

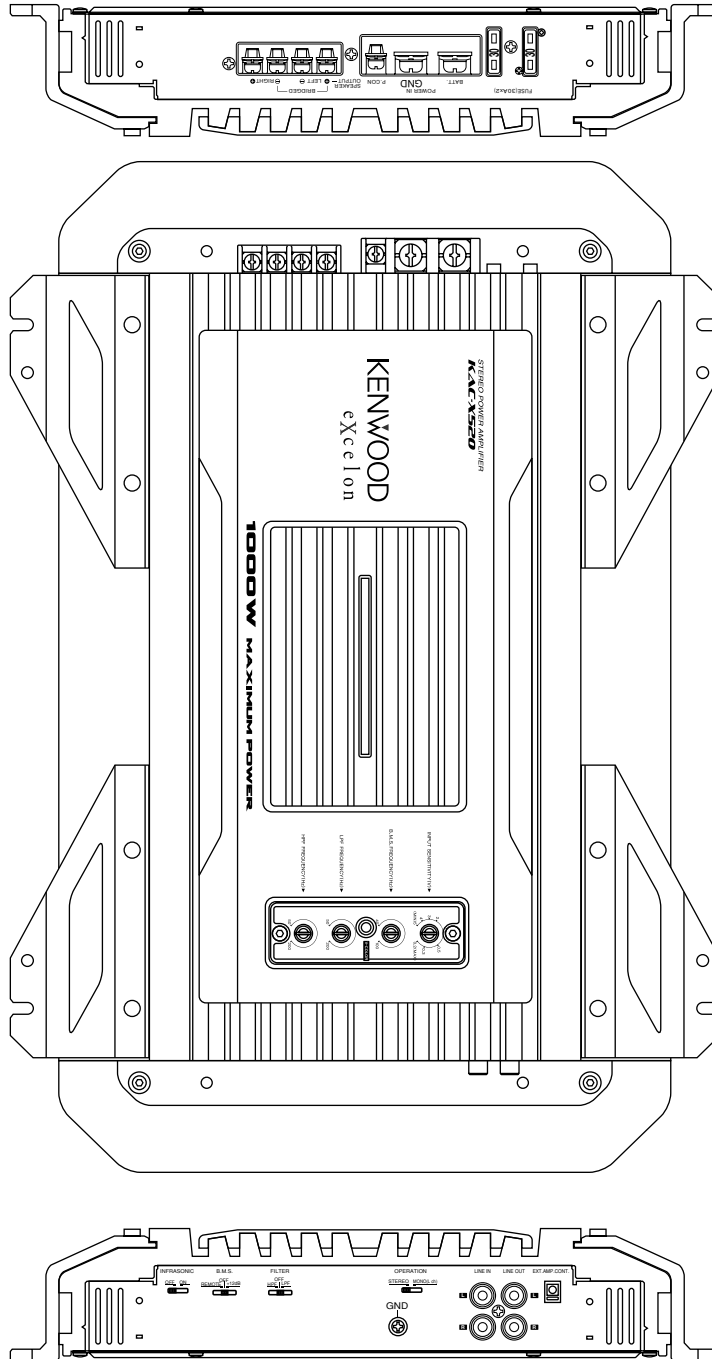
POWER AMPLIFIER

# KAC-PS520/X520

## SERVICE MANUAL

# KENWOOD

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B51-7934-00 (K) 3547



# KAC-PS520/X520

## MICROCOMPUTER'S TERMINAL DESCRIPTION

### (X09-) IC11 : u-COM

PORT No.	PORT NAME	I/O	FUNCTION	OPERATING CONDITION
1	+5V SW	O	Controls small-amount current.	"L" : SW 5V on.
2	-	-	-	-
3	FAN	O	Controls fan rotation.	"H" : Fan on.
4	-	-	-	-
5	D VOLTAGE	I	Detects class-D over-voltage.	"L" : Over-voltage detection.
6	V DOWN	I	Detects momentary power down.	"H" : Momentary power-down detection.
7	D CURRENT	I	Detects class-D over-current.	"L" (Class-D power on) : Over-current detection.
8	AB VOLTAGE	I	Detects class-AB over-voltage.	"L" : Over-voltage detection.
9	AB CURRENT	I	Detects class-AB over-current.	"H" : Over-current detection.
10	BLUE	O	Controls BLUE of variable illumination.	"H" : Illumination on.
11	GREEN	O	Controls GREEN of variable illumination.	"H" : Illumination on.
12	RED	O	Controls RED of variable illumination.	"H" : Illumination on.
13	TEST	-	-	-
14	RESET	-	Resets.	"L" : Reset.
15	XIN	-	-	-
16	XOUT	-	-	-
17	VSS	-	-	-
18	VAREF	-	A/D reference.	-
19	ADIN 1	I	Detects temperature.	"H" : Unusual temperature detection.
20	ADIN 2	I	Detects temperature.	"H" : Unusual temperature detection.
21	ADIN 3	I	Detects temperature.	"H" : Unusual temperature detection.
22	ADIN 4	I	Detects temperature.	"H" : Unusual temperature detection.
23	-	-	-	-
24	BASS 12dB	I	Stabilizes BMS +12dB.	"H" : BMS +12dB stabilization.
25	BASS REMO	I	Being remote-controlled from BMS head unit.	"H" : remote control available.
26	BASS OFF	I	Releases boost.	"H" : Boost off.
27	D POWER	O	Controls class-D amplifier.	"H" : Class-D amplifier on.
28,29	-	-	-	-
30	POWER	O	Controls power amplifier.	"H" : SW 14.4V on.
31	COM HU	I	Measures the head unit pulse.	-
32	OFFSET CON	O	Controls bass boost frequency offset.	"H" : Offset on.
33	BASS CON A	O	Controls bass boost frequency offset.	-
34	BASS CON B	O	Controls bass boost frequency offset.	-
35,36	-	-	-	-
37	STAND-BY	I	Cancels stop mode by P.CON on.	"L" : P.CON on or BACK-UP over-voltage detection.
38,39	-	-	-	-
40	VDD	-	VDD.	-
41	TACT SW	I	Switches color.	"H" : SW on.
42	MUTE 2	O	Controls driver stages.	"L" : Mute on.
43	MUTE 1	O	Controls amplifier input mute.	"L" : Mute on.
44	-	-	-	-

