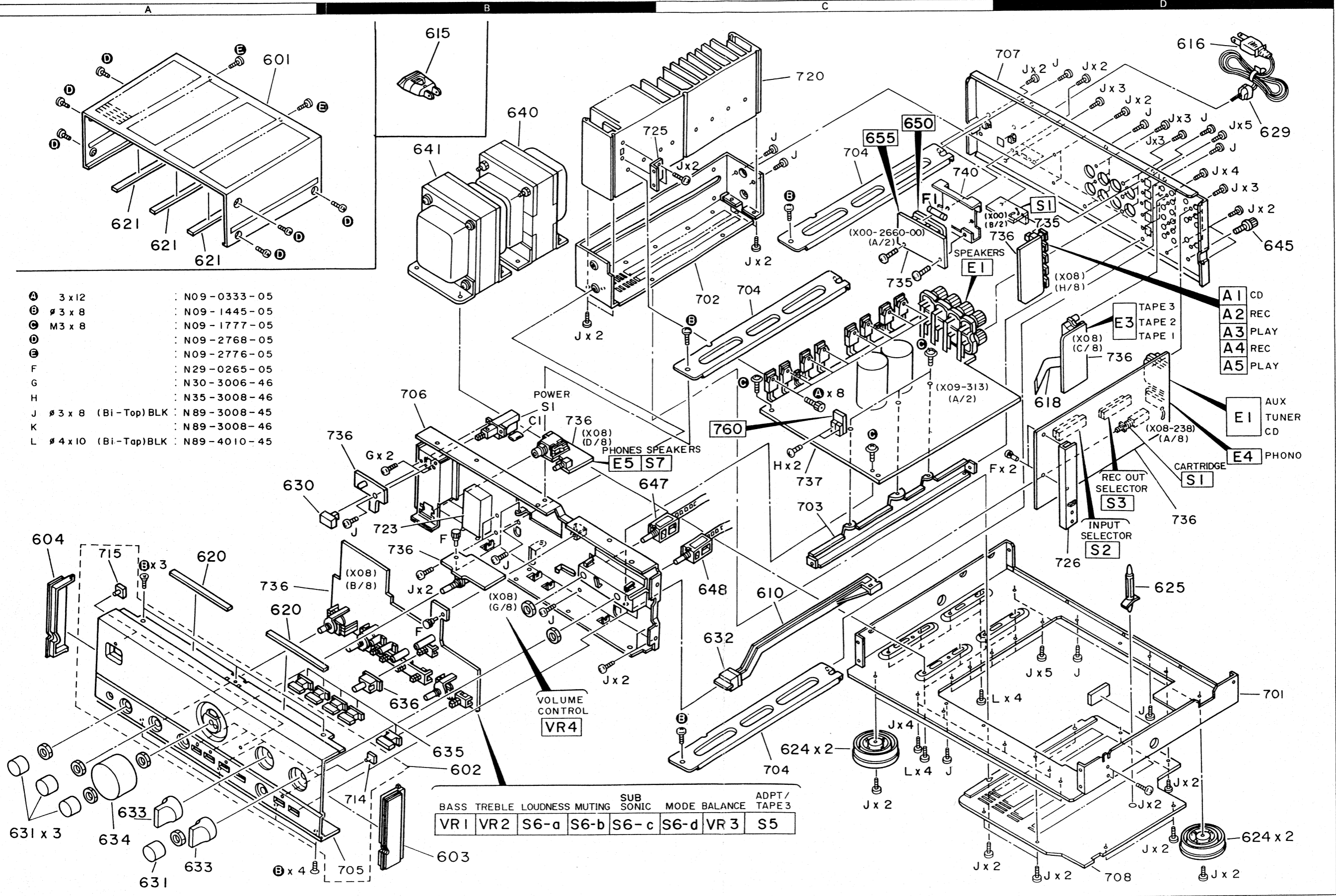
DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

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 schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

KA-7020 KA-7020

EXPLODED VIEW



- A 3 x 12 : N09-0333-05
- B # 3 x 8 : N09-1445-05
- C M3 x 8 : N09-1777-05
- D : N09-2768-05
- E : N09-2776-05
- F : N29-0265-05
- G : N30-3006-46
- H : N35-3008-46
- J # 3 x 8 (Bi-Top) BLK : N89-3008-45
- K : N89-3008-46
- L # 4 x 10 (Bi-Top) BLK : N89-4010-45

BASS	TREBLE	LOUDNESS	MUTING	SUB SONIC	MODE	BALANCE	ADPT / TAPE 3
VR 1	VR 2	S6-a	S6-b	S6-c	S6-d	VR 3	S 5

- A1 CD
- A2 REC
- A3 PLAY
- A4 REC
- A5 PLAY
- E1 AUX TUNER CD
- E4 PHONO

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.

