

POWER AMPLIFIER

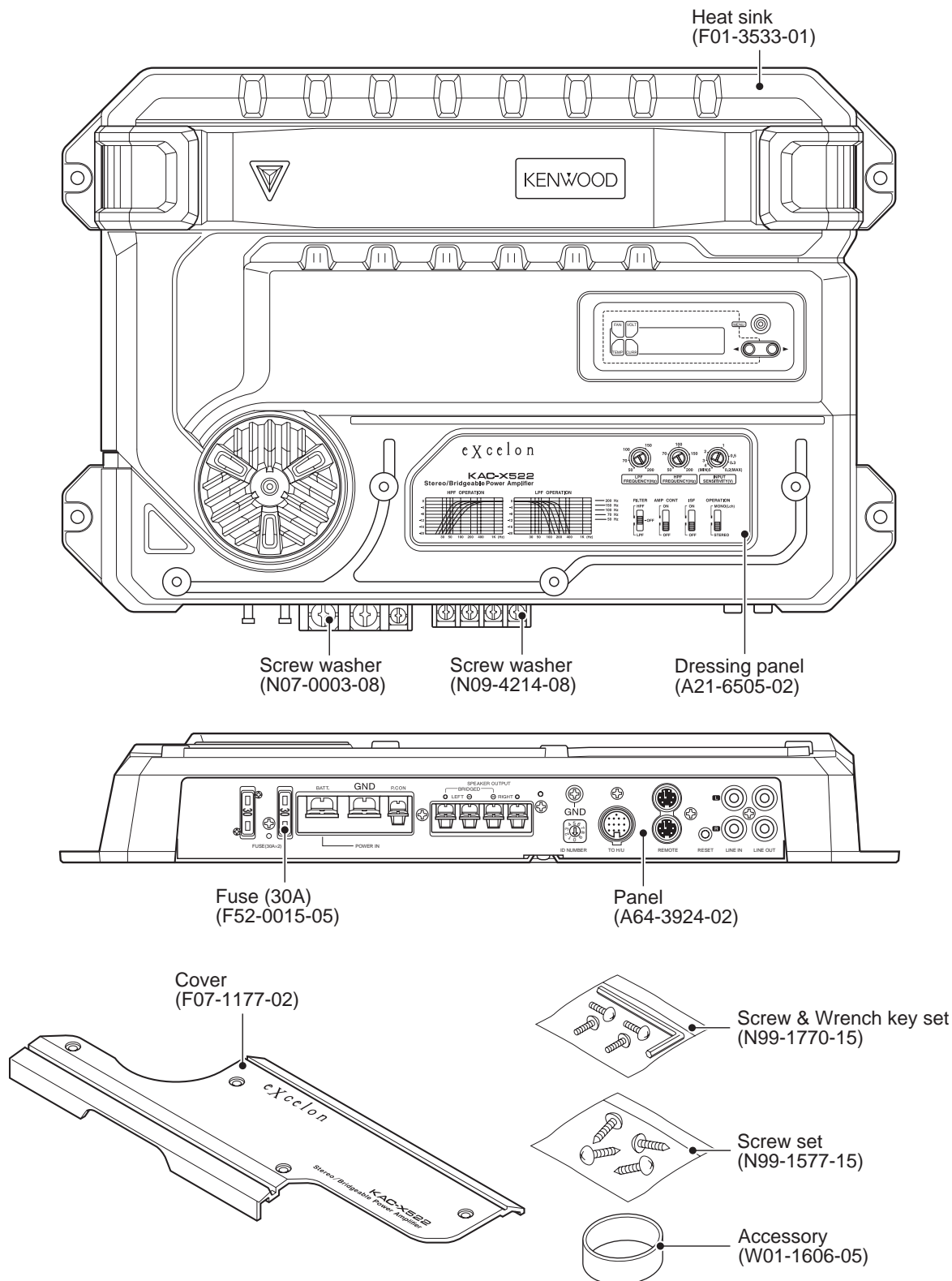
KAC-X522

SERVICE MANUAL

KENWOOD

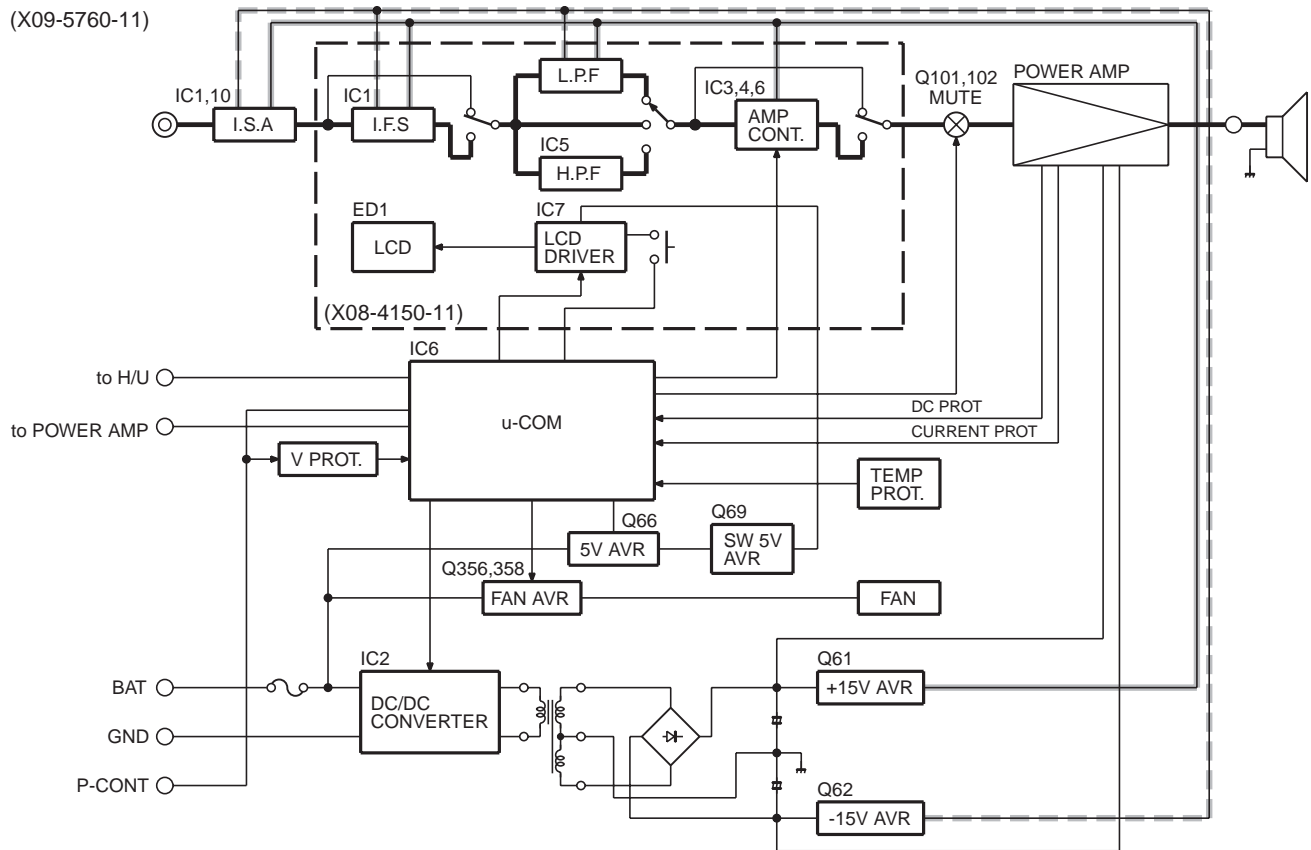
Kenwood Corporation

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B53-0374-00 (N) 589



KAC-X522

BLOCK DIAGRAM



COMPONENTS DESCRIPTION

● PREAMPLIFIER UNIT (X08-4150-11)

Ref. No	Application / Function	Operation / Condition / Compatibility
IC1	Infrasonic filter	Controlled by microprocessor
IC3	Tone and volume variable	
IC4	6dB voltage amplification	
IC5	HPF	
	LPF	
IC6	Lch : 6dB voltage amplification	
	Rch : Signal 180 reverse and 6dB voltage amplification	
IC7	LCD driver	Controlled by microprocessor

● AUDIO UNIT (X09-5760-11)

Ref. No	Application / Function	Operation / Condition / Compatibility
IC1	Buffer	
IC2	DC/DC converter	
IC3	AMP communication buffer	

COMPONENTS DESCRIPTION

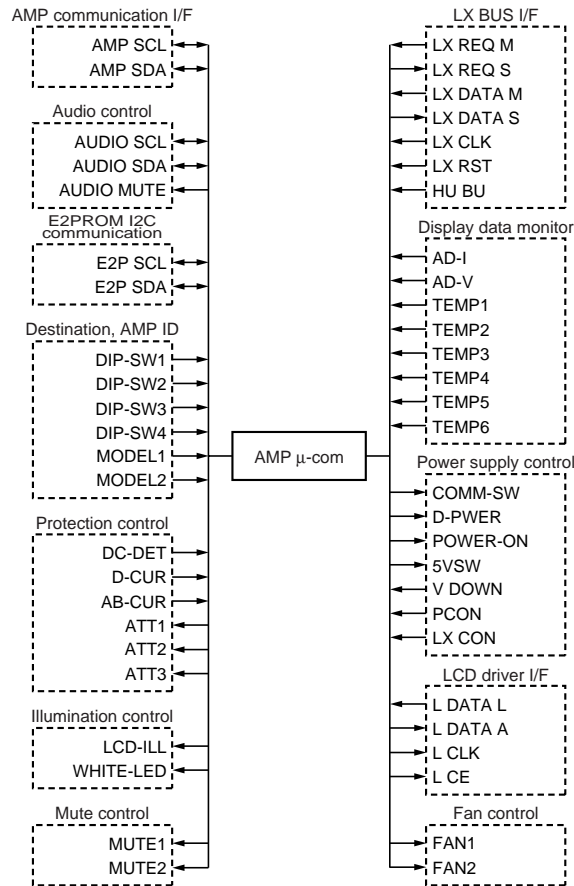
Ref. No	Application / Function	Operation / Condition / Compatibility
IC5	Head unit communication buffer	
IC6	Microprocessor	
IC7	Reset IC	
IC8	E2PROM	
IC9	Current detection	
IC10	Isolation amplifier	
Q50	5V AVR	
Q51~54	DC/DC output driver	
Q55~60	DC/DC	
Q61	+15V AVR	
Q62,63	-15V AVR	
Q64,65	DC/DC converter (IC2) ON/OFF	Controlled by microprocessor
Q66,68	5V AVR	
Q69	5V AVR ON/OFF	
Q70,71	Power supply detection	
Q81	+15V AVR	
Q91,92	When P-CON is OFF, DC/DC driver stop speedy	
Q97	AMP communication stability power supply	
Q101,102	Mute	
Q103~112	A-class first stage amplifier	
Q113~118	A-class 2nd stage amplifier	
Q119,120	Final temperature compensation	
Q121~124	Amplifier current detection	
Q125~132	Final driver	
Q133~140	Final	
Q141	Mute control	
Q142~145	Amplifier limiter	
Q146,147	Amplifier current detection	
Q148,149	DC detection	
Q301~307	Head unit communication output driver	
Q313	Head unit communication output driver	
Q314	Head unit communication ON/OFF	
Q341~344	Head unit communication input driver	
Q346	Head unit communication output driver	
Q347~349	AMP and head unit communication ON/OFF control	
Q351,352	BATT voltage output	
Q353~358	Fan stability power supply	
Q403	LCD backlight LED control	
Q404	LED control	

KAC-X522

MICROCOMPUTER'S TERMINAL DESCRIPTION

● MICROPROCESSOR (X09 : IC6)

◆ Block Diagram



◆ Terminal Function

Pin No.	Pin Name	I/O	Function	Processing Operation Description
1~3	TEMP4~TEMP6	I	Temperature detection 4~6	
4	AVSS	-	GND	
5	L CE	O	CE output to LCD driver	H : LCD driver CE
6	LX REQ S	O	Data transmit request to head unit	H : OFF, L : ON
7	AVREF1	-	DA reference voltage	
8	L DATA L	I	Data input from LCD driver	
9	L DATA A	O	Data output to LCD driver	
10	L CLK	O	CLK output to LCD driver	
11	LX DATA M	I	Data input from head unit	
12	LX DATA S	O	Data output to head unit	
13	LX CLK	I	CLK input from head unit	
14	LX BU	I	LX BUS communication, head unit connect detection	H : Not connect (Except master amplifier), L : Connect
15	NC	O	Not used	
16	SDA AMP	I/O	Data input/output AMP communication	
17	NC	-	Not used	

