

POWER AMPLIFIER

# KAC-629S

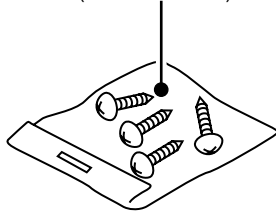
## SERVICE MANUAL

# KENWOOD

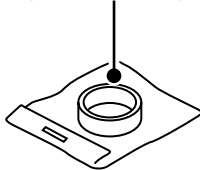
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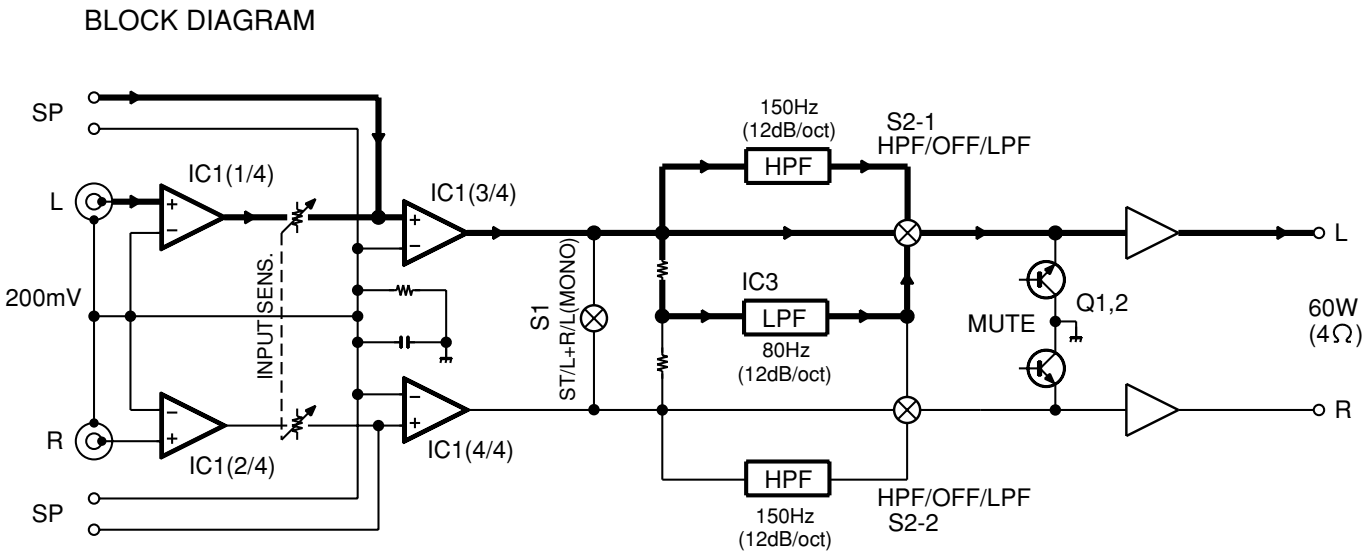
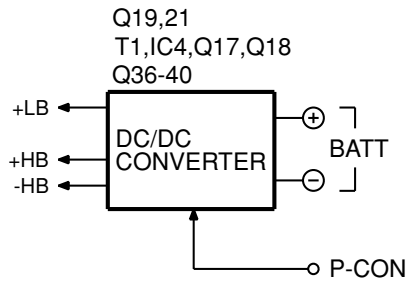
SCREW SET  
(N99-1587-05)



ACCESSORY  
(TERMINAL COVER SET)  
(W01-1516-05)

