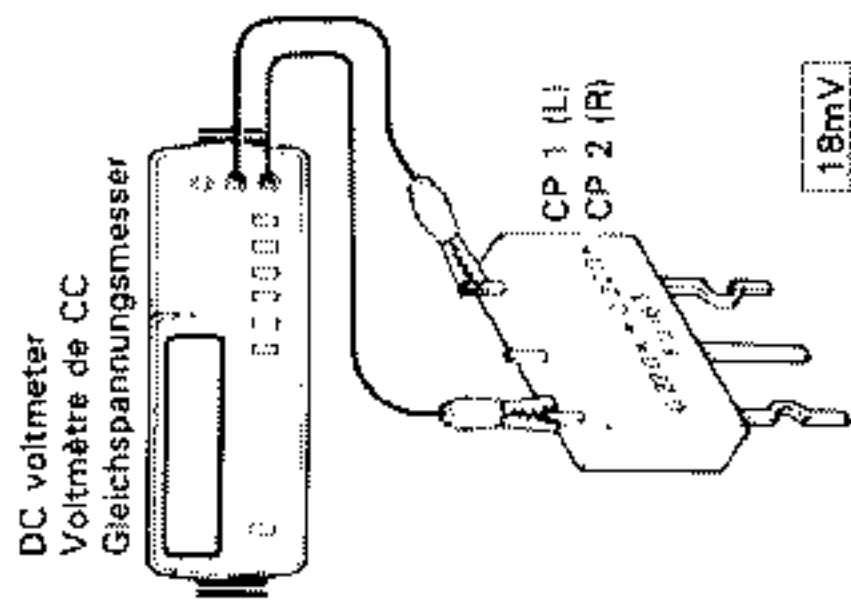


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VOLTAGE TABLES

AUDIO UNIT(X09-28XX-XX)

IC1	9	-12V
	22	12V

IC2	1,2	0V
	4	-12V
	6,7	0V
	8	12V

IC3	1	0V
	4	-12V
	7	0V
	8	12V

IC4	3	0V
	4	2.8V
	5	0V
	6	0.7V
	7	2.2V
	8	3.4V

Q1-4	E	-0.6V
	C	64.4V
	B	0V

Q5-8	E	65V
	C	-
	B	64.4V

Q9,10	E	-0.6V
	C	-
	B	0V

TO NE UNIT(X11-263X-XX)

IC1,2	18	12V
	20	-12V

IC3	1	0V
	4	12V
	6-9	12V
	11	-12V
	14	0V

Q1	E	11V
	C	0V
	B	11V

Q3	E	0V
	C	11V
	B	0.4V

Q27	E	12V
	C	-
	B	-

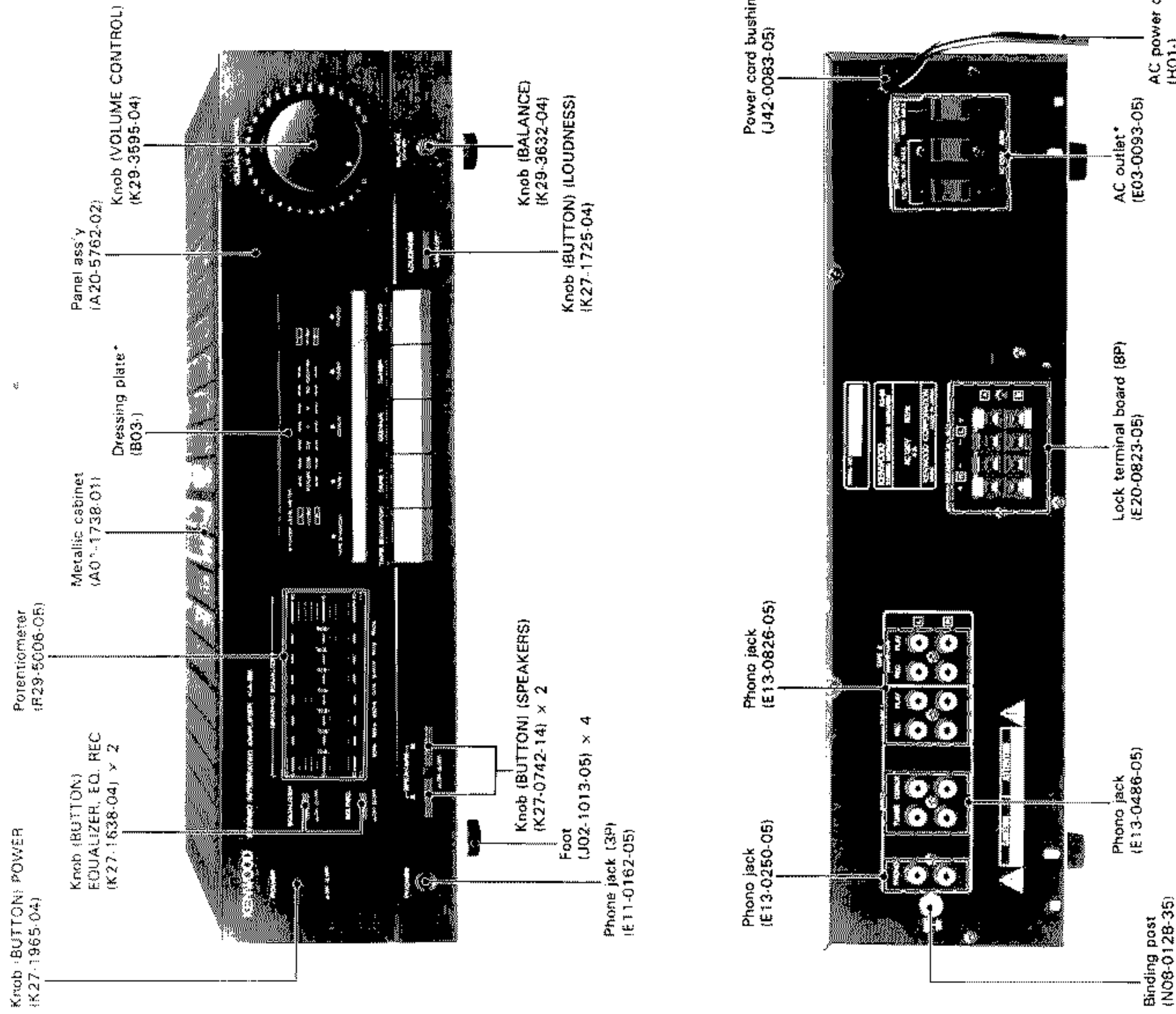
Q31	E	12.7V
	C	30V
	B	-

Q32	E	-12.7V
	C	-30V
	B	-

Q33,34	E	-
	C	-66.5V
	B	-

Q35,36	E	-
	C	66.5V
	B	-

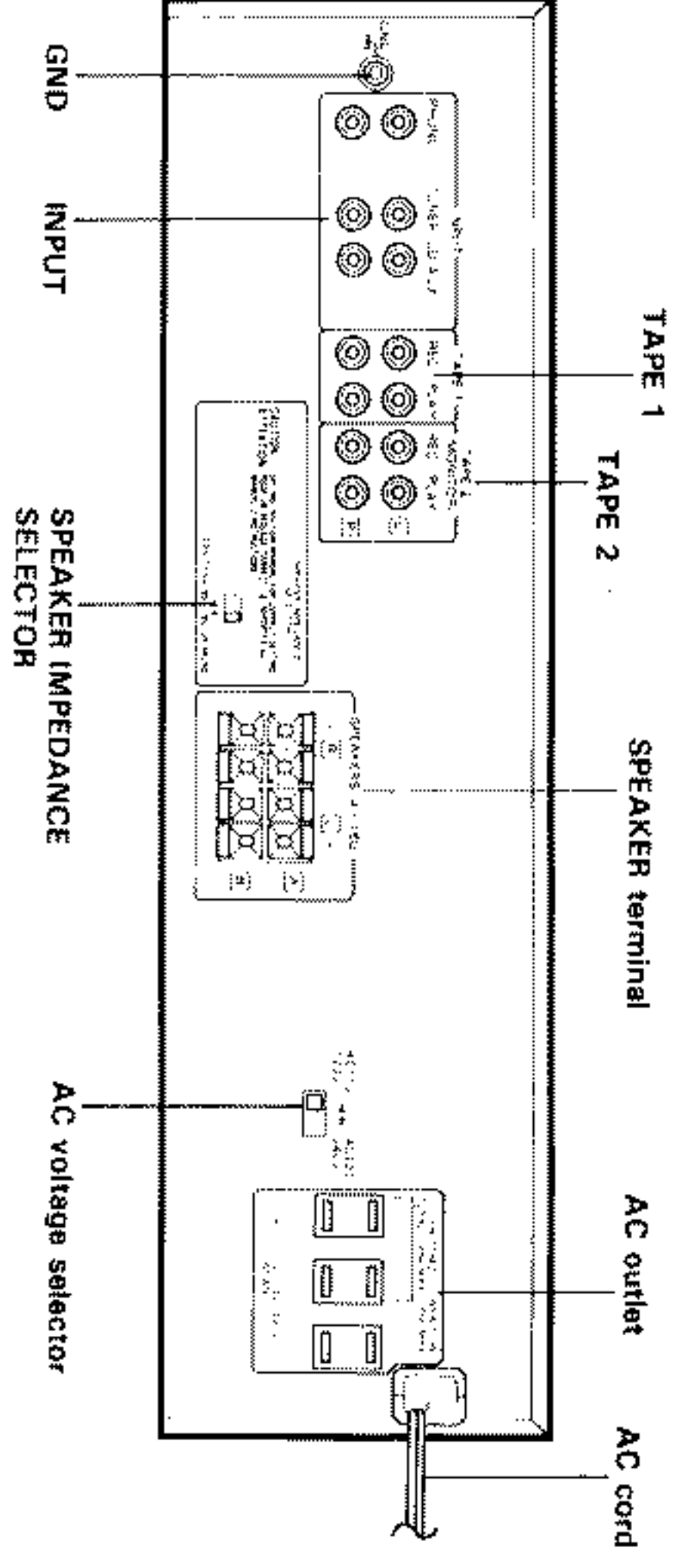
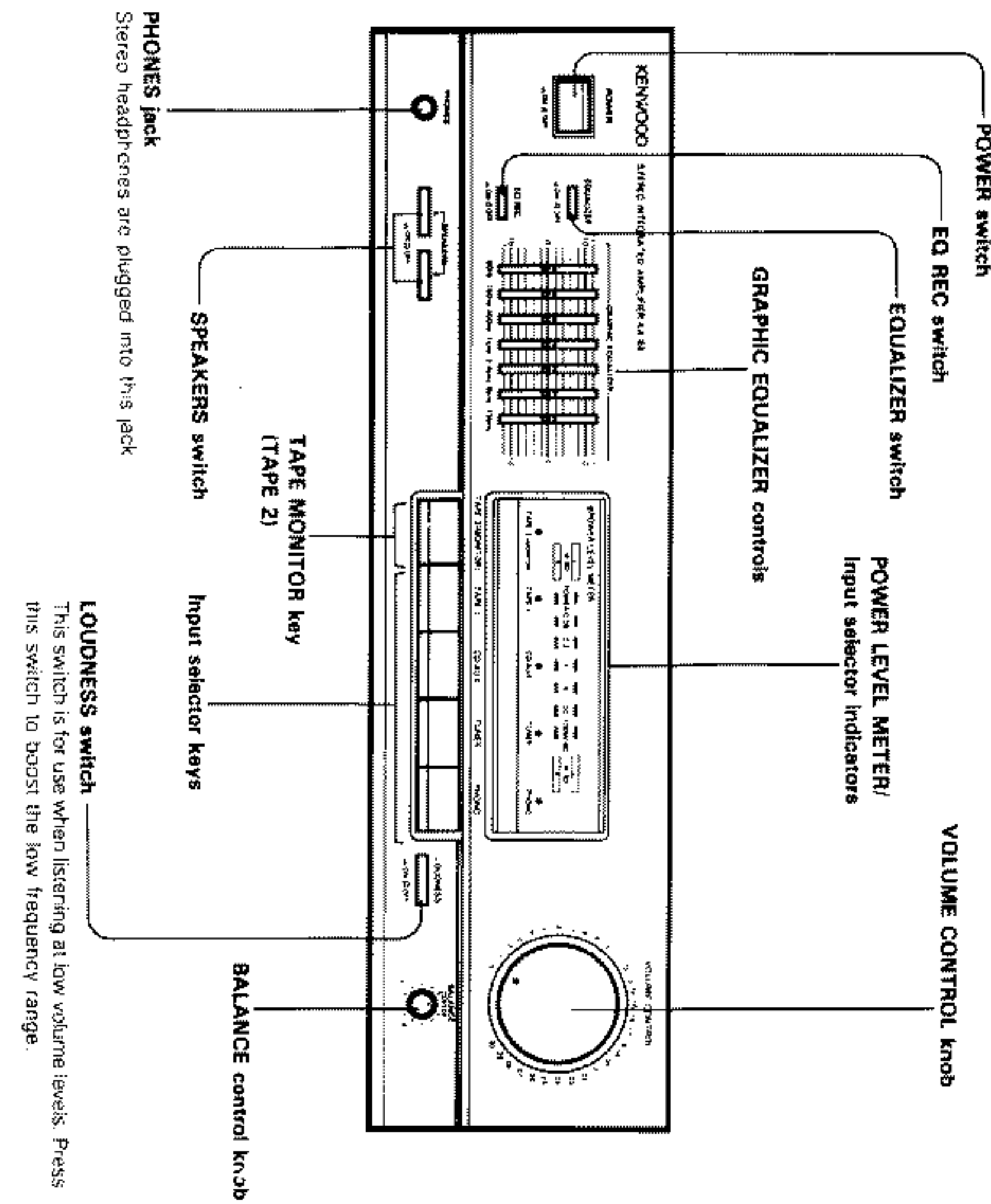
Q39	E	12V
	C	-
	B	-



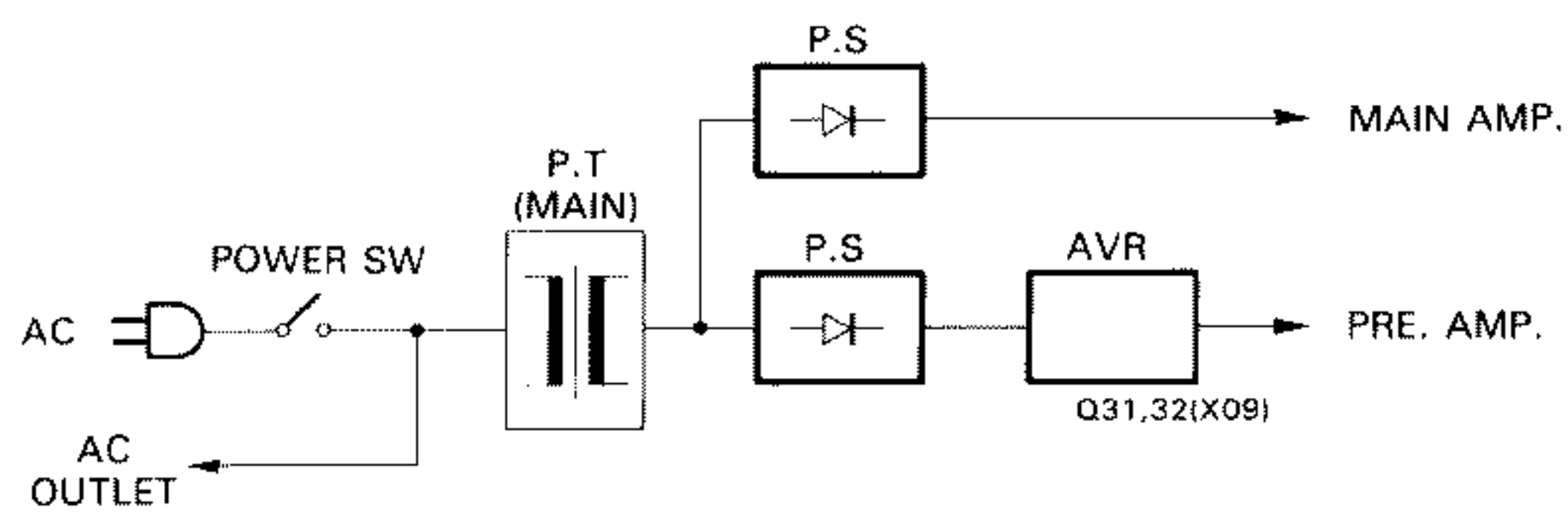
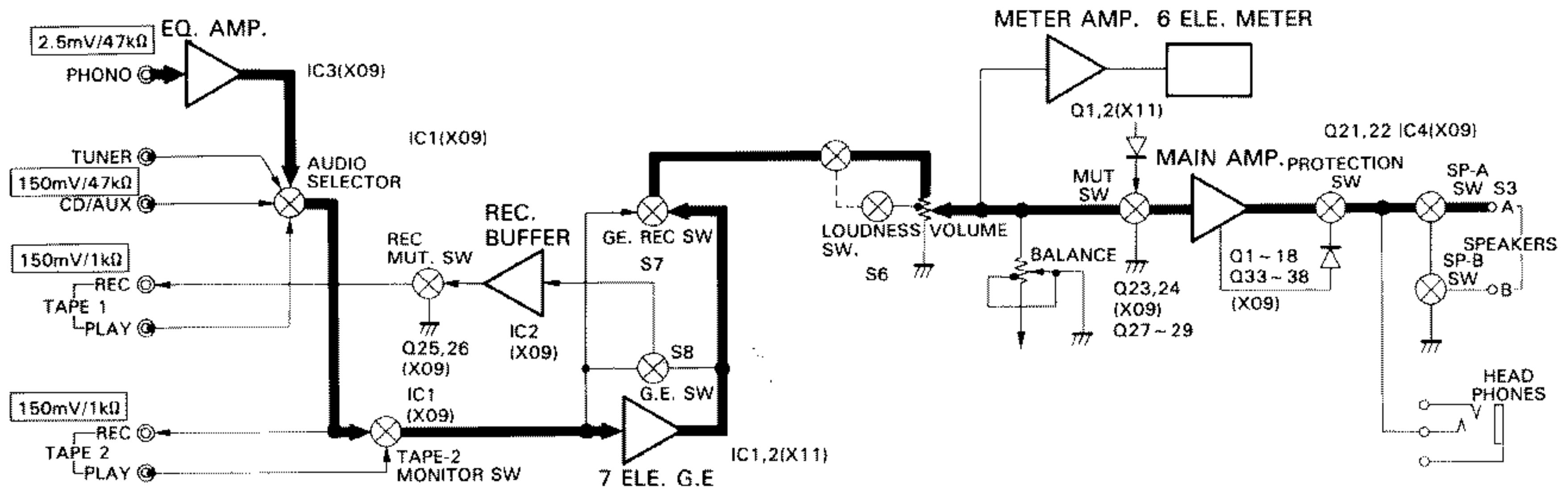
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CIRCUIT DESCRIPTION.....	3	SCHEMATIC DIAGRAM.....	15
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CONTROLS AND INDICATORS



BLOCK & LEVEL DIAGRAM



CIRCUIT DESCRIPTION

ADJUSTMENT/REGLAGES/ABGLEICH

TONE CONTROL UNIT (X11-263X-XX)

Ref.No.	Name	Use and Function	Operation/Condition/Compatibility
IC1, 2	M5229P	7-device graphic equalizer	Here are incorporated seven devices as OP amp type resonance circuits and one device as an output OP amp. This consists of externally connected variable resistor and capacitor setting the resonance frequency and Q. This is the graphic equalizer circuit in which the frequency range between 60 Hz and 15 kHz is divided seven equally for one channel.
IC3	NUM2058D #PC4574C	4-device OP amp	For one channel, OP amp devices are used in series. This is the power level meter circuit in which buffer is placed in the former stage and inversion and compression amps are in the latter stage. Incorporated for two channels.
Q1, 2	2SA733(A) 2SA933S	Transistors	Power level meter circuit LED lighting. LED lighting driver, which also provides level compensation.
Q3, 4	2SC1740S 2SC945(A)	Transistors	Power level meter circuit LED lighting. Integration driver.
D21, 22	HZS2, 7N(B2) RD2, 7ES(B2)	Zener diodes	Used for the compression amp device in the latter stage in IC3. The audio signal is compressed by making use of zener properly when middle or high power is engaged.