MICROCOMPUTER'S TERMINAL DESCRIPTION

Pin No.	Pin Name	I/O	Function	Processing Operation Description
18	SCL AMP	I/O	CLK input/output AMP communication	
19	AUDIO SCL	I/O	CLK input/output with audio chip	
20	AUDIO SDA	I/O	Data input/output with audio chip	
21	AUDIO MUTE	O	Mute output to audio chip	H : Mute OFF, L : Mute ON
22	E2P SCL	I/O	CLK input/output with E2PROM	
23	E2P SDA	I/O	Data input/output with E2PROM	
24	NC	-	Not used	
25~28	DIP-SW1-DIP-SW4	I	AMP address setting	
29	MODEL1	I	Model setting 1	
30	MODEL2	I	Model setting 2	
31,32	NC	-	Not used	
33	VSS1	-	GND	
34~37	NC	-	Not used	
38	LCD-ILL	O	LCD backlight switch	H : ON, L : OFF
39	WHITE-LED	O	Triangle illumination switch	H : ON, L : OFF
40	NC	-	Not used	
41~43	ATT1~ATT3	O	Output attenuate due to rise in temperature 1~3	H : Attenuate, L : Not attenuate
44,45	NC	-	Not used	
46	COMM-SW	O	Communication IC power switch	H : ON, L : OFF
47~50	NC	-	Not used	
51	D-PWER	O	D class amplifier power supply control	H : ON, L : OFF (2ch/4ch L fixed)
52	DC-DET	I	Speaker output DC voltage detection	H : Normal, L : Abnormal
53	NC	-	Not used	
54	POWER-ON	O	Amplifier power supply control	H : ON (D/AB class), L : OFF
55	5VSW	O	5VSW	H : OFF, L : ON
56	MUTE1	O	Amplifier section input stage mute control	H : OFF, L : ON
57	MUTE2	O	Driver stage pop-noise mute control	H : OFF, L : ON
58	FAN1	O	Fan rotation control	H : Operate, L : Stop
59	FAN2	O	Fan speed control	H : Low speed, L : High speed
60	RESET	-	Hard reset	H : Normal, L : Reset
61	PCON	I	Amplifier power control	H : OFF, L : ON
62	LX CON	I	LX-BUS communication control	H : OFF, L : ON
63	LX REQ M	I	Data receive request from head unit	H : ON, L : OFF
64	NC	-	Not used	
65	V DOWN	I	Momentary power down detection	H : ON (Power down detection), L : OFF (L fixed)
66	NC	-	Not used	
67	VSS0	-	GND	
68	VD1	-	VDD	
69	X2	-	Main clock input 1	
70	X1	-	Main clock input 2	

KAC-X522

MICROCOMPUTER'S TERMINAL DESCRIPTION

Pin No.	Pin Name	I/O	Function	Processing Operation Description
71	TEST	-	Flash ROM writing	
72	XT2	-	Not used	
73	XT1	-	Not used	
74	VDD0	-	VDD	
75	AVDD	-	VDD	
76	AD-I	I	First current detection (for display)	
77	AD-V	I	BU voltage detection (for display)	
78~80	TEMP1~TEMP3	I	Temperature detection 1~3	

◆ Logic Table

1) Destination

The destination in AMP does not mean the sales regions but specific models.

The following are the models. When reset is released, it is checked only once.

Model name	MODEL1 (pin 29)	MODEL2 (pin 30)
KAC-X812D	Low	Low
KAC-X522	Low	High
KAC-X542	High	High

2) AMP ID

AMP ID is checked only once at the time reset is released or when the microcomputer is released from the low consumption mode.

When setting AMP ID to 8 or 9, remote control is impossible.

AMP ID	DIP-SW1 (pin 25)	DIP-SW2 (pin 26)	DIP-SW3 (pin 27)	DIP-SW4 (pin 28)
0	High	High	High	High
1	Low	High	High	High
2	High	Low	High	High
3	Low	Low	High	High
4	High	High	Low	High
5	Low	High	Low	High
6	High	Low	Low	High
7	Low	Low	Low	High
8	High	High	High	Low
9	Low	High	High	Low

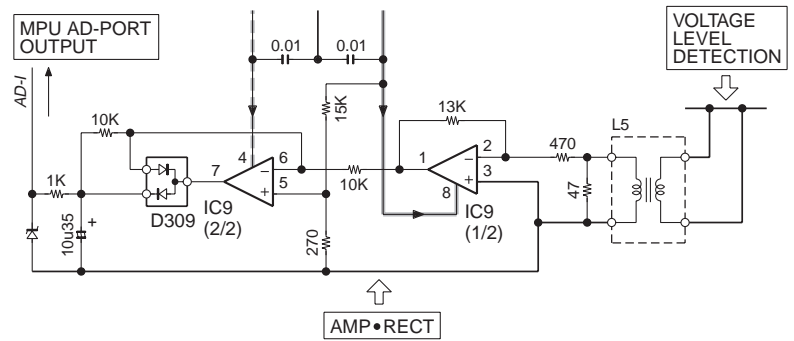
3) Fan speed

Operation	FAN1 (pin 58)	FAN2 (pin 59)
Stop	Low	High/Low
Low speed	High	High
High speed	High	Low

CIRCUIT DESCRIPTION

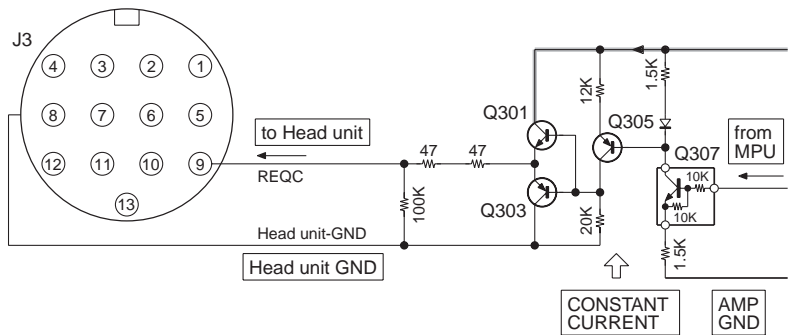
● Current detection circuit

Amplify and rectify potential differences at two points in the primary-side current circuit and send it to the AD-port of the MPU and obtain data for displaying current value.



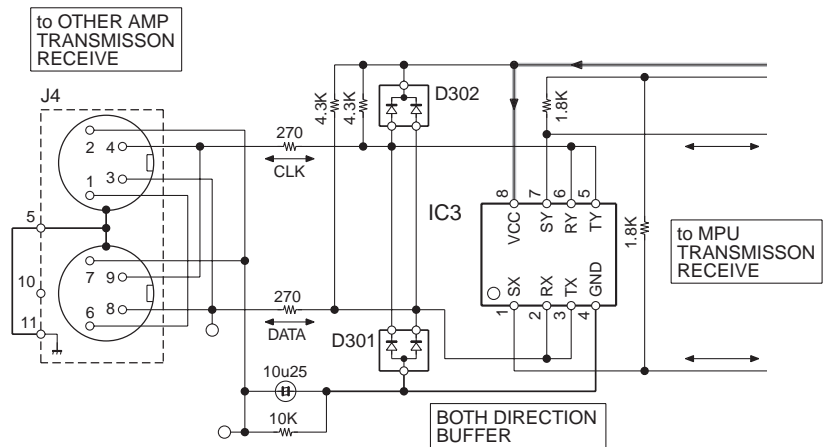
● Constant current output circuit

Remove troubles caused by the potential differences between the constant current output and the GND, so that the GND potential differences between the head unit and the AMP is not overlapped in the AMP to head unit communication.



● I2C buffer

Using an IC for I2C communication, between-AMP communication is conducted so that there will be no trouble from GND potential differences.

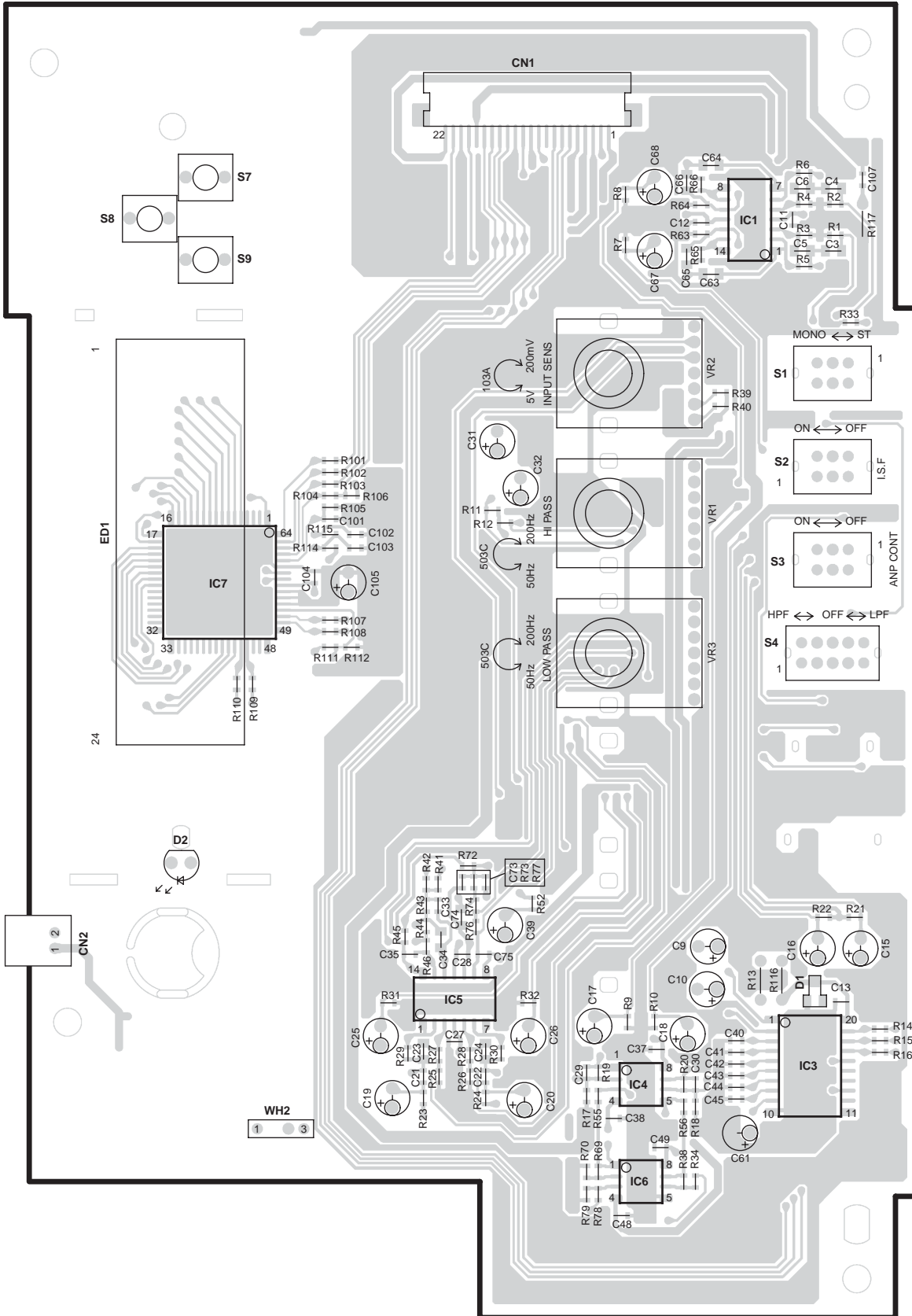


ADJUSTMENT

No.	Item	Alignment Point	Method	Align For	Note	Fig.
1	IDEL CURRENT	VR1 (Lch) VR2 (Rch)	Connect a DC voltmeter between the following emitter resistors. R167 (L) R168 (R)	2.5mV	Over 2 minutes aging is required.	PC BOARD on page 10.

KAC-X522 PC BOARD (COMPONENT SIDE VIEW)

PREAMPLIFIER UNIT X08-4150-11 (J76-0010-12)



