

STEREO INTEGRATED AMPLIFIER

KA-2060R/3060R

SERVICE MANUAL

KENWOOD

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B51-4863-00(K) 2710

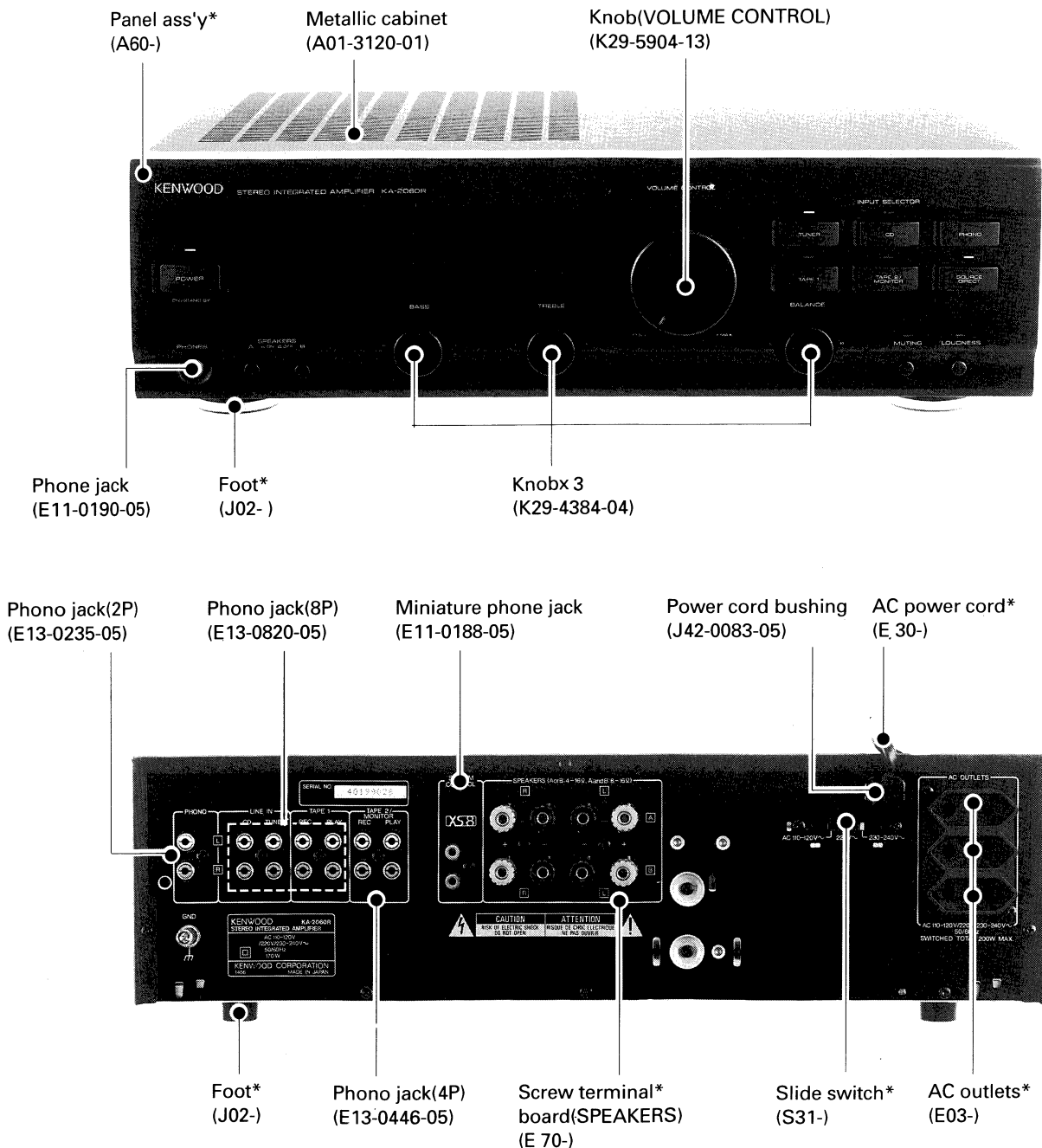


Photo is KA-2060R.

*Refer to parts list on page 16.

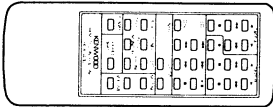
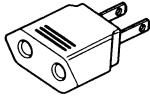
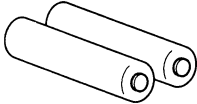
Caution : Signal ground floats from chassis ground. Please connect the cold lead of tester or oscilloscope to the cold terminal of speaker or input jack if check and/or measure the voltage.(Don't connect ground of unit.)

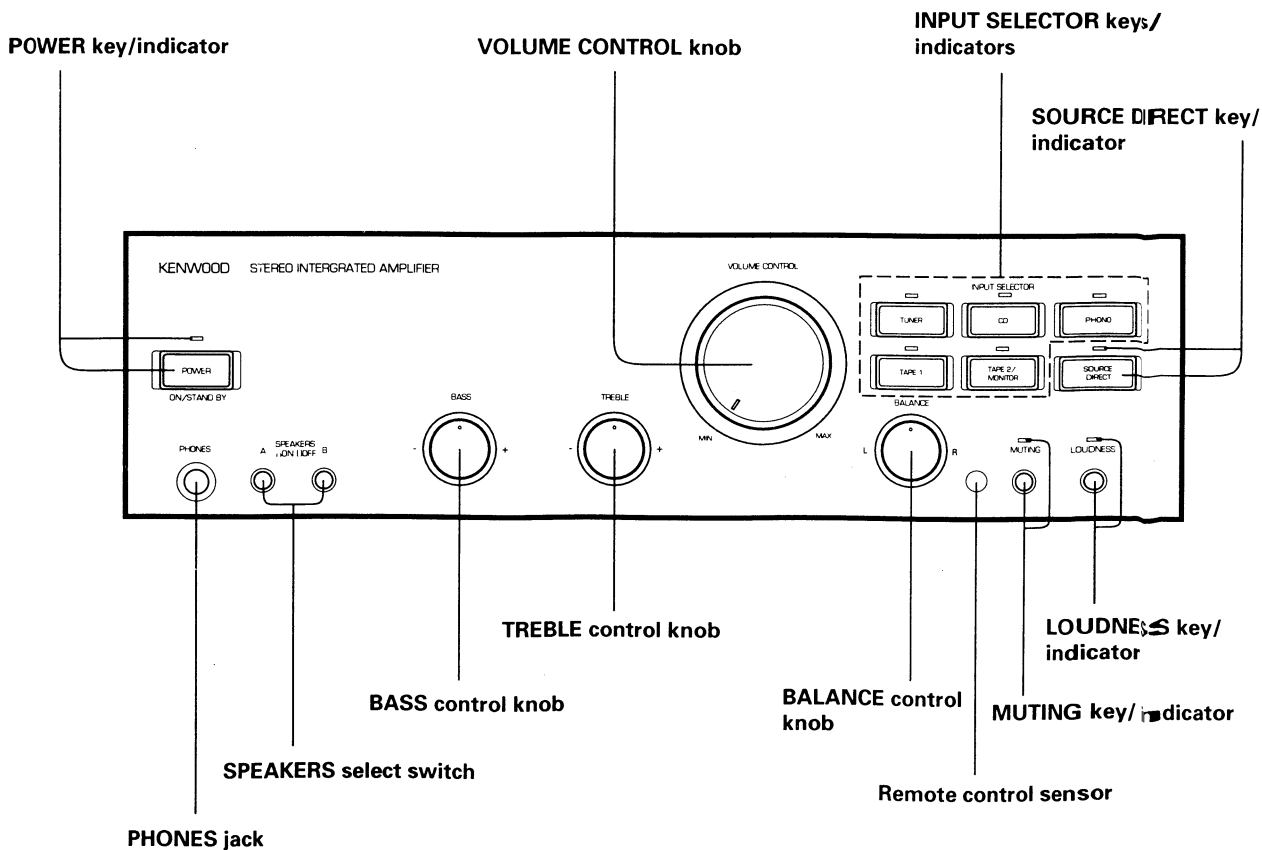
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For remote control and new M- con M37470M4 - 189SP
(X09 : IC4), Please refer to the manual of KA - 4060R.

Accessories

<ul style="list-style-type: none"> · Remote control unit 1 (A70 - 0979 - 05) Battery cover : (A09 - 0159 - 08) 	<ul style="list-style-type: none"> · AC plug adaptor 1 (Except for U. K., Australia and Europe) For the unit with a European AC plug in areas other than Europe. (E03 - 0115 - 05) 
<ul style="list-style-type: none"> · Batteries (R03 / UM - 4 / "AAA") 2 (-) 	

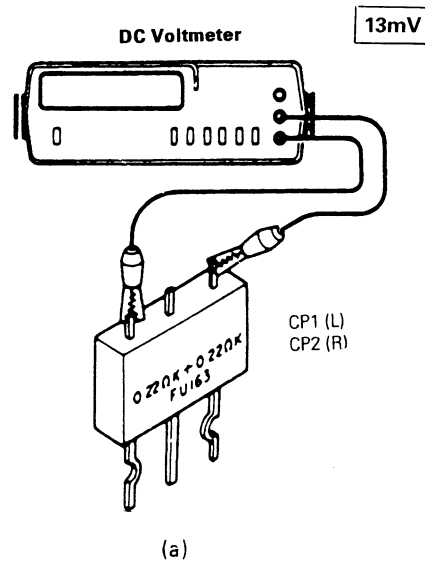


ADJUSTMENT

ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTING	ALIGNMENT POINTS	ALIGN FOR	FIG.
Unless otherwise specified, set the respective switches as follows : POWER : ON SPEAKER : B REC OUT : OFF SELECTOR : PHONO							
1	IDLE CURRENT (KA-2060R)	—	Connect a DC voltmeter across TP 5, 6(L) TP 3, 4(R) (X09-)	VOLUME : 0	VR1 (L) VR2(R) (X09 -)	13mV	(a)
1	IDLE CURRENT (KA-3060R)	—	Connect a DC voltmeter across CP1(L) CP2(R) (X09-)	VOLUME : 0	VR1 (L) VR2(R) (X09 -)	13mV	(a)

