

# 16K29 REO INTEGRATED AMPLIFIER A-87/97

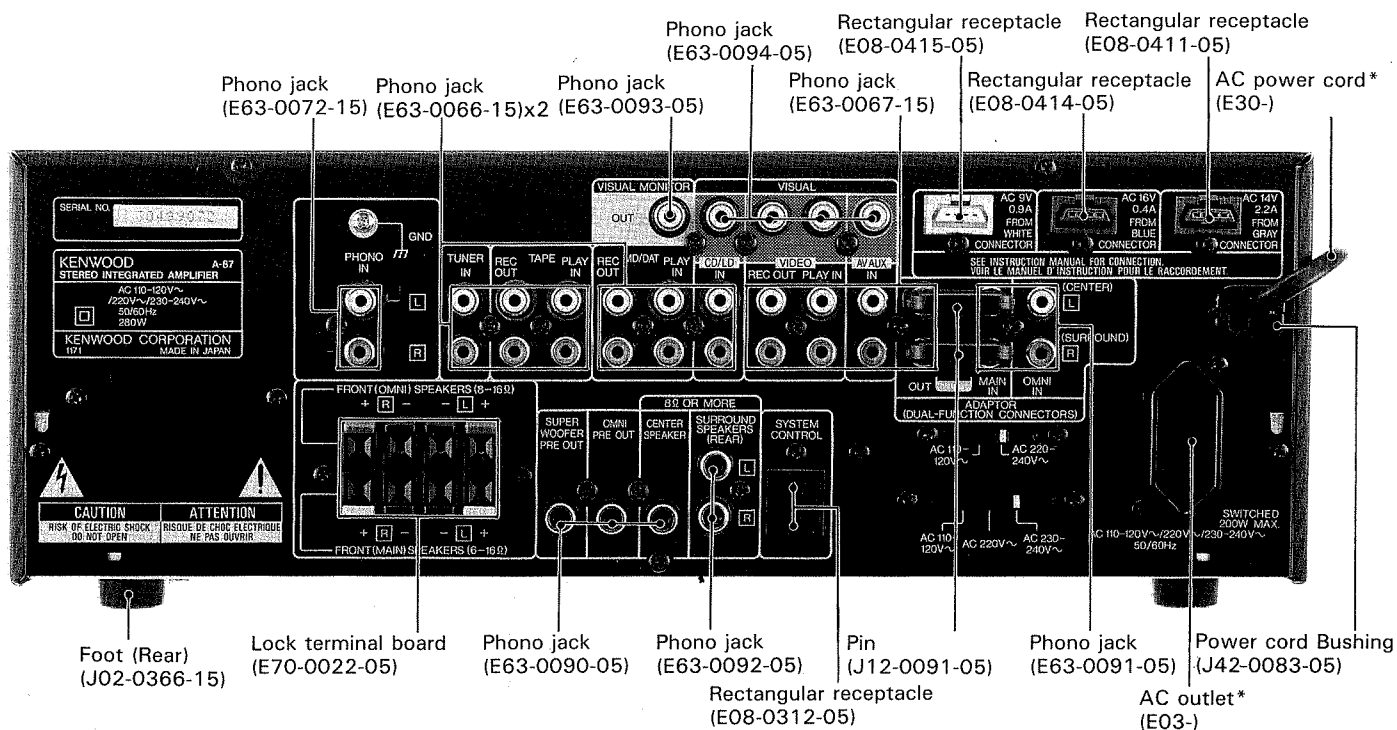
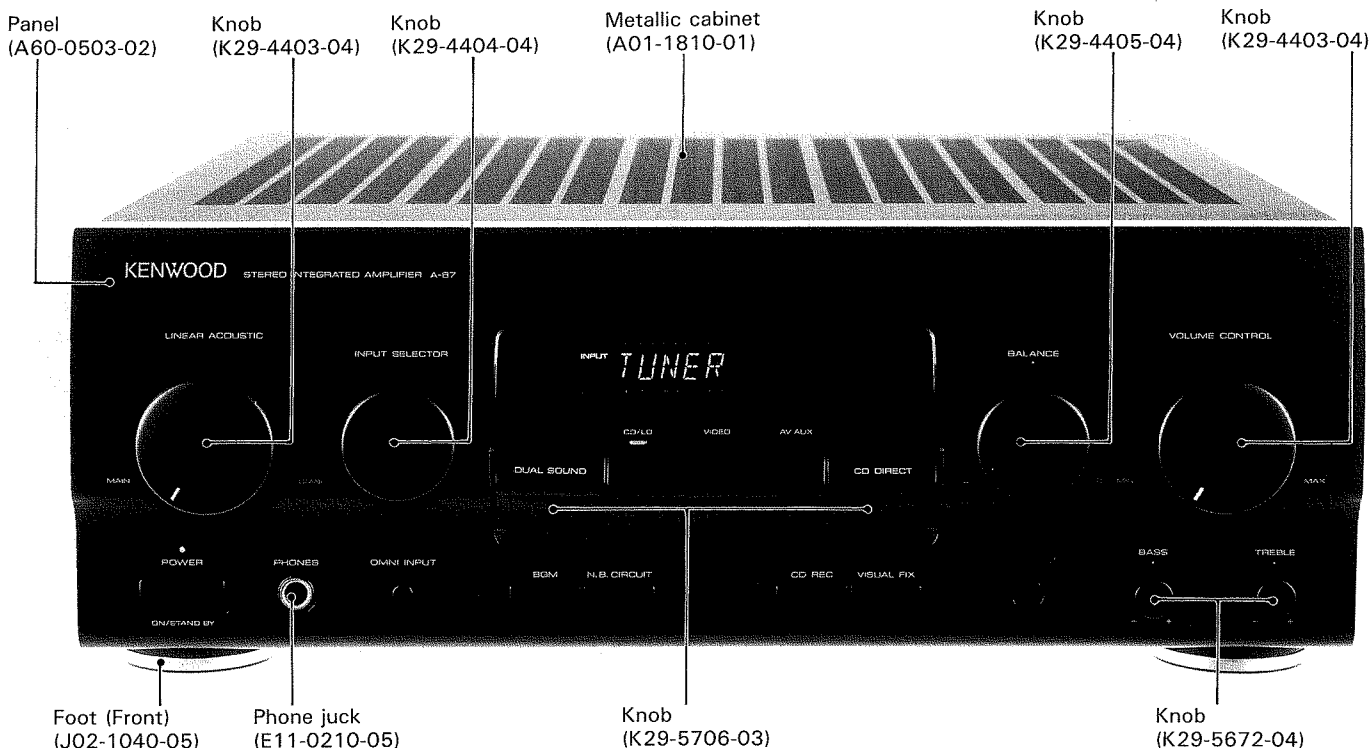
# KENWOOD

## SERVICE MANUAL (M-97/97M/99LD/99M)

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B51-4735-00 (S) 2318

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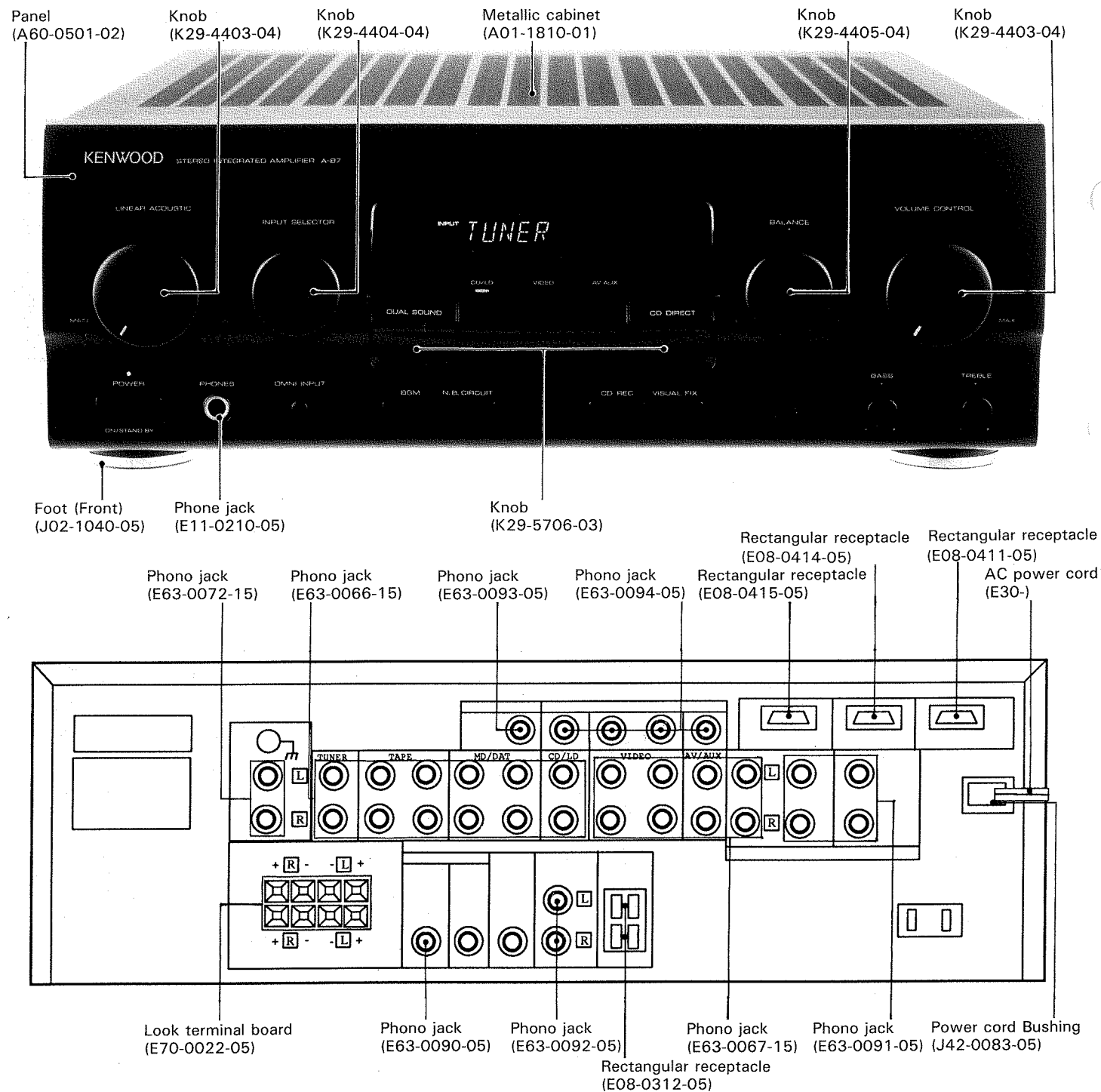
[A-87]



\*Refer to parts list on page 22.