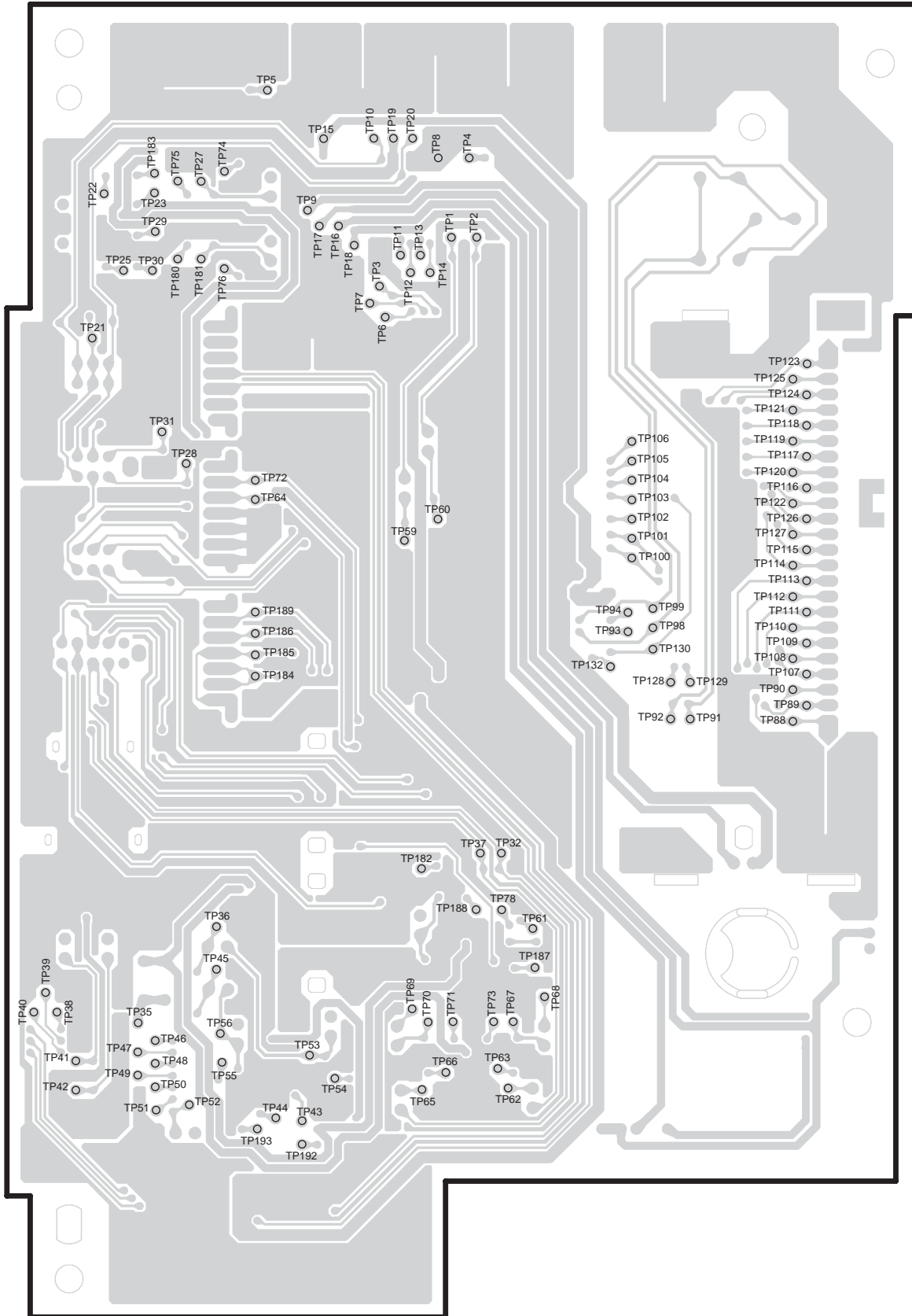
X08-4150-11

Ref. No.	Address
IC1	2D
IC3	6D
IC4	6D
IC5	6C
IC6	6D
IC7	4B

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

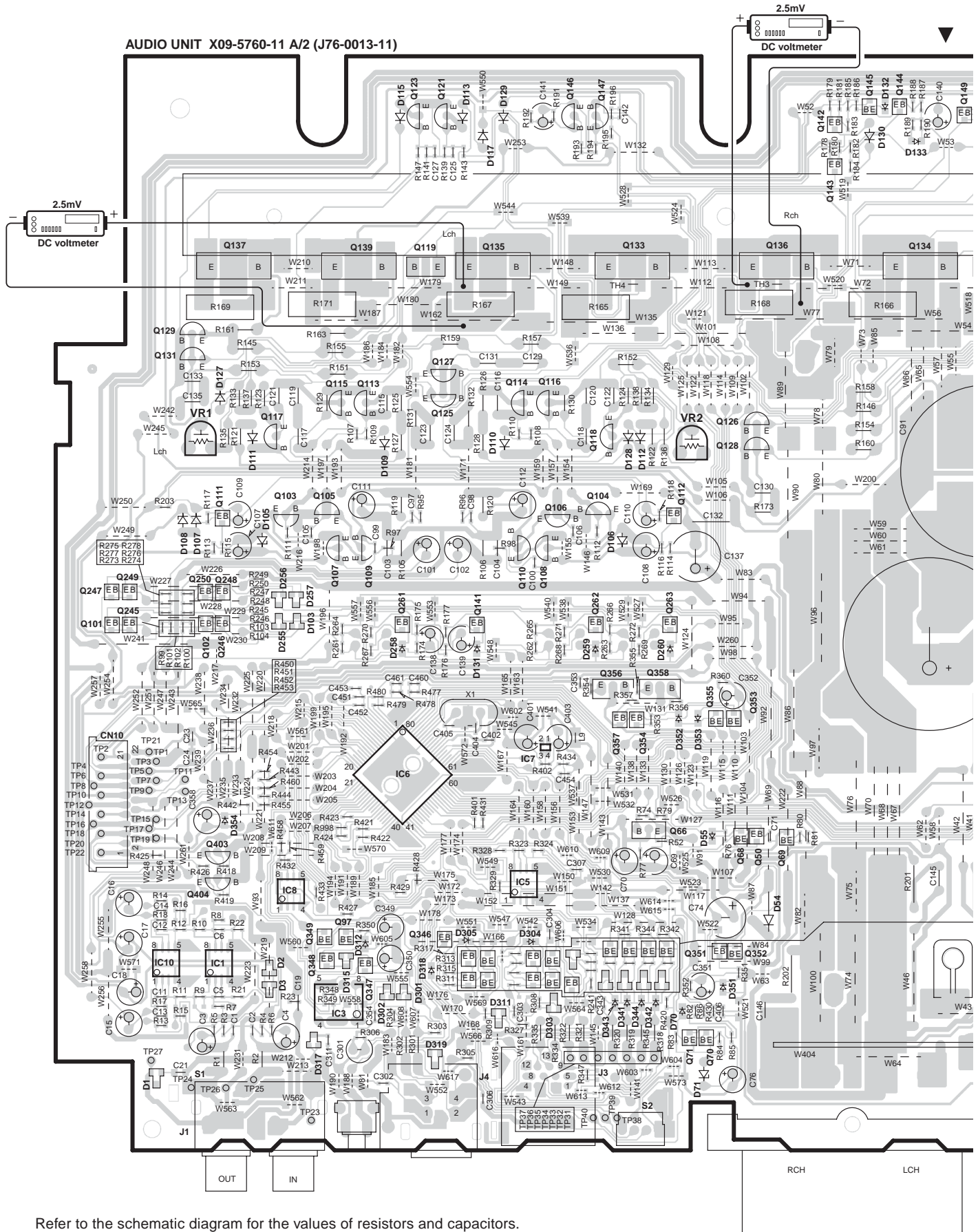
PC BOARD (FOIL SIDE VIEW)

PREAMPLIFIER UNIT X08-4150-11 (J76-0010-12)



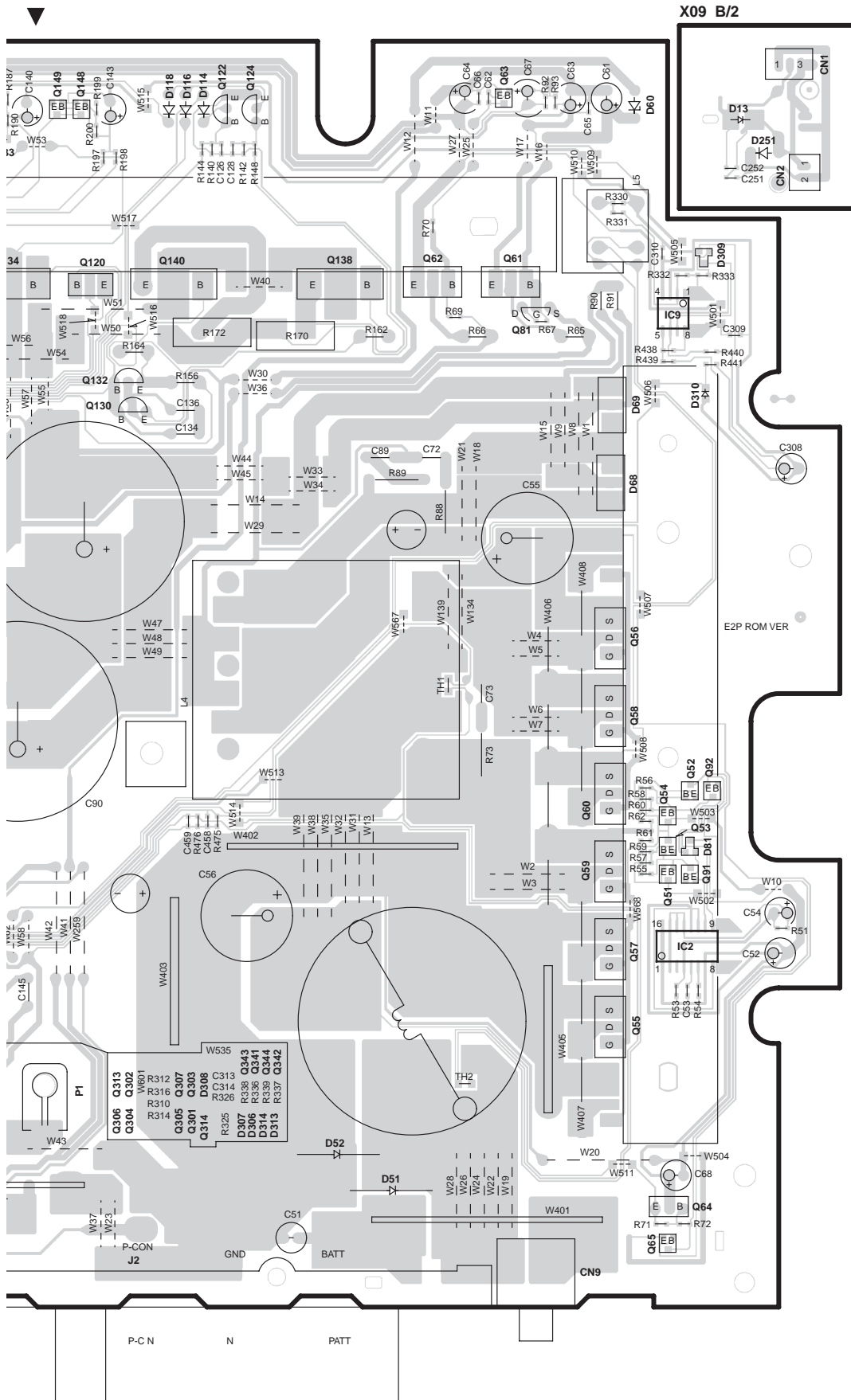
Refer to the schematic diagram for the values of resistors and capacitors.

KAC-X522 PC BOARD (FOIL SIDE VIEW)



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

X09-5760-11



Ref. No.	Address	Ref. No.	Address
IC1	6L	Q123	2M
IC2	5R	Q124	2Q
IC3	6L	Q125	3M
IC5	5M	Q126	3N
IC6	5M	Q127	3M
IC7	5M	Q128	3N
IC9	3R	Q129	3L
IC10	6L	Q130	3P
Q50	5N	Q131	3L
Q51	5R	Q132	3P
Q52	4R	Q133	2N
Q53	5R	Q134	2O
Q54	5R	Q135	2M
Q55	6R	Q136	2O
Q56	4R	Q137	2L
Q57	5R	Q138	2Q
Q58	4R	Q139	2L
Q59	5R	Q140	2P
Q60	5R	Q141	4M
Q61	2R	Q142	2O
Q62	2Q	Q143	2O
Q63	2R	Q144	2O
Q64	6R	Q145	2O
Q65	6R	Q146	2N
Q66	5N	Q147	2N
Q68	5N	Q148	2P
Q69	5O	Q149	2P
Q70	6N	Q301	6P
Q71	6N	Q302	6P
Q81	3R	Q303	6P
Q91	5R	Q304	6P
Q92	4R	Q305	6P
Q97	6L	Q306	6P
Q101	4K	Q307	6P
Q102	4L	Q313	6P
Q103	4L	Q314	6P
Q104	4N	Q341	6Q
Q105	4L	Q342	6Q
Q106	4M	Q343	6Q
Q107	4L	Q344	6Q
Q108	4M	Q346	6M
Q109	4M	Q347	6M
Q110	4M	Q348	6L
Q111	4L	Q349	6L
Q112	4N	Q351	6N
Q113	3M	Q352	6N
Q114	3M	Q353	5N
Q115	3L	Q354	5N
Q116	3M	Q355	5N
Q117	3L	Q356	4N
Q118	3N	Q357	5N
Q119	2M	Q358	4N
Q120	2P	Q403	5L
Q121	2M	Q404	5L
Q122	2P		

