

POWER AMPLIFIER

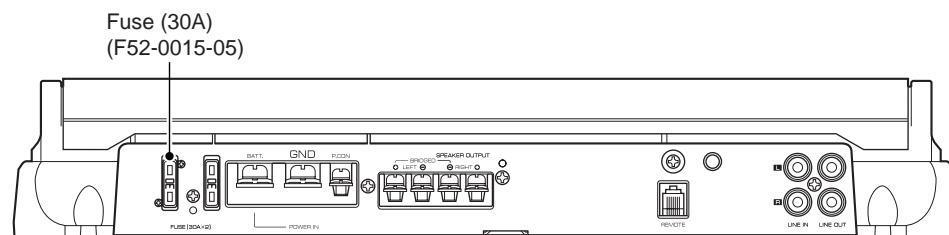
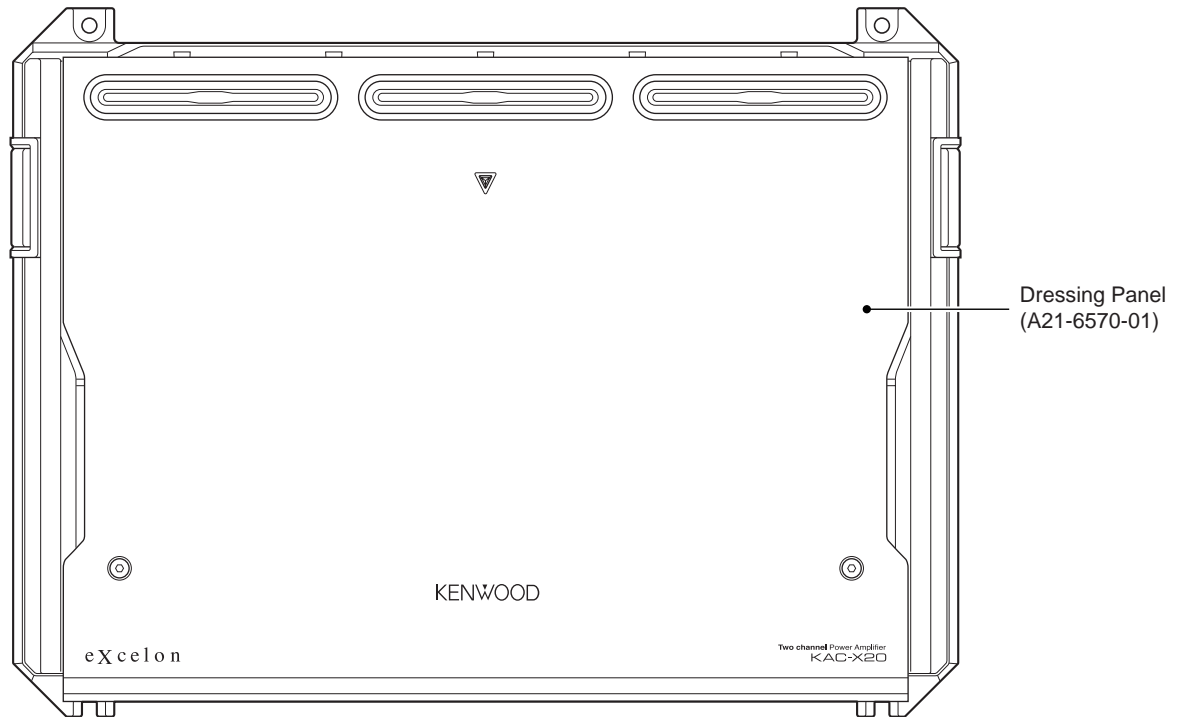
KAC-X20

SERVICE MANUAL

KENWOOD

Kenwood Corporation

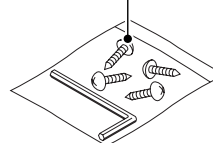
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B53-0484-00 (N) 584



Accessories
(W01-1606-05)



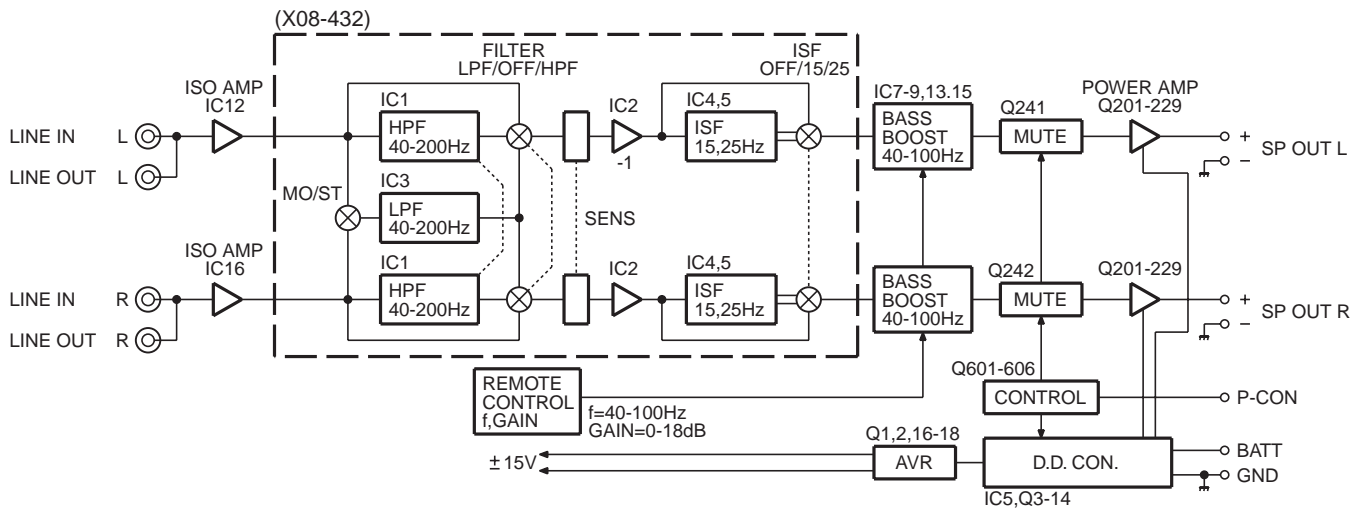
Screw set
(N99-1794-05)



This product uses Lead Free solder.



BLOCK DIAGRAM



COMPONENTS DESCRIPTION

● PREAMPLIFIER UNIT (X08-4320-10)

Ref. No.	Application / Function	Operation / Condition / Compatibility
IC1	HPF	
IC2	Phase inversion amplifier (Lch only)	
IC3	LPF	
IC4	I.S.F 15Hz	
IC5	I.S.F 25Hz	

● AUDIO UNIT (X09-8570-10)

Ref. No.	Application / Function	Operation / Condition / Compatibility
IC5	DC/DC converter	
IC6	Temperature detection comparator	
IC7,8,13	Bass boost amplifier	
IC9	For bass boost gain and frequency adjustments	
IC12,16	Input isolation amplifier	
IC15	Bass boost mix amplifier	
Q1,2	±15V AVR	
Q3~8	FET for DC/DC converter	