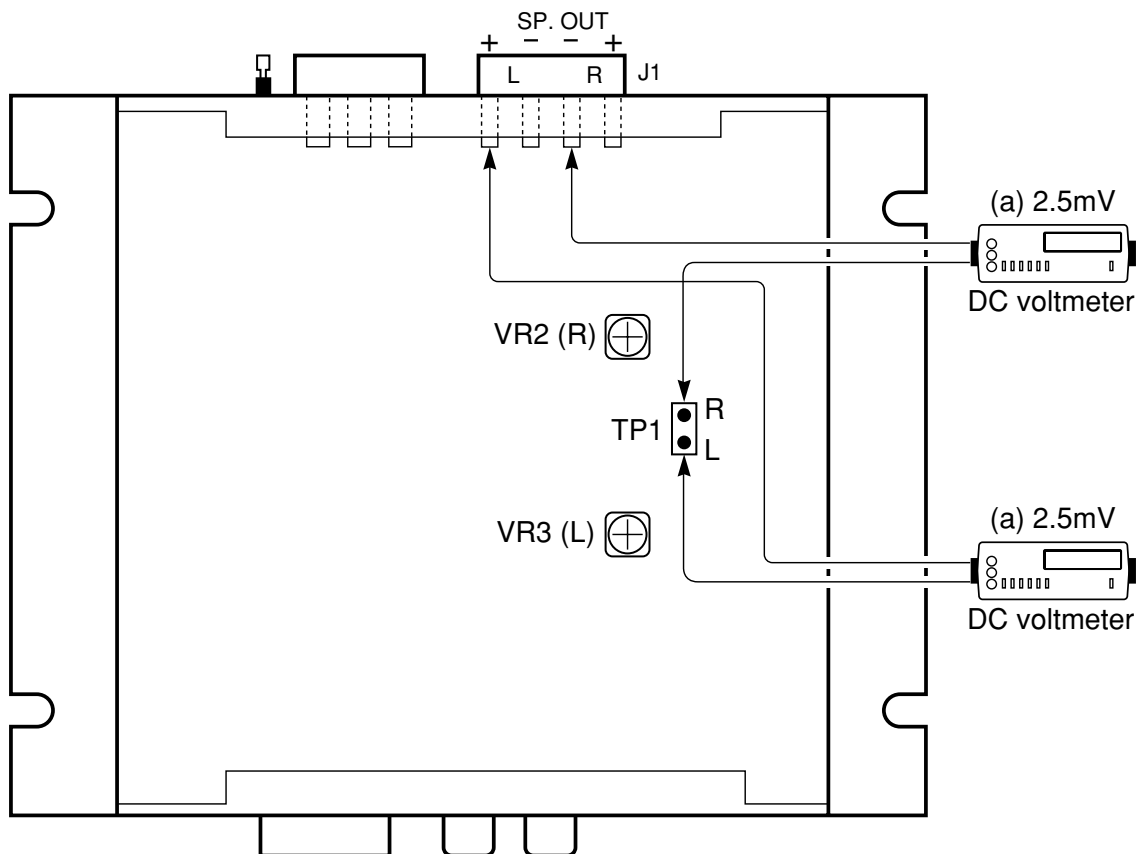


## BLOCK DIAGRAM



## ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	RECEIVER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
Connect a cassette receiver or CD receiver.							
1	IDEL CURRENT	-	Connect a DC voltmeter between TP1 (L/R) and J1 (SP.OUT, L+/R-)	VOLUME : 0	VR2 (R ch) VR3 (L ch) (X09-)	2.5mV	(a)



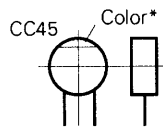
# KAC-629S

## PARTS DESCRIPTIONS

### CAPACITORS

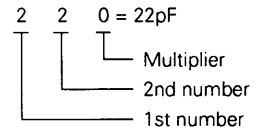
CC 45 TH 1H 220 J  
 1 2 3 4 5 6

- 1 = Type ... ceramic, electrolytic, etc.
- 2 = Shape ... round, square, ect.
- 3 = Temp. coefficient
- 4 = Voltage rating
- 5 = Value
- 6 = Tolerance



#### • Capacitor value

- 010 = 1pF
- 100 = 10pF
- 101 = 100pF
- 102 = 1000pF = 0.001μF
- 103 = 0.01μF



#### • Temperature coefficient

1st Word	C	L	P	R	S	T	U
Color*	Black	Red	Orange	Yellow	Green	Blue	Violet
ppm/°C	0	-80	-150	-220	-330	-470	-750

2nd Word	G	H	J	K	L
ppm/°C	±30	±60	±120	±250	±500

Example : CC45TH = -470 ± 60ppm/°C

#### • Tolerance (More than 10pF)

Code	C	D	G	J	K	M	X	Z	P	No code
(%)	±0.25	±0.5	±2	±5	±10	±20	+40 -20	+80 -20	+100 -0	More than 10μF -10 ~ +50 Less than 4.7μF -10 ~ +75

#### (Less than 10pF)

Code	B	C	D	F	G
(pF)	±0.1	±0.25	±0.5	±1	±2

#### • Voltage rating

2nd word \ 1st word	A	B	C	D	E	F	G	H	J	K	V
0	1.0	1.25	1.6	2.0	2.5	3.15	4.0	5.0	6.3	8.0	-
1	10	12.5	16	20	25	31.5	40	50	63	80	35
2	100	125	160	200	250	315	400	500	630	800	-
3	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	-

#### • Chip capacitors

(EX) C C 7 3 F S L 1 H 0 0 0 J  
 1 2 3 4 5 6 7 Refer to the table above.

(Chip) (CH, RH, UJ, SL)

(EX) C K 7 3 F F 1 H 0 0 0 Z  
 1 2 3 4 5 6 7

(Chip) (B, F)

- 1 = Type
- 2 = Shape
- 3 = Dimension
- 4 = Temp. coefficient
- 5 = Voltage rating
- 6 = Value
- 7 = Tolerance

#### Dimension (Chip capacitors)

Dimension code	L	W	T
Empty	5.6 ± 0.5	5.0 ± 0.5	Less than 2.0
A	4.5 ± 0.5	3.2 ± 0.4	Less than 2.0
B	4.5 ± 0.5	2.0 ± 0.3	Less than 2.0
C	4.5 ± 0.5	1.25 ± 0.2	Less than 1.25
D	3.2 ± 0.4	2.5 ± 0.3	Less than 1.5
E	3.2 ± 0.2	1.6 ± 0.2	Less than 1.25
F	2.0 ± 0.3	1.25 ± 0.2	Less than 1.25
G	1.6 ± 0.2	0.8 ± 0.2	Less than 1.0

### RESISTORS

#### • Chip resistor (Carbon)

(EX) R K 7 3 E B 2 B 0 0 0 J  
 1 2 3 4 5 6 7

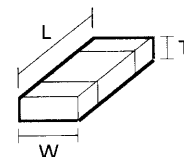
(Chip) (B, F)

#### • Carbon resistor (Normal type)

(EX) R D 1 4 B B 2 C 0 0 0 J  
 1 2 3 4 5 6 7

- 1 = Type
- 2 = Shape
- 3 = Dimension
- 4 = Temp. coefficient
- 5 = Rating wattage
- 6 = Value
- 7 = Tolerance