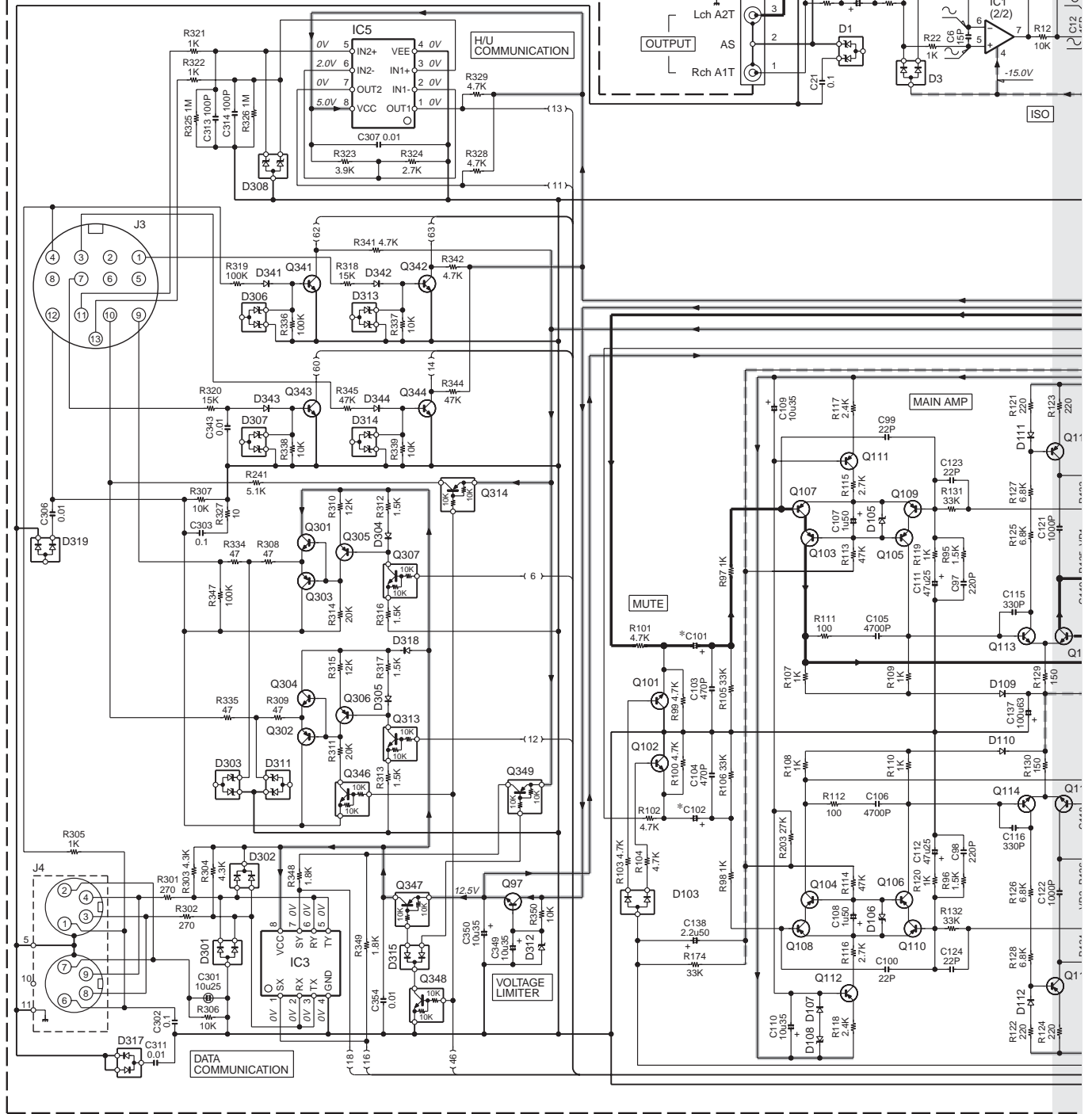
KAC-X522

- | | | | |
|--|------------------|--------------------------------|-----------------|
| Q50,68,70,71,97,101,102,143,144,148, 149,301,304,341-344,357 | : 2SC4081 | D1,303,306-308,311,313,314,319 | : STZ6.8N |
| Q51,52 | : 2SC4097 | D2,81,302,315 | : LM1MA142WK-G |
| Q53,54 | : 2SA1577 | D3,103,301 | : LM1MA142WA-G |
| Q55-60 | : 2SK3662-F | D51,52 | : RM4ZLF-J1NF |
| Q61 | : 2SD2012-F | D54 | : S5566B-Q |
| Q62 | : 2SB1375-F | D55 | : UDZ54.7B |
| Q63,69,111,112,142,145,302,303,305,306 | : 2SA1576A | D60 | : RD16JS-AZ(B) |
| Q64 | : 2SB1241 | D68 | : FCH10A20 |
| Q65,307,313,346,348,352,353,355 | : DTC114EUA | D69 | : FRH10A20 |
| Q66 | : 2SB1238 | D70 | : UDZS6.8B |
| Q81 | : 2SK246(BL)-F | D71 | : RD15JS-AZ(B) |
| Q91,92,314,347,349,351,354 | : DTA114EUA | D105,106,108 | : RD5.1JS-AZ(B) |
| Q103-110,123,124,147 | : 2SA992-A(F,E) | D107,109-118,127-130 | : 1S5133 |
| Q113-116 | : 2SC3478AA(L,K) | D131-133,304,305,318,341-344 | : 1S5355 |
| Q117,118 | : 2SA1376AA(L,K) | D309,317 | : DA204U |
| Q119,120 | : 2SC3419(Y)-F | D310,351,354 | : UDZS5.1B |
| Q121,122,146 | : 2SC1845-A(F,E) | D312 | : UDZS166B |
| Q125-128 | : 2SC2235-F | D352 | : UDZS108B |
| Q129-132 | : 2SA965-F | D353 | : UDZS3.3B |
| Q133-136 | : 2SC3856NF | | |
| Q137-140 | : 2SA1492NF | | |
| Q141 | : DTA124EUA | | |
| Q356,358 | : 2SC3902 | | |
| Q403,404 | : 2SC945AA(Q,P) | | |

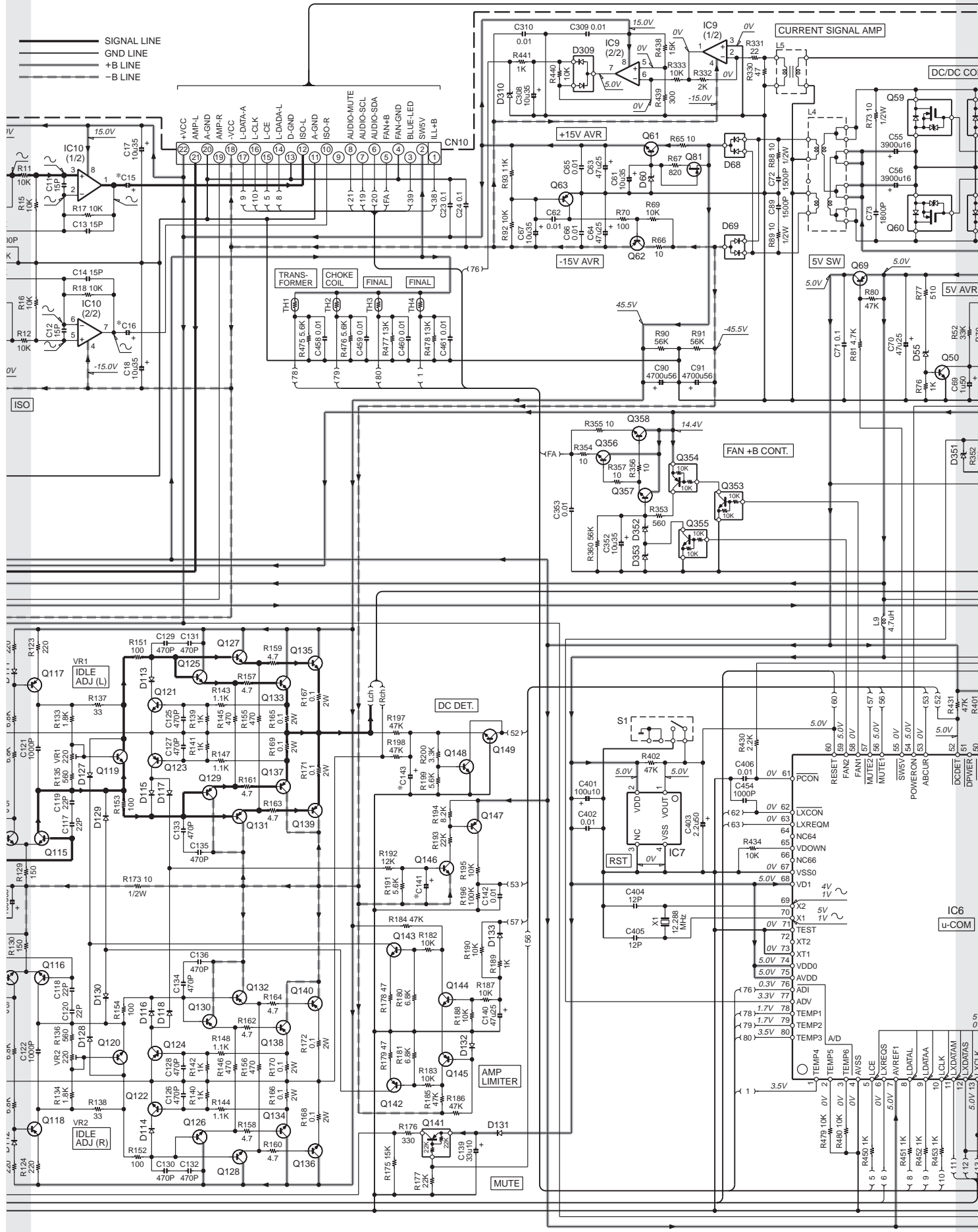
- | | |
|----------|-----------------|
| IC1,9,10 | : BA4560F |
| IC2 | : UPC494GS-A |
| IC3 | : P82B96PN |
| IC5 | : BA10393F |
| IC6 | : 784224YGC117A |
| IC7 | : PST3436UL-E |

X09-576x-xx			
MODEL NAME	UNIT No.	C15,16, 101,102	C141, 143
KAC-PS521	0-10	22u25	100u6.3
KAC-X522	0-11	22u50	100u10

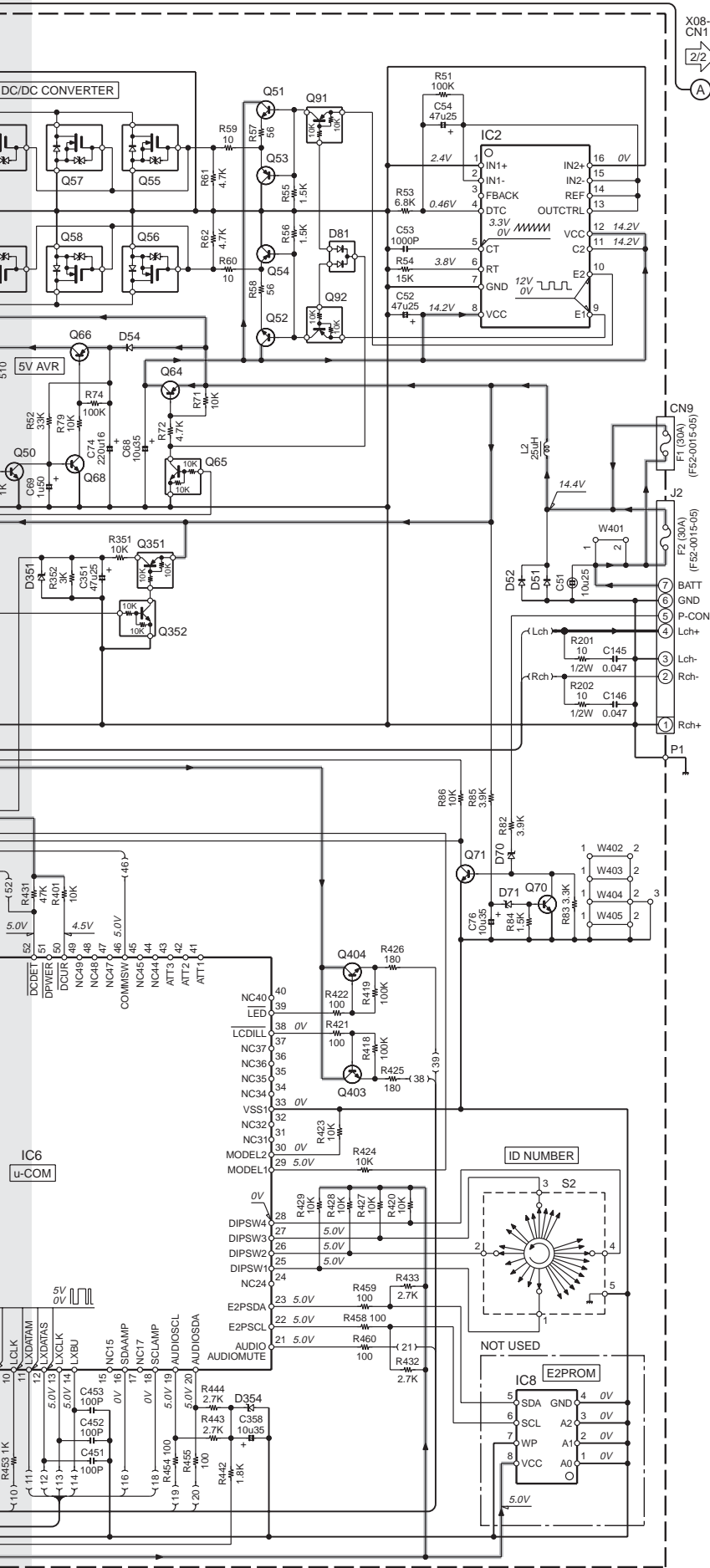
AUDIO UNIT (X09-576x-xx) (A/2)



KAC-X522

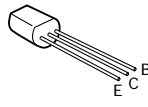


KAC-X522



KAC-X522 (1/2)

