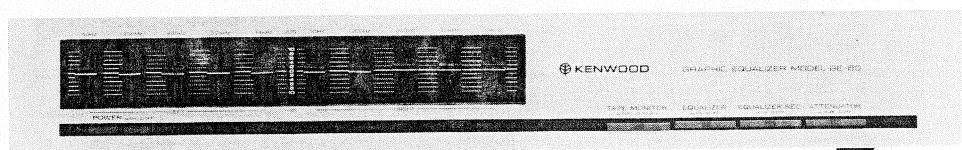


KENWOOD®
HI/FI STEREO COMPONENTS

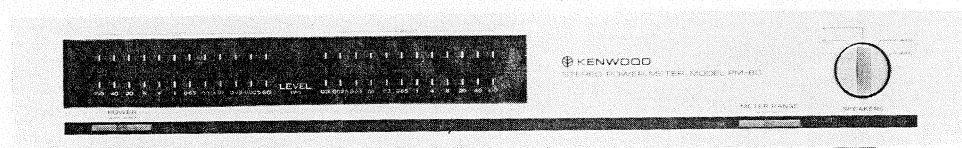
SERVICE MANUAL

GE-80/PM-80/RA-80

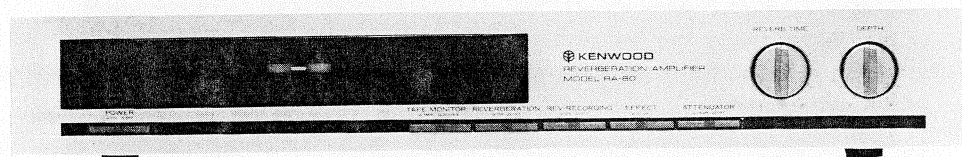
An item of adjustment is written in three languages — English, French and German.
Un article sur réglages est écrit en trois langues, Anglais, Français et Allemand.
Ein Artikel der Abgleich wird auf drei Sprachen, Englische, Französisch und Deutsch geschrieben.



GE-80



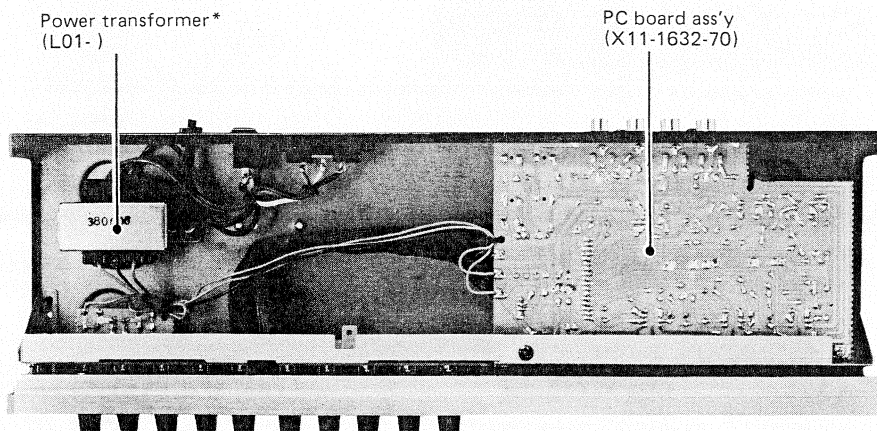
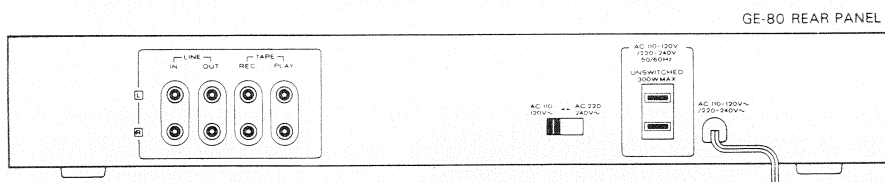
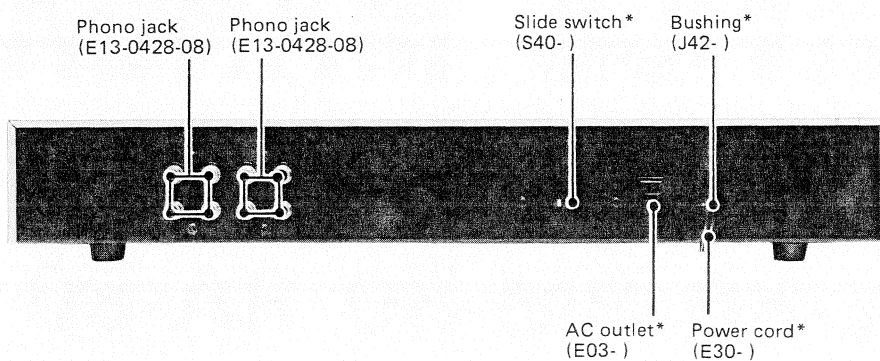
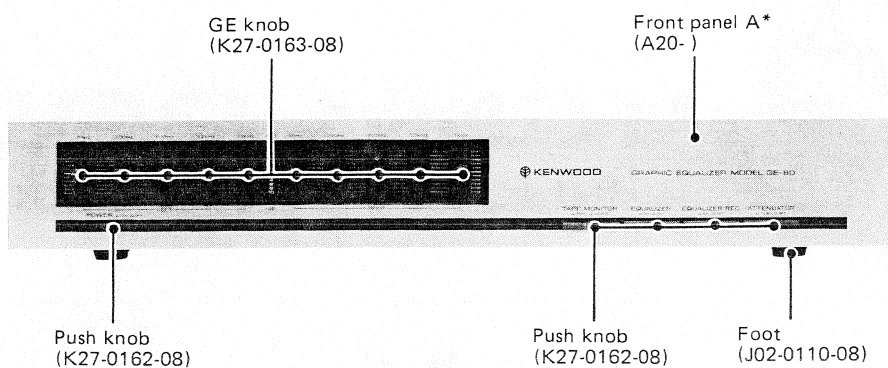
PM-80



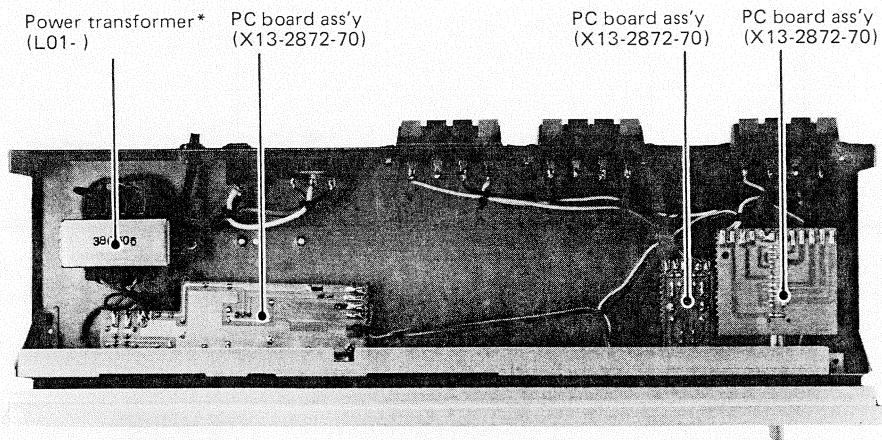
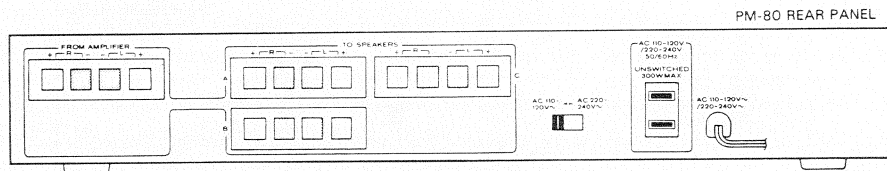
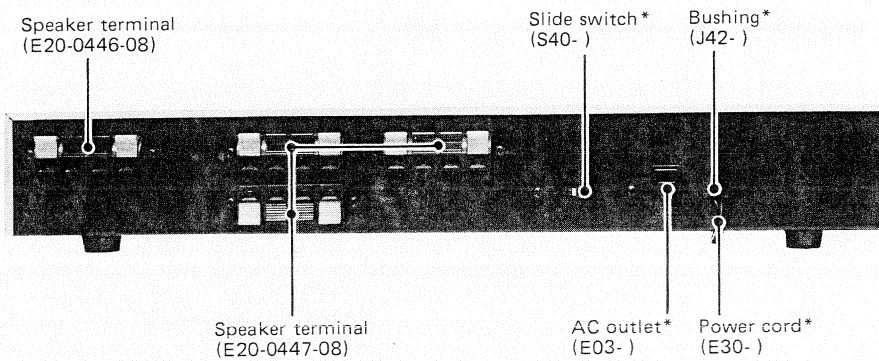
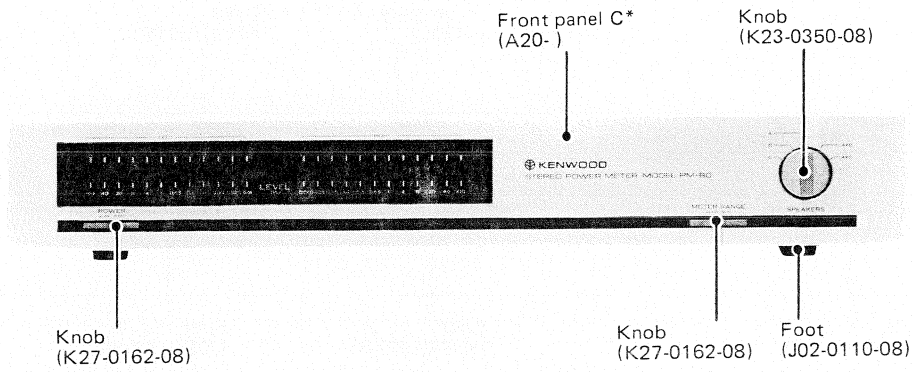
RA-80