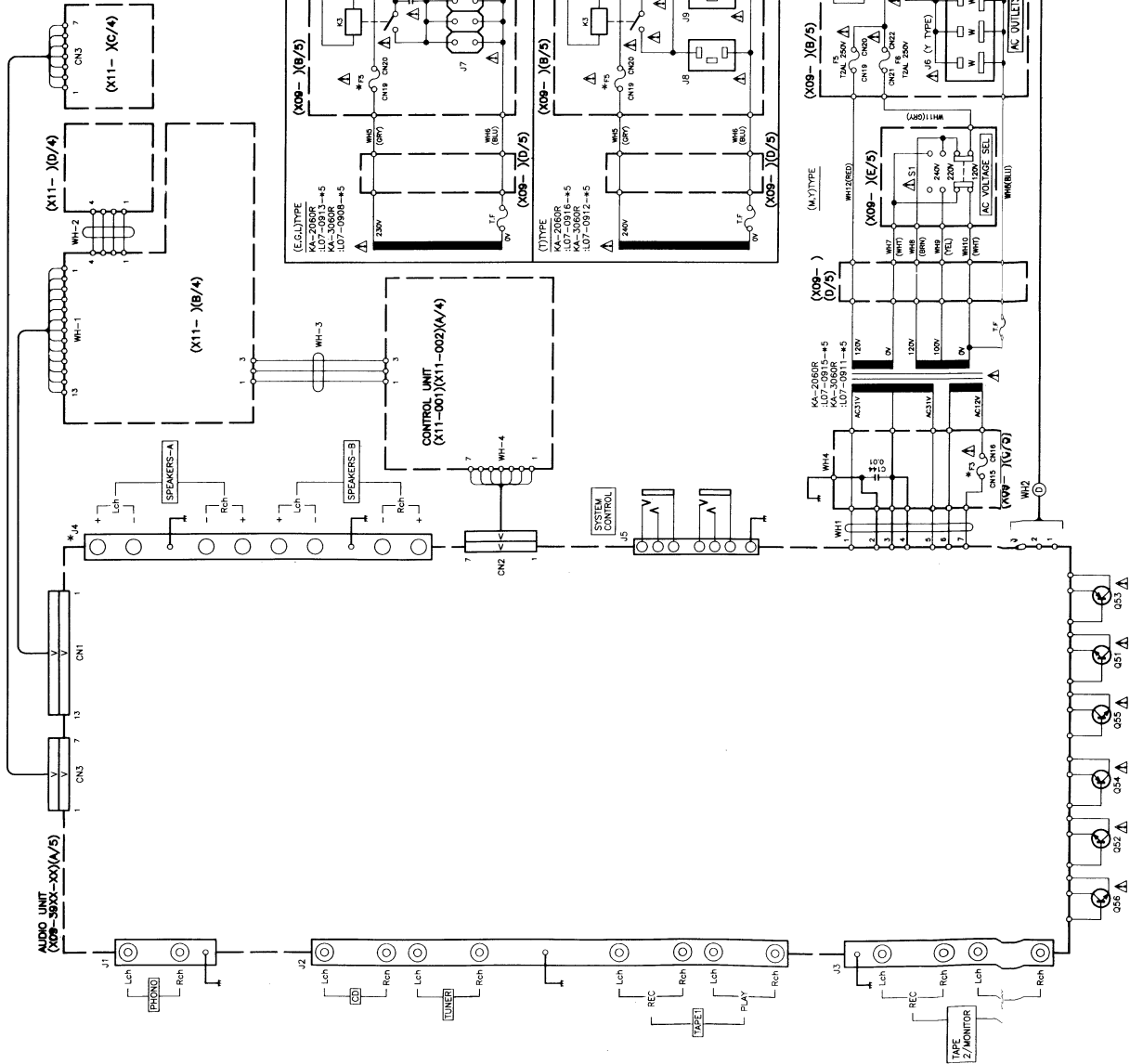
Caution : Signal ground floats from chassis ground.
Please connect the cold lead of tester or oscilloscope to the cold terminal of speaker or input jack if check and / or measure the voltage.
(Don't connect ground of unit.)



KA-2060R/3060R

WIRING DIAGRAM

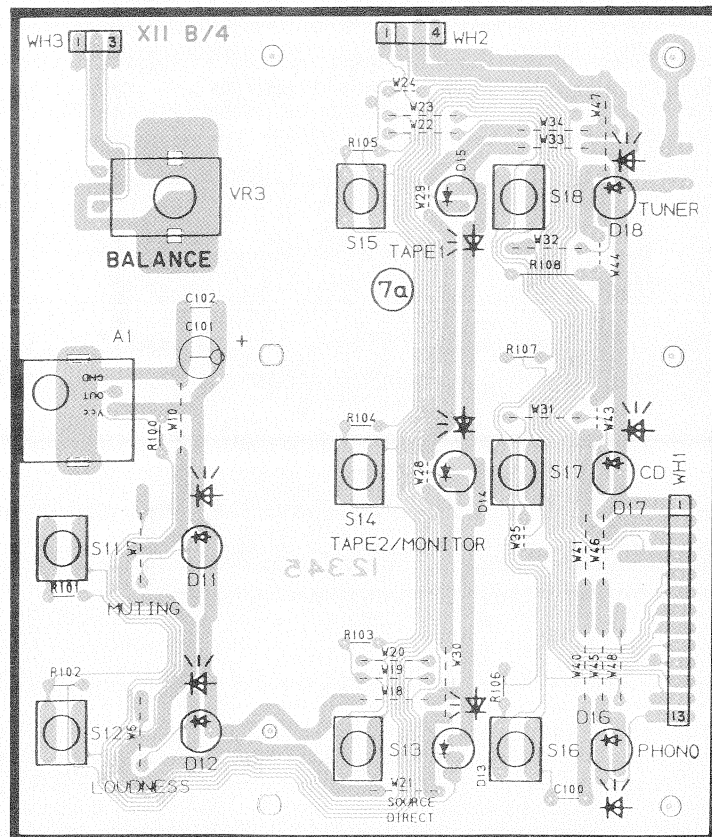
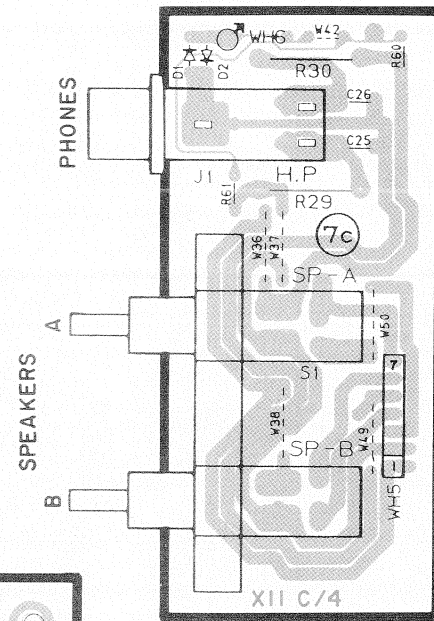
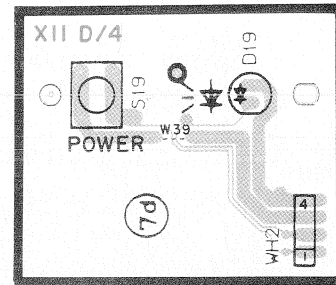
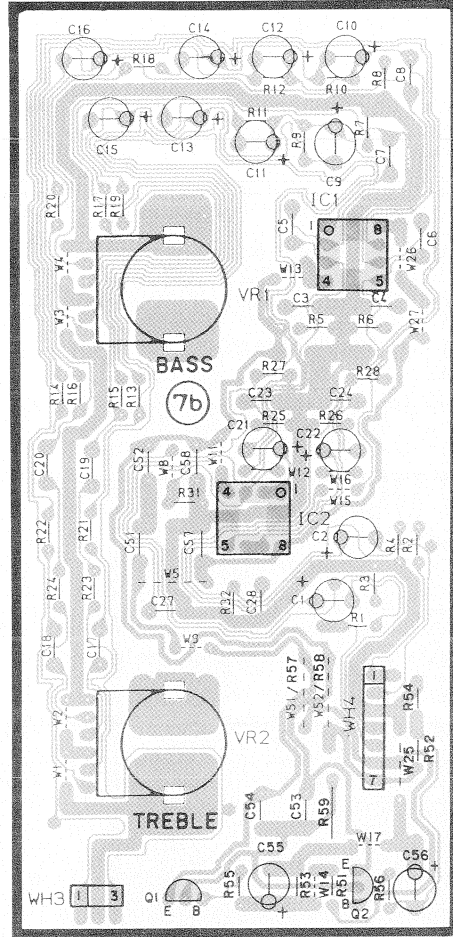
MODEL NAME	DESTINATION	UNIT NAME	F3	F5	K1	R1B3	J4
KA-2060R	GENERAL MARKET	P 100P-3901-01	1A, 250V	4A, 125V	IS1-2062-05	33	
	U.K.	Y 100P-3902-91					
	AUSTRALIA	X 100P-3900-51					
	EUROPE	E 100P-3902-70					56
	SCANDINAVIA	L 100P-3901-21					
KA-3060R	GENERAL MARKET	P 100P-3901-01	1A, 250V	5A, 125V	IS1-2062-05		
	U.K.	Y 100P-3902-91					
	AUSTRALIA	X 100P-3900-51					
	EUROPE	E 100P-3902-70					33
	SCANDINAVIA	L 100P-3901-21					



KA-2060R/KA-3060R(M)