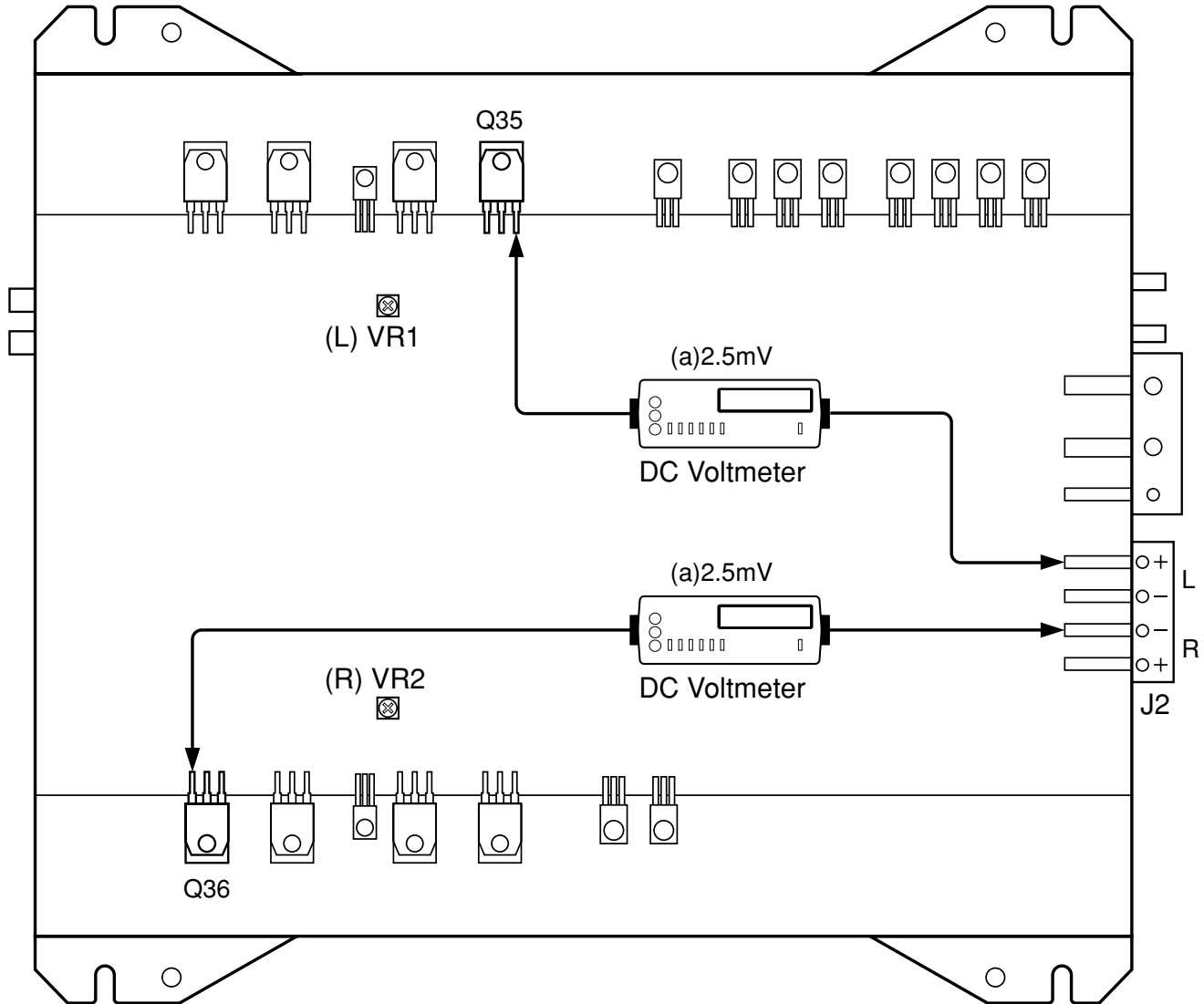
# KAC-PS520/X520

## ADJUSTMENT (KAC-PS520/X520)

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	RECEIVER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
Connect a cassette receiver or other receiver.							
1	IDEL CURRENT	-	Connect a DC voltmeter between emitter terminals of Q35/Q36 (L/R) and J2 (SP.OUT, L+/R-).	VOLUME : 0	VR1 (L ch) VR2 (R ch) (X09-)	2.5mV	(a)

# KAC-PS520/X520

## ADJUSTMENT



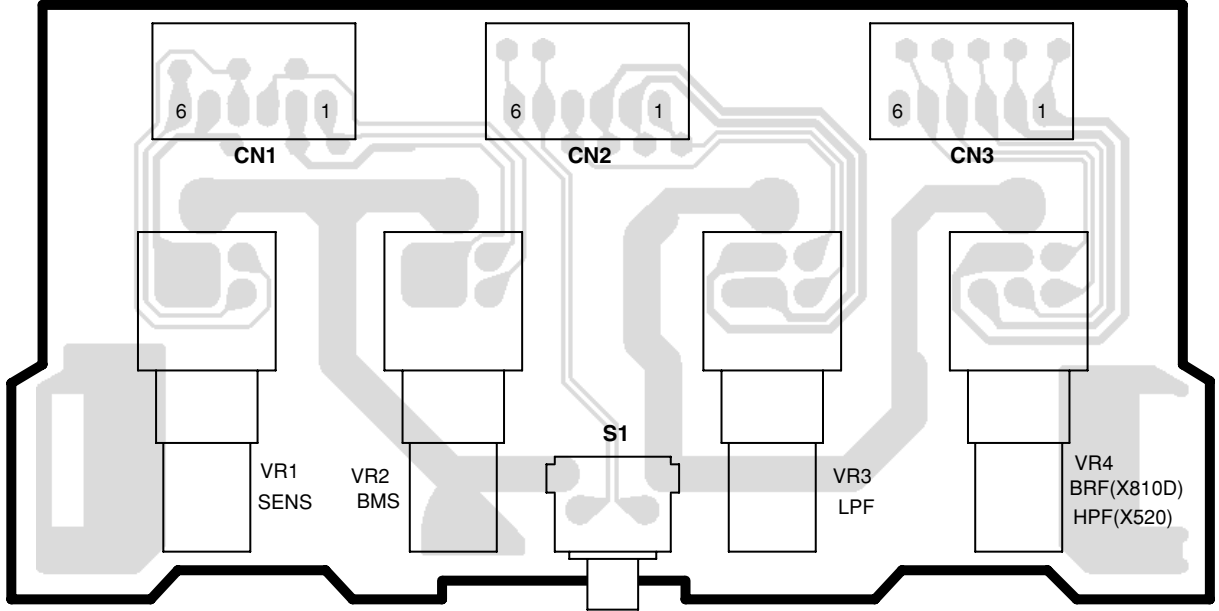
A B C D E

# PC BOARD

1

## Component side view

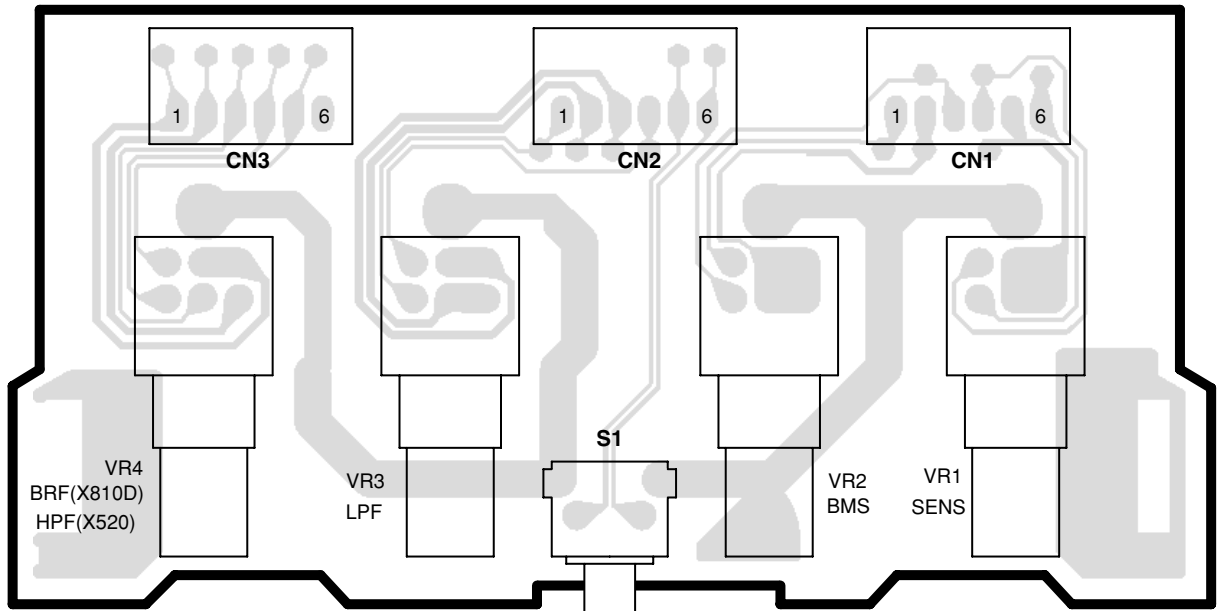
X08-4090-10 (J74-1362-11)