2SA965-F
2SA992-A
2SC1845-A
2SC2235-F



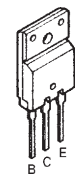
2SA1576A



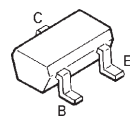
2SC3419



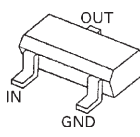
2SB1375-F
2SD2012-F



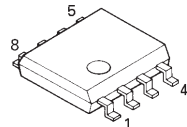
2SC4081



DTA114EUA
DTA124EUA
DTC114EUA



NJM4565MD-ZB



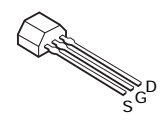
DA204U



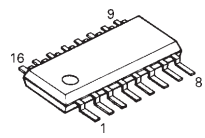
02CZ8.2-F



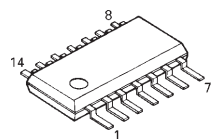
2SK246



UPC494GS-A



NJM2058M-ZB



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

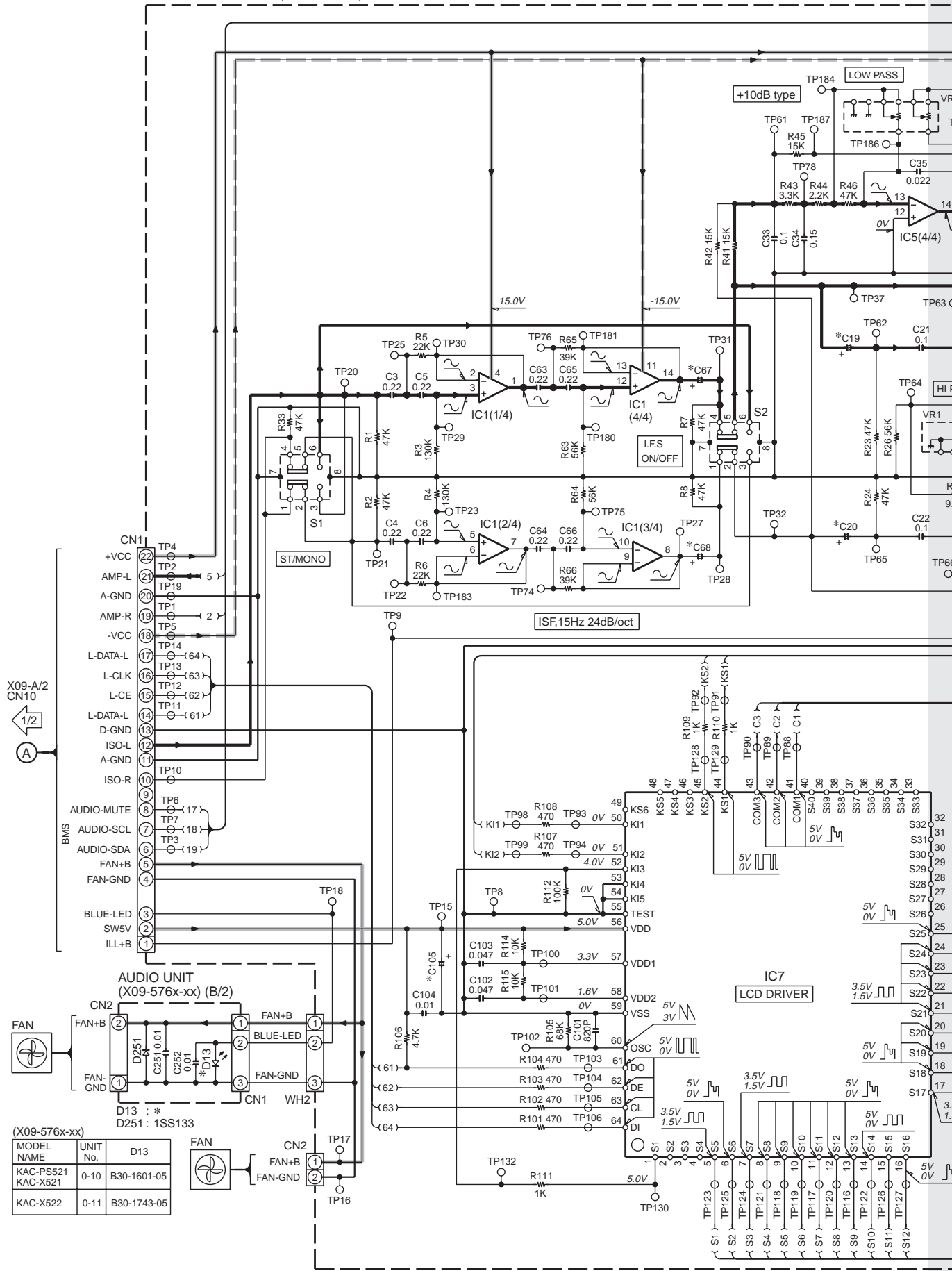
⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

• DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

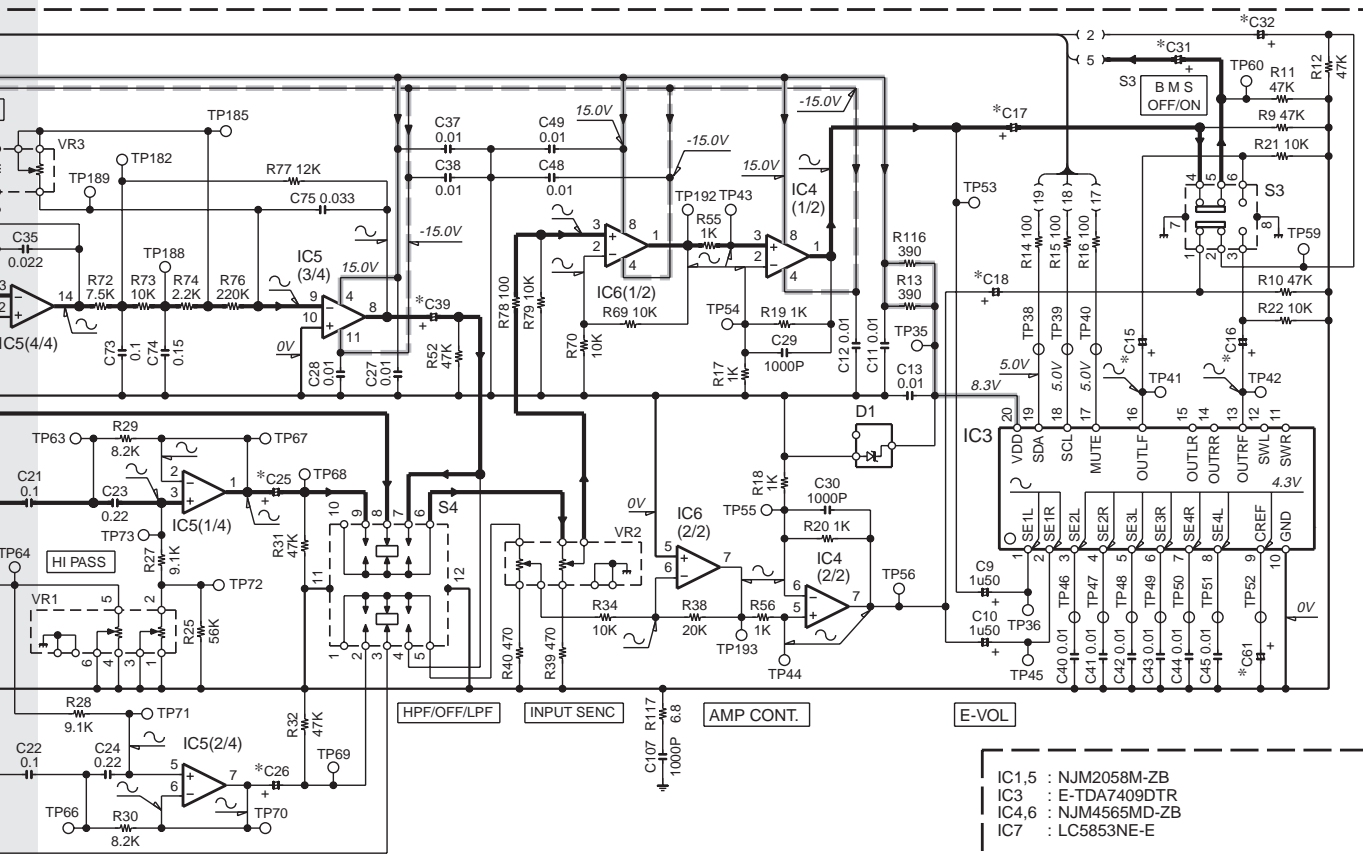
1
2
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7

KAC-X522

PREAMPLIFIER UNIT (X08-415x-xx)



KAC-X522



HPF,12dB/oct,F=VRcont

HPF/OFF/LPF

INPUT SENC

AMP CONT.

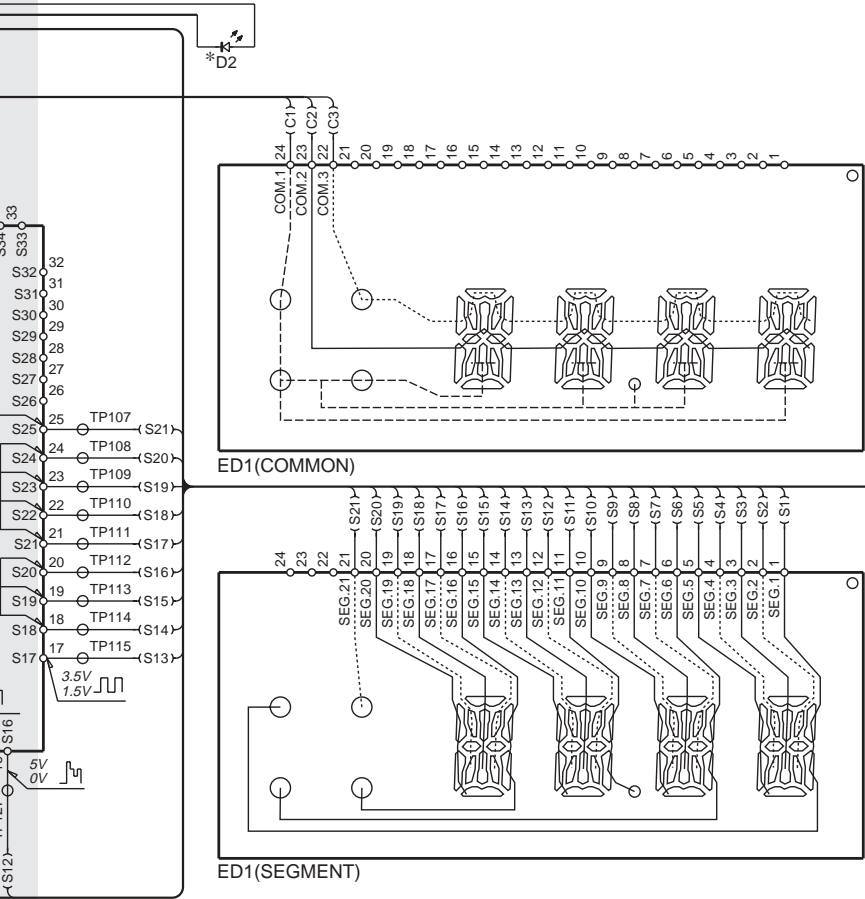
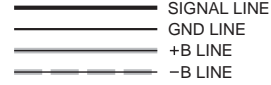
E-VOL

- IC1,5 : NJM2058M-ZB
- IC3 : E-TDA7409DTR
- IC4,6 : NJM4565MD-ZB
- IC7 : LC5853N-E

- D1 : 02CZ8.2-F(Y)
- D2 : *

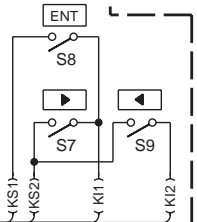
(X08-415x-xx)

MODEL NAME	UNIT No.	C15-20,25,26,31,32,39,61,67,68,105	D2
KAC-PS521	0-10	10u16	B30-1694-05
KAC-X521	0-11	10u35	B30-1641-05



ED1(COMMON)

ED1(SEGMENT)