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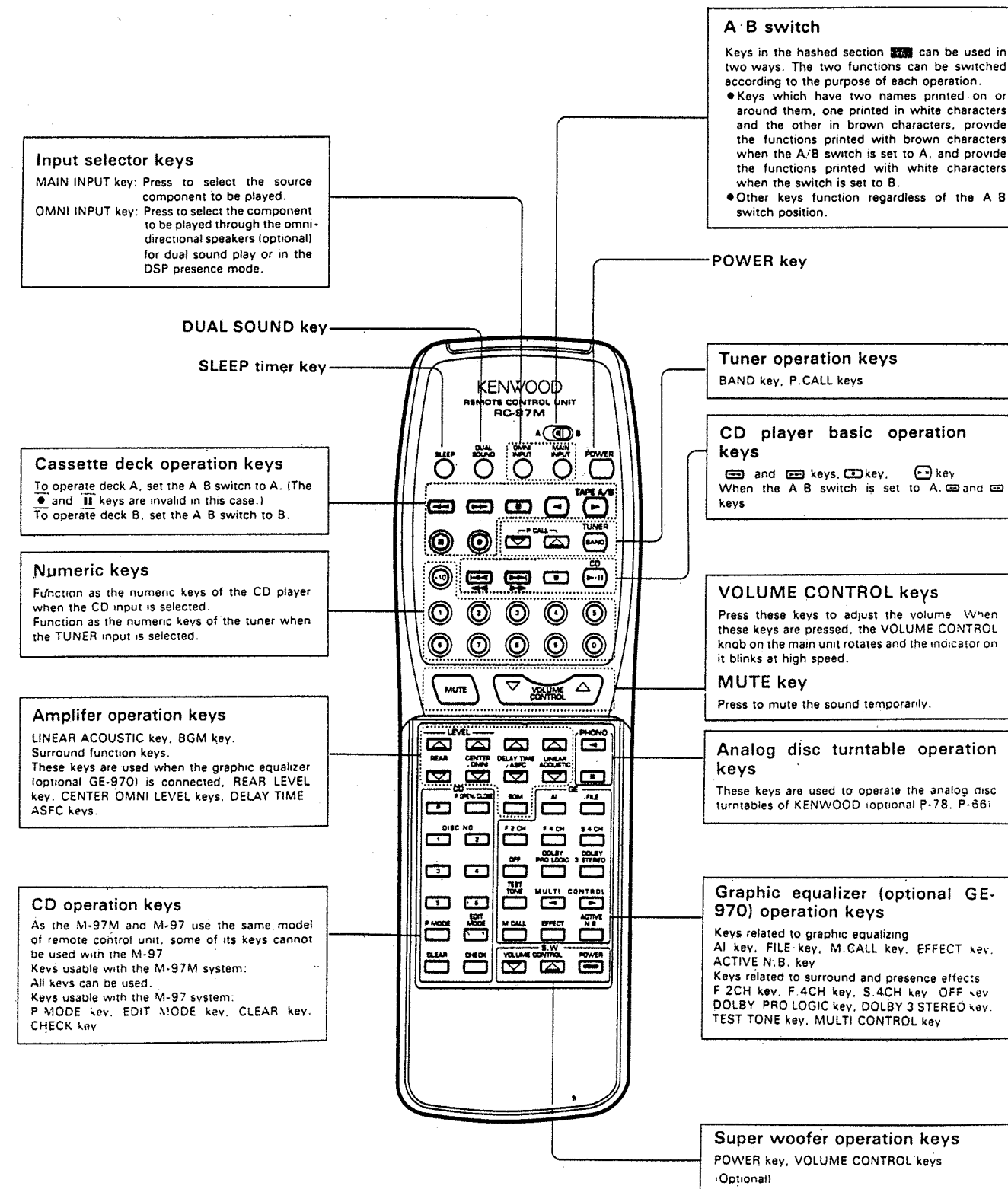


**INSTRUCTION MANUAL**  
 B60-1351-00 ENGLISH  
 B60-1352-00 SPANISH M  
 B60-1353-00 CHINESE M

\*Refer to parts list on page 22.

REMOTE CONTROL UNIT

REMOTE CONTROL UNIT (X94-1050-11)  
 BATTERY COVER (F07-0721-23)



**Input selector keys**  
 MAIN INPUT key: Press to select the source component to be played.  
 OMNI INPUT key: Press to select the component to be played through the omnidirectional speakers (optional) for dual sound play or in the DSP presence mode.

**A·B switch**  
 Keys in the hashed section can be used in two ways. The two functions can be switched according to the purpose of each operation.  
 • Keys which have two names printed on or around them, one printed in white characters and the other in brown characters, provide the functions printed with brown characters when the A/B switch is set to A, and provide the functions printed with white characters when the switch is set to B.  
 • Other keys function regardless of the A/B switch position.

**Cassette deck operation keys**  
 To operate deck A, set the A/B switch to A. (The ● and II keys are invalid in this case.)  
 To operate deck B, set the A/B switch to B.

**Numeric keys**  
 Function as the numeric keys of the CD player when the CD input is selected.  
 Function as the numeric keys of the tuner when the TUNER input is selected.

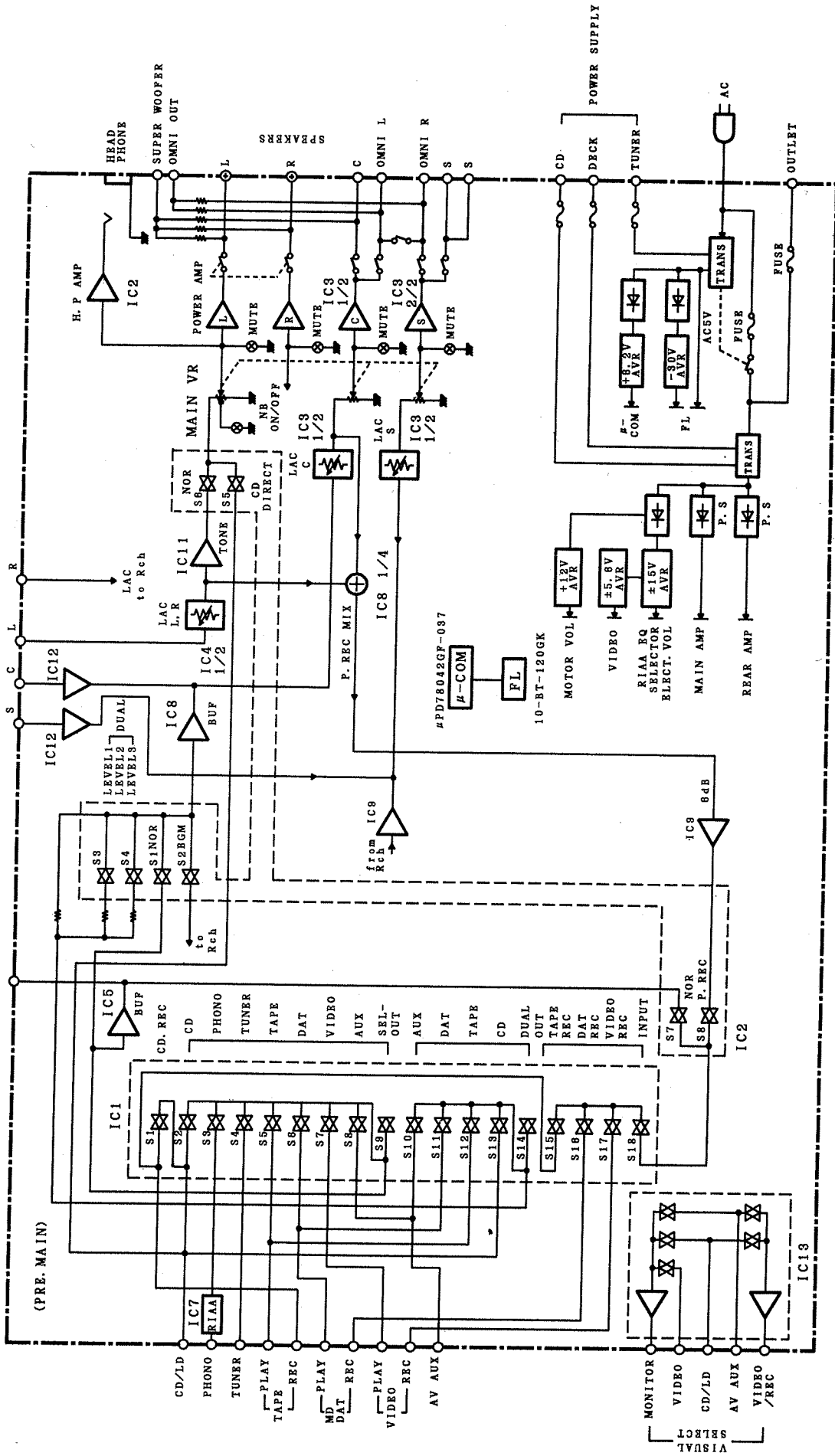
**Amplifier operation keys**  
 LINEAR ACOUSTIC key, BGM key, Surround function keys. These keys are used when the graphic equalizer (optional GE-970) is connected, REAR LEVEL key, CENTER OMNI LEVEL keys, DELAY TIME ASFC keys.

**CD operation keys**  
 As the M-97M and M-97 use the same model of remote control unit, some of its keys cannot be used with the M-97.  
 Keys usable with the M-97M system: All keys can be used.  
 Keys usable with the M-97 system: P MODE key, EDIT MODE key, CLEAR key, CHECK key

**Graphic equalizer (optional GE-970) operation keys**  
 Keys related to graphic equalizing: AI key, FILE key, M.CALL key, EFFECT key, ACTIVE N.B. key  
 Keys related to surround and presence effects: F 2CH key, F 4CH key, S 4CH key, OFF key, DOLBY PRO LOGIC key, DOLBY 3 STEREO key, TEST TONE key, MULTI CONTROL key

**Super woofer operation keys**  
 POWER key, VOLUME CONTROL keys (Optional)

# BLOCK DIAGRAM



### CIRCUIT DESCRIPTION

### CIRCUIT DESCRIPTION

Microprocessor  $\mu$ PD78042GF-037-3B9 (X11: IC-101)

#### TEST MODE

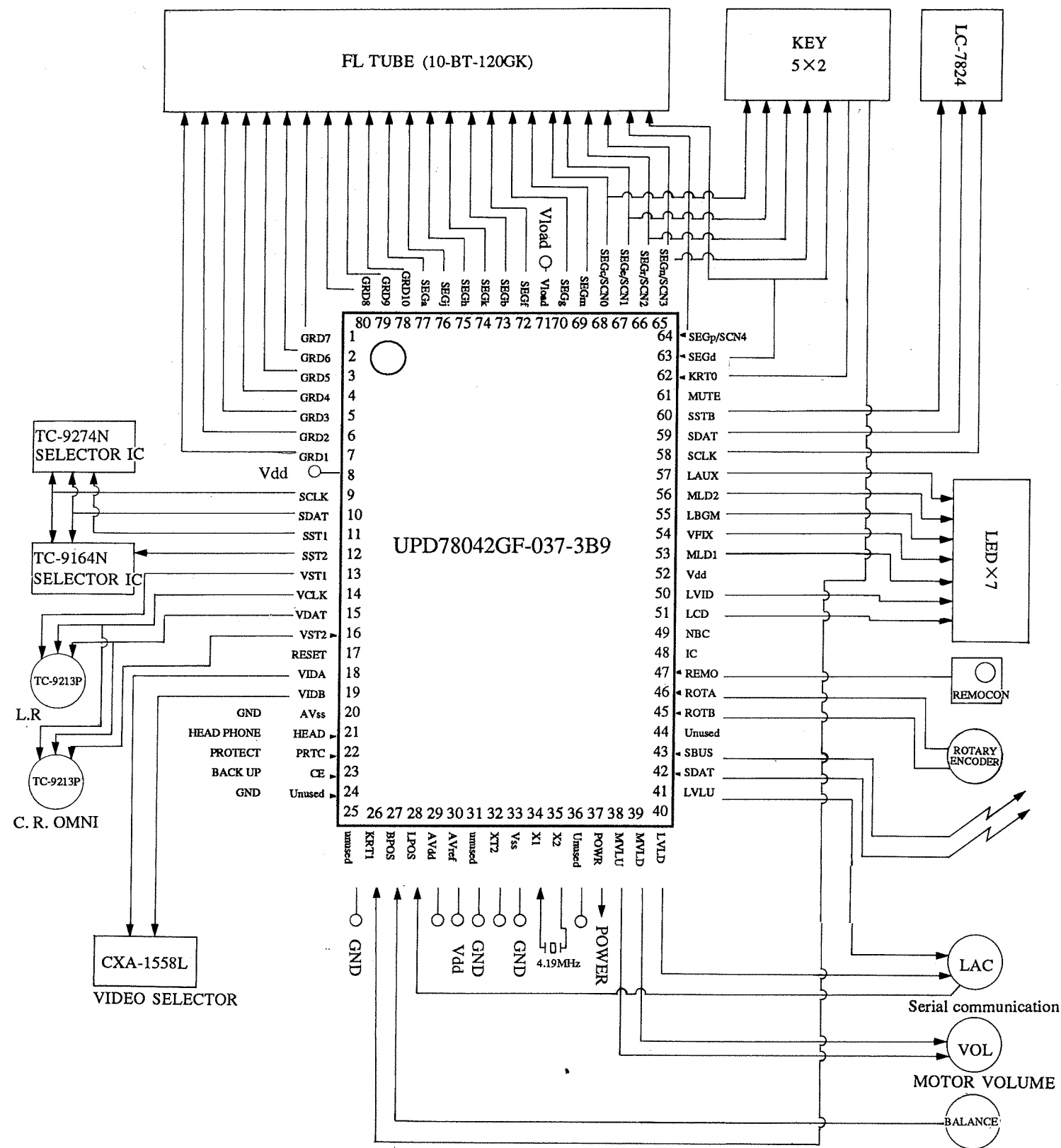
##### Test mode by means of main unit keys