4

## Foil side view

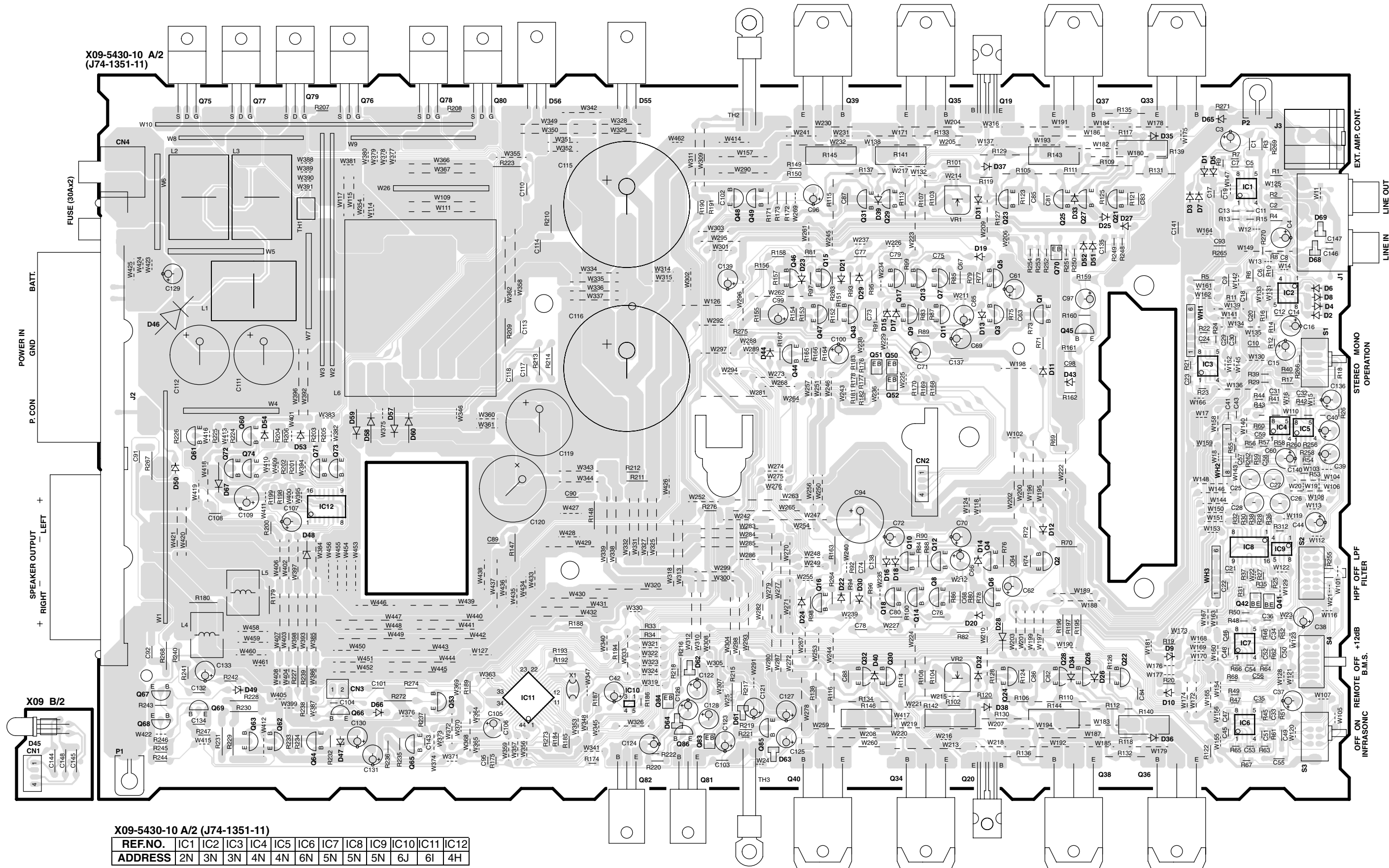
X08-4090-10 (J74-1362-11)



# PC BOARD(Foil side view)

X09-5430-10 A/2 (J74-1351-11)

REF.NO.	Q1	Q2	Q3	Q4	Q5	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	Q30	Q31	Q32	Q33	Q34	Q35	Q36	Q37	Q38	Q39	Q40	Q41
ADDRESS	3M	5M	3L	5L	3L	3L	5L	3L	5L	3L	5L	3L	5L	3K	5K	3L	5L	2L	6L	2M	5M	2L	6L	2M	5M	2M	5M	2L	5L	2K	5K	2M	6L	2L	6M	2M	6M	2K	6K	5N
REF.NO.	Q42	Q43	Q44	Q45	Q46	Q47	Q48	Q49	Q50	Q51	Q52	Q53	Q60	Q61	Q62	Q63	Q64	Q65	Q66	Q67	Q68	Q69	Q70	Q71	Q72	Q73	Q74	Q75	Q76	Q77	Q78	Q79	Q80	Q81	Q82	Q83	Q84	Q85	Q86	
ADDRESS	5N	3K	3K	3M	3K	3K	2K	2K	3L	3L	4L	6I	4G	4G	6H	6G	6H	6H	6H	6H	6G	6G	6G	3M	4H	4G	4H	4G	2G	2H	2G	2I	2H	2I	6J	6J	6J	6J	6K	6J

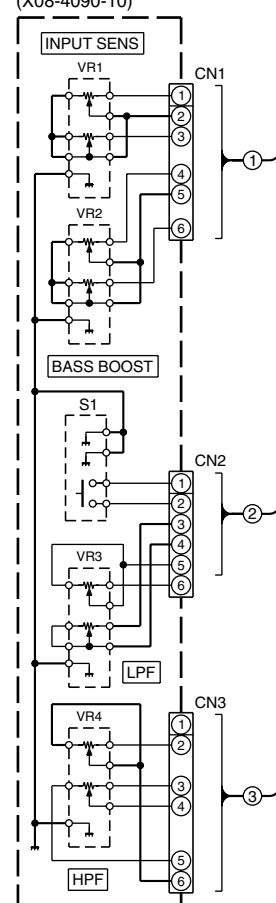


X09-5430-10 A/2 (J74-1351-11)

REF.NO.	IC1	IC2	IC3	IC4	IC5	IC6	IC7	IC8	IC9	IC10	IC11	IC12
ADDRESS	2N	3N	3N	4N	4N	6N	5N	5N	5N	6J	6I	4H

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

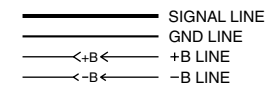
PREAMPLIFIER UNIT  
(X08-4090-10)



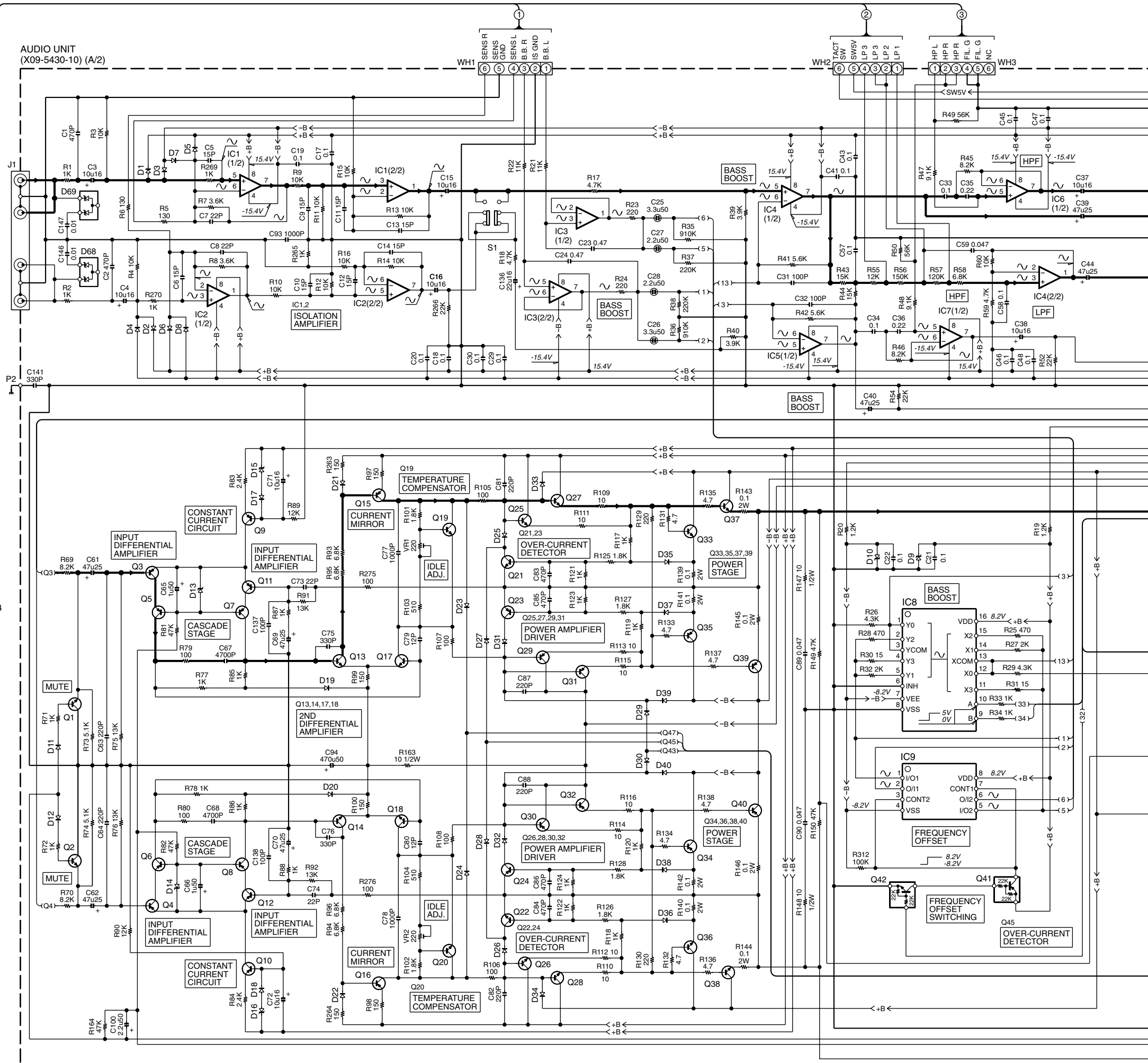
- IC1,2,4,5 : NJM5532MD
- IC3,6,7 : NJM4565M
- IC8 : TC4052BF(N)
- IC9 : TC4W66F
- IC10 : PST9130NR
- IC11 : TMP87C847U3J.V4
- IC12 : UPC494GS