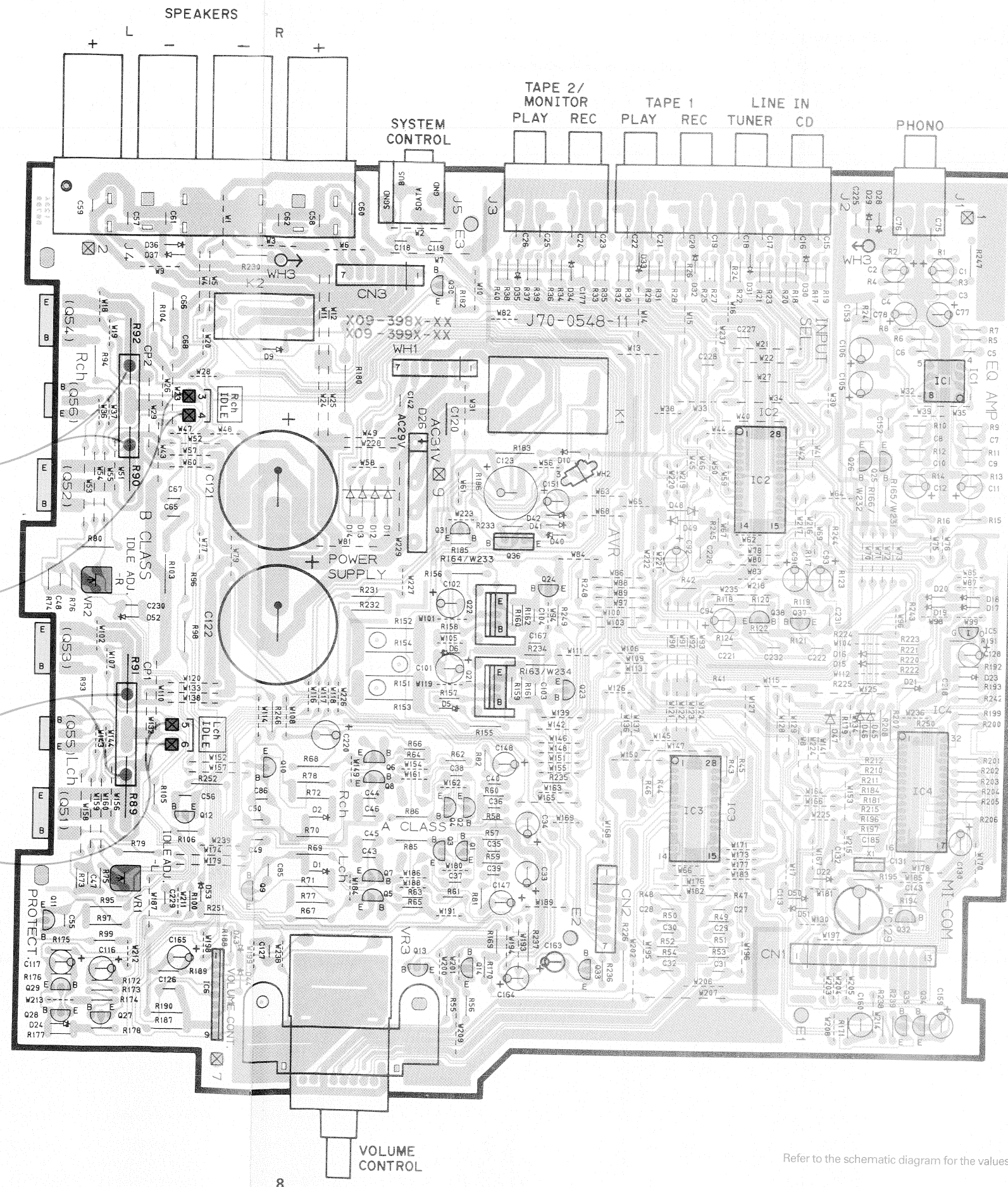
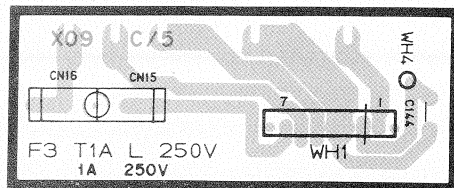
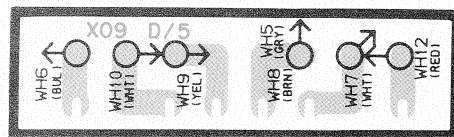
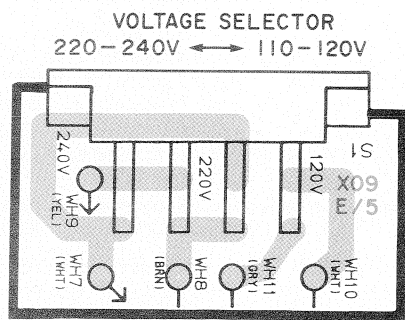
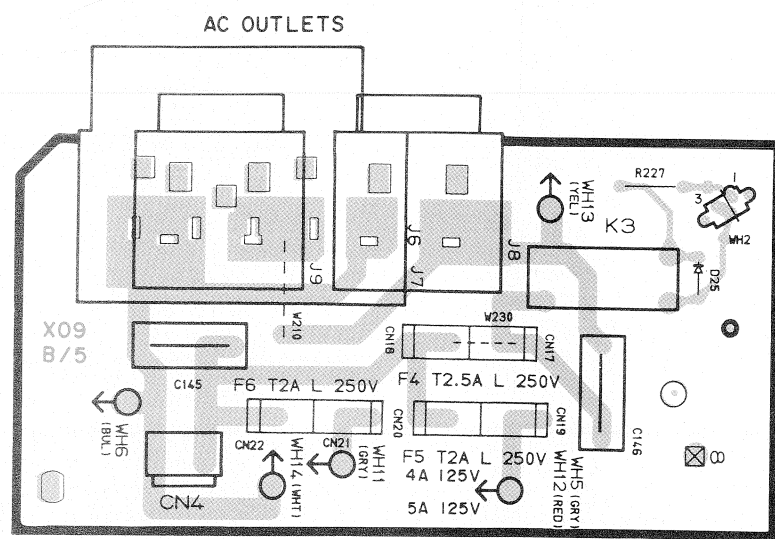
PC BOARD(Component side view) CONTROL UNIT(X11-00X)

X11-001
X11-002 A/4



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

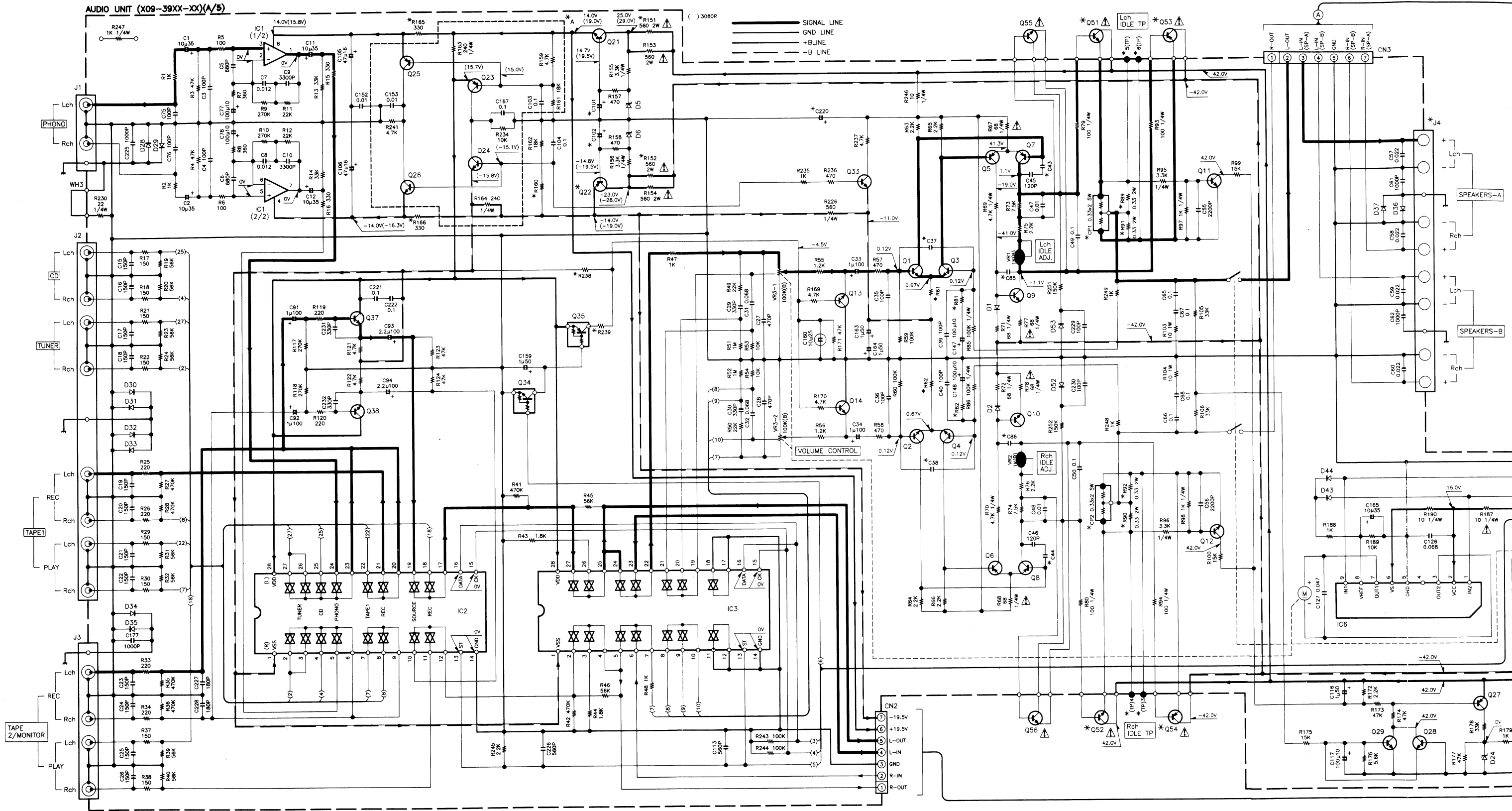
PC BOARD (Component side view) AUDIO UNIT(X09-39XX-XX)



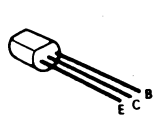
- DC voltmeter KA-3060R Rch (a) Idle current : 13mV
- DC voltmeter KA-2060R Rch (a) Idle current : 13mV
- DC voltmeter KA-3060R Lch (a) Idle current : 13mV
- DC voltmeter KA-2060R Lch (a) Idle current : 13mV

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

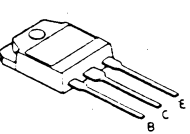
AUDIO UNIT (X09-39XX-XX)(A/5)



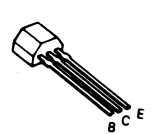
2SA934 2SC2060
2SA992 2SC2878
2SC1845
2SC2003



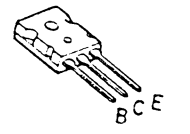
2SB1531BT * 5
2SD2340BT * 5



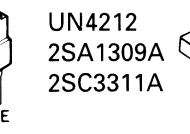
DTA124ES 2SC2458
DTC124ES
UN4112
2SA1048



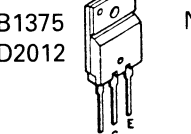
2SB1492BT * 5
2SD2254BT * 5



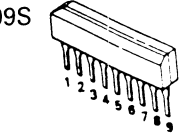
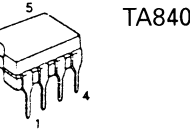
2SB1370
2SD2061