- (1) Setting method  
Plug the power cord in the AC electrical outlet while pressing the CD DIRECT key.
- (2) Cancellation method  
The test mode set at the beginning is cancelled when the power cord is unplugged from the AC electrical outlet.
- (3) Contents
  - ① Automatic POWER ON  
The POWER turns necessarily ON, and all functions are initialized when the power cord is plugged into the AC electrical outlet while pressing the CD DIRECT KEY.
  - ② ALL LIT mode  
All FL and all LED light up without fail when the power cord is plugged into the AC electrical outlet while pressing the CD KEY. After that, the equipment switches to the ordinary indication mode when any key of the main unit is operated.
  - ③ Master/LAC volume automatic motor VR UP/DOWN  
The motor VR carries out the following sequence of operations when the CD REC key is operated during the test mode by means of the main unit keys  
16-second UP  $\rightarrow$  16-second DOWN  $\rightarrow$  STOP  
The CD REC key is inhibited during these operations.

- ④ Check of the operations of all circuits by means of the main unit keys  
The MUTING function, which is carried out only with the remote controller, can be operated also with the N.B key of the main unit during the test mode by means of the main unit keys.
- ⑤ MUTE signal output  
Ordinary operation should be carried out during the test mode by means of the main unit keys.

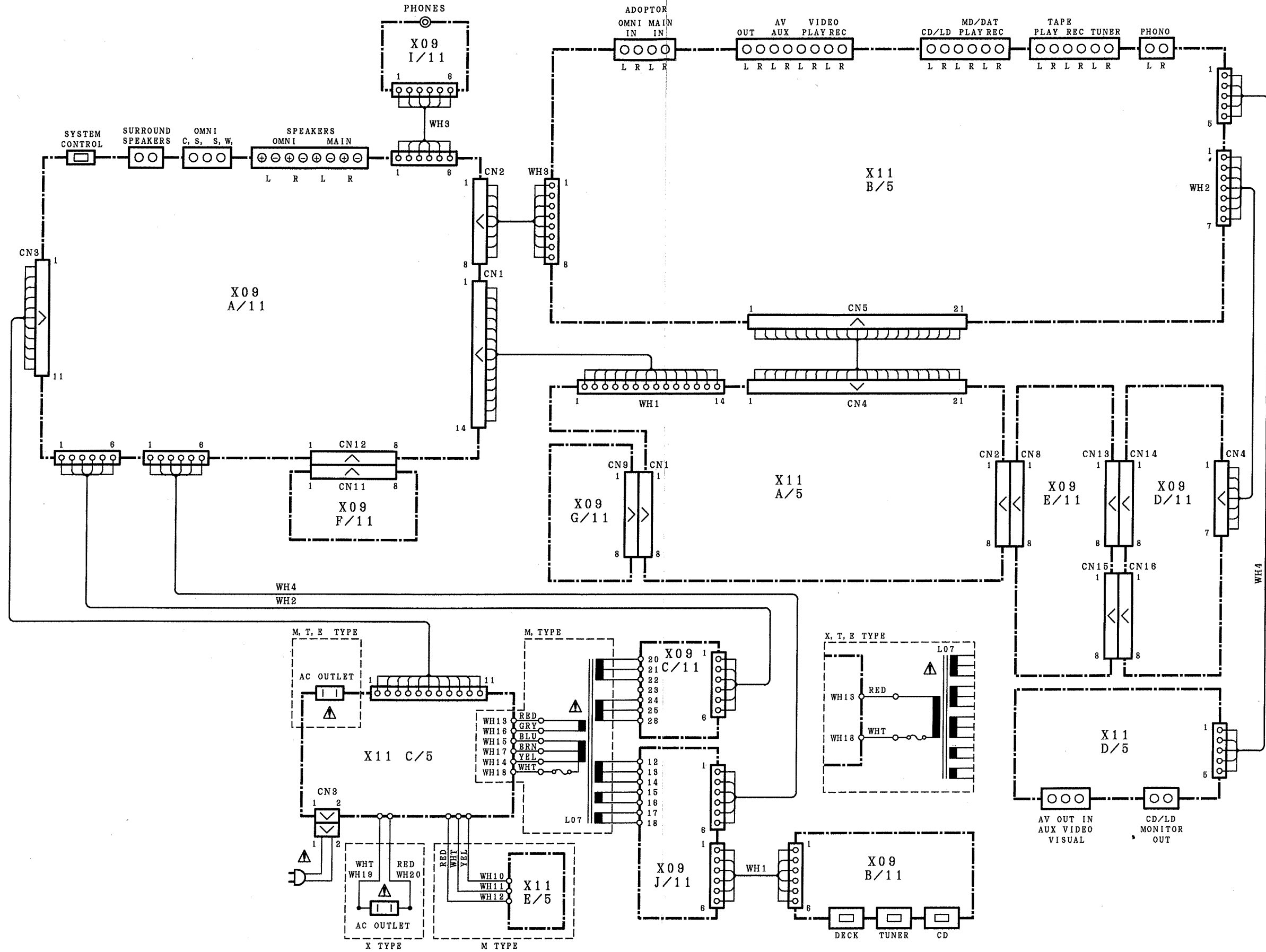
#### Initialization

- (1) Setting method
  - The equipment is initialized by plugging the power cord in the AC electrical outlet while pressing the POWER key.
  - The equipment is initialized when the power cord is unplugged and then plugged in the AC electrical outlet during the test mode by means of the main unit keys and the test mode by means of serial communication.
- (2) Contents  
All functions are initialized. (Including test mode).



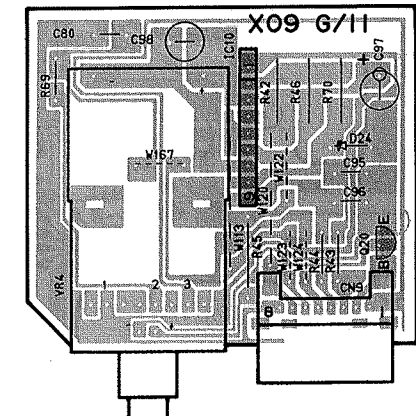
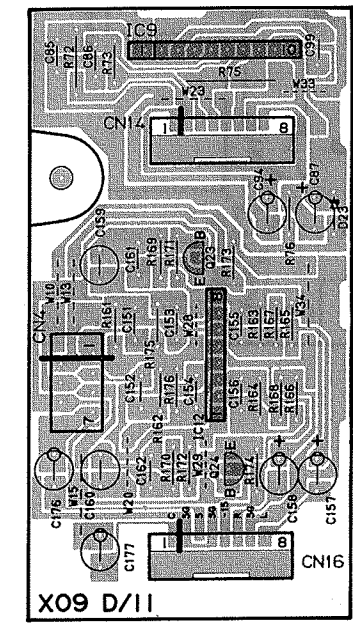
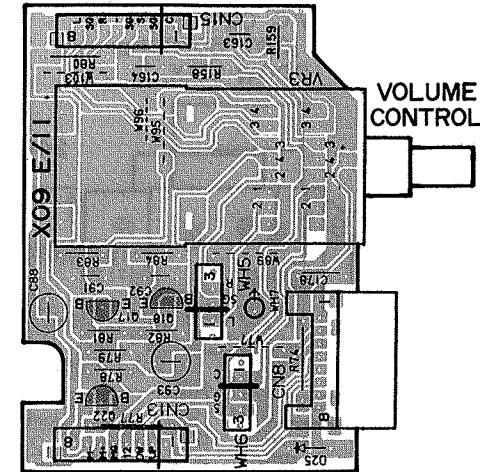
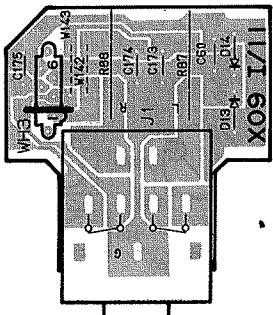
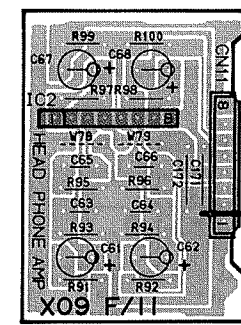
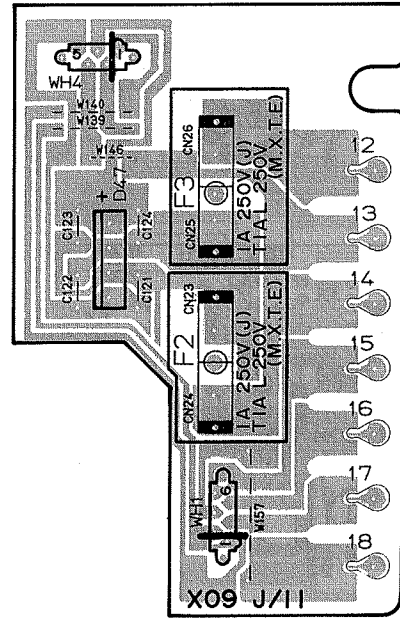
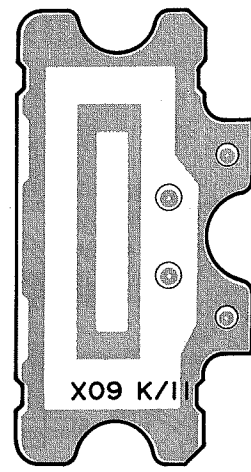
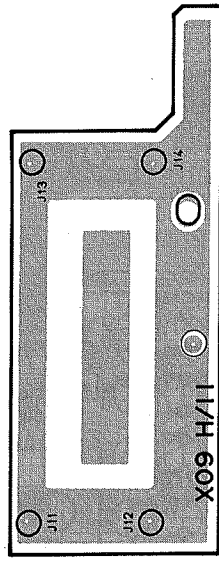
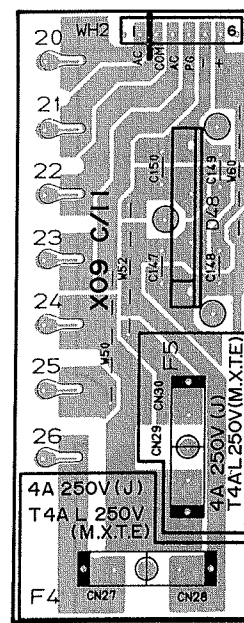
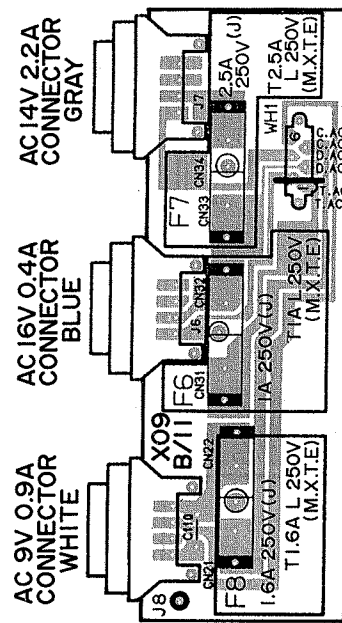
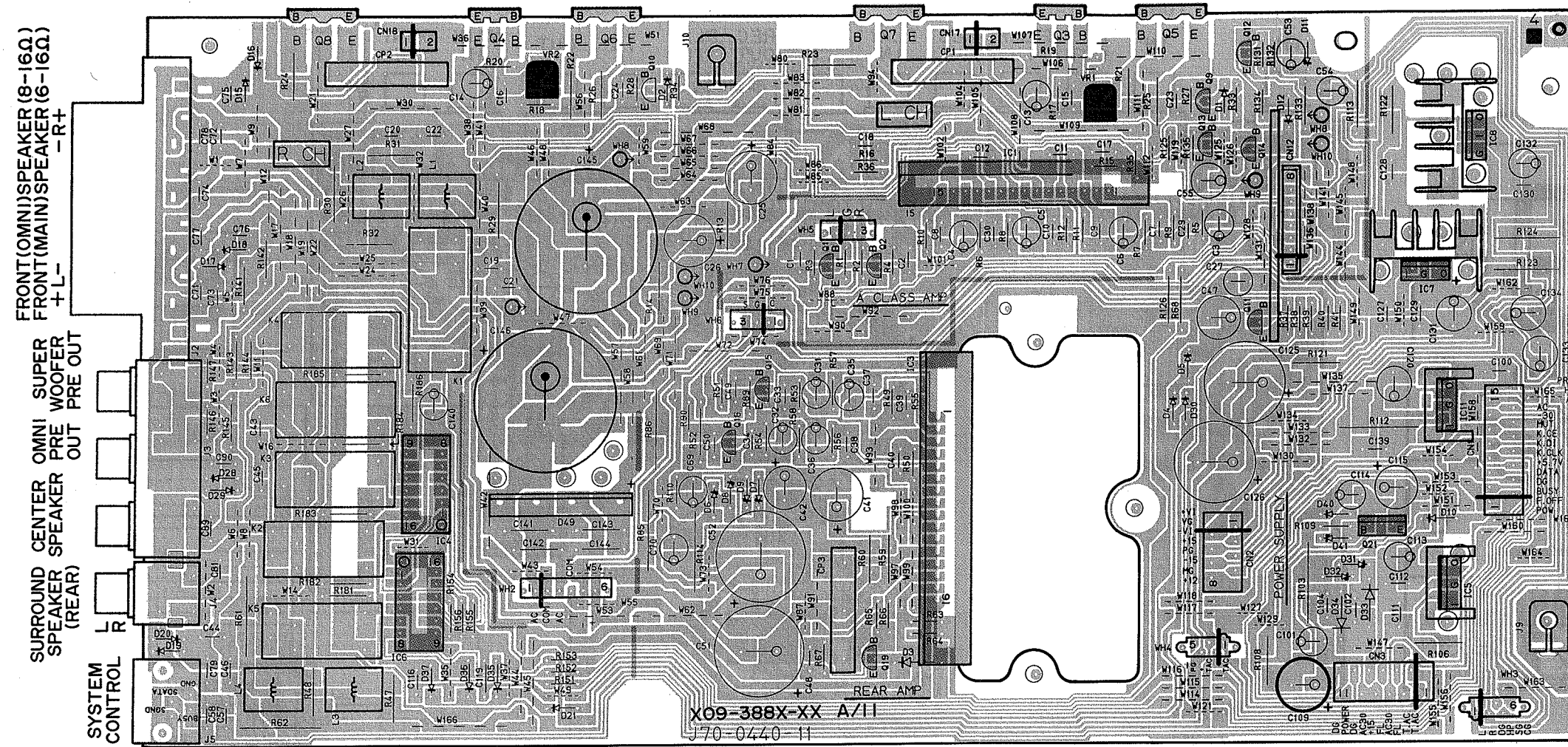
# A-87/97    A-87/97