#### Dimension



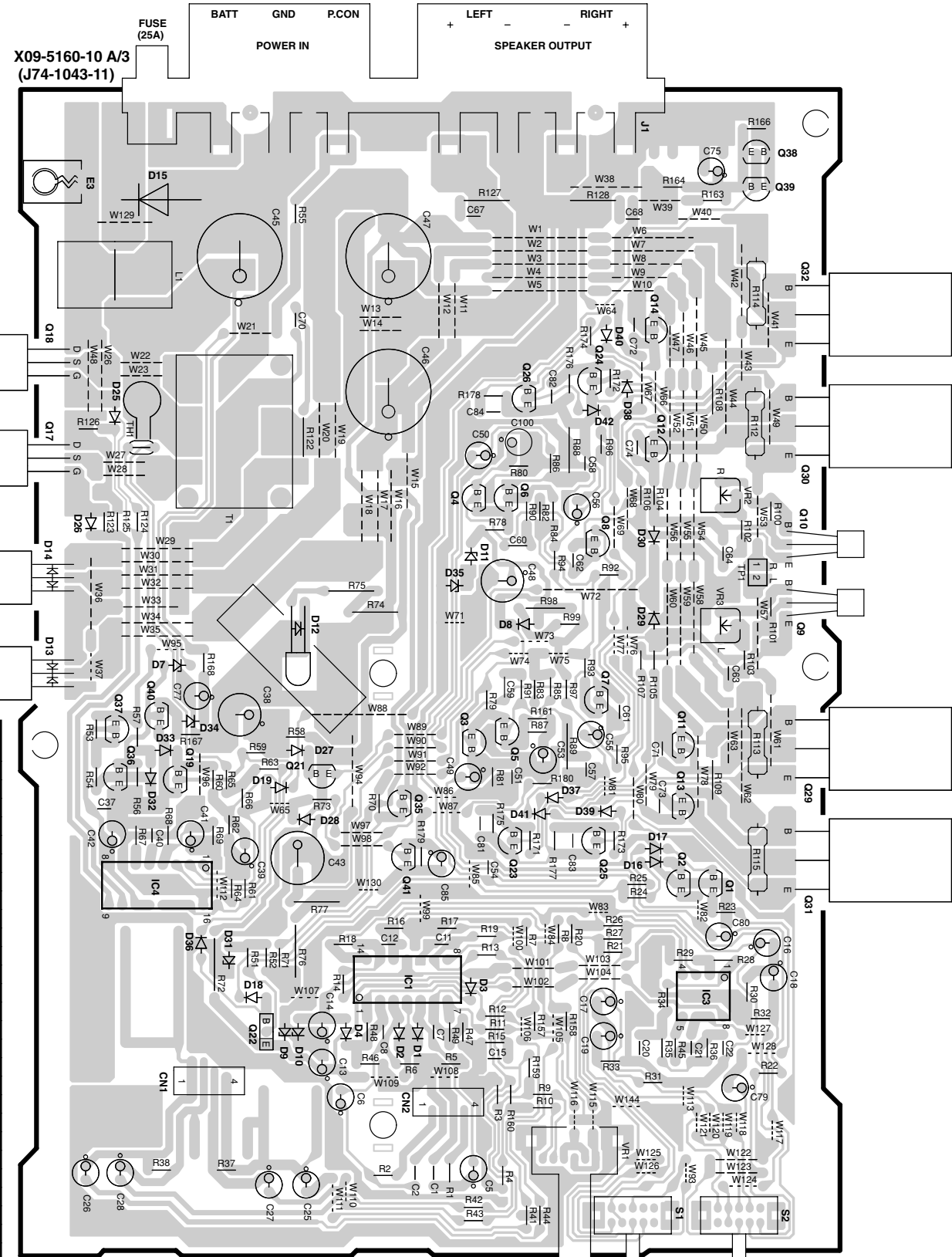
#### Dimension (Chip resistor)

Dimension code	L	W	T
E	3.2 ± 0.2	1.6 ± 0.2	1.0
F	2.0 ± 0.3	1.25 ± 0.2	1.0
G	1.6 ± 0.2	0.8 ± 0.2	0.5 ± 0.1

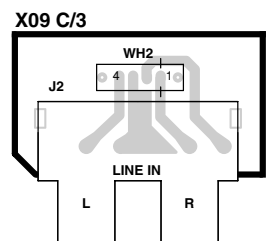
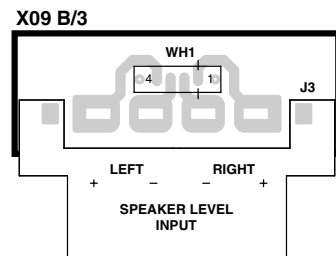
#### Rating wattage

Code	Wattage	Code	Wattage	Code	Wattage
1J	1/16W	2C	1/6W	3A	1W
2A	1/10W	2E	1/4W	3D	2W
2B	1/8W	2H	1/2W		

# PC BOARD(Component side view)

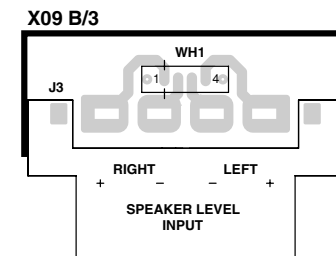
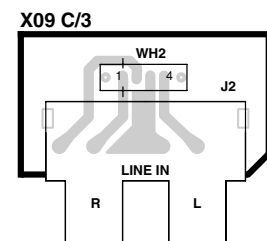


Ref. No.	Address
IC1	5C
IC3	5D
IC4	5B
Q1	5D
Q2	5D
Q3	4C
Q4	3C
Q5	4C
Q6	3C
Q7	4C
Q8	3D
Q9	3E
Q10	3E
Q11	4D
Q12	3D
Q13	4D
Q14	2D
Q17	3A
Q18	2A
Q19	4B
Q21	4B
Q22	5B
Q23	4C
Q24	2D
Q25	4D
Q26	2C
Q29	4E
Q30	3E
Q31	5E
Q32	2E
Q35	4C
Q36	4B
Q37	4B
Q38	1D
Q39	2D
Q40	4B
Q41	4C