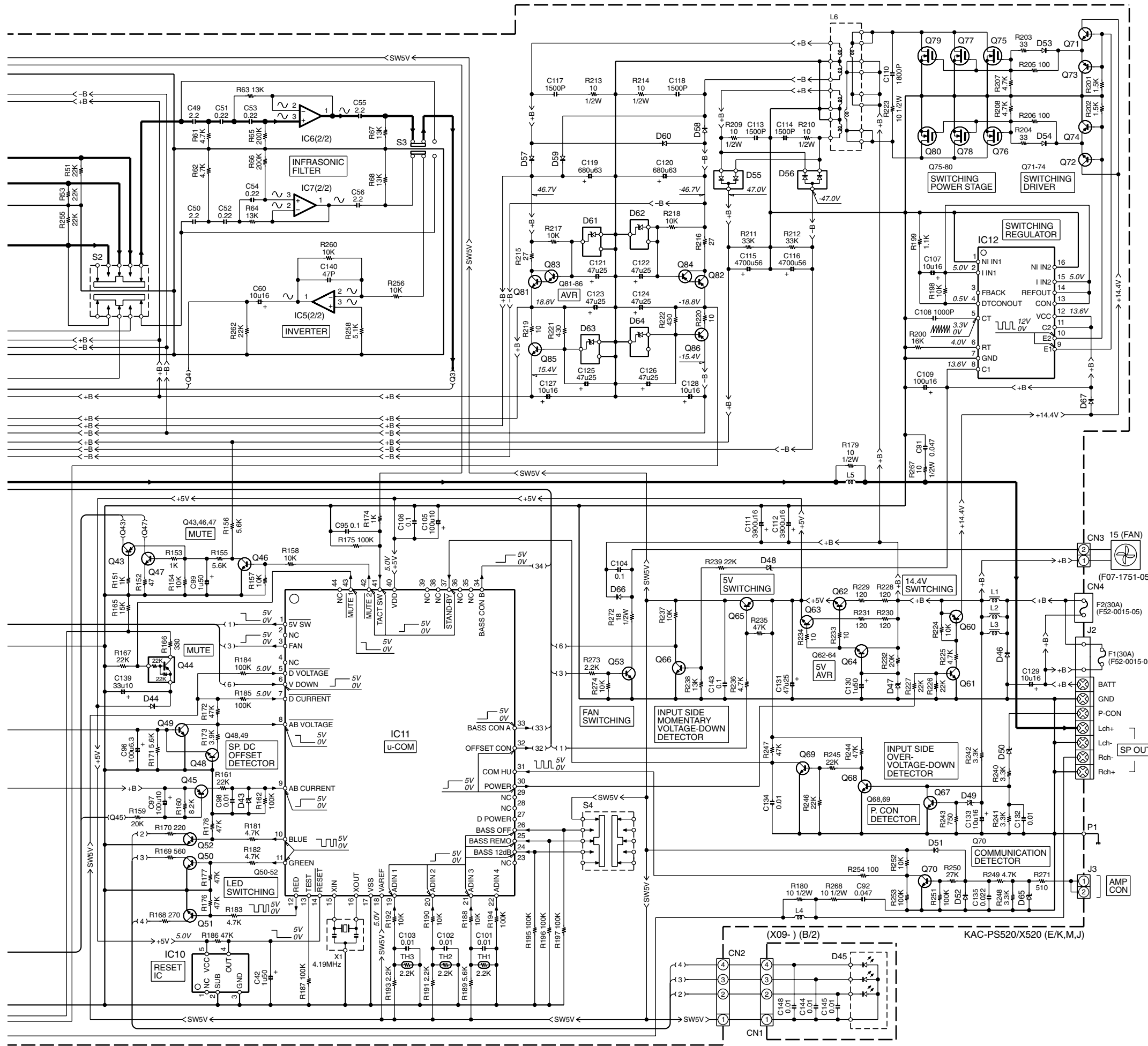
- Q1,2,21,22 : 2SC1845(F,E)
- Q3-8,11,12,23,24,45 : 2SA992(F,E)
- Q9,10,43,65,73,74 : 2SA733(A)(Q,P)
- Q13,14,17,18 : 2SC2631(R,S)
- Q15,16 : 2SA1123(Q,R)
- Q19,20 : 2SC4137(V,W)
- Q25-28 : 2SC2235
- Q29-32 : 2SA965
- Q33,36-38 : 2SC3856LB\*5
- Q34,35,39,40 : 2SA1492LB\*5
- Q41 : DTA124EK
- Q42 : DTC124EK
- Q44 : DTA124ES
- Q46-49,61,64,66-69,71,72 : 2SC945(A)(Q,P)
- Q50-52,70,83 : 2SC2412K
- Q53,62,63,85 : 2SC3940A(R,S)
- Q60,86 : 2SA1534A(R,S)
- Q75-80 : IRF1010N
- Q81 : 2SD2375
- Q82 : 2SB1548(P)
- Q84 : 2SA1037K

- D1-8,11,12,17-40,44,51-54,66 : 1SS133
- D9,10 : RD8.2J(S)(B)
- D13-16,43 : RD5.1J(S)(B)
- D45 : B30-1582-05
- D46 : 6A20-M
- D47,65 : RD6.2J(S)(B)
- D48 : RD9.1J(S)(B)
- D49 : RD15J(S)(B)
- D50 : RD7.5J(S)(B)
- D55 : FML22S \*A
- D56 : FML22R \*A
- D57-60,67 : FR103S
- D61,62 : HZM20N(B)
- D63,64 : HZM16N(B2)
- D68,69 : MA3068WA

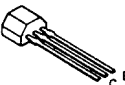

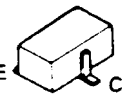
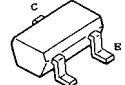

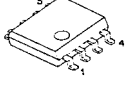
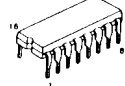
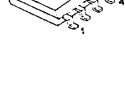
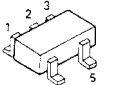
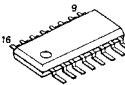
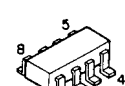


AUDIO UNIT  
(X09-5430-10) (A/2)





**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). 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.

- |   |           |   |
|---|-----------|---|
| 2SA1123   | 2SC2631   | DTA124ES  |
| 2SA1534A  | 2SC3940A  |    |
| 2SA733(A)   | 2SC945(A) |   |
| 2SA965  |           |   |
| 2SA992  |           |   |
| 2SC1845   |           |   |
| 2SC2235   |           |   |
|   |           |   |
| DTA124EK  | 2SC4137   |    |
| DTC124EK  |           |   |
| 2SC2412K  |           |   |
|    |           |   |
|   |           |   |
| 2SB1548   | 2SA1037K  |  |
|  |           |   |
|   |           |   |
| TC4052BF  | NJM4565M  |  |
|  | NJM5532MD |  |
|   |           |   |
| UPC494GS  | PST9130NR |  |
|  |           |   |
|   |           |   |
|   | TC4W66F   |  |

