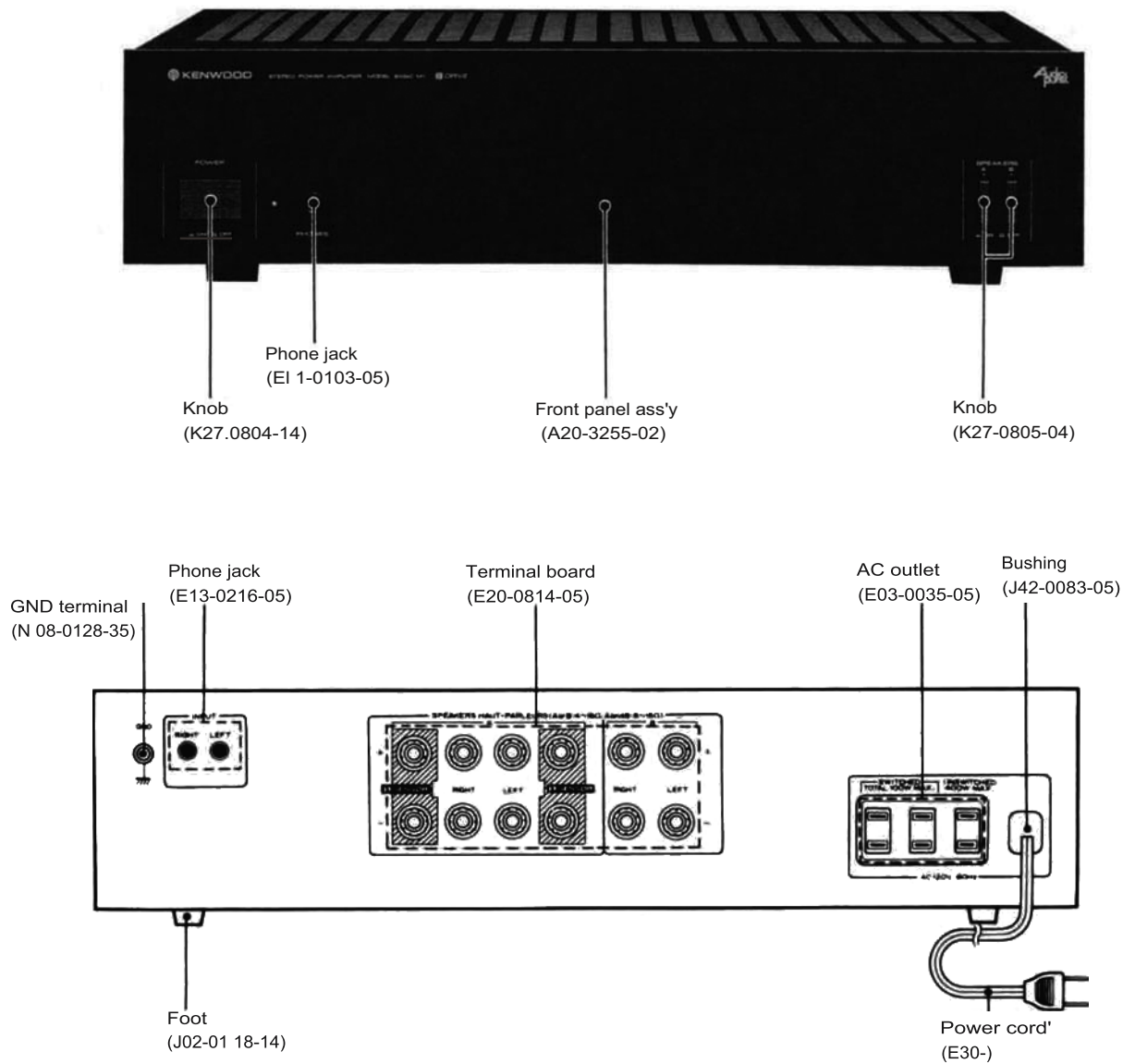


STEREO POWER AMPLIFIER



ADJUSTMENT / REGLAGES

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTING	ALIGNMENT POINTS	ALIGN FOR	FIG.
1	IDLE CURRENT	—	Connect a DC voltmeter across R113 (R114)	VOLUME : 0 POWER : ON	VR3 (L) VR4 (R)	After 5 minutes, adjust VR3 (VR4) for 8~20mV reading of the DC voltmeter.	(a)

Power Amplifier Check

After completing power amplifier repairs, be sure to confirm that waveforms are present as indicated below. Power amplifier operation is not normal if these waveforms cannot be observed.

[Test Conditions]

1. Apply a 50Hz sine wave to the AUX terminal.
2. Connect an 8 ohm dummy load to the speaker terminals.
3. Connect the (+) lead of the oscilloscope to pin 14 of X13-3520-11, and connect the (—) lead to pin 11 (L) or pin 12 (R) of X07-1940-11.
4. Set the volume control of the BASIC M1 to 0, the selector to AUX, and the REC OUT control to OFF, then turn on the power.
5. When the volume control of the BASIC M1 is turned up slowly, the waveform shown in Figure A should appear suddenly at a certain point. This is evidence that the high output circuit has begun operating. Stop turning the volume control at the point where this waveform appears.

6. Momentarily turn off the power to the BASIC M1.
7. Connect the (+) lead of the oscilloscope to pin 15 of X13-3520-11, and connect the (—) lead to pin 13 (L) or pin 14 (R) of X07-1940-11.
8. Turn the power to the BASIC M1 back on.
9. The waveform shown in Figure B should appear. It is not possible to observe both waveform A and B at the same time. Be sure to observe them individually, and be sure that no other test equipment is connected to the amplifier at the same time as the oscilloscope.

Note :

A self-restoring thermal switch is built into the power transformer. This switch is activated to cut output of the transformer when its temperature rises beyond 150° C. The amount of time required for recovery is approximately 5 minutes.

No	ITEM	REGLAGE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DE L'AMPLIFICATEUR	POINTS DE L'AIGNEMENT	ALIGNER POUR	FIG.
1	COURANT DE POLARISATION	—	Connecter un voltmètre CC sur R113 (R114)	VOLUME : 0	VR3 (G) VR4 (D)	Après 5 minutes, régler VR3 (VR4) de façon à ce que le voltmètre de C.C. indique 8~20mV.	(a)

Vérification de l'amplificateur de puissance

Après avoir effectué les réparations de l'amplificateur de puissance, s'assurer que les ondes existent dans les conditions indiquées ci-dessous. Le fonctionnement de l'amplificateur est anormal si ces ondes ne peuvent être observées.

[Conditions d'essai]

1. Appliquer une onde sinusoïdale de 50Hz à la borne AUX.
2. Appliquer une charge "dummy" de 8 ohms aux bornes des enceintes.
3. Relier le fil d'alimentation (+) de l'oscilloscope à la broche 14 du X13-3520-11, et relier le fil d'alimentation (—) à la broche 11 (L) ou à la broche 12 (R) du X07-1940-11.
4. Placer le réglage de volume du BASIC M1 sur "0", le sélecteur sur AUX, et la commande de sortie d'enregistrement "REC OUT" sur "OFF" avant de mettre sous tension l'appareil.
5. Lorsque le réglage de volume du BASIC M1 est lentement tourné dans le sens d'une augmentation de volume, l'onde indiquée sur la figure A doit soudainement apparaître à un moment donné. Cette onde est la preuve que le

haut circuit de sortie a commencé à fonctionner. Arrêter le mouvement de la commande de réglage de volume au moment où l'onde décrite apparaît.

6. Mettre momentanément hors tension le BASIC M1.
7. Relier le fil d'alimentation (+) de l'oscilloscope à la broche 15 du X13-3520-11, et relier le fil d'alimentation (—) à la broche 13 (L) ou à la broche 14 (R) du X07-1940-11.
8. Mettre de nouveau sous tension le BASIC M1.
9. L'onde indiquée sur la figure B doit apparaître. Il est impossible d'observer les deux types d'ondes en même temps. Veiller à les observer séparément et s'assurer qu'aucun autre matériel d'essai est raccordé à l'amplificateur en même temps que l'oscilloscope.

Remarque :

Un commutateur thermique à auto-déclenchement est incorporé au transformateur de puissance. Ce commutateur est activé pour couper l'alimentation du transformateur lorsque sa température s'élève au dessus de 150° C. Cinq minutes sont environ nécessaires pour que le transformateur soit de nouveau mis sous tension.