## WIRING DIAGRAM





# PC BOARD (Component side view) AUDIO UNIT (X09-388X-XX)



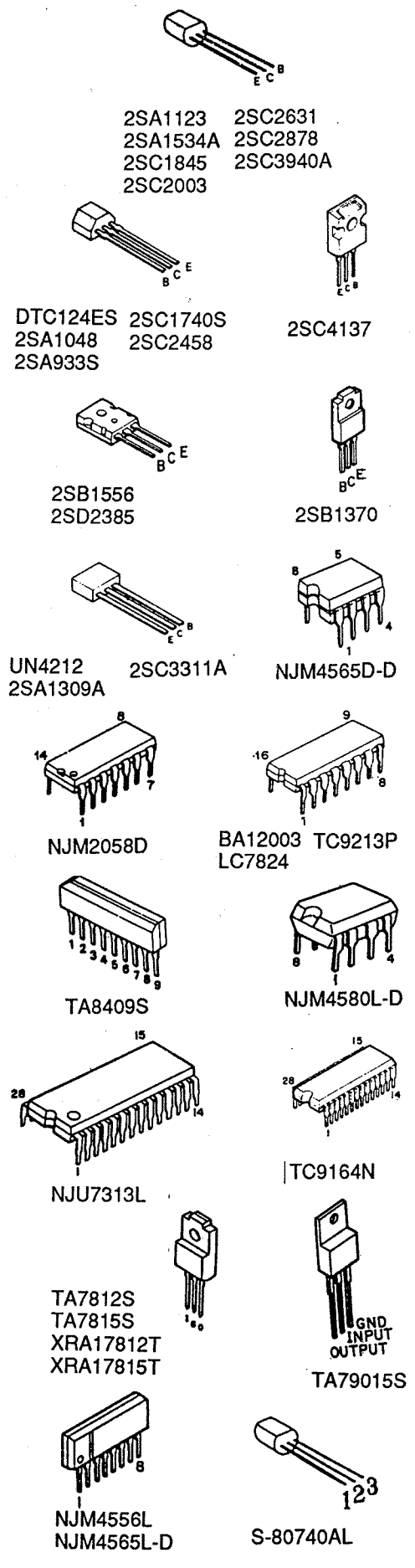
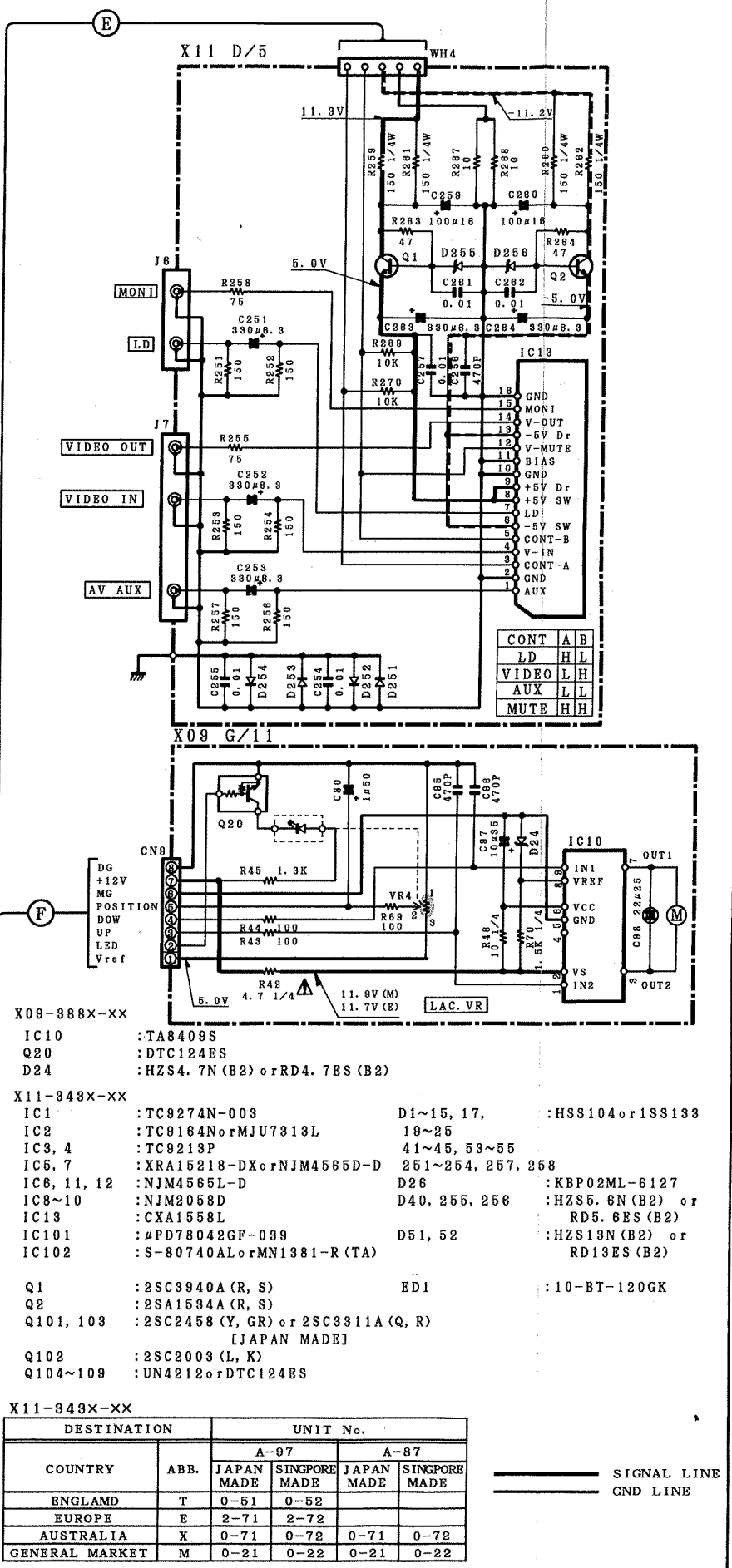
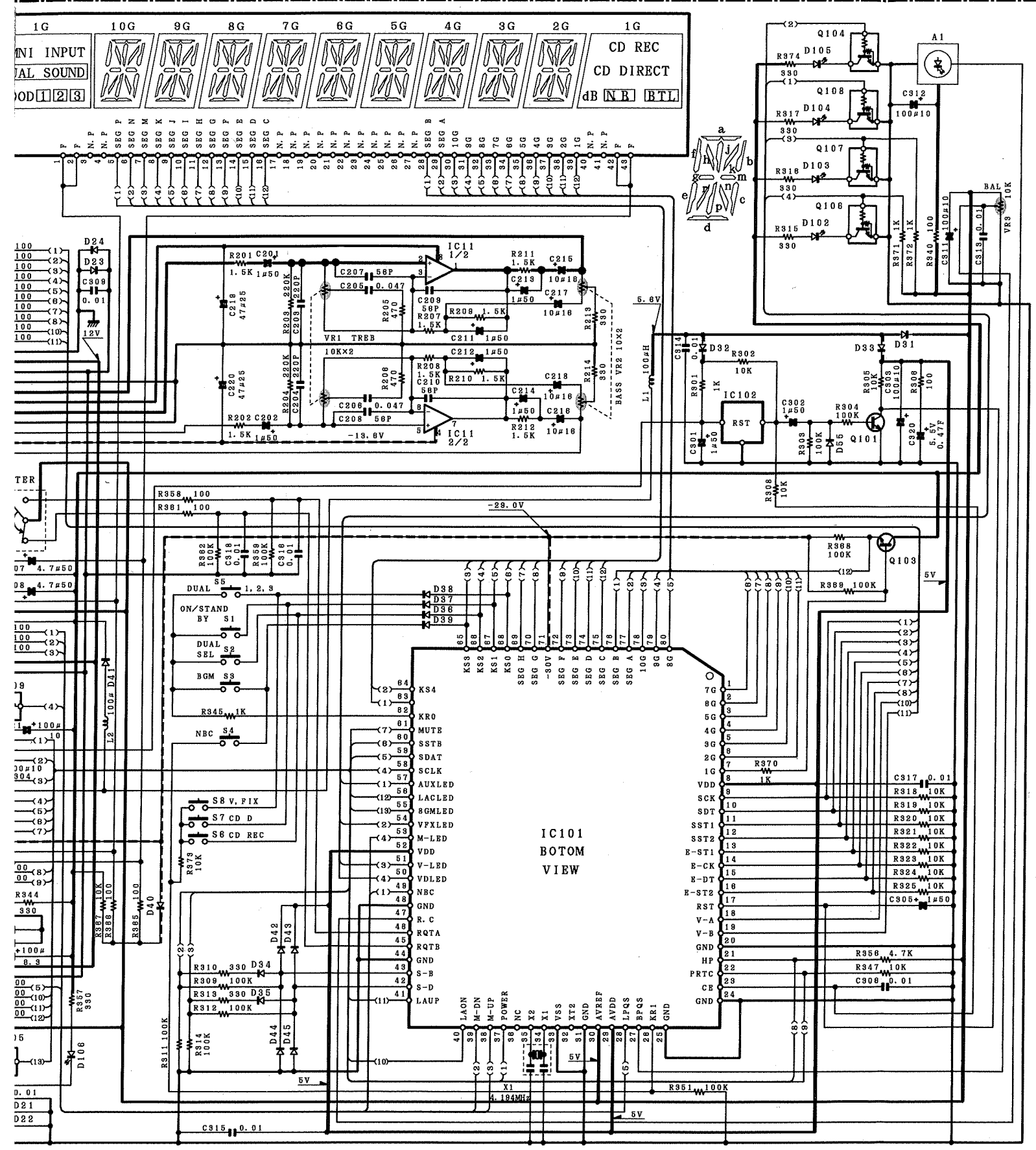
ON/STANDBY  
POWER