AUDIO UNIT (X09-284X-XX)

Ref.No.	Name	Use and Function	Operation/Condition/Compatibility
IC1	LC7818	Input selector	G-MOS ±13V
IC2	#PC4570C-A	TAPE-1 REC OUT buffer	
IC3	#PC4570C-A	PHONO EQ amp.	
IC4	#PC1237HA	Protection	Reset type
Q1~4	2SC1845(F, E)	Class A first stage amp	
Q5~8	2SA992(F, E)	Class A second stage amp	
Q9, 10	2SC2632(Q, R, S)	A class amp.	
Q11~14	2SC2632(Q, R, S)	Third stage amp	
Q15, 16	2SA1124(Q, R, S)	Current mirror	
Q17~20	2SA1535(Q, R, S) 2SC3944(Q, R, S)	Driver	
Q21, 22	2SA733(A) 2SA933S	Over current protection	
Q23~26	2SC2878(B)	Muting	HI-ON
Q27~30	2SA733(A) 2SA933S 2SC1740S 2SC945(A)	Muting driver	
Q31	2SD882	+13 V regulated voltage	
Q32	2SA954(L, K)	-13 V regulated voltage	
Q39	DTA124EN	For IC1 initialize spec.	Making pin MIN "L" when the +13 V regulated voltage becomes 10 V.

Device of main body part that does not belong to X09 unit.

Ref.No.	Name	Use and Function	Operation/Condition/Compatibility
Q33~36	2SB1162 2SB1163 2SD1717 2SD1718	Final stage	
Q37, 38	2SC4137(V, W)	Bias transistors	Hi-bie

ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTING	ALIGNMENT POINTS	ALIGN FOR	FIG.
1	IDLE CURRENT		Connect a DC voltmeter across CP1 (L) CP2 (R) (X09-)	VOLUME: 0	VR1 (L) VR2 (R) (X09-)	18mV	(a)

REGLAGES

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DE L'AMPLIFICATEUR	POINTS DE L'ALIGNEMENT	ALIGNER POUR	FIG.
1	COEFFICIENT DE POLARISATION		Coeficient de voltmètre de CC SUR CP1 (G) CP2 (D) (X09-)	VOLUME: 0	VR1 (G) VR2 (D) (X09-)	18mV	(a)

ABGLEICH

NR.	GEGENSTAND	EINGANGS EINSTELLUNG	AUSGANG EINSTELLUNG	VORSTÄRKER EINSTELLUNG	ABGLEICHE PUNKTE	ABGLEICHEN FÜR	ABB.
1	LEERLAUFSTROM		Einigen Gleichspannungsmesser über CP1 (L) CP2 (R) anschließen. (X09-)	VOLUME: 0	VR1 (L) VR2 (R) (X09-)	18mV	(a)

Kann nicht anders angeben, die einzelnen Schalter wie folgt einstellen:
POWER: ON SPEAKER: B REC OUT: OFF SELECTOR: PHONO

PARTS LIST

SPECIFICATIONS

* 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	New Parts 新 部 品 番 号	Parts No. 部 品 番 号	Description 部 品 名 / 規 格	Desti- nation 向 備考	Re- marks 備考
D21 .22			HZ52.ZN(R)	ZENER DIODE	J	
D21 .22			RD2.ZE(SR)	ZENER DIODE		
D23 .24			HS5104	DIODE		
D23 .24			15S133	DIODE		
101 .2			MS229P	100TCH GRAPHITE EQUALIZER		
IC3			NUM205BD	IC (MP AMP X4)		
IC3			LFPC4574C	IC (MP AMP X4)		
01 .2			25A733(A)(O.P)	TRANSISTOR		
01 .2			25A9335(O.R)	TRANSISTOR		
03 .4			25C17403(O.R)	TRANSISTOR		
03 .4			25C1945(A)(O.P)	TRANSISTOR		

E: Scandinavia & Europe K: USA P: Canada
U: Pacific East, Hawaii T: England M: Other Areas
UE: AAFES(Europe) X: Australia

J: Japan made
S: Singapore made
△ indicates safety critical components

Rated Power Output (Except for Europe and UK)

100 watts per channel minimum RMS, both channels driven, at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.05% total harmonic distortion. (FTC)

Both channel driven at 1 kHz into
8 ohms 120 W + 120 W
Maximum continuous output power (for Europe and UK) (IEC) from 63 Hz to 12,500 Hz 0.7% T.H.D. at 8 ohms 90 W + 90 W
(DIN) 1,000 Hz at 8 ohms 90 W + 90 W
Total Harmonic Distortion 0.004% at 1/2 rated power into 8 ohms at 1 kHz
Intermodulation Distortion 0.03% at rated power (60 Hz : 7 kHz = 4 : 1) into 8 ohms
Damping Factor 30 (50 Hz at 8 ohms)
Power Bandwidth 10 Hz to 100 kHz at 0.2% T.H.D. 8 ohms
Frequency Response 10 Hz to 70 kHz, +0 dB, -3 dB
Signal-to-Noise Ratio (IHF-A) 75 dB for 2.5 mV input
Phono 100 dB
Tuner, Tape, CD/AUX 100 dB
Input Sensitivity/Impedance
Phono 2.5 mV/47 k ohms
Tuner, Tape play, CD/AUX 150 mV/33 k ohms

Phono Maximum Input Level 100 mV, T.H.D. 0.05% at 1 kHz

Output Level/Impedance 150 mV/330 ohms
Tape REC (Pin) RIAA standard curve
Phono Frequency Response ±0.5 dB (20 Hz to 20,000 Hz)

Graphic Equalizer Control
(60 Hz, 150 Hz, 400 Hz, 1 kHz, 2.4 kHz, 6 kHz, 15 kHz) ±10 dB
Loudness Control +8 dB at 100 Hz (at -30 dB VOLUME Level)

General Power Consumption 4 A (U.S.A. & Canada models)
180 W (Europe & Australia models)

Dimensions 230 W (Other countries)
W: 440 mm (17-5/16")
H: 133 mm (5-1/4")
D: 275 mm (10-13/16")
Weight (Net) 7.5 kg (16.5 lb)