ABGLEICH/ REMOVAL OF POWER TRANSISTORS

NR	GEGENSTAND	EINGANGES-EINSTELLUNG	AUSGANGS-EINSTELLUNG	VERSTÄRKER-EINSTELLUNG	ABGLEICHE PUNKTE	ABGEICHEN FÜR	ABB.
1	LEERLAUF-STROM	—	Einen Gleichspannungsmesser über R113 (R114) anschließen.	VOLUME : 0	VR3 (L) VR4 (R)	Nach 5 Minuten, den VR3 (VR4) So regulieren, daß die Gleichspannungsmesser Ablesung 8-20mV ist.	(a)

Überprüfung des Leistungsverstärkers

Nach Abschluß von Reparaturen am Leistungsverstärker auf jeden Fall überprüfen, ob die Wellenformen wie nachstehend aufgeführt vorhanden sind. Falls diese Wellenformen nicht festzustellen sind, arbeitet der Leistungsverstärker nicht einwandfrei.

[Testbedingungen.]

1. An die AUX-Buchse eine 50Hz-Sinuswelle anlegen.
2. Eine 8 ohm-Blindlast an die Lautsprecherklemmen anschließen.
3. Die (+)-Leitung des Oszilloskops an Stift 14 von X13-3520-11 anschließen, und die (—)-Leitung an Stift 11 (L) oder Stift 12 (R) von X07-1940-11 anschließen.
4. Den Lautstärkesteller des BASIC M1 auf 0, den Wahlschalter auf AUX und den REC OUT-Regler auf ON stellen, dann die Stromversorgung einschalten.
5. Indem man den Lautstärkesteller des BASIC M1 langsam höher dreht, sollte eine Wellenform wie in Abbildung A gezeigt plötzlich an einem bestimmten Punkt auftreten. Das ist der Beleg dafür, daß der hochleistungs-Schaltkreis aktiviert wurde. Sobald diese Wellenform erscheint, hört man an dieser Stelle auf, den Lautstärkesteller weiter zu drehen.

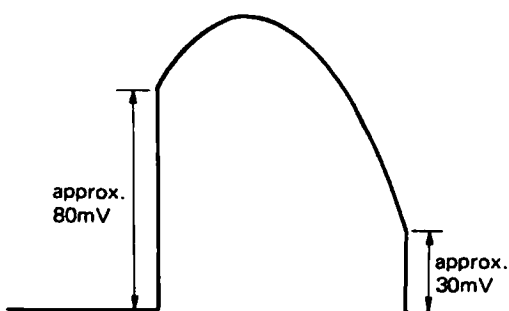


Fig. A

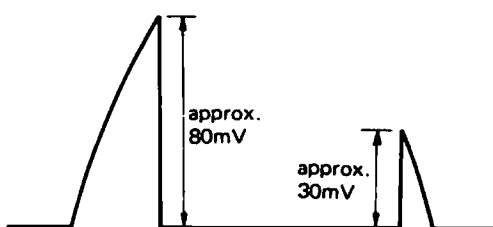


Fig. B

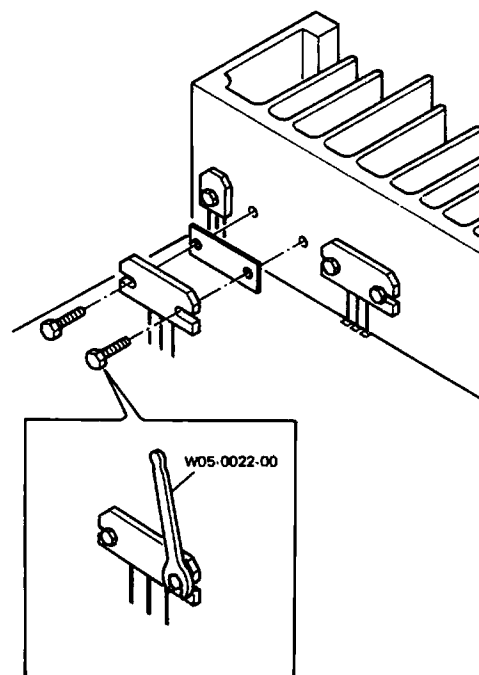
6. Die Stromversorgung des BASIC M1 kurzzeitig ausschalten.
7. Die (+)-Leitung des Oszilloskops an Stift 15 von X13-3520-11 und die (—)-Leitung an Stift 13 (L) bzw. Stift 14 (R) von X07-1940-11 anschließen.
8. Die Stromversorgung des BASIC M1 wieder einschalten.
9. Die in Abbildung B gezeigte Wellenform sollte erscheinen. Es ist nicht möglich, beide Wellenformen A und B gleichzeitig zu beobachten. Man überprüft beide Wellenformen getrennt voneinander, dabei sicherstellen, daß währenddessen keinen weiteren Testgeräte außer dem Oszilloskop an den Verstärker angeschlossen sind.

Bemerkung :

Ein Rückstell-Thermoschalter ist in den Netztransformator eingebaut. Der Schalter wird aktiviert, wenn seine Temperatur über 150° ansteigt, wobei der Transformatorausgang abgetrennt wird. Die zur Erholung erforderliche Zeit beträgt ca. 5 Minuten.

Removal of Power Transistors

To remove the power transistors, remove the solder from the leads. Remove the hex-head screw by the use of the flat hex-wrench (W05-0022-00).



ADJUSTMENT

Power Amplifier Check by the use of a Volt-Ohm Milliammeter

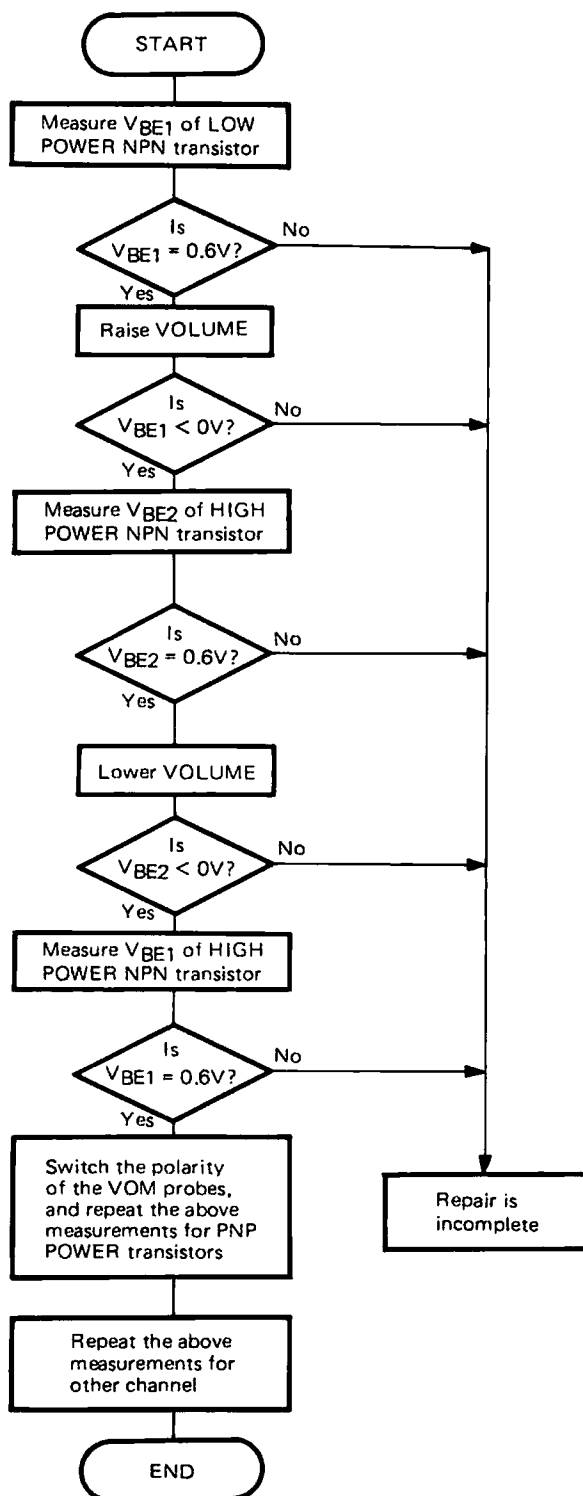
1) By Using Cassette Tape

AMPLIFIER SETTING

VOLUME: 0 TAPE MONITOR: A or B SPEAKER: OFF

INPUT SETTING

Playback test tape MTT-111 by a cassette deck.