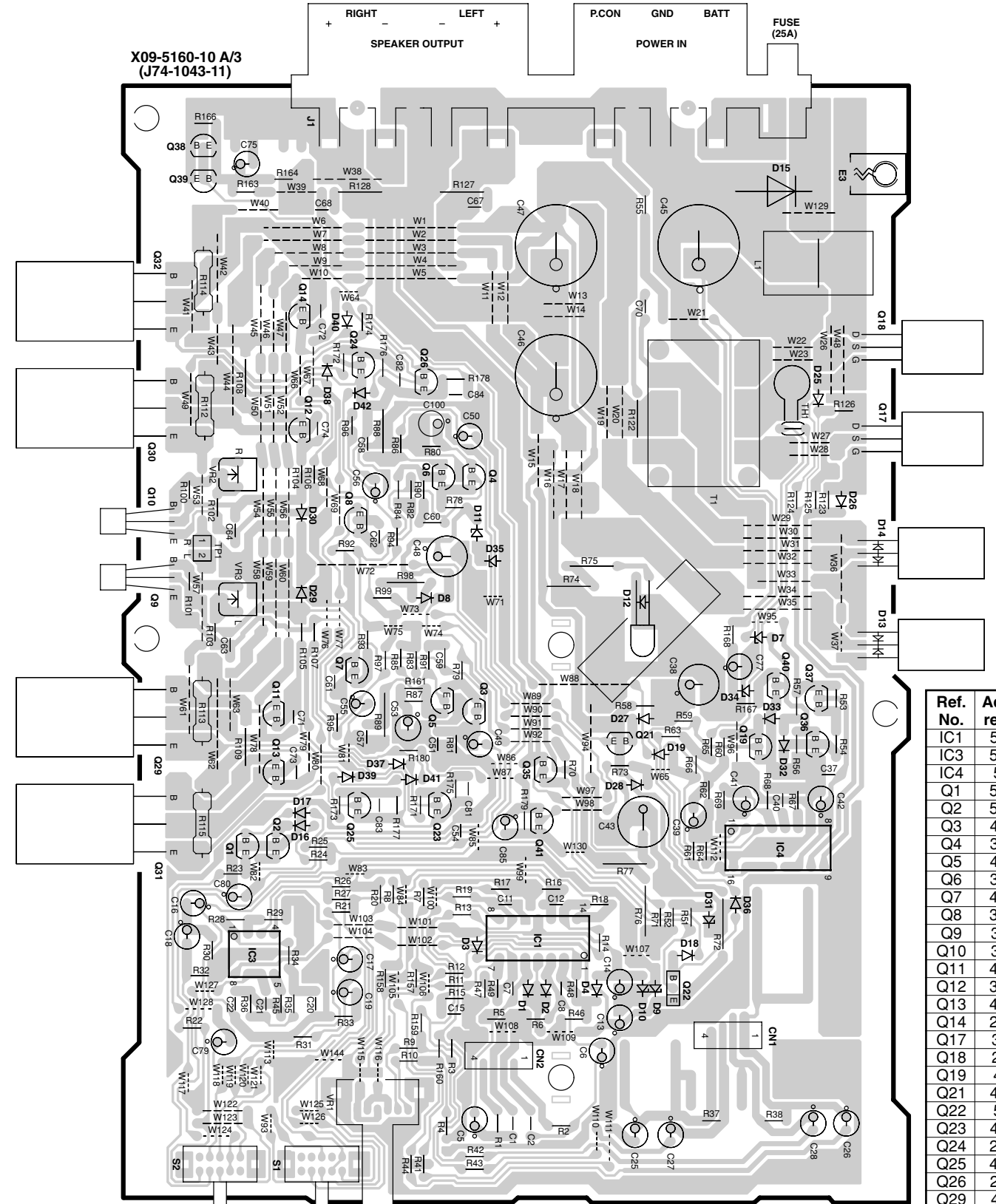


INPUT SENSITIVITY MONO-L-R-ST OPERATION LPF-OFF-HPF FILTER

HPF-OFF-LPF FILTER ST-L-R-MONO OPERATION INPUT SENSITIVITY

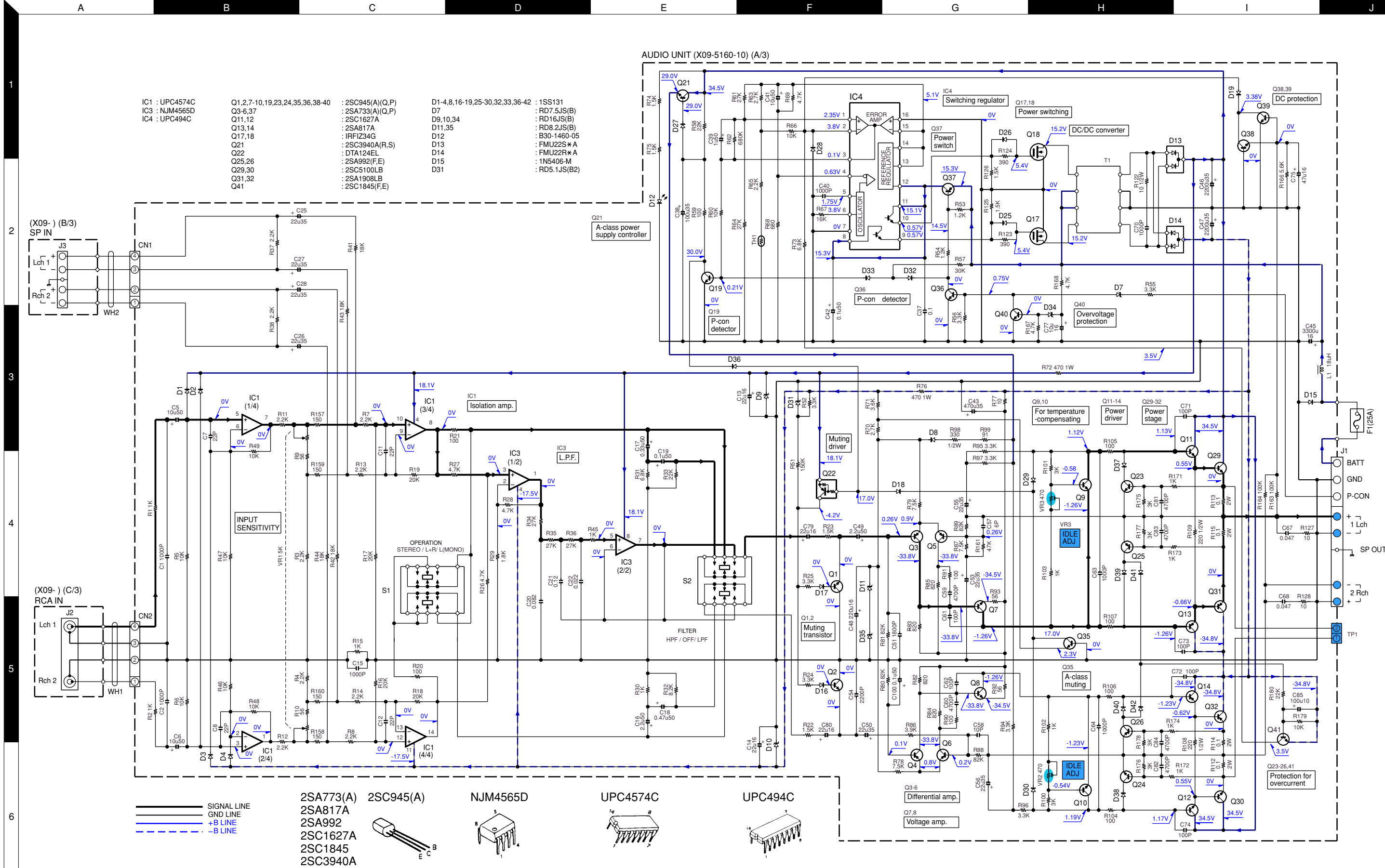


# PC BOARD(Foil side view)



Ref. No.	Address
IC1	5H
IC3	5G
IC4	5I
Q1	5G
Q2	5G
Q3	4H
Q4	3H
Q5	4H
Q6	3H