Telle 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	Desti- nation 仕向	Re- marks 備考
KA-7020						
601	1A	*	A01-1864-01	METALLIC CABINET		
602	3A, 3B	*	A20-6037-02	PANEL ASSY		
603	3B	*	B07-1944-04	SIDE ESCUTCHEON(L)		
604	2A, 3A	*	B07-1945-04	SIDE ESCUTCHEON(R)		
605	3A		B43-0287-04	KENWOOD BADGE		
-			B46-0094-03	WARRANTY CARD	Y	
-			B46-0095-03	WARRANTY CARD	Y	
-			B46-0096-13	WARRANTY CARD	X	
-			B46-0121-03	WARRANTY CARD	P	
-			B46-0122-13	WARRANTY CARD	EE2	
-			B46-0143-13	WARRANTY CARD	T	
-			B58-0513-04	CAUTION CARD (PRESET220-240)	Y	
-			B58-0803-13	CAUTION CARD	E	
-		*	B60-0123-00	INSTRUCTION MANUAL (ENGLISH)		
-		*	B60-0124-00	INSTRUCTION MANUAL (FRENCH)	PEE2	
-		*	B60-0125-00	INSTRUCTION MANUAL (SPA,CHA)	M	
-		*	B60-0126-00	INSTRUCTION MANUAL (GE,DU,IT)	EE2	
△ C1	2B		C91-0971-05	FILM 0.01UF 250WV		
610	3C		D21-1505-03	EXTENSION SHAFT		
△ 615	1B		E03-0115-05	AC PLUG ADAPTER	M	
△ 616	1D		E30-0459-05	AC POWER CORD	MEE2	
△ 616	1D		E30-0812-05	AC POWER CORD	Y	
△ 616	1D		E30-0974-05	AC POWER CORD	P	
△ 616	1D		E30-1341-05	AC POWER CORD	X	
△ 616	1D		E30-1416-05	AC POWER CORD	T	
618	2D	*	E31-7794-05	FLAT CABLE		
△ F1			F05-4025-05	FUSE (SEMKO) (250V T4A)	XTEE2	
△ F1			F05-6027-05	FUSE (UL) (250V 6A)	P	
△ F1 ,2			F05-3022-05	FUSE (250V 3A)	Y	
△ F1 ,2			F05-4025-05	FUSE (SEMKO) (250V T4A)	M	
620	2A, 3A	*	G10-0402-04	CUSHION (110X5X1)		
621	1A	*	G11-0427-04	CUSHION (140X10X2)		
-		*	H01-8805-04	ITEM CARTON CASE		
-		*	H10-5010-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-5011-02	POLYSTYRENE FOAMED FIXTURE		
-			H25-0225-04	PROTECTION BAG (850X450X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
624	3C, 3D		J02-1002-05	FOOT		
625	2D, 3D		J19-0581-05	UNIT HOLDER		
△ 629	1D		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
630	2A		K27-2004-04	KNOB (POWER)		
631	3A	*	K29-3930-04	KNOB (BASS, TREBL, SPEAKERS)		
632	3C	*	K29-3932-04	KNOB (CARTRIDGE)		
633	3A	*	K29-3933-04	KNOB (REC OUT SEL, INPUT SEL)		
634	3A	*	K29-3934-04	KNOB (MAIN VR)		
635	3A, 3B	*	K29-3940-04	KNOB (MUT, LOUD, SUB, MOD, ADP/TA)		
636	3B	*	K29-3941-04	KNOB (SOURCE DIRECT)		
△ 640	1B		L01-5641-05	POWER TRANSFORMER	P	

E: Europe

K: USA

P: Canada

Y: PX(Far East, Hawaii)

T: England

M: Other Areas

Y: AAFES(Europe)

X: Australia

E2: Scandinavia

△ indicates safety critical components.