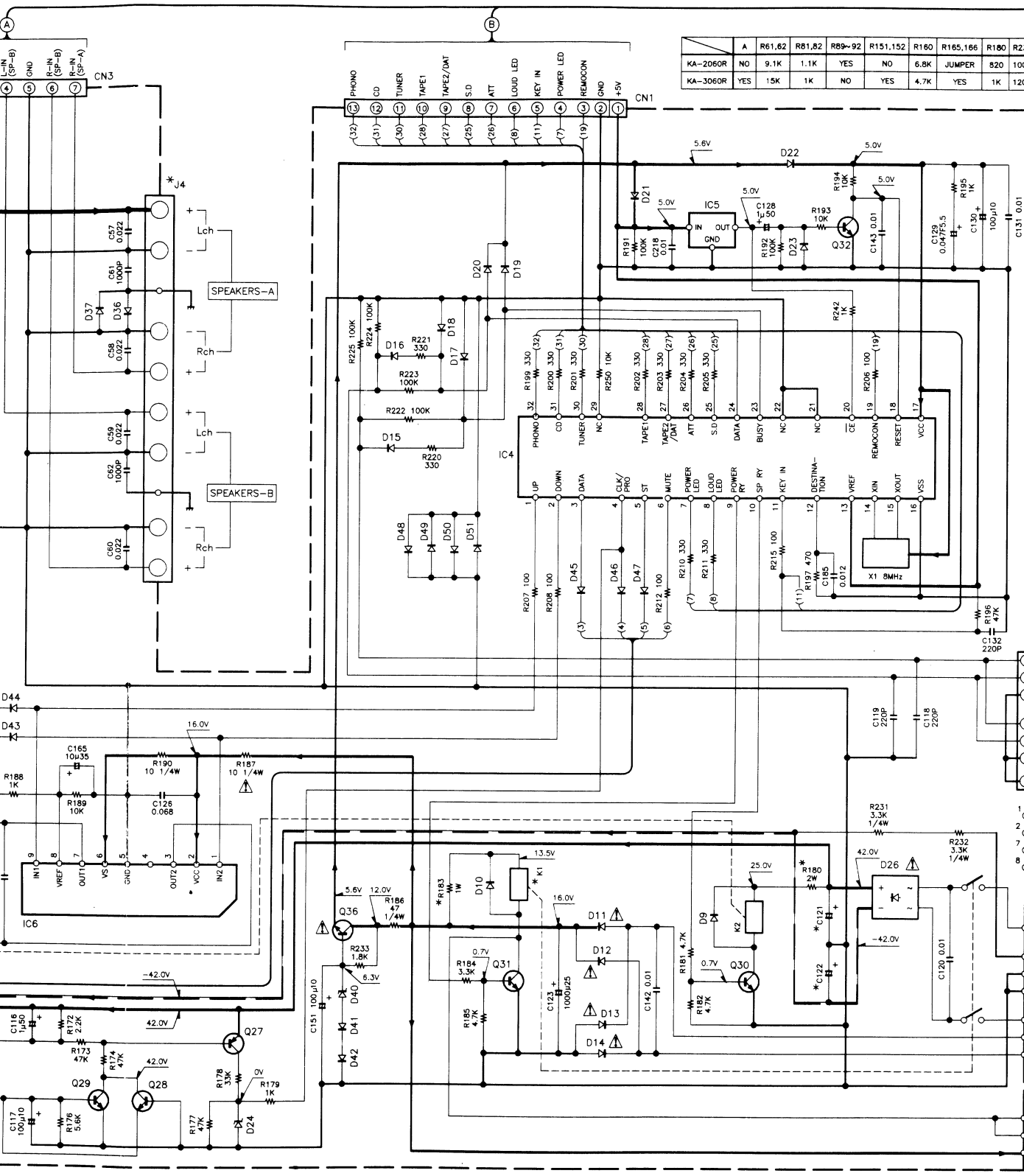
UN4212
2SA1309A
2SC3311A



2SB1375
2SD2012



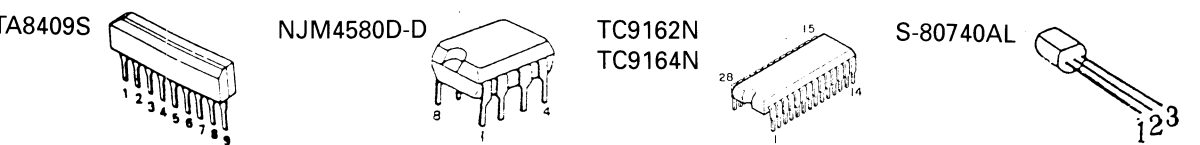
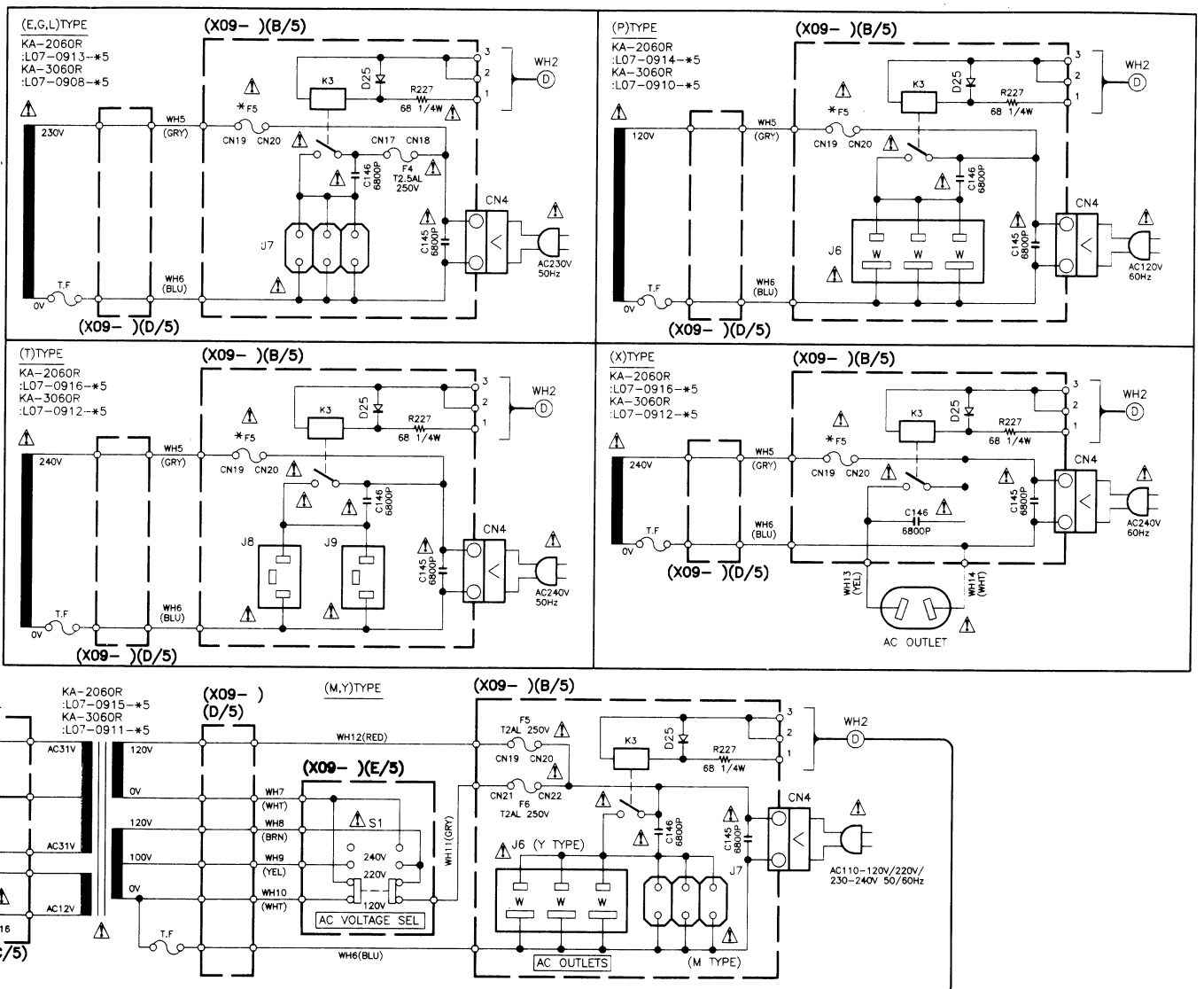
NJM4565D-D
TA8409S
NJM4580



	A	R61,62	R81,82	R89-92	R151,152	R160	R165,166	R180	R238	R239	C37,38	C43,44	C85,86	C101,102	C121,122	C220	TP3-6	CP1,2	D5,6	Q22	Q51,52	Q53,54
KA-2060R	NO	9.1K	1.1K	YES	NO	6.8K	JUMPER	820	100K	10K	56P	120P	330P	100µ25	4700µ50	1µ100	NO	NO	RD15J(S) or HZ515S(B)	2S81370(E,F) or 2S81375	2SD2340BT#5	2S81531BT#5
KA-3060R	YES	15K	1K	NO	YES	4.7K	YES	1K	120K	12K	100P	100P	220P	10µ50	6800µ50	10µ100	NO	YES	RD20J(S) or HZ520S(B2)	2S81370(E,F) or 2S81375	2SD2254BT#5	2S81492BT#5

- D1,2,9,10,15~23,25,28~37,41~51
 :1S5133 or HSS104
 D5,6 :* :2SC1845(F,E)
 D11~14 :S5688B
 D24,40 :RD5.1J(S) or HZ5.1S(B2)
 D26 :D5SBA20F03
 D52,53 :HSS104A/1SS131
- Q1~4,9~12,24,26,33,37,38
 :2SC1845(F,E)
 Q5~8,23,25 :2SA992(F,E)
 Q13,14 :2SC2878(B)
 Q21,36 :2SD2061(E,F) or 2SD2012
 Q22 :* :2SA1048(Y,GR) or 2SA1309A(Q,R)
 Q28,29,32 :2SC2458(Y,GR) or 2SC3311A(Q,R)
 Q30,31 :2SC2003(L,K)
 Q34 :UN4212 or DTC124ES
 Q35 :UN4112 or DTA124ES
 Q51,52 :* :*
 Q53,54 :* :*
 Q55,56 :2SC4137F19(V,W)
- IC1 :NJM4580D-D
 IC2 :TC9164N
 IC3 :TC9162N
 IC4 :M37470M4-1895P
 IC5 :S-B0740AL
 IC6 :TA8409S

MODEL NAME	DESTINATION	UNIT NAME	F3	F5	K1	R183	J4
KA-2060R	CANADA	P X09-3991-01	1A 250V	4A 125V	S51-2052-05	33	
	GENERAL MARKET	M X09-3990-21					
	PX	Y X09-3992-91					
	U.K.	T X09-3990-51					E70-0018-05
	AUSTRALIA	X X09-3990-71	T1AL 250V	T2AL 250V	S51-2094-05	56	
KA-3060R	EUROPE	E X09-3992-70					
	GERMANY	G X09-3991-71					
	SCANDINAVIA	L X09-3991-01	1A 250V	5A 125V	S51-2052-05		E70-0019-05
	GENERAL MARKET	M X09-3982-21					
	PX	Y X09-3982-91					
KA-3060R	U.K.	T X09-3980-51					
	AUSTRALIA	X X09-3980-71	T1AL 250V	T2AL 250V	S76-0015-05	33	E70-0018-05
	EUROPE	E X09-3982-70					
	GERMANY	G X09-3982-70					
	SCANDINAVIA	L X09-3981-71					E70-0019-05