Q7	4H
Q8	3G
Q9	3F
Q10	3F
Q11	4G
Q12	3G
Q13	4G
Q14	2G
Q17	3J
Q18	2J
Q19	4I
Q21	4H
Q22	5I
Q23	4H
Q24	2G
Q25	4G
Q26	2H
Q29	4F
Q30	3F
Q31	5F
Q32	2F
Q35	4H
Q36	4I
Q37	4I
Q38	1G
Q39	2G
Q40	4I
Q41	4H

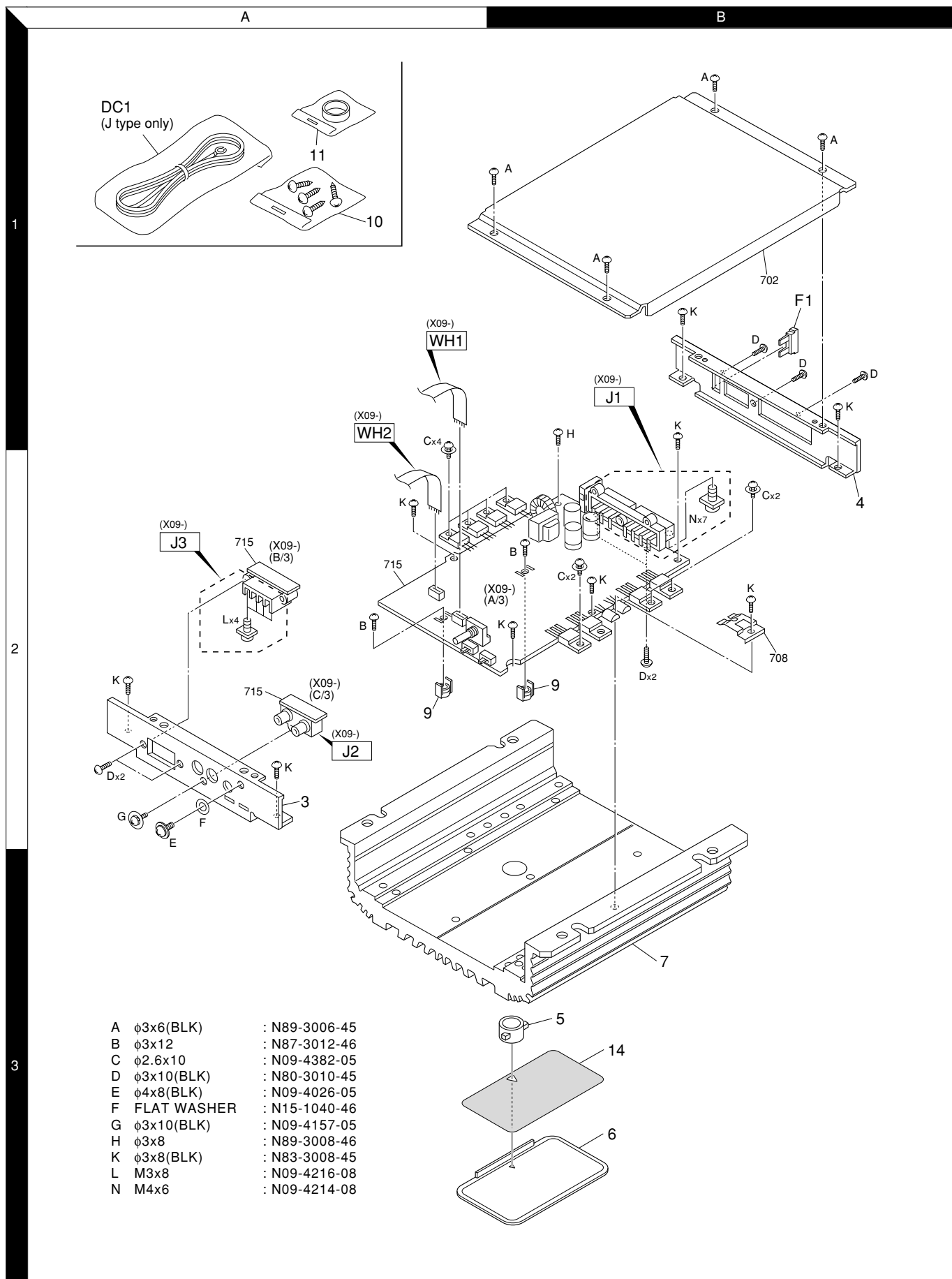
Refer to the schematic diagram for the value of resistors and capacitors.