GRAPHIC EQUALIZER / STEREO POWER METER / REVERBERATION AMPLIFIER

GE-80 EXTERNAL & INTERNAL VIEWS

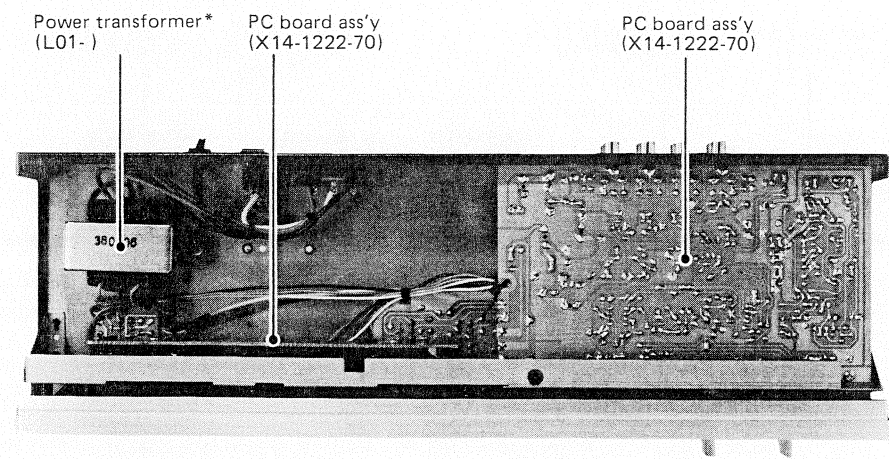
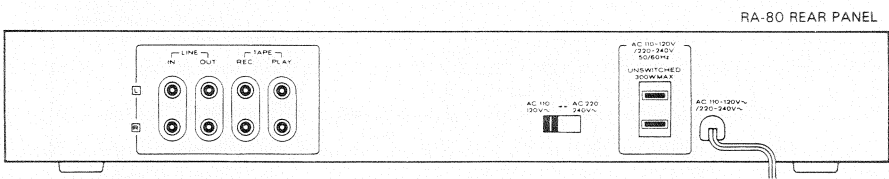
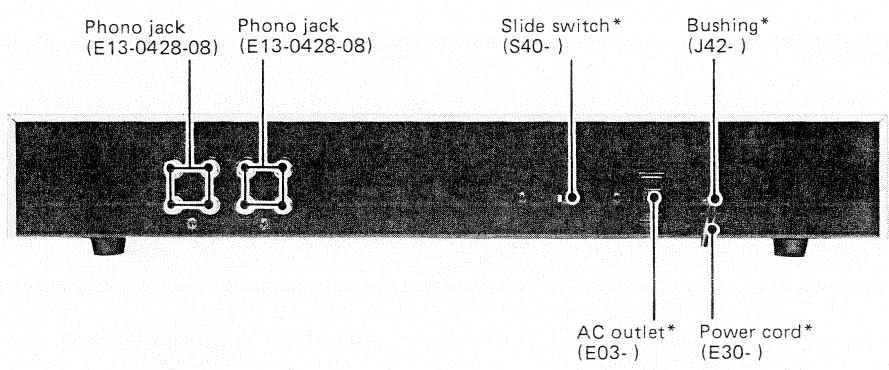
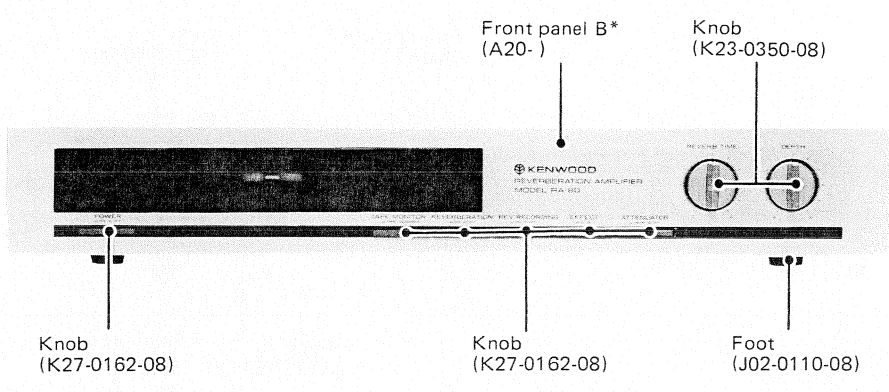


PM-80 EXTERNAL & INTERNAL VIEWS



* Refer to Parts List.

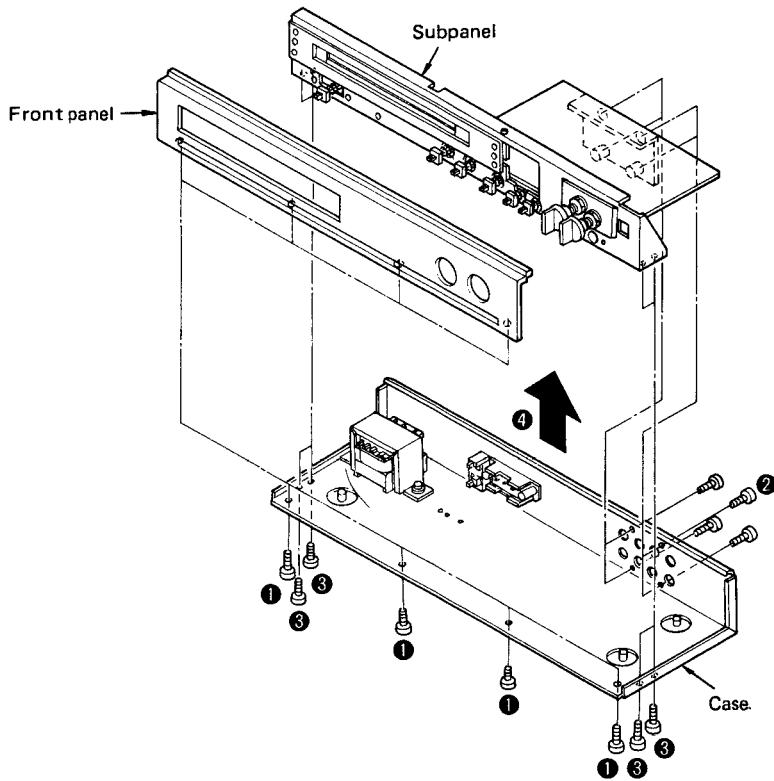
RA-80 EXTERNAL & INTERNAL VIEWS



* Refer to Parts List.

DISASSEMBLY FOR REPAIR

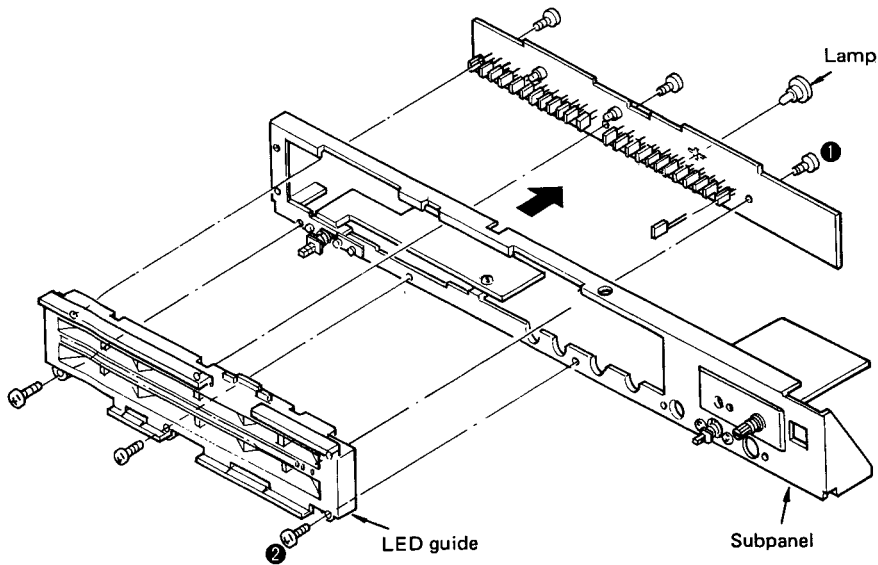
GE-80, RA-80 PCB ASS'Y DETACHMENT



- 1 Remove the screws from the front panel.
- 2 Remove the screws from the phono jacks.
- 3 Remove the screws from the case.
- 4 Separate the subpanel ass'y from the case.

Note: Illustration is in case of the RA-80.