KA-7020

PARTS LIST

× New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Telle 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	Desti- nation 仕 向	Re- marks 備考
△ 640	1B		L01-5642-05	POWER TRANSFORMER	EE2	
△ 640	1B		L01-5645-05	POWER TRANSFORMER	Y	
△ 640	1B		L01-5647-05	POWER TRANSFORMER	XT	
△ 640	1A, 1B	*	L07-0101-05	POWER TRANSFORMER	M	
△ 641	1B		L01-5632-05	POWER TRANSFORMER	EE2	
△ 641	1B		L01-5637-05	POWER TRANSFORMER	XT	
△ 641	1A, 1B	*	L07-0098-05	POWER TRANSFORMER	P	
△ 641	1A, 1B	*	L07-0099-05	POWER TRANSFORMER	Y	
△ 641	1A, 1B	*	L07-0100-05	POWER TRANSFORMER	M	
645	1D		N08-0128-35	BINDING POST (EARTH)		
A	2C		N09-0333-05	TAPPING SCREW (3X12)		
B	2A, 3A		N09-1445-05	SET SCREW (M3X8)		
C	2C		N09-1777-05	SEMS (TAPTITE SCREW)		
D	1A	*	N09-2768-05	SEMS (TAPTITE SCREW)(4X8)		
E	1A		N09-2776-05	SEMS (TAPTITE SCREW)		
F	2B, 2D		N29-0265-05	PUSH RIVET		
G	2B		N30-3006-46	PAN HEAD MACHINE SCREW		
J	1C, 1D		N89-3008-45	BINDING HEAD TAPTITE SCREW		
L	3C		N89-4010-45	BINDING HEAD TAPTITE SCREW		
647	2B, 2C		S90-0110-05	REMOTE SWITCH SHAFT(REC OUT)		
648	2C		S90-0111-05	REMOTE SWITCH SHAFT(SELECTOR)		
△ S1	2B		S40-1073-05	PUSH SWITCH (POWER SW)	YMXTE	
△ S1	2B		S40-1073-05	PUSH SWITCH (POWER SW)	E2	
△ S1	2B		S40-1094-05	PUSH SWITCH (POWER SW)	P	
Q33 ,34			2SC4137F19(V,W)	TRANSISTOR		
Q35 -38			2SD1717BD*5	TRANSISTOR		
Q39 -42			2SB1162BD*5	TRANSISTOR		
POWER SUPPLY UNIT (X00-2661-01 : P, 2-71 : X, T, E, E2, 2-91 : Y)						
△ C1			C91-0971-05	FILM 0.01UF 250WV	PYXTE	
△ C1			C91-0971-05	FILM 0.01UF 250WV	E2	
△ 650	1C		E03-0077-05	AC OUTLET	Y	
△ 650	1C		E03-0078-05	AC OUTLET	P	
655	1C		J13-0041-05	FUSE CLIP	PY	
655	1C		J13-0054-05	FUSE CLIP	XTEE2	
K	1C		N89-3008-46	BINDING HEAD TAPTITE SCREW	XTEE2	
△ S1	1C		S31-2126-05	SLIDE SWITCH (VOLTAGE SELECT)	Y	
PRE AMPLIFIER UNIT (X08-2380-00 : P, Y, 0-21 : M, 2-71 : E, 2-72 : X, T, E2)						
D8 -11			B30-1281-05	LED(LN21CPH)		
D12			B30-0431-05	LED(LN21CPSLX(V)-(TA4))		
D13			B30-1291-05	LED(LN21CPSLX(V)-(TA4))		
C1 -6			CF92FV1H151K	MF 150PF K	E	
C7 ,8			CF92FV1H101K	MF 100PF K	E	
C9 -20			CF92FV1H151K	MF 150PF K	E	
C21 -24			CF92FV1H122J	MF 1200PF J	E	
C25 ,26			CC45FSL1H560J	CERAMIC 56PF J	E	
C27 ,28			CF92FV1H222J	MF 2200PF J		
C29 ,30			CF92FV1H393J	MF 0.039UF J		
C31 ,32			CF92FV1H113J	MF 0.011UF J		
C33 ,34			CE04KW1V100M	ELECTRO 10UF 35WV		
C35 ,36			CF92FV1H392J	MF 3900PF J		
C37 ,38			CE04KW1H010M	ELECTRO 1.0UF 50WV		