LINER ACOUSTIC  
FRONT

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







impedance voltme- lightly due to varia- f units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance sans signal d'entrée. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser ohne Eingangssignal gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

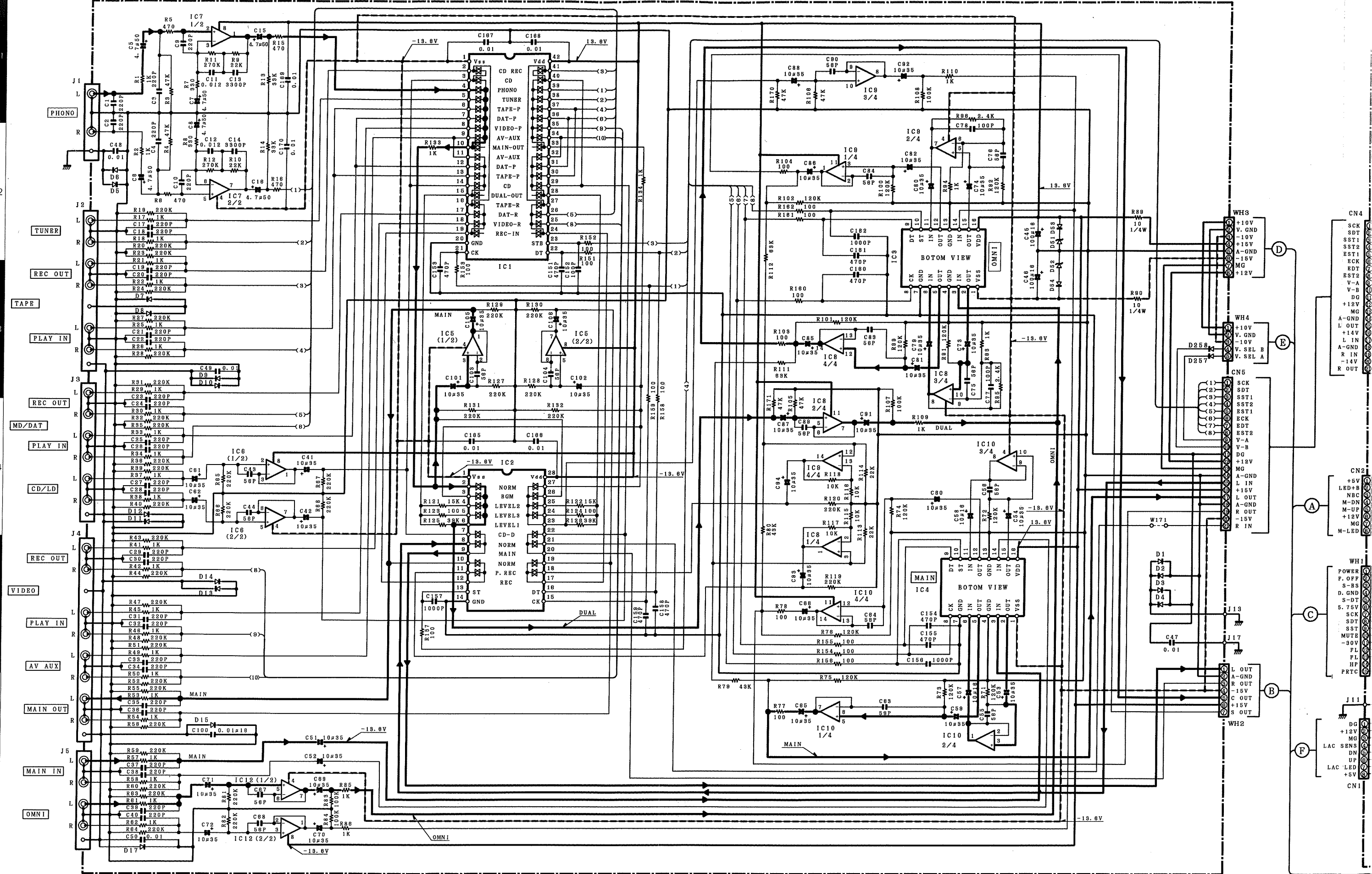
**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). **⚠** Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