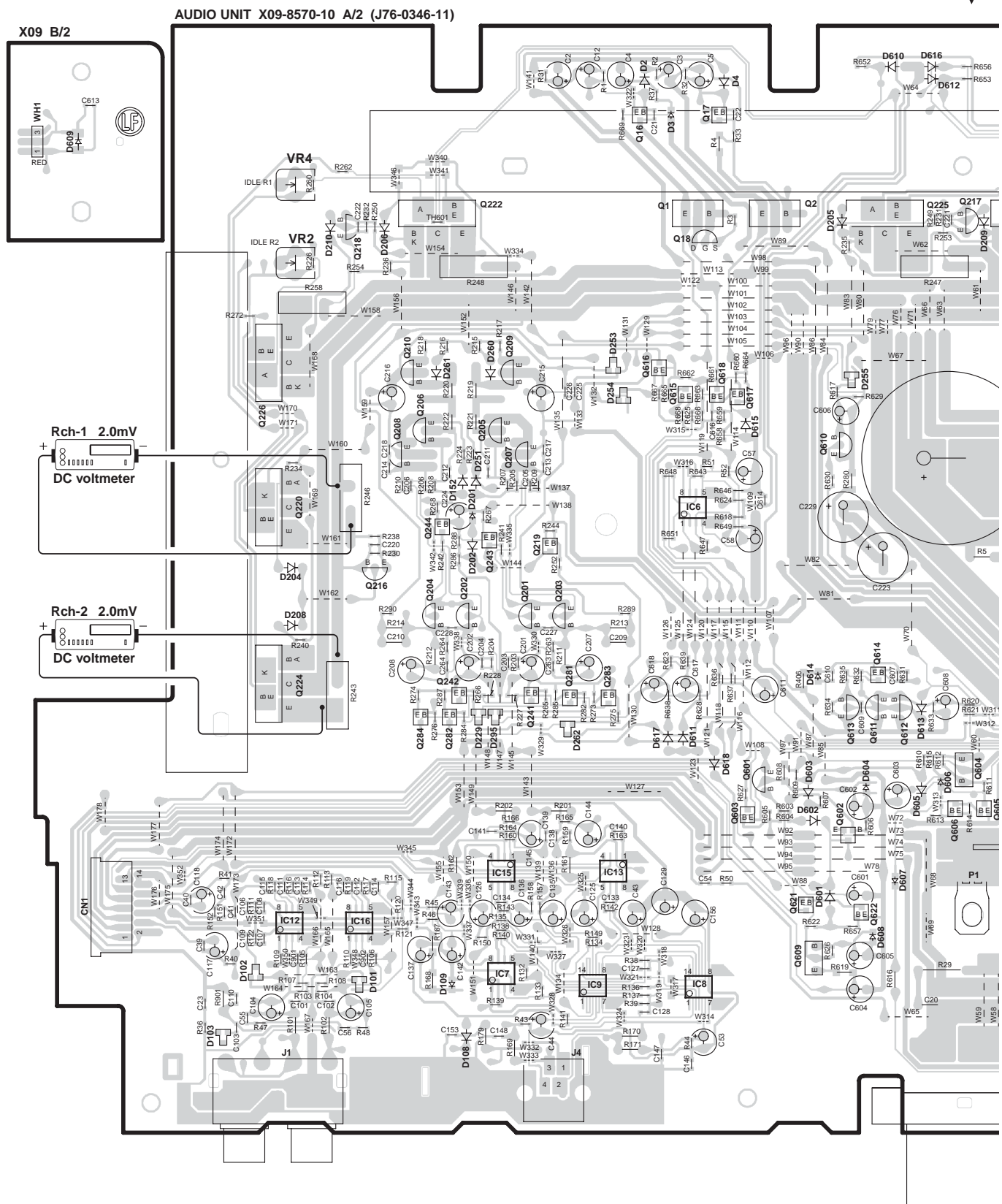
COMPONENTS DESCRIPTION

Ref. No.	Application / Function	Operation / Condition / Compatibility
Q9~12	FET driver for DC/DC converter	
Q13,14	FET driver control for DC/DC converter	
Q15	Temperature detection control circuit	
Q16,17	±15V for AVR control	
Q18	±15V AVR constant current	
Q201~204	Power amplifier initial stage differential operation	
Q205~208	Power amplifier second stage differential operation	
Q209,210	Current mirror	
Q215~218	Current limiter	
Q219	Shock noise prevention circuit	
Q220,222~227,229	Power amplifier final stage	
Q241,242	Power amplifier mute	
Q243,244	Power amplifier initial stage constant current	
Q281~284	Power amplifier ATT	
Q601,615~618	Shock noise preventing circuit when power is turned on	
Q602	P-Con OFF detection	
Q603	Mute driver	
Q604,605	P-Con control circuit	
Q606	Over voltage detection	
Q609	Power supply for fan	
Q610	Over current detection	
Q611,612	DC detection	
Q613,614	DC detection For latching	
Q621,622	For LED control	

ADJUSTMENT

NO.	ITEM	ALIGNMENT POINT	METHOD	ALIGN FOR	NOTE
1	IDEL CURRENT	VR1 (Lch-1) VR3 (Lch-2) VR4 (Rch-1) VR2 (Rch-2)	Connect a DC voltmeter between check land (Refer to PC BOARD)	2.0mV	After Power on 5minutes Since there are interferences between Lch-1 and Lch-2, or between Rch-1 and Rch-2, please repeat 1 and 2 several times for adjustment.

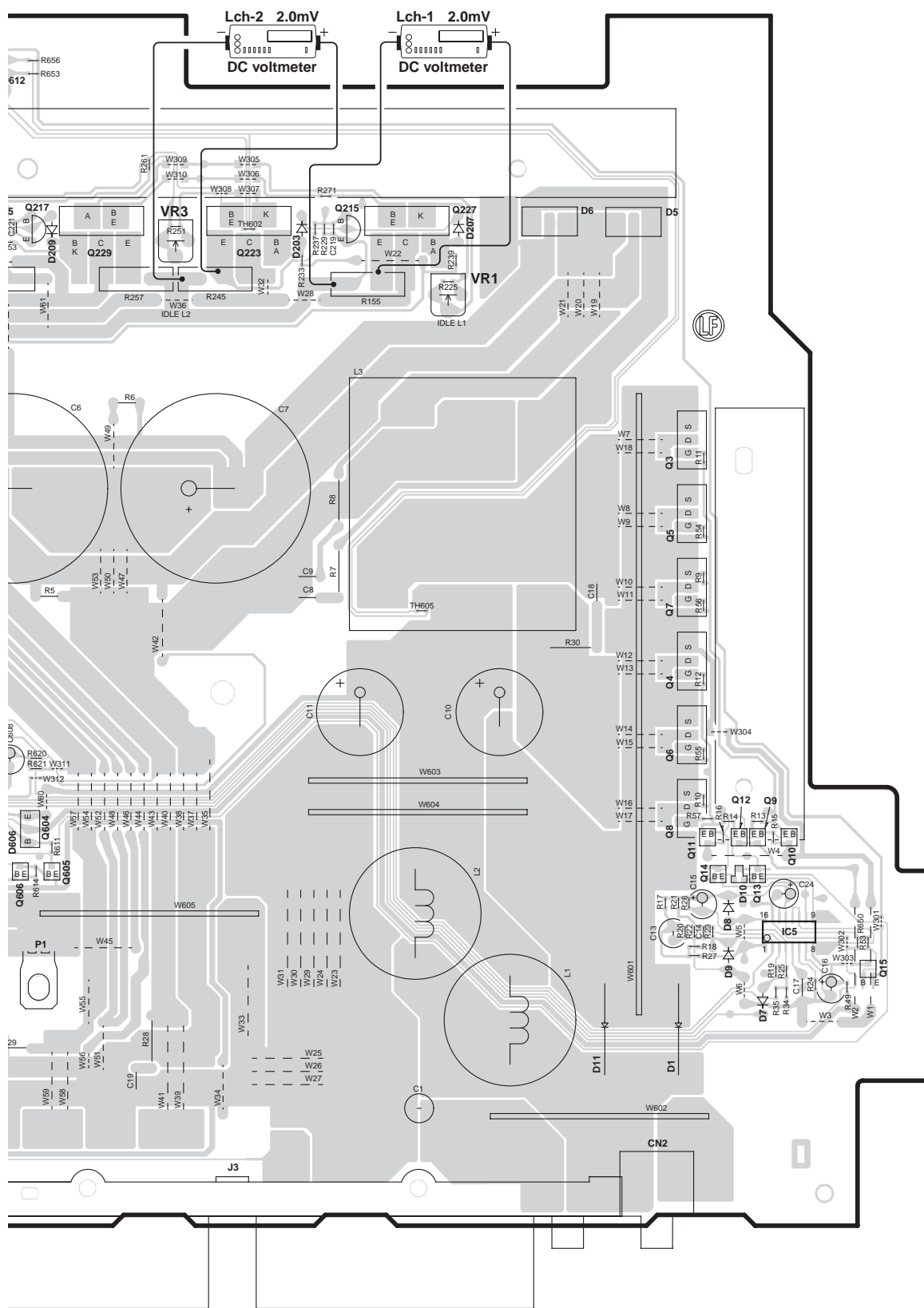
KAC-X20 PC BOARD (FOIL SIDE VIEW)