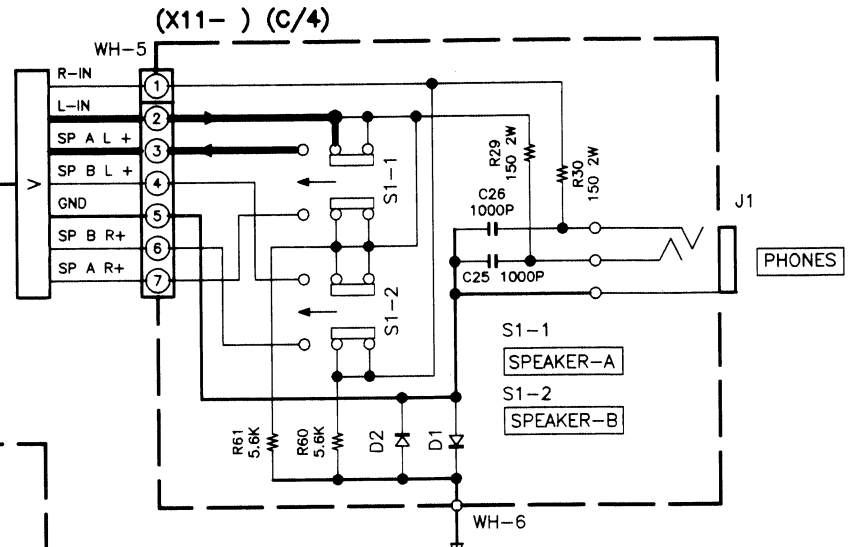
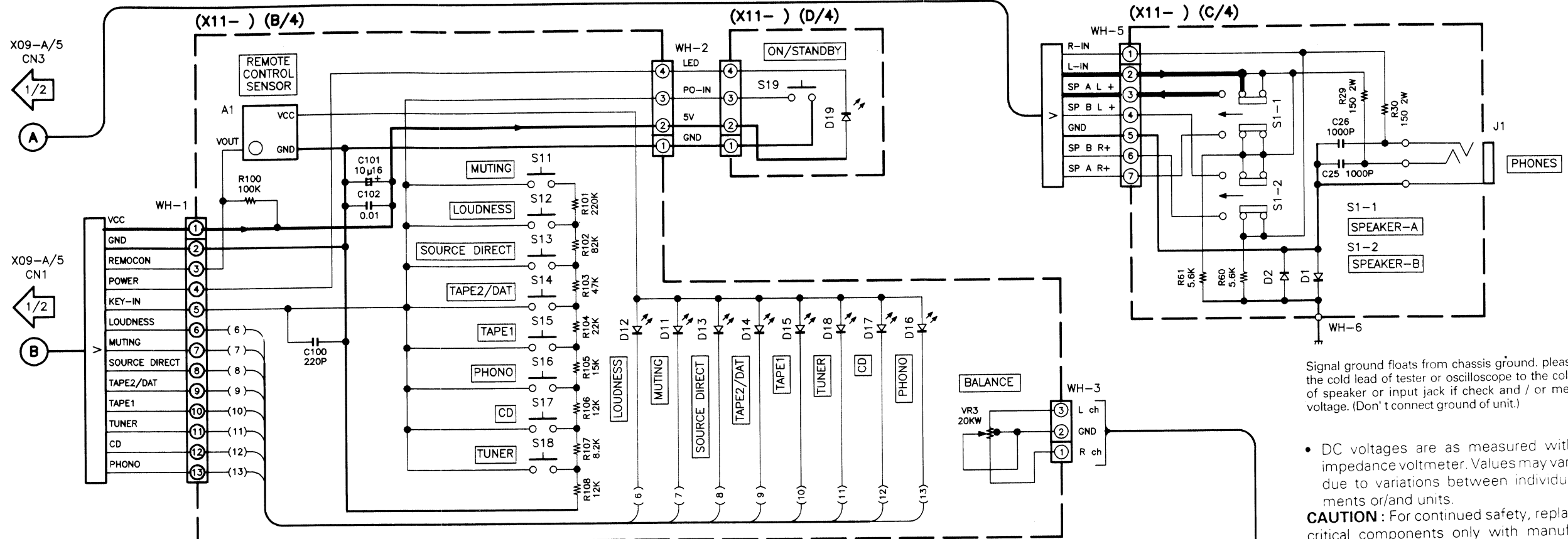
Signal ground floats from chassis ground. please connect the cold lead of tester or oscilloscope to the cold terminal of speaker or input jack if check / or measure the voltage. (Don't connect ground of unit.)

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

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

KA-2060R/3060R
KENWOOD

Y08-5052-70



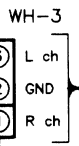
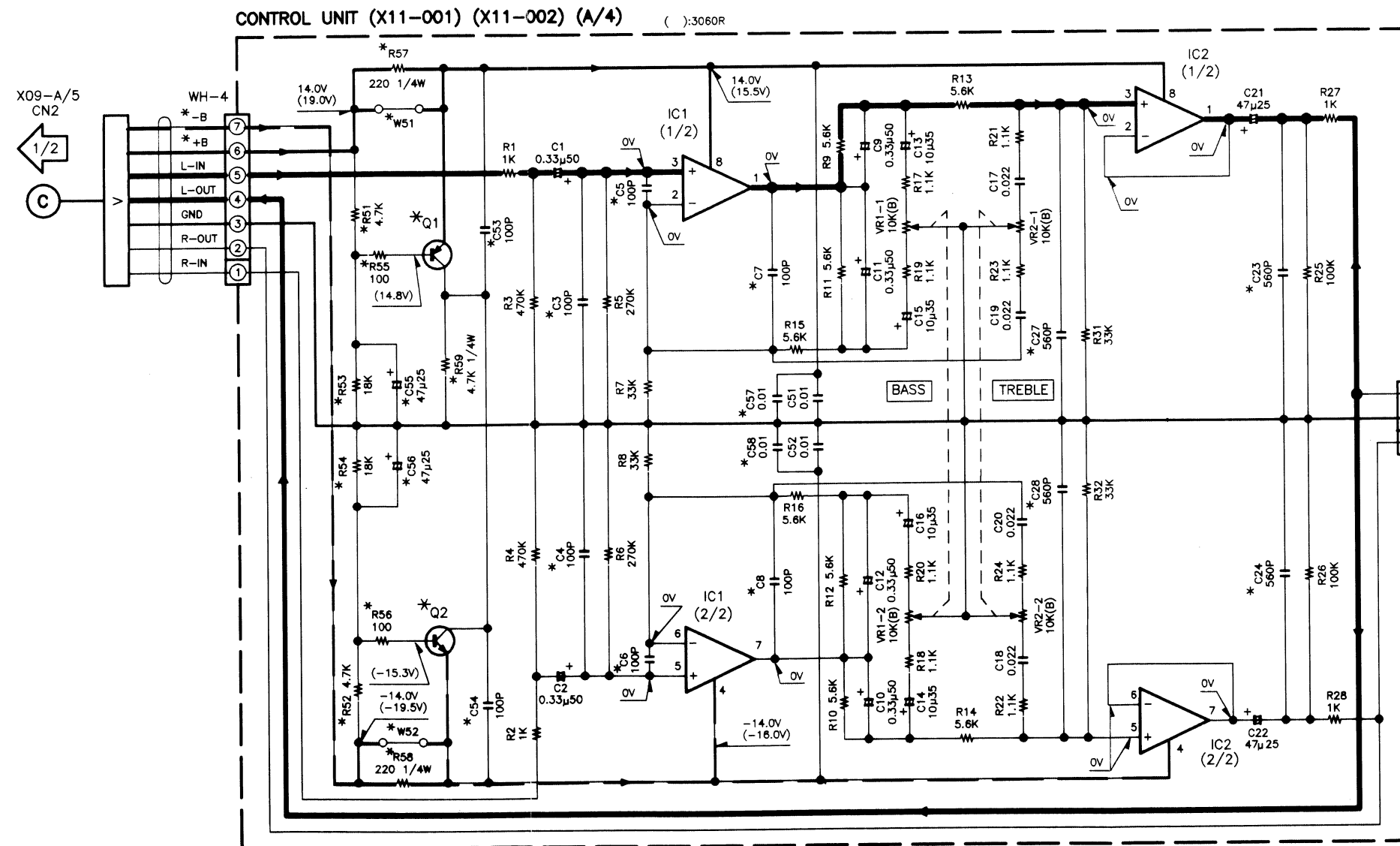
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— SIGNAL LINE
 --- GND LINE
 --- +B LINE
 --- -B LINE

- IC1,2 : NJM4565D-D
- Q1 : 2SA934(Q,R)
- Q2 : 2SC2060(Q,R)
- D1,2 : 1SS133
- D11~19 : B30-1294-05



KA-2060R/3060R(M)(2/2)

MODEL NAME	DESTINATION		UNIT NAME	Q1,2	R51~59	C3~8	C23,24,27,28	C53~56	C57,58	W51,52	-B	+B
	COUNTRY	ABB.										
KA-2060R	CANADA	P	X11-002	NO	NO	CC45FSL1H101J	CK45FB1H561J	NO	YES	YES	-13.5V	+13.5V
	GENERAL MARKET	M										
	PX	Y										
	U.K.	T										
	AUSTRALIA	X										
KA-3060R	EUROPE	E	X11-001	YES	YES	CF92FV1H101K	CF92FV1H561J	YES	NO	NO	-19.5V	+19.5V
	GERMANY	G										
	SCANDINAVIA	L										
	CANADA	P										
	GENERAL MARKET	M										