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

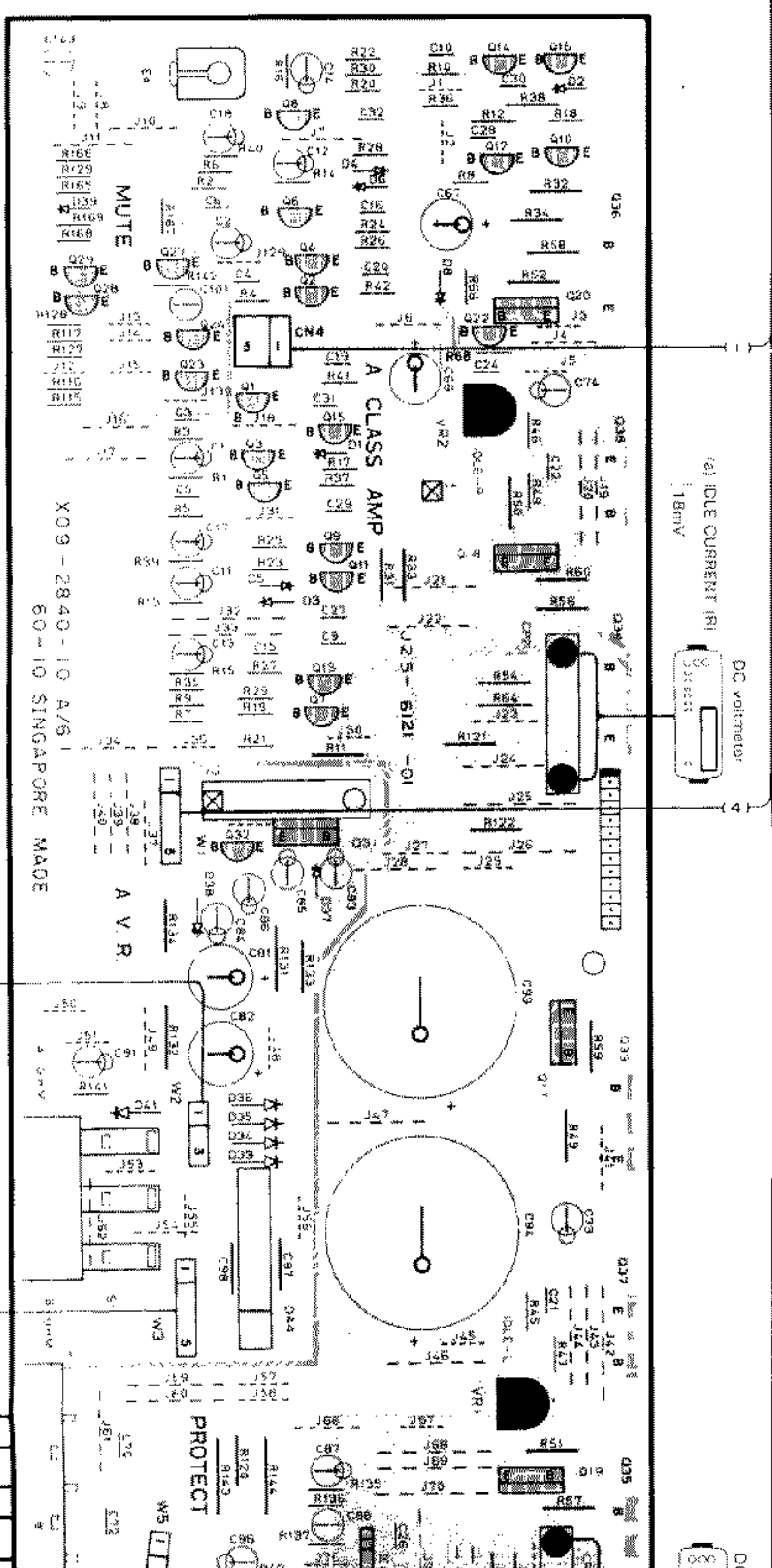
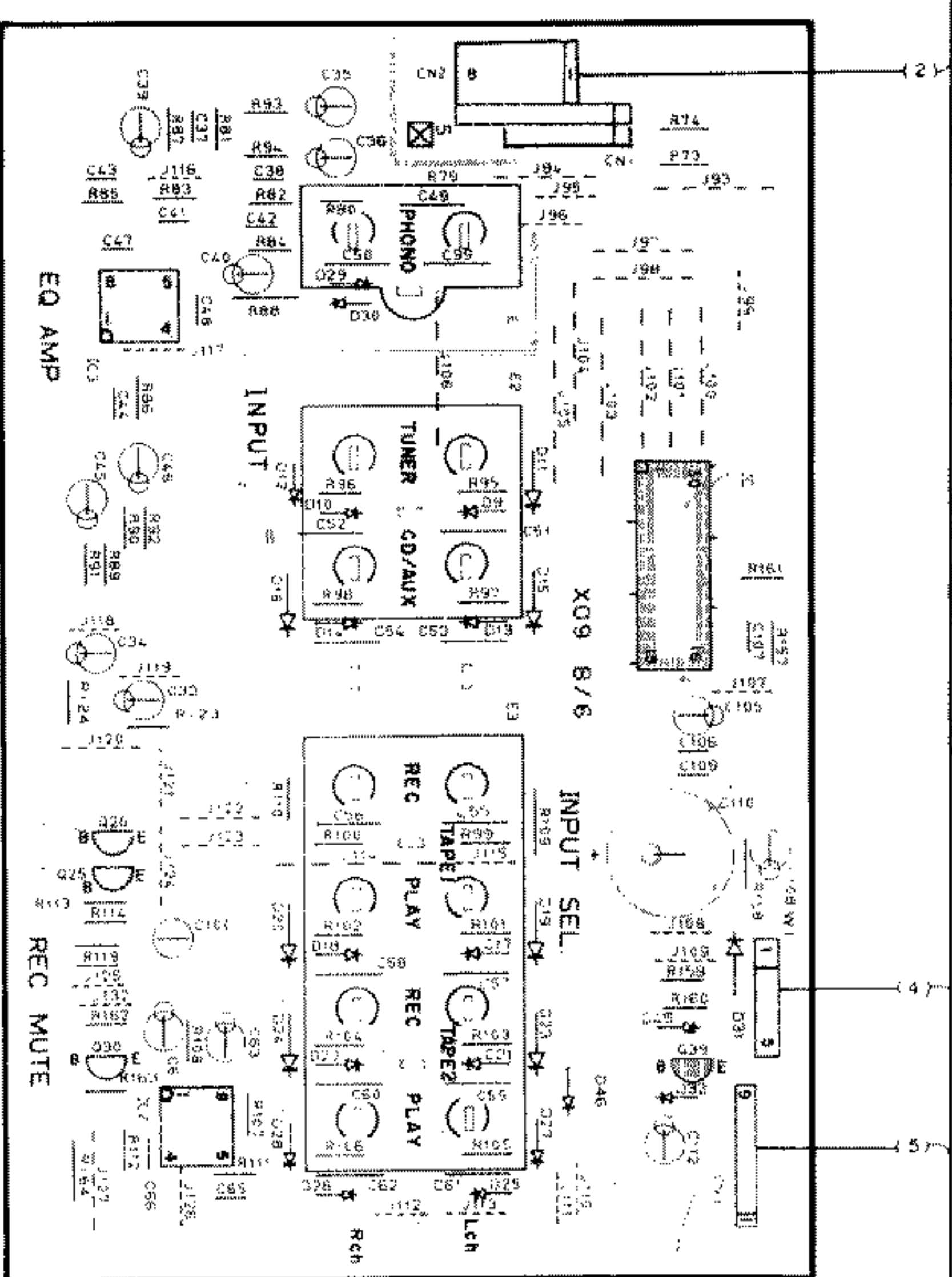
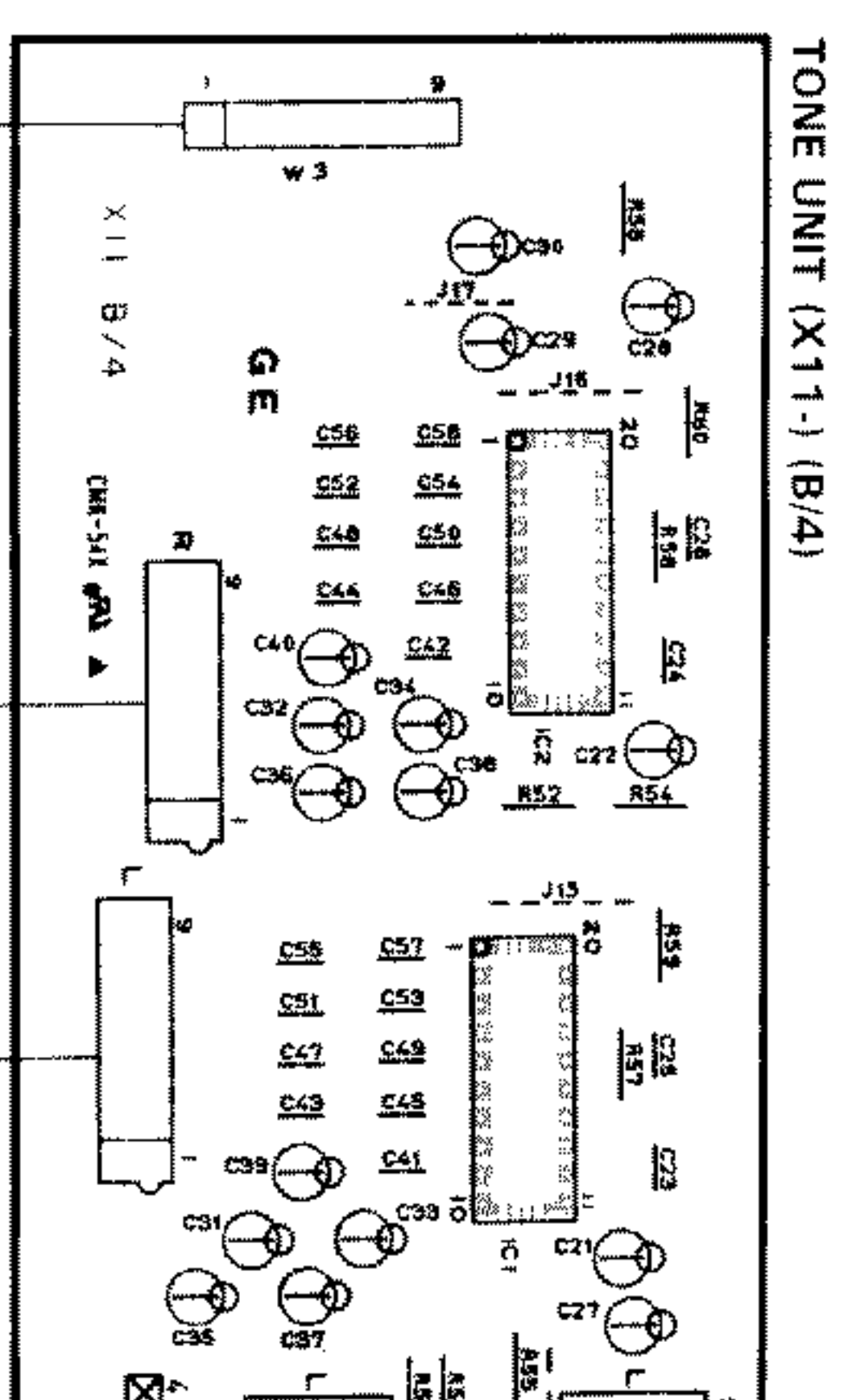
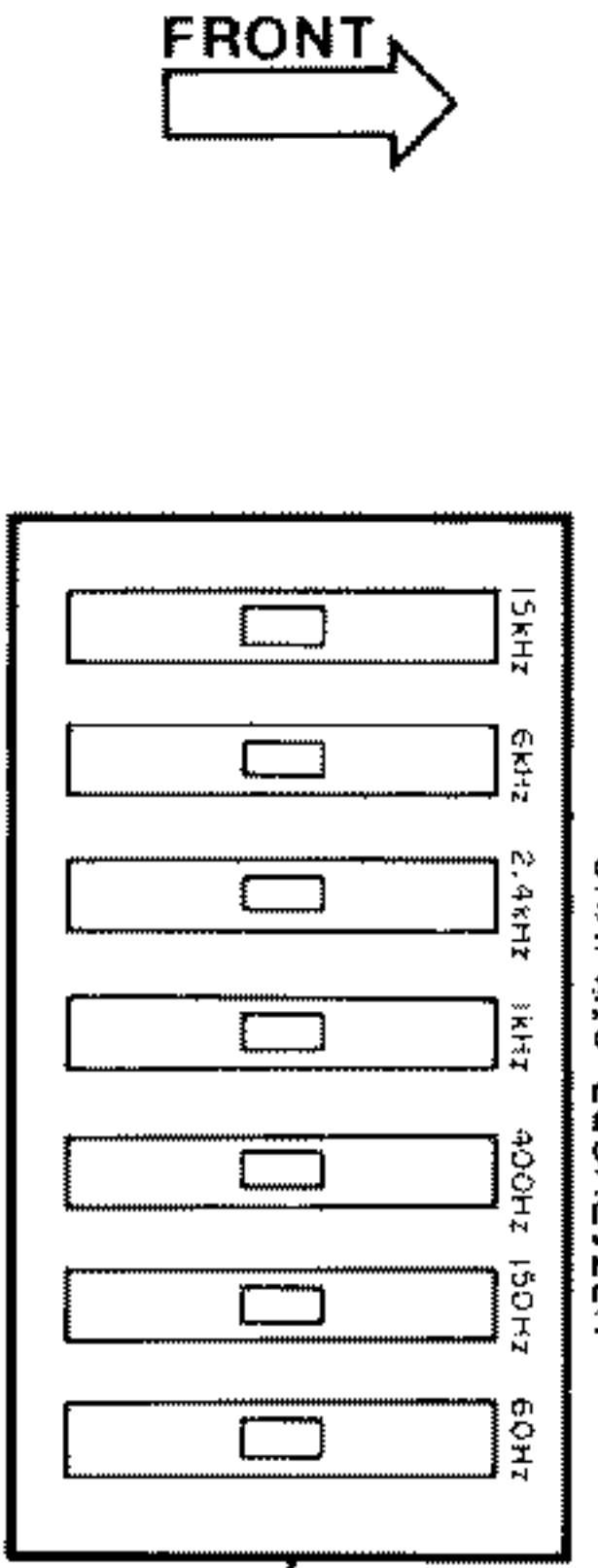
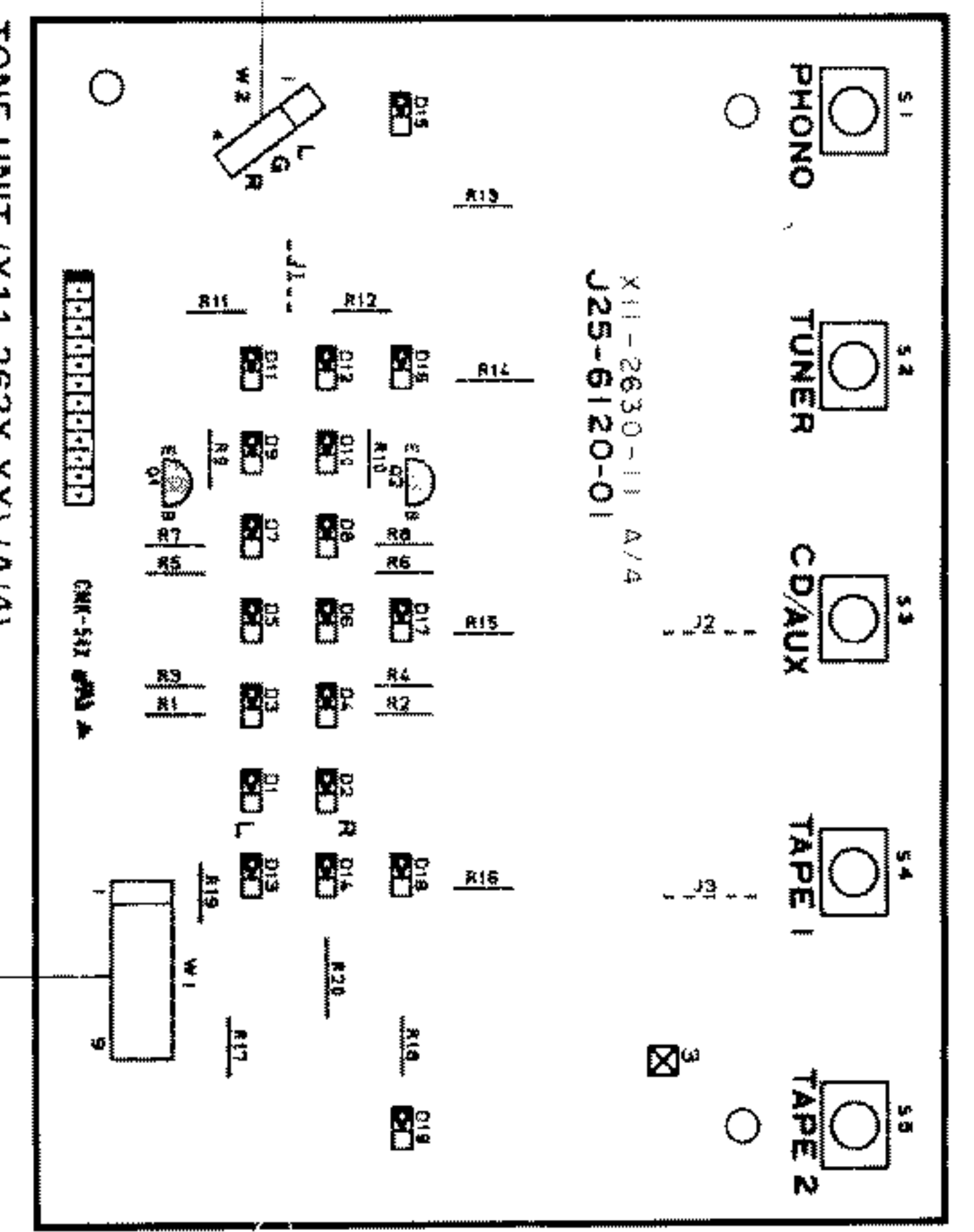
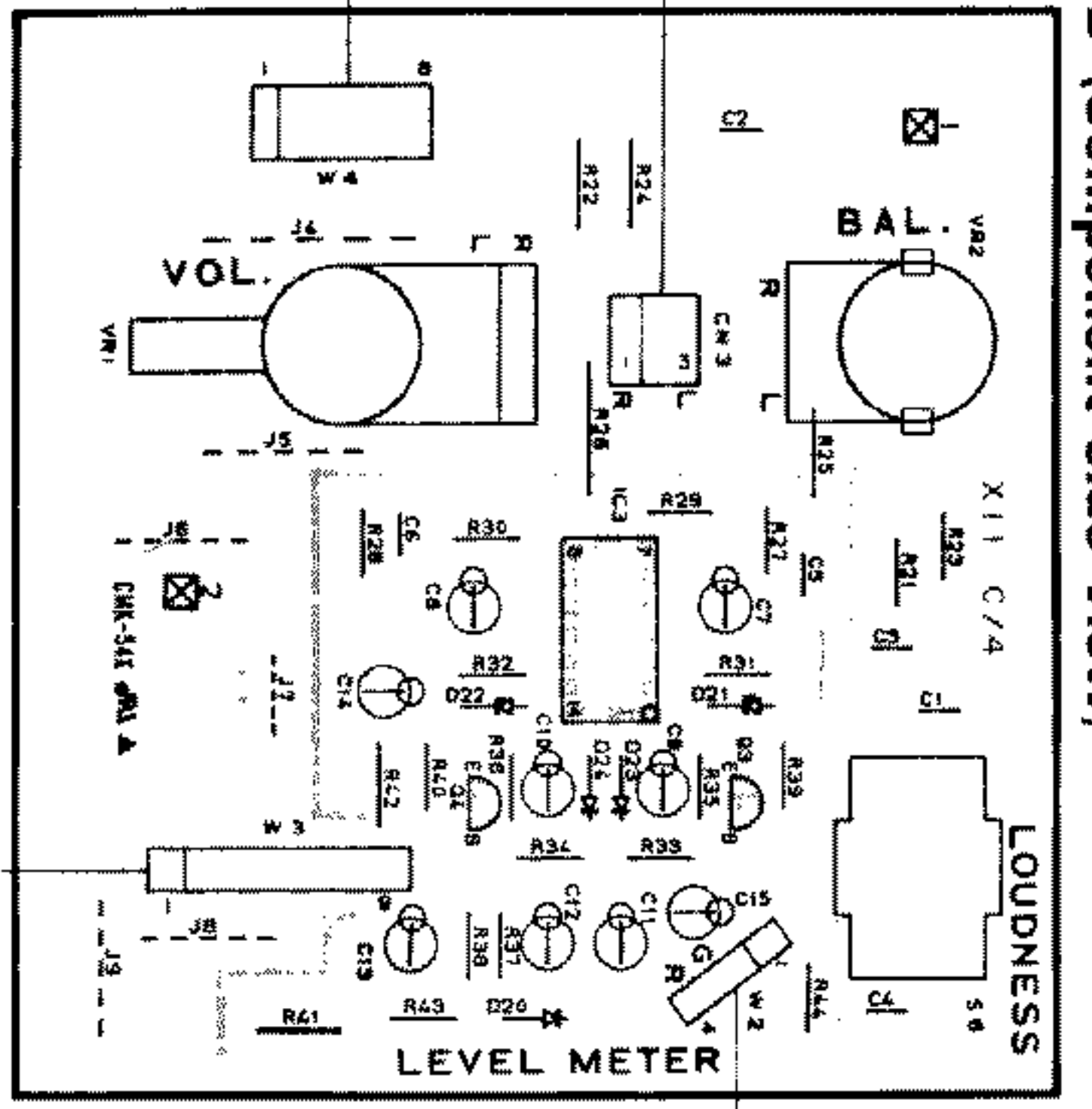
Note:

Component and circuitry are subject to modification to insure 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.

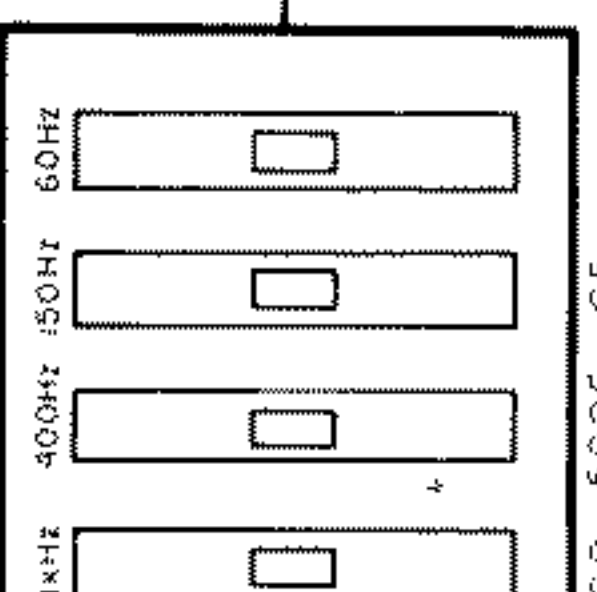
KENWOOD CORPORATION

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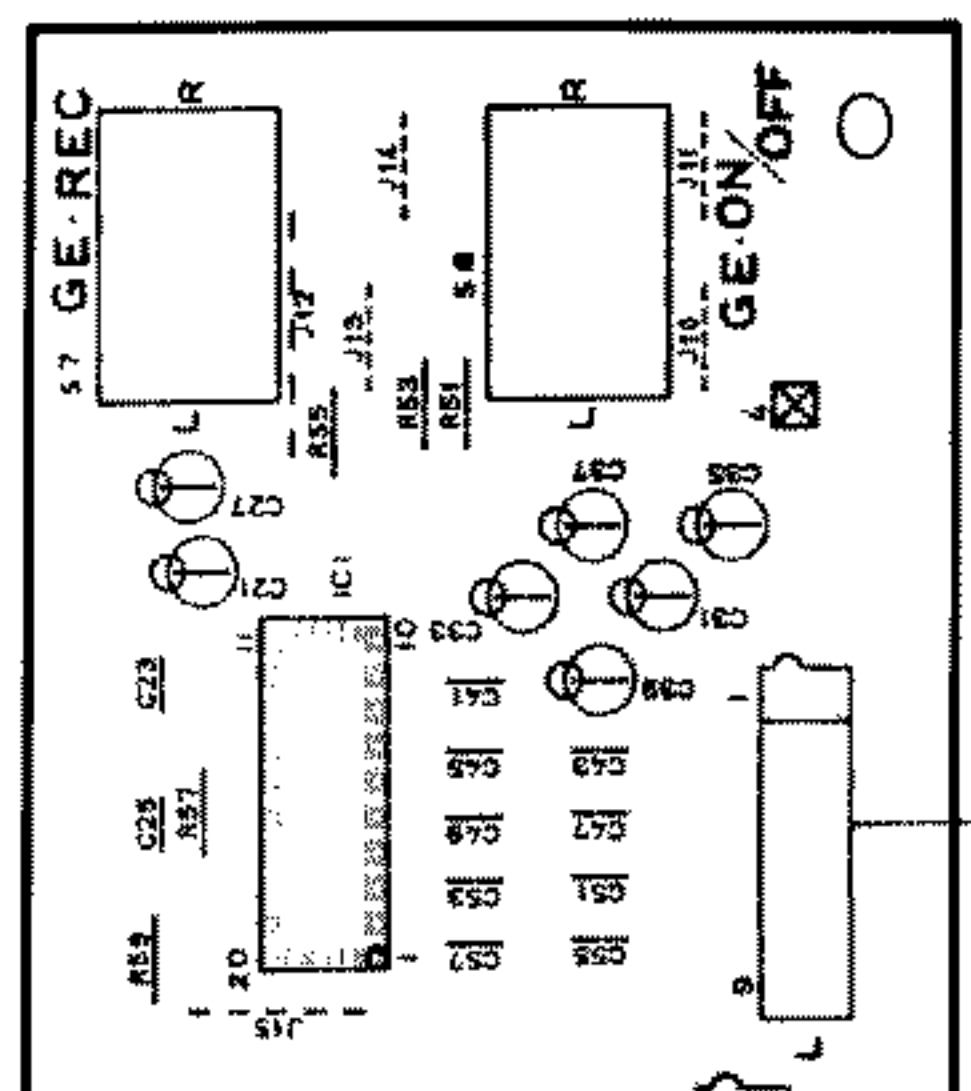
PC BOARD (Component side view)