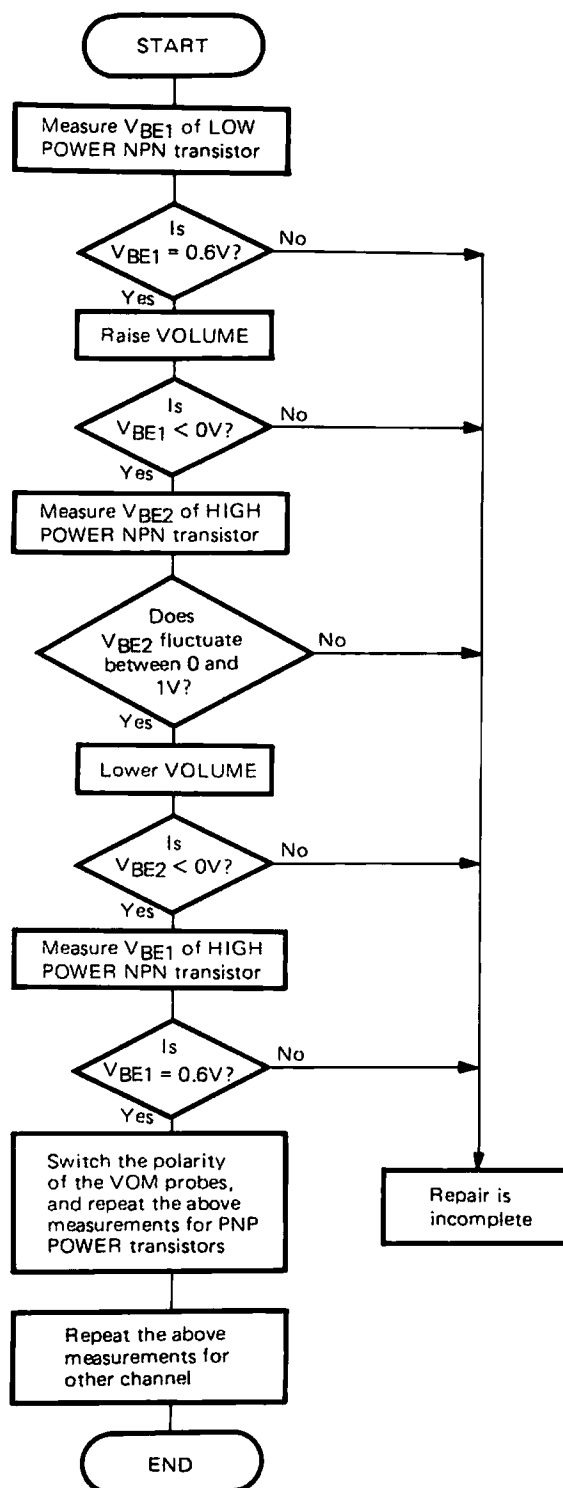
2) By Using Inter-station Noise of a Tuner

AMPLIFIER SETTING

VOLUME: 0 SELECTOR: TUNER SPEAKER: OFF

INPUT SETTING

Inter-station noise.



REGLAGES

Vérification d'amplificateur de puissance en utilisant une Volt-Ohm-Milliammètre

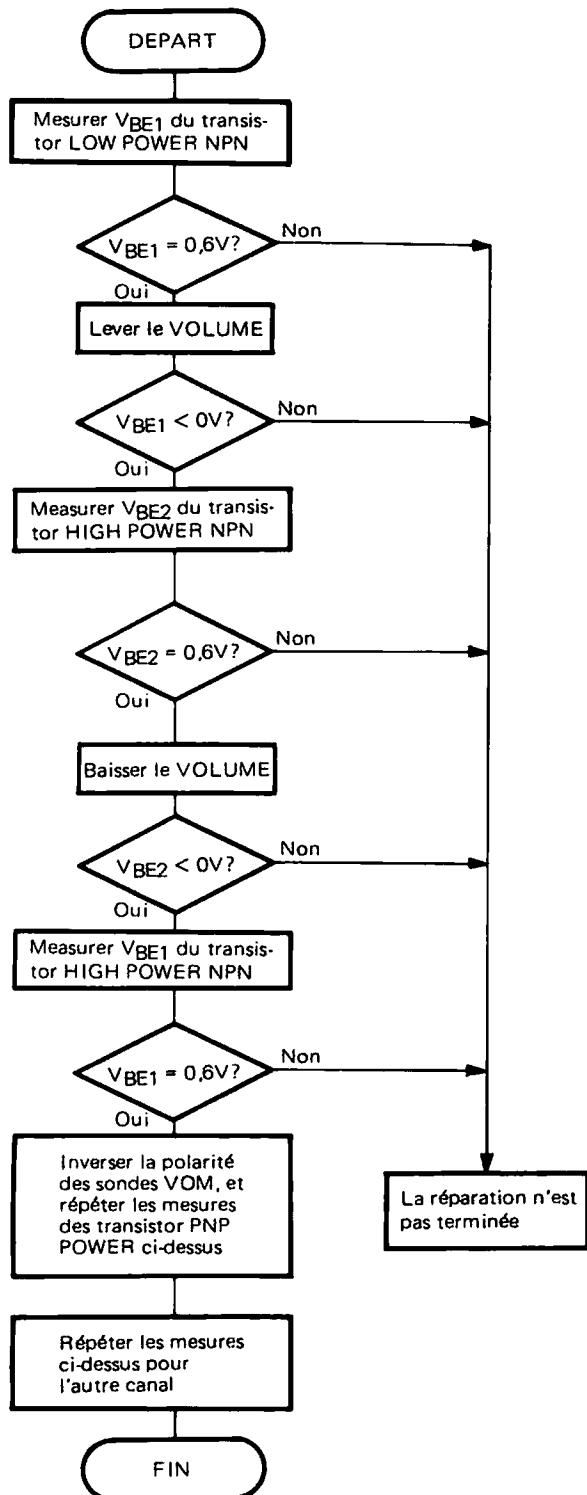
1) En utilisant une cassette

REGLAGE DE L'AMPLIFICATEUR

VOLUME: 0 TAPE MONITOR: A ou B SPEAKER: OFF

REGLAGE DE L'ENTREE

Jouer la bande d'essai MTT-111 sur une platine magnéto-cassette.



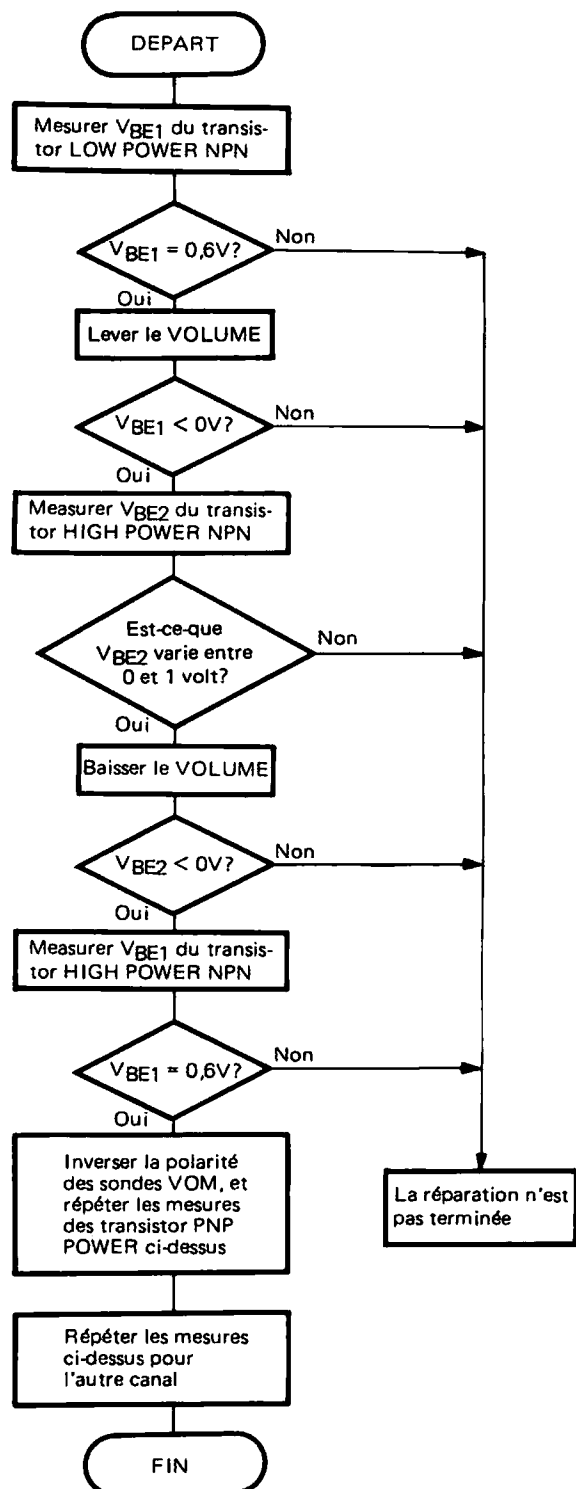
2) En utilisant le bruit de inter-stations

REGLAGE DE L'AMPLIFICATEUR

VOLUME: 0 SELECTOR: TUNER SPEAKER: OFF

REGLAGE DE L'ENTREE

Le bruit de inter-stations.