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KA-7020

PARTS LIST

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Address	New Parts	Parts No.	Description	Destination	Remarks
位置	新	部品番号	部品名 / 規格	仕向	備考
		CF92FV1H101K	MF 100PF K		
		CE04KW1V220M	ELECTRO 22UF 35WV		
		CF92FV1H331K	MF 330PF K		
		CE04KW0J332M	ELECTRO 3300UF 6.3WV		
		CF92FV1H474J	MF 0.47UF J		
		CF92FV1H221K	MF 220PF K		
		CF92FV1H101K	MF 100PF K		
		CF92FV1H471J	MF 470PF J		
		CE04KW1HR47M	ELECTRO 0.47UF 50WV		
		CE04KW1V220M	ELECTRO 22UF 35WV		
		CF92FV1H333J	MF 0.033UF J		
		CE04KW1V220M	ELECTRO 22UF 35WV		
		CK45FB1H561K	CERAMIC 560PF K		
		CF92FV1H224J	MF 0.22UF J		
		CF92FV1H274J	MF 0.27UF J		
		CE04KW1V100M	ELECTRO 10UF 35WV		
0		CF92FV1H101K	MF 100PF K		
4		CE04KW1V220M	ELECTRO 22UF 35WV		
6		CF92FV1H101K	MF 100PF K		
		CF92FV1H102J	MF 1000PF J	E	
18		CF92FV1H103J	MF 0.010UF J		
14		CE04KW1V100M	ELECTRO 10UF 35WV		
18		CF92FV1H101K	MF 100PF K		
20		CE04DWOJ102M	ELECTRO 1000UF 6.3WV		
24		C91-0166-05	POLYSTY 10PF D		
42		CE04KW1E221M	ELECTRO 220UF 25WV		
44		CE04KW1C330M	ELECTRO 33UF 16WV		
146		CC45FSL1H101J	CERAMIC 100PF J		
		CE04KW0J331M	ELECTRO 330UF 6.3WV		
149		CE04KW1H331M	ELECTRO 330UF 50WV		
		CE04KW1E101M	ELECTRO 100UF 25WV		
152		CF92FV1H103J	MF 0.010UF J		
		CE04KW1E101M	ELECTRO 100UF 25WV		
		CF92FV1H103J	MF 0.010UF J		
		CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
-167		CF92FV1H103J	MF 0.010UF J		
		CF92FV1H104J	MF 0.10UF J	PYM	
2		CE04KW1V4R7M	ELECTRO 4.7UF 35WV	PYM	
3		CF92FV1H104J	MF 0.10UF J	PYM	
4		CE04KW1V4R7M	ELECTRO 4.7UF 35WV	PYM	
5		CF92FV1H104J	MF 0.10UF J	PYM	
6-178		CK45FF1H103Z	CERAMIC 0.010UF Z	PYM	
		E10-2304-05	FLAT CABLE CONNECTOR		
2		E10-2303-05	FLAT CABLE CONNECTOR		
		E13-0636-05	PHONE JACK(6P) (AUX, TUNER, CD)		
		E13-0253-05	PHONE JACK(2P) (PHONE)		
4		E13-0636-05	PHONE JACK(6P) (TAPE1-3)		
		E11-0189-05	PHONE JACK (PHONE)		
1, 2		L40-1011-47	SMALL FIXED INDUCTOR(100UH, K)	E	
11		L40-1021-14	SMALL FIXED INDUCTOR(1.0MH, K)		
43, 44		RN14BK2C8252FTS	RN 82.5K F 1/6W		
45, 46		RN14BK2C6811FTS	RN 6.81K F 1/6W		
135-138	*	RS14DB3D221JTE	FL-PROOF RS 220 J 2W		