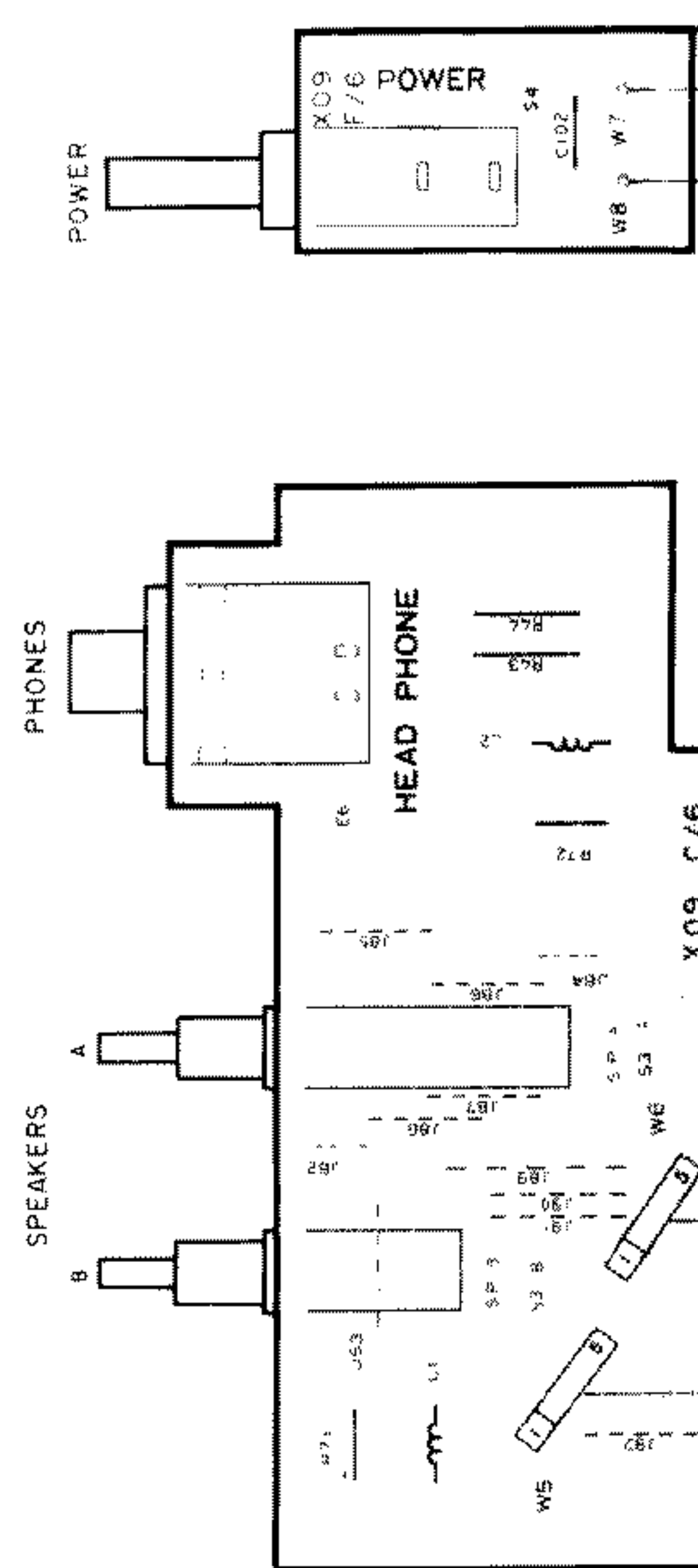
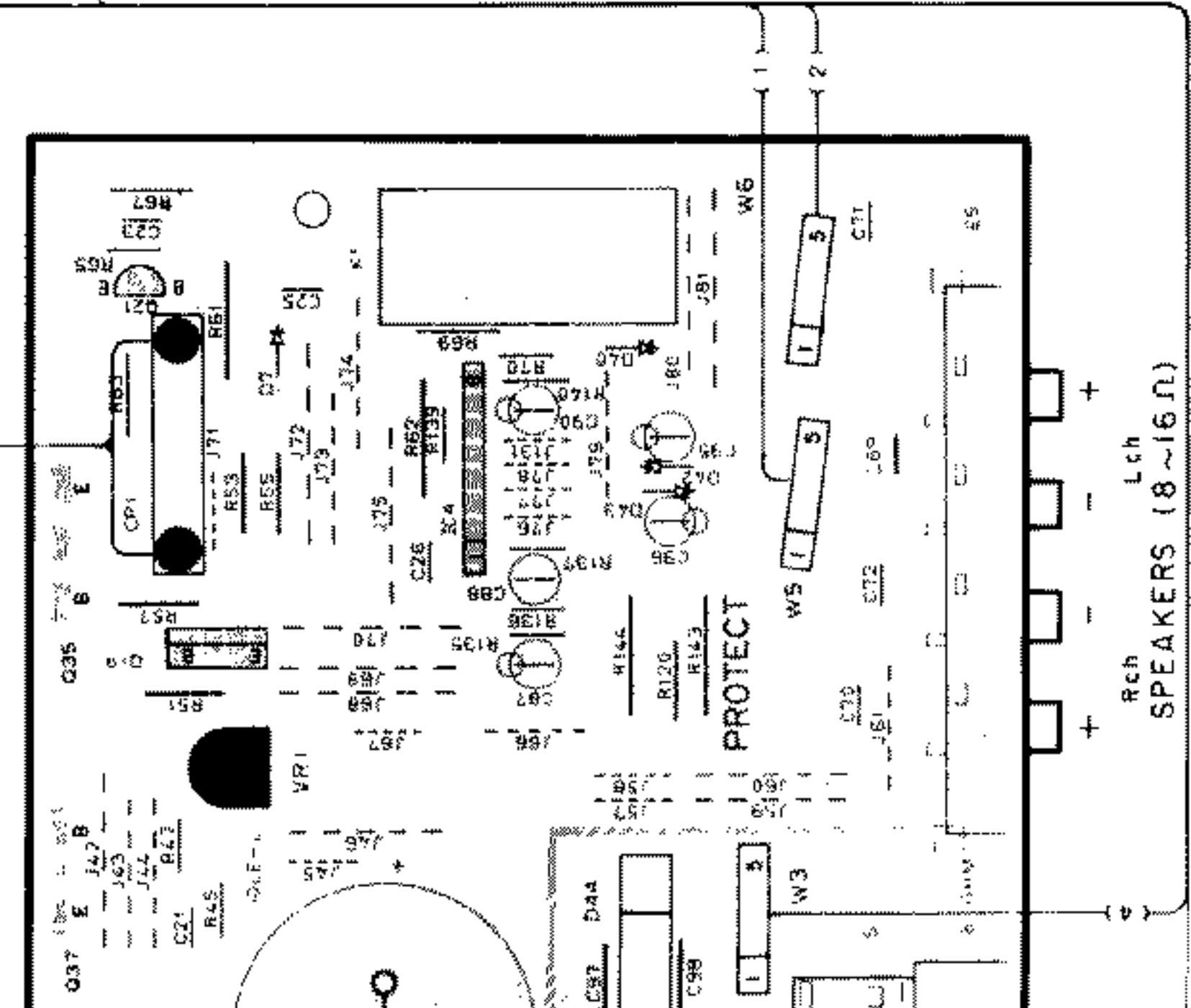
IC EQUALIZER



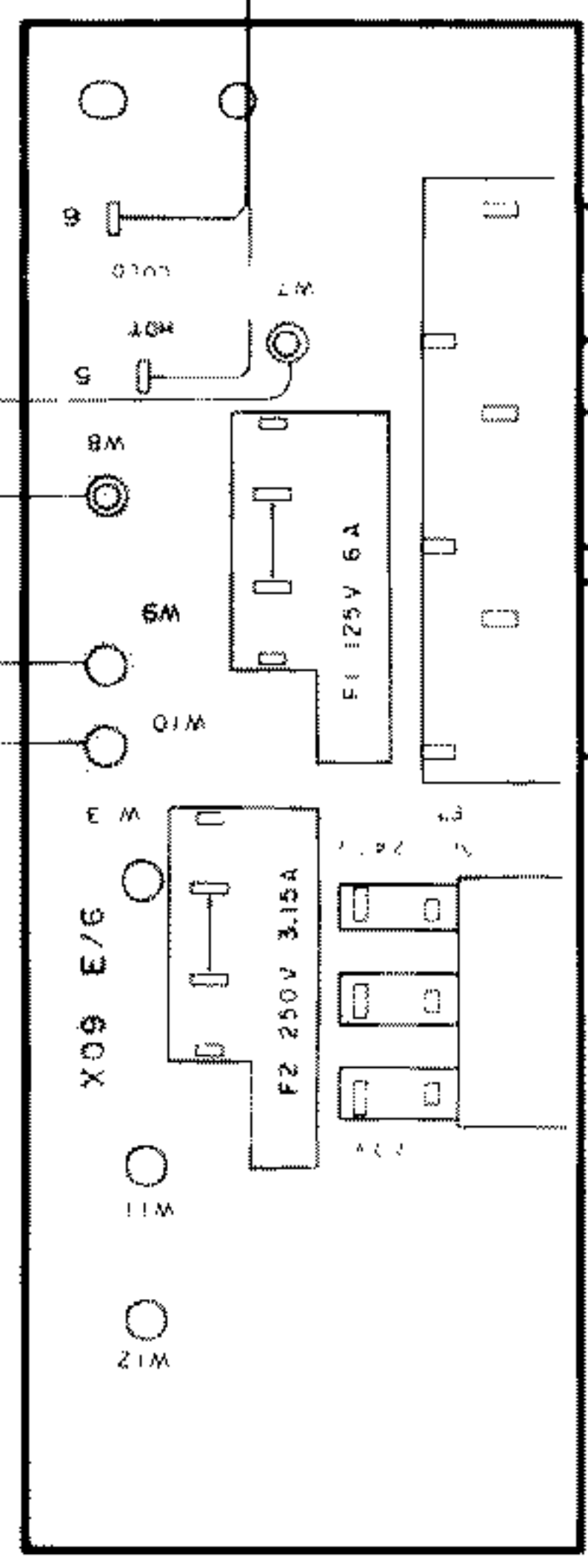
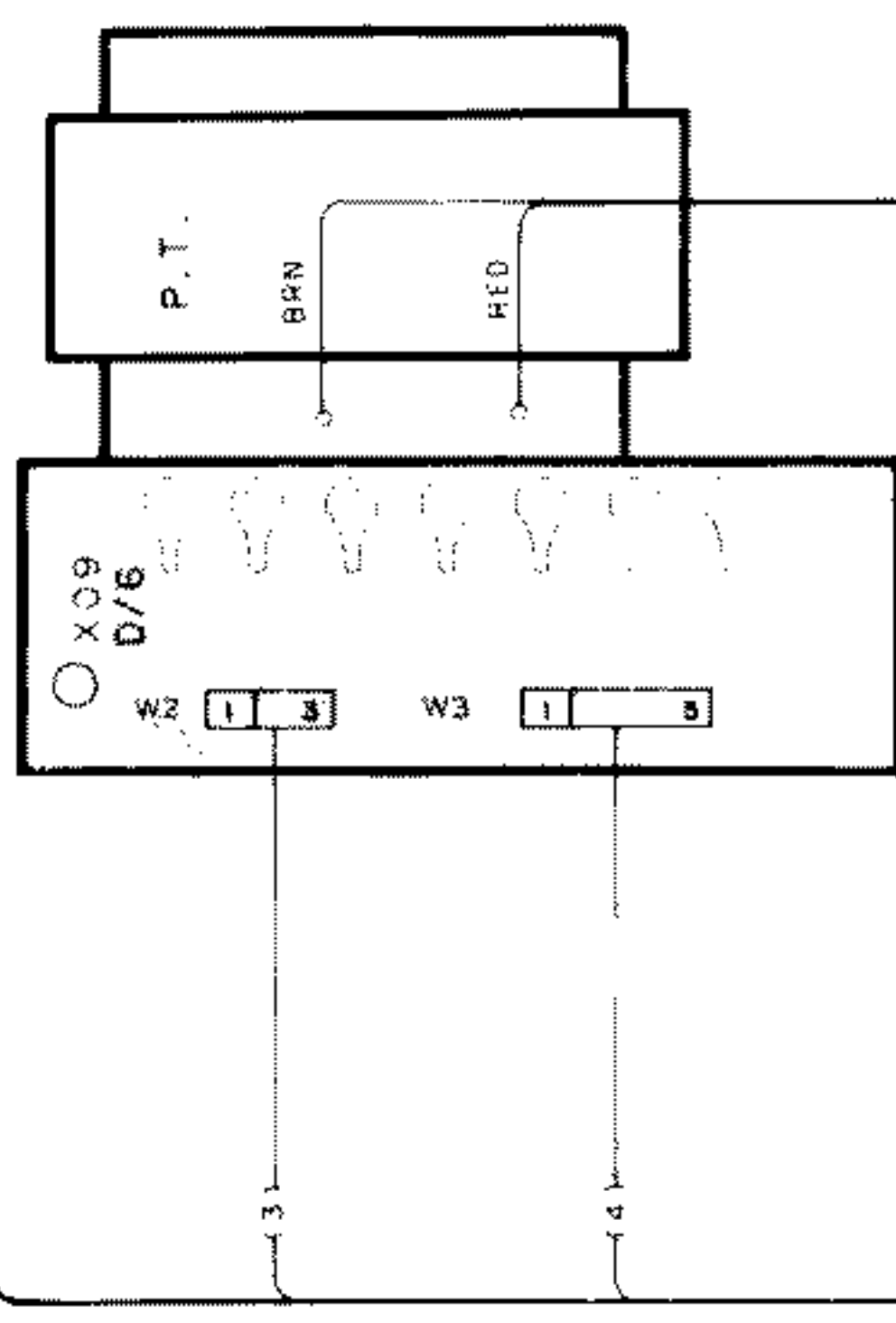
29-5006-05



DC voltmeter
 (at IDLE CURRENT) 18mV



AUDIO UNIT (X09-) (C/6)



AUDIO UNIT (X09-) (E/6)

KA-88(K)

AC 120V
60Hz

TOTAL 100W MAX. SWITCHED
 100W MAX. UNSWITCHED

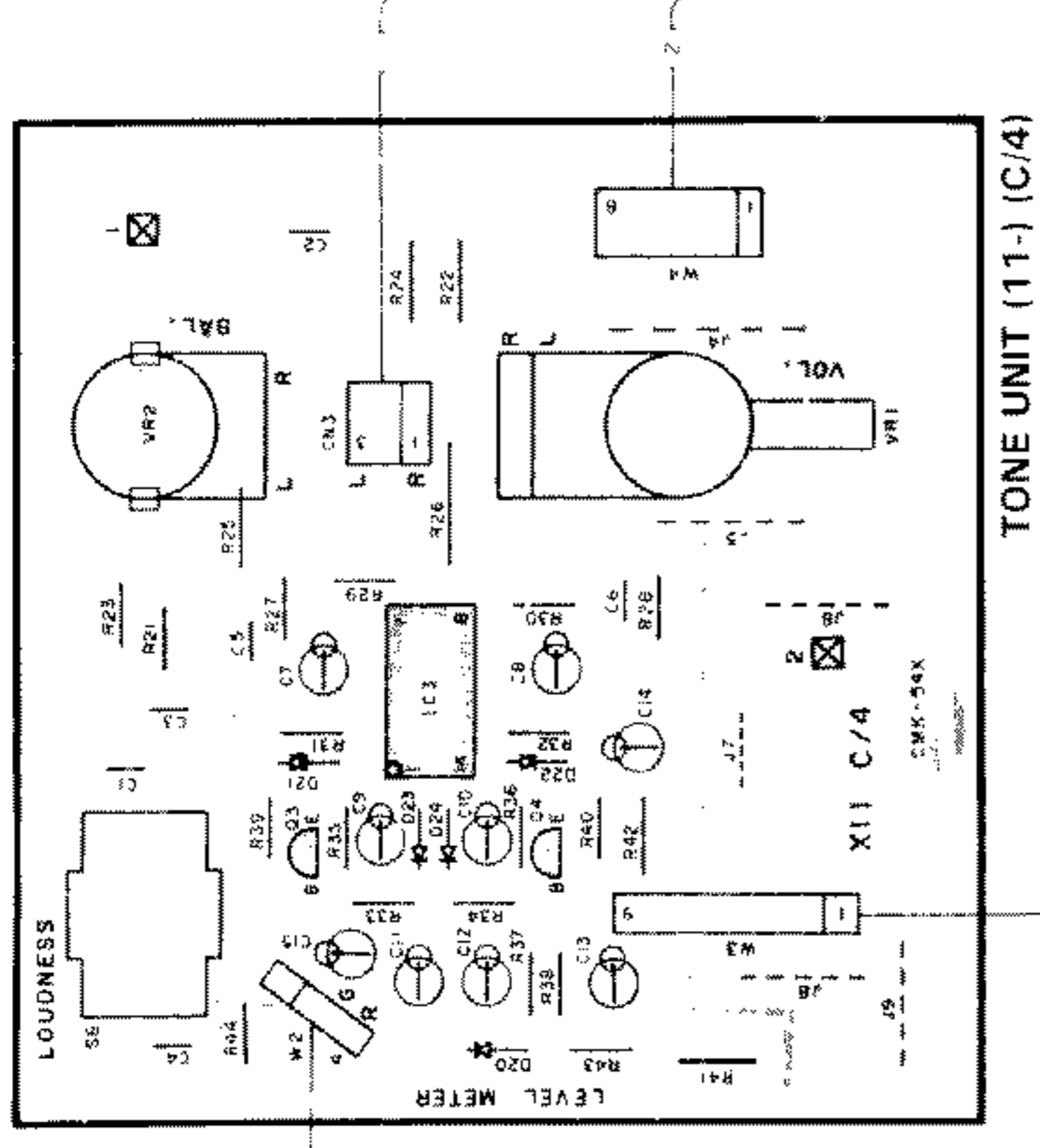
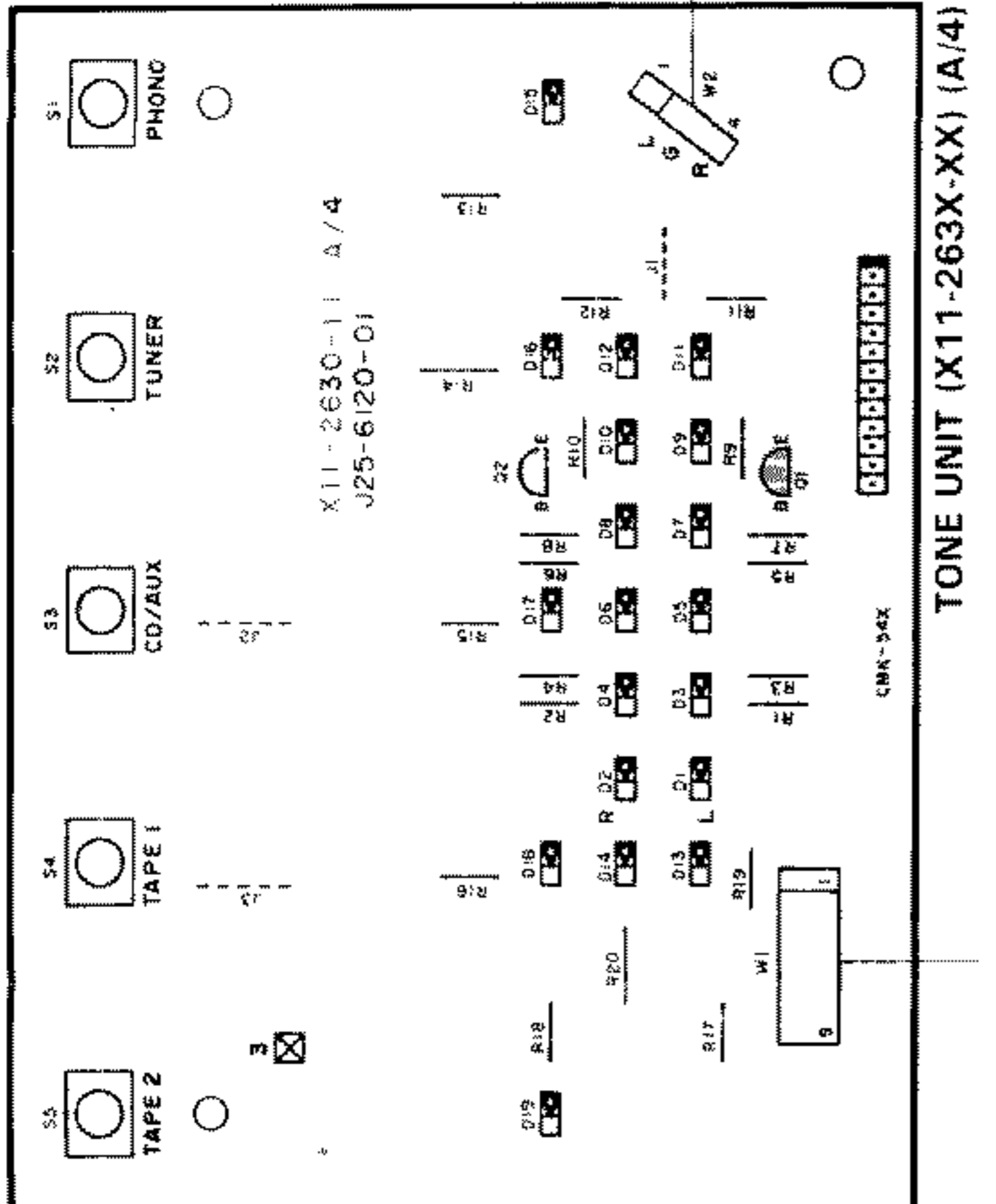
AUDIO UNIT (X09-284X-XX)