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

# KAC-629S

## EXPLODED VIEW



## PARTS LIST

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

Ref.No.	A d d	N e w	Parts No.	Description	Dest inati on
<b>KAC-629S</b>					
3	2A	*	A64-2332-02	PANEL	
4	2B	*	A84-0275-02	REAR PANEL	
5	3B	*	B19-2082-04	LIGHTING BOARD	
6	3B	*	B43-1275-03	BADGE	
-			B46-0100-50	WARRANTY CARD	KEM
-		*	B64-1949-00	INST.MANUAL (ENGLISH)	KE
-		*	B64-1950-00	INST.MANUAL (FRE,SPA)	KE
-		*	B64-1951-00	INST.MANUAL (ENG,CHI)	M
-		*	B64-1962-00	INST.MANUAL (GER,DUT)	E
-		*	B64-1963-00	INST.MANUAL (ITA,POR)	E
7	3B	*	F01-1654-01	HEAT SINK	
△ F1	1B		F52-0014-05	FUSE(BLADE TYPE) (25A)	
14	3B	*	H30-0543-04	ADHESIVE DOUBLE-COATED TAPE	
-			H10-4644-03	POLYSTYRENE FOAMED FIXTURE	
-			H25-0336-04	PROTECTION BAG (170X250X0.03)	
-			H25-0342-04	PROTECTION BAG (350X350X0.03)	
-		*	H54-2063-03	ITEM CARTON CASE	
9	2A		J30-1066-04	SPACER	
10	1A		N99-1587-05	SCREW SET	
A	1B		N89-3006-45	BINDING HEAD TAPTITE SCREW	
B	2A		N87-3012-46	BRAZIER HEAD TAPTITE SCREW	
C	2B		N09-4382-05	TAPTITE SCREW (2.6X10)	
D	1B		N80-3010-45	PAN HEAD TAPTITE SCREW	
E	2A		N09-4026-05	TAPPING SCREW (4X8,TP,S)	
F	2A		N15-1040-46	FLAT WASHER (4)	
G	2A		N09-4157-05	SEMS (TAPTITE SCREW)	
H	1B		N89-3008-46	BINDING HEAD TAPTITE SCREW	
K	2B		N83-3008-45	PAN HEAD TAPTITE SCREW	
11	1A		W01-1516-05	ACCESSORY (TERMINAL COVER SET)	
<b>AUDIO UNIT(X09-5160-10)</b>					
D12			B30-1460-05	LED(RE D)	
C1 ,2			CF92FV1H102J	MF-C 1000PF	J
C5 ,6			CE04DW1H100M	ELECTRO 10UF	50WV
C7 ,8			CC45FSL1H220J	CERAMIC 22PF	J
C11 ,12			CC45FSL1H220J	CERAMIC 22PF	J
C13 ,14			CE04DW1C220M	ELECTRO 22UF	16WV
C15			CF92FV1H102J	MF-C 1000PF	J
C16			CE04DW1H2R2M	ELECTRO 2.2UF	50WV
C17			CE04DW1HR33M	ELECTRO 0.33UF	50WV
C18			CE04DW1HR47M	ELECTRO 0.47UF	50WV
C19			CE04DW1HOR1M	ELECTRO 0.1UF	50WV
C20			CF92FV1H823J	MF-C 0.082UF	J
C21			CF92FV1H124J	MF-C 0.12UF	J
C22			CF92FV1H223J	MF-C 0.022UF	J
C25 -28			CE04DW1V220M	ELECTRO 22UF	35WV