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R139, 140 R168 R169 R172 R175			RS14DB3D151JTE RS14DB3D181JTE RS14DB3D331JTE RD14AB2E4R7JTS RD14AB2E561JTS	FL-PROOF RS 150 J 2W FL-PROOF RS 180 J 2W FL-PROOF RS 330 J 2W FL-PROOF RD 4.7 J 1/4W FL-PROOF RD 560 J 1/4W		
R176 R187 R189 VR1 ,2 VR3			RS14DB3D181JTE RD14AB2E392JTS RD14AB2E101JTS R06-2018-05 R06-5166-05	FL-PROOF RS 180 J 2W FL-PROOF RD 3.9K J 1/4W FL-PROOF RD 100 J 1/4W POTENTIOMETER(BASS, TREBLE) POTENTIOMETER(BALANCE)		
VR4		*	R11-9020-05	POTENTIOMETER(50KX4, 5KX2)(VR)		
K1 S1 S2 S3 S4			S51-2089-05 S40-6036-05 S90-0038-05 S90-0078-05 S40-6038-05	MAGNETIC RELAY PUSH SWITCH (CARTRIDGE) SLIDE SWITCH (INPUT SELECTOR) SLIDE SWITCH (RECOUT SELECTOR) PUSH SWITCH(S-DIRECT, LOUDNESS)		
S5 S6 S7 S8		*	S40-2376-05 S42-4060-05 S29-2035-05 S31-2322-05	PUSH SWITCH (ADPT/TAPE3) MULTIPLE PUSH SWITCH(MUT, MODE) ROTARY SWITCH(SPEAKERS) SLIDE SWITCH (VOLTAGE SELECT)	M	
D1 ,2 D1 ,2 D3 D3 D4 -7			HZS13N(B2) RD13ES(B2) HZS5.1S(B2) RD5.1JS(B2) HSS104	ZENER DIODE ZENER DIODE ZENER DIODE ZENER DIODE DIODE		
D4 -7 D14 -23 D14 -23 D16 -23 D16 -23			1SS133 HSS104 1SS133 HSS104 1SS133	DIODE DIODE DIODE DIODE DIODE	PYM PYM XTBE2 XTBE2	
IC1 ,2 IC3 ,4 IC5 ,6 IC11, 12 IC13		*	NJM4565D-E NJM4560D-X NJM5532D-D NJM4565D-E NJM5532D-D	IC(OP AMP X2) IC(OP AMP X2) IC(OP AMP X2) IC(OP AMP X2) IC(OP AMP X2)		
IC14 IC15 IC16 Q1 -4 Q1 -4		*	NJM4565D NJM4560D-X TC74HC153AP 2SK170(BL) 2SK170(V)	IC(OP AMP X2) IC(OP AMP X2) IC FET FET	PYM	
Q5 -8 Q5 -8 Q11 Q12 Q13 ,14			2SC1740S(Q, R) 2SC945(A)(Q, P) 2SD1266(Q, P) 2SB941(Q, P) 2SA733(A)(Q, P)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q13 ,14			2SA933S(Q, R)	TRANSISTOR		
A1 A2 A3 A4 A5		*	W02-1047-05 W02-1044-05 W02-1047-05 W02-1044-05 W02-1047-05	ELECTRIC CIRCUIT MODULE TRANSMITTING ASSY ELECTRIC CIRCUIT MODULE TRANSMITTING ASSY ELECTRIC CIRCUIT MODULE	PYM PYM PYM PYM PYM	
AUDIO UNIT (X09-3131-01 : P, Y, 0-21 : M, 2-71 : X, T, E, 2-72 : E2)						
C1 ,2			CE04KW1E470M	ELECTRO 47UF 25WV		