Ref. No.	IC	Q	Address
1		1	6F
2		2	6F
3		3	6F
4		4	6F
5		5	6G
6		6	6F
7		7	6G
8		8	6E
9		9	5G
10		10	5E
11		11	5G
12		12	5E
13		13	6G
14		14	5E
15		15	5F
16		16	5E
17		17	5I
18		18	5G
19		19	5J
20		20	5F
21		21	5K
22		22	5F
23		23	6F
24		24	6F
25		25	6C
26		26	6C
27		27	6F
28		28	6F
29		29	6F
30		30	6D
31		31	6H
32		32	6H
39		39	5D
1		1	5B
2		2	6D
3		3	6B
4		4	5J

STONE UNIT (X11-263X-XX)

Ref. No.	IC	Q	Address
1		1	3E
2		2	2E
3		3	2C
4		4	2C
1		1	2J
2		2	2I
3		3	2B

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

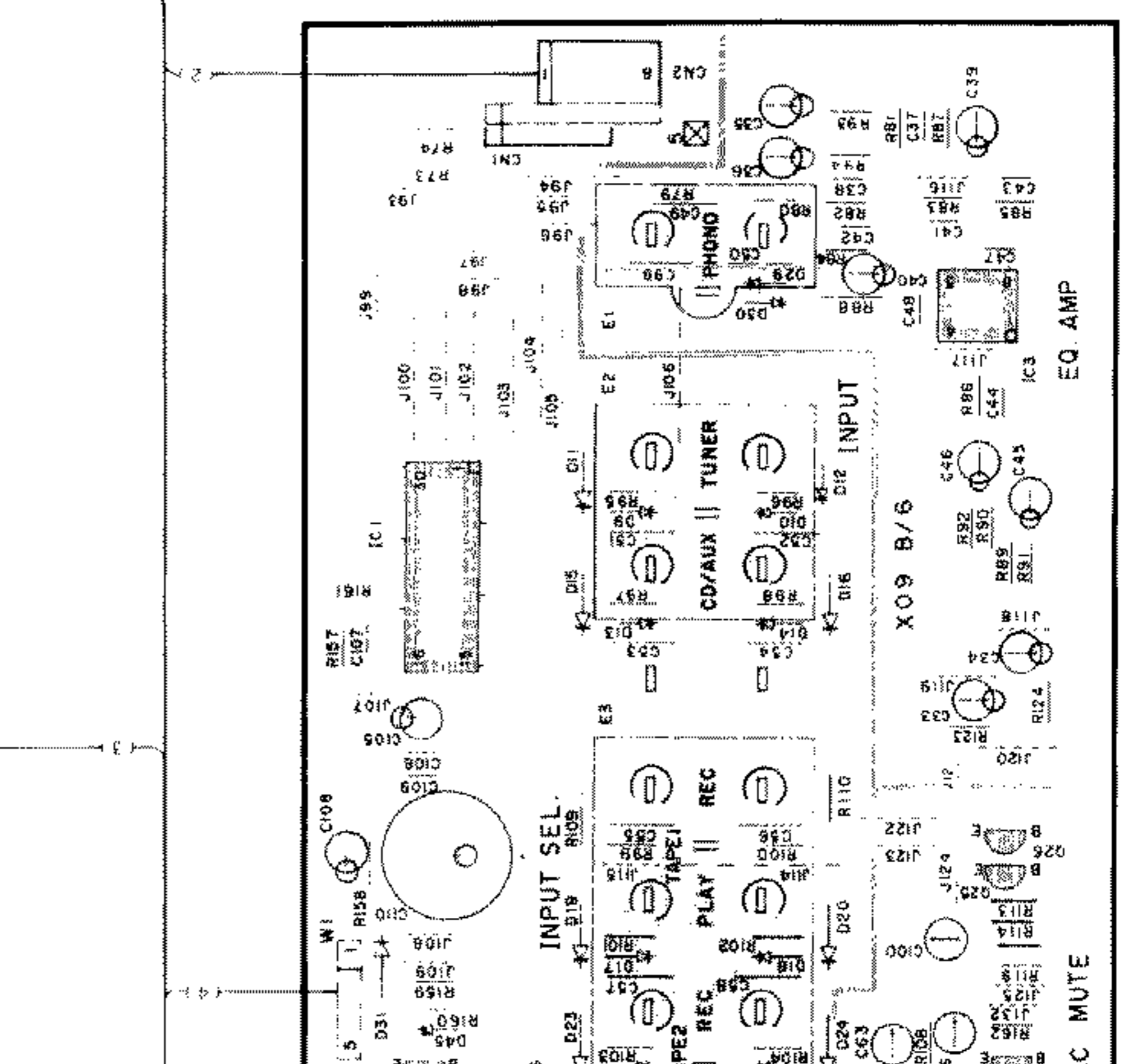
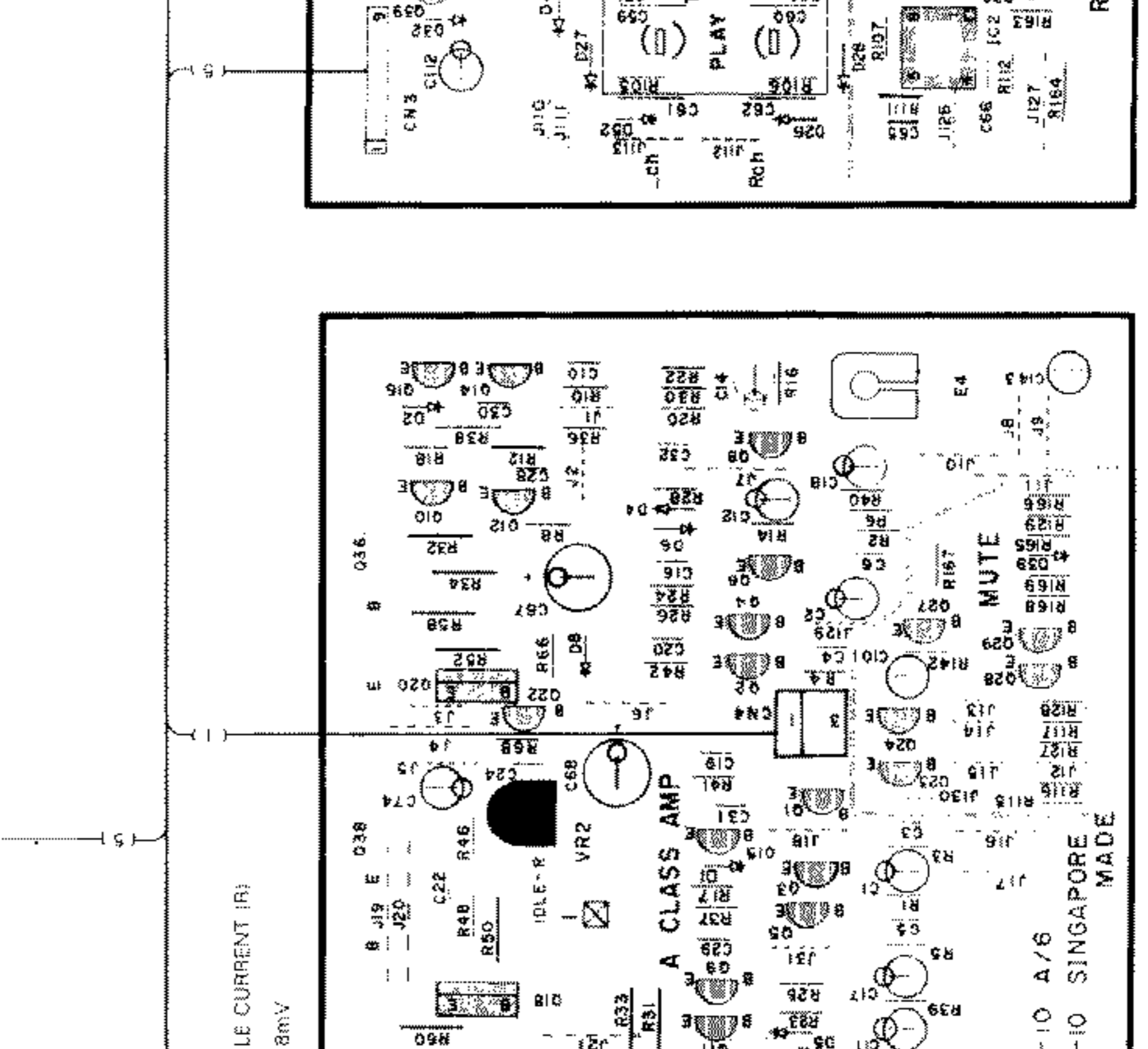


TONE UNIT (X11-263X-XX)

Ref. No.	IC	Q	Address
1		1	3AD
2		2	2AD
3		3	1AF
4		4	2AF
2		2	2Z
3		3	2AA
		3	2AG

AUDIO UNIT (X09-284X-XX)

Ref. No.	IC	Q	Address
1		1	6AC
2		2	6AC
3		3	6AC
4		4	6AC
5		5	6AC
6		6	6AD
7		7	5AB
8		8	6AD
9		9	5AC
10		10	5AD
11		11	5AB
12		12	5AD
13		13	5AB
14		14	5AD
15		15	5AC
16		16	5AD
17		17	5AA
18		18	5AB
19		19	5Y
20		20	5AC
21		21	5X
22		22	5AC
23		23	6AC
24		24	6AC
25		25	6AF
26		26	6AF
27		27	6AC
28		28	6AC
29		29	6AC
30		30	6AE
31		31	6AB
32		32	6AA
33		33	5AE
1		1	5AG
2		2	6AE
3		3	6AH
4		4	5Y



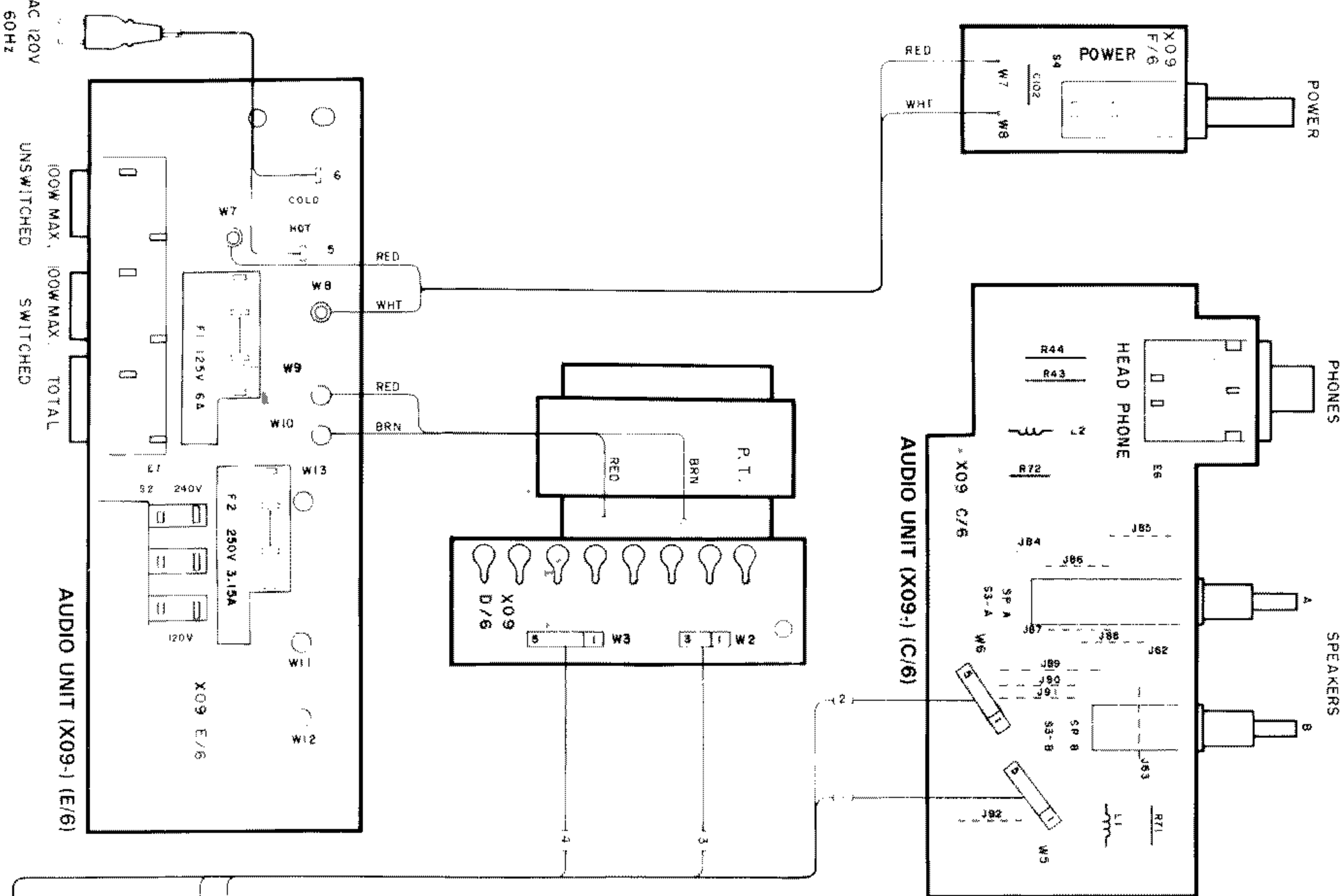
KA - 88 (K)

9-284X-XX (A/6)

AUDIO UNIT (X09-) (B/6)