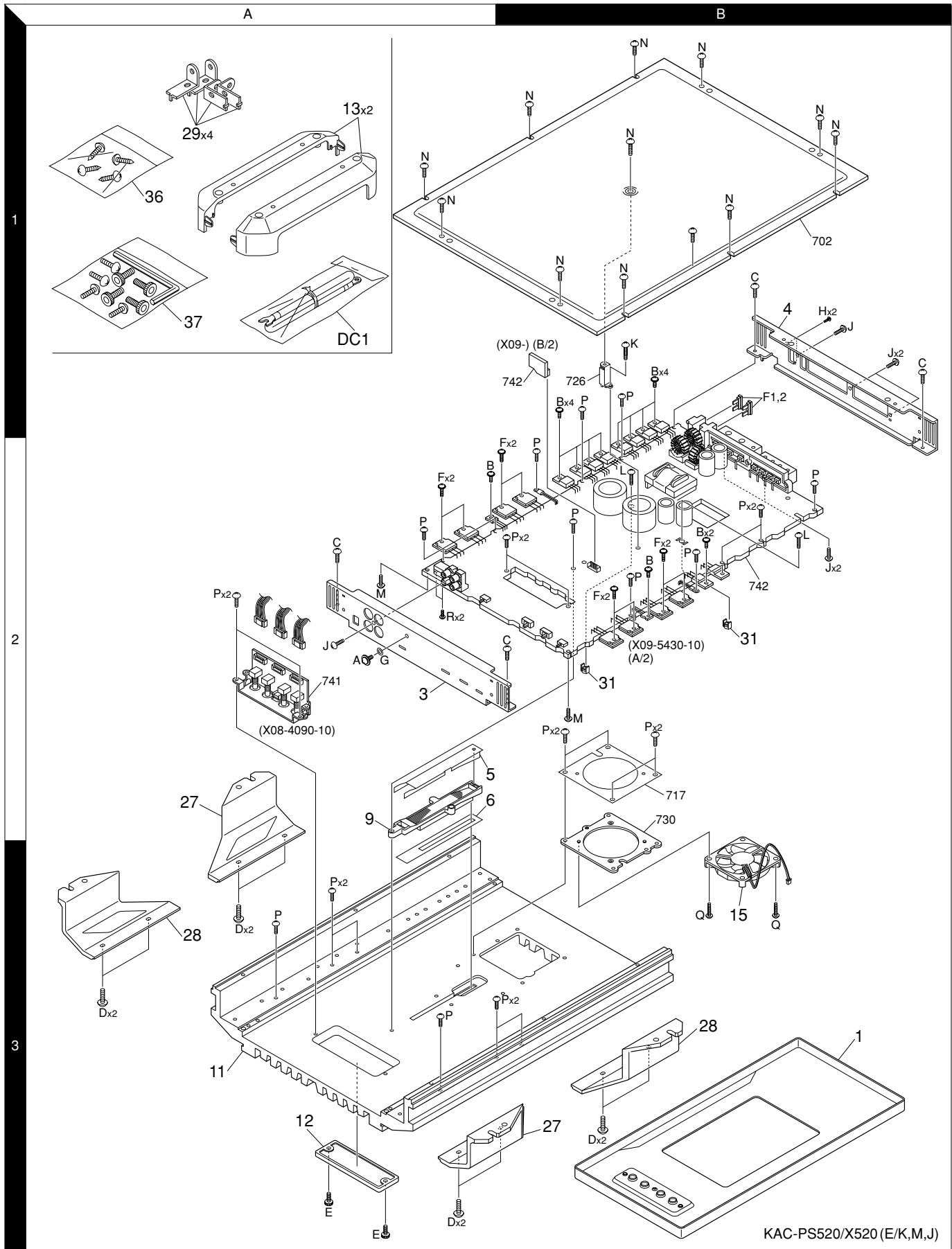
# KAC-PS520/X520

KENWOOD



# KAC-PS520/X520

## EXPLODED VIEW



KAC-PS520/X520 (E/K,M,J)

Parts with exploded numbers larger than 700 are not supplied.

# KAC-PS520/X520

## PARTS LIST

\*New Parts

Parts without Part No. are not supplied.

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation
<b>KAC-PS520/X520</b>					
1	3B	*	A21-4192-12	DRESSING PANEL	KM1J1
1	3B	*	A21-4193-12	DRESSING PANEL	E1
3	2A	*	A64-2698-02	FRONT PANEL	
4	1B	*	A84-0311-02	REAR PANEL	
5	2B	*	B11-1388-04	REFLECTION SHEET	
6	3A	*	B11-1389-04	REFLECTION SHEET	
9	2A	*	B19-2143-03	LIGHTING BOARD	
-			B46-0100-50	WARRANTY CARD	KE1M1
-			B46-0648-03	USER CARD	K
-		*	B64-2277-00	INST. MANUAL (ENG,FRE,SPA)	KE1
-		*	B64-2278-00	INST. MANUAL (GER,DUT,ITA,POR)	E1
-		*	B64-2279-00	INST. MANUAL (ENG,T-CHI)	M1
11	3A	*	F01-1685-01	HEAT SINK	
12	3A	*	F07-1109-04	COVER	
13	1A	*	F07-1110-01	COVER	
15	2B	*	F09-1751-15	FAN	
△ F1,2	1B	*	F52-0015-05	FUSE (BLADE TYPE) (30A)	
-		*	H10-4805-02	POLYSTYRENE FOAMED FIXTURE	KE1M1
-		*	H11-1529-04	POLYSTYRENE FOAMED BOARD	KE1M1
-		*	H13-2022-04	CARTON BOARD	KE1M1
-			H21-1117-04	PROTECTION SHEET	KE1M1
-		*	H21-1141-04	PROTECTION SHEET	KE1M1
-			H25-0336-04	PROTECTION BAG (170X250X0.03)	KE1M1
-			H25-0336-04	PROTECTION BAG (170X250X0.03)	KE1M1
-		*	H25-1179-04	PROTECTION BAG	KE1M1
-		*	H25-1179-04	PROTECTION BAG	KE1M1
-		*	H54-2522-04	ITEM CARTON CASE (KAC-X520)	KM1
-		*	H54-2522-04	ITEM CARTON CASE (KAC-X520)	KM1
-		*	H54-2523-04	ITEM CARTON CASE (KAC-PS520)	E1
-		*	H54-2523-04	ITEM CARTON CASE (KAC-PS520)	E1
27	2A	*	J21-9853-03	MOUNTING HARDWARE	
28	2A	*	J21-9854-03	MOUNTING HARDWARE	
29	1A	*	J21-9864-04	MOUNTING HARDWARE	
31	2B	*	J30-1066-04	SPACER	
36	1A		N99-1577-15	SCREW SET	
A	2A		N09-4026-05	TAPPING SCREW (4X8,TP,S)	
B	2B		N09-4382-05	TAPTITE SCREW (2.6X10)	
C	1B		N09-4488-05	TAPTITE SCREW (3X6)	
D	3A	*	N09-6032-05	DRESSED SCREW (TORX,4X12)	
E	3A	*	N09-6033-05	DRESSED SCREW (M3X8)	
F	2A	*	N09-6039-05	TAPTITE SCREW (2.6X13)	
G	2A		N15-1040-46	FLAT WASHER	
H	1B		N80-2008-45	PAN HEAD TAPTITE SCREW	