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C3 ,4			CF92FV1H101K	MF 100PF K		
C5 -8			CF92FV1H331K	MF 330PF K		
C9 ,10			CF92FV1H473J	MF 0.047UF J		
C11 ,12			CF92FV1H122J	MF 1200PF J		
C13 ,14			CF92FV1H101K	MF 100PF K		
C17 ,18			C91-0176-05	POLYSTY 68PF K		
C19 ,20			CF92FV1H101K	MF 100PF K		
C21 ,22			CF92FV1H221K	MF 220PF K		
C23 ,24			CC45FSL2H220J	CERAMIC 22PF J		
C25 ,26			CF92FV1H103J	MF 0.010UF J		
C27 ,28			C91-0177-05	POLYSTY 82PF K		
C29 -32			CF92FV1H331K	MF 330PF K		
C33			CE04DW2A470M	ELECTRO 47UF 100WV		
C35			CE04KW2A2R2M	ELECTRO 2.2UF 100WV		MXTEE2
C35 -38			CE04KW2A2R2M	ELECTRO 2.2UF 100WV		PY
C38			CE04KW2A2R2M	ELECTRO 2.2UF 100WV		MXTEE2
C39 ,40			CF92FV1H471J	MF 470PF J		
C41 ,42			CF92FV1H333J	MF 0.033UF J		
C43 ,44			CF92FV1H124J	MF 0.12UF J		
C45 -48			CF92FV1H104J	MF 0.10UF J		
C49 -52			CF92FV1H472J	MF 4700PF J		XTE
C53 -56			CF92FV1H561J	MF 560PF J		XTE
C57 -60			CE04KW2A2R2M	ELECTRO 2.2UF 100WV		PY
C58 ,59			CE04KW2A2R2M	ELECTRO 2.2UF 100WV		MXTEE2
C61 ,62			CE04KW1C220M	ELECTRO 22UF 16WV		
C63 ,64			CE04KW1E470M	ELECTRO 47UF 25WV		
C65 ,66			CF92FV1H102J	MF 1000PF J		
C67 -70			CF92FV1H222J	MF 2200PF J		XTE
C101			CK45FE2H103P	CERAMIC 0.010UF P		
C102			CE04KW2A4R7M	ELECTRO 4.7UF 100WV		
C103,104		*	C90-1823-05	ELECTRO 15000UF 71UF		
C105		*	CE04DW1V331M	ELECTRO 330UF 35WV		
C106,107			CE04KW1J331M	ELECTRO 330UF 63WV		
C108			CE04KW1A101M	ELECTRO 100UF 10WV		
C109			CE04KW1C330M	ELECTRO 33UF 16WV		
C110			CE04DW1E471M	ELECTRO 470UF 25WV		
C111			CE04KW1C330M	ELECTRO 33UF 16WV		
C112			CE04DW1E471M	ELECTRO 470UF 25WV		
C113,114			CF92FV1H103J	MF 0.010UF J		
C115,116			CK45FF1H103Z	CERAMIC 0.010UF Z		PYM
C117			CE04KW1C102M	ELECTRO 1000UF 16WV		PYM
C119			CE04DW0J102M	ELECTRO 1000UF 6.3WV		PYM
C121			CF92FV1H103J	MF 0.010UF J		PYM
C123			CE04KW1C330M	ELECTRO 33UF 16WV		
C124			CF92FV1H223J	MF 0.022UF J		
C125			C90-1333-05	NP-ELEC 22UF 10WV		
C126			CE04KW1C220M	ELECTRO 22UF 16WV		
C127,128			CE04KW2A101M	ELECTRO 100UF 100WV		
△ C129		*	C91-1421-05	FILM 0.01UF 250AC		M
C130			CE04KW1V100M	ELECTRO 10UF 35WV		
C131			CE04DW2A470M	ELECTRO 47UF 100WV		
C140,141			CE04KW1J220M	ELECTRO 22UF 63WV		
C142,143			CE04KW1H470M	ELECTRO 47UF 50WV		
C144			CE04KW1J220M	ELECTRO 22UF 63WV		
C146			CE04KW1J220M	ELECTRO 22UF 63WV		