KAC-X20

X09-8570-10

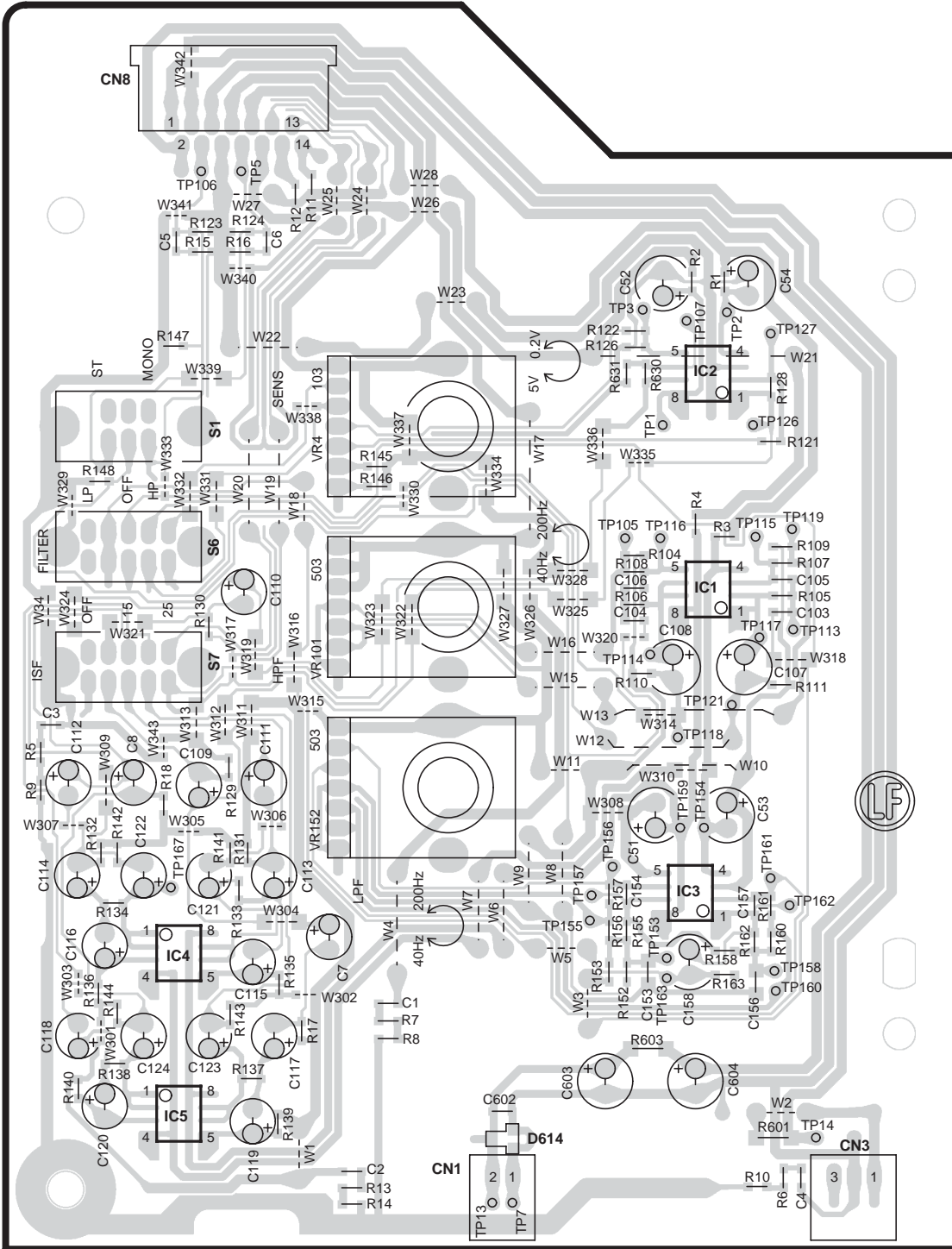
Ref. No.	Address
IC5	5I
IC6	4D
IC7	6C
IC8	6D
IC9	6D
IC12	5B
IC13	5D
IC15	5C
IC16	5C
Q1	2D
Q2	2E
Q3	3H
Q4	4H
Q5	4H
Q6	4H
Q7	4H
Q8	5H
Q9	5I
Q10	5I
Q11	5H
Q12	5I
Q13	5I
Q14	5H
Q15	5I
Q16	2D
Q17	2D
Q18	2D
Q201	4C
Q202	4C
Q203	4C
Q204	4C
Q205	3C
Q206	3C
Q207	3C
Q208	3C
Q209	3C
Q210	3C
Q215	2G
Q216	4C
Q217	2E
Q218	2C
Q219	4C
Q220	4B
Q222	2C
Q223	2G
Q224	4B
Q225	2E
Q226	3B
Q227	2G
Q229	2F
Q241	4C
Q242	4C
Q243	4C
Q244	4C
Q281	4C
Q282	5C
Q283	4D
Q284	5C
Q601	5D
Q602	5E
Q603	5D
Q604	5F
Q605	5F
Q606	5E
Q609	6E
Q610	3E
Q611	5E
Q612	5E
Q613	5E
Q614	4E
Q615	3D
Q616	3D
Q617	3D
Q618	3D
Q621	5E
Q622	5E



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

KAC-X20 PC BOARD (FOIL SIDE VIEW)

PREAMPLIFIER UNIT X08-4320-10 (J76-0351-12)