ABGLEICH

Verstärker Leistungskontrolle durch den Gebrauch eines Volt-Ohm-Milliammeter.

1) Beim Gebrauch von Tape Cassetten

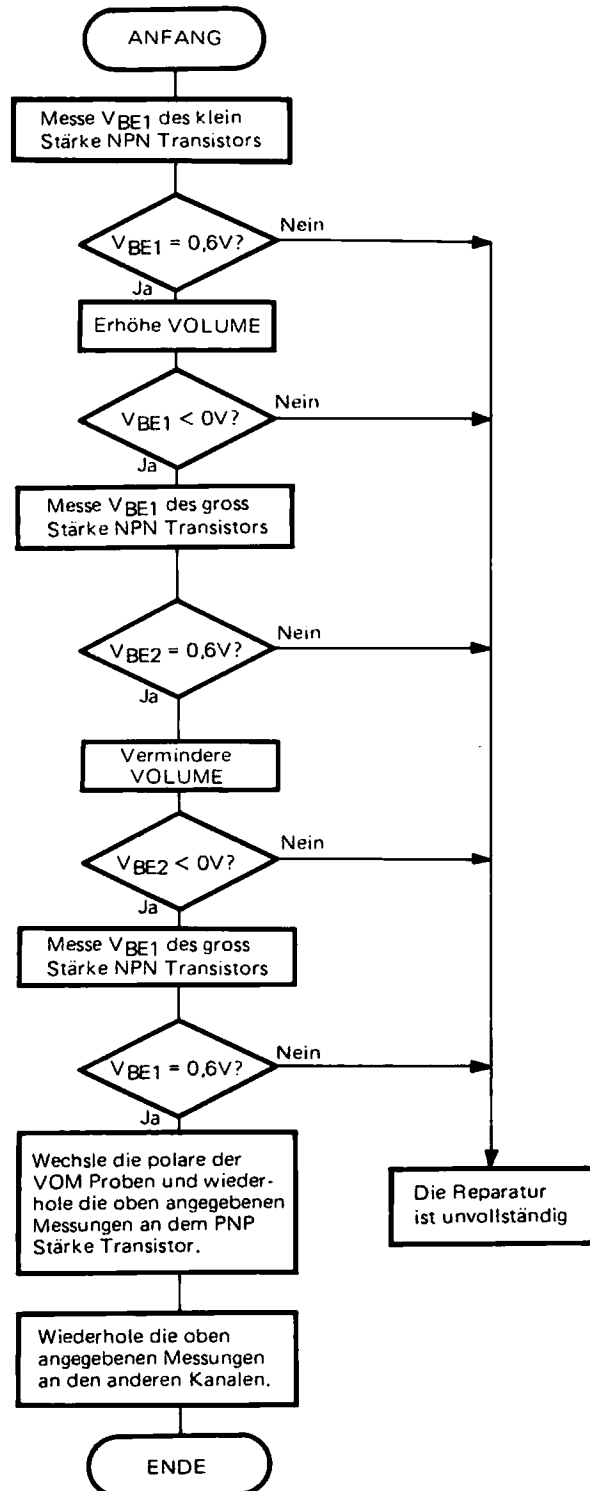
Verstärker Einstellung

VOLUME: 0 TAPE MONITOR: A oder B

SPEAKER: AUS

Einlass Einstellung

Zurückspiel Probe mit einer MTT-111 cassette.



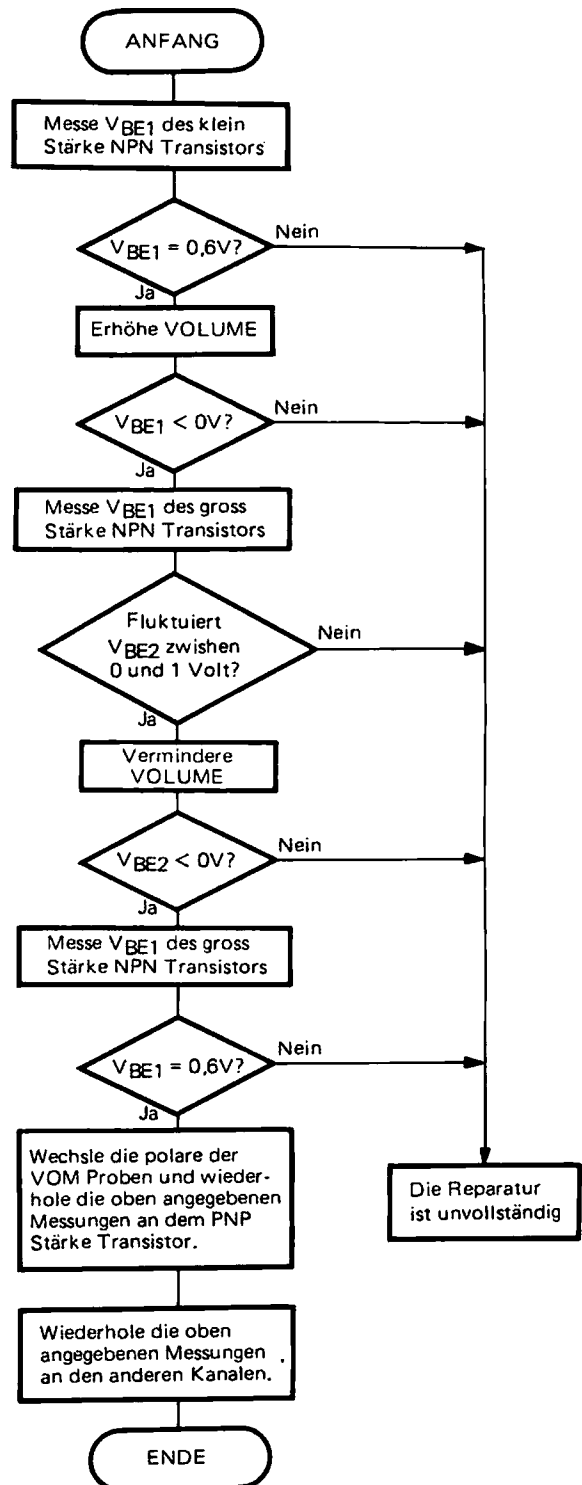
2) Durch gebrauch einer zwischen Stationsstörung eines Radios.