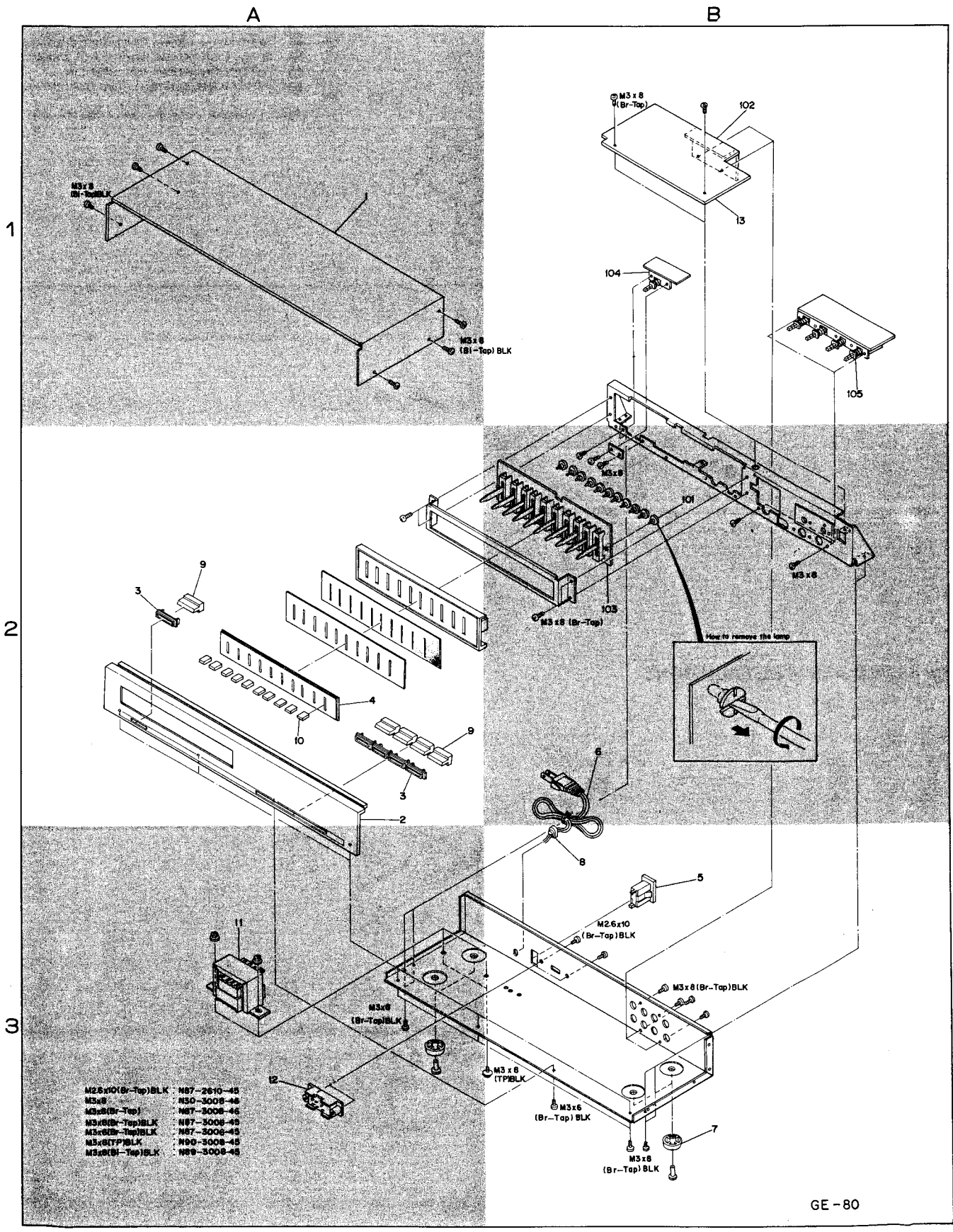
PM-80 PCB ASS'Y DETACHMENT



- 1 When replacing LEDs on the PC board, remove the screws from the PC board.
- 2 When replacing LED's guide, remove the screws from the subpanel.

GE-80 EXPLODED VIEW

See Parts List on page 14.

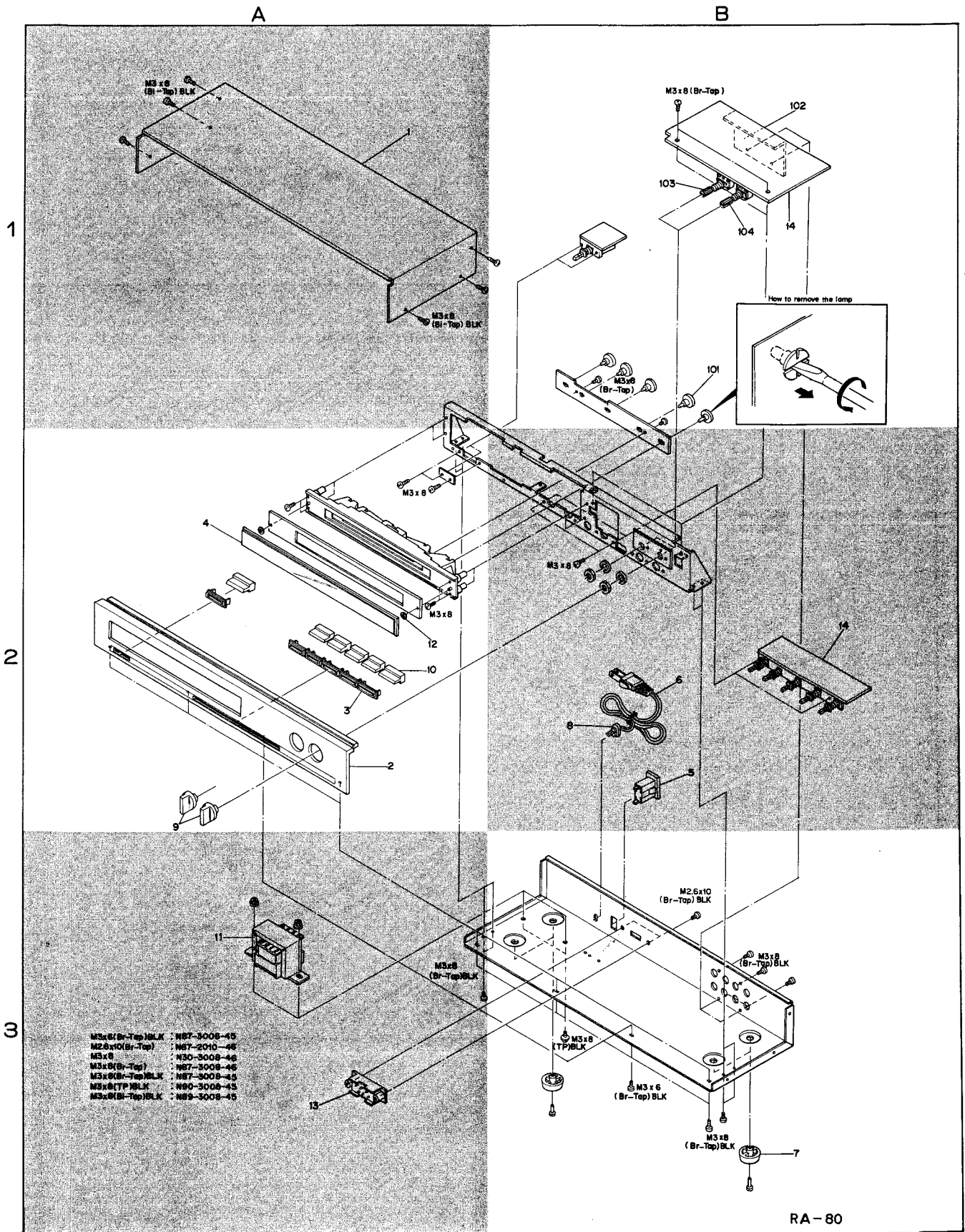


M2.6x10(Br-Top)BLK	N87-2610-45
M3x8	N90-3008-45
M3x6(Br-Top)	N87-3006-45
M3x6(Br-Top)BLK	N87-3006-45
M3x6(Br-Top)BLK	N87-3006-45
M3x6(TP)BLK	N90-3008-45
M3x8(Br-Top)BLK	N90-3008-45

GE-80

RA-80 EXPLODED VIEW

See Parts List on page 15.

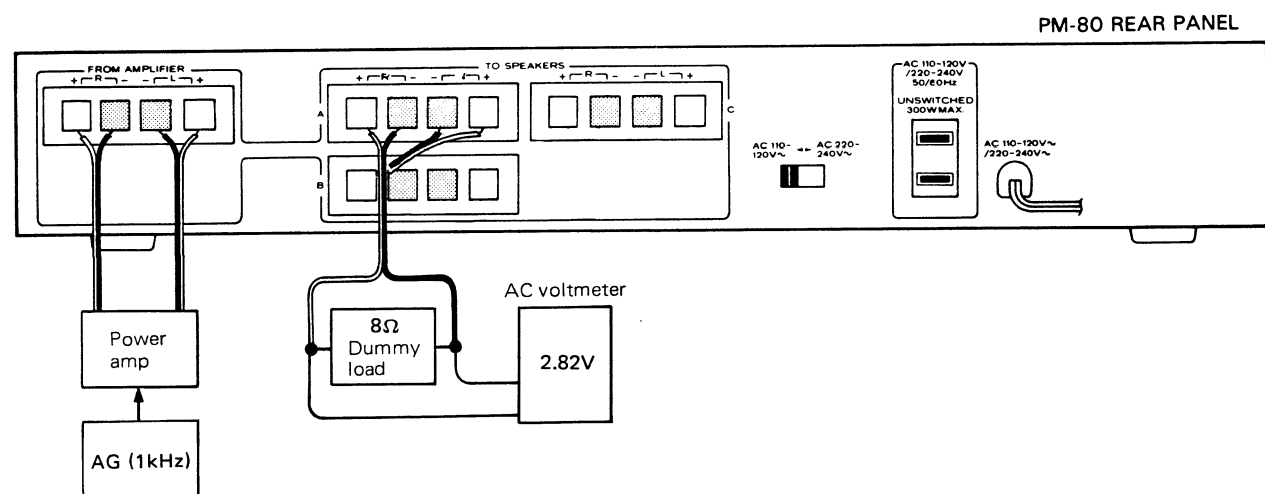
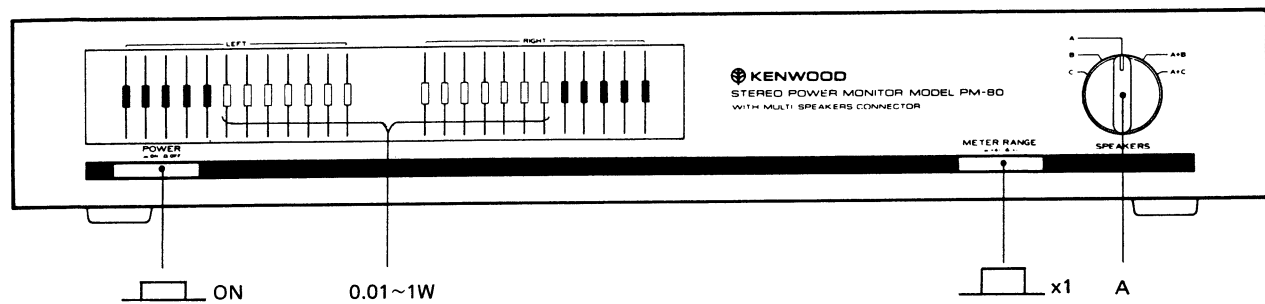