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation
J	1B		N80-3010-45	PAN HEAD TAPTITE SCREW	
K	1B		N83-3013-45	PAN HEAD TAPTITE SCREW	
L	2A		N87-3012-46	BRAZIER HEAD TAPTITE SCREW	
M	2B		N89-2606-46	BINDING HEAD TAPTITE SCREW	
N	1B		N89-3006-45	BINDING HEAD TAPTITE SCREW	
P	2B		N89-3008-46	BINDING HEAD TAPTITE SCREW	
Q	3B		N89-3015-46	BINDING HEAD TAPTITE SCREW	
R	2A		N80-2608-45	PAN HEAD TAPTITE SCREW	
37	1A	*	W01-1586-05	ACCESSORY	
<b>PREAMPLIFIER UNIT (X08-4090-10)</b>					
CN1 -3		*	E41-0294-05	PIN ASSY	
VR1		*	R31-0235-05	VARIABLE RESISTOR	
VR2 -4		*	R31-0236-05	VARIABLE RESISTOR	
S1			S68-0806-05	PUSH SWITCH	
<b>AUDIO UNIT (X09-5430-10)</b>					
D45			B30-1582-05	LED	
C1 ,2			CK45FB1H471K	CERAMIC 470PF	K
C3 ,4			CE04DW1C100M	ELECTRO 10UF	16WV
C5 ,6			CC73GCH1H150J	CHIP C 15PF	J
C7 ,8			CC73GCH1H220J	CHIP C 22PF	J
C9 ,10			CC45FSL1H150J	CERAMIC 15PF	J
C11 -14			CC73GCH1H150J	CHIP C 15PF	J
C15 ,16			CE04DW1C100M	ELECTRO 10UF	16WV
C17 -22			CK73FB1H104K	CHIP C 0.10UF	K
C23 ,24			CK73FB1C474K	CHIP C 0.47UF	K
C25 ,26			CE04HW1H3R3M	NP-ELEC 3.3UF	50WV
C27 ,28			CE04HW1H2R2M	NP-ELEC 2.2UF	50WV
C29 ,30			CK73FB1H104K	CHIP C 0.10UF	K
C31 ,32			CC73GCH1H101J	CHIP C 100PF	J
C33 ,34			CK73FB1H104K	CHIP C 0.10UF	K
C35 ,36			CK73FB1C224K	CHIP C 0.22UF	K
C37 ,38			CE04DW1C100M	ELECTRO 10UF	16WV
C39 ,40			CE04DW1E470M	ELECTRO 47UF	25WV
C41			CK73FB1H104K	CHIP C 0.10UF	K
C42			CE04DW1H010M	ELECTRO 1.0UF	50WV
C43			CK73FB1H104K	CHIP C 0.10UF	K
C44			CE04DW1E470M	ELECTRO 47UF	25WV
C45 -48			CK73FB1H104K	CHIP C 0.10UF	K
C49 ,50			CK73EB1C225K	CHIP C 2.2UF	K
C51 -54			CK73FB1C224K	CHIP C 0.22UF	K
C55 ,56			CK73EB1C225K	CHIP C 2.2UF	K
C57 ,58			CK73FB1H104K	CHIP C 0.10UF	K
C59			CK73GB1E473K	CHIP C 0.047UF	K
C60			CE04DW1C100M	ELECTRO 10UF	16WV
C61 ,62			CE04DW1E470M	ELECTRO 47UF	25WV
C63 ,64			CC45FSL1H221J	CERAMIC 220PF	J
C65 ,66			CE04DW1H010M	ELECTRO 1.0UF	50WV
C67 ,68			CK45FB1H472K	CERAMIC 4700PF	K
C69 ,70			CE04DW1E470M	ELECTRO 47UF	25WV
C71 ,72			CE04DW1C100M	ELECTRO 10UF	16WV
C73 ,74			CC45FSL1H220J	CERAMIC 22PF	J

E1 : KAC-PS520

KM1J1 : KAC-X520

E : Europe

K : North America

M : Other Areas

J : Japan

△ indicates safety critical components.

# KAC-PS520/X520

## PARTS LIST

\*New Parts

Parts without Part No. are not supplied.

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
C75 ,76			CC45FSL1H331J	CERAMIC 330PF J		W10		*	E29-1902-05	LEAD PLATE	
C77 ,78			CK45FB1H102K	CERAMIC 1000PF K		W26		*	E29-1862-05	LEAD PLATE	
C79 ,80			CC45FSL1H120J	CERAMIC 12PF J		W101-227			E31-0001-00	JUMPER WIRE	
C81 ,82			CC45FSL1H221J	CERAMIC 220PF J		W229-232			E31-0001-00	JUMPER WIRE	
C83 -86			CK45FB1H471K	CERAMIC 470PF K		W234-257			E31-0001-00	JUMPER WIRE	
C87 ,88			CC45FSL1H221J	CERAMIC 220PF J		W259-265			E31-0001-00	JUMPER WIRE	
C89 -92			CF92FV1H473J	MF-C 0.047UF J		W267-305			E31-0001-00	JUMPER WIRE	
C93			CK45FB1H102K	CERAMIC 1000PF K		W307-316			E31-0001-00	JUMPER WIRE	
C94			CE04DW1H471M	ELECTRO 470UF 50WV		W318-456			E31-0001-00	JUMPER WIRE	
C95			CK73FB1H104K	CHIP C 0.10UF K		W458-462			E31-0001-00	JUMPER WIRE	
C96			CE04DW0J101M	ELECTRO 100UF 6.3WV		WH1 -3		*	E39-0445-15	WIRING HARNESS	
C97			CE04DW1A101M	ELECTRO 100UF 10WV							
C98			CF92FV1H103J	MF-C 0.010UF J		△ CN4			J13-0602-05	FUSE HOLDER	
C99			CE04DW1H010M	ELECTRO 1.0UF 50WV							
C100			CE04DW1H2R2M	ELECTRO 2.2UF 50WV							
C101-103			CF92FV1H103J	MF-C 0.010UF J		L1 -3			L33-1809-05	CHOKO COIL	
C104			CK73FB1H104K	CHIP C 0.10UF K		L4 ,5		*	L39-1054-05	PHASE COMPENSATION COIL	
C105			CE04DW1A101M	ELECTRO 100UF 10WV		L6		*	L19-0712-15	TRANSFORMER FOR CONVERTER	
C106			CK73FB1H104K	CHIP C 0.10UF K		X1		*	L78-0864-05	RESONATOR (4.19M)	
C107			CE04DW1C100M	ELECTRO 10UF 16WV		R1 ,2			RD14BB2C102J	RD 1.0K J 1/6W	
C108			CK45FB1H102K	CERAMIC 1000PF K		R3 ,4			RD14BB2C103J	RD 10K J 1/6W	
C109			CE04DW1C101M	ELECTRO 100UF 16WV		R5 ,6			RD14BB2C131J	RD 130 J 1/6W	
C110			CF92FV1H182J	MF-C 1800PF J		R7 ,8			RK73FB2B362J	CHIP R 3.6K J 1/8W	
C111,112			C90-2921-05	ELECTRO 3900UF 16WV		R9 -16			R92-3040-05	CHIP R 10K D 1/10W	
C113,114			CK45FB1H152K	CERAMIC 1500PF K		R17 ,18			RD14BB2C472J	RD 4.7K J 1/6W	
C115,116			C90-5445-05	ALUMINIUM ELECTROLYTIC C.		R19 ,20			RD14BB2C122J	RD 1.2K J 1/6W	
C117,118			CK45FB1H152K	CERAMIC 1500PF K		R21 ,22		*	RK73FB2B113J	CHIP R 11K J 1/8W	
C119,120			C90-2916-05	ELECTRO 680UF 63WV		R23 ,24			RK73FB2B221J	CHIP R 220 J 1/8W	
C121-126			CE04DW1E470M	ELECTRO 47UF 25WV		R25			RK73FB2B471J	CHIP R 470 J 1/8W	
C127-129			CE04DW1C100M	ELECTRO 10UF 16WV		R26		*	RK73FB2B432J	CHIP R 4.3K J 1/8W	
C130			CE04DW1H010M	ELECTRO 1.0UF 50WV		R27		*	RK73FB2B202J	CHIP R 2.0K J 1/8W	
C131			CE04DW1E470M	ELECTRO 47UF 25WV		R28			RK73FB2B471J	CHIP R 470 J 1/8W	
C132			CF92FV1H103J	MF-C 0.010UF J		R29		*	RK73FB2B432J	CHIP R 4.3K J 1/8W	
C133			CE04DW1C100M	ELECTRO 10UF 16WV		R30 ,31			RK73FB2B150J	CHIP R 15 J 1/8W	
C134			CF92FV1H103J	MF-C 0.010UF J		R32		*	RK73FB2B202J	CHIP R 2.0K J 1/8W	
C135			CF92FV1H223J	MF-C 0.022UF J		R33 ,34			RD14BB2C102J	RD 1.0K J 1/6W	
C136			CE04DW1C220M	ELECTRO 22UF 16WV		R35 ,36		*	RK73FB2B914J	CHIP R 910K J 1/8W	
C137,138			CC45FSL1H101J	CERAMIC 100PF J		R37 ,38			RK73FB2B224J	CHIP R 220K J 1/8W	
C139			CE04DW1A330M	ELECTRO 33UF 10WV		R39			RK73FB2B392J	CHIP R 3.9K J 1/8W	
C140			CC73GCH1H470J	CHIP C 47PF J		R40			RD14BB2C392J	RD 3.9K J 1/6W	
C141			CC45FSL1H331J	CERAMIC 330PF J		R41 ,42		*	RK73FB2B562J	CHIP R 5.6K J 1/8W	
C143			CK73FB1H104K	CHIP C 0.10UF K		R43 ,44		*	RK73FB2B153J	CHIP R 15K J 1/8W	
C144,145			C91-0769-05	CERAMIC 0.010UF K		R45 ,46		*	RK73FB2B822J	CHIP R 8.2K J 1/8W	
C146,147			CK73GB1H103K	CHIP C 0.010UF K		R47 ,48		*	RK73FB2B912J	CHIP R 9.1K J 1/8W	
C148			C91-0769-05	CERAMIC 0.010UF K		R49 ,50		*	RK73FB2B563J	CHIP R 56K J 1/8W	
CN1			E40-9092-05	SOCKET FOR PIN ASSY		R51 -54			RK73FB2B223J	CHIP R 22K J 1/8W	
CN2			E40-9073-05	PIN ASSY		R55			RK73FB2B123J	CHIP R 12K J 1/8W	
CN3			E40-3246-05	PIN ASSY		R56		*	RK73FB2B154J	CHIP R 150K J 1/8W	
J1		*	E63-0880-05	PIN JACK		R57		*	RK73FB2B124J	CHIP R 120K J 1/8W	
J2			E70-0832-05	SCREW TERMINAL BOARD		R58		*	RK73FB2B682J	CHIP R 6.8K J 1/8W	
J3		*	E70-0836-05	LOCK TERMINAL BOARD		R59			RK73FB2B472J	CHIP R 4.7K J 1/8W	
P1 ,2			E23-0149-05	TERMINAL		R60			RK73FB2B103J	CHIP R 10K J 1/8W	
W1 -3		*	E29-1861-05	LEAD PLATE		R61 ,62			RK73FB2B472J	CHIP R 4.7K J 1/8W	
W4 -7		*	E29-1862-05	LEAD PLATE		R63 ,64		*	RK73FB2B133J	CHIP R 13K J 1/8W	
W8 ,9		*	E29-1903-05	LEAD PLATE		R65 ,66		*	RK73FB2B204J	CHIP R 200K J 1/8W	
						R67 ,68		*	RK73FB2B133J	CHIP R 13K J 1/8W	