Verstärker Einstellung

VOLUME: 0 SELECTOR: Radio SPEAKER: AI

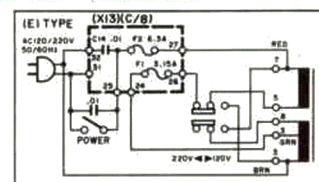
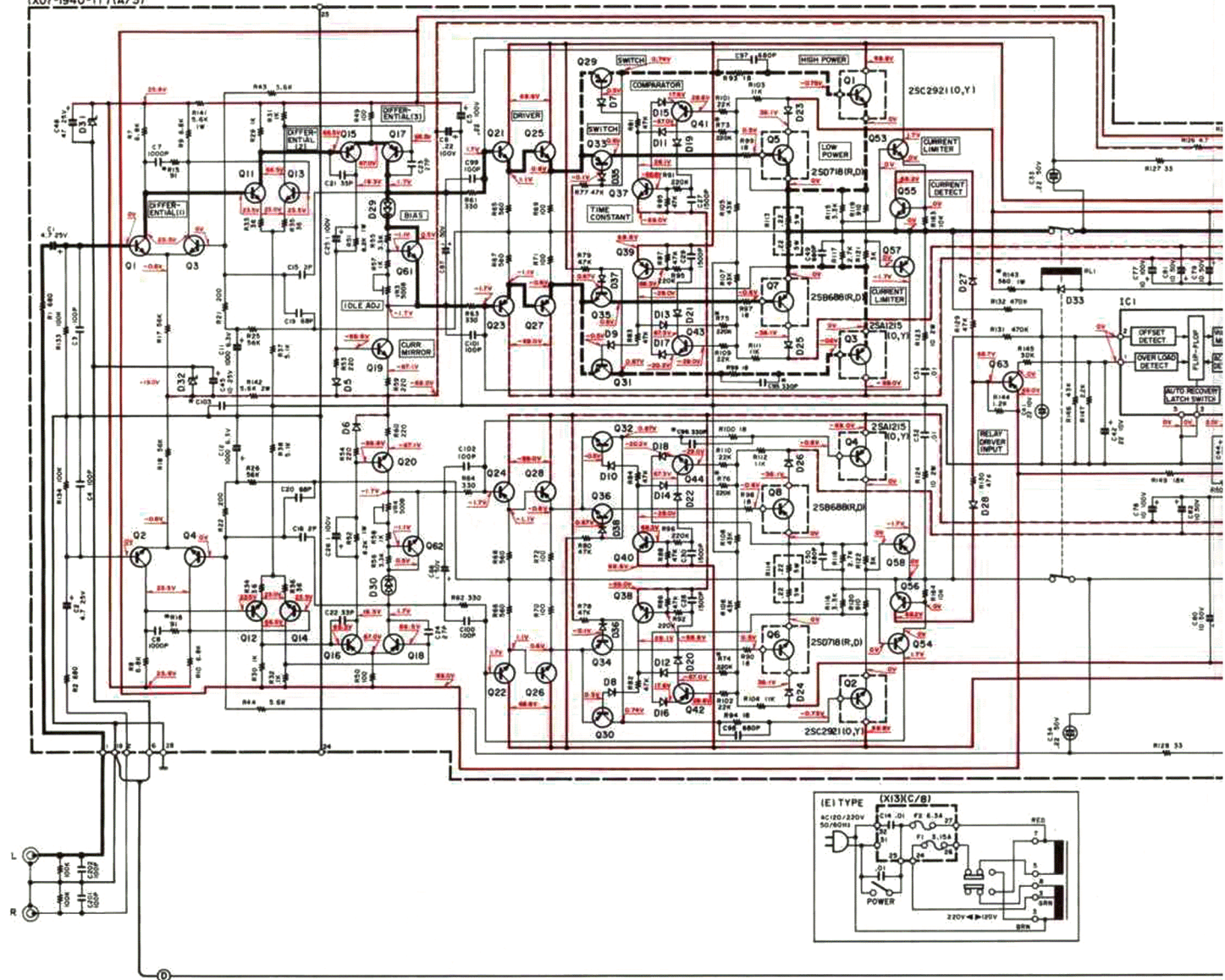
Einlass Einstellung

Zwischenstations Geräusch.



POWER AMP
(X07-1940-11) (A/3)

IC1	: µPC1237H	Q39~42, 63	: 2SA988
Q1~4	: 2SC1845 (E)	Q33, 34, 57, 58	: 2SA999 (E, F)
Q11~14, 37, 38, 43, 44, 53~56, 61, 62	: 2SC1841	Q35, 36	: 2SC2320 (E, F)
Q15~18	: 2SA1124 (Q, R, S)		
Q19, 20	: 2SC2632 (Q, R, S)	D5, 6, 1~14, 35~38	: IS2076 or IS555
Q21, 22	: 2SC2631 (Q, R, S)	D7~10, 15~22, 27, 28, 33, 34	: IS2076A
Q23, 24	: 2SA1123 (Q, R, S)	D23~26	: UF-21
Q25, 26	: 2SC2591 (Q, R, S)	D29, 30	: STV-2H (O)
Q27, 28	: 2SA1111 (Q, R, S)	D31	: EZ-242
Q29, 30	: 2SA954	D32	: EZ-193
Q31, 32	: 2SC2003		



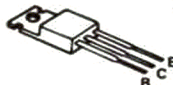
2SA954
2SA988
2SA999
2SA1123
2SA1124
2SC1841
2SC1845
2SC2003
2SC2320
2SC2631
2SC2632



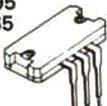
2SA1110
2SC2590



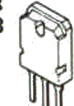
2SA1111
2SC2591



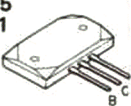
2SA1095
2SC2565

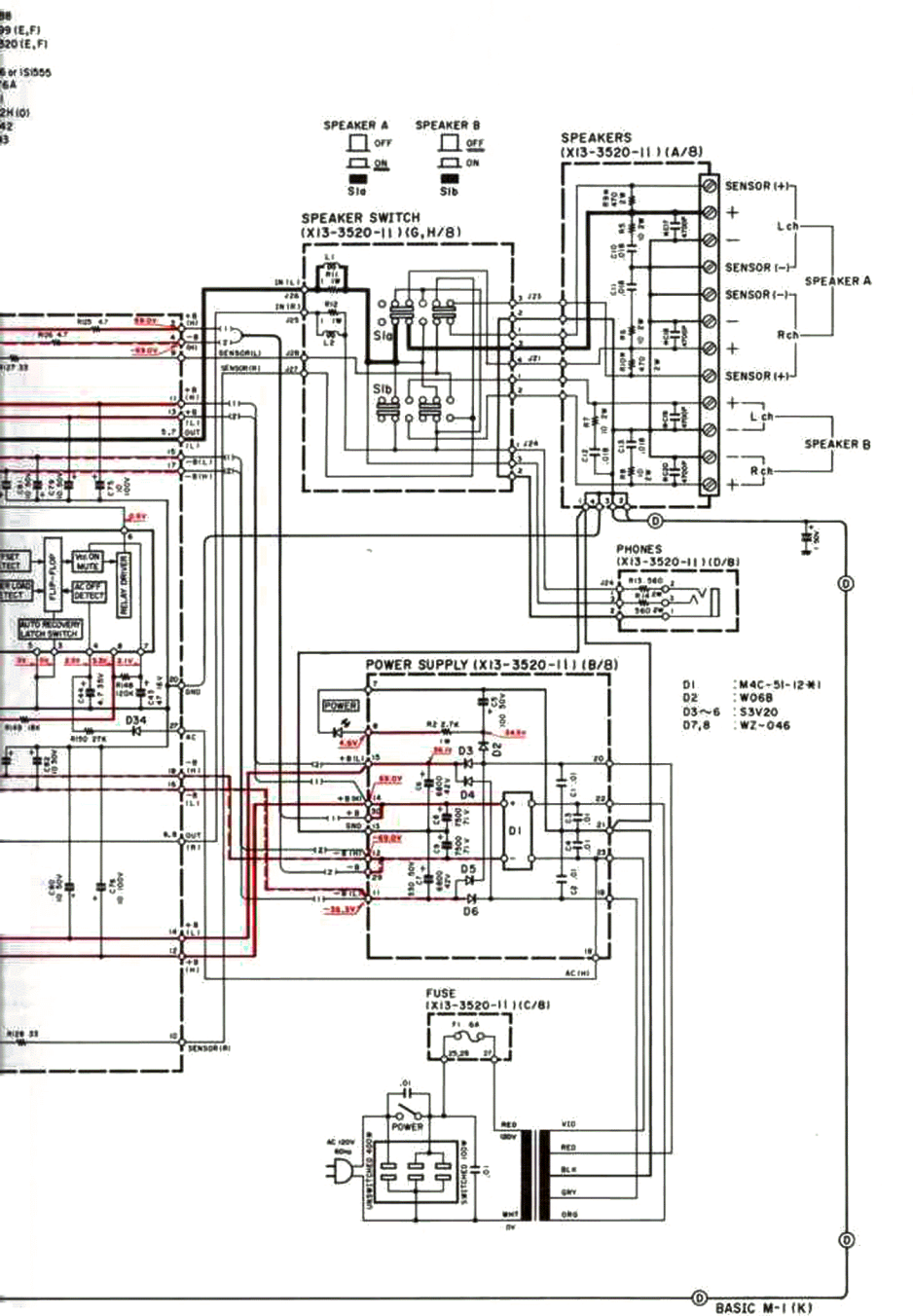


2SB688
2SD718



2SA1215
2SC2921





SPECIFICATIONS

Power output

105 watts per channel minimum RMS, both channels driven, at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.005% total harmonic distortion.