- M3x8 (Br-Top) BLK : N67-3008-45
- M2.6x10 (Br-Top) : N67-2010-46
- M3x8 : N30-3008-46
- M3x8 (Br-Top) : N67-3008-45
- M3x8 (Br-Top) BLK : N67-3008-45
- M3x8 (TP) BLK : N69-3008-45
- M3x8 (Br-Top) BLK : N69-3008-45

RA-80

PM-80 ADJUSTMENT/RÉGLAGES/ABGLEICH

GE-80 PC BOARD



TEST INSTRUMENTS

- Power amp
- Audio generator
- AC voltmeter
- Dummy load

APPAREILLAGE

- Ampli
- Générateur audio fréquences
- Voltmètre CA
- Fausse charge (resistance)

PRÜFINSTRUMENTE

- Leistungsverstärker
- NF-Signalgenerator
- Wechselspannungsmesser
- Belastungsnachbildung

POWER METER LEVEL ADJUSTMENT

1. Connect an AG (via a power amp) and a dummy load to "FROM AMPLIFIER" and "TO SPEAKERS" terminals respectively.
2. Connect an AC voltmeter across the dummy load.
3. Set the AG to 1kHz and its output for a 2.82V reading of the AC voltmeter.
4. Adjust the trimming pot. VR1 (VR21) for 1W reading of the power meter.

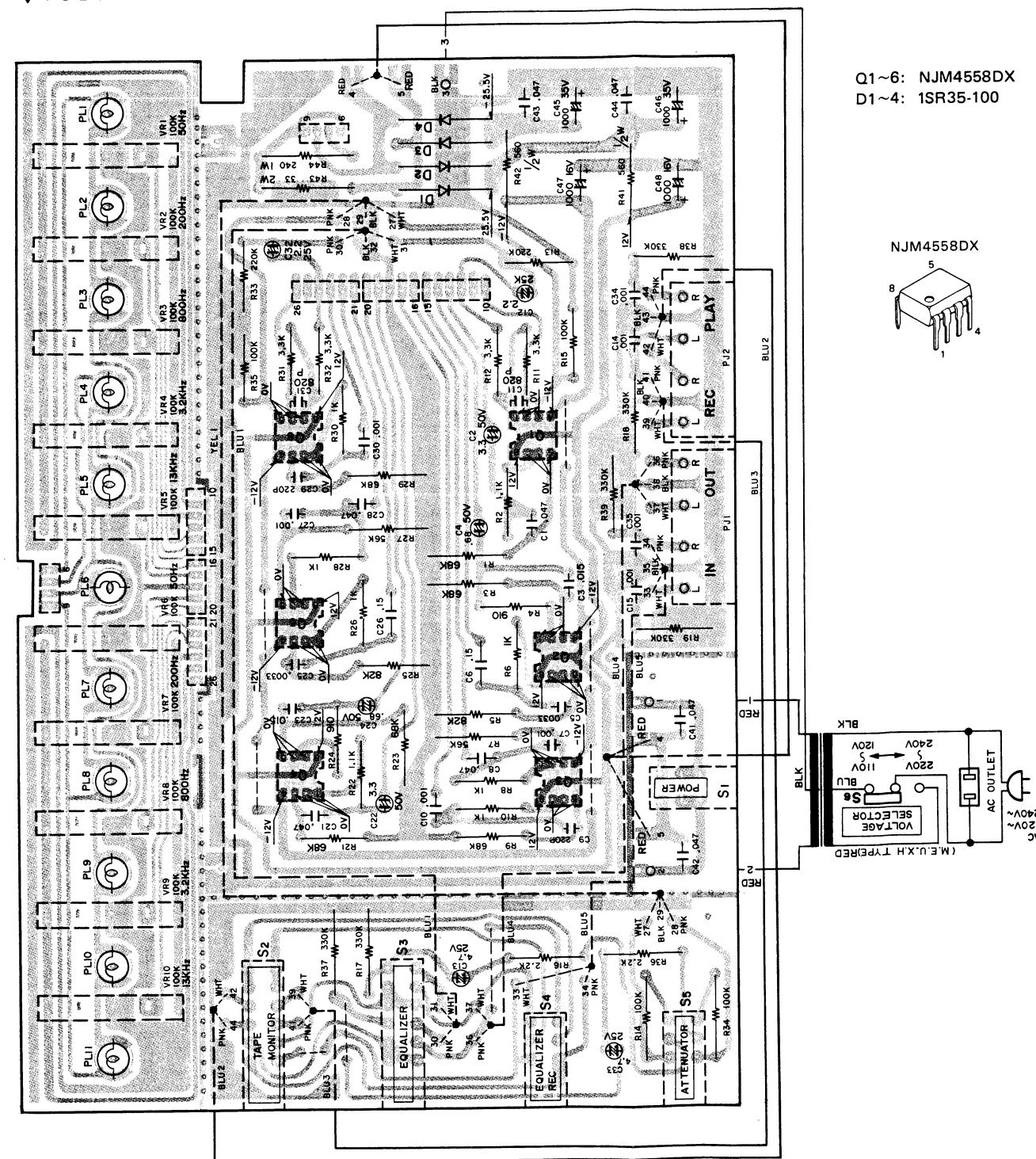
ABGLEICH DER LEISTUNGSMESSE (POWER METER)

1. Einen AG (via eine Leistungsverstärker) an die "FROM AMPLIFIER" und eine Belastungsnachbildung (8Ω, 10W oder mehr) an die "TO SPEAKERS" anschließen.
2. Einen Wechselspannungsmesser über die Belastungsnachbildung anschließen.
3. Den AG auf 1kHz einstellen.
4. Die Lautstärkereger (und/oder den AG-Ausgang) so einstellen, daß die Wechselspannungsmesser-Ableseung 2,82V ist.
5. Das Trimm-Potentiometer VR1 (VR21) so einstellen, daß die Leistungsmesser-Ableseung 1W ist.

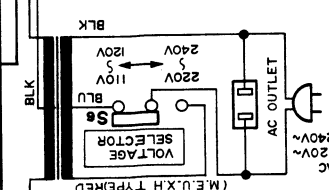
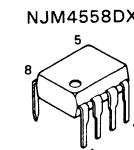
RÉGLAGE DU LED MÈTRE

1. Relier un AG (par un ampli) sur les prises "FROM AMPLIFIER" et une fausse charge (resistance) sur les bornes de "TO SPEAKERS".
2. Relier un voltmètre de C.A. aux deux extrémités de la resistance (ou aux borne de sortie + et -).
3. Régler le potentiomètre ajustable VR1 (VR21) en sorte que le LED's mètre indique 1W lorsque le voltmètre indique 2.82V/8Ω.