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# KAC-PS520/X520

## PARTS LIST

\*New Parts

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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
R69,70			RD14BB2C822J	RD 8.2K J 1/6W		R189			RD14BB2C562J	RD 5.6K J 1/6W	
R71,72			RD14BB2C102J	RD 1.0K J 1/6W		R190			RD14BB2C103J	RD 10K J 1/6W	
R73,74			RD14BB2C512J	RD 5.1K J 1/6W		R191			RD14BB2C222J	RD 2.2K J 1/6W	
R75,76			RD14BB2C133J	RD 13K J 1/6W		R192			RD14BB2C103J	RD 10K J 1/6W	
R77,78			RD14BB2C102J	RD 1.0K J 1/6W		R193			RD14BB2C222J	RD 2.2K J 1/6W	
R79,80			RD14BB2C101J	RD 100 J 1/6W		R194-197			RD14BB2C104J	RD 100K J 1/6W	
R81,82			RD14BB2C473J	RD 47K J 1/6W		R198			RD14BB2C103J	RD 10K J 1/6W	
R83,84			RD14BB2C242J	RD 2.4K J 1/6W		R199			RD14BB2C112J	RD 1.1K J 1/6W	
R85-88			RD14BB2C102J	RD 1.0K J 1/6W		R200			RD14BB2C163J	RD 16K J 1/6W	
R89,90			RD14BB2C123J	RD 12K J 1/6W		R201,202			RD14BB2C152J	RD 1.5K J 1/6W	
R91,92			RD14BB2C133J	RD 13K J 1/6W		R203,204			RD14BB2C330J	RD 33 J 1/6W	
R93-96			RD14BB2C682J	RD 6.8K J 1/6W		R205,206			RD14BB2C101J	RD 100 J 1/6W	
R97-100			RD14BB2C151J	RD 150 J 1/6W		R207,208			RD14BB2C472J	RD 4.7K J 1/6W	
R101,102			RD14BB2C182J	RD 1.8K J 1/6W		R209,210			RD14DB2H100J	SMALL-RD 10 J 1/2W	
R103,104			RD14BB2C511J	RD 510 J 1/6W		R211,212			RD14BB2C333J	RD 33K J 1/6W	
R105-108			RD14NB2E101J	RD 100 J 1/4W		R213,214			RD14DB2H100J	SMALL-RD 10 J 1/2W	
R109-116			RD14NB2E100J	RD 10 J 1/4W		R215,216			RD14BB2E270J	RD 27 J 1/4W	
R117-124			RD14BB2C102J	RD 1.0K J 1/6W		R217			RD14BB2C103J	RD 10K J 1/6W	
R125-128			RD14BB2C182J	RD 1.8K J 1/6W		R218			RK73FB2B103J	CHIP R 10K J 1/8W	
R129,130			RD14NB2E221J	RD 220 J 1/4W		R219,220			RD14BB2C100J	RD 10 J 1/6W	
R131-138			RD14NB2E4R7J	RD 4.7 J 1/4W		R221,222			RK73FB2B431J	CHIP R 430 J 1/8W	
R139-146			R92-0205-05	METAL-PLATE 0.1 K 2W		R223			RD14DB2H100J	SMALL-RD 10 J 1/2W	
R147,148			RD14DB2H100J	SMALL-RD 10 J 1/2W		R224			RD14BB2C103J	RD 10K J 1/6W	
R149,150			RD14BB2C473J	RD 47K J 1/6W		R225			RD14BB2C472J	RD 4.7K J 1/6W	
R151			RD14BB2C102J	RD 1.0K J 1/6W		R226,227			RD14BB2C223J	RD 22K J 1/6W	
R152			RD14BB2C470J	RD 47 J 1/6W		R228-231			RD14BB2E121J	RD 120 J 1/4W	
R153			RD14BB2C102J	RD 1.0K J 1/6W		R232			RD14BB2C203J	RD 20K J 1/6W	
R154			RD14BB2C103J	RD 10K J 1/6W		R233,234			RD14BB2C100J	RD 10 J 1/6W	
R155			RD14BB2C562J	RD 5.6K J 1/6W		R235			RD14BB2C473J	RD 47K J 1/6W	
R156			RD14BB2C153J	RD 15K J 1/6W		R236			RD14BB2C472J	RD 4.7K J 1/6W	
R157,158			RD14BB2C103J	RD 10K J 1/6W		R237			RD14BB2C103J	RD 10K J 1/6W	
R159			RD14BB2C203J	RD 20K J 1/6W		R238			RD14BB2C133J	RD 13K J 1/6W	
R160			RD14BB2C822J	RD 8.2K J 1/6W		R239			RD14BB2C223J	RD 22K J 1/6W	
R161			RD14BB2C223J	RD 22K J 1/6W		R240-242			RD14BB2C332J	RD 3.3K J 1/6W	
R162			RD14BB2C104J	RD 100K J 1/6W		R243			RD14BB2C751J	RD 750 J 1/6W	
R163			RD14DB2H100J	SMALL-RD 10 J 1/2W		R244			RD14BB2C473J	RD 47K J 1/6W	
R164			RD14BB2C473J	RD 47K J 1/6W		R245,246			RD14BB2C223J	RD 22K J 1/6W	
R165			RD14BB2C153J	RD 15K J 1/6W		R247			RD14BB2C473J	RD 47K J 1/6W	
R166			RD14BB2C331J	RD 330 J 1/6W		R248	*		RK73FB2B332J	CHIP R 3.3K J 1/8W	
R167			RD14BB2C223J	RD 22K J 1/6W		R249			RK73FB2B472J	CHIP R 4.7K J 1/8W	
R168			RD14BB2C271J	RD 270 J 1/6W		R250	*		RK73FB2B273J	CHIP R 27K J 1/8W	
R169			RD14BB2C561J	RD 560 J 1/6W		R251			RK73FB2B104J	CHIP R 100K J 1/8W	
R170			RD14BB2C221J	RD 220 J 1/6W		R252			RK73FB2B103J	CHIP R 10K J 1/8W	
R171			RD14BB2C562J	RD 5.6K J 1/6W		R253			RK73FB2B104J	CHIP R 100K J 1/8W	
R172			RD14BB2C473J	RD 47K J 1/6W		R254			RK73FB2B101J	CHIP R 100 J 1/8W	
R173			RD14BB2C392J	RD 3.9K J 1/6W		R255			RK73FB2B223J	CHIP R 22K J 1/8W	
R174			RK73FB2B102J	CHIP R 1.0K J 1/8W		R256			RK73FB2B103J	CHIP R 10K J 1/8W	
R175			RK73FB2B104J	CHIP R 100K J 1/8W		R258	*		RK73FB2B512J	CHIP R 5.1K J 1/8W	
R176-178		*	RK73FB2B473J	CHIP R 47K J 1/8W		R260			RK73FB2B103J	CHIP R 10K J 1/8W	
R179,180			RD14DB2H100J	SMALL-RD 10 J 1/2W		R262			RK73FB2B223J	CHIP R 22K J 1/8W	
R181-183			RK73FB2B472J	CHIP R 4.7K J 1/8W		R263,264			RD14BB2C151J	RD 150 J 1/6W	
R184,185			RD14BB2C104J	RD 100K J 1/6W		R265			RD14BB2C102J	RD 1.0K J 1/6W	
R186		*	RK73FB2B473J	CHIP R 47K J 1/8W		R266			RK73FB2B223J	CHIP R 22K J 1/8W	
R187			RD14BB2C104J	RD 100K J 1/6W		R267,268			RD14DB2H100J	SMALL-RD 10 J 1/2W	
R188			RD14BB2C103J	RD 10K J 1/6W		R269,270			RK73GB2A102J	CHIP R 1.0K J 1/10W	