Clipping Power

at 8 ohms127 watts/ch. (1 kHz)
at 4 ohms160 watts/ch. (1 kHz)

Clipping Headroom

at 8 ohms0.8 dB
at 4 ohms1.6 dB

Dynamic Power

at 8 ohms170 watts/ch. (1 kHz)
at 4 ohms210 watts/ch. (1 kHz)

Dynamic Headroom

at 8 ohms2.1 dB
at 4 ohms2.8 dB

Total Harmonic Distortion

(20 Hz to 20,000 Hz)

Input to SPEAKER output0.005% at rated power into
8 ohms
0.005% at 1/2 rated power into
8 ohms
0.001% at rated power into
8 ohms at 1 kHz

Intermodulation Distortion0.005% at rated power into
(60 Hz:7 kHz=4:1)
8 ohms
0.005% at 1 watt into 8 ohms

Damping Factor

More than 1,000 at 100 Hz

Transient Response

Rise Time1.2μs

Slew Rate± 100 V/μs

Frequency Response

.....1 Hz to 300 kHz, -3 dB

Signal-to-Noise Ratio

.....120 dB
(IHF-A Curve)

Speaker Impedance

Accept 4 ohms to 16 ohms

Input Sensitivity/Impedance

INPUT1 V/47 kohms

General

Power Consumption2A (Rated power at 8 ohms)

A.C. OutletsSwitched 2, Unswitched 1

DimensionsW 440 mm (17-5/16")

H 112 mm (4-27/64")

D 324 mm (12-49/64")

Net Weight9.1 kg (20.1 lb)

Gross Weight9.9 kg (21.9 lb)

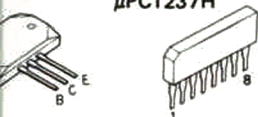
* Measured pursuant to Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier in U.S.A.

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.

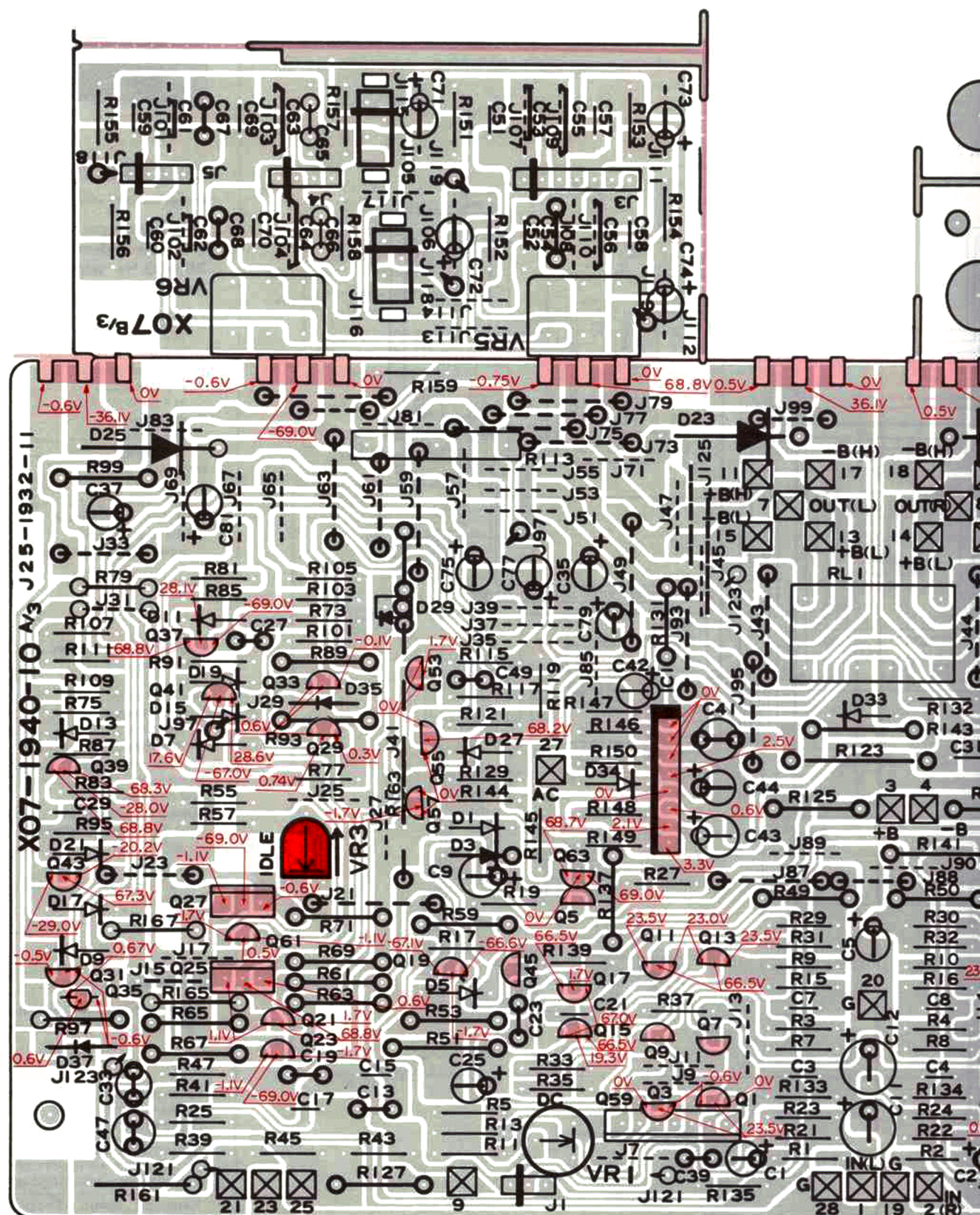
Kenwood strebt ständige Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

μPC1237H



- DC voltage are measured by a VOM of 20 kΩ/V input impedance.
- Les tensions de courant continu sont mesurées par un multimètre d'une impédance d'entrée de 20 kΩ/V.
- Die Gleichstrom-Spannungen werden durch ein Vielfachmeßgerät von 20 kΩ/V Eingangs-Impedanz gemessen.

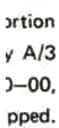
POWER AMP (X07-1940-11) Component Side View



In this model, there are separated pc boards which was originally one. These separated pc boards can't be shipped independently.

ex.	Part No. of pc board	Separated portion no.
	X09-1230-00	(A/3)
	X09-1230-00	(B/3)
	X09-1230-00	(C/3)

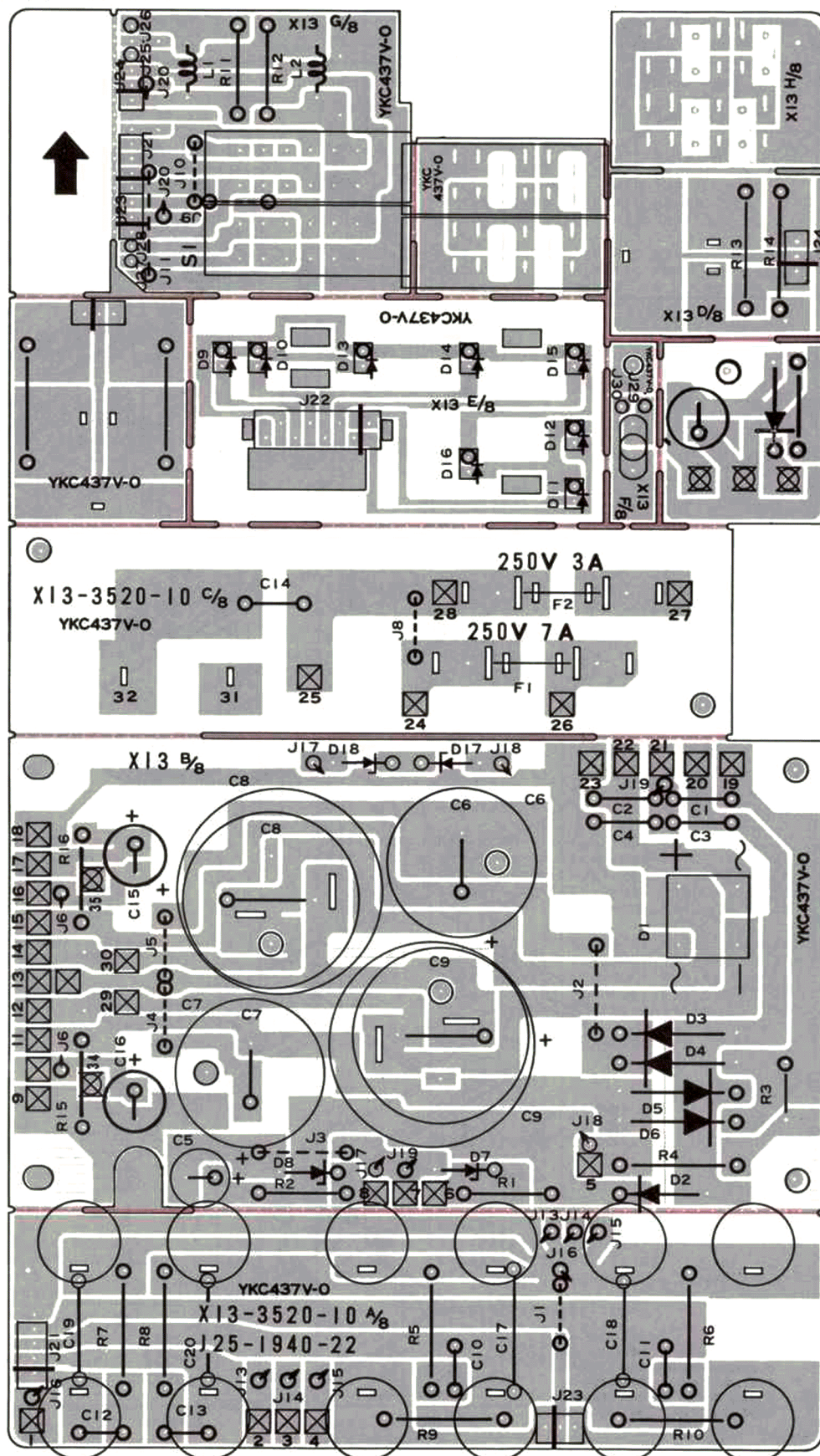
In the example shown above, separated portion can't be ordered independently. In case only A/3 was ordered, pc board assy of X09-1230-00, which all A/3, B/3, C/3 included, will be shipped.