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C147			CE04DW2A470M	ELECTRO 47UF 100WV		
E1		*	E20-0839-05	SCREW TERMINAL BOARD (SPEAKER)	PYMXTE	
E1		*	E20-0840-05	SCREW TERMINAL BOARD (SPEAKER)	E2	
CN5 -8			J13-0075-05	FUSE CLIP	M	
L1 ,2			L39-0080-15	PHASE-COMPENSATION COIL		
H	2C		N35-3008-46	BINDING HEAD MACHINE SCREW		
J	2C		N89-3008-45	BINDING HEAD TAPTITE SCREW		
CP1 -4			R90-0187-05	MULTI-COMP 0.22X2 K 5W		
R21 ,22			RD14AB2E331JTS	FL-PROOF RD 330 J 1/4W		
R23 ,24			RS14DB3A822JTE	FL-PROOF RS 8.2K J 1W		
R25 ,26			RD14AB2E331JTS	FL-PROOF RD 330 J 1/4W		
R37 -40			RD14AB2E391JTS	FL-PROOF RD 390 J 1/4W		
R41 ,42			RD14AB2E122JTS	FL-PROOF RD 1.2K J 1/4W		
R43 ,44			RD14AB2E221JTS	FL-PROOF RD 220 J 1/4W		
R45			RD14AB2E470JTS	FL-PROOF RD 47 J 1/4W		
R47 -50			RD14AB2E4R7JTS	FL-PROOF RD 4.7 J 1/4W		
R51			RD14GB2E4R7JTS	FL-PROOF RD 4.7 J 1/4W		
R52 -54			RD14AB2E4R7JTS	FL-PROOF RD 4.7 J 1/4W		
R55 ,56			RD14AB2E182JTS	FL-PROOF RD 1.8K J 1/4W		
R57 -60			RD14AB2E681JTS	FL-PROOF RD 680 J 1/4W		
R61 ,62			RD14AB2E222JTS	FL-PROOF RD 2.2K J 1/4W		
R63 -66			RD14AB2E101JTS	FL-PROOF RD 100 J 1/4W		
R71 ,72			RS14DB3D100JTE	FL-PROOF RS 10 J 2W		
R73 ,74			RD14AB2E2R2JTS	FL-PROOF RD 2.2 J 1/4W		
R75 ,76			RD14AB2E330JTS	FL-PROOF RD 33 J 1/4W		
R77 ,78			RS14DB3D100JTE	FL-PROOF RS 10 J 2W		
R79 ,80			RD14AB2E101JTS	FL-PROOF RD 100 J 1/4W		
R87 ,88			RD14AB2E470JTS	FL-PROOF RD 47 J 1/4W		
R103			RS14DB3D471JTE	FL-PROOF RS 470 J 2W		
R104,105			RS14DB3D561JTE	FL-PROOF RS 560 J 2W		
R119,120			RS14DB3D471JTE	FL-PROOF RS 470 J 2W		
R125			RS14DB3A392JTE	FL-PROOF RS 3.9K J 1W		
R130			RS14DB3A681JTE	FL-PROOF RS 680 J 1W		
R159,160			RS14DB3D471JTE	FL-PROOF RS 470 J 2W		
R161-164			RN14BK2E1962FTS	RN 19.6K F 1/4W		
R165-168			RN14BK2E7501FTS	RN 7.50K F 1/4W		
R169			RS14DB3D561JTE	FL-PROOF RS 560 J 2W		
R170			RN14BK2E1001FTS	RN 1.00K F 1/4W		
VR1 ,2			R12-1085-05	TRIM POT. 2.2K		
K1 ,2		*	S51-2096-05	MAGNETIC RELAY		
K3			S51-2090-05	MICRO SWITCH		
D3 ,4			HSS104	DIODE		
D3 ,4			1SS133	DIODE		
D7 ,8			MA27Q(A)	VARISTOR		
D9 -12			HSS104A	DIODE		
D9 -12			1SS131	DIODE		
D21			HSS104	DIODE		
D21			1SS133	DIODE		
D22			HZS5.1S(B2)	ZENER DIODE		
D22			RD5.1JS(B2)	ZENER DIODE		
D25			HSS104A	DIODE		

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D25			1SS131	DIODE		
D26			HSS104	DIODE		
D26			1SS133	DIODE		
D27 ,28			HSS104A	DIODE		
D27 ,28			1SS131	DIODE		
D29			HZS5.1S(B2)	ZENER DIODE		
D29			RD5.1JS(B2)	ZENER DIODE		
D30 ,31			HZS13N(B2)	ZENER DIODE		
D30 ,31			RD13ES(B2)	ZENER DIODE		
D32 ,33			S5566B	DIODE	PYM	
D44 ,45			S5566B	DIODE		
D46			D5FB20*1	DIODE		
IC1			UPC1237HA	IC(POWER AMP)		
IC2			NJM4560D-N	IC		
IC3			AN7805F	IC(VOLTAGE REGULATOR/ +5V)	PYM	
Q1 -8			2SA992(F,E)	TRANSISTOR		
Q9 ,10			2SA733(A)(Q,P)	TRANSISTOR		
Q9 ,10			2SA933S(Q,R)	TRANSISTOR		
Q15 -18			2SC2632(R,S)	TRANSISTOR		
Q19 ,20			2SA1124(R,S)	TRANSISTOR		
Q21 ,22			2SC2631(R,S)	TRANSISTOR		
Q23 ,24			2SA1123(R,S)	TRANSISTOR		
Q25 ,26			2SC3944(R,S)	TRANSISTOR		
Q27 ,28			2SA1535(R,S)	TRANSISTOR		
Q29 ,30			2SC1845(F,E)	TRANSISTOR		
Q31 ,32			2SA992(F,E)	TRANSISTOR		
Q52 ,53			2SC1845(F,E)	TRANSISTOR		
Q54			2SA733(A)(Q,P)	TRANSISTOR		
Q54			2SA933S(Q,R)	TRANSISTOR		
Q55			2SA992(F,E)	TRANSISTOR		
Q56			2SD1266(Q,P)	TRANSISTOR		
Q57			2SB941(Q,P)	TRANSISTOR		

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SPECIFICATIONS

Rated Power Output

100 watts per channel minimum RMS, both channels driven, at 8 Ω from 20 Hz to 20,000 Hz with no more than 0.008% total harmonic distortion