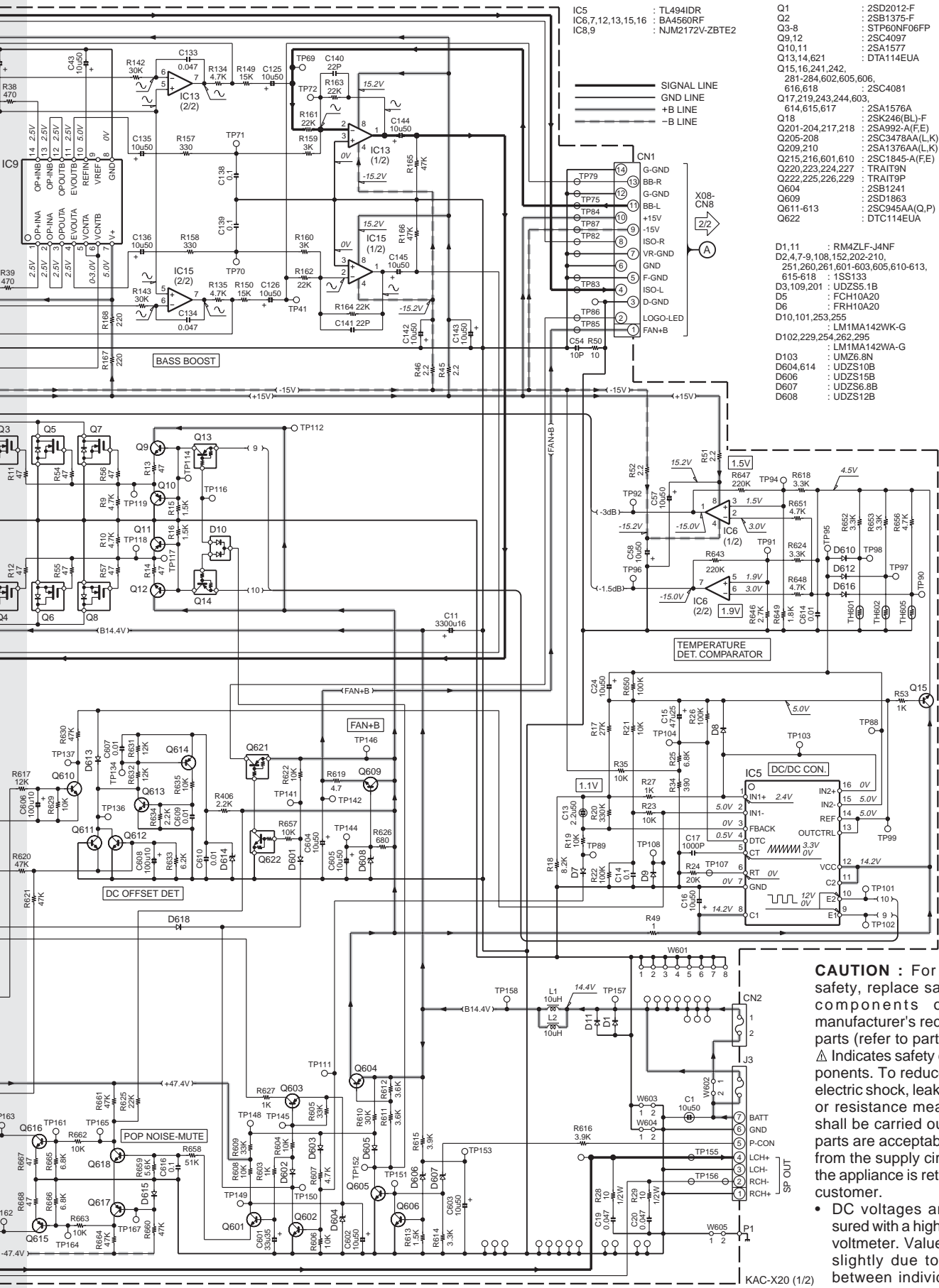


X08-4320-10

Ref. No.	Address
IC1	4N
IC2	3N
IC3	5N
IC4	5L
IC5	6L

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

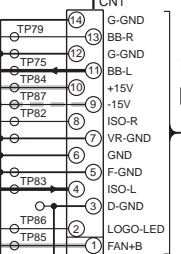
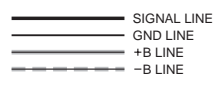
KAC-X20



- IC5 : TL494IDR
 IC6,7,12,13,15,16 : BA4560RF
 IC8,9 : NJM2172V-ZBTE2

- Q1 : 2SD2012-F
 Q2 : 2SB1375-F
 Q3-8 : STP60NF06FP
 Q9,12 : 2SC4097
 Q10,11 : 2SA1577
 Q13,14,621 : DTA114EUA
 Q15,16,241,242, 281-284,602,605,606, 616,618 : 2SC4081
 Q17,219,243,244,603, 614,615,617 : 2SA1576A
 Q18 : 2SK246(BL)-F
 Q201-204,217,218 : 2SA992-A(F/E)
 Q205-208 : 2SC3478AA(L,K)
 Q209,210 : 2SA1376AA(L,K)
 Q215,216,601,610 : 2SC1845-A(F/E)
 Q220,223,224,227 : TRAIT9N
 Q222,225,226,229 : TRAIT9P
 Q604 : 2SB1241
 Q609 : 2SD1863
 Q611-613 : 2SC945AA(Q,P)
 Q622 : DTC114EUA

- D1,11 : RM4ZLF-J4NF
 D2,4,7-9,108,152,202-210, 251,260,261,601-603,605,610-613, 615-618 : 1SS133
 D3,109,201 : UDZS5.1B
 D5 : FCH10A20
 D8 : FRH10A20
 D10,101,253,255 : LM1MA142WK-G
 D102,229,254,262,295 : LM1MA142WA-G
 D103 : UMZ6.8N
 D604,614 : UDZS10B
 D606 : UDZS15B
 D607 : UDZS6.8B
 D608 : UDZS12B



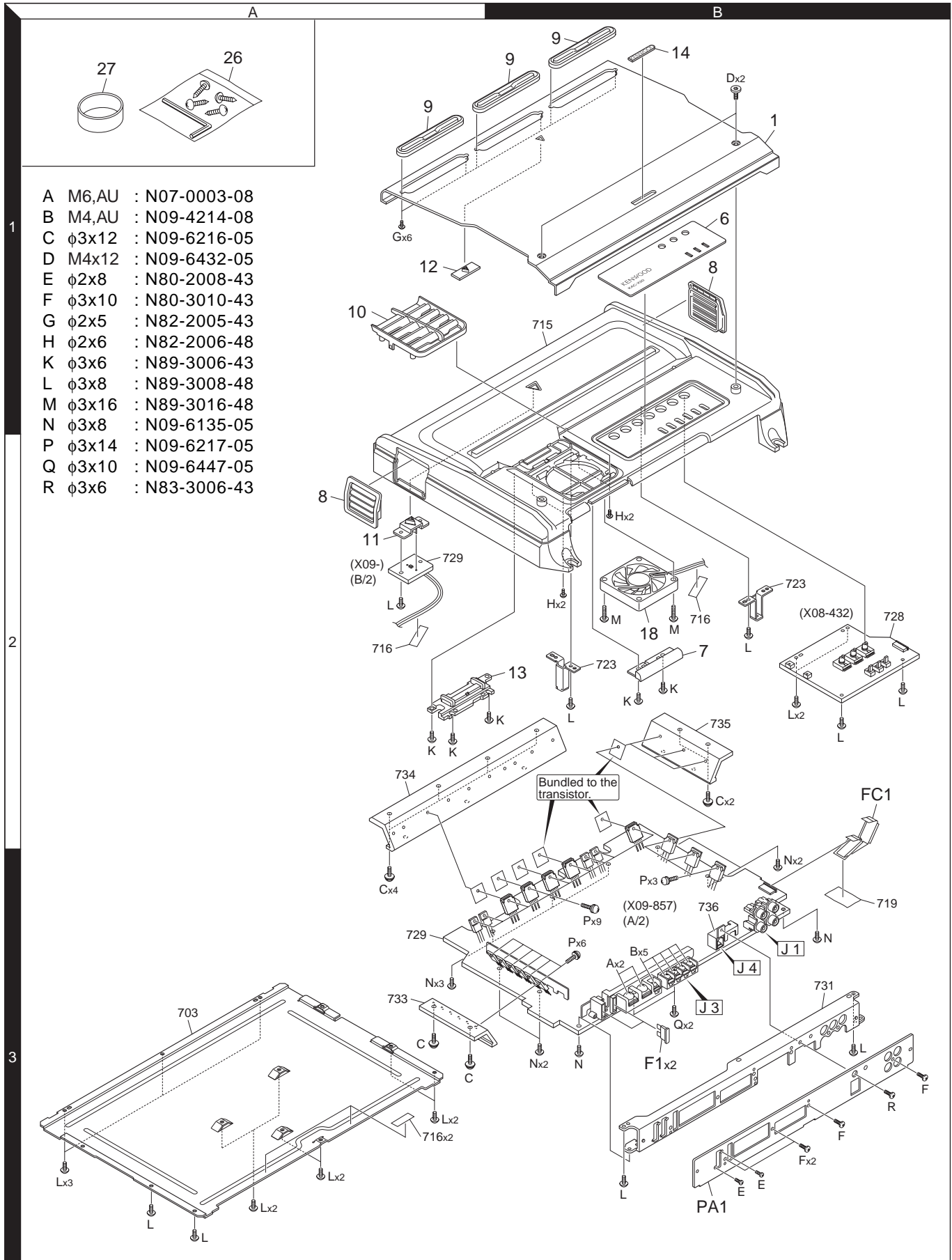
CAUTION : For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).

⚠ 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. Values may vary slightly due to variations between individual instruments or/and units.

KAC-X20

EXPLODED VIEW



PARTS LIST

* New parts

Parts without **Parts No.** are not supplied.

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

Teile ohne **Parts No.** werden nicht geliefert.