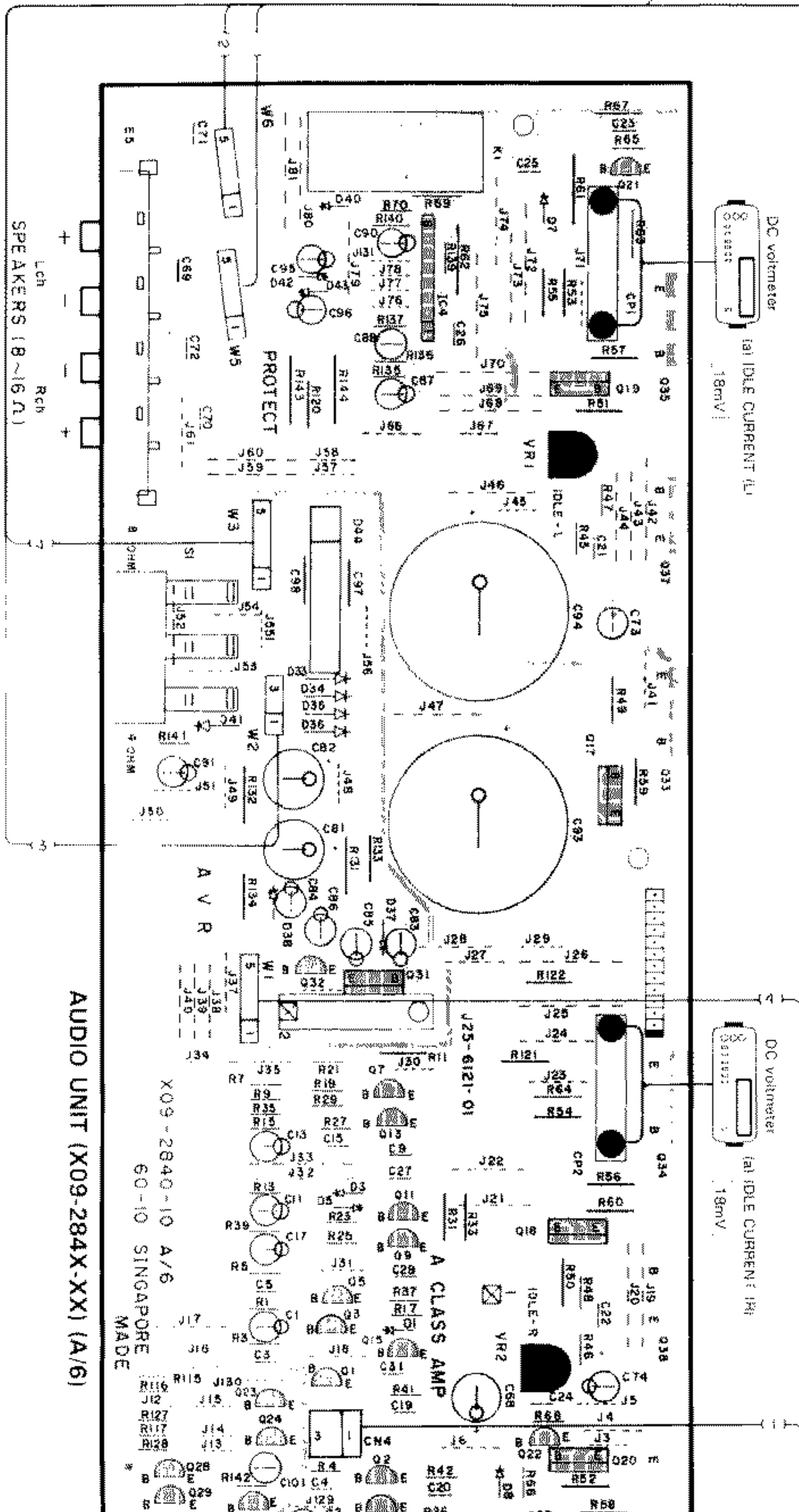
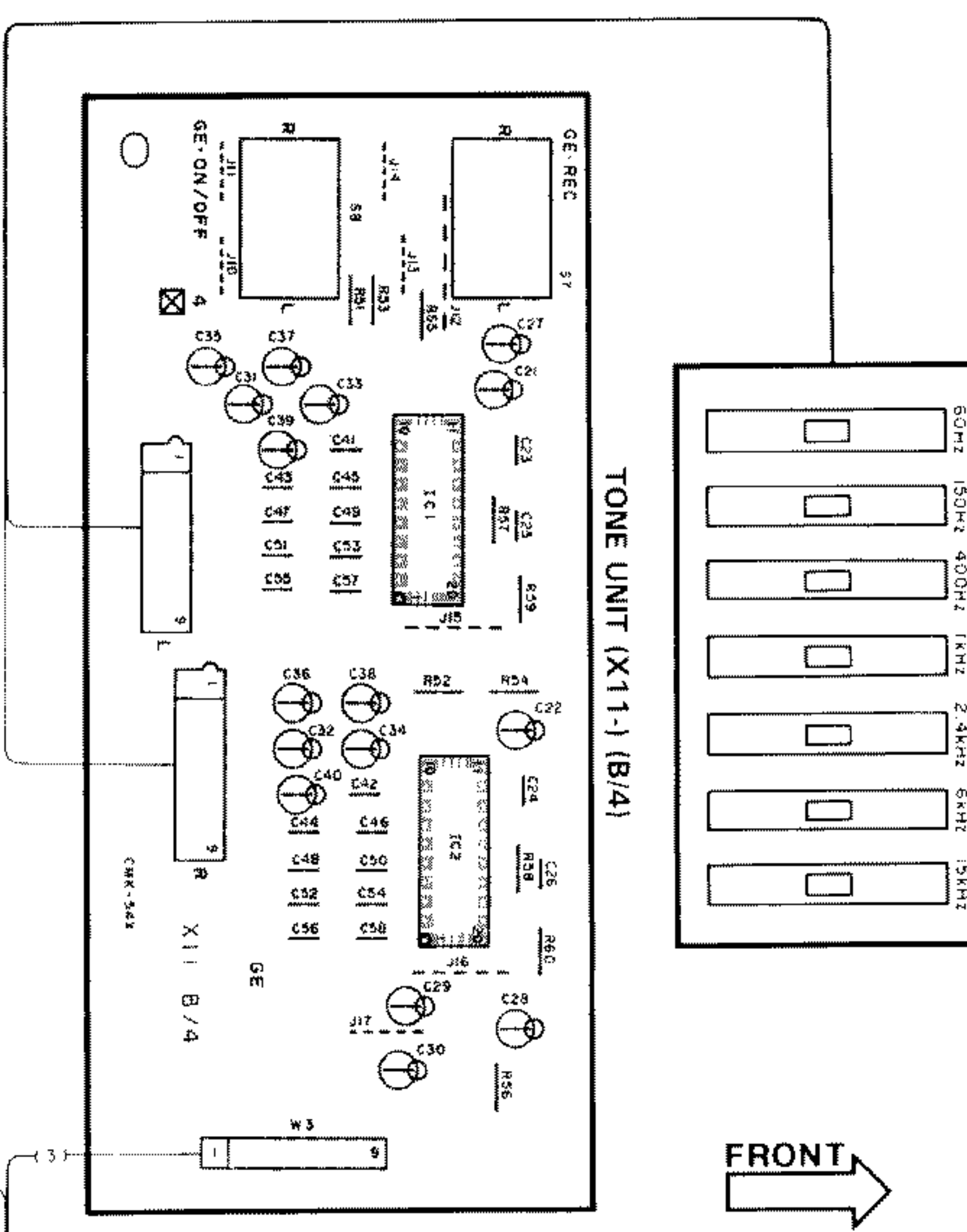
Refer to the schematic diagram for the values of resistors and capacitors.

PC BOARD (Foil side view)



11

GRAPHIC EQUALIZER R29-5006-05

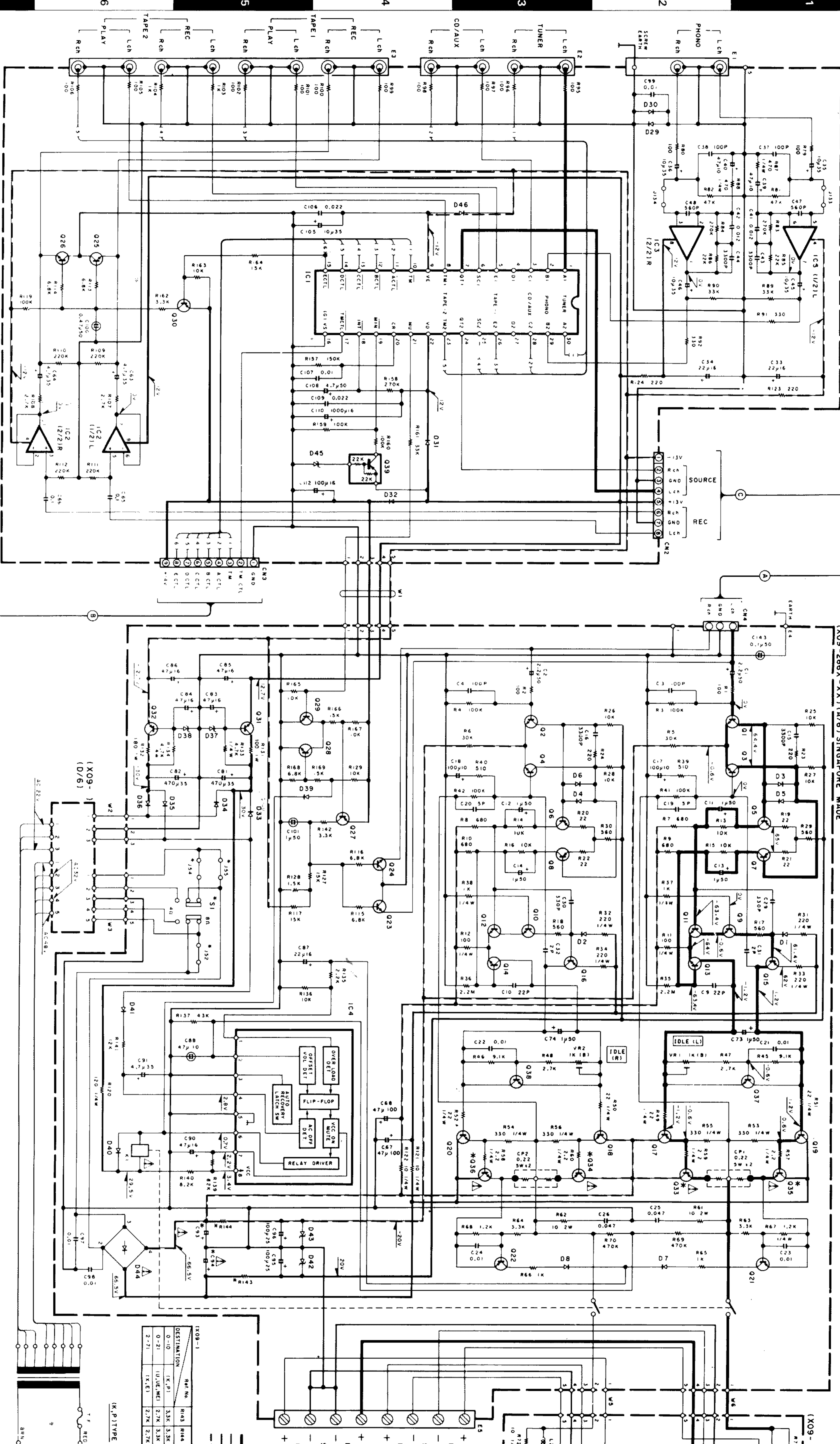


12

13

(X09-284X-XX) (B/6) JAPAN MADE
(X09-286X-XX) (B/6) SINGAPORE MADE

(X09-284X-XX) (A/6) JAPAN MADE
(X09-286X-XX) (A/6) SINGAPORE MADE

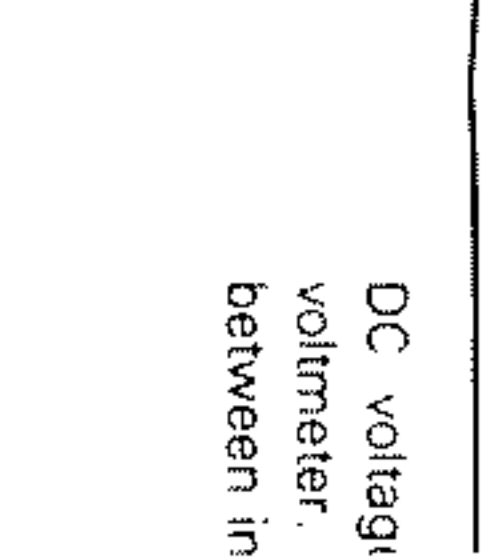
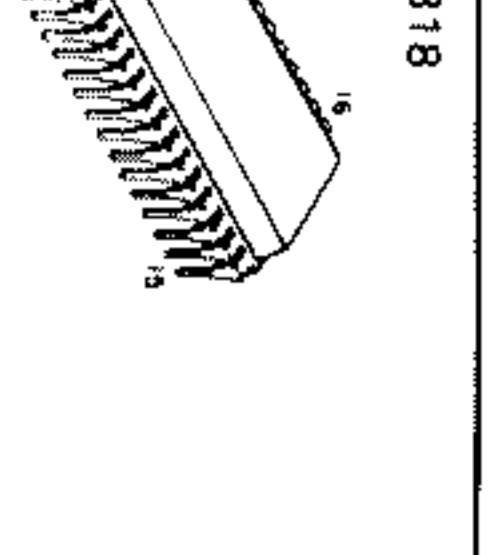
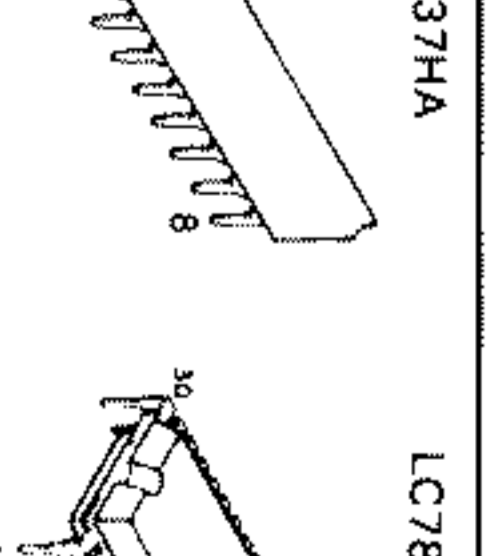
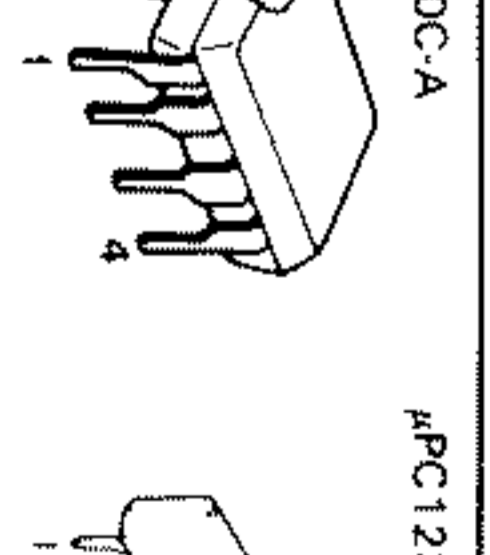
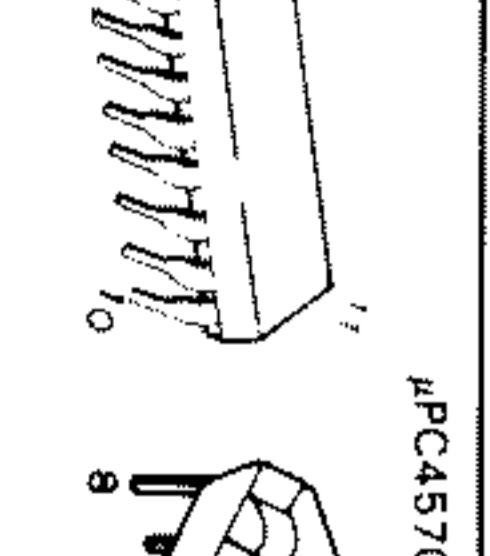
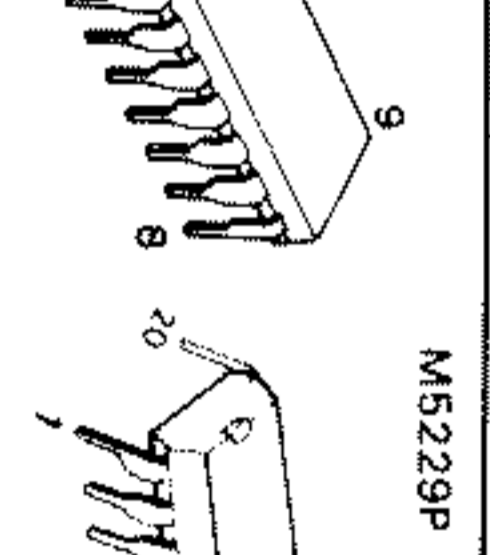
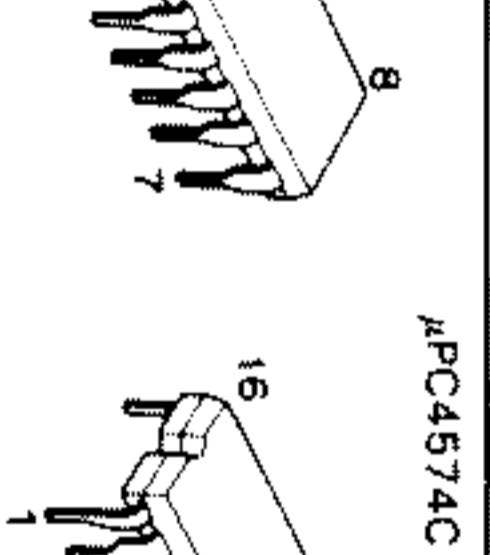
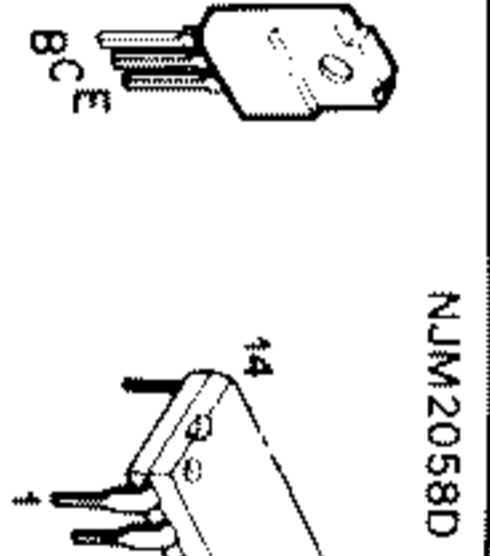
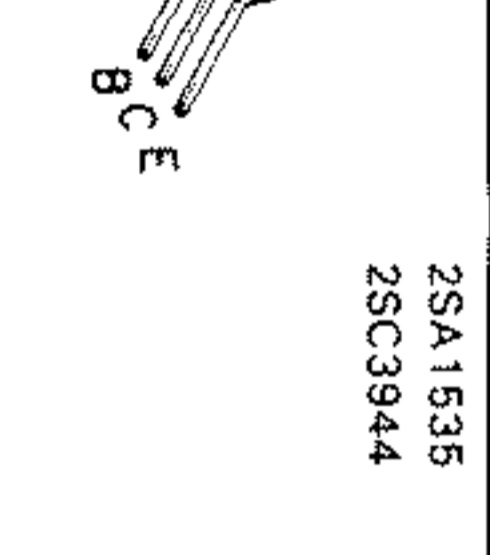
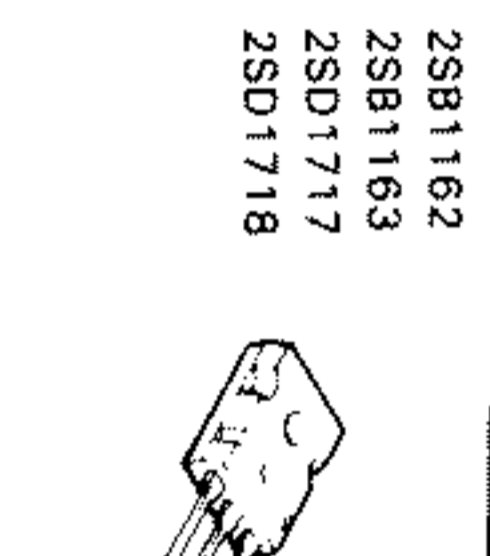
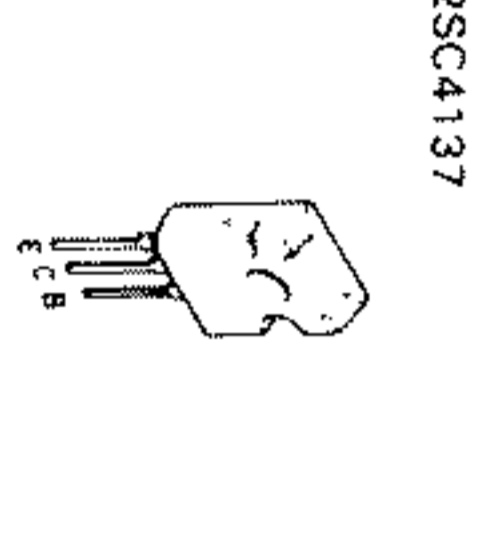
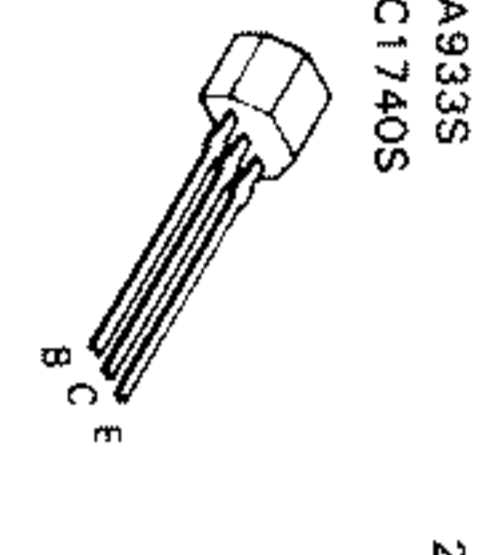
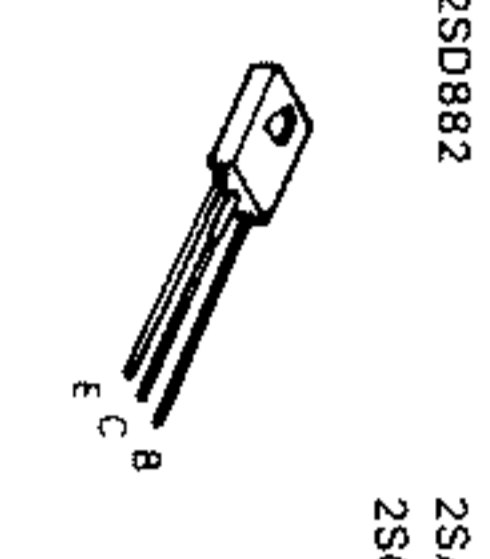
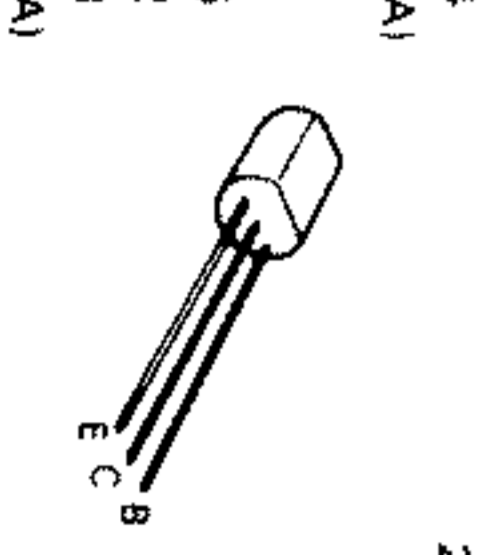
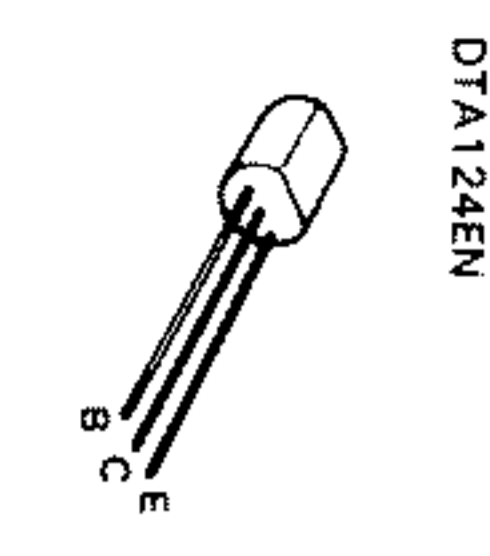