The PC board drawing is viewed from the side easy to check.

PC BOARD

SUB (X13-3520-11) Component Side View



In this model, there are separated pc boards which was o

In this model, there are separated pc boards which was originally one. These separated pc boards can't be shipped independently.

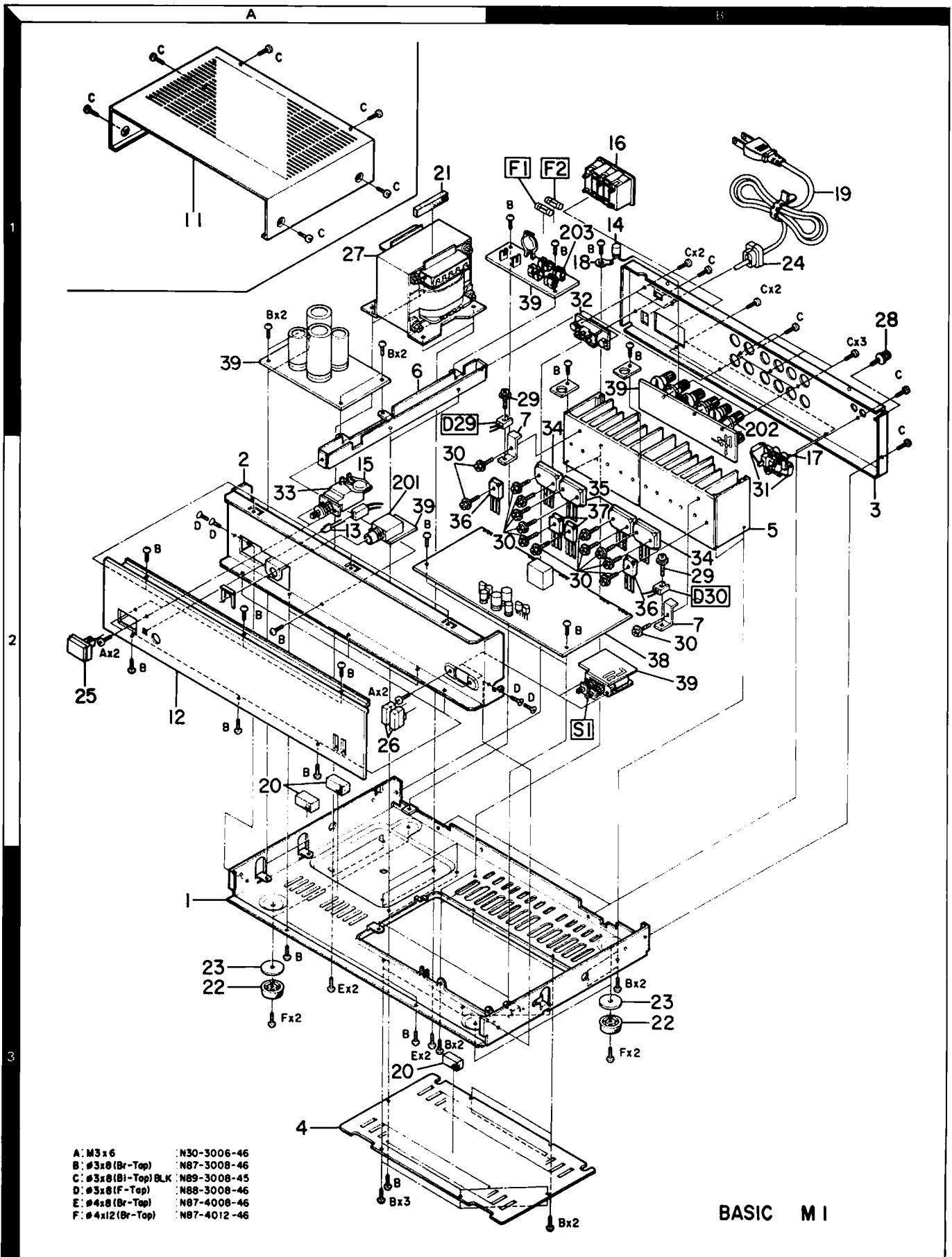
ex.	Part No. of pc board	Separated portion no.
	X09-1230-00	(A/3)
	X09-1230-00	(B/3)
	X09-1230-00	(C/3)

In the example shown above, separated portion can't be ordered independently. In case only A/3 was ordered, pc board ass'y of X09-1230-00, which all A/3, B/3, C/3 included, will be shipped.

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

The PC board drawing is viewed from the side easy to check.

EXPLODED VIEW



BASIC M1

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	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
BASIC M1 UNIT			
1 3A	NO STOCK	MAIN CHASSIS	
2 2A	NO STOCK	SUB PANEL	
3 2B	NO STOCK	REAR PANEL	
4 3A	NO STOCK	BOTTOM PLATE	
5 2B	NO STOCK	HEAT SINK	
6 1A	NO STOCK	REINFORCING HARDWARE	
7 1B, 2B	NO STOCK	MOUNTING HARDWARE	
11 1A	A01-0448-02	METALLIC CABINET	*
12 2A	A20-3255-02	FRONT PANEL ASSY	*
-	B46-0061-30	WARRANTY CARD	K
-	B46-0078-03	WARRANTY CARD	E
-	B50-4421-00	INSTRUCTION MANUAL(ENG)	*K
-	B50-4477-00	INSTRUCTION MANUAL(4-L)	*E
13 2A	B30-0258-05	LED (SR538W)	
-	C71-1710-15	CERAMIC 100PF J	E
14 1B	C24-1710-57	ELECTRO 1UF 50WV	
15 2A	C91-0079-05	CERAMIC 0.01UF AC125V	
-	E90-0022-05	INSULATING COVER	
16 1B	E03-0035-05	AC OUTLET	
17 2B	E13-0216-05	PHONO JACK	
18 1B	E23-0015-04	EARTH LUG	
19 1B	E30-0181-05	POWER CORD	K
19 1B	E30-0459-05	POWER CORD	E
20 2A, 3A	G11-0178-04	CUSHION	
21 1A	G11-0186-04	CUSHION	
-	H01-3459-04	CARTON BOX	*
-	H10-1599-02	POLYSTYRENE FIXTURE	
-	H20-0452-04	COVER	
-	H25-0078-04	BAG (235X315)	
22 3A, 3B	J02-0118-14	FOOT	
23 3A, 3B	J30-0162-04	SPACER (FOOT)	*
24 1B	J42-0083-05	BUSHING	
25 2A	K27-0804-14	KNOB (POWER)	
26 2A	K27-0805-04	KNOB (SPEAKER)	
27 1A	L01-2471-05	POWER TRANSFORMER	K
27 1A	L01-2476-05	POWER TRANSFORMER	E
28 1B	N08-0128-35	GND TERMINAL	
29 1B, 2B	N09-0394-05	SCREW (VARISTOR)	
30 2B	N09-1202-05	SCREW (POWER TR.)	
31 2B	R42-6210-45	RD 100K J 2E	
32 1B	S31-2050-05	SLIDE SWITCH(VOLT SEL)	
33 2A	S40-1015-05	PUSH SWITCH (POWER)	K
33 2A	S40-1047-05	PUSH SWITCH (POWER)	E
34 2B	V01-1215-10	2SA1215(O)	
35 2B	V03-2921-10	2SC2921(O)	
36 2B	V02-0688-20	2SB688(R)	
37 2B	V04-0718-20	2SD718(R)	
38 2B	X07-1940-11	POWER AMP PCB ASSY	*K
38 2B	X07-1942-72	POWER AMP PCB ASSY	*E
39 1A, 1B	X13-3520-11	SUB PCB ASSY	*K
39 1A, 1B	X13-3522-72	SUB PCB ASSY	*E
POWER AMP (X07-1940-11)			
C1 ,2	C25-1447-57	LL-ELEC 4.7UF 25WV	
C3 ,4	C71-1710-15	CERAMIC 100PF J	
C5 ,6	C24-2022-47	ELECTRO 0.22UF 100WV	