Ref.No.	A d d	N e w	Parts No.	Description	Dest inati on
C37			CF92FV1H104J	MF-C 0.10UF	J
C38			CE04DW1V101M	ELECTRO 100UF	35WV
C39			CE04DW1H010M	ELECTRO 1.0UF	50WV
C40			CF92FV1H102J	MF-C 1000PF	J
C41			CE04DW1H100M	ELECTRO 10UF	50WV
C42			CE04DW1H0R1M	ELECTRO 0.1UF	50WV
C43			CE04DW1V471M	ELECTRO 470UF	35WV
C45			C90-2689-05	ELECTRO 3300UF	16WV
C46 ,47			C90-2780-05	ELECTRO 2200UF	35WV
C48			CE04DW1C221M	ELECTRO 220UF	16WV
C49			CE04DW1H2R2M	ELECTRO 2.2UF	50WV
C50			CE04DW1V220M	ELECTRO 22UF	35WV
C51			CK45FB1H182K	CERAMIC 1800PF	K
C53			CE04DW1V220M	ELECTRO 22UF	35WV
C54			CK45FB1H222K	CERAMIC 2200PF	K
C55 ,56			CE04DW1V220M	ELECTRO 22UF	35WV
C57			CC45FSL1H060D	CERAMIC 6.0PF	D
C58			CC45FSL1H100D	CERAMIC 10PF	D
C59 ,60			CF92FV1H472J	MF-C 4700PF	J
C61 ,62			CC45FSL1H101J	CERAMIC 100PF	J
C63 ,64			CK45FB1H102K	CERAMIC 1000PF	K
C67 ,68			CF92FV1H473J	MF-C 0.047UF	J
C70			CF92FV1H102J	MF-C 1000PF	J
C71 -74			CC45FSL1H101J	CERAMIC 100PF	J
C75			CE04DW1C470M	ELECTRO 47UF	16WV
C77			CE04DW1C100M	ELECTRO 10UF	16WV
C79 ,80			CE04DW1C220M	ELECTRO 22UF	16WV
C81 -84			CF92FV1H472J	MF-C 4700PF	J
C85			CE04DW1A101M	ELECTRO 100UF	10WV
C100			CE04DW1HOR1M	ELECTRO 0.1UF	50WV
CN1 ,2			E40-9472-05	FLAT CABLE CONNECTOR (4P)	
J1	1B		E70-0823-05	SCREW TERMINAL BOARD (7P)	
J2	2A		E63-0834-05	PIN JACK (2P)	
J3	2A		E70-0822-05	SCREW TERMINAL BOARD (4P)	
TP1			E40-3640-05	PIN ASSY (2P)	
WH1 ,2	1A		E31-8122-05	LEAD WIRE (4P)	
L1			L33-1032-05	CHOKO COIL (18UH)	
T1		*	L19-0549-05	TRANSFORMER FOR CONVERTER	
D	2B		N80-3010-45	PAN HEAD TAPTITE SCREW	
L	2A		N09-4216-08	SEMS SCREW	
N	2B		N09-4214-08	SEMS SCREW	
R1 ,2			RD14BB2C102J	RD 1.0K J	1/6W
R3 ,4			RD14BB2C222J	RD 2.2K J	1/6W
R5 ,6			RD14BB2C103J	RD 10K J	1/6W
R7 ,8			RD14BB2C222J	RD 2.2K J	1/6W
R9 ,10			RD14BB2C560J	RD 56 J	1/6W
R11 -14			RD14BB2C222J	RD 2.2K J	1/6W
R15			RD14BB2C102J	RD 1.0K J	1/6W
R16 -19			RD14BB2C203J	RD 20K J	1/6W
R20 ,21			RD14BB2C101J	RD 100 J	1/6W
R22 ,23			RD14BB2C152J	RD 1.5K J	1/6W
R24 ,25			RD14BB2C332J	RD 3.3K J	1/6W
R26 -28			RD14BB2C472J	RD 4.7K J	1/6W

K : North America E : Europe J : Japan M : Other Areas

△ indicates safety critical components.



## PARTS LIST

\* New Parts

Parts without Parts No. are not supplied.

Ref.No.	A d d	N e w	Parts No.	Description	Dest inati on
R29			RD14BB2C182J	RD 1.8K J 1/6W	
R30			RD14BB2C102J	RD 1.0K J 1/6W	
R31			RD14BB2C682J	RD 6.8K J 1/6W	
R32			RD14BB2C822J	RD 8.2K J 1/6W	
R33			RD14BB2C223J	RD 22K J 1/6W	
R34 -36			RD14BB2C273J	RD 27K J 1/6W	
R37 ,38			RD14BB2C222J	RD 2.2K J 1/6W	
R41 -44			RD14BB2C183J	RD 18K J 1/6W	
R45			RD14BB2C102J	RD 1.0K J 1/6W	
R46 -49			RD14BB2C103J	RD 10K J 1/6W	
R51			RD14BB2C154J	RD 150K J 1/6W	
R52			RD14BB2C332J	RD 3.3K J 1/6W	
R53 ,54			RD14BB2C122J	RD 1.2K J 1/6W	
R55 ,56			RD14BB2C332J	RD 3.3K J 1/6W	
R57			RD14BB2C303J	RD 30K J 1/6W	
R58			RD14BB2C223J	RD 22K J 1/6W	
R59			RD14BB2C101J	RD 100 J 1/6W	
R60			RD14BB2C103J	RD 10K J 1/6W	
R61			RD14BB2C273J	RD 27K J 1/6W	
R62			RD14BB2C684J	RD 680K J 1/6W	
R63			RD14BB2C272J	RD 2.7K J 1/6W	
R64			RD14BB2C273J	RD 27K J 1/6W	
R65			RD14BB2C222J	RD 2.2K J 1/6W	
R66			RD14BB2C103J	RD 10K J 1/6W	
R67			RD14BB2C163J	RD 16K J 1/6W	
R68			RD14BB2C681J	RD 680 J 1/6W	
R69			RD14BB2C472J	RD 4.7K J 1/6W	
R70			RD14BB2C272J	RD 2.7K J 1/6W	
R71			RD14BB2C362J	RD 3.6K J 1/6W	
R72			RS14KB3A471J	FL-PROOF RS 470 J 1W	
R73			RD14BB2C682J	RD 6.8K J 1/6W	
R74 ,75			RD14BB2E152J	RD 1.5K J 1/4W	
R76			RS14KB3A471J	FL-PROOF RS 470 J 1W	
R77			RD14BB2E100J	RD 10 J 1/4W	
R78 ,79			RD14BB2C752J	RD 7.5K J 1/6W	
R80 ,81			RD14BB2C823J	RD 82K J 1/6W	
R82 -85			RD14BB2C821J	RD 820 J 1/6W	
R86			RD14BB2C392J	RD 3.9K J 1/6W	
R87			RD14BB2C752J	RD 7.5K J 1/6W	
R88 ,89			RD14BB2E823J	RD 82K J 1/4W	
R90 ,91			RD14BB2C101J	RD 100 J 1/6W	
R92 ,93			RD14BB2C560J	RD 56 J 1/6W	
R94 -97			RD14BB2C332J	RD 3.3K J 1/6W	
R98			RD14DB2H331J	SMALL-RD 330 J 1/2W	
R99			RD14BB2C910J	RD 91 J 1/6W	
R100,101			RD14BB2C302J	RD 3.0K J 1/6W	
R102,103			RD14BB2C102J	RD 1.0K J 1/6W	
R104-107			RD14BB2C101J	RD 100 J 1/6W	
R108,109			RD14DB2H221J	SMALL-RD 220 J 1/2W	
R112-115			R92-2115-05	METAL FILM 0.1 J 2W	
R122			RD14DB2H100J	SMALL-RD 10 J 1/2W	
R123,124			RD14BB2C391J	RD 390 J 1/6W	
R125,126			RD14BB2C152J	RD 1.5K J 1/6W	
R127,128			RD14BB2E100J	RD 10 J 1/4W	
R157-160			RD14BB2C151J	RD 150 J 1/6W	