1/2

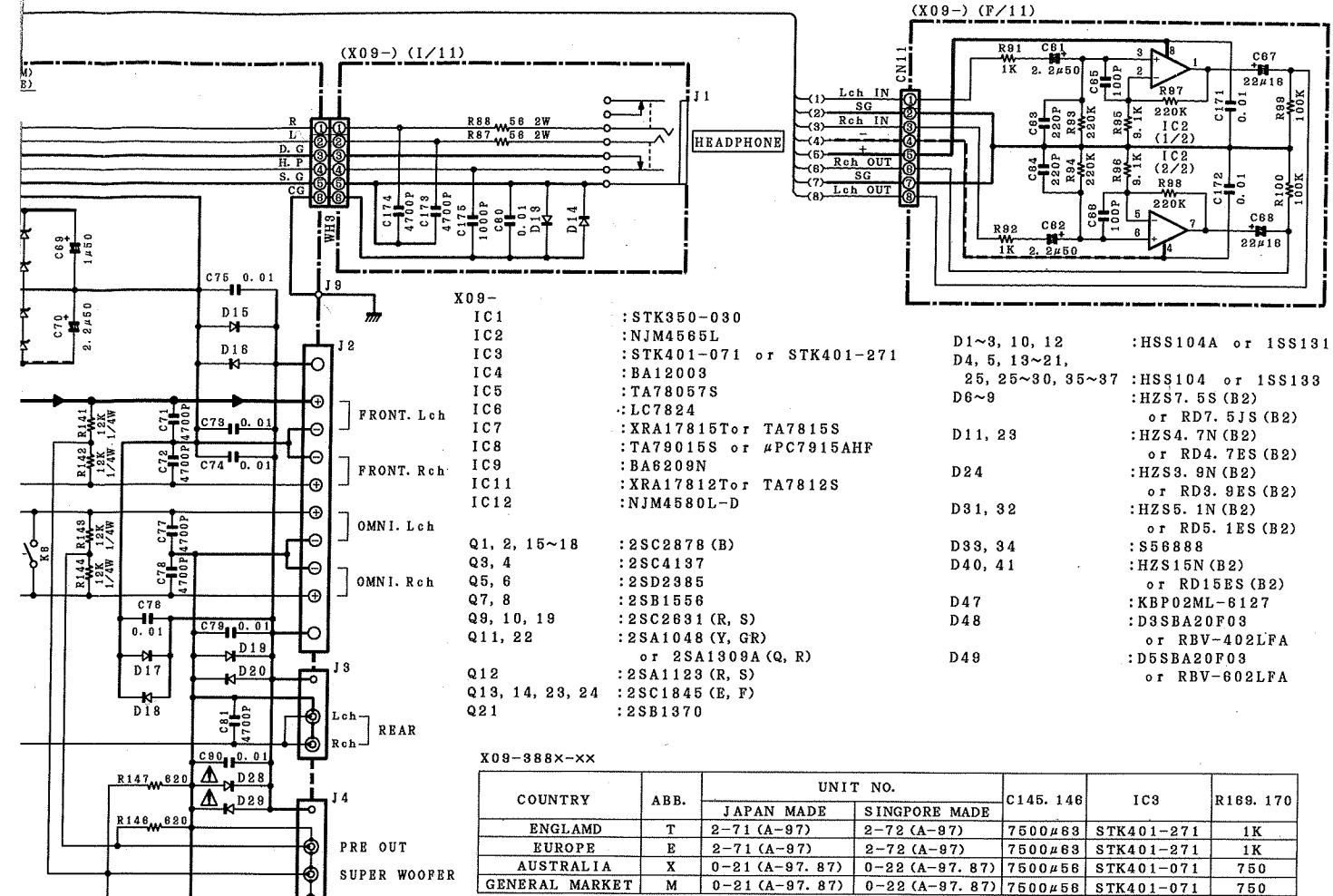
Y08-4860-21

**A-87/97**  
**KENWOOD**



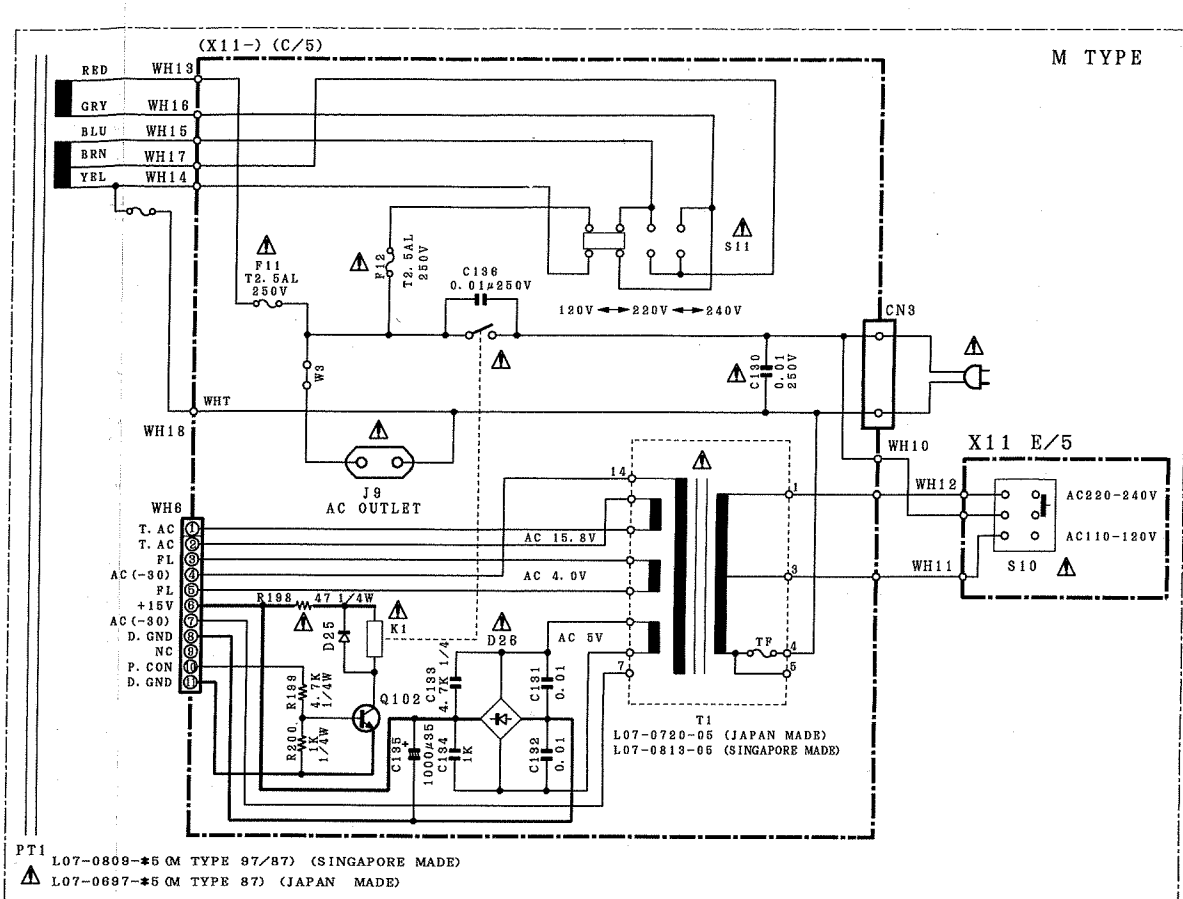


DC voltages are as measured with  
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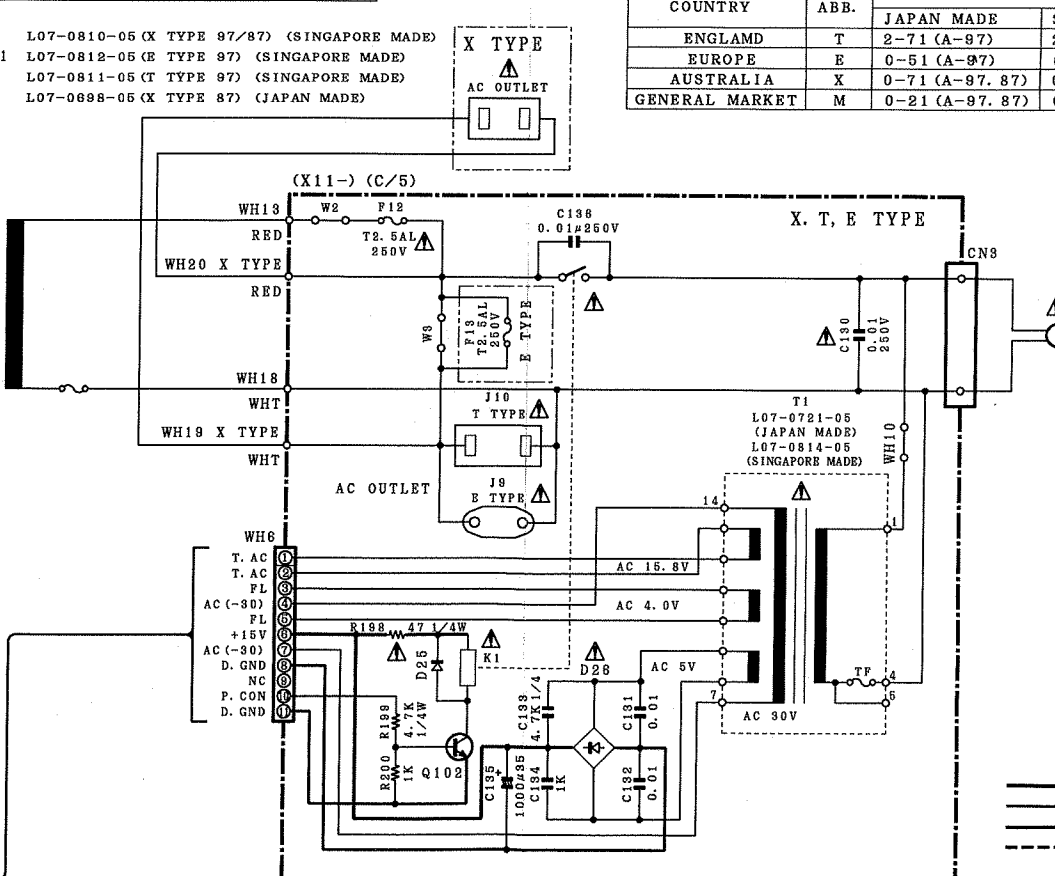
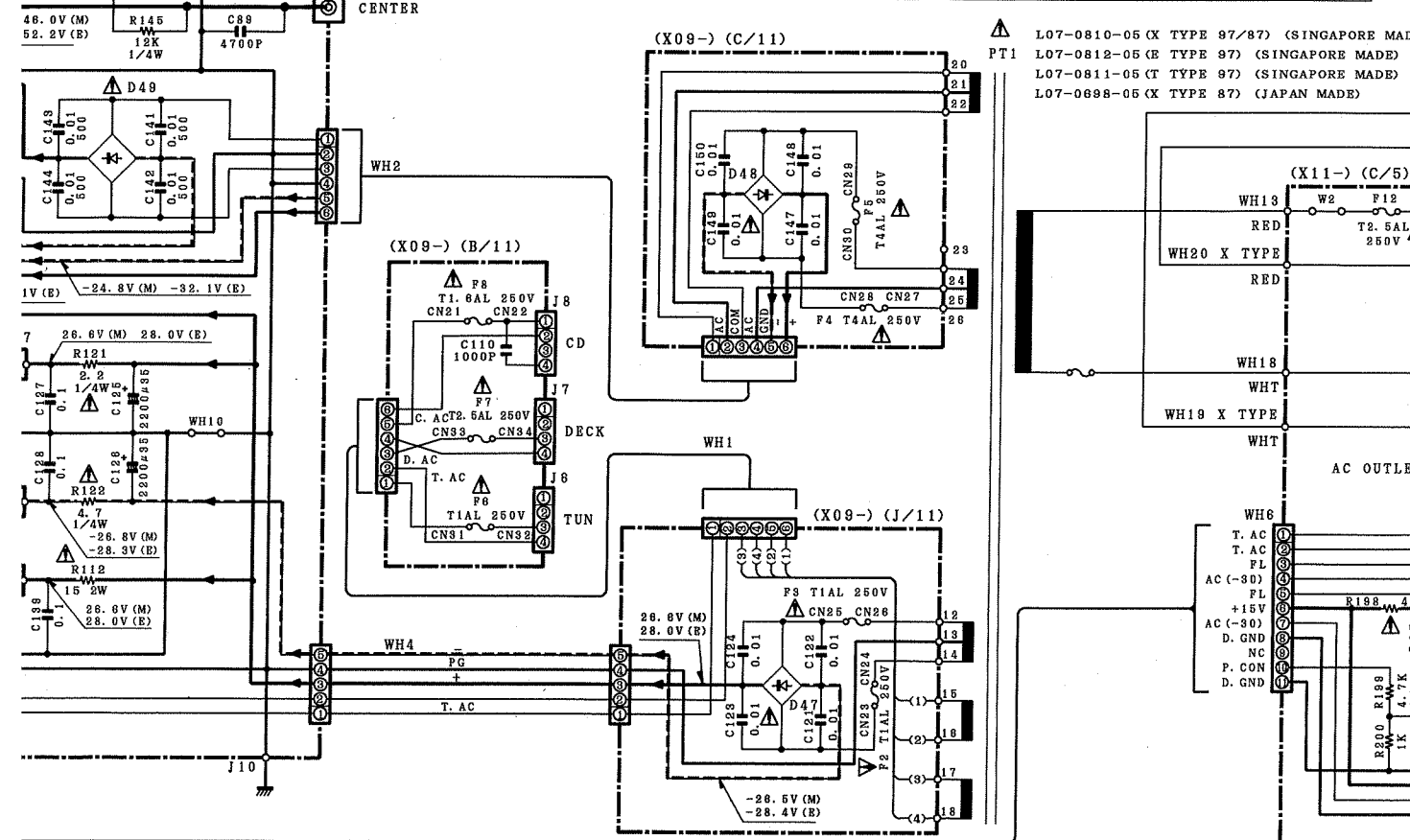
**X09-388X-XX**

COUNTRY	ABB.	UNIT NO.		C145. 146	IC3	R169. 170
		JAPAN MADE	SINGAPORE MADE			
ENGLAND	T	2-71 (A-97)	2-72 (A-97)	7500#63	STK401-271	1K
EUROPE	E	2-71 (A-97)	2-72 (A-97)	7500#63	STK401-271	1K
AUSTRALIA	X	0-21 (A-97. 87)	0-22 (A-97. 87)	7500#58	STK401-071	750
GENERAL MARKET	M	0-21 (A-97. 87)	0-22 (A-97. 87)	7500#58	STK401-071	750



**X11-343X-XX**

COUNTRY	ABB.	UNIT NO.	
		JAPAN MADE	SINGAPORE MADE
ENGLAND	T	2-71 (A-97)	2-72 (A-97)
EUROPE	E	0-51 (A-97)	0-52 (A-97)
AUSTRALIA	X	0-71 (A-97. 87)	0-72 (A-97. 87)
GENERAL MARKET	M	0-21 (A-97. 87)	0-22 (A-97. 87)



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

DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance sans signal d'entrée. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

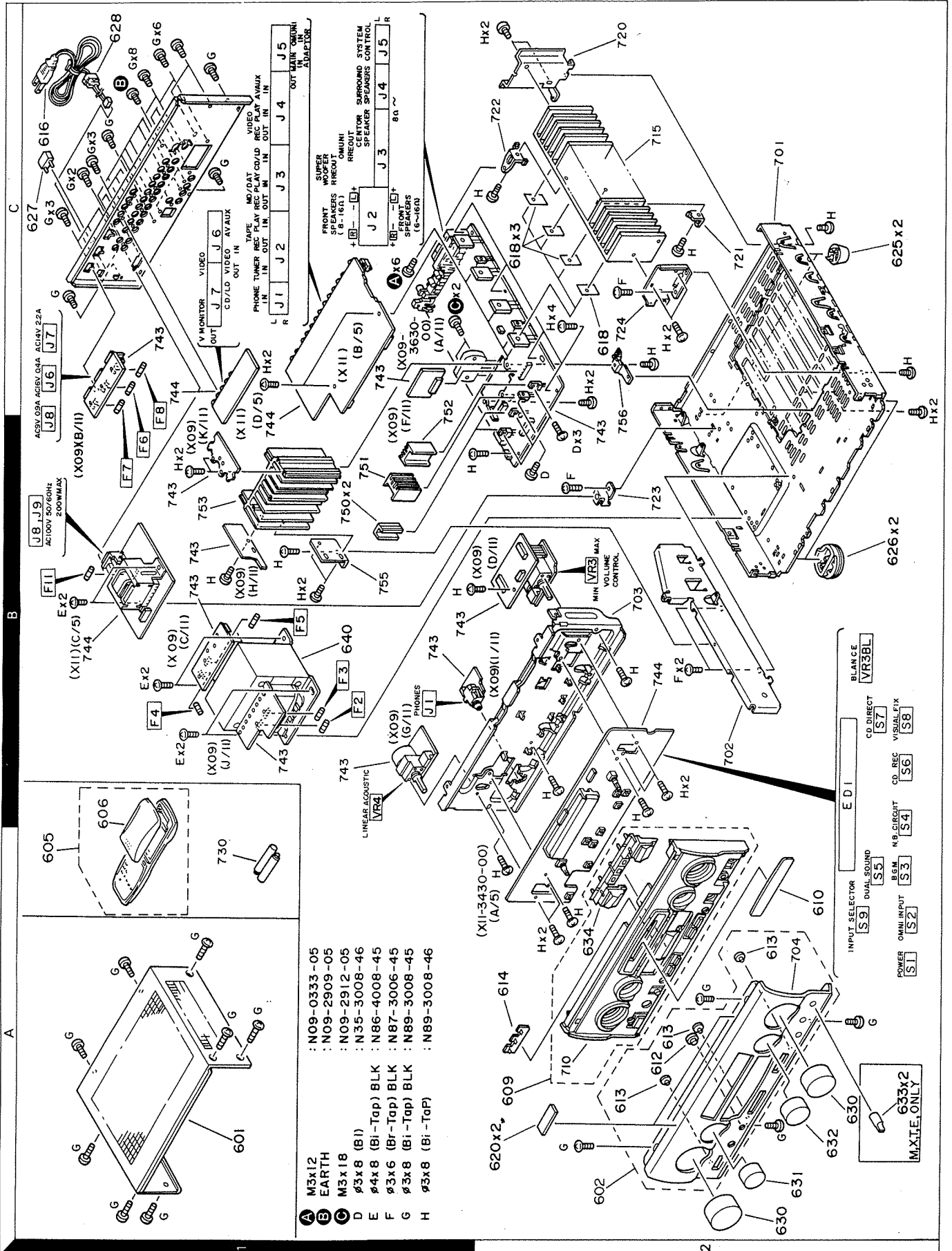
Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser ohne Eingangssignal gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