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# KAC-PS520/X520

## PARTS LIST

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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
R271			RD14BB2C511J	RD 510 J 1/6W		Q11 ,12			2SA992(F,E)	TRANSISTOR	
R272			RD14DB2H180J	SMALL-RD 18 J 1/2W		Q13 ,14			2SC2631(R,S)	TRANSISTOR	
R273			RD14BB2C222J	RD 2.2K J 1/6W		Q15 ,16			2SA1123(Q,R)	TRANSISTOR	
R274			RD14BB2C103J	RD 10K J 1/6W		Q17 ,18			2SC2631(R,S)	TRANSISTOR	
R275,276			RD14BB2C101J	RD 100 J 1/6W		Q19 ,20			2SC4137(V,W)	TRANSISTOR	
R312			RK73FB2B104J	CHIP R 100K J 1/8W		Q21 ,22			2SC1845(F,E)	TRANSISTOR	
R501-540			RD14BB2E103J	RD 10K J 1/4W		Q23 ,24			2SA992(F,E)	TRANSISTOR	
VR1 ,2			R32-0030-05	SEMI FIXED VARIABLE RESISTOR		Q25 -28			2SC2235	TRANSISTOR	
W11			R92-2053-05	CHIP R 0 J 1/8W		Q29 -32			2SA965	TRANSISTOR	
W12 -16			R92-2052-05	CHIP R 0 OHM J 1/10W		Q33	*		2SC3856LB*5	TRANSISTOR	
W17			R92-2053-05	CHIP R 0 J 1/8W		Q34 ,35	*		2SA1492LB*5	TRANSISTOR	
W18			R92-2052-05	CHIP R 0 OHM J 1/10W		Q36 -38	*		2SC3856LB*5	TRANSISTOR	
W19			R92-2053-05	CHIP R 0 J 1/8W		Q39 ,40	*		2SA1492LB*5	TRANSISTOR	
W20 -22			R92-2052-05	CHIP R 0 OHM J 1/10W		Q41			DTA124EK	DIGITAL TRANSISTOR	
W23			R92-2053-05	CHIP R 0 J 1/8W		Q42			DTC124EK	DIGITAL TRANSISTOR	
W24 ,25			R92-2052-05	CHIP R 0 OHM J 1/10W		Q43			2SA733(A)(Q,P)	TRANSISTOR	
S1			S62-0842-05	SLIDE SWITCH		Q44			DTA124ES	DIGITAL TRANSISTOR	
S2			S31-2630-05	SLIDE SWITCH		Q45			2SA992(F,E)	TRANSISTOR	
S3			S62-0842-05	SLIDE SWITCH		Q46 -49			2SC945(A)(Q,P)	TRANSISTOR	
S4			S31-2630-05	SLIDE SWITCH		Q50 -52			2SC2412K	TRANSISTOR	
D1 -8			1SS133	DIODE		Q53			2SC3940A(R,S)	TRANSISTOR	
D9 ,10			RD8.2JS(B)	ZENER DIODE		Q60			2SA1534A(R,S)	TRANSISTOR	
D11 ,12			1SS133	DIODE		Q61			2SC945(A)(Q,P)	TRANSISTOR	
D13 -16			RD5.1JS(B)	ZENER DIODE		Q62 ,63			2SC3940A(R,S)	TRANSISTOR	
D17 -40			1SS133	DIODE		Q64			2SC945(A)(Q,P)	TRANSISTOR	
D43			RD5.1JS(B)	ZENER DIODE		Q65			2SA733(A)(Q,P)	TRANSISTOR	
D44			1SS133	DIODE		Q66 -69			2SC945(A)(Q,P)	TRANSISTOR	
D46			6A20-M	DIODE		Q70			2SC2412K	TRANSISTOR	
D47			RD6.2JS(B)	ZENER DIODE		Q71 ,72			2SC945(A)(Q,P)	TRANSISTOR	
D48			RD9.1JS(B)	ZENER DIODE		Q73 ,74			2SA733(A)(Q,P)	TRANSISTOR	
D49			RD15JS(B)	ZENER DIODE		Q75 -80			IRFI1010N	FET	
D50			RD7.5JS(B)	ZENER DIODE		Q81			2SD2375	TRANSISTOR	
D51 -54			1SS133	DIODE		Q82			2SB1548(P)	TRANSISTOR	
D55			FML22S*A	DIODE		Q83			2SC2412K	TRANSISTOR	
D56			FML22R*A	DIODE		Q84			2SA1037K	TRANSISTOR	
D57 -60	*		FR103S	DIODE		Q85			2SC3940A(R,S)	TRANSISTOR	
D61 ,62			HZM20N(B)	ZENER DIODE		Q86			2SA1534A(R,S)	TRANSISTOR	
D63 ,64			HZM16N(B2)	ZENER DIODE		TH1			PTH9L04BD222TS	POSITIVE RESISTOR	
D65			RD6.2JS(B)	ZENER DIODE		TH2 ,3			PTH9M04BD222T	POSITIVE RESISTOR	
D66			1SS133	DIODE							
D67	*		FR103S	DIODE							
D68 ,69			MA3068WA	ZENER DIODE							
IC1 ,2			NJM5532MD	IC(OP AMP)							
IC3			NJM4565M	ANALOGUE IC							
IC4 ,5			NJM5532MD	IC(OP AMP)							
IC6 ,7			NJM4565M	ANALOGUE IC							
IC8			TC4052BF(N)	MOS-IC							
IC9			TC4W66F	IC							
IC10			PST9130NR	ANALOGUE IC							
IC11			TMP87C847U3JV4	MI-COM IC							
IC12			UPC494GS	ANALOGUE IC							
Q1 ,2			2SC1845(F,E)	TRANSISTOR							
Q3 -8			2SA992(F,E)	TRANSISTOR							
Q9 ,10			2SA733(A)(Q,P)	TRANSISTOR							

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# KAC-PS520/X520

## SPECIFICATIONS

### Audio Section

Rated Power Output (12V, 4Ω, 20-20KHz, 0.05% THD)  
.....90W x 2  
Rated Power Output (12V, 2Ω, 1KHz, 0.5% THD)  
.....170W x 2  
Bridged Power Output (12V, 4Ω, 1KHz, 0.5% THD)  
.....340W x 1  
Rated Power Output (14.4V, 4Ω, 20-20KHz, 0.05% THD)  
.....125W x 2  
Rated Power Output (14.4V, 4Ω, DIN45324) ...125W x 2  
Rated Power Output (14.4V, 2Ω, 1KHz, 0.5% THD)  
.....250W x 2  
Bridged Power Output (14.4V, 4Ω, 1KHz, 0.5% THD)  
.....500W x 1  
Max Power Output (14.4V, 4Ω, Normal) .....500W x 2  
Max Power Output (14.4V, 4Ω, Bridge).....1000W x 1  
Total Harmonic Distortion (14.4V, Rated Power)  
.....0.006%  
Low Pass Filter (18dB/oct.) .....50Hz - 200Hz  
High Pass Filter (12dB/oct.) .....50Hz - 200Hz  
Infrasonic Filter (24dB/oct.) .....15Hz  
New BMS (Bass Boost Circuit) : 40Hz - 100Hz  
.....OFF / +6dB / +12dB / +18dB  
Frequency Response (+0, -3dB) .....5Hz - 100KHz  
Signal to Noise Ratio .....105dB  
Sensitivity (Max) (Rated Output) .....0.2V  
Sensitivity (Min) (Rated Output) .....5V  
Input Impedance.....10KΩ  
Damping Factor.....More than 200

### General

Operating Voltage (11V-16V allowable) .....14.4V  
Current Consumption (12V, 1KHz, 10% THD) .....37A  
Installation Size (Width x Height x Depth)  
.....283mm x 58mm x 350mm  
Weight .....5.2Kg

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

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