Y08-5052-70



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. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 向備考
CN15,16		J13-0075-05	FUSE CLIP	BGL
CN17,18		J13-0075-05	FUSE CLIP	
CN19,20		J13-0075-05	FUSE CLIP	YM
CN21,22		J13-0075-05	FUSE CLIP	
X1		L78-0290-05	RESONATOR (8MHZ)	
B	2C	N89-3008-45	BINDING HEAD TAPITE SCREW	
F	1C,2A	N30-3006-46	PAN HEAD MACHINE SCREW	
CP1,2		R90-0888-05	MULTIPLE RESISTOR (0.33X2.5W)	
R67,68		RD14AB2E680JTS	FL-PR00F RD 68 J 1/4W	
R69,70		RD14AB2E472JTS	FL-PR00F RD 47K J 1/4W	
R71,72		RD14AB2E680JTS	FL-PR00F RD 68 J 1/4W	
R77,78		RD14AB2E680JTS	FL-PR00F RD 68 J 1/4W	
R79,80		RD14AB2E101JTS	FL-PR00F RD 100 J 1/4W	
R81,82		RN14BK2C1001F	RN 1.00K F 1/6W	
R85,86		RN14BK2E1003F	RN 100K F 1/4W	
R93,94		RD14AB2E101JTS	FL-PR00F RD 100 J 1/4W	
R95,96		RD14AB2E392JTS	FL-PR00F RD 3.9K J 1/4W	
R97,98		RD14AB2E102JTS	FL-PR00F RD 1.0K J 1/4W	
R103,104		RS14DB3A100JTE	RS 10 J 1W	
R151,154		RS14DB3D561JTE	RS 560 J 2W	
R163,164		RN14BK2E2400F	RN 240.0 F 1/4W	
R165,166		RN14BK2C3300F	RN 330.0 F 1/6W	
R180		RS14DB30102JTE	RS 1.0K J 2W	
R183		RS14DB3A330JTE	RS 33 J 1W	
R186		RD14AB2E470JTS	FL-PR00F RD 47 J 1/4W	
R187		RD14AB2E100JTS	FL-PR00F RD 10 J 1/4W	
R190		RD14AB2E100JTS	FL-PR00F RD 10 J 1/4W	
R226		RN14BK2E5600F	RN 560.0 F 1/4W	
R227		RD14AB2E680JTS	FL-PR00F RD 68 J 1/4W	
R230		RN14BK2E2200F	RN 22.0 F 1/4W	
R231,232		RN14BK2E3301F	RN 3.30K F 1/4W	
R234		RN14BK2C1002F	RN 10.0K F 1/6W	
R237		RN14BK2C4701F	RN 4.70K F 1/6W	
R241		RN14BK2C4701F	RN 4.70K F 1/6W	
R246		RD14AB2E100JTS	FL-PR00F RD 10 J 1/4W	
R248,249		RN14BK2C1001F	RN 1.00K F 1/6W	
R251,252		RN14BK2C1503F	RN 150K F 1/6W	
VR1,2		R12-1616-05	TRIMMING POT.(1K) IDLE ADJ.	
VR3		R31-0010-05	VARIABLE RESISTOR(100K) VOLUME	
K1		S51-2052-05	MAGNETIC RELAY	P
K1		S76-0015-05	MAGNETIC RELAY	BGLYMX
K1		S76-0013-05	MAGNETIC RELAY	T
K2		S76-0005-05	MAGNETIC RELAY	
K3		S76-0009-05	MAGNETIC RELAY	
S1		S31-2322-05	SLIDE SWITCH AC VOLTAGE SEL	YM
D1,2		HSS104	DIODE	
D1,2		HS133	DIODE	
D5,6		HZ520S(B2)	ZENER DIODE	
D5,6		R202JS(B2)	ZENER DIODE	
D9,10		HSS104	DIODE	
D9,10		HS133	DIODE	
D11-14		S5688B	DIODE	

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Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 向備考
C117		CE04KWA101M	ELECTRO 1000F 10WV	
C118,119		C045FSL1H221J	CERAMIC 220PF J	
C120		CK45E2H103P	CERAMIC 0.010UF P	
C121,122		C90-3560-05	ELECTRO 6800UF 50WV	
C123		CE04KWA1E102M	ELECTRO 1000UF 25WV	
C126		C092PM1H683JEL	MYLAR 0.048UF J	
C127		CK45F1H473Z	CERAMIC 0.047UF Z	
C128		CE04KWA101M	ELECTRO 1.0UF 50WV	
C129		C90-1827-05	BACKUP 0.047F 5.5WV	
C130		CE04KWA101M	ELECTRO 100UF 10WV	
C131		CK45F1H103Z	CERAMIC 0.010UF Z	
C132		C045FSL1H221J	CERAMIC 220PF J	
C142,143		CK45F1H103Z	CERAMIC 0.010UF Z	
C144		C092PM1H103JEL	MYLAR 0.010UF J	
C145,146		C91-1488-05	MF 6800PF 250VAC	
C147,148		CE04KWA101M	ELECTRO 100UF 10WV	
C151,148		CE04KWA101M	ELECTRO 100UF 10WV	
C152		C092PM1H103JEL	MYLAR 0.010UF J	
C153		CF92EV1H103J	MF 0.010UF J	
C159		CE04KWA101M	ELECTRO 1.0UF 50WV	
C160		CE04HWE100M	NP-ELEC 10UF 25WV	
C165		C90-3568-05	ELECTRO 1UF 50WV	
C164		CE04KWA101M	ELECTRO 1.0UF 50WV	
C165		CE04KWA100M	ELECTRO 10UF 35WV	
C167		C092PM1H104JEL	MYLAR 0.100UF J	
C177		C092PM1H102JEL	MYLAR 1000PF J	
C185		C092PM1H123JEL	MYLAR 0.012UF J	
C218		CK45F1H103Z	CERAMIC 0.010UF Z	
C220		CE04KWA100M	ELECTRO 10UF 100WV	
C221,222		C092PM1H104JEL	MYLAR 0.100UF J	
C225		C092PM1H102JEL	MYLAR 1000PF J	
C226		CK45FB1H561K	CERAMIC 560PF K	
C227,228		C045FSL1H181J	CERAMIC 180PF J	
C229,230		CF92EV1H101K	MF 100PF K	
C231,232		C045FSL1H331J	CERAMIC 330PF J	
J1		E13-0235-05	PHONO JACK(OP) PHONO	
J2		E13-0820-05	PHONO JACK(OP) LINE IN/TAPE 1	
J3		E13-0446-05	PHONO JACK(OP) TAPE 2/MONITOR	
J4		E70-0018-05	SCREW TERMINAL BOARD SPEAKERS	EGPYMX
J4		E70-0018-05	SCREW TERMINAL BOARD SPEAKERS	T
J4		E70-0018-05	SCREW TERMINAL BOARD SPEAKERS	
J4		E70-0019-05	SCREW TERMINAL BOARD SPEAKERS	
J4		E11-0186-05	MINIATURE PHONE JACK S.CONTROL	L
J5		E03-0306-05	AC OUTLET	PY
J6		E03-0147-05	AC OUTLET	EGLM
J6		E03-0109-05	AC OUTLET	T
F3		F04-1026-05	FUSE (UL) (250V 1A)	P
F3		F06-1022-05	FUSE (SEMK0) (250V TIAL)	BGLYMX
F3		F06-1022-05	FUSE (SEMK0) (250V TIAL)	T
F4		F05-2525-05	FUSE (SEMK0) (250V T2.SAL)	EGL
F5		F04-5022-05	FUSE (UL) (125V 5A UL)	P
F5		F06-2021-05	FUSE (SEMK0) (250V T2AL)	BGLYMX
F5		F06-2021-05	FUSE (SEMK0) (250V T2AL)	T
F6		F06-2021-05	FUSE (SEMK0) (250V T2AL)	YM
-		J11-0098-05	WIRE CLAMPER	

L:Scandinavia K:USA P:Canada R:Mexico
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2KA-2060R 3KA-3060R
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PARTS LIST

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Ref. No. 参照番号	Address New Parts 位置新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕	Re- marks 備考
C5	*	CK45FB1H681K	CERAMIC		
6		C92FM1H123JEL	MYLAR		
C7		C92FM1H332JEL	MYLAR		
C9		CE04KW1V100M	ELECTRØ		
C11		CE04KW1V100M	ELECTRØ		
C15		CC45FSL1H151J	CERAMIC		
C27		CK45FB1H471K	CERAMIC		
C29		CK45FSL1H331J	CERAMIC		
C31		C92FM1H663JEL	MYLAR		
C33		CE04KW2A010M	ELECTRØ		
C35		CC45FSL1H101J	CERAMIC		
C37		CC45FSL1H560J	CERAMIC		
C39		CC45FSL1H101J	CERAMIC		
C43		CC45FSL1H121J	CERAMIC		
C47		CK45FF1H103Z	CERAMIC		
C49		C92FM1H104JEL	MYLAR		
C55		CK45FB1H222K	CERAMIC		
C57		C92FM1H223JEL	MYLAR		
C61		CK45FB1H102K	CERAMIC		
C65		C92FM1H104JEL	MYLAR		
C75		CC45FSL1H101J	CERAMIC		
C77		CE04KW1A101M	ELECTRØ		
C85		CC45FSL1H331J	CERAMIC		
C91		CE04KW2A010M	ELECTRØ		
C93		CE04KW2A2R2M	ELECTRØ		
C101, 102		CE04KW1E101M	ELECTRØ		
C104		C92FM1H104JEL	MYLAR		
C105		CE04KW1C470M	ELECTRØ		
C113		CK45FB1H561K	CERAMIC		
C115		CE04KW1C101M	ELECTRØ		
C117		CE04KW1A101M	ELECTRØ		
C118, 119		CC45FSL1H221J	CERAMIC		
C120		CK45FB2H103P	CERAMIC		
C121, 122	*	C90-3561-05	ELECTRØ		
C123		CE04KW1E102M	ELECTRØ		
C126		C92FM1H663JEL	MYLAR		
C127		CK45FF1H473Z	CERAMIC		
C128		CE04KW1H010M	ELECTRØ		
C129		C90-1827-05	BACKUP		
C130		CE04KW1A101M	ELECTRØ		
C131		CK45FF1H103Z	CERAMIC		
C132		CC45FSL1H221J	CERAMIC		
C142, 143		CK45FF1H103Z	CERAMIC		
C144		C92FM1H103JEL	MYLAR		
C145, 146		C91-1488-05	MF		
C147, 148		CE04KW1A101M	ELECTRØ		
C151		CE04KW1A101M	ELECTRØ		
C152		C92FM1H103JEL	MYLAR		
C156		CE04KW1H010M	ELECTRØ		
C159		CE04KW1E100M	NP-ELEC		
C160		C90-3568-05	10UF		
C165		CE04KW1H101M	ELECTRØ		
C165		CE04KW1V100M	ELECTRØ		
C177		C92FM1H102JEL	MYLAR		
C185		C92FM1H123JEL	MYLAR		
C218		CK45FF1H103Z	CERAMIC		