**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.





# EXPLODED VIEW (MAIN UNIT)



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

## PARTS LIST

### UNIT LIST(A-87)

DESTINATION		AUDIO UNIT	CONTROL UNIT
JAPAN MADE	M	X09-3880-21	X11-3430-21
	X	X09-3880-21	X11-3430-71
SINGAPORE MADE	M	X09-3880-22	X11-3430-22
	X	X09-3880-22	X11-3430-72

### A-97

DESTINATION		AUDIO UNIT	CONTROL UNIT
JAPAN MADE	J	X09-3880-00	X11-3430-00
	M	X09-3880-21	X11-3430-21
	X	X09-3880-21	X11-3430-71
	T	X09-3882-71	X11-3430-51
	E	X09-3882-71	X11-3432-71
SINGAPORE MADE	M	X09-3880-22	X11-3430-22
	X	X09-3882-22	X11-3430-72
	T	X09-3882-72	X11-3430-52
	E	X09-3882-72	X11-3432-72

PARTS LIST

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.

NO.1

Table with columns: Ref. No., Address, New Parts, Parts No., Description, Destination marks. Includes sub-sections for A-87 (JAPAN MADE) and A-87 (SINGAPORE MADE).

L:Scandinavia Y:PX(Far East, Hawaii) Y:AAFE(S/Europe) K:USA T:England X:Australia P:Canada E:Europe M:Other Areas

\* New Parts
Parts without Parts No. are not supplied.
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Teile ohne Parts No. werden nicht geliefert.

NO.2

Table with columns: Ref. No., Address, New Parts, Parts No., Description, Destination marks. Includes sub-sections for A-97 (JAPAN MADE) and A-97 (SINGAPORE MADE).

L:Scandinavia Y:PX(Far East, Hawaii) Y:AAFE(S/Europe) K:USA T:England X:Australia P:Canada E:Europe M:Other Areas

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

NO.3

Table with columns: Ref. No., Address, New Parts, Parts No., Description, Destination marks. Includes sub-sections for A-97 (SINGAPORE MADE) and A-97 (SINGAPORE MADE).

L:Scandinavia Y:PX(Far East, Hawaii) Y:AAFE(S/Europe) K:USA T:England X:Australia P:Canada E:Europe M:Other Areas

\* New Parts
Parts without Parts No. are not supplied.
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Teile ohne Parts No. werden nicht geliefert.

NO.4

Table with columns: Ref. No., Address, New Parts, Parts No., Description, Destination marks. Includes sub-sections for A-97 (SINGAPORE MADE) and A-97 (SINGAPORE MADE).

L:Scandinavia Y:PX(Far East, Hawaii) Y:AAFE(S/Europe) K:USA T:England X:Australia P:Canada E:Europe M:Other Areas



PARTS LIST

NO.6

\* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnés dans le Parts No. ne sont pas fournis.
Telle que Parts No. werden nicht geliefert.

Table with columns: Ref. No., Address, Parts No., Description, Destination. Includes parts like resistors, capacitors, and diodes.

L:Scandinavia Y:PX(Far East, Hawaii) Y:AFES(Europe) X:Australia M:Other Areas
J: JAPAN MADE S: SINGAPORE MADE 8: A-87 9: A-97

NO.5

\* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnés dans le Parts No. ne sont pas fournis.
Telle que Parts No. werden nicht geliefert.

Table with columns: Ref. No., Address, Parts No., Description, Destination. Includes parts like transformers, screws, and audio unit components.

L:Scandinavia Y:PX(Far East, Hawaii) Y:AFES(Europe) X:Australia M:Other Areas
J: JAPAN MADE S: SINGAPORE MADE 8: A-87 9: A-97

NO.8

\* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnés dans le Parts No. ne sont pas fournis.
Telle que Parts No. werden nicht geliefert.

Table with columns: Ref. No., Address, Parts No., Description, Destination. Includes parts like resistors, capacitors, and diodes.

L:Scandinavia Y:PX(Far East, Hawaii) Y:AFES(Europe) X:Australia M:Other Areas
J: JAPAN MADE S: SINGAPORE MADE 8: A-87 9: A-97

NO.7

\* New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnés dans le Parts No. ne sont pas fournis.
Telle que Parts No. werden nicht geliefert.

Table with columns: Ref. No., Address, Parts No., Description, Destination. Includes parts like fuses, capacitors, and audio unit components.

L:Scandinavia Y:PX(Far East, Hawaii) Y:AFES(Europe) X:Australia M:Other Areas
J: JAPAN MADE S: SINGAPORE MADE 8: A-87 9: A-97

PARTS LIST

x 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.

NO.10

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕	Re- marks 備考
C45, 46			CE04LW1C101M	ELECTR0		S
C48, 49			CK45FE1H103Z	CERAMIC	16WV	
C50			C91-0769-05	ELECTR0	Z	
C51-54			CE04KW1V100M	ELECTR0	K	J S
C55, 56			CC45FSL1H560J	ELECTR0	10UF	
C57, 58			C90-3225-05	CERAMIC	J	J J S
C59-62			CE04KW1V100M	ELECTR0	10UF	
C63, 64			CC45FSL1H560J	CERAMIC	J	J S
C65, 66			CE04KW1V100M	ELECTR0	10UF	
C67, 68			CC45FSL1H560J	CERAMIC	56PF	J S
C69-74			CE04KW1V100M	ELECTR0	10UF	
C75, 76			CC45FSL1H560J	CERAMIC	56PF	J S
C77, 78			CE04KW1V100M	ELECTR0	10UF	
C79, 82			CE04KW1V100M	ELECTR0	10UF	J S
C73, 82			CE04KW1V100M	ELECTR0	10UF	
C83, 84			CC45FSL1H560J	CERAMIC	56PF	J S
C85-88			CE04KW1V100M	ELECTR0	10UF	
C89, 90			CC45FSL1H560J	CERAMIC	56PF	J S
C91-94			CE04KW1V100M	ELECTR0	10UF	J S
C100			C91-0769-05	CERAMIC	K	
C101, 102			CE04KW1V100M	ELECTR0	0.01UF	J S
C101, 102			CE04KW1V100M	ELECTR0	10UF	
C103, 104			CC45FSL1H560J	CERAMIC	56PF	J S
C105, 106			CE04KW1V100M	ELECTR0	10UF	J
C130-134			CE04LW1V100M	ELECTR0	10UF	S
C135			CK45FE1H103Z	CERAMIC	0.01UF	
C135			CE04E1W102M	ELECTR0	0.010UF	
C135			CE04KW1V102M	ELECTR0	1000UF	S J
C136			C91-1439-05	FILM	0.01UF	
C151			CK45EB1H471K	CERAMIC	470PF	
C152			CK45EB1H102K	CERAMIC	1000PF	
C153-155			CK45EB1H471K	CERAMIC	470PF	
C156, 157			CK45EB1H102K	CERAMIC	1000PF	
C158			CK45EB1H471K	CERAMIC	470PF	
C159-161			C91-0753-05	CHIP C	K	
C162			C91-0757-05	CERAMIC	470PF	
C165-168			CK45FE1H103Z	CERAMIC	1000PF	
C169, 170			CF92FV1H103J	MF	0.010UF	J
C201, 202			CE04KW1H101M	ELECTR0	1.0UF	J S
C203, 204			CC45FSL1H221J	CERAMIC	220PF	
C205, 206			CF92FV1H473J	MF	0.047UF	
C207-210			CC45FSL1H560J	CERAMIC	56PF	J
C211-214			CE04KW1H101M	ELECTR0	1.0UF	J S
C215-218			C90-3225-05	ELECTR0	10UF	
C219, 220			CE04KW1S470M	ELECTR0	47UF	J S
C219, 220			CE04LW1E470M	ELECTR0	47UF	J S

x New Parts  
 Parts without Parts No. are not supplied.  
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 Teile ohne Parts No. werden nicht geliefert.

NO.9

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕	Re- marks 備考
IC1		*	STK350-030	IC(CAF DRIVER AMP)		
IC2		*	NJM4556L	IC(COP AMP)		9
IC3		*	STK401-071	IC(CAF POWER AMP/40HX2)		8
IC3		*	STK401-071	IC(CAF POWER AMP/40HX2)		8
IC3		*	STK401-271	IC(CAF POWER AMP/40HX2)		9
IC4			BA12003	IC(TRANSISTOR ARRAY)		
IC5			TA76057S	IC(VOLTAGE REGULATOR/ +5.75V)		
IC6		*	LC78225	IC(CANALOG SW)		
IC7			TA7815S	IC(VOLTAGE REGULATOR/ +15V)		
IC7		*	XRA17815T	IC(VOLTAGE REGULATOR/ +15V)		
IC8			TA79015S	IC(VOLTAGE REGULATOR/ -15V)		
IC8			UPC7915AHF	IC(VOLTAGE REGULATOR/ -15V)		
IC9			BA6209N	IC(MOTOR DRIVER)		
IC10			TAB409S	IC(MOTOR CONTROL)		
IC11			TA7812S	IC(VOLTAGE REGULATOR/ +12V)		
IC11		*	XRA17812T	IC(VOLTAGE REGULATOR/ +12V)		
IC12			NJM4580L-D	IC(COP AMP X2)		
Q1			2SC2878(B)	TRANSISTOR		
Q3, 4			2SC4137	TRANSISTOR		
Q5, 6		*	2SD2385	TRANSISTOR		
Q7, 8		*	2SB1556	TRANSISTOR		
Q9, 10		*	2SC2631(R, S)	TRANSISTOR		J S
Q11			2SA1048(Y, GR)	TRANSISTOR		J
Q11			2SA1175(F, E)	TRANSISTOR		J
Q11			2SA1309A(Q, R)	TRANSISTOR		J
Q11			2SA1309A(Q, R)	TRANSISTOR		S
Q12			2SA933S(G, B)	TRANSISTOR		
Q13, 14			2SA1123(K, S)	TRANSISTOR		
Q15, 16			2SC1845(K, E)	TRANSISTOR		
Q19			2SC2676(B)	TRANSISTOR		
Q20			2SC2631(R, S)	TRANSISTOR		
Q20			DTC124BS	DIGITAL TRANSISTOR		
Q21			2SB1370	TRANSISTOR		
Q22			2SA1048(Y, GR)	TRANSISTOR		J S
Q22			2SA1175(F, E)	TRANSISTOR		J
Q22			2SA1309A(Q, R)	TRANSISTOR		J
Q22			2SA933S(G, R)	TRANSISTOR		S
Q23, 24			2SC1845(F, E)	TRANSISTOR		
<b>CONTROL UNIT (X11-343X-XX)</b>						
D101-106			B30-1291-05	LED(LN21CPSLX(V)-(TA4))		
C1			CC45FSL1H221J	CERAMIC	220PF	J
C5			CE04KW1H4R7M	ELECTR0	4.7UF	J S
C5			CE04LW1H4R7M	ELECTR0	50WV	J S
C7, 8			CE04KW1H4R7M	ELECTR0	4.7UF	J S
C7, 8			CE04LW1H4R7M	ELECTR0	50WV	J S
C9			CC45FSL1H221J	CERAMIC	220PF	J
C11, 12			CF92FV1H123J	MF	0.012UF	
C13, 14			CF92FV1H352J	MF	3300PF	
C15, 16			CE04KW1H4R7M	ELECTR0	4.7UF	J S
C15, 16			CE04LW1H4R7M	ELECTR0	50WV	J S
C17-40			C91-0749-05	CERAMIC	220PF	K
C41, 42			CE04KW1V100M	ELECTR0	10UF	J S
C43, 44			CE04LW1V100M	ELECTR0	10UF	J S
C43, 44			CC45FSL1H560J	CERAMIC	56PF	J
C45, 46			CE04KW1C101M	ELECTR0	100UF	J

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△ indicates safety critical components.