PC BOARD ASS'Y (X11-1632-70) Foil side view



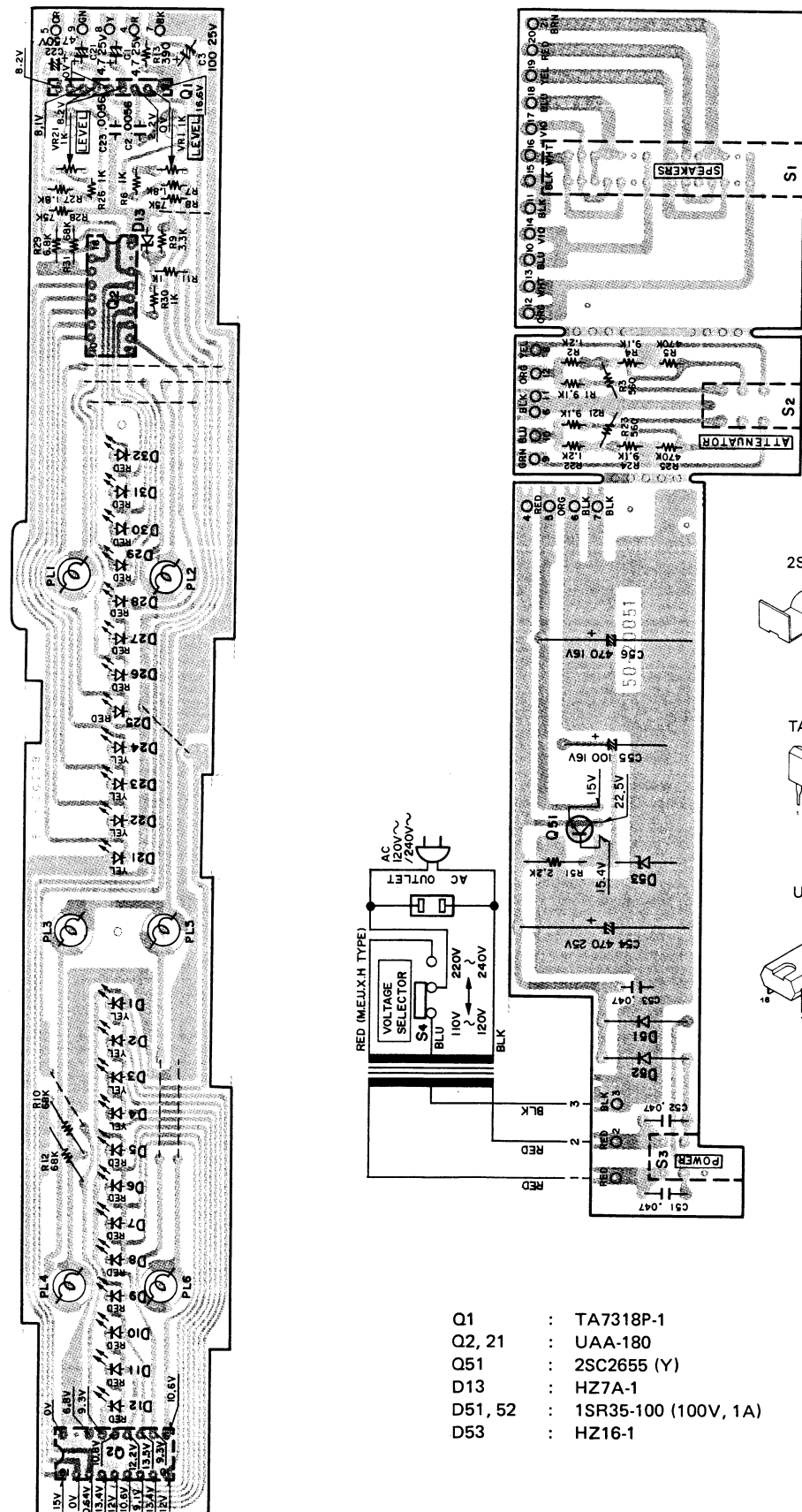
Q1~6: NJM4558DX
D1~4: 1SR35-100



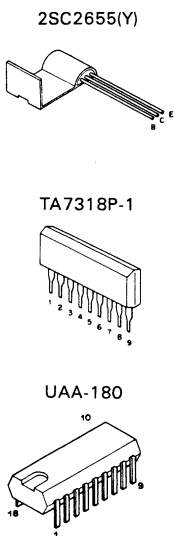
PM-80 PC BOARD

RA-80 PC BOARD

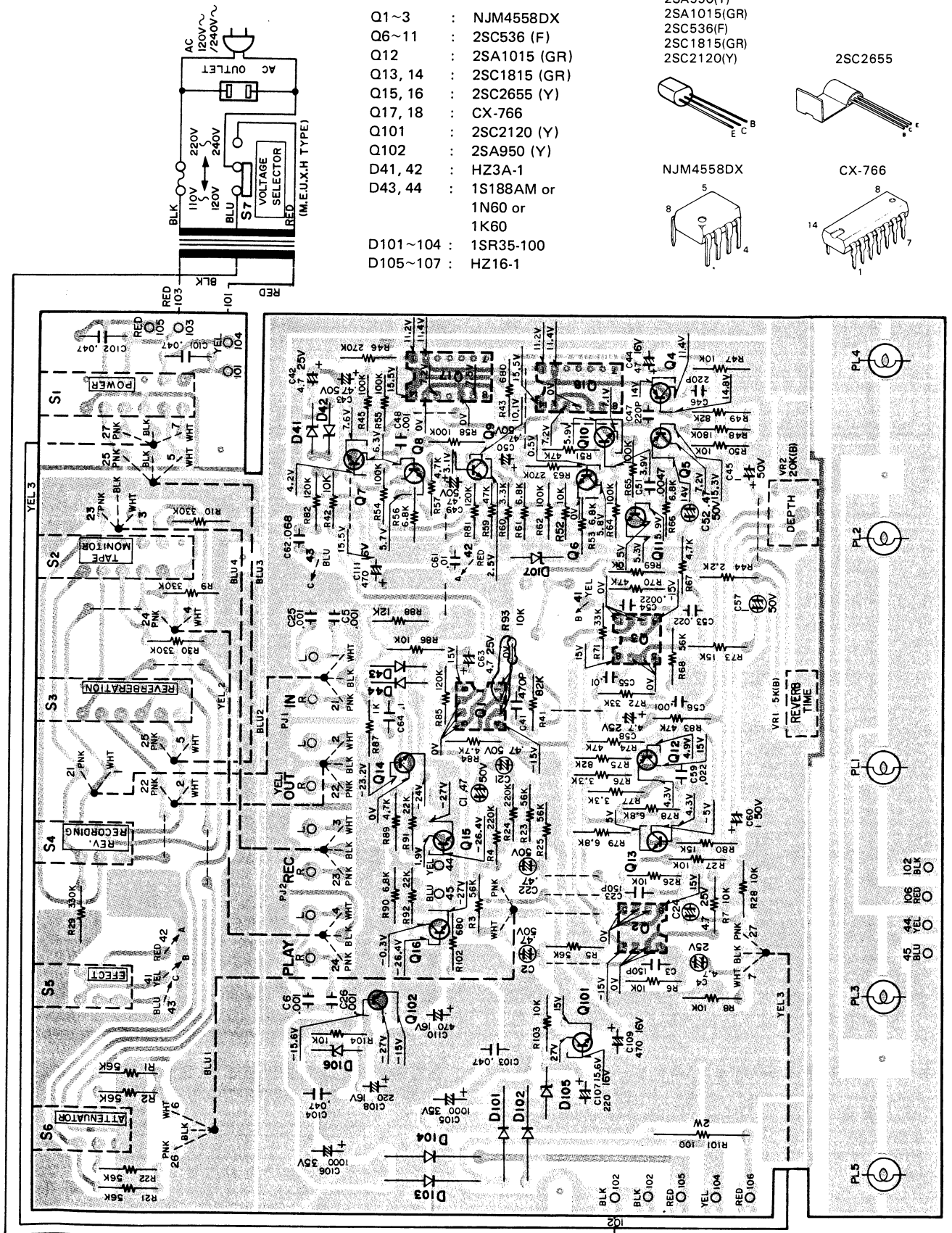
▼ PC BOARD ASS'Y (X13-2872-70) Foil side view



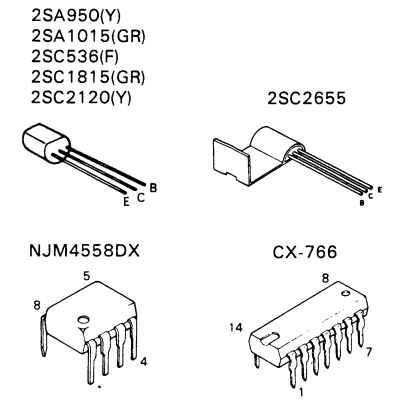
- Q1 : TA7318P-1
- Q2, 21 : UAA-180
- Q51 : 2SC2655 (Y)
- D13 : HZ7A-1
- D51, 52 : 1SR35-100 (100V, 1A)
- D53 : HZ16-1

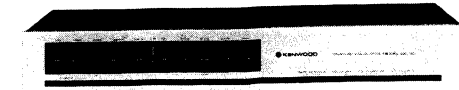


▼ PC BOARD ASS'Y (X14-1222-70) Foil side view



- Q1~3 : NJM4558DX
- Q6~11 : 2SC536 (F)
- Q12 : 2SA1015 (GR)
- Q13, 14 : 2SC1815 (GR)
- Q15, 16 : 2SC2655 (Y)
- Q17, 18 : CX-766
- Q101 : 2SC2120 (Y)
- Q102 : 2SA950 (Y)
- D41, 42 : HZ3A-1
- D43, 44 : 1S188AM or 1N60 or 1K60
- D101~104 : 1SR35-100
- D105~107 : HZ16-1





SPECIFICATIONS

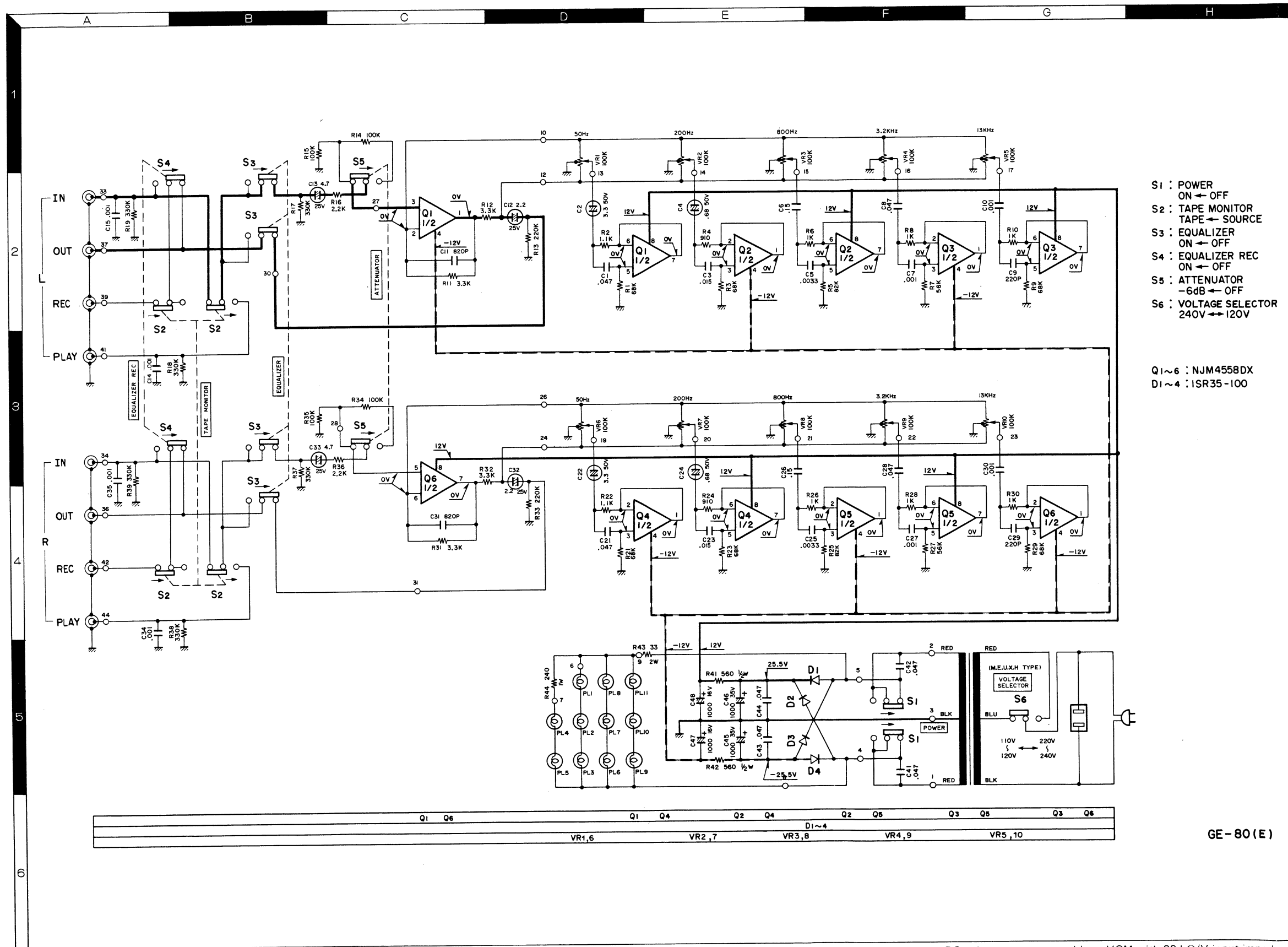
Equalizer characteristic
 Variable range ± 10dB (L & R independently adjustable)
 Center frequencies 50Hz, 200Hz, 800Hz, 3.2kHz, 13kHz
 Attenuation -6dB at 1kHz
 Frequency response 10Hz - 60kHz +0dB, -1dB
 Harmonic distortion Less than 0.006% (20Hz - 20kHz, all controls flat, output 1V)