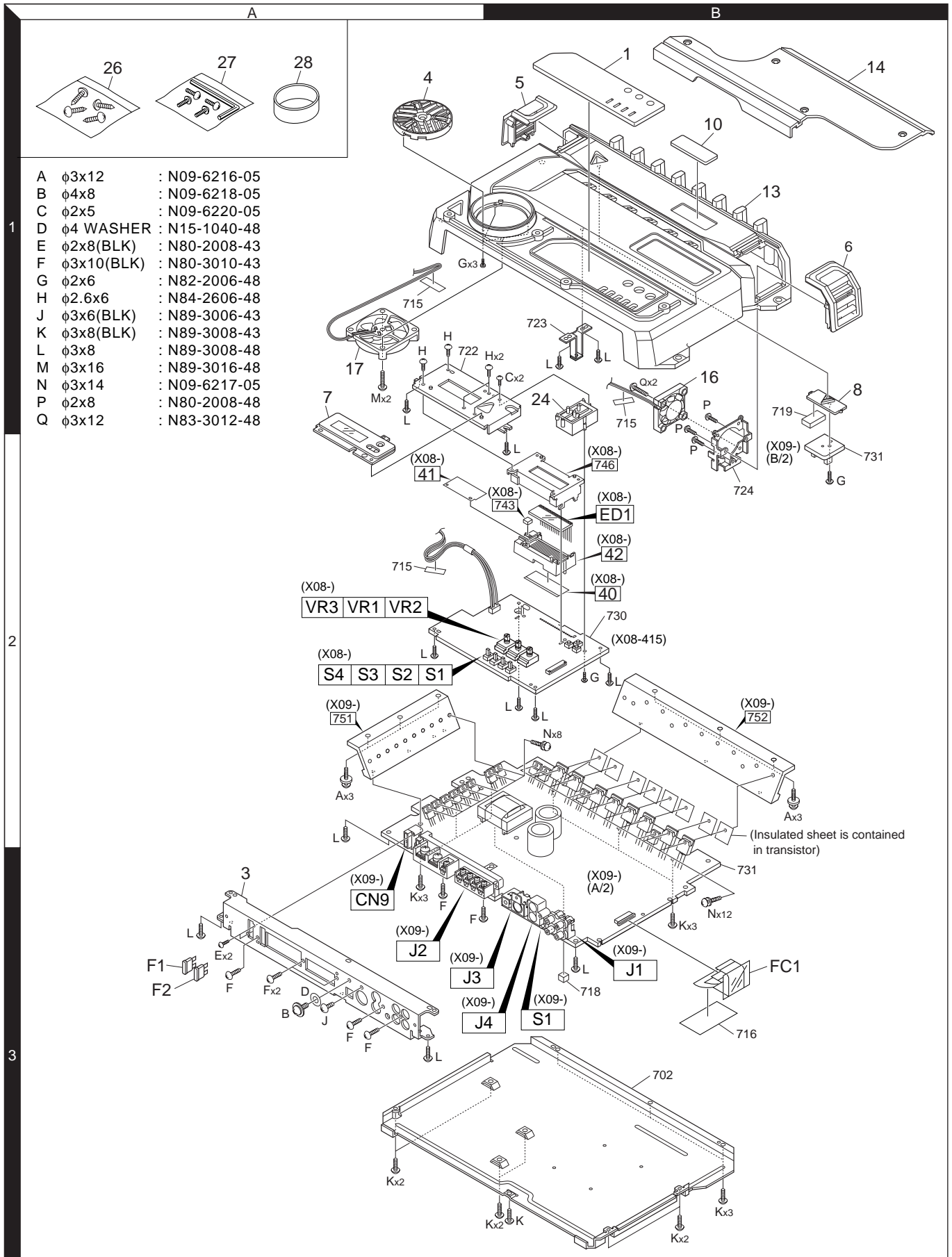


CAUTION : For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).
 ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably 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-X522 (2/2)

EXPLODED VIEW



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

KAC-X522

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.	Add	New	Parts No.	Description	Destination
KAC-X522					
1	1B	*	A21-6505-02	DRESSING PANEL	
3	3A	*	A64-3924-02	PANEL	
4	1A	*	B07-3176-03	ESCUTCHEON	
5	1B	*	B07-3177-02	ESCUTCHEON	
6	1B	*	B07-3178-02	ESCUTCHEON	
7	1A		B10-4717-03	FRONT GLASS	
8	1B		B19-2257-03	LIGHTING BOARD	
10	1B	*	B43-1537-04	BADGE	
-			B46-0682-00	WARRANTY CARD	
-		*	B64-3394-00	INST. MANUAL (ENG.FRE.SPA)	
FC1	3B		E39-0642-05	FLAT CABLE	
13	1B	*	F01-3533-01	HEAT SINK	
14	1B	*	F07-1177-02	COVER (TERMINAL COVER)	
16	1B	*	F09-1846-15	FAN (SIDE) (40X40X10)	
17	1A		F09-1885-15	FAN (TOP) (60X60X11.5)	
△ F1,2	3A		F52-0015-05	FUSE (BLADE TYPE) (30A)	
-			H10-4894-13	POLYSTYRENE FOAMED FIXTURE	
-			H13-2055-04	CARTON BOARD	
-			H25-1199-04	PROTECTION BAG	
-		*	H25-1200-04	PROTECTION BAG (250X350X0.03)	
-		*	H54-3782-03	ITEM CARTON CASE	
24	1B		K24-4146-03	PUSH KNOB (VR CAP)	
26	1A		N99-1577-15	SCREW SET	
27	1A		N99-1770-15	SCREW & WRENCH KEY SET	
A	2A		N09-6216-05	TAPTITE SCREW (3X12)	
B	3A		N09-6218-05	TAPTITE SCREW (4X8)	
C	1B		N09-6220-05	MACHINE SCREW (2X5)	
D	3A		N15-1040-48	FLAT WASHER	
E	3A		N80-2008-43	PAN HEAD TAPTITE SCREW	
F	3A		N80-3010-43	PAN HEAD TAPTITE SCREW	
G	1A		N82-2006-48	BINDING HEAD TAPTITE SCREW	
H	1A		N84-2606-48	PAN HEAD TAPTITE SCREW	
J	3A		N89-3006-43	BINDING HEAD TAPTITE SCREW	
K	3A		N89-3008-43	BINDING HEAD TAPTITE SCREW	
L	3A		N89-3008-48	BINDING HEAD TAPTITE SCREW	
M	1A		N89-3016-48	BINDING HEAD TAPTITE SCREW	
P	1B		N80-2008-48	PAN HEAD TAPTITE SCREW	
Q	1B		N83-3012-48	PAN HEAD TAPTITE SCREW	
28	1A		W01-1606-05	ACCESSORY	
PREAMPLIFIER UNIT (X08-4150-11)					
40	2B		B11-1446-04	REFLECTION SHEET	
41	2A		B11-1447-04	OPTICAL DIFFUSER	
42	2B		B19-2258-12	LIGHTING BOARD	
D2			B30-1641-05	LED	
ED1	2B		B38-1150-05	LCD ASSY	
C3-6			CK73FB1H224K	CHIP C 0.22UF K	
C9,10			CD04AS1H010M	ELECTRO 1UF 50WV	
C11-13			CK73GB1H103K	CHIP C 0.010UF K	
C15-20			CD04AS1V100M	ELECTRO 10UF 35WV	
C21,22			CK73GB1H104K	CHIP C 0.10UF K	

Ref. No.	Add	New	Parts No.	Description	Destination
C23,24			CK73FB1H224K	CHIP C 0.22UF K	
C25,26			CD04AS1V100M	ELECTRO 10UF 35WV	
C27,28			CK73GB1H103K	CHIP C 0.010UF K	
C29,30			CK73GB1H102K	CHIP C 1000PF K	
C31,32			CD04AS1V100M	ELECTRO 10UF 35WV	
C33			CK73GB1H104K	CHIP C 0.10UF K	
C34			CK73FB1E154K	CHIP C 0.15UF K	
C35			CK73GB1H223K	CHIP C 0.022UF K	
C37,38			CK73GB1H103K	CHIP C 0.010UF K	
C39			CD04AS1V100M	ELECTRO 10UF 35WV	
C40-45			CK73GB1H103K	CHIP C 0.010UF K	
C48,49			CK73GB1H103K	CHIP C 0.010UF K	
C61			CD04AS1V100M	ELECTRO 10UF 35WV	
C63-66			CK73FB1H224K	CHIP C 0.22UF K	
C67,68			CD04AS1V100M	ELECTRO 10UF 35WV	
C73			CK73GB1H104K	CHIP C 0.10UF K	
C74			CK73FB1E154K	CHIP C 0.15UF K	
C75			CK73GB1H333K	CHIP C 0.033UF K	
C101			CK73GB1H821K	CHIP C 820PF K	
C102,103			CK73GB1H473K	CHIP C 0.047UF K	
C104			CK73GB1H103K	CHIP C 0.010UF K	
C105			CD04AS1V100M	ELECTRO 10UF 35WV	
C107			CK73GB1H102K	CHIP C 1000PF K	
CN1			E41-2178-05	FLAT CABLE CONNECTOR (22P)	
CN2			E41-0941-05	PIN ASSY (2P)	
WH2			E39-0655-05	WIRING HARNESS	
R1,2			RK73GB2A473J	CHIP R 47K J 1/10W	
R3,4			RK73GB2A134J	CHIP R 130K J 1/10W	
R5,6			RK73GB2A223J	CHIP R 22K J 1/10W	
R7-12			RK73GB2A473J	CHIP R 47K J 1/10W	
R13			RD14BB2C391J	RD 390 J 1/6W	
R14-16			RK73GB2A101J	CHIP R 100 J 1/10W	
R17-20			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R21,22			RK73GB2A103J	CHIP R 10K J 1/10W	
R23,24			RK73GB2A473J	CHIP R 47K J 1/10W	
R25,26			RK73GB2A563J	CHIP R 56K J 1/10W	
R27,28			RK73GB2A912J	CHIP R 9.1K J 1/10W	
R29,30			RK73GB2A822J	CHIP R 8.2K J 1/10W	
R31-33			RK73GB2A473J	CHIP R 47K J 1/10W	
R34			RK73GB2A103J	CHIP R 10K J 1/10W	
R38			RK73GB2A203J	CHIP R 20K J 1/10W	
R39,40			RK73GB2A471J	CHIP R 470 J 1/10W	
R41,42			RK73GB2A153J	CHIP R 15K J 1/10W	
R43			RK73GB2A332J	CHIP R 3.3K J 1/10W	
R44			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R45			RK73GB2A153J	CHIP R 15K J 1/10W	
R46			RK73GB2A473J	CHIP R 47K J 1/10W	
R52			RK73GB2A473J	CHIP R 47K J 1/10W	
R55,56			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R63,64			RK73GB2A563J	CHIP R 56K J 1/10W	
R65,66			RK73GB2A393J	CHIP R 39K J 1/10W	
R69,70			RK73GB2A103J	CHIP R 10K J 1/10W	
R72			RK73GB2A752J	CHIP R 7.5K J 1/10W	
R73			RK73GB2A103J	CHIP R 10K J 1/10W	

E : Europe K : North America M : Other Areas E : Without Europe

△ Indicates safety critical components.

PARTS LIST

PREAMPLIFIER UNIT (X08-4150-11)

Ref. No.	Add	New	Parts No.	Description	Destination
R74			RK73GB2A222J	CHIP R 2.2K J 1/10W	
R76			RK73GB2A224J	CHIP R 220K J 1/10W	
R77			RK73GB2A123J	CHIP R 12K J 1/10W	
R78			RK73GB2A101J	CHIP R 100 J 1/10W	
R79			RK73GB2A103J	CHIP R 10K J 1/10W	
R101-104			RK73GB2A471J	CHIP R 470 J 1/10W	
R105			RK73GB2A683J	CHIP R 68K J 1/10W	
R106			RK73GB2A472J	CHIP R 4.7K J 1/10W	
R107,108			RK73GB2A471J	CHIP R 470 J 1/10W	
R109-111			RK73GB2A102J	CHIP R 1.0K J 1/10W	
R112			RK73GB2A104J	CHIP R 100K J 1/10W	
R114,115			RK73GB2A103J	CHIP R 10K J 1/10W	
R116			RD14BB2C391J	RD 390 J 1/6W	
R117			RD14BB2C6R8J	RD 6.8 J 1/6W	
VR1	2A		R31-0241-05	VARIABLE RESISTOR 50K (C)	
VR2	2A		R31-0238-05	VARIABLE RESISTOR 10K (A)	
VR3	2A		R31-0241-05	VARIABLE RESISTOR 50K (C)	
S1-3	2A		S62-0873-05	SLIDE SWITCH	
S4	2A		S62-0874-05	SLIDE SWITCH	
S7-9			S70-0922-05	TACT SWITCH	
D1		*	02CZ8.2-F(Y)	ZENER DIODE	
IC1			NJM2058M-ZB	ANALOGUE IC	
IC3			E-TDA7409DTR	ANALOGUE IC	
IC4			NJM4565MD-ZB	ANALOGUE IC	
IC5			NJM2058M-ZB	ANALOGUE IC	
IC6			NJM4565MD-ZB	ANALOGUE IC	
IC7			LC75853NE-E	MOS-IC	
AUDIO UNIT (X09-5760-11)					
D13		*	B30-1743-05	LED (RED LED)	
C1,2			CK73GB1H471K	CHIP C 470PF K	
C3,4		*	CD04BJ1V100M	ELECTRO 10UF 35WV	
C5,6			CC73GCH1H150J	CHIP C 15PF J	
C11-14			CC73GCH1H150J	CHIP C 15PF J	
C15,16			CD04BJ1H220M	ELECTRO 22UF 50WV	
C17,18		*	CD04BJ1V100M	ELECTRO 10UF 35WV	
C19			CQ93FMG1H102J	MYLAR 1000PF J	
C21			CK73FB1H104K	CHIP C 0.10UF K	
C23,24			CK73FB1H104K	CHIP C 0.10UF K	
C51			C90-5557-05	ELECTRO 10UF 25WV	
C52			CD04BJ1E470M	ELECTRO 47UF 25WV	
C53			CK73GB1H102K	CHIP C 1000PF K	
C54			CD04BJ1E470M	ELECTRO 47UF 25WV	
C55,56			CD04BC1C392M	ELECTRO 3900UF 16WV	
C61		*	CD04BJ1V100M	ELECTRO 10UF 35WV	
C62			CK73GB1H103K	CHIP C 0.010UF K	
C63,64			CD04BJ1E470M	ELECTRO 47UF 25WV	
C65,66			CK73GB1H103K	CHIP C 0.010UF K	
C67,68		*	CD04BJ1V100M	ELECTRO 10UF 35WV	
C69			CD04BJ1H010M	ELECTRO 1.0UF 50WV	
C70			CD04BJ1E470M	ELECTRO 47UF 25WV	
C71			CK73GB1H104K	CHIP C 0.10UF K	
C72			CQ93FMG1H152J	MYLAR 1500PF J	
C73			CQ93FMG1H182J	MYLAR 1800PF J	