△ indicates safety critical components.

PARTS LIST

NO.12

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕	Re- marks 備考
T1		L07-0814-05	POWER TRANSFORMER	XTE	9 S
T1		L07-0814-05	POWER TRANSFORMER	X	8 S
X1		L78-0267-05	RESONATOR 4.194MHZ		S
R198		RD14NB2E470J	RD 47. J 1/4W		
R259-262		RD14NB2E151J	RD 150. J 1/4W		
VR1, 2		R10-3954-05	POTENTIOMETER(10K) BASS, TREBLE		
VR3		R05-3037-05	POTENTIOMETER(10K) BALANCE		
K1		S76-0002-05	MAGNETIC RELAY		
S10		S60-1064-05	PUSH SWITCH KEY BOARD		
S11		S62-0001-05	SLIDE SWITCH VOLTAGE SELECTOR	M	
		S31-2322-05	SLIDE SWITCH VOLTAGE SELECTOR	M	
S9		T99-0530-05	ROTARY ENCODER INPUT SELECTOR		
D1 -15		HSS104	DIODE		
D1 -15		HSS133	DIODE		
D17		HSS133	DIODE		
D19 -25		HSS104	DIODE		
D19 -25		HSS133	DIODE		
D19 -25		HSS104	DIODE		
D19 -25		HSS133	DIODE		
D26		KBPO2ML-6127	DIODE		
D31 -39		HSS104	DIODE		
D31 -39		HSS133	DIODE		
D40		HZSS5.6N(B2)	ZENER DIODE		
D40		R05.6ES(B2)	ZENER DIODE		
D41 -45		HSS104	DIODE		
D41 -45		HSS133	DIODE		
D51 .52		HZS13N(B2)	ZENER DIODE		
D51 .52		RD13ES(B2)	ZENER DIODE		
D53 -55		HSS104	DIODE		
D53 -55		HSS133	DIODE		
D251-254		HSS104	DIODE		
D251-254		HSS133	DIODE		
D255, 256		HZSS5.6N(B2)	ZENER DIODE		
D255, 256		R05.6ES(B2)	ZENER DIODE		
D257, 258		HSS104	DIODE		
D257, 258		HSS133	DIODE		
ED1		10-BT-120GK	INDICATOR TUBE		
IC1		TC9274N-003	IC(ANALOG SWITCH)		
IC2		NJU7313L	IC(ANALOG SWITCH)		
IC2		IC9164N	IC(16CH BILATERAL SELECTOR SW)		
IC3		IC9213P	IC(2CH ELECTRONIC VOLUME)		
IC3 .4		NM4565D-D	IC(OP AMP X2)		
IC5		XRA15218-DX	IC(OP AMP X2)		
IC6		NM4565L-D	IC(OP AMP X2)		
IC7		NM4565L-D	IC(OP AMP X2)		
IC7		YR115058-D	IC(OP AMP X2)		
IC8 -10		NM2058B-DX	IC(OP AMP X2)		
IC8 -10		NM2058B-D	IC(OP AMP X2)		
IC11, 12		NM4565L-D	IC(OP AMP X2)		
IC13		CXA1558L	IC(MICROPROCESSOR)		
IC101		UPD78042QF-039	IC(VOLTAGE DETECT)		
IC102		MN1381-R(TA)	IC(VOLTAGE DETECTOR)		
IC102		S-80740AL	IC(VOLTAGE DETECTOR)		
Q1		25C3940A(R, S)	TRANSISTOR		
Q2		2SA1534A(R, S)	TRANSISTOR		

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NO.11

NO.11

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕	Re- marks 備考
C251-253		CE04KW0331M	ELECTR0 330UF 6.3KV	J	S
C251-253		CE04LW0331M	ELECTR0 330UF 6.3KV		
C254, 255		CK45FF1H103Z	CERAMIC 0.010UF Z		
C256		CK456B1H401K	CERAMIC 470PFC Z		
C257		CK45FF1H103Z	CERAMIC 0.010UF Z		
C259, 260		CE04KW1010M	ELECTR0 100UF 16KV	J	S
C261, 262		CE04LW1010M	ELECTR0 100UF 16KV		
C263, 264		CK45FF1H103Z	CERAMIC 0.010UF Z		
C263, 264		CE04LW0331M	ELECTR0 330UF 6.3KV		
C301, 302		C90-3253-05	ELECTR0 1UF 50WV	J	S
C303, 304		CE04KW1A101M	ELECTR0 100UF 10WV		
C303, 304		CE04LW1A101M	ELECTR0 100UF 10WV		
C305		C90-3253-05	ELECTR0 1UF 50WV		
C306		CK45FF1H103Z	CERAMIC 0.010UF Z		
C307, 308		C90-3256-05	ELECTR0 4.7UF 50WV		
C309		CK45FF1H103Z	CERAMIC 0.010UF Z		
C310		C91-0769-05	CERAMIC 0.01UF Z		
C311, 312		CE04KW1A101M	ELECTR0 100UF 10WV		
C311, 312		CE04LW1A101M	ELECTR0 100UF 10WV		
C313, 314		CK45FF1H103Z	CERAMIC 0.010UF Z		
C315		C91-0769-05	CERAMIC 0.01UF Z		
C316		CK45FF1H103Z	CERAMIC 0.010UF Z		
C317		C91-0769-05	CERAMIC 0.01UF Z		
C318		CK45FF1H103Z	CERAMIC 0.010UF Z		
C319		C90-3214-05	ELECTR0 100UF 6.3KV		
C320		C90-1827-05	BACKUP 0.047F 5.5WV		
C321		CE04KW1A101M	ELECTR0 100UF 10WV		
C321		CE04LW1A101M	ELECTR0 100UF 10WV		
CN4	2B	E40-4161-05	FLAT CABLE CONNECTOR		
CN5	1C	E40-4201-05	FLAT CABLE CONNECTOR		
J1		E63-0072-15	PHONO JACK PHONO		
J2		E63-0072-15	PHONO JACK TUNER, TAPE, MD, CD		
J4		E63-0067-15	PHONO JACK VIDEO, AV/AUX, ADAPTER		
J5		E63-0091-05	PHONO JACK ADAPTER/1N, 0MMI		
J6		E63-0093-05	PHONO JACK VISUAL MONITOR		
J7		E63-0094-05	PHONO JACK VIDEO IN/OUT, AV AUX		
J9		E03-0108-05	AC OUTLET	M	9
J9		E03-0108-05	AC OUTLET	X	8
J9		E03-0108-05	AC OUTLET	TE	8
J10		E03-0109-05	AC OUTLET	T	9
F11, 12		F05-2525-05	FUSE (SEM0) (250V T2.5A)	M	9
F12		F05-2525-05	FUSE (SEM0) (250V T2.5A)	X	8
F12, 13		F05-2525-05	FUSE (SEM0) (250V T2.5A)	TE	8
F17		F10-0937-03	SHIELDING PLATE		
CN10-13		J13-0075-05	FUSE CLIP	M	9
CN10, 11		J13-0075-05	FUSE CLIP	X	8
CN10, 11		J13-0075-05	FUSE CLIP	TE	8
CN14, 15		J13-0075-05	FUSE CLIP		
L1		L40-1011-17	SMALL FIXED INDUCTOR(100UH, K)		
T1		L07-0720-05	POWER TRANSFORMER	M	9
T1		L07-0721-05	POWER TRANSFORMER	X	8
T1		L07-0721-05	POWER TRANSFORMER	TE	8
T1		L07-0813-05	POWER TRANSFORMER		

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PARTS LIST

NO.13

Ref. No. 参照番号	Address 位置	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕	Re- marks 備考
Q101		2SC1740S(Q, R)	TRANSISTOR		S
Q101		2SC2458(Y, GR)	TRANSISTOR		S
Q101		2SC2785(F, E)	TRANSISTOR		S
Q102		2SC3311A(Q, R)	TRANSISTOR		
Q102		2SC2003(L, K)	TRANSISTOR		
Q103		2SC1740S(Q, R)	TRANSISTOR		S
Q103		2SC2458(Y, GR)	TRANSISTOR		S
Q103		2SC2785(F, E)	TRANSISTOR		S
Q103		2SC3311A(Q, R)	TRANSISTOR		
Q104-109		DTC124ES	DIGITAL TRANSISTOR		
Q104-109		UN4212	DIGITAL TRANSISTOR		
A1		W02-1174-05	ELECTRIC CIRCUIT MODULE		
		X25-5470-11	REMOTE CONTROL UNIT		

\* New Parts  
Parts without Parts No. are not supplied.  
Les articles non mentionnes dans le Parts No. ne sont pas fournis.  
Teile ohne Parts No. werden nicht geliefert.

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Y:AFES(Europe)  
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J: JAPAN MADE  
S: SINGAPORE MADE  
8: A-87  
9: A-97  
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## SPECIFICATIONS

Rated power output at the STEREO operation  
(IEC/NF) from 63 Hz to 12,500Hz, 0.7% T.H.D.  
at 8Ω ..... 85W+85W  
(DIN) 1,000Hz at 8Ω ..... 85W+85W

Power output at the Surround operation  
Front (1kHz, 0.08% T.H.D. at 8Ω) ..... 85W+85W  
Omni (1kHz, 0.5% T.H.D. at 8Ω) ..... 25W+25W  
Center (1kHz, 0.5% T.H.D. at 8Ω) ..... 25W  
Rear (1kHz, 0.5% T.H.D. at 8Ω) ..... 25W+25W

Total harmonic distortion (1kHz, 8Ω) ..... 0.02% at 40W

Signal to noise ratio (IHF '66)  
PHONO (MM) ..... 72dB  
CD/LD, TAPE ..... 90dB

Signal to noise ratio (DIN weighted at 50mW output)  
PHONO (MM) ..... 56dB  
CD/LD, TAPE ..... 57dB

Input sensitivity/impedance  
PHONO (MM) ..... 2.5mV/47kΩ  
CD/LD, TAPE ..... 200mV/47kΩ

Tone controls  
BASS ..... ±10dB (at 100Hz)  
TREBLE ..... ±10dB (at 10kHz)

VIDEO inputs/outputs  
(composite) ..... 1Vp-p/75Ω

General  
Power consumption ..... 280W  
Dimensions ..... W : 360 mm  
H : 129 mm  
D : 378 mm  
Weight (net) ..... 11.3kg  
AC outlets (switched) ..... 1 (Total 200W max)

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

Kenwood poursuit une politique de progrès constants en ce qui concerne le développement.  
Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

Kenwood strebt ständige Verbesserungen in der Entwicklung an.  
Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

### Note:

Component and circuitry are subject to modification to insure the best operation under differing local conditions. This manual is based on the U.S.A. (K) 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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