Maximum output 5V (1kHz, THD 0.01%, PL 47kohms)
S/N ratio 110dB (Short-circuited IHF-A network)
Input impedance 47kohms
Gain 0dB ± 1.0dB
Power consumption 12W
Dimensions 440(W) × 74(H) × 160(D)mm
Weight 2.7kg (net), 3.1kg (gross)

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

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

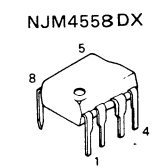
Kenwood poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.



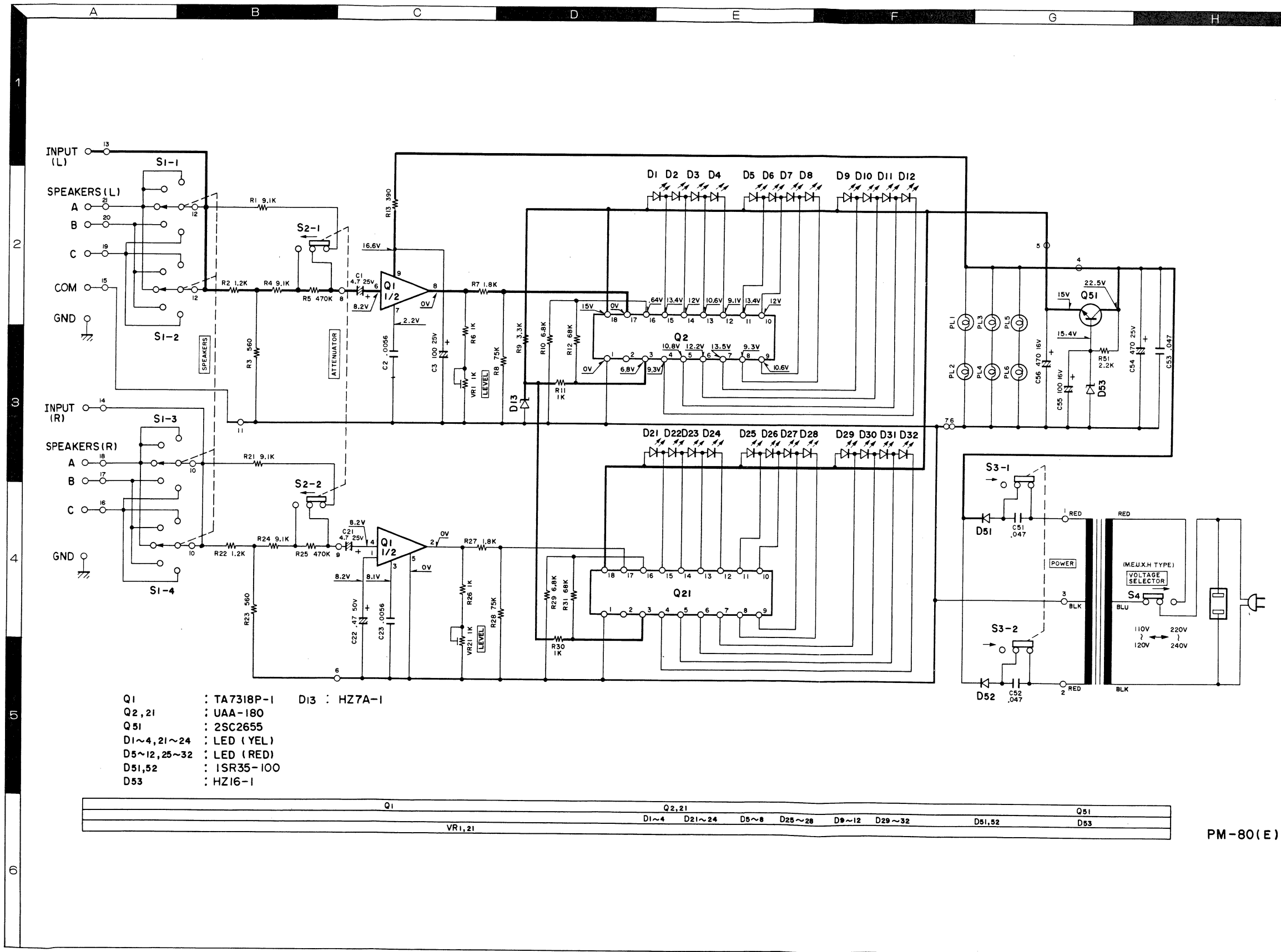
- S1 : POWER ON ← OFF
- S2 : TAPE MONITOR TAPE ← SOURCE
- S3 : EQUALIZER ON ← OFF
- S4 : EQUALIZER REC ON ← OFF
- S5 : ATTENUATOR -6dB ← OFF
- S6 : VOLTAGE SELECTOR 240V ↔ 120V

Q1~6 : NJM4558DX
 D1~4 : 1SR35-100

GE-80(E)



DC voltages are measured by a VOM with 20 kΩ/V input impedance.



SPECIFICATIONS

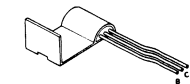
Power meter indication range	0.001-10W (x0.1)
	0.01-100W (x1)
Power meter accuracy	±1dB (x0.1)
	±1dB (x1)
Frequency response	20Hz-20kHz, ±1dB
Response time	7msec. (1kHz)
Speaker switch	Selects any of 3 sets of speaker systems, A, B, C plus A+B and A+C
Power consumption	13W
Dimensions	440(W) x 74(H) x 160(D) mm
Weight	2.7 kg (net), 3.1 kg (gross)

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

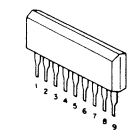
Kenwood strebt ständige Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

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

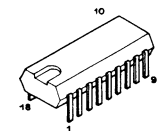
2SC2655(Y)



TA7318P-1



UAA-180



PM-80(E)

DC voltages are measured by a VOM with 20 kΩ/V input impedance.



SPECIFICATIONS

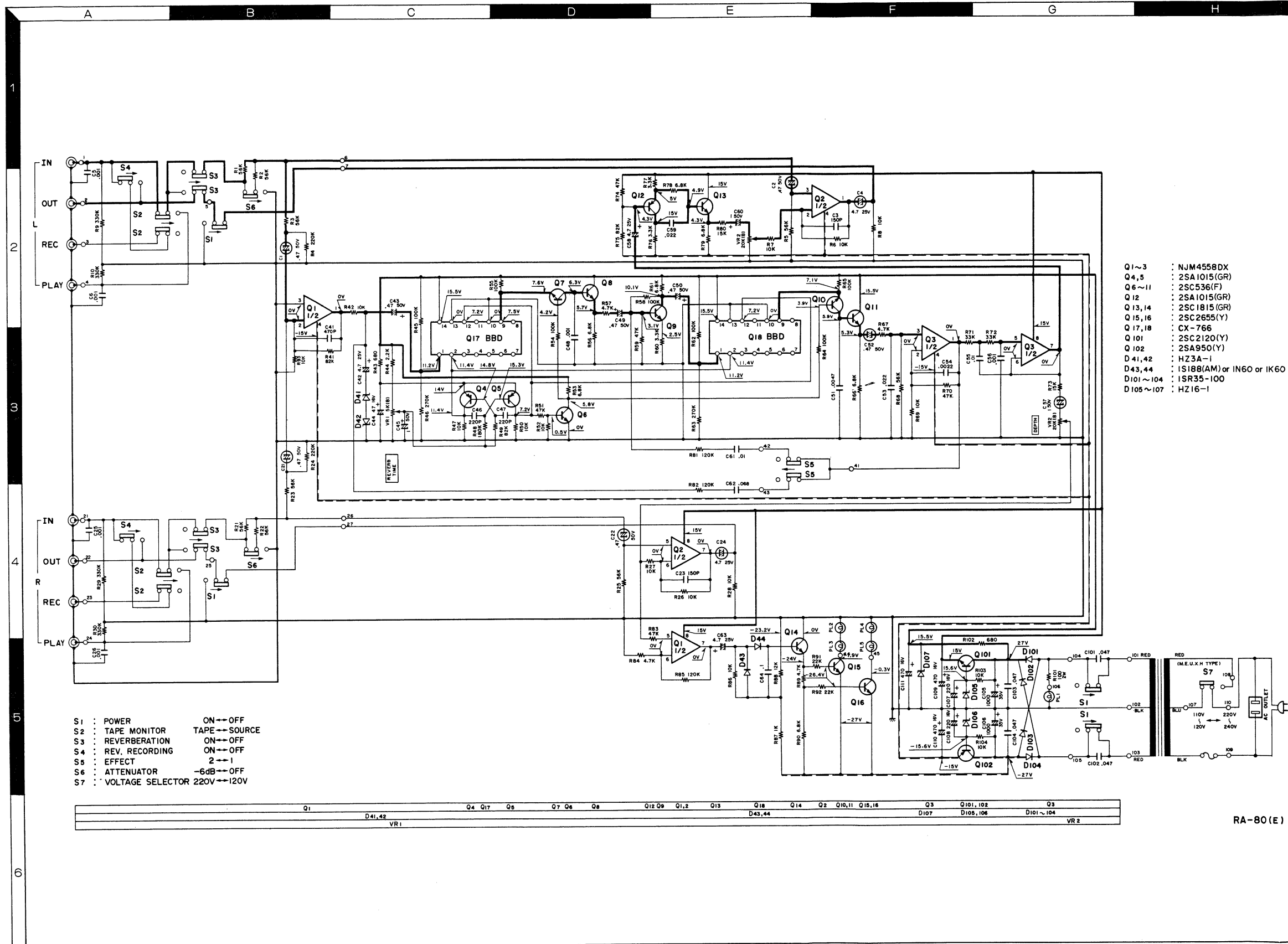
Reverberation time
 Effect 1 0-2.5 sec.
 Effect 2 30-80 msec.
 Frequency response 15Hz-60 kHz, +0dB, -1 dB
 Harmonic distortion Less than 0.008% (20Hz-20 kHz, output 1 V)
 S/N ratio 100 dB (Short-circuited IHF-A network)
 Input impedance 4.7k ohms
 Attenuation -6 dB at 1 kHz
 Power consumption 12 W
 Dimensions 440(W) x 74(H) x 160(D) mm
 Weight 2.7 kg (net), 3.1 kg (gross)