Ref. No.	Add	New	Parts No.	Description	Destination
C74			CD04BJ1E221M	ELECTRO 220UF 25WV	
C76		*	CD04BJ1V100M	ELECTRO 10UF 35WV	
C89			CQ93FMG1H152J	MYLAR 1500PF J	
C90,91			C90-5690-05	ELECTRO 4700UF 56WV	
C97,98			CK73GB1H221K	CHIP C 220PF K	
C99,100			CC73GCH1H220J	CHIP C 22PF J	
C101,102			CD04BJ1H220M	ELECTRO 22UF 50WV	
C103,104			CK45FB1H471K	CERAMIC 470PF K	
C105,106			CK73GB1H472K	CHIP C 4700PF K	
C107,108			CD04BJ1H010M	ELECTRO 1.0UF 50WV	
C109,110		*	CD04BJ1V100M	ELECTRO 10UF 35WV	
C111,112			CD04BJ1E470M	ELECTRO 47UF 25WV	
C115,116			CC45FSL1H331J	CERAMIC 330PF J	
C117-120			CC45FSL1H220J	CERAMIC 22PF J	
C121,122			CK45FB1H102K	CERAMIC 1000PF K	
C123,124			CC45FSL1H220J	CERAMIC 22PF J	
C125-128			CK73GB1H471K	CHIP C 470PF K	
C129-136			CK45FB1H471K	CERAMIC 470PF K	
C137			CD04BJ1J101M	ELECTRO 100UF 63WV	
C138			CD04BJ1H2R2M	ELECTRO 2.2UF 50WV	
C139		*	CD04BJ1A330M	ELECTRO 33UF 10WV	
C140			CD04BJ1E470M	ELECTRO 47UF 25WV	
C141			CD04BJ1A101M	ELECTRO 100UF 10WV	
C142			CK73GB1H103K	CHIP C 0.010UF K	
C143			CD04BJ1A101M	ELECTRO 100UF 10WV	
C145,146			CQ93FMG1H473J	MYLAR 0.047UF J	
C251,252			CK73GB1H103K	CHIP C 0.010UF K	
C301			C90-5557-05	ELECTRO 10UF 25WV	
C302,303			CK73GB1H104K	CHIP C 0.10UF K	
C306,307			CK73GB1H103K	CHIP C 0.010UF K	
C308		*	CD04BJ1V100M	ELECTRO 10UF 35WV	
C309-311			CK73GB1H103K	CHIP C 0.010UF K	
C313,314			CC73GCH1H101J	CHIP C 100PF J	
C343			CK73GB1H103K	CHIP C 0.010UF K	
C349,350		*	CD04BJ1V100M	ELECTRO 10UF 35WV	
C351			CD04BJ1E470M	ELECTRO 47UF 25WV	
C352		*	CD04BJ1V100M	ELECTRO 10UF 35WV	
C353,354			CK73GB1H103K	CHIP C 0.010UF K	
C358		*	CD04BJ1V100M	ELECTRO 10UF 35WV	
C401			CD04BJ1A101M	ELECTRO 100UF 10WV	
C402			CK73GB1H103K	CHIP C 0.010UF K	
C403			CD04BJ1H2R2M	ELECTRO 2.2UF 50WV	
C404,405			CC73GCH1H120J	CHIP C 12PF J	
C406			CK73GB1H103K	CHIP C 0.010UF K	
C451-453			CC73GCH1H101J	CHIP C 100PF J	
C454			CK73GB1H102K	CHIP C 1000PF K	
C458-461			CK73GB1H103K	CHIP C 0.010UF K	
CN1			E41-0928-05	PIN ASSY (3P)	
CN2			E41-0927-05	PIN ASSY (2P)	
CN10			E41-2202-05	FLAT CABLE CONNECTOR (22P)	
J1	3B		E63-0921-05	PIN JACK (4P)	
J2	3A		E70-0838-05	SCREW TERMINAL BOARD (7P)	
J3	3B		E56-0856-05	CYLINDRICAL RECEPTACLE (13P)	
J4	3B		E56-0853-05	CYLINDRICAL RECEPTACLE (4P×2)	

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PARTS LIST

AUDIO UNIT (X09-5760-11)

Ref. No.	Add New	Parts No.	Description	Destination
△ CN9	3A	J13-0602-05	FUSE HOLDER	
L2		L33-1972-05	CHOKE COIL (25UH)	
L4		L19-0764-05	TRANSFORMER FOR CONVERTER	
L5		L19-0758-05	TRANSFORMER FOR CONVERTER	
L9		L41-4795-33	SMALL FIXED INDUCTOR (4.7UH)	
X1		L77-2844-05	CRYSTAL RESONATOR (12.288MHZ)	
F	3A	N80-3010-43	PAN HEAD TAPTITE SCREW	
K	3A	N89-3008-43	BINDING HEAD TAPTITE SCREW	
N	2B	N09-6217-05	TAPTITE SCREW (3X14)	
R1,2		RD14BB2C102J	RD 1.0K J 1/6W	
R3,4		RK73GB2A103J	CHIP R 10K J 1/10W	
R5,6		RK73GB2A102J	CHIP R 1.0K J 1/10W	
R7-10		RK73GB2A103J	CHIP R 10K J 1/10W	
R11-18		RK73GH2A103D	CHIP R 10K D 1/10W	
R21-23		RK73GB2A102J	CHIP R 1.0K J 1/10W	
R51		RK73GB2A104J	CHIP R 100K J 1/10W	
R52		RK73GB2A333J	CHIP R 33K J 1/10W	
R53		RK73GB2A682J	CHIP R 6.8K J 1/10W	
R54		RK73GB2A153J	CHIP R 15K J 1/10W	
R55,56		RK73GB2A152J	CHIP R 1.5K J 1/10W	
R57,58		RK73GB2A560J	CHIP R 56 J 1/10W	
R59,60		RK73GB2A100J	CHIP R 10 J 1/10W	
R61,62		RK73GB2A472J	CHIP R 4.7K J 1/10W	
R65,66		RD14NB2E100J	RD 10 J 1/4W	
R67		RK73GB2A821J	CHIP R 820 J 1/10W	
R69		RK73GB2A103J	CHIP R 10K J 1/10W	
R70		RK73GB2A101J	CHIP R 100 J 1/10W	
R71		RK73GB2A103J	CHIP R 10K J 1/10W	
R72		RK73GB2A472J	CHIP R 4.7K J 1/10W	
R73		RD14DB2H100J	SMALL-RD 10 J 1/2W	
R74		RK73GB2A104J	CHIP R 100K J 1/10W	
R76		RK73GB2A102J	CHIP R 1.0K J 1/10W	
R77		RK73GB2A511J	CHIP R 510 J 1/10W	
R79		RK73GB2A103J	CHIP R 10K J 1/10W	
R80		RK73GB2A473J	CHIP R 47K J 1/10W	
R81		RK73GB2A472J	CHIP R 4.7K J 1/10W	
R82		RK73GB2A392J	CHIP R 3.9K J 1/10W	
R83		RK73GB2A332J	CHIP R 3.3K J 1/10W	
R84		RK73GB2A152J	CHIP R 1.5K J 1/10W	
R85		RK73GB2A392J	CHIP R 3.9K J 1/10W	
R86		RK73GB2A103J	CHIP R 10K J 1/10W	
R88,89		RD14DB2H100J	SMALL-RD 10 J 1/2W	
R90,91		RD14BB2C563J	RD 56K J 1/6W	
R92		RK73GB2A103J	CHIP R 10K J 1/10W	
R93		RK73GB2A113J	CHIP R 11K J 1/10W	
R95,96		RK73GB2A152J	CHIP R 1.5K J 1/10W	
R97,98		RK73GB2A102J	CHIP R 1.0K J 1/10W	
R99-104		RK73GB2A472J	CHIP R 4.7K J 1/10W	
R105,106		RD14BB2C333J	RD 33K J 1/6W	
R107-110		RK73GB2A102J	CHIP R 1.0K J 1/10W	
R111,112		RK73GB2A101J	CHIP R 100 J 1/10W	
R113,114		RK73GB2A473J	CHIP R 47K J 1/10W	
R115,116		RK73GB2A272J	CHIP R 2.7K J 1/10W	
R117,118		RK73GB2A242J	CHIP R 2.4K J 1/10W	

Ref. No.	Add New	Parts No.	Description	Destination
R119,120		RD14BB2C102J	RD 1.0K J 1/6W	
R121-124		RD14BB2C221J	RD 220 J 1/6W	
R125-128		RD14BB2C682J	RD 6.8K J 1/6W	
R129,130		RD14BB2C151J	RD 150 J 1/6W	
R131,132		RD14BB2C333J	RD 33K J 1/6W	
R133,134		RD14BB2C182J	RD 1.8K J 1/6W	
R135,136		RD14BB2C561J	RD 560 J 1/6W	
R137,138		RD14BB2C330J	RD 33 J 1/6W	
R139-142		RK73GB2A102J	CHIP R 1.0K J 1/10W	
R143,144		RK73GB2A112J	CHIP R 1.1K J 1/10W	
R145,146		RD14NB2E471J	RD 470 J 1/4W	
R147,148		RK73GB2A112J	CHIP R 1.1K J 1/10W	
R151-154		RD14NB2E101J	RD 100 J 1/4W	
R155,156		RD14NB2E471J	RD 470 J 1/4W	
R157-164		RD14NB2E47J	RD 4.7 J 1/4W	
R165-172		R92-0205-05	METAL-PLATE 0.1 K 2W	
R173		RD14DB2H100J	SMALL-RD 10 J 1/2W	
R174		RK73GB2A333J	CHIP R 33K J 1/10W	
R175		RK73GB2A153J	CHIP R 15K J 1/10W	
R176		RK73GB2A331J	CHIP R 330 J 1/10W	
R177		RK73GB2A223J	CHIP R 22K J 1/10W	
R178,179		RK73GB2A470J	CHIP R 47 J 1/10W	
R180,181		RK73GB2A682J	CHIP R 6.8K J 1/10W	
R182,183		RK73GB2A103J	CHIP R 10K J 1/10W	
R184-186		RK73GB2A473J	CHIP R 47K J 1/10W	
R187,188		RK73GB2A103J	CHIP R 10K J 1/10W	
R189		RK73GB2A102J	CHIP R 1.0K J 1/10W	
R190		RK73GB2A103J	CHIP R 10K J 1/10W	
R191		RK73GB2A562J	CHIP R 5.6K J 1/10W	
R192		RK73GB2A123J	CHIP R 12K J 1/10W	
R193		RK73GB2A223J	CHIP R 22K J 1/10W	
R194		RK73GB2A822J	CHIP R 8.2K J 1/10W	
R195		RK73GB2A103J	CHIP R 10K J 1/10W	
R196		RK73GB2A104J	CHIP R 100K J 1/10W	
R197,198		RK73GB2A473J	CHIP R 47K J 1/10W	
R199		RK73GB2A562J	CHIP R 5.6K J 1/10W	
R200		RK73GB2A332J	CHIP R 3.3K J 1/10W	
R201,202		RD14DB2H100J	SMALL-RD 10 J 1/2W	
R203		RK73GB2A273J	CHIP R 27K J 1/10W	
R241		RK73GB2A512J	CHIP R 5.1K J 1/10W	
R301,302		RD14BB2C271J	RD 270 J 1/6W	
R303,304		RK73GB2A432J	CHIP R 4.3K J 1/10W	
R305		RK73GB2A102J	CHIP R 1.0K J 1/10W	
R306,307		RK73GH2A103D	CHIP R 10K D 1/10W	
R308,309		RK73GB2A470J	CHIP R 47 J 1/10W	
R310		RK73GB2A123J	CHIP R 12K J 1/10W	
R311		RK73GB2A203J	CHIP R 20K J 1/10W	
R312,313		RK73GB2A152J	CHIP R 1.5K J 1/10W	
R314		RK73GB2A203J	CHIP R 20K J 1/10W	
R315		RK73GB2A123J	CHIP R 12K J 1/10W	
R316,317		RK73GB2A152J	CHIP R 1.5K J 1/10W	
R318		RD14BB2C153J	RD 15K J 1/6W	
R319		RD14BB2C104J	RD 100K J 1/6W	
R320		RD14BB2C153J	RD 15K J 1/6W	
R321,322		RD14BB2C102J	RD 1.0K J 1/6W	

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PARTS LIST

AUDIO UNIT (X09-5760-11)