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Ref. No. 参照番号	Address New Parts 位置新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕	Re- marks 備考
D15 -23		HSS104	DIODE		
D15 -23		ISS133	DIODE		
D24		HZSS-1S(B2)	ZENER DIODE		
D25		RD5-1JS(B2)	ZENER DIODE		
D25		HSS104	DIODE		
D26		ISS133	DIODE		
D28 -37		D5SBA20F03	DIODE		
D28 -37		HSS104	DIODE		
D40		HZSS-1S(B2)	ZENER DIODE		
D40		RD5-1JS(B2)	ZENER DIODE		
D41 -51		HSS104	DIODE		
D41 -51		ISS133	DIODE		
D52 -53		HSS104A	DIODE		
D52 -53		ISS131	DIODE		
IC1		NJM4580D-D	IC(OP AMP X2)		
IC2		TC9164N	IC(16CH BILATERAL SELECTOR SW)		
IC3		TC9162N	IC(CANALOG SWITCH ARRAY)		
IC4		M37470M4-189SP	MI-COM IC		
IC5		S-80740AL	IC(VOL-TAGE DETECTOR)		
IC6		TAB409S	IC(MOTOR CONTROL)		
Q1 -4		25C1845(F,E)	TRANSISTOR		
Q5 -8		25A992(F,E)	TRANSISTOR		
Q9 -12		25C1845(F,E)	TRANSISTOR		
Q13, 14		25C2878(B)	TRANSISTOR		
Q21		25D2012	TRANSISTOR		
Q22		25D2061(E,F)	TRANSISTOR		
Q22		25B1370(E,F)	TRANSISTOR		
Q22		25B1375	TRANSISTOR		
Q23		25A992(F,E)	TRANSISTOR		
Q24		25C1845(F,E)	TRANSISTOR		
Q25		25A992(F,E)	TRANSISTOR		
Q26		25C1845(F,E)	TRANSISTOR		
Q27		25A1048(Y,GR)	TRANSISTOR		
Q27		25A1309A(G,R)	TRANSISTOR		
Q28, 29		25C2458(Y,GR)	TRANSISTOR		
Q28, 29		25C3511A(G,R)	TRANSISTOR		
Q30, 51		25C2003(L,K)	TRANSISTOR		
Q32		25C2458(Y,GR)	TRANSISTOR		
Q32		25C3511A(G,R)	TRANSISTOR		
Q33		25C1845(F,E)	TRANSISTOR		
Q34		DTC124ES	DIGITAL TRANSISTOR		
Q34		UN4212	TRANSISTOR		
Q35		DTC124ES	DIGITAL TRANSISTOR		
Q35		UN4112	TRANSISTOR		
Q36		25D2012	TRANSISTOR		
Q36		25D2061(E,F)	TRANSISTOR		
Q37, 38		25C1845(F,E)	TRANSISTOR		
Q51, 52	*	25D2254BT*5	TRANSISTOR		
Q53, 54	*	25B1492BT*5	TRANSISTOR		
Q55, 56		25C4137F19(V,W)	TRANSISTOR		
C1, 2		CE04KW1V100M	ELECTRØ		
C3, 4		CC45FSL1H101J	CERAMIC		

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2KA-2060R
3KA-3060R
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PARTS LIST

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Ref. No. 参照番号	Address 位置	New Parts 新部品	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 向備考	Re- marks 備考
R230			RN14BK2E22R0F	22.0		
R231, 232			RN14BK2E3301F	3.30K	F 1/4W	
R237			RN14BK2C4701F	4.70K	F 1/6W	
R246			RD14AB2E100JTS	FL-PROOF RD 10	F 1/4W	
R248, 249			RN14BK2C1001F	1.00K	F 1/6W	
R251, 252			RN14BK2G1503F	150K	F 1/6W	
VR1, 2		*	R12-1616-05	TRIMMING POT.(1K) ADJ.		
VR3			R31-0010-05	VARIABLE RESISTOR(100K) VOLUME		
K1			S51-2052-05	MAGNETIC RELAY		P
K1			S51-2094-05	MAGNETIC RELAY		EGLYMX
K1			S51-2094-05	MAGNETIC RELAY		T
K2			S76-0005-05	MAGNETIC RELAY		
K3			S76-0009-05	MAGNETIC RELAY		
△ S1			S31-2322-05	SLIDE SWITCH AC VOLTAGE SEL		YM
D1, 2			HSS104	DIODE		
D1, 2			ISS133	DIODE		
D5, 6			HZS15S(B)	ZENER DIODE		
D5, 6			RD15JS(B)	ZENER DIODE		
D9, 10			HSS104	DIODE		
D9, 10			ISS133	DIODE		
D11, 14			S5688B	DIODE		
D15-23			HSS104	DIODE		
D15-23			ISS133	DIODE		
D24			HZS5.1S(B2)	ZENER DIODE		
D24			RD5.1JS(B2)	ZENER DIODE		
D25			HSS104	DIODE		
D25			ISS133	DIODE		
D26			D5SBA20F03	DIODE		
D28-37			HSS104	DIODE		
D28-37			ISS133	DIODE		
D40			HZS5.1S(B2)	ZENER DIODE		
D40			RD5.1JS(B2)	ZENER DIODE		
D41-51			HSS104	DIODE		
D41-51			ISS133	DIODE		
D52, 53			HSS104A	DIODE		
D52, 53			ISS131	DIODE		
IC1			NJM45800-D	IC(OP AMP X2)		
IC2			TC9164N	IC(16CH BILATERAL SELECTOR SW)		
IC3			TC9162N	IC(ANALOG SWITCH ARRAY)		
IC4			M3740M4-1895P	MI-COM IC		
IC5			S-80740AL	IC(VOLTAGE DETECTOR)		
IC6			TAB409S	IC(MOTOR CONTROL)		
Q1-4			2SC1845(F,E)	TRANSISTOR		
Q5-8			2SA992(F,E)	TRANSISTOR		
Q9-12			2SC1845(F,E)	TRANSISTOR		
Q13, 14			2SC2878(B)	TRANSISTOR		
Q21			2SD2012	TRANSISTOR		
Q22			2SD2061(E,F)	TRANSISTOR		
Q22			2SB1370(E,F)	TRANSISTOR		
Q27			2SA1048(Y,GR)	TRANSISTOR		
Q27			2SA1309(G,B)	TRANSISTOR		
Q28, 29			2SC458(Y,GR)	TRANSISTOR		
Q28, 29			2SC3311A(G,R)	TRANSISTOR		
Q30, 31			2SC2003(L,K)	TRANSISTOR		

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C220			C604KW2A010M	ELECTRO 1.0UF 100WV		
C221, 222			C492EM1H104JEL	0.110UF J		
C225			C492EM1H102JEL	1000PF K		
C226			C645FBLH561K	560PF J		
C227, 228			C645FBLH181J	180PF J		
C229, 230			C692FV1H101K	100PF K		
C231, 232			CC45FSL1H331J	330PF J		
J1			E13-0235-05	PHONO JACK(2P) PHONO		
J1			E13-0820-05	PHONO JACK(8P) LINE IN/TAPE 1		
J3			E13-0446-05	PHONO JACK(4P) TAPE 2/MONITOR		
J4			E70-0018-05	SCREW TERMINAL BOARD SPEAKERS		EGLYMX
J4			E70-0018-05	SCREW TERMINAL BOARD SPEAKERS		T
J4			E70-0019-05	SCREW TERMINAL BOARD SPEAKERS		L
J5			E11-0188-05	MINIATURE PHONE JACK S.CONTROL		
J6		*	E03-0306-05	AC OUTLET		PY
J6, 9			E03-0147-05	AC OUTLET		EGLM
J6, 9			E03-0109-05	AC OUTLET		T
F3			F04-1026-05	FUSE (UL) (250V 1A)		P
F3			F04-1022-05	FUSE (SEMKO) (250V T1AL)		EGLYMX
F3			F06-1026-05	FUSE (SEMKO) (250V T1AL)		T
F4			F05-2525-05	FUSE (SEMKO) (250V T2.5AL)		EGL
F4			F05-2525-05	FUSE (SEMKO) (250V T2.5AL)		P
F5			F06-2021-05	FUSE (SEMKO) (250V T2AL)		EGLYMX
F5			F06-2021-05	FUSE (SEMKO) (250V T2AL)		T
F6			F06-2021-05	FUSE (SEMKO) (250V T2AL)		YM
-			J11-0098-05	WIRE CLAMPER		
CN15, 16			J13-0075-05	FUSE CLIP		EGL
CN17, 18			J13-0075-05	FUSE CLIP		
CN19, 20			J13-0075-05	FUSE CLIP		
CN21, 22			J13-0075-05	FUSE CLIP		YM
X1			L78-0290-05	REGULATOR (6MHZ)		
R67, 68			RD14AB2E680JTS	FL-PROOF RD 68	J 1/4W	
R69, 70			RD14AB2E472JTS	FL-PROOF RD 4.7K	J 1/4W	
R71, 72			RD14AB2E680JTS	FL-PROOF RD 68	J 1/4W	
R77, 78			RD14AB2E680JTS	FL-PROOF RD 68	J 1/4W	
R79, 80			RD14AB2E101JTS	FL-PROOF RD 100	J 1/4W	
R81, 82			RN14BK2C1101F	1.10K	F 1/6W	
R85, 86			RN14BK2E1003F	100K	F 1/4W	
R89-92		*	RS14GB3DR331KW	FL-PROOF RS 0.33	J 2W	
R93, 94			RD14AB2E101JTS	FL-PROOF RD 100	J 1/4W	
R95, 96			RD14AB2E392JTS	FL-PROOF RD 3.9K	J 1/4W	
R97, 98			RD14AB2E102JTS	FL-PROOF RD 1.0K	J 1/4W	
R103, 104			RS14DB3A1001TE	FL-PROOF RS 10	J 1W	
R133, 154			RS14DB3D5611TE	FL-PROOF RS 560	J 2W	
R133, 154			RS14DB3D9211TE	FL-PROOF RS 820	J 2W	
R193			RS14DB3A3300JTE	FL-PROOF RS 33	J 1W	P
R193			RS14DB3A660JTE	FL-PROOF RS 66	J 1W	EGLYMX
R193			RS14DB3A660JTE	FL-PROOF RS 56	J 1W	T
R186			RD14AB2E470JTS	FL-PROOF RD 47	J 1/4W	
R187			RD14AB2E100JTS	FL-PROOF RD 10	J 1/4W	
R190			RD14AB2E100JTS	FL-PROOF RD 10	J 1/4W	
R226			RN14BK2E5600F	560.0	F 1/4W	
R227			RD14AB2E680JTS	FL-PROOF RD 68	J 1/4W	