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

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

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

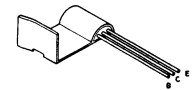
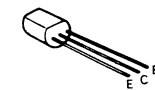
- Q1~3 : NJM4558DX
- Q4,5 : 2SA1015(GR)
- Q6~11 : 2SC536(F)
- Q12 : 2SA1015(GR)
- Q13,14 : 2SC1815(GR)
- Q15,16 : 2SC2655(Y)
- Q17,18 : CX-766
- Q101 : 2SC2120(Y)
- Q102 : 2SA950(Y)
- D41,42 : HZ3A-1
- D43,44 : 1S188(AM) or IN60 or IK60
- D101~104 : 1SR35-100
- D105~107 : HZ16-1



RA-80 (E)

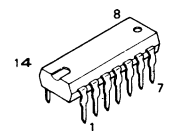
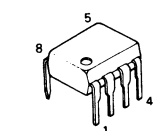
- 2SA950(Y)
- 2SA1015(GR)
- 2SC536(F)
- 2SC1815(GR)
- 2SC2120(Y)

2SC2655



NJM4558DX

CX-766



DC voltages are measured by a VOM with 20 kΩ/V input impedance.

PARTS LIST

GE-80 PARTS LIST

☆ : New parts

Ref. No.	Parts No.	Description	Re- marks
TOTAL (GE-80)			
1 1A	A01-0386-08	Cabinet	
2 2A	A20-1685-08	Front panel A	E ☆
2 2B	A20-1690-08	Front panel A	K,M,U,X,H ☆
2 2B	A20-1691-08	Front panel A	T ☆
3 2A	B07-0342-08	Knob guide x5	☆
4 2A	B11-0010-08	Filter A	☆
—	B50-3165-00	Instruction manual	UE,K,U,M,H,X ☆
—	B50-3166-00	Instruction manual	T ☆
—	B50-3167-00	Instruction manual (French)	E,M,X ☆
—	B50-3168-00	Instruction manual (Germany)	E ☆
—	B50-3169-00	Instruction manual (Dutch)	E ☆
—	B50-3170-00	Instruction manual (Swedish)	E ☆
5 3B	E03-0029-08	AC outlet	E ☆
5 3B	E03-0032-08	AC outlet	K ☆
5 3B	E03-0033-08	AC outlet	M,U,H ☆
—	E30-0652-08	Audio cord	☆
6 2B	E30-0651-08	Power cord	E ☆
6 2B	E30-0658-08	Power cord	M,U,H ☆
6 2B	E30-0659-08	Power cord	K ☆
6 2B	E30-0660-08	Power cord	T ☆
6 2B	E30-0661-08	Power cord	X ☆
—	H01-3183-08	Carton case	E ☆
—	H01-3200-08	Carton case	K,M,U,X,H ☆
—	H10-1554-08	Packing L	☆
—	H10-1555-08	Packing R	☆
—	H20-0461-08	Protection bag	☆
7 3B	J02-0110-08	Foot x4	☆
8 3B	J42-0088-08	Bushing	E,T ☆
8 3B	J42-0089-08	Bushing	U,M,H ☆
8 3B	J42-0090-08	Bushing	K ☆
8 3B	J42-0091-08	Bushing	X ☆
9 2A	K27-0162-08	Push knob x5	☆
10 2A	K27-0163-08	GE knob x10	☆
11 3A	L01-2124-08	Power transformer	K ☆
11 3A	L01-2126-08	Power transformer	M,E,T,U,X,H ☆
12 3A	S40-1026-08	Slide switch	M,E,U,X,H ☆
13 1B	X11-1632-70	PC board ass'y	☆
PCB ASS'Y (X11-1632-70)			
101 2B	B30-0245-08	Lamp (0.05A)	☆
C1, 21	C46-1747-35	Mylar 0.047μF	K
C2, 22	C26-1733-57	NP-Electrolytic 3.3μF	50WV
C3, 23	C46-1715-35	Mylar 0.015μF	K
C4, 24	C26-1768-47	NP-Electrolytic 0.68μF	50WV
C5, 25	C46-1733-25	Mylar 0.0033μF	K
C6, 26	C46-1715-46	Mylar 0.15μF	K
C7, 27	C46-1710-26	Mylar 0.001μF	K
C8, 28	C46-1747-35	Mylar 0.047μF	K

Note:
Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the Europe (E) 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.

Region	Code
U.S.A.	K
Canada	P
PX(Far East)	U
PX(Europe)	UE
Australia	X
Europe	E
England	T
South Africa	S
Other Areas	M
Audio Club	H

There is no plan for producing units of P and S types.

• Abbreviations of capacitors (Parts No. with initial letter "C")
ELECTRO Electrolytic capacitor
LL-ELEC Low leak electrolytic capacitor
NP-ELEC Non-pole electrolytic capacitor
MICA Mica capacitor
POLYSTY Polystyrene capacitor
MYLAR Mylar capacitor
CERAMIC Ceramic capacitor
TANTAL Tantalum capacitor
MF Metallized film capacitor
OIL Oil capacitor
The unit "UF" is used in lieu of "μF"

• Abbreviations of resistors (Parts No. with initial letters "R")
RC Carbon composition resistor
RD Carbon film resistor
FL-PROOF RD Flame-proof carbon film resistor
RW Wire wound power resistor
FL-PROOF RS Flame-proof metal oxide film resistor
RN Metal film resistor
2B Rated wattage 1/8W
2E Rated wattage 1/4W
2H Rated wattage 1/2W
3A Rated wattage 1W
3D Rated wattage 2W
3F Rated wattage 3W
3G Rated wattage 4W
3H Rated wattage 5W
All resistor values are indicated with the unit (Ω) omitted

• Abbreviations common to capacitors and resistors
C ±0.25pF (Used for capacitors only)
D ±0.5pF (Used for capacitors only)
F ±1%
G ±2%
J ±5%
K ±10%
M ±20%
Z +80% -20% (Used for capacitors only)
P +100% -0% (Used for capacitors only)
Resistors RD (carbon composition resistors) are not listed in the parts list. For values, refer to the schematic diagram.