Ref. No.	Ad	New	Parts No.	Description	Destination	Ref. No.	Ad	New	Parts No.	Description	Destination
KAC-X20											
1	1B	*	A21-6570-01	DRESSING PANEL		R11,12			RK73GB2A101J	CHIP R 100 J 1/10W	
PA1	3B	*	A64-4086-02	PANEL		R13,14			RK73GB2A100J	CHIP R 10 J 1/10W	
6	1B	*	B03-5087-12	DRESSING PLATE		R15,16			RK73GB2A101J	CHIP R 100 J 1/10W	
7	2B		B07-3194-03	ESCUTCHEON		R17,18			RK73GB2A472J	CHIP R 4.7K J 1/10W	
8	2A		B07-3197-02	ESCUTCHEON		R105,106			RK73GB2A203J	CHIP R 20K J 1/10W	
9	1B	*	B07-3207-03	ESCUTCHEON		R107,108			RK73GB2A133J	CHIP R 13K J 1/10W	
10	1A	*	B07-3208-12	ESCUTCHEON		R110,111			RK73GB2A473J	CHIP R 47K J 1/10W	
11	2A		B19-2324-03	LIGHTING BOARD		R121			RK73GB2A103J	CHIP R 10K J 1/10W	
12	1A	*	B19-2424-04	LIGHTING BOARD		R122			RK73GB2A621J	CHIP R 620 J 1/10W	
13	2A	*	B19-2431-02	LIGHTING BOARD		R123,124			RK73GB2A473J	CHIP R 47K J 1/10W	
14	1B		B43-0336-04	BADGE		R126			RK73GB2A103J	CHIP R 10K J 1/10W	
-		*	B64-3519-00	INSTRUCTION MANUAL (ENG.FRE.SPA)		R128			RK73GB2A623J	CHIP R 62K J 1/10W	
FC1	2B		E39-0699-15	FLAT CABLE		R129,130			RK73GB2A473J	CHIP R 47K J 1/10W	
18	2B		F09-1885-15	FAN		R131,132			RK73GB2A103J	CHIP R 10K J 1/10W	
△ F1	3B		F52-0015-05	FUSE(BLADE TYPE) 30A		R133,134			RK73GB2A392J	CHIP R 3.9K J 1/10W	
-		*	H54-3885-03	ITEM CARTON CASE		R135,136			RK73GB2A273J	CHIP R 27K J 1/10W	
26	1A		N99-1794-05	SCREW & WRENCH KEY SET		R137,138			RK73GB2A202J	CHIP R 2.0K J 1/10W	
A	3B		N07-0003-08	SCREW (M6, AU)		R139,140			RK73GB2A183J	CHIP R 18K J 1/10W	
B	3B		N09-4214-08	SCREW (M4, AU)		R141,142			RK73GB2A104J	CHIP R 100K J 1/10W	
C	3A		N09-6216-05	TAPTITE SCREW (3X12)		R143,144			RK73GB2A822J	CHIP R 8.2K J 1/10W	
D	1B	*	N09-6432-05	DRESSED SCREW (M4X12)		R145,146			RK73GB2A431J	CHIP R 430 J 1/10W	
E	3B		N80-2008-43	PAN HEAD TAPTITE SCREW		R147,148			RK73GB2A473J	CHIP R 47K J 1/10W	
F	3B		N80-3010-43	PAN HEAD TAPTITE SCREW		R152,153			RK73GB2A203J	CHIP R 20K J 1/10W	
G	1A		N82-2005-43	BINDING HEAD TAPTITE SCREW		R155,156			RK73GB2A103J	CHIP R 10K J 1/10W	
H	2B		N82-2006-48	BINDING HEAD TAPTITE SCREW		R157			RK73GB2A184J	CHIP R 180K J 1/10W	
K	2B		N89-3006-43	BINDING HEAD TAPTITE SCREW		R158			RK73GB2A752J	CHIP R 7.5K J 1/10W	
L	3A		N89-3008-48	BINDING HEAD TAPTITE SCREW		R160			RK73GB2A912J	CHIP R 9.1K J 1/10W	
M	2B		N89-3016-48	BINDING HEAD TAPTITE SCREW		R161			RK73GB2A104J	CHIP R 100K J 1/10W	
27	1A		W01-1606-05	ACCESSORIES		R162			RK73GB2A752J	CHIP R 7.5K J 1/10W	
						R163			RK73GB2A473J	CHIP R 47K J 1/10W	
PREAMPLIFIER UNIT (X08-4320-10)											
C1-6			CC73GCH1H070D	CHIP C 7.0PF D		VR101			R31-0241-05	VARIABLE RESISTOR	
C7,8			CD04AS1V100M	ELECTRO 10UF 35WV		VR152			R31-0241-05	VARIABLE RESISTOR	
C51-54			CD04BJ1H100M	ELECTRO 10UF 50WV		W301-303			R92-1252-05	CHIP R 0 OHM J 1/16W	
C103-106			CK73GB1H104K	CHIP C 0.10UF K		W304			R92-2053-05	CHIP R 0 OHM J 1/8W	
C107,108			CD04BJ1H100M	ELECTRO 10UF 50WV		W305-307			R92-1252-05	CHIP R 0 OHM J 1/16W	
C109-112			CD04AS1V100M	ELECTRO 10UF 35WV		W308-314			R92-2053-05	CHIP R 0 OHM J 1/8W	
C113-124			CD04AS1H010M	ELECTRO 1UF 50WV		W315			R92-1252-05	CHIP R 0 OHM J 1/16W	
C153			CK73FB1E154K	CHIP C 0.15UF K		W316			R92-2053-05	CHIP R 0 OHM J 1/8W	
C154			CK73GB1H333K	CHIP C 0.033UF K		W317			R92-1252-05	CHIP R 0 OHM J 1/16W	
C156			CK73FB1E154K	CHIP C 0.15UF K		W318,319			R92-2053-05	CHIP R 0 OHM J 1/8W	
C157			CK73GB1H333K	CHIP C 0.033UF K		W320			R92-1252-05	CHIP R 0 OHM J 1/16W	
C158			CD04BJ1H100M	ELECTRO 10UF 50WV		W321-328			R92-2053-05	CHIP R 0 OHM J 1/8W	
C602			CK73GB1H103K	CHIP C 0.010UF K		W329,330			R92-1252-05	CHIP R 0 OHM J 1/16W	
C603			CD04BJ1E470M	ELECTRO 47UF 25WV		W331,332			R92-2053-05	CHIP R 0 OHM J 1/8W	
C604			CD04BJ1H100M	ELECTRO 10UF 50WV		W333			R92-1252-05	CHIP R 0 OHM J 1/16W	
CN1			E41-1699-05	PIN ASSY		W334			R92-2053-05	CHIP R 0 OHM J 1/8W	
CN3			E41-1700-05	PIN ASSY		W335			R92-1252-05	CHIP R 0 OHM J 1/16W	
CN8			E41-2277-05	FLAT CABLE CONNECTOR		W336,337			R92-2053-05	CHIP R 0 OHM J 1/8W	
R1-10			RK73GB2A100J	CHIP R 10 J 1/10W		W338			R92-1252-05	CHIP R 0 OHM J 1/16W	
						W339			R92-2053-05	CHIP R 0 OHM J 1/8W	

(North America)

△ Indicates safety critical components.