Maximum Continuous Power Output (DIN)	
1 kHz at 4 Ω	175 W
Maximum Continuous Power Output (DIN)	
1 kHz at 8 Ω	115 W
Maximum Continuous Power Output (IEC/NF)	
from 63 Hz to 12,500 Hz, 0.7% Total Harmonic Distortion at 8 Ω	115 W + 115 W
Dynamic Power	380 W per channel at 2 Ω
	240 W per channel at 4 Ω
	140 W per channel at 8 Ω

Total Harmonic Distortion

(LINE input to SPEAKER output)

Rated Output Power at 8 Ω,	
20 Hz ~ 20,000 Hz	0.008%
1/2 Rated Output Power at 8 Ω,	
20 Hz ~ 20,000 Hz	0.005%
Rated Output Power at 8 Ω, 1 kHz	0.0006%

Frequency Response

LINE to SPEAKER.....5 Hz to 100 kHz +0 dB, -3 dB

PHONO "RIAA" Response

PHONO (MM) Input.....20 Hz to 20 kHz \pm 0.3 dB

PHONO (MC) Input.....20 Hz to 20 kHz \pm 0.3 dB

Signal To Noise Ratio

PHONO (MM) (IHF-A) (IHF'66) ...87 dB for 2.5 mV input

PHONO (MC) (IHF-A) (IHF'66) ..69 dB for 0.25 mV input

TUNER/AUX/TAPE/CD

(IHF-A) (IHF'66)

PHONO (MM) (IHF-A)

PHONO (MC) (IHF-A)

TUNER/AUX/TAPE/CD (IHF-A)

PHONO (MM) at Unweighted,

50 mW Output (DIN)

TUNER/AUX/TAPE/CD at Unweighted,

50 mW Output (DIN)

Filter.....SUBSONIC 18 Hz -18 dB/oct

Tone Control

BASS..... \pm 10 dB at 100 Hz

TREBLE..... \pm 10 dB at 10 kHz

Loudness Control.....+6 dB at 100 Hz, +3 dB at 10 kHz

Damping Factor.....220/50 Hz at 8 Ω

Channel Separation at 1 kHz (DIN)

PHONO (MM)

TUNER/AUX/TAPE/CD

(Terminated with 47 k Ω +250 pF)

Input Sensitivity/Impedance

PHONO (MM)

PHONO (MC)

TUNER/AUX/TAPE/CD

Phono Maximum Input Level (PHONO to TAPE REC)

MM at 1 kHz 0.01% T.H.D.

MC at 1 kHz 0.01% T.H.D.

Phono input capacity (DIN)

Output Level/Impedance

TAPE REC (Pin).....

General

Power Consumption

3.6 A

350 W

350 W

Dimensions

W: 440 mm (17-5/16")

H: 163 mm (6-7/16")

D: 398 mm (15-11/16")

Weight (net)

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

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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 Europe (E) 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.

KENWOOD CORPORATION

Shionogi Shibuya Building, 17-5, 2-chome Shibuya, Shibuya-ku, Tokyo 150, Japan

KENWOOD U.S.A. CORPORATION

2201 East Dominguez Street, Long Beach, CA 90810;
550 Clark Drive, Mount Olive, NJ 07828, U.S.A.

KENWOOD ELECTRONICS CANADA INC.

P.O. BOX 1075, 959 Gana Court, Mississauga, Ontario, Canada L4T 4C2

TRIO-KENWOOD U.K. LIMITED

KENWOOD House, Dwight Road, Watford, Herts., WD1 8EB United Kingdom

KENWOOD ELECTRONICS BENELUX N.V.

Mechelsesteenweg 418 B-1930 Zaventem, Belgium

KENWOOD ELECTRONICS DEUTSCHLAND GMBH

Rembrücker-Str. 15, 6056 Heusenstamm, West Germany

TRIO-KENWOOD FRANCE S.A.

13 Boulevard Ney, 75018 Paris, France

KENWOOD LINEAR S.p.A.

20125, MILANO-VIA ARBE, 50, ITALY

KENWOOD ELECTRONICS AUSTRALIA PTY. LTD. (INCORPORATED IN N.S.W.)

4E Woodcock Place, Lane Cove, N.S.W. 2066, Australia

KENWOOD & LEE ELECTRONICS, LTD.

Wang Kee Building, 4th Floor, 34-37, Connaught Road, Central, Hong Kong