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2KA-2060R
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Q32		25C2458(Y,GR)	TRANSISTOR	
Q33		25C311A(Q,R)	TRANSISTOR	
Q34		25C1845(P,E)	DIGITAL TRANSISTOR	
Q34		UN4212	TRANSISTOR	
Q35		DTA124ES	DIGITAL TRANSISTOR	
Q35		UN4112	TRANSISTOR	
Q36		25D2012	TRANSISTOR	
Q36		25D2061(E,F)	TRANSISTOR	
Q37, 38		25C1845(P,E)	TRANSISTOR	
Q51, 52		25D2340BT*5	TRANSISTOR	
Q53, 54		25B1531BT*5	TRANSISTOR	
Q55, 56		25C4137F19(V,W)	TRANSISTOR	
CONTROL UNIT(X11-00X)				
C1, 2		CE04KW1HR33M	ELECTR0 0.33UF 50WV	2
C3 - 8		CC45FSL1H101J	CERAMIC 100PF J	3
C9 - 12		CF92FV1H101K	MF 100PF K	3
C13 - 16		CE04KW1HR33M	ELECTR0 0.33UF 50WV	3
		CE04KW1V100M	ELECTR0 10UF 35WV	3
C17 - 20		CF92FV1H223J	MF 0.022UF J	3
C21, 22		CE04KW1B470M	ELECTR0 47UF 25WV	3
C23, 24		CF92FV1HS61J	MF 560PF J	3
C23, 24		CK45FB1HS61K	CERAMIC 560PF K	3
C25, 26		CK45FB1H102K	CERAMIC 1000PF K	3
C27, 28		CF92FV1HS61J	MF 560PF J	3
C27, 28		CK45FB1HS61J	CERAMIC 560PF J	3
C51, 52		CK45FF1H103Z	CERAMIC 0.010UF Z	3
C53, 54		CF92FV1H101K	MF 100PF K	3
C55, 56		CE04KW1B470M	ELECTR0 47UF 25WV	3
C57, 58		CK45FF1H103Z	CERAMIC 0.010UF Z	2
C100		CC45FSL1H221J	CERAMIC 220PF J	
C101		CE04KW1C100M	ELECTR0 10UF 16WV	
C102		CK45FF1H103Z	CERAMIC 0.010UF Z	
J1		E11-0190-05	PHONE JACK PHONES	
R29, 30		RS14KB3D151JTE	FL-PR00F RS 150 J 2H	
VR1, 2		R06-3057-05	VARIABLE RESISTOR(BASS/TREBLE)	
VR3		R05-3030-05	VARIABLE RESISTOR(BALANCE)	
S1		S42-2138-05	PUSH SWITCH SPEAKERS	
S11 - 19		S40-1064-05	PUSH SWITCH	
D1, 2		1SS133	DIODE	
D11 - 19		B30-1294-05	LED	
IC1, 2		NJM4565D-D	IC(OP AMP X2)	
Q1		2SA934(Q,R)	TRANSISTOR	
Q2		25C2060(Q,R)	TRANSISTOR	
A1		W02-1153-05	REMOTE SENSOR	

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SPECIFICATIONS

KA-3060R(For U. K. and Europe)

Continuous rated power output	
(DIN) 1 kHz, at 8 Ω	60 W + 60 W
at 4 Ω	80 W + 80 W
(IEC/NF) From 63 Hz to 12,500 Hz, 0.7% T.H.D.	
at 8 Ω	60 W + 60 W
at 4 Ω	80 W + 80 W
Dynamic power	64 W (8 Ω)
	75 W (6 Ω)
	90 W (4 Ω)
Damping factor	40 (50 Hz)
Total harmonic distortion	
.....	0.06% (20 Hz ~ 20,000 Hz, 50 W, 8 Ω)
	0.02% (1 kHz, 50 W, 8 Ω)
Intermodulation distortion	0.05% (50 W, 8 Ω)
(70 Hz : 7 kHz = 4 : 1)	
Frequency response	
CD/TUNER/TAPE1, 2	5 Hz ~ 100 kHz, +0 dB, -3 dB
PHONO 'RIAA' response	20 Hz ~ 20 kHz,
	+0.3 dB, -0.3 dB
Maximum input level	
PHONO (MM)	130 mV, 0.5% T.H.D. at 1 kHz
Signal to noise ratio	
PHONO (MM)	76 dB (IHF '66)
	77 dB (IHF '78)
CD/TUNER/TAPE1, 2	103 dB (IHF '66)
	81 dB (IHF '78)
PHONO (MM).....	61 dB (DIN, 50 mW output)
CD/TUNER/TAPE1, 2	63 dB (DIN, 50 mW output)
Input sensitivity/impedance	
PHONO (MM)	2.5 mV/47 kΩ
CD/TUNER/TAPE1, 2	200 mV/47 kΩ
Tone control	
BASS	±10 dB (at 100 Hz)
TREBLE	±10 dB (at 10 kHz)
Loudness control	
(VOLUME at -30 dB level)	+6 dB (100 Hz)
	+3 dB (10 kHz)
Output level/impedance	
TAPE REC	200 mV/600 Ω

General

Power consumption	190 W
AC outlets	
For U.K.	
SWITCHED	2; (Total 200 W max.)
For Europe	
SWITCHED	3; (Total 200 W max.)
Dimensions	W: 440 mm (17-5/16")
	H: 133 mm (5-1/4")
	D: 303 mm(11-15/16")
Weight (net)	7.0 kg (15.4 lb)

KA-2060R(For U. K. and Europe)

Continuous rated power output	
(DIN) 1 kHz, at 8 Ω	50 W + 50 W
at 4 Ω	65 W + 65 W
(IEC/NF) From 63 Hz to 12,500 Hz, 0.7% T.H.D.	
at 8 Ω	50 W + 50 W
at 4 Ω	65 W + 65 W
Dynamic power	54 W (8 Ω)
	60 W (6 Ω)
	70 W (4 Ω)
Damping factor	40 (50 Hz)
Total harmonic distortion	
.....	0.06% (20 Hz ~ 20,000 Hz, 40 W, 8 Ω)
	0.02% (1 kHz, 40 W, 8 Ω)
Intermodulation distortion	0.05% (40 W, 8 Ω)
(70 Hz : 7 kHz = 4 : 1)	
Frequency response	
CD/TUNER/TAPE1, 2	5 Hz ~ 100 kHz, +0 dB, -3 dB
PHONO 'RIAA' response	20 Hz ~ 20 kHz,
	+0.3 dB, -0.3 dB
Maximum input level	
PHONO (MM)	110 mV, 0.5% T.H.D. at 1 kHz
Signal to noise ratio	
PHONO (MM)	75 dB (IHF '66)
	77 dB (IHF '78)
CD/TUNER/TAPE1, 2	103 dB (IHF '66)
	81 dB (IHF '78)
PHONO (MM).....	61 dB (DIN, 50 mW output)
CD/TUNER/TAPE1, 2	63 dB (DIN, 50 mW output)
Input sensitivity/impedance	
PHONO (MM)	2.5 mV/47 kΩ
CD/TUNER/TAPE1, 2	200 mV/47 kΩ
Tone control	
BASS	±10 dB (at 100 Hz)
TREBLE	±10 dB (at 10 kHz)
Loudness control	
(VOLUME at -30 dB level)	+6 dB (100 Hz)
	+3 dB (10 kHz)
Output level/impedance	
TAPE REC	200 mV/600 Ω

General

Power consumption	170 W
AC outlets	
For U.K.	
SWITCHED	2; (Total 200 W max.)
For Europe	
SWITCHED	3; (Total 200 W max.)
Dimensions	W: 440 mm (17-5/16")
	H: 133 mm (5-1/4")
	D: 303 mm(11-15/16")
Weight (net)	6.5 kg (14.3 lb)

KA-2060R/3060R

SPECIFICATIONS

KA-3060R(For other countries)

Continuous rated power output	
From 20 Hz to 20,000 Hz 0.06% T.H.D.	
at 8 Ω	50 W + 50 W
(IEC/NF) From 63 Hz to 12,500 Hz, 0.7% T.H.D.	
at 8 Ω	60 W + 60 W
at 4 Ω	80 W + 80 W
Dynamic power	64 W (8 Ω)
	75 W (6 Ω)
	90 W (4 Ω)
Damping factor	40 (50 Hz)
Total harmonic distortion	
.....	0.06% (20 Hz ~ 20,000 Hz, 50 W, 8 Ω)
	0.02% (1 kHz, 50 W, 8 Ω)
Intermodulation distortion	
	0.05% (50 W, 8 Ω)
	(70 Hz : 7 kHz = 4 : 1)
Frequency response	
CD/TUNER/TAPE1, 2	5 Hz ~ 100 kHz, +0 dB, -3 dB
PHONO 'RIAA' response	
	20 Hz ~ 20 kHz,
	+0.3 dB, -0.3 dB
Maximum input level	
PHONO (MM)	130 mV, 0.5% T.H.D. at 1 kHz
Signal to noise ratio	
PHONO (MM)	76 dB (IHF '66)
	77 dB (IHF '78)
CD/TUNER/TAPE1, 2	103 dB (IHF '66)
	81 dB (IHF '78)
Input sensitivity/impedance	
PHONO (MM)	2.5 mV/47 kΩ
CD/TUNER/TAPE1, 2	200 mV/47 kΩ
Tone control	
BASS	±10 dB (at 100 Hz)
TREBLE	±10 dB (at 10 kHz)
Loudness control	
(VOLUME at -30 dB level)	+6 dB (100 Hz)
	+3 dB (10 kHz)
Output level/impedance	
TAPE REC	200 mV/600 Ω

General

Power consumption	190 W
AC outlets	
SWITCHED	3; (Total 200 W max.)
	For Australia 1; (Total 200 W max.)
Dimensions	
	W: 440 mm (17-5/16")
	H: 133 mm (5-1/4")
	D: 303 mm(11-15/16")
Weight (net)	7.0 kg (15.4 lb)

KA-2060R(For other countries)

Continuous rated power output	
From 20 Hz to 20,000 Hz 0.06% T.H.D.	
at 8 Ω	40 W + 40 W
(IEC/NF) From 63 Hz to 12,500 Hz, 0.7% T.H.D.	
at 8 Ω	50 W + 50 W
at 4 Ω	65 W + 65 W
Dynamic power	54 W (8 Ω)
	60 W (6 Ω)
	70 W (4 Ω)
Damping factor	40 (50 Hz)
Total harmonic distortion	
.....	0.06% (20 Hz ~ 20,000 Hz, 40 W, 8 Ω)
	0.02% (1 kHz, 40 W, 8 Ω)
Intermodulation distortion	
	0.05% (40 W, 8 Ω)
	(70 Hz : 7 kHz = 4 : 1)
Frequency response	
CD/TUNER/TAPE1, 2	5 Hz ~ 100 kHz, +0 dB, -3 dB
PHONO 'RIAA' response	
	20 Hz ~ 20 kHz,
	+0.3 dB, -0.3 dB
Maximum input level	
PHONO (MM)	110 mV, 0.5% T.H.D. at 1 kHz
Signal to noise ratio	
PHONO (MM)	75 dB (IHF '66)
	77 dB (IHF '78)
CD/TUNER/TAPE1, 2	103 dB (IHF '66)
	81 dB (IHF '78)
Input sensitivity/impedance	
PHONO (MM)	2.5 mV/47 kΩ
CD/TUNER/TAPE1, 2	200 mV/47 kΩ
Tone control	
BASS	±10 dB (at 100 Hz)
TREBLE	±10 dB (at 10 kHz)
Loudness control	
(VOLUME at -30 dB level)	+6 dB (100 Hz)
	+3 dB (10 kHz)
Output level/impedance	
TAPE REC	200 mV/600 Ω

General

Power consumption	170 W
AC outlets	
SWITCHED	3; (Total 200 W max.)
	For Australia 1; (Total 200 W max.)
Dimensions	
	W: 400 mm (17-5/16")
	H: 133 mm (5-1/4")
	D: 303 mm(11-15/16")
Weight (net)	6.5 kg (14.3 lb)

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

Note :

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the general market(M) standard, and provides information on regional circuit modification through use of alternate schematic diagrams and information on regional component variations through use of parts list.

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