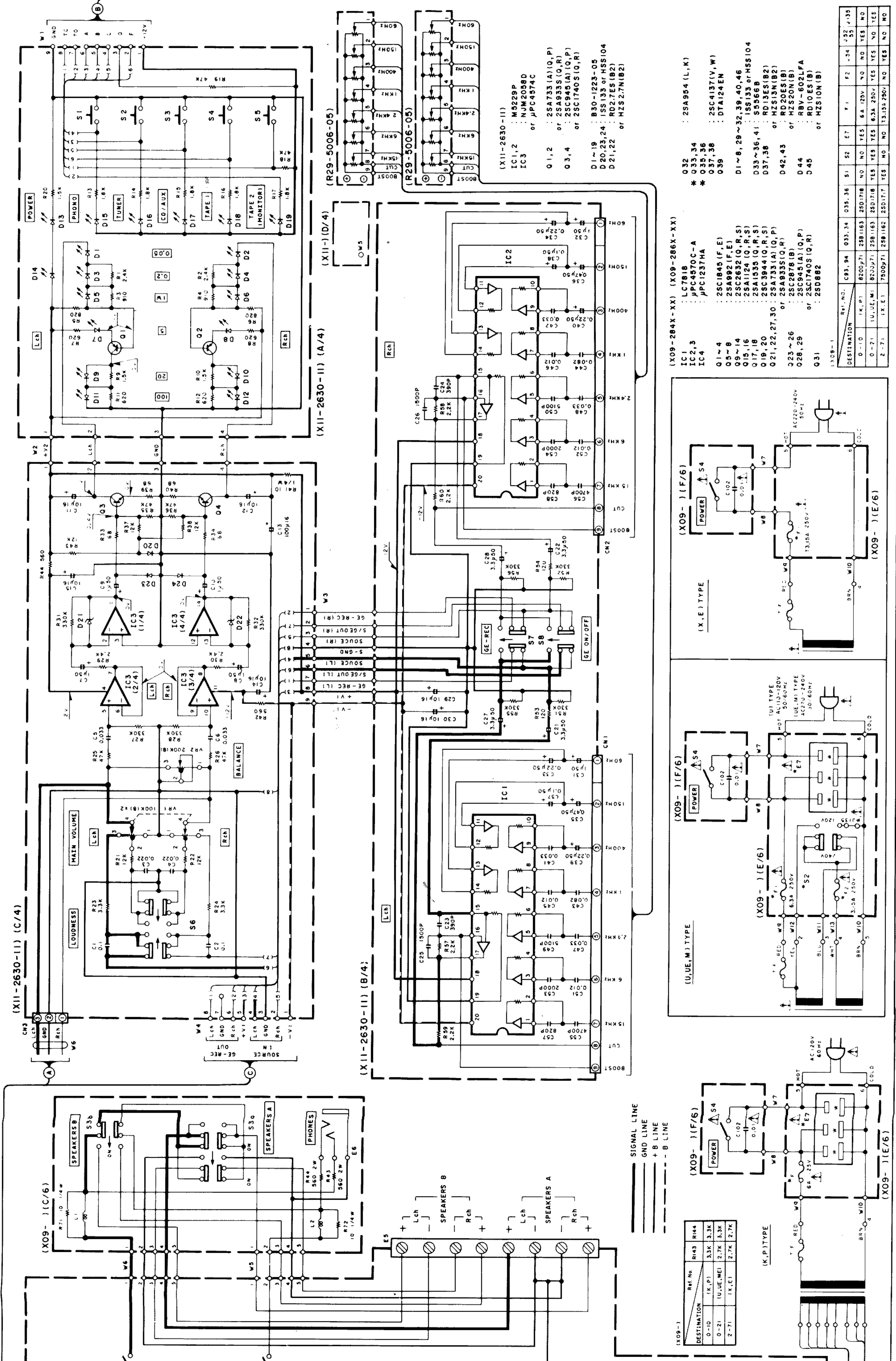
DESTINATION	R41 No.	R43	R44
0-10	1K.P1	3.3K	3.3K
0-21	10J.C.ME1	2.7K	3.3K
2-21	1K.L.E1	2.7K	2.7K

(K.P.) TYPE

DC voltage voltmeter between in

- DTA124EN
- 2SA1124
- 2SA733(A)
- 2SA954
- 2SA992
- 2SC1845
- 2SC2832
- 2SC2878
- 2SC945(A)
- ZSD882
- 2SA933S
- ZSC1740S
- ZSC4137
- ZS81162
- ZS81163
- ZSD1717
- ZSD1718
- ZSA1535
- ZSC944
- NJM2058D
- μPC4574C
- μPC4570C-A
- MS229P
- μPC1237HA
- LC7818





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). **⚠** 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.

(X09-1) (I, P) TYPE

DESTINATION	R41 No.	R43	R44
0-10	(I, P)	3.3K	3.3K
0-21	(U, UE, ME)	2.7K	3.3K
2-71	(I, E)	2.7K	2.7K

(X09-1) (F, E) TYPE

DESTINATION	R41 No.	R43	R44
0-10	(I, P)	8200/71	258/1183
0-21	(U, UE, ME)	8200/71	258/1183
2-71	(I, E)	7500/71	258/1182

(X09-284X-XX) (X09-286X-XX)

IC1 : LC7818
 IC2,3 : APC4570C-A
 IC4 : APC1237HA

Q1~4 : 2SC1845 (F, E)
 Q5~8 : 2SA992 (F, E)
 Q9~14 : 2SC2632 (Q, R, S)
 Q15,16 : 2SA1124 (Q, R, S)
 Q17,18 : 2SA1535 (Q, R, S)
 Q19,20 : 2SC3944 (Q, R, S)
 Q21,22,27,30 : 2SA733 (A) (Q, P)
 or 2SA855 (Q, R)
 Q23~26 : 2SC2876 (B)
 Q28,29 : 2SC945 (A) (Q, P)
 or 2SC1740S (Q, R)
 Q31 : 2SD882

(X11-2630-II)

IC1,2 : M5229P
 IC3 : NJM2058D or μ PC6574C

Q1,2 : 2SA733 (A) (Q, P)
 or 2SA935S (Q, R)
 Q3,4 : 2SC945 (A) (Q, P)
 or 2SC1740S (Q, R)

D1~19 : B30-1223-05
 D20,23,24 : ISS133 or HSS104
 D21,22 : RD27E5 (B2)
 or HZ527N (B2)

(R29-5006-05)

IC1,2 : M5229P
 IC3 : NJM2058D or μ PC6574C

Q1,2 : 2SA733 (A) (Q, P)
 or 2SA935S (Q, R)
 Q3,4 : 2SC945 (A) (Q, P)
 or 2SC1740S (Q, R)

D1~19 : B30-1223-05
 D20,23,24 : ISS133 or HSS104
 D21,22 : RD27E5 (B2)
 or HZ527N (B2)

(X09-1) (F, E) TYPE

Q32 : 2SA954 (L, K)
 * Q33,34 : 2SC4137 (V, W)
 * Q35,36 : 2SC4137 (V, W)
 Q37,38 : DTA124EN
 Q39 : 2SC1845 (F, E)

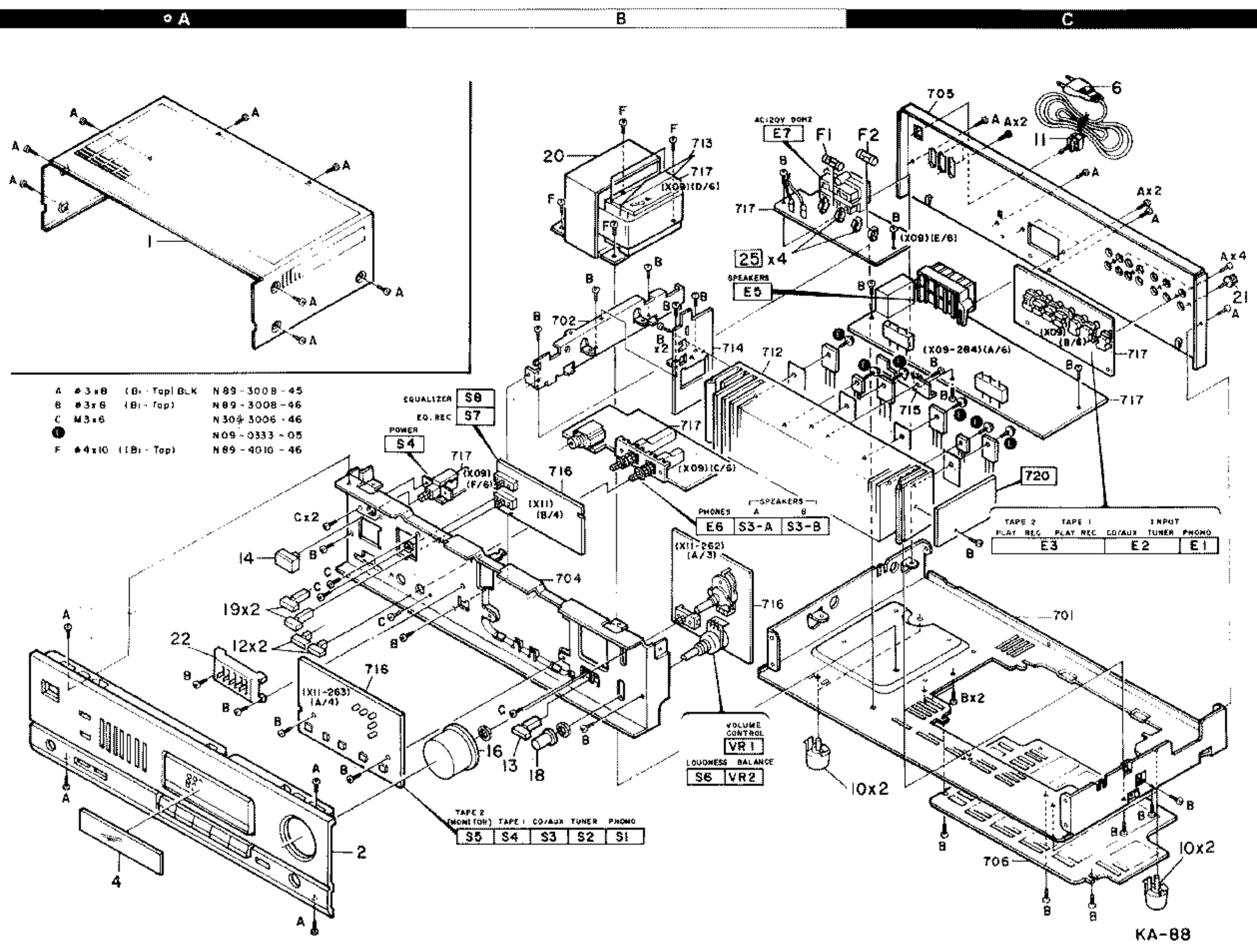
D1~8,28~32,39,40,46 : ISS133 or HSS104
 D33~36,41 : S5566B
 D37,38 : RD15E1 (B2)
 or HZ153N (B2)
 D42,43 : RD20E5 (B)
 or HZ20Z (B)
 D44 : RBV-602LFA
 or HZ520N (B)
 D45 : RD10E5 (B)
 or HZ510N (B)

EXPLODED VIEW

KA-88

KA-88

PARTS LIST



- A #3x6 (B) - Top/BLK N89-3008-45
- B #3x8 (B) - Top N89-3008-46
- C #3x6 N30#3006-46
- D #4x10 (1B) - Top N09-0333-05
- E #3x6 N89-4010-46
- F #4x10 (1B) - Top N89-4010-46

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

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Ref. No.	Address	Parts No.	Description	Desti- nation	Re- marks
参照番号	位置	部品番号	部品名/規格	仕	備考
1	1A	ANT-1738-01	METAL TIE CARBINE		
2	2A	ANT-5762-03	PANEL ASSY		
4	2A	B03-2524-04	DRESSING PLATE	J	
		B03-2536-04	DRESSING PLATE		
		B46-0092-03	WARRANTY CARD		
		B46-0094-03	WARRANTY CARD		
		B46-0095-03	WARRANTY CARD		
		B46-0096-13	WARRANTY CARD	X	
		B46-0121-03	WARRANTY CARD	F	
		B46-0122-13	WARRANTY CARD	E	
		B50-9470-00	INSTRUCTION MANUAL		
		B50-9471-00	INSTRUCTION MANUAL		
		B50-9473-00	INSTRUCTION MANUAL		
		B50-9475-00	INSTRUCTION MANUAL		
		B50-9647-00	INSTRUCTION MANUAL		
		B50-9648-00	INSTRUCTION MANUAL		
		B50-9650-00	INSTRUCTION MANUAL		
		B50-9652-00	INSTRUCTION MANUAL		
		B58-0223-04	CAUTION CARD (PRE-SET 120V)		
		B58-0513-04	CAUTION CARD (PRESET220-240)		
		B58-0803-13	CAUTION CARD		
		E30-0459-05	AC PRIMER CARD	E	
		E30-0812-05	AC PRIMER CARD	U	
		E30-0974-05	AC PRIMER CARD	U	
		E30-1341-05	AC PRIMER CARD	U	
		E30-2209-05	AC PRIMER CARD	U	
		F05-3121-05	FUSE (SEMKO)	XE	
		F05-3123-05	FUSE (250V T3.15A)	U	
		F05-6029-05	FUSE (250V 3.15A)	U	
		F05-6324-05	FUSE (250V 6.3A)	U	
		H01-8442-04	ITEM CARTON CASE	J	
		H01-8515-04	ITEM CARTON CASE	J	
		H10-3845-02	POLYSTYRENE FRAMED FIXTURE	J	
		H10-3846-02	POLYSTYRENE FRAMED FIXTURE	J	
		H10-3847-02	POLYSTYRENE FRAMED FIXTURE	J	
		H10-3848-02	POLYSTYRENE FRAMED FIXTURE	J	
		H25-0223-04	PROTECTION BAG (750X350X10.03)	S	
		H25-0232-04	PROTECTION BAG (235X350X10.03)	S	
		J02-1013-05	FRONT PRIMER CARD WASHING		
		J42-0081-05	FRONT PRIMER CARD WASHING		
		J61-0307-05	FRONT PRIMER CARD WASHING		
		K27-0742-14	FRONT PRIMER CARD WASHING		
		K27-1725-04	FRONT PRIMER CARD WASHING		
		K27-1965-04	FRONT PRIMER CARD WASHING		
		K29-0595-04	FRONT PRIMER CARD WASHING		
		K29-0632-04	FRONT PRIMER CARD WASHING		
		K29-1629-04	FRONT PRIMER CARD WASHING		
		L01-7621-05	FRONT PRIMER CARD WASHING		
		L01-7622-05	FRONT PRIMER CARD WASHING		
		L01-7623-05	FRONT PRIMER CARD WASHING		
		L01-7624-05	FRONT PRIMER CARD WASHING		
		L01-7625-05	FRONT PRIMER CARD WASHING		
		L01-7626-05	FRONT PRIMER CARD WASHING		
		L01-7627-05	FRONT PRIMER CARD WASHING		

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▲ indicates safety critical components.