Ref.No.	A d d	N e w	Parts No.	Description	Dest inati on
R161			RD14BB2C473J	RD 47K J 1/6W	
R163,164			RD14BB2C104J	RD 100K J 1/6W	
R166			RD14BB2C562J	RD 5.6K J 1/6W	
R167,168			RD14BB2C472J	RD 4.7K J 1/6W	
R171-174			RD14BB2C102J	RD 1.0K J 1/6W	
R175-178			RD14BB2C302J	RD 3.0K J 1/6W	
R179			RD14BB2C103J	RD 10K J 1/6W	
R180			RD14BB2C223J	RD 22K J 1/6W	
VR1			R31-0209-05	VARIABLE RESISTOR (5K A)	
VR2 ,3			R12-0607-05	TRIMMING POT.(470 B)	
S1 ,2			S31-2630-05	SLIDE SWITCH	
D1 -4			1SS131	DIODE	
D7			RD7.5JS(B)	ZENER DIODE	
D8			1SS131	DIODE	
D9 ,10			RD16JS(B)	ZENER DIODE	
D11			RD8.2JS(B)	ZENER DIODE	
D13			FMU22S*A	DIODE	
D14			FMU22R*A	DIODE	
D15			1N5406-M	DIODE	
D16 -19			1SS131	DIODE	
D25 -30			1SS131	DIODE	
D31			RD5.1JS(B2)	ZENER DIODE	
D32 ,33			1SS131	DIODE	
D34			RD16JS(B)	ZENER DIODE	
D35			RD8.2JS(B)	ZENER DIODE	
D36 -42			1SS131	DIODE	
IC1			UPC4574C	IC(OP AMP X4)	
IC3			NJM4565D	ANALOGUE IC	
IC4			UPC494C	IC(SWITCHING REGULATOR)	
Q1 ,2			2SC945(A)(Q,P)	TRANSISTOR	
Q3 -6			2SA733(A)(Q,P)	TRANSISTOR	
Q7 ,8			2SC945(A)(Q,P)	TRANSISTOR	
Q9 ,10			2SC945(A)(Q,P)	TRANSISTOR	
Q11 ,12			2SC1627A	TRANSISTOR	
Q13 ,14			2SA817A	TRANSISTOR	
Q17 ,18			IRFIZ34G	FET	
Q19			2SC945(A)(Q,P)	TRANSISTOR	
Q21			2SC3940A(R,S)	TRANSISTOR	
Q22			DTA124EL	DIGITAL TRANSISTOR	
Q23 ,24			2SC945(A)(Q,P)	TRANSISTOR	
Q25 ,26			2SA992(F,E)	TRANSISTOR	
Q29 ,30			2SC5100LB	TRANSISTOR	
Q31 ,32			2SA1908LB	TRANSISTOR	
Q35 ,36			2SC945(A)(Q,P)	TRANSISTOR	
Q37			2SA733(A)(Q,P)	TRANSISTOR	
Q38 -40			2SC945(A)(Q,P)	TRANSISTOR	
Q41			2SC1845(F,E)	TRANSISTOR	
TH1			ERT-D2ZHL103S	THERMISTOR	

K : North America E : Europe J : Japan M : Other Areas

 indicates safety critical components.

# KAC-629S

## SPECIFICATIONS

### Audio Section

Max Power Output (4Ω)	
Normal .....	120W x 2
Bridge .....	350W x 1
Rated Power Output (4Ω)	
Normal (20Hz-20KHz, 0.08% THD) .....	60W x 2
Normal (DIN45324, +B=14.4V) .....	60W x 2
Bridge (1KHz, 0.8% THD) .....	150W x 1
Rated Power Output (2Ω)	
Normal (1KHz, 0.8% THD) .....	75W x 2
Frequency Response (+0, -1dB) .....	10Hz - 45kHz
Signal to Noise Ratio .....	100dB
Sensitivity (MAX) (rated output) .....	0.2V
Sensitivity (MIN) (rated output) .....	5.0V
Input Impedance .....	10kΩ
Low Pass Filter (12dB/oct.) .....	80Hz
High Pass Filter (12dB/oct.) .....	150Hz

### General

Operating Voltage (11V-16V allowable) .....	14.4V
Current Consumption (1KHz, 10% THD) .....	19A
Dimensions (Width x Height x Depth) .....	221mm x 57mm x 228mm
Weight .....	2.8kg

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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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