PARTS LIST

PREAMPLIFIER UNIT (X08-4320-10)

Ref. No.	Add	New	Parts No.	Description	Destination
W340,341			R92-1252-05	CHIP R 0 OHM J 1/16W	
W342			R92-2053-05	CHIP R 0 OHM J 1/8W	
W343			R92-1252-05	CHIP R 0 OHM J 1/16W	
W344			R92-2053-05	CHIP R 0 OHM J 1/8W	
S1		*	S62-0879-05	SLIDE SWITCH	
S6,7		*	S62-0880-05	SLIDE SWITCH	
D614			LM1MA142WK-G	DIODE	
IC1-5			BA4560RF	ANALOGUE IC	

AUDIO UNIT (X09-8570-10)

Ref. No.	Add	New	Parts No.	Description	Destination
D609			B30-1743-05	LED (RED LED)	
C1			CD04AU1H100M	NP ELEC 10UF 50WV	
C2-4			CD04BJ1E470M	ELECTRO 47UF 25WV	
C5			CD04BJ1H100M	ELECTRO 10UF 50WV	
C6,7		*	C90-6841-05	ELECTR 4700UF 56WV	
C8,9			CK45FB1H102K	CERAMIC 1000PF K	
C10,11			C90-6816-05	ELECTR 3300UF 16WV	
C12			CD04BJ1H100M	ELECTRO 10UF 50WV	
C13			CD04AU1H2R2M	NP-ELEC 2.2UF 50WV	
C14			CK73GB1H104K	CHIP C 0.10UF K	
C15			CD04BJ1E470M	ELECTRO 47UF 25WV	
C16			CD04BJ1H100M	ELECTRO 10UF 50WV	
C17			CK45FB1H102K	CERAMIC 1000PF K	
C18			CK45FB1H222K	CERAMIC 2200PF K	
C19,20			CQ93FMG1H473J	MYLAR 0.047UF J	
C21,22			CK73GB1H103K	CHIP C 0.010UF K	
C23			CC73GCH1H070D	CHIP C 7.0PF D	
C24			CD04BJ1H100M	ELECTRO 10UF 50WV	
C39,40			CC73GCH1H070D	CHIP C 7.0PF D	
C41,42			CC73GCH1H100D	CHIP C 10PF D	
C43,44			CD04BJ1H100M	ELECTRO 10UF 50WV	
C53			CD04BJ1H100M	ELECTRO 10UF 50WV	
C54			CC73GCH1H100D	CHIP C 10PF D	
C55,56			CC73GCH1H070D	CHIP C 7.0PF D	
C57,58			CD04BJ1H100M	ELECTRO 10UF 50WV	
C101,102			CC73GCH1H471J	CHIP C 470PF J	
C103			CK73GB1H104K	CHIP C 0.10UF K	
C104,105			CD04BJ1H100M	ELECTRO 10UF 50WV	
C106,107			CC73GCH1H070D	CHIP C 7.0PF D	
C108,109			CK73GB1H103K	CHIP C 0.010UF K	
C110			CK73GB1H102K	CHIP C 1000PF K	
C111,112			CC73GCH1H150J	CHIP C 15PF J	
C113-116			CC73GCH1H101J	CHIP C 100PF J	
C117,118			CD04BJ1H220M	ELECTRO 22UF 50WV	
C125,126			CD04BJ1H100M	ELECTRO 10UF 50WV	
C127,128			CK73GB1H473K	CHIP C 0.047UF K	
C129			CD04BJ1H100M	ELECTRO 10UF 50WV	
C133,134			CK73GB1H473K	CHIP C 0.047UF K	
C135-137			CD04BJ1H100M	ELECTRO 10UF 50WV	
C138,139			CK73GB1H104K	CHIP C 0.10UF K	
C140,141			CC73GCH1H220J	CHIP C 22PF J	
C142-145			CD04BJ1H100M	ELECTRO 10UF 50WV	
C146-148			CC73GCH1H101J	CHIP C 100PF J	
C153			CC73GCH1H101J	CHIP C 100PF J	

Ref. No.	Add	New	Parts No.	Description	Destination
C156			CD04BJ1H100M	ELECTRO 10UF 50WV	
C201,202			CD04BJ1H100M	ELECTRO 10UF 50WV	
C203,204			CC73GCH1H221J	CHIP C 220PF J	
C205,206			CK73GB1H472K	CHIP C 4700PF K	
C207,208			CD04BJ1E470M	ELECTRO 47UF 25WV	
C209,210			CC45FCH1H150J	CERAMIC 15PF J	
C211,212			CC73GCH1H331J	CHIP C 330PF J	
C213,214			CC73GCH1H220J	CHIP C 22PF J	
C215,216			CD04BJ1H100M	ELECTRO 10UF 50WV	
C217,218			CC73GCH1H220J	CHIP C 22PF J	
C219-222			CK73GB1H102K	CHIP C 1000PF K	
C223			CD04BJ1J101M	ELECTRO 100UF 63WV	
C224			CD04BJ1A101M	ELECTRO 100UF 10WV	
C225,226			CC73GCH1H471J	CHIP C 470PF J	
C227,228			CC73GCH1H470J	CHIP C 47PF J	
C229			CD04BJ1J101M	ELECTRO 100UF 63WV	
C263,264			CC73GCH1H221J	CHIP C 220PF J	
C601			CD04BJ1V330M	ELECTRO 33UF 35WV	
C602-605			CD04BJ1H100M	ELECTRO 10UF 50WV	
C606			CD04BJ1E470M	ELECTRO 47UF 25WV	
C607			CK73GB1H103K	CHIP C 0.010UF K	
C608			CD04BJ1A101M	ELECTRO 100UF 10WV	
C609,610			CK73GB1H103K	CHIP C 0.010UF K	
C611			CD04BJ1H010M	ELECTRO 1.0UF 50WV	
C613,614			CK73GB1H103K	CHIP C 0.010UF K	
C616			CK73GB1H104K	CHIP C 0.10UF K	
C617,618			CD04BJ1H100M	ELECTRO 10UF 50WV	
C901,902			CC73GCH1H150J	CHIP C 15PF J	
CN1			E41-2277-05	FLAT CABLE CONNECTOR	
J1		*	E63-0948-05	PIN JACK	
J3			E70-0838-05	SCREW TERMINAL BOARD	
J4			E58-0966-15	RECTANGULAR RECEPTACLE	
WH1			E39-0710-05	WIRING HARNESS	
△ CN2			J13-0602-05	FUSE HOLDER	
L1,2		*	L33-2413-05	CHOKE COIL	
L3			L19-0771-05	TRANSFORMER FOR CONVERTER	
N	3B		N09-6135-05	TAPTITE SCREW (3X8 B-T)	
P	3B		N09-6217-05	TAPTITE SCREW (3X14)	
Q	3B		N09-6447-05	TAPTITE SCREW (3X10 P-T)	
R	3B		N83-3006-43	PAN HEAD TAPTITE SCREW	
R1			RK73GB2A183J	CHIP R 18K J 1/10W	
R2			RK73GB2A103J	CHIP R 10K J 1/10W	
R3			RK73GB2A821J	CHIP R 820 J 1/10W	
R4			RK73EB2E123J	CHIP R 12K J 1/4W	
R5,6			RD14BB2C333J	RD 33K J 1/6W	
R7,8			RD14DB2H100J	SMALL-RD 10 J 1/2W	
R9,10			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R11-14			RK73GB2A470J	CHIP R 47 J 1/10W	
R15,16			RK73GB2A152J	CHIP R 1.5K J 1/10W	
R17			RK73GB2A273J	CHIP R 27K J 1/10W	
R18			RK73GB2A822J	CHIP R 8.2K J 1/10W	
R19			RK73GB2A103J	CHIP R 10K J 1/10W	
R20			RK73GB2A334J	CHIP R 330K J 1/10W	

(North America)

△ Indicates safety critical components.

PARTS LIST

AUDIO UNIT (X09-8570-10)