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 S: Singapore made

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21	1C	N08-0128-35	BINDING POST		
A	1A, 1C	N89-3008-45	BINDING HEAD TAPTITE SCREW		
B	1B, 2A	N89-3008-46	BINDING HEAD TAPTITE SCREW		
C	2A	N30-3006-46	PAN HEAD MACHINE SCREW		
E	1C	N09-0333-05	TAPPING SCREW (3X12,+)		
F	1B	N89-4010-46	BINDING HEAD TAPTITE SCREW		
27	2A	R29-5006-05	POTENTIOMETER		
033, 34		25B1162	TRANSISTOR	XE	
033, 34		25B1163	TRANSISTOR	KPUJEM	
035, 36		25D1717	TRANSISTOR	XE	
035, 36		25D1718	TRANSISTOR	KPUJEM	
037, 38		25C4137(U,W)	TRANSISTOR		
AUDIO UNIT (X09-284X-XX) Japan made: 0-10; K.P. 0-21; U, UEM 2-71; X, E					
01, 2		CE04KW12R22M	ELECTR. 2.2UF 50WV		J
01, 2		CE04LW12R22M	ELECTR. 2.2UF 50WV		S
03, 4		CE045FSL1H101J	CERAMIC 100PF J		
09, 10		CE045FSL1H220J	CERAMIC 22PF J		
011 - 14		CE04KW1H010M	ELECTR. 1.0UF 50WV		J
011 - 14		CE04LW1H010M	ELECTR. 1.0UF 50WV		S
015 - 16		CE045FSL1H333J	CERAMIC 330PF J		J
017 - 18		CE04KW1A101M	ELECTR. 10UF 10WV		J
017 - 18		CE04LW1A101M	ELECTR. 10UF 10WV		S
019 - 20		CE045FSL1H330F	CERAMIC 330PF		
021 - 22		CE045FSL1H103J	CERAMIC 100PF J		
023 - 24		CE045FSL1H103J	CERAMIC 100PF J		
025 - 26		CE045FSL1H223J	CERAMIC 22PF J		
029 - 30		CE045FSL1H333J	CERAMIC 330PF J		
031 - 32		CE045FSL1H033J	CERAMIC 30PF J		
033 - 34		CE04KW1E220M	ELECTR. 22UF 16WV		J
033 - 34		CE04LW1E220M	ELECTR. 22UF 16WV		S
035 - 36		CE04KW1V100M	ELECTR. 10UF 30WV		J
035 - 36		CE04LW1V100M	ELECTR. 10UF 30WV		S
037 - 38		CE045FSL1H101J	CERAMIC 100PF J		
039 - 40		CE04KW1A630M	ELECTR. 47UF 10WV		J
039 - 40		CE04LW1A630M	ELECTR. 47UF 10WV		S
041 - 42		CE045FSL1H123J	CERAMIC 120PF J		
043 - 44		CE045FSL1H332J	CERAMIC 330PF J		
045 - 46		CE04KW1V100M	ELECTR. 10UF 35WV		J
045 - 46		CE04LW1V100M	ELECTR. 10UF 35WV		S
047 - 48		CE045FSL1H561K	CERAMIC 560PF K		
063 - 64		CE04KW1V4R7M	ELECTR. 4.7UF 35WV		J
063 - 64		CE04LW1V4R7M	ELECTR. 4.7UF 35WV		S
065 - 66		CE045FSL1H104J	CERAMIC 100PF J		
067 - 68		CE04KW2A470M	ELECTR. 47UF 100WV		J
067 - 68		CE04LW2A470M	ELECTR. 47UF 100WV		S
073 - 74		CE04KW1H010M	ELECTR. 1.0UF 50WV		J
073 - 74		CE04LW1H010M	ELECTR. 1.0UF 50WV		S
073 - 74		CE04LW1H010M	ELECTR. 1.0UF 50WV		S
081 - 82		CE04KW1V471M	ELECTR. 470UF 35WV		J
081 - 82		CE04LW1V471M	ELECTR. 470UF 35WV		S
083 - 86		CE04KW1C470M	ELECTR. 47UF 16WV		J
083 - 86		CE04LW1C470M	ELECTR. 47UF 16WV		S
087		CE04KW1C220M	ELECTR. 22UF 16WV		J
087		CE04LW1C220M	ELECTR. 22UF 16WV		S

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088		C90-1334-05	NP-ELEC		J
090		CE04KW1C470M	ELECTR. 47UF 16WV		S
090		CE04LW1C470M	ELECTR. 47UF 16WV		S
091		CE04KW1V4R7M	ELECTR. 4.7UF 35WV		J
091		CE04LW1V4R7M	ELECTR. 4.7UF 35WV		S
093 - 94		C90-1760-05	ALUMINIUM ELECTROLYTIC C.	KPUJEM	
093 - 94		C90-1761-05	ALUMINIUM ELECTROLYTIC C.	XE	
095 - 96		CE04KW1E101M	ELECTR. 100UF 25WV		J
095 - 96		CE04LW1E101M	ELECTR. 100UF 25WV		S
097 - 98		CE045FE2H103P	CERAMIC 0.010UF P		
099		C91-0769-05	CERAMIC 0.01UF M		
0100		C90-1331-05	NP-ELEC 50WV		
0101		C90-1349-05	NP-ELEC 50WV		
0102		C91-0023-05	CERAMIC 0.01UF AP250V		
0102		C91-0647-05	CERAMIC 0.01UF P		
0102		C91-0971-05	ELECTR. 0.01UF 250WV		
0105		CE04KW1V100M	ELECTR. 10UF 35WV		J
0105		CE04LW1V100M	ELECTR. 10UF 35WV		S
0106		CE045FSL1H223J	CERAMIC 22PF J		
0107		CE045FSL1H103J	CERAMIC 100PF J		
0108		CE04KW1V4R7M	ELECTR. 4.7UF 35WV		J
0109		CE04LW1V4R7M	ELECTR. 4.7UF 35WV		S
0109		CE045FSL1H223J	CERAMIC 22PF J		
0110		C90-1256-05	ELECTR. 100UF 16WV		J
0112		CE04KW1C101M	ELECTR. 100UF 16WV		J
0112		CE04LW1C101M	ELECTR. 100UF 16WV		S
0143		C90-1455-05	NP-ELEC 50WV		
01		E13-0250-05	PHONO JACK		
02		E13-0486-05	PHONO JACK		
03		E13-0826-05	PHONO JACK		
04		E20-0823-05	TRK TERMINAL HARD(HP)		
05		E11-0164-05	PHONO JACK (3P)		
07		E03 0073-05	AE INLET		
25	1B	J13-0054-05	FUSE T1P		
11 - 32		L39-0085-05	PHASE-COMPENSATION COIL		
01 - 2		R90-0187-05	MULTI-COMP 0.22X2 K 5W		
011 - 12		RD14GB2E101J	FL-PRSNF RD 100 J 1/4W		J
031		RD14GB2E221J	FL-PRSNF RD 220 J 1/4W		J
031 - 34		RD14GB2E221J	FL-PRSNF RD 220 J 1/4W		J
032		RD14AB2E221J	FL-PRSNF RD 220 J 1/4W		J
033		RD14GB2E221J	FL-PRSNF RD 220 J 1/4W		J
034		RD14AB2E221J	FL-PRSNF RD 220 J 1/4W		J
043 - 44		RS14DR3D561J	FL-PRSNF RS 560 J 2W		J
043 - 44		RS14KB3D561J	FL-PRSNF RS 560 J 2W		J
049 - 52		RD14AB2E220J	FL-PRSNF RD 22 J 1/4W		J
049 - 52		RD14GB2E220J	FL-PRSNF RD 22 J 1/4W		J
053 - 56		RD14AB2E331J	FL-PRSNF RD 330 J 1/4W		J
053 - 56		RD14GB2E331J	FL-PRSNF RD 330 J 1/4W		J
057 - 60		RD14AB2E2R2J	FL-PRSNF RD 2.2 J 1/4W		J
057 - 60		RD14GB2E2R2J	FL-PRSNF RD 2.2 J 1/4W		J
061 - 62		RS14DB3D100J	FL-PRSNF RS 10 J 2W		J
061 - 62		RS14KB3D100J	FL-PRSNF RS 10 J 2W		J

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R62		RS14KB3D100J	FL-PRSNF RS 10	J	J
R71 .72		RD14AR2E100J	FL-PRSNF RD 10	J	J
R71 .72		RD14GE2E100J	FL-PRSNF RD 10	S	S
R120		RD14AR2E121J	FL-PRSNF RD 120	J	J
R120		RD14GB2E121J	FL-PRSNF RD 120	S	S
R121.122		RD14AR2E100J	FL-PRSNF RD 10	J	J
R121.122		RD14GB2E100J	FL-PRSNF RD 10	S	S
R131		RS14DR3A101J	FL-PRSNF RS 100	J	J
R131		RS14KB3A101J	FL-PRSNF RS 100	J	J
R132		RS14DB3A181J	FL-PRSNF RS 180	J	J
R132		RS14KB3A181J	FL-PRSNF RS 180	S	S
R133.134		RD14AB2E472J	FL-PRSNF RD 4.7K	J	J
R133.134		RD14GB2E472J	FL-PRSNF RD 4.7K	S	S
R143		RS14DB3B222J	FL-PRSNF RS 2.2K	J	J
R143		RS14KB3D272J	FL-PRSNF RS 2.7K	J	J
R143.144		RS14KB3D332J	FL-PRSNF RS 3.3K	J	J
R144		RS14DR3D272J	FL-PRSNF RS 2.7K	KP	KP
VR1 .2		R12-1083-05	TRIMMING PNT. (1K)	XE	XE
K1		S51-2078-05	MAGNETIC RELAY	UUEM	UUEM
S1		S31-2136-05	SLIDE SWITCH (40--80)	E	E
S1		S31-2136-05	SLIDE SWITCH (40--80)	UUEM	UUEM
S2		S31-2131-05	SLIDE SWITCH (POWER TYPE)	E	E
S3		S42-2153-05	MULTIPLE PUSH SWITCH (SPEAKERS)	UUEM	UUEM
S4		S40-1073-05	PUSH SWITCH (POWER)	UUEM	UUEM
D1 .8		H5S104	DIODE		
D29 .32		15S133	DIODE		
D33 .36		15S133	DIODE		
D37 .38		S5566R	ZENER DIODE		
D39 .40		HZ513N(R)	ZENER DIODE		
D41		RD13ES(RC)	ZENER DIODE		
D42 .43		15S133	DIODE		
D42 .43		S5566B	ZENER DIODE		
D44		HZ520N(R)	ZENER DIODE		
D45		RD20FS(R)	ZENER DIODE		
D46		RBV-6021FA	DIODE		
IC1		HZ510N(B)	ZENER DIODE		
IC2 .3		RD10ES(R)	ZENER DIODE		
IC4		15S133	DIODE		
IC4		IC (PICTURE CONTROL SWITCH (2H))			
05 .8		UPC4570D-A	IC (OP AMP X2)		
09 .14		UPC1237HA	IC (POWER AMP)		
015 .16		25C1845(F.F)	TRANSISTOR		
017 .18		25A992(F.F)	TRANSISTOR		
019 .20		25C2632(D.R.S)	TRANSISTOR		
021 .22		25A1124(O.R.S)	TRANSISTOR		
021 .22		25A1535(O.R.S)	TRANSISTOR		
023 .26		25C3944(O.R.S)	TRANSISTOR		
027		25A733(O.R.P)	TRANSISTOR		
027		25A933(O.R)	TRANSISTOR		
028 .29		25C17405(O.R)	TRANSISTOR		
028 .29		25F965(O.R.P)	TRANSISTOR		

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030		25A733(O.R.P)	TRANSISTOR		
030		25A933(O.R)	TRANSISTOR		
031		25D8B2	TRANSISTOR		
032		25A954(L.F)	TRANSISTOR		
039		DTA124FN	DIGITAL TRANSISTOR		
TRIMMING UNIT (X11-263X-XX) Japan made:0-11 Singapore made:0-10					
D1 .19		R30-1223-05	LED(LN21PHT(V))-C		
C1 .2		CF92FV1H104J	MF 0.10UF	J	J
C3 .4		CF92FV1H233J	MF 0.022UF	J	J
C5 .6		CF92FV1H333J	MF 0.033UF	J	J
C7 .10		CE04KW1H010M	ELECTR 1.0UF	50WV	50WV
C7 .10		CE04LW1H010M	ELECTR 1.0UF	50WV	50WV
C11 .12		CE04KW1C100M	ELECTR 10UF	16WV	16WV
C11 .12		CE04LW1C100M	ELECTR 10UF	16WV	16WV
C13		CE04KW1C101M	ELECTR 100UF	16WV	16WV
C13		CE04LW1C101M	ELECTR 100UF	16WV	16WV
C14 .15		CE04KW1C101M	ELECTR 100UF	16WV	16WV
C14 .15		CE04LW1C101M	ELECTR 100UF	16WV	16WV
C14 .15		CE04KW1H3R3M	ELECTR 3.3UF	50WV	50WV
C21 .22		CE04LW1H3R3M	ELECTR 3.3UF	50WV	50WV
C21 .22		CE04LW1H3R3M	ELECTR 3.3UF	50WV	50WV
C23 .24		CK45FB1H391K	CERAMIC 390PF	K	K
C25 .26		CK45FB1H152K	CERAMIC 1500PF	K	K
C27 .28		CE04KW1H3R3M	ELECTR 3.3UF	50WV	50WV
C27 .28		CE04LW1H3R3M	ELECTR 3.3UF	50WV	50WV
C29 .30		CE04KW1C100M	ELECTR 10UF	16WV	16WV
C29 .30		CE04LW1C100M	ELECTR 10UF	16WV	16WV
C31 .32		CE04KW1H010M	ELECTR 1.0UF	50WV	50WV
C31 .32		CE04LW1H010M	ELECTR 1.0UF	50WV	50WV
C31 .32		CE04KW1HR22M	ELECTR 0.22UF	50WV	50WV
C33 .34		CE04LW1HR22M	ELECTR 0.22UF	50WV	50WV
C33 .34		CE04LW1HR22M	ELECTR 0.22UF	50WV	50WV
C35 .36		CE04KW1HR47M	ELECTR 0.47UF	50WV	50WV
C35 .36		CE04LW1HR47M	ELECTR 0.47UF	50WV	50WV
C37 .38		CE04KW1HOR1M	ELECTR 0.1UF	50WV	50WV
C37 .38		CE04LW1HOR1M	ELECTR 0.1UF	50WV	50WV
C39 .40		CE04KW1HR22M	ELECTR 0.22UF	50WV	50WV
C39 .40		CE04LW1HR22M	ELECTR 0.22UF	50WV	50WV
C41 .42		CF92FV1H333J	MF 0.033UF	J	J
C43 .44		CF92FV1H823J	MF 0.082UF	J	J
C45 .46		CF92FV1H123J	MF 0.012UF	J	J
C47 .48		CF92FV1H333J	MF 0.033UF	J	J
C49 .50		CF92FV1H512J	MF 5100PF	J	J
C51 .52		CF92FV1H123J	MF 0.012UF	J	J
C53 .54		CF92FV1H202J	MF 2000PF	J	J
C55 .56		CF92FV1H472J	MF 4700PF	J	J
C57 .58		CK45FB1H821K	CERAMIC 820PF	K	K
R41		RD14GB2E100J	FL-PRSNF RD 10	J	J
VR1		RD6-5176-05	POTENTIOMETER		
VR2		RD1-5063-05	POTENTIOMETER		
S1 .5		S40-1064-05	PUSH SWITCH		
S6		S40-4074-05	PUSH SWITCH		
S7 .8		S40-2351-05	PUSH SWITCH		
D20		H5S104	DIODE		
D20		15S133	DIODE		

E: Scandinavia & Europe K: USA P: Canada J: Japan made
U: P(Far East, Hawaii) T: England M: Other Areas S: Singapore made
UE: AAFES(Europe) X: Australia A indicates safety critical components.