★ 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	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
C7 ,8	C52-1710-26	CERAMIC 0.001UF K	
C11 ,12	C24-0810-87	ELECTRO 1000UF 6.3V	
C15 ,16	C71-1702-01	CERAMIC 2PF C	
C19 ,20	C71-1768-05	CERAMIC 68PF J	
C21 ,22	C71-1733-05	CERAMIC 33PF J	
C23 ,24	C71-1727-05	CERAMIC 27PF J	
C25 ,26	C24-2010-57	ELECTRO 1UF 100WV	
C27 ,28	C46-1715-26	MYLAR 0.0015UF K	
C29 ,30	C46-1715-26	MYLAR 0.0015UF K	
C31 ,32	C46-1710-36	MYLAR 0.01UF K	
C33 ,34	C26-1722-47	NP-ELEC 0.22UF 50WV	
C41	C26-1022-67	ELECTRO 22UF 10WV	
C42	C24-1022-67	ELECTRO 22UF 10WV	
C43	C25-1247-67	LL-ELEC 47UF 16WV	
C44	C24-6547-57	ELECTRO 4.7UF 35WV	
C45	C24-1410-67	ELECTRO 10UF 25WV	
C46	C24-1447-67	ELECTRO 47UF 25WV	
C49 ,50	C52-1768-16	CERAMIC 680PF K	
C75 -78	C24-2010-67	ELECTRO 10UF 100WV	
C79 -82	C24-1710-67	ELECTRO 10UF 50WV	
C87 ,88	C24-1710-57	ELECTRO 1UF 50WV	
C95 -98	C52-1768-16	CERAMIC 680PF K	
C99 -102	C71-1710-15	CERAMIC 100PF J	
C103	C52-1733-26	CERAMIC 0.0033UF K	E
R29 -32	R42-1210-25	FL-PROOF RD1K J 2E	
R43 ,44	R49-6256-23	RN 5.6K F 2E	
R49 ,50	R42-1210-15	FL-PROOF RD100 J 2E	
R51 ,52	R47-5482-25	FL-PROOF RS8.2K J 3A	
R53 ,54	R42-1222-15	FL-PROOF RD220 J 2E	
R59 ,60	R42-1222-15	FL-PROOF RD220 J 2E	
R61 -64	R42-1233-15	FL-PROOF RD330 J 2E	
R65 -68	R42-1256-15	FL-PROOF RD560 J 2E	
R69 -72	R42-1210-15	FL-PROOF RD100 J 2E	
R89 ,90	R42-1218-05	FL-PROOF RD18 J 2E	
R93 ,94	R42-1218-05	FL-PROOF RD18 J 2E	
R97 -100	R42-1218-05	FL-PROOF RD18 J 2E	
R113, 114	R90-0187-05	MULTI-COMP 0.22X2 K 3H	
R123, 124	R47-5510-05	FL-PROOF RS10 J 3D	
R125, 126	R42-1247-95	FL-PROOF RD4.7 J 2E	
R127, 128	R42-1233-05	FL-PROOF RD33 J 2E	
R141	R47-5456-25	FL-PROOF RS5.6K J 3A	
R142	R47-5556-25	FL-PROOF RS5.6K J 3D	
R143	R47-5439-15	FL-PROOF RS390 J 3A	E
R143	R47-5456-15	FL-PROOF RS560 J 3A	K
VR3 ,4	R12-0302-05	TRIMMING POT. 500	
RL1	S51-2045-05	RELAY	
D5 ,6	V11-0076-05	1S1555	
D5 ,6	V11-0271-05	1S2076	
D7 -10	V11-0273-05	1S2076A	
D11 -14	V11-0076-05	1S1555	
D11 -14	V11-0271-05	1S2076	
D15 -22	V11-0273-05	1S2076A	
D23 -26	V11-5102-30	UF-21	*
D27 ,28	V11-0273-05	1S2076A	
D29 ,30	V11-5101-70	STV-2H(O)	
D31	V11-4109-40	EZ-242	
D32	V11-4112-30	EZ-193	
D33 ,34	V11-0273-05	1S2076A	
D35 -38	V11-0076-05	1S1555	
D35 -38	V11-0271-05	1S2076	
IC1	V30-0678-10	UPC1237H	*

E : Scandinavia & Europe H : Audil Club K : USA P : Canada

S : South Africa T : England U : PX (Far East, Hawaii)

UE : AAFES (Europe) X : Australia M : Other Areas

For Power AMP

K : X07-1940-11

E : X07-1942-72

BASIC M1

★ 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	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
Q1 -4	V03-1845-40	2SC1845(E)	
Q11 -14	V03-1841-00	2SC1841	
Q15 -18	V01-1124-20	2SA1124(Q,R,S)	
Q19 ,20	V03-2632-20	2SC2632(Q,R,S)	
Q21 ,22	V03-2631-10	2SC2631(Q,R,S)	
Q23 ,24	V01-1123-10	2SA1123(Q,R,S)	
Q25 ,26	V03-2591-20	2SC2591(Q,R,S)	
Q27 ,28	V01-1111-20	2SA1111(Q,R,S)	
Q29 ,30	V01-0954-00	2SA954	
Q31 ,32	V03-2003-00	2SC2003	
Q33 ,34	V01-0999-10	2SA999(E,F)	
Q35 ,36	V03-2320-10	2SC2320(E,F)	
Q37 ,38	V03-1841-00	2SC1841	
Q39 -42	V01-0988-00	2SA988	
Q43 ,44	V03-1841-00	2SC1841	
Q53 -56	V03-1841-00	2SC1841	
Q57 ,58	V01-0999-10	2SA999(E,F)	
Q61 ,62	V03-1841-00	2SC1841	
Q63	V01-0988-00	2SA988	
SUB (X13-3520-11)			
-	C91-0079-05	CERAMIC 0.01UF AC125V	E
C1 -4	C54-2710-39	CERAMIC 0.01UF P	
C5	C24-1710-77	ELECTRO 100UF 50WV	
C6 ,7	C90-0468-05	ELECTRO 6800UF 42WV	
C8 ,9	C90-0567-05	ELECTRO 7500UF 71WV	
C10 -13	C46-1718-36	MYLAR 0.018UF K	
C17 -20	C52-1747-26	CERAMIC 0.0047UF K	E
201 2A	E11-0103-05	PHONE JACK	*
202 1B	E20-0814-05	TERMINAL BOARD(SPEAKER)	
F1	F05-3122-05	FUSE (3.15A 250V)	E
F1	F05-6027-05	FUSE (6A 250V)	K
F2	F05-6322-05	FUSE (6.3A 250V)	E
203 1B	J13-0041-05	FUSE HOLDER	K
203 1B	J13-0054-05	FUSE HOLDER	E
L1 ,2	L39-0085-05	COIL	
R2	R47-5427-25	FL-PROOF RS2.7K J 3A	
R5 -8	R47-5510-05	FL-PROOF RS10 J 3D	
R9 ,10	R47-5547-15	FL-PROOF RS470 J 3D	
R11 ,12	R47-5401-05	FL-PROOF RS1 J 3A	
R13 ,14	R47-5556-15	FL-PROOF RS560 J 3D	
S1	S42-2056-05	PUSH SWITCH(SPEAKERS)	
D1	V11-2101-40	M4C-51-12*1	
D2	V11-0295-05	W068	
D3 -6	V11-1300-10	S3V20	

For SUB

K : X13-3550-11

E : X13-3552-71

Note:

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