Ref. No.	Add	New	Parts No.	Description	Destination	Ref. No.	Add	New	Parts No.	Description	Destination
R21			RK73GB2A103J	CHIP R 10K J 1/10W		R211,212			RD14BB2C102J	RD 1.0K J 1/6W	
R22			RK73GB2A104J	CHIP R 100K J 1/10W		R213,214			RD14BB2C223J	RD 22K J 1/6W	
R23			RK73GB2A103J	CHIP R 10K J 1/10W		R215-218			RK73GB2A101J	CHIP R 100 J 1/10W	
R24			RK73GB2A203J	CHIP R 20K J 1/10W		R219-222			RK73EB2E472J	CHIP R 4.7K J 1/4W	
R25			RK73GB2A682J	CHIP R 6.8K J 1/10W		R223,224			RK73GB2A101J	CHIP R 100 J 1/10W	
R26			RK73GB2A104J	CHIP R 100K J 1/10W		R225,226			RK73GB2A331J	CHIP R 330 J 1/10W	
R27			RK73GB2A102J	CHIP R 1.0K J 1/10W		R227,228			RK73GB2A103J	CHIP R 10K J 1/10W	
R28-30			RD14DB2H100J	SMALL-RD 10 J 1/2W		R229-232			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R31,32			RK73GB2A103J	CHIP R 10K J 1/10W		R233-236			RK73GB2A101J	CHIP R 100 J 1/10W	
R33			RK73GB2A101J	CHIP R 100 J 1/10W		R237,238			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R34			RK73GB2A391J	CHIP R 390 J 1/10W		R239,240			RK73GB2A101J	CHIP R 100 J 1/10W	
R35			RK73GB2A103J	CHIP R 10K J 1/10W		R241,242			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R36,37			RK73GB2A101J	CHIP R 100 J 1/10W		R243			R92-0205-05	METAL-PLATE 0.1 K 2W	
R38,39			RK73GB2A471J	CHIP R 470 J 1/10W		R244			RK73GB2A103J	CHIP R 10K J 1/10W	
R40,41			RK73GB2A101J	CHIP R 100 J 1/10W		R245-248			R92-0205-05	METAL-PLATE 0.1 K 2W	
R43,44			RK73GB2A243J	CHIP R 24K J 1/10W		R249,250			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R45,46			RK73GB2A2R2J	CHIP R 2.2 J 1/10W		R251			RK73GB2A331J	CHIP R 330 J 1/10W	
R47,48			RK73GB2A101J	CHIP R 100 J 1/10W		R252			RK73GB2A473J	CHIP R 47K J 1/10W	
R49			RK73GB2A1R0J	CHIP R 1.0 J 1/10W		R253,254			RK73GB2A101J	CHIP R 100 J 1/10W	
R50			RK73GB2A100J	CHIP R 10 J 1/10W		R257,258			R92-0205-05	METAL-PLATE 0.1 K 2W	
R51,52			RK73GB2A2R2J	CHIP R 2.2 J 1/10W		R260			RK73GB2A331J	CHIP R 330 J 1/10W	
R53			RK73GB2A102J	CHIP R 1.0K J 1/10W		R261,262			RK73GB2A221J	CHIP R 220 J 1/10W	
R54-57			RK73GB2A470J	CHIP R 47 J 1/10W		R263,264			RK73GB2A152J	CHIP R 1.5K J 1/10W	
R101,102			RD14BB2C102J	RD 1.0K J 1/6W		R265,266			RK73GB2A103J	CHIP R 10K J 1/10W	
R103,104			RK73GB2A103J	CHIP R 10K J 1/10W		R267,268			RK73GB2A392J	CHIP R 3.9K J 1/10W	
R105,106			RK73GB2A152J	CHIP R 1.5K J 1/10W		R271,272			RK73GB2A221J	CHIP R 220 J 1/10W	
R107,108			RK73GB2A103J	CHIP R 10K J 1/10W		R273,274			RK73GB2A183J	CHIP R 18K J 1/10W	
R109,110			RK73GB2A123J	CHIP R 12K J 1/10W		R275,276			RK73GB2A103J	CHIP R 10K J 1/10W	
R111			RK73GB2A221J	CHIP R 220 J 1/10W		R280			RK73EB2E100J	CHIP R 10 J 1/4W	
R112-119			RK73GH2A103D	CHIP R 10K D 1/10W		R282			RK73GB2A103J	CHIP R 10K J 1/10W	
R120,121			RK73GB2A2R2J	CHIP R 2.2 J 1/10W		R284			RK73GB2A103J	CHIP R 10K J 1/10W	
R122			RK73GB2A221J	CHIP R 220 J 1/10W		R285			RK73GB2A223J	CHIP R 22K J 1/10W	
R132,133			RK73GB2A152J	CHIP R 1.5K J 1/10W		R286			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R134,135			RK73GB2A472J	CHIP R 4.7K J 1/10W		R287			RK73GB2A223J	CHIP R 22K J 1/10W	
R136,137			RK73GB2A103J	CHIP R 10K J 1/10W		R288			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R138,139			RK73GB2A472J	CHIP R 4.7K J 1/10W		R289,290			RK73GB2A101J	CHIP R 100 J 1/10W	
R140,141			RK73GB2A393J	CHIP R 39K J 1/10W		R406			RK73EB2E222J	CHIP R 2.2K J 1/4W	
R142,143			RK73GB2A303J	CHIP R 30K J 1/10W		R603			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R149,150			RK73GB2A153J	CHIP R 15K J 1/10W		R604			RK73GB2A103J	CHIP R 10K J 1/10W	
R151,152			RK73GB2A331J	CHIP R 330 J 1/10W		R605			RK73GB2A333J	CHIP R 33K J 1/10W	
R155			R92-0205-05	METAL-PLATE 0.1 K 2W		R606			RK73GB2A103J	CHIP R 10K J 1/10W	
R157,158			RK73GB2A331J	CHIP R 330 J 1/10W		R607			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R159,160			RK73GB2A302J	CHIP R 3.0K J 1/10W		R608			RK73EB2E103J	CHIP R 10K J 1/4W	
R161,162			RD14BB2C223J	RD 22K J 1/6W		R609			RK73GB2A333J	CHIP R 33K J 1/10W	
R163,164			RK73GB2A223J	CHIP R 22K J 1/10W		R610			RK73GB2A303J	CHIP R 30K J 1/10W	
R165,166			RK73GB2A473J	CHIP R 47K J 1/10W		R611,612			RK73GB2A362J	CHIP R 3.6K J 1/10W	
R167,168			RK73EB2E221J	CHIP R 220 J 1/4W		R613			RK73GB2A152J	CHIP R 1.5K J 1/10W	
R169			RD14BB2C103J	RD 10K J 1/6W		R614			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R170			RD14BB2C223J	RD 22K J 1/6W		R615			RK73GB2A392J	CHIP R 3.9K J 1/10W	
R171			RD14BB2C103J	RD 10K J 1/6W		R616			RD14BB2C392J	RD 3.9K J 1/6W	
R179			RD14BB2C100J	RD 10 J 1/6W		R617			RK73GB2A123J	CHIP R 12K J 1/10W	
R201,202			RD14BB2C103J	RD 10K J 1/6W		R618			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R203,204			RK73GB2A223J	CHIP R 22K J 1/10W		R619			RK73EB2E4R7J	CHIP R 4.7 J 1/4W	
R205-208			RK73GB2A152J	CHIP R 1.5K J 1/10W		R620,621			RK73GB2A473J	CHIP R 47K J 1/10W	
R209,210			RK73GB2A101J	CHIP R 100 J 1/10W		R622,623			RK73GB2A103J	CHIP R 10K J 1/10W	

(North America)

△ Indicates safety critical components.

PARTS LIST

AUDIO UNIT (X09-8570-10)