PARTS LIST

Ref. No.	Parts No.	Description	Re- marks
C9, 29	C47-1722-15	Polystyrene 220pF	J
C10, 30	C46-1710-26	Mylar 0.001μF	K
C11, 31	C52-1710-26	Ceramic 0.001μF	K
C12, 32	C26-1722-57	NP-Electrolytic 2.2μF	50WV
C13, 33	C26-1447-57	NP-Electrolytic 4.7μF	25WV
C14, 15	C52-1710-26	Ceramic 0.001μF	K
C34, 35	C52-1710-26	Ceramic 0.001μF	K
C41, 42	C53-1747-37	Ceramic 0.047μF	M
C43, 44	C55-1747-38	Ceramic 0.047μF	Z
C45, 46	C24-6510-71	Electrolytic 100μF	35WV
C47, 48	C24-1210-81	Electrolytic 1000μF	16WV
102 1B	E13-0428-08	Phono jack (4P) x2	☆
R41, 42	R40-8356-15	FL-proof RC 560Ω	J 2H
R43	R47-5533-05	FL-proof RS 33Ω	J 3D
R44	R47-5424-05	FL-proof RS 240Ω	J 3A
VR1~10	R13-5025-08	Slide pot 100kΩ(B)	Fig. 103 ☆
S1	S40-4014-08	Pushbutton switch (POWER)	Fig. 104 ☆
S2~5	S42-4014-08	4 keys pushbutton switch	Fig. 105 ☆
Q1~6	V30-1020-26	IC NJM4558DX	
D1~4	V11-5101-50	Diode 1SR35-100	☆
—	H01-3184-08	Carton case	E ☆
—	H01-3204-08	Carton case	K,M,U,X,H ☆
—	H10-1554-08	Packing L	
—	H10-1555-08	Packing R	
—	H20-0461-08	Protection bag	
11 3B	J02-0110-08	Foot x4	
12 2B	J42-0088-08	Bushing	E,T
12 2B	J42-0089-08	Bushing	U,M,H
12 2B	J42-0090-08	Bushing	K
12 2B	J42-0091-08	Bushing	X
13 2A	K23-0350-08	Knob (rotary)	
14 2A	K27-0162-08	Knob (push) x2	
15 3A	L01-2124-08	Power transformer	K
15 3A	L01-2126-08	Power transformer	M,E,T,U,X,H
16 3A	S40-1026-08	Slide switch	M,E,U,X,H ☆
17 1B	X13-2872-70	PC board ass'y	☆
PCB ASS'Y (X13-2872-70)			
101 1B, 2B	B30-0244-08	Lamp (0.1A)	
D1~4	B30-0247-08	LED PY5531K (YEL)	
D21~24	B30-0247-08	LED PY5531K (YEL)	
D5~12	B30-0246-08	LED PR5531K (RED)	
D25~32	B30-0246-08	LED PR5531K (RED)	
C1	C24-1447-51	Electrolytic 4.7μF	25WV
C2	C46-1756-24	Mylar 0.0056μF	G
C3	C24-1410-71	Electrolytic 100μF	25WV
C21	C24-1447-51	Electrolytic 4.7μF	25WV
C22	C24-1447-41	Electrolytic 0.47μF	25WV
C23	C46-1756-24	Mylar 0.0056μF	G
C51, 52	C53-1747-37	Ceramic 0.047μF	M
C53	C55-1747-38	Ceramic 0.047μF	Z
C54	C24-1447-71	Electrolytic 470μF	25WV
C55	C24-1210-71	Electrolytic 100μF	16WV
C56	C24-1247-71	Electrolytic 470μF	16WV
VR1, 21	R12-1049-08	Trimming pot 1kΩ (B)	
S1	S29-1128-08	Rotary-Slide switch	Fig. 102 ☆
S2	S40-1028-08	Pushbutton switch	Fig. 103 ☆
S3	S40-1029-01	Pushbutton switch	Fig. 104 ☆
Q1	V30-0292-10	IC TA7318P-1	
Q2, 21	V30-0502-10	IC UAA-180	☆
Q51	V03-2655-10	Transistor 2SC2655 (Y)	
D13	V11-2104-20	Zener diode HZ7A-1	☆
D51, 52	V11-5101-50	Diode 1SR35-100 (100V, 1A)	
D53	V11-2104-30	Zener diode HZ16-1	
PM-80 PARTS LIST			
Ref. No.	Parts No.	Description	Re- marks
TOTAL (PM-80)			
1 1A	A01-0386-08	Cabinet	
2 2A	A20-1684-08	Front panel C	E ☆
2 2A	A20-1694-08	Front panel C	K,M,U,X,H ☆
2 2A	A20-1695-08	Front panel C	T ☆
3 2A	B07-0342-08	Knob guide x2	☆
4 2A	B11-0009-08	Filter B	☆
—	B50-3165-00	Instruction manual	UE,K,U,M,H,X ☆
—	B50-3166-00	Instruction manual	T ☆
—	B50-3167-00	Instruction manual (French)	E,M,X ☆
—	B50-3168-00	Instruction manual (Germany)	E ☆
—	B50-3169-00	Instruction manual (Dutch)	E ☆
—	B50-3170-00	Instruction manual (Swedish)	E ☆
5 2B	E03-0029-08	AC outlet	E ☆
5 2B	E03-0032-08	AC outlet	K ☆
5 2B	E03-0033-08	AC outlet	M,U,H ☆
6 3B	E20-0446-08	Speaker terminal	☆
7 3A	E20-0447-08	Speaker terminal x3	☆
—	E30-0650-08	Speaker cord ass'y	M,E,T,U,X,H ☆
—	E30-0677-08	Speaker cord ass'y	K ☆
9 2B	E30-0651-08	Power cord	E ☆
9 2B	E30-0658-08	Power cord	M,U,H ☆
9 2B	E30-0659-08	Power cord	K ☆
9 2B	E30-0660-08	Power cord	T ☆
9 2B	E30-0661-08	Power cord	X ☆

PARTS LIST

RA-80 PARTS LIST

Ref. No.	Parts No.	Description	Re- marks	Ref. No.	Parts No.	Description	Re- marks
TOTAL (RA-80)				PCB ASS'Y (X14-1220-70, 2-70)			
1 1A	A01-0386-08	Cabinet		101 1B	B30-0244-08	Lamp (0.1A)	*
2 2A	A20-1683-08	Front panel B	E	C1, 2	C26-1747-47	NP-electrolytic 0.47μF	50WV
2 2A	A20-1692-08	Front panel B	K,M,U,X,H	C21, 22	C26-1747-47	NP-electrolytic 0.47μF	50WV
2 2A	A20-1693-08	Front panel B	T	C3, 23	C71-1747-16	Ceramic 470pF	K
3 2A	B07-0342-08	Knob guide x6		C4, 24	C26-1747-57	NP-electrolytic 4.7μF	50WV
4 2A	B11-0008-08	Filter B		C5, 6	C52-1710-26	Ceramic 0.001μF	K
—	B50-3165-00	Instruction manual	UE,K,U,M,H,X	C25, 26	C52-1710-26	Ceramic 0.001μF	K
—	B50-3166-00	Instruction manual	T	C41	C71-1747-16	Ceramic 470pF	J
—	B50-3167-00	Instruction manual (French)	E,M,X	C42	C24-1447-51	Electrolytic 4.7μF	25WV
—	B50-3168-00	Instruction manual (Germany)	E	C43	C24-1747-41	Electrolytic 0.47μF	50WV
—	B50-3169-00	Instruction manual (Dutch)	E	C44	C24-1247-61	Electrolytic 47μF	16WV
—	B50-3170-00	Instruction manual (Swedish)	E	C45	C24-1710-51	Electrolytic 1μF	50WV
5 2B	E03-0029-08	AC outlet	E	C46, 47	C47-1722-15	Polystyrene 220pF	J
5 2B	E03-0032-08	AC outlet	K	C48	C46-1710-26	Mylar 0.001μF	K
5 2B	E03-0033-08	AC outlet	M,U,H	C49, 50	C24-1747-41	Electrolytic 0.47μF	50WV
—	E30-0652-08	Audio cord	M,T,U,X,H	C51	C46-1747-25	Mylar 0.0047μF	J
—	E30-0669-08	Audio cord	K	C52	C26-1747-47	NP-electrolytic 0.47μF	50WV
6 2B	E30-0651-08	Power cord	E	C53, 54	C46-1722-35	Mylar 0.022μF	J
6 2B	E30-0658-08	Power cord	M,U,H	C55	C46-1710-35	Mylar 0.01μF	J
6 2B	E30-0659-08	Power cord	K	C56	C46-1710-26	Mylar 0.001μF	K
6 2B	E30-0660-08	Power cord	T	C57	C26-1710-57	NP-electrolytic 1μF	50WV
6 2B	E30-0661-08	Power cord	X	C58	C24-1447-51	Electrolytic 4.7μF	25WV
—	H01-3182-08	Carton case	E	C59	C46-1722-35	Mylar 0.022μF	J
—	H01-3202-08	Carton case	K,M,U,X,H	C60	C24-1710-51	Electrolytic 1μF	50WV
—	H10-1554-08	Packing L		C61	C46-1710-35	Mylar 0.01μF	J
—	H10-1555-08	Packing R		C62	C46-1768-35	Mylar 0.068μF	J
—	H20-0461-08	Protection bag		C63	C24-1447-51	Electrolytic 4.7μF	25WV
7 3B	J02-0110-08	Foot x4		C101~104	C53-1747-37	Ceramic 0.047μF	M
8 2B	J42-0088-08	Bushing	E,T	C105,106	C24-6510-81	Electrolytic 1000μF	35WV
8 2B	J42-0089-08	Bushing	U,M,H	C107,108	C24-1222-71	Electrolytic 220μF	16WV
8 2B	J42-0090-08	Bushing	K	C109~111	C24-1247-71	Electrolytic 470μF	16WV
8 2B	J42-0091-08	Bushing	X	102 1B	E13-0428-08	Phono jack (4P) x2	
9 2A	K23-0350-08	Knob (rotary) x2		R101	R47-5410-15	FL-proof RS 100Ω	J 3D
10 2A	K27-0162-08	Knob (push) x6		VR1	R01-2014-08	Potentiometer 5kΩ (B)	Fig. 103
11 3A	L01-2124-08	Power transformer	K	VR2	R06-3021-08	Potentiometer 20kΩ (B)	Fig. 104
11 3A	L01-2126-08	Power transformer	M,E,T,U,X,H	S1	S40-1027-08	Pushbutton switch (POWER)	*
12 2A	N29-0052-08	CS ring x2		S2~6	S42-5018-08	5 keys pushbutton switch	*
13 3A	S40-1026-08	Slide switch	M,E,U,X,H	Q1~3	V30-1020-26	IC NJM4558DX	
14 1B, 2B	X14-1222-70	PC board ass'y		Q6~11	V03-0339-05	Transistor 2SC536 (F)	*
				Q12	V01-1015-20	Transistor 2SA1015 (GR)	*
				Q13, 14	V03-1815-10	Transistor 2SC1815 (GR)	*
				Q15, 16	V03-2655-10	Transistor 2SC2655 (Y)	*
				Q17, 18	V30-0501-10	IC CX-766	*
				Q101	V03-2120-00	Transistor 2SC2120 (Y)	*
				Q102	V01-0950-00	Transistor 2SA950 (Y)	*
				D41, 42	V11-2104-10	Zener diode HZ3A-1	*
				D43, 44	V11-9990-05	Diode 1S188AM or	*
					V11-0051-05	1N60 or	*
					V11-9725-05	1K60	*
				D101~104	V11-5101-50	Diode 1SR35-100	*
				D105~107	V11-2104-30	Zener diode HZ16-1	*