Ref. No.	Add	New	Parts No.	Description	Destination	Ref. No.	Add	New	Parts No.	Description	Destination
R323			RK73GB2A392J	CHIP R 3.9K J 1/10W		S2		*	S79-0853-05	DIP SWITCHES	
R324			RK73GB2A272J	CHIP R 2.7K J 1/10W		D1			STZ6.8N	ZENER DIODE	
R325,326			RK73GB2A105J	CHIP R 1.0M J 1/10W		D2			LM1MA142WK-G	DIODE	
R327			RK73GB2A100J	CHIP R 10 J 1/10W		D3			LM1MA142WA-G	DIODE	
R328,329			RK73GB2A472J	CHIP R 4.7K J 1/10W		D51,52			RM4ZLF-J1NF	DIODE	
R330			RK73GB2A470J	CHIP R 47 J 1/10W		D54			S5566B-Q	DIODE	
R331			RK73GB2A220J	CHIP R 22 J 1/10W		D55			UDZS4.7B	ZENER DIODE	
R332			RK73GB2A202J	CHIP R 2.0K J 1/10W		D60			RD16JS-AZ(B)	ZENER DIODE	
R333			RK73GB2A103J	CHIP R 10K J 1/10W		D68			FCH10A20	DIODE	
R334,335			RD14BB2C470J	RD 47 J 1/6W		D69			FRH10A20	DIODE	
R336			RK73GB2A104J	CHIP R 100K J 1/10W		D70			UDZS6.8B	ZENER DIODE	
R337-339			RK73GB2A103J	CHIP R 10K J 1/10W		D71			RD15JS-AZ(B)	ZENER DIODE	
R341,342			RK73GB2A472J	CHIP R 4.7K J 1/10W		D81			LM1MA142WK-G	DIODE	
R344			RK73GB2A473J	CHIP R 47K J 1/10W		D103			LM1MA142WA-G	DIODE	
R345			RD14BB2C473J	RD 47K J 1/6W		D105,106			RD5.1JS-AZ(B2)	ZENER DIODE	
R347			RK73GB2A104J	CHIP R 100K J 1/10W		D107			1SS133	DIODE	
R348,349			RK73GB2A182J	CHIP R 1.8K J 1/10W		D108			RD5.1JS-AZ(B2)	ZENER DIODE	
R350,351			RK73GB2A103J	CHIP R 10K J 1/10W		D109-118			1SS133	DIODE	
R352			RK73GB2A302J	CHIP R 3.0K J 1/10W		D127-130			1SS133	DIODE	
R353			RK73GB2A561J	CHIP R 560 J 1/10W		D131-133			1SS355	DIODE	
R354-357			RK73GB2A100J	CHIP R 10 J 1/10W		D251			1SS133	DIODE	
R360			RK73GB2A563J	CHIP R 56K J 1/10W		D301			LM1MA142WA-G	DIODE	
R401			RK73GB2A103J	CHIP R 10K J 1/10W		D302			LM1MA142WK-G	DIODE	
R402			RK73GB2A473J	CHIP R 47K J 1/10W		D303			STZ6.8N	ZENER DIODE	
R418,419			RK73GB2A104J	CHIP R 100K J 1/10W		D304,305			1SS355	DIODE	
R420			RK73GB2A103J	CHIP R 10K J 1/10W		D306-308			STZ6.8N	ZENER DIODE	
R421,422			RK73GB2A101J	CHIP R 100 J 1/10W		D309			DA204U	DIODE	
R423,424			RK73GB2A103J	CHIP R 10K J 1/10W		D310			UDZS5.1B	ZENER DIODE	
R425,426			RK73GB2A181J	CHIP R 180 J 1/10W		D311			STZ6.8N	ZENER DIODE	
R427-429			RK73GB2A103J	CHIP R 10K J 1/10W		D312			UDZS16B	ZENER DIODE	
R430			RK73GB2A222J	CHIP R 2.2K J 1/10W		D313,314			STZ6.8N	ZENER DIODE	
R431			RK73GB2A473J	CHIP R 47K J 1/10W		D315			LM1MA142WK-G	DIODE	
R432,433			RK73GB2A272J	CHIP R 2.7K J 1/10W		D317			DA204U	DIODE	
R434			RK73GB2A103J	CHIP R 10K J 1/10W		D318			1SS355	DIODE	
R438			RK73GB2A153J	CHIP R 15K J 1/10W		D319			STZ6.8N	ZENER DIODE	
R439			RK73GB2A301J	CHIP R 300 J 1/10W		D341-344			1SS355	DIODE	
R440			RK73GB2A103J	CHIP R 10K J 1/10W		D351			UDZS5.1B	ZENER DIODE	
R441			RK73GB2A102J	CHIP R 1.0K J 1/10W		D352			UDZS10B	ZENER DIODE	
R442			RK73GB2A182J	CHIP R 1.8K J 1/10W		D353			UDZS3.3B	ZENER DIODE	
R443,444			RK73GB2A272J	CHIP R 2.7K J 1/10W		D354			UDZS5.1B	ZENER DIODE	
R450-453			RK73GB2A102J	CHIP R 1.0K J 1/10W		IC1			BA4560F	ANALOGUE IC	
R454,455			RK73GB2A101J	CHIP R 100 J 1/10W		IC2		*	UPC494GS-A	ANALOGUE IC	
R458-460			RK73GB2A101J	CHIP R 100 J 1/10W		IC3			P82B96PN	ANALOGUE IC	
R475,476			RK73GB2A562J	CHIP R 5.6K J 1/10W		IC5			BA10393F	ANALOGUE IC	
R477,478			RK73GB2A133J	CHIP R 13K J 1/10W		IC6		*	784224YGC117A	MICROCONTROLLER IC	
R479,480			RK73GB2A103J	CHIP R 10K J 1/10W		IC7			PST3436UL-E	MOS-IC	
VR1,2			R32-0294-05	SEMI FIXED VARIABLE RESISTOR		IC9,10			BA4560F	ANALOGUE IC	
W501-511			RK73EB2E000J	CHIP R 0.0 J 1/4W		Q50			2SC4081	TRANSISTOR	
W513-532			RK73EB2E000J	CHIP R 0.0 J 1/4W		Q51,52			2SC4097	TRANSISTOR	
W534-545			RK73EB2E000J	CHIP R 0.0 J 1/4W		Q53,54			2SA1577	TRANSISTOR	
W547-558			RK73EB2E000J	CHIP R 0.0 J 1/4W		Q55-60			2SK3662-F	FET	
W560-573			RK73EB2E000J	CHIP R 0.0 J 1/4W		Q61			2SD2012-F	TRANSISTOR	
W601-617			R92-1252-05	CHIP R 0 OHM J 1/16W		Q62			2SB1375-F	TRANSISTOR	
S1	3B		S68-0806-05	PUSH SWITCH		Q63			2SA1576A	TRANSISTOR	

E : Europe K : North America M : Other Areas E : Without Europe

△ Indicates safety critical components.

PARTS LIST

AUDIO UNIT (X09-5760-11)

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
Q64			2SB1241	TRANSISTOR							
Q65			DTC114EUA	DIGITAL TRANSISTOR							
Q66			2SB1238	TRANSISTOR							
Q68			2SC4081	TRANSISTOR							
Q69			2SA1576A	TRANSISTOR							
Q70,71			2SC4081	TRANSISTOR							
Q81			2SK246(BL)-F	FET							
Q91,92			DTA114EUA	DIGITAL TRANSISTOR							
Q97			2SC4081	TRANSISTOR							
Q101,102			2SC4081	TRANSISTOR							
Q103-110			2SA992-A(F,E)	TRANSISTOR							
Q111,112			2SA1576A	TRANSISTOR							
Q113-116			2SC3478AA(L,K)	TRANSISTOR							
Q117,118			2SA1376AA(L,K)	TRANSISTOR							
Q119,120			2SC3419(Y)-F	TRANSISTOR							
Q121,122			2SC1845-A(F,E)	TRANSISTOR							
Q123,124			2SA992-A(F,E)	TRANSISTOR							
Q125-128			2SC2235-F	TRANSISTOR							
Q129-132			2SA965-F	TRANSISTOR							
Q133-136			2SC3856NF	TRANSISTOR							
Q137-140			2SA1492NF	TRANSISTOR							
Q141			DTA124EUA	DIGITAL TRANSISTOR							
Q142			2SA1576A	TRANSISTOR							
Q143,144			2SC4081	TRANSISTOR							
Q145			2SA1576A	TRANSISTOR							
Q146			2SC1845-A(F,E)	TRANSISTOR							
Q147			2SA992-A(F,E)	TRANSISTOR							
Q148,149			2SC4081	TRANSISTOR							
Q301			2SC4081	TRANSISTOR							
Q302,303			2SA1576A	TRANSISTOR							
Q304			2SC4081	TRANSISTOR							
Q305,306			2SA1576A	TRANSISTOR							
Q307			DTC114EUA	DIGITAL TRANSISTOR							
Q313			DTC114EUA	DIGITAL TRANSISTOR							
Q314			DTA114EUA	DIGITAL TRANSISTOR							
Q341-344			2SC4081	TRANSISTOR							
Q346			DTC114EUA	DIGITAL TRANSISTOR							
Q347			DTA114EUA	DIGITAL TRANSISTOR							
Q348			DTC114EUA	DIGITAL TRANSISTOR							
Q349			DTA114EUA	DIGITAL TRANSISTOR							
Q351			DTA114EUA	DIGITAL TRANSISTOR							
Q352,353			DTC114EUA	DIGITAL TRANSISTOR							
Q354			DTA114EUA	DIGITAL TRANSISTOR							
Q355			DTC114EUA	DIGITAL TRANSISTOR							
Q356			2SC3902	TRANSISTOR							
Q357			2SC4081	TRANSISTOR							
Q358			2SC3902	TRANSISTOR							
Q403,404			2SC945AA(Q,P)	TRANSISTOR							
TH1-4			NT732ATTD103J	THERMISTOR							

E : Europe K : North America M : Other Areas E : Without Europe

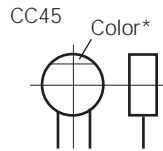
△ Indicates safety critical components.

PARTS LIST

CAPACITORS

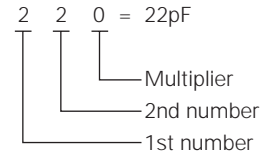
CC 45 TH 1H 220 J
 1 2 3 4 5 6

- 1 = Type ... ceramic, electrolytic, etc.
- 2 = Shape ... round, square, etc.
- 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	2150	4000	5000	6300	8000	-

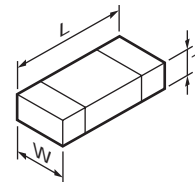
CHIP CAPACITORS

(EX) CC 73 F SL 1H 000 J
 1 2 3 4 5 6 7
 (Chip) (CH, RH, UJ, SL)

(EX) CK 73 F F 1H 000 Z
 1 2 3 4 5 6 7
 (Chip) (B, F)

- Refer to the table above.
- 1 = Type
- 2 = Shape
- 3 = Dimension
- 4 = Temp. coefficient
- 5 = Voltage rating
- 6 = Value
- 7 = Tolerance

• Dimension



Chip capacitor

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
H	1.0±0.05	0.5±0.05	0.5±0.05

Chip resistor

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
H	1.0±0.05	0.5±0.05	0.35±0.05

RESISTORS

• Chip resistor (Carbon)

(EX) RD 73 E B 2B 000 J
 1 2 3 4 5 6 7
 (Chip) (B, F)

• Carbon resistor (Normal type)

(EX) RD 14 B B 2C 000 J
 1 2 3 4 5 6 7
 (Chip) (B, F)

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

• 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		

SPECIFICATIONS

Audio Section

Max Power Output	1000W
Rated Power Output (+B=12.0V)	
Normal (4Ω) (20Hz~20kHz, 0.05% THD)	80W x 2
(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) (20Hz~20kHz, 0.05% THD)	125W x 2
(2Ω) (1kHz, 0.5% THD)	250W x 2
Bridged (4Ω) (1kHz, 0.5% THD)	500W x 1
Sensitivity (rated output)	
MAX.	0.2V
MIN.	5.0V
Input Impedance	10kΩ
Low Pass Filter Frequency (24dB/oct.)	
.....	50~200Hz (variable)
High Pass Filter Frequency (12dB/oct.)	
.....	50~200Hz (variable)
Infrasonic Filter Frequency (24dB/oct.)	15Hz
Frequency Response (+0, -3dB)	5Hz~70kHz
Signal to Noise Ratio	105dB

Amplifier Control Section (EQ)

Bass Frequency	60/80/100/200Hz
Bass Level	-15dB~+15dB
Bass Q Factor	1.00/1.25/1.50/2.00
Treble Frequency	10/12/15/17kHz
Treble Level	-15dB~+15dB

General

Operating Voltage	14.4V (11~16V allowable)
Current Consumption (+B=12.0V, 1kHz, 10% THD, 4Ω)	
.....	37A
Dimensions (W x H x D)	
.....	386 x 61 x 259.5 (mm), 15-3/16 x 2-3/8 x 10-3/16 (inch)
Installation Size (W x H x D)	
.....	386 x 61 x 265 (mm), 15-3/16 x 2-3/8 x 10-3/8 (inch)
Weight	3.83kg (8.44 lbs)

CEA-2006

RMS Power Output (+B=14.4V)	
Normal (4Ω/2ch) (1.0% THD+N)	165W
(2Ω/2ch) (1.0% THD+N)	254W (1kHz)
Bridged (4Ω) (1.0% THD+N)	505W x 1
Dynamic Power (+B=14.4V)	170W
Output Regulation (+B=14.4V)	Under 0.3dB (4Ω)
Signal to Noise Ratio	81dBa (W/4Ω)
Bypass	82dBa (W/4Ω)

KENWOOD follows a policy of continuous advancements in development.

For this reason specifications may be changed without notice.

Installation