Ref. No.	A d	N e w	Parts No.	Description	Desti- nation
R624			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R625			RK73GB2A223J	CHIP R 22K J 1/10W	
R626			RK73GB2A681J	CHIP R 680 J 1/10W	
R627			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R628			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R629			RK73GB2A103J	CHIP R 10K J 1/10W	
R630			RK73GB2A473J	CHIP R 47K J 1/10W	
R631,632			RK73GB2A123J	CHIP R 12K J 1/10W	
R633			RK73GB2A622J	CHIP R 6.2K J 1/10W	
R634			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R635			RK73GB2A103J	CHIP R 10K J 1/10W	
R636			RK73GB2A104J	CHIP R 100K J 1/10W	
R637			RK73GB2A154J	CHIP R 150K J 1/10W	
R638			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R639			RK73GB2A103J	CHIP R 10K J 1/10W	
R643			RK73GB2A224J	CHIP R 220K J 1/10W	
R646			RK73GB2A272J	CHIP R 2.7K J 1/10W	
R647			RK73GB2A224J	CHIP R 220K J 1/10W	
R648			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R649			RK73GB2A182J	CHIP R 1.8K J 1/10W	
R650			RK73GB2A104J	CHIP R 100K J 1/10W	
R651			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R652,653			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R656			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R657			RK73GB2A103J	CHIP R 10K J 1/10W	
R658			RK73GB2A513J	CHIP R 51K J 1/10W	
R659			RK73GB2A562J	CHIP R 5.6K J 1/10W	
R660,661			RK73GB2A473J	CHIP R 47K J 1/10W	
R662,663			RK73GB2A103J	CHIP R 10K J 1/10W	
R664			RK73GB2A473J	CHIP R 47K J 1/10W	
R665,666			RK73GB2A682J	CHIP R 6.8K J 1/10W	
R667,668			RK73GB2A470J	CHIP R 47 J 1/10W	
R669			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R901			RD14BB2C102J	RD 1.0K J 1/6W	
VR1-4			R32-0340-05	SEMI FIXED VARIABLE RESISTOR	
W301-303			R92-1252-05	CHIP R 0 OHM J 1/16W	
W304-307			R92-2053-05	CHIP R 0 OHM J 1/8W	
W308			R92-1252-05	CHIP R 0 OHM J 1/16W	
W309,310			R92-2053-05	CHIP R 0 OHM J 1/8W	
W311-316			R92-1252-05	CHIP R 0 OHM J 1/16W	
W317			R92-2053-05	CHIP R 0 OHM J 1/8W	
W318-324			R92-1252-05	CHIP R 0 OHM J 1/16W	
W325,326			R92-2053-05	CHIP R 0 OHM J 1/8W	
W327-339			R92-1252-05	CHIP R 0 OHM J 1/16W	
W340,341			R92-2053-05	CHIP R 0 OHM J 1/8W	
W342-345			R92-1252-05	CHIP R 0 OHM J 1/16W	
W346			R92-2053-05	CHIP R 0 OHM J 1/8W	
W347-350			R92-1252-05	CHIP R 0 OHM J 1/16W	
W351			R92-2053-05	CHIP R 0 OHM J 1/8W	
W352			R92-1252-05	CHIP R 0 OHM J 1/16W	
D1			RM4ZLF-J4NF	DIODE	
D2			1SS133	DIODE	
D3			UDZS5.1B	ZENER DIODE	
D4			1SS133	DIODE	
D5			FCH10A20	DIODE	

Ref. No.	A d	N e w	Parts No.	Description	Desti- nation
D6			FRH10A20	DIODE	
D7-9			1SS133	DIODE	
D10			LM1MA142WK-G	DIODE	
D11			RM4ZLF-J4NF	DIODE	
D101			LM1MA142WK-G	DIODE	
D102			LM1MA142WA-G	DIODE	
D103			UMZ6.8N	ZENER DIODE	
D108			1SS133	DIODE	
D109			UDZS5.1B	ZENER DIODE	
D152			1SS133	DIODE	
D201			UDZS5.1B	ZENER DIODE	
D202-210			1SS133	DIODE	
D229			LM1MA142WA-G	DIODE	
D251			1SS133	DIODE	
D253			LM1MA142WK-G	DIODE	
D254			LM1MA142WA-G	DIODE	
D255			LM1MA142WK-G	DIODE	
D260,261			1SS133	DIODE	
D262			LM1MA142WA-G	DIODE	
D295			LM1MA142WA-G	DIODE	
D601-603			1SS133	DIODE	
D604			UDZS10B	ZENER DIODE	
D605			1SS133	DIODE	
D606			UDZS15B	ZENER DIODE	
D607			UDZS6.8B	ZENER DIODE	
D608			UDZS12B	ZENER DIODE	
D610-613			1SS133	DIODE	
D614			UDZS10B	ZENER DIODE	
D615-618			1SS133	DIODE	
IC5			TL494IDR	ANALOGUE IC	
IC6,7			BA4560RF	ANALOGUE IC	
IC8,9			NJM2172V-ZBTE2	ANALOGUE IC	
IC12,13			BA4560RF	ANALOGUE IC	
IC15,16			BA4560RF	ANALOGUE IC	
Q1			2SD2012-F	TRANSISTOR	
Q2			2SB1375-F	TRANSISTOR	
Q3-8			STP60NF06FP	FET	
Q9			2SC4097	TRANSISTOR	
Q10,11			2SA1577	TRANSISTOR	
Q12			2SC4097	TRANSISTOR	
Q13,14			DTA114EUA	DIGITAL TRANSISTOR	
Q15,16			2SC4081	TRANSISTOR	
Q17			2SA1576A	TRANSISTOR	
Q18			2SK246 (BL) -F	FET	
Q201-204			2SA992-A (F,E)	TRANSISTOR	
Q205-208			2SC3478AA (L,K)	TRANSISTOR	
Q209,210			2SA1376AA (L,K)	TRANSISTOR	
Q215,216			2SC1845-A (F,E)	TRANSISTOR	
Q217,218			2SA992-A (F,E)	TRANSISTOR	
Q219			2SA1576A	TRANSISTOR	
Q220			TRAIT9N	TRANSISTOR	
Q222			TRAIT9P	TRANSISTOR	
Q223,224			TRAIT9N	TRANSISTOR	
Q225,226			TRAIT9P	TRANSISTOR	
Q227			TRAIT9N	TRANSISTOR	

(North America)

△ Indicates safety critical components.

PARTS LIST

AUDIO UNIT (X09-8570-10)

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation	Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation
Q229			TRAIT9P	TRANSISTOR							
Q241,242			2SC4081	TRANSISTOR							
Q243,244			2SA1576A	TRANSISTOR							
Q281-284			2SC4081	TRANSISTOR							
Q601			2SC1845-A (F,E)	TRANSISTOR							
Q602			2SC4081	TRANSISTOR							
Q603			2SA1576A	TRANSISTOR							
Q604			2SB1241	TRANSISTOR							
Q605,606			2SC4081	TRANSISTOR							
Q609			2SD1863	TRANSISTOR							
Q610			2SC1845-A (F,E)	TRANSISTOR							
Q611-613			2SC945AA (Q,P)	TRANSISTOR							
Q614,615			2SA1576A	TRANSISTOR							
Q616			2SC4081	TRANSISTOR							
Q617			2SA1576A	TRANSISTOR							
Q618			2SC4081	TRANSISTOR							
Q621			DTA114EUA	DIGITAL TRANSISTOR							
Q622			DTC114EUA	DIGITAL TRANSISTOR							
TH601,602			NCP18XH103J0S	THERMISTOR							
TH605			NCP18XH103J0S	THERMISTOR							

(North America)

△ Indicates safety critical components.

KAC-X20

SPECIFICATIONS

CEA-2006

RMS Watts per channel @ 4 ohms, 1% THD+N 180W x 2
Signal to Noise Ratio (Reference: 1Watt into 4 ohms) 80dBA

Audio Section

Max Power Output 1000W
Rated Power Output (+B=12.0V)
Normal (4Ω) (20Hz~20kHz, 0.05% THD) 120W x 2
Normal (2Ω) (1kHz, 0.5% THD) 160W x 2
Bridged (4Ω) (1kHz, 0.5% THD) 320W x 1
Rated Power Output (+B=14.4V)
Normal (4Ω) (20 Hz~20kHz, 0.05% THD) 180W x 2
Normal (2Ω) (1kHz, 0.5% THD) 260W x 2
Bridged (4Ω) (1kHz, 0.5% THD) 520W x 1
Sensitivity (rated output) (MAX.) 0.2V
Sensitivity (rated output) (MIN.) 5.0V

Input Impedance 10kΩ
Frequency Response (+0, -3dB) 5Hz~70kHz
Signal to Noise Ratio 105dB
Low Pass Filter Frequency (-24dB/oct.) 40~200Hz (variable)
High Pass Filter Frequency (-12dB/oct.) 40~200Hz (variable)
Infrasonic Filter Frequency (-24dB/oct.) 15/25Hz
Bass Boost Circuit 0~+18dB (variable)
Bass Boost Frequency 40~100Hz (variable)

General

Operating Voltage 14.4V (11~16V allowable)
Current Consumption 47A
Installation Size (W x H x D) 380 x 65 x 286mm
..... 14-15/16 x 2-9/16 x 11-1/4inch
Weight 4.6kg (10.1lbs)

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

INSTALLATION

