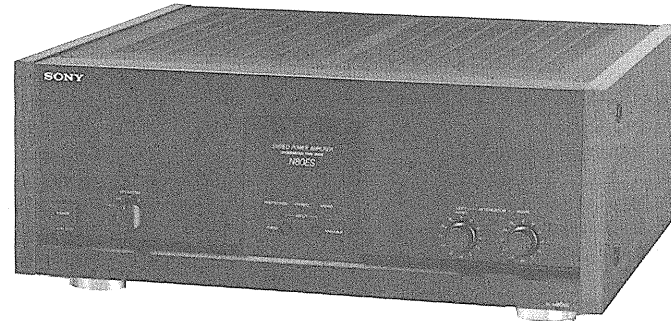


TA-N80ES

SERVICE MANUAL

*AEP Model
E Model*



SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 4 ohm loads, both channels driven, from 20 - 20,000 Hz; rated 270 watts per channel minimum RMS power, with no more than 0.006 % total harmonic distortion from 250 milliwatts to rated output.

With 8 ohm loads, both channels driven, from 20 - 20,000 Hz; rated 200 watts per channel minimum RMS power, with no more than 0.004 % total harmonic distortion from 250 milliwatts to rated output.

Other specifications

Item	Condition	Model except for North Europe	Model for North Europe
Continuous RMS power output (both channels driven simultaneously)	4 ohms 20 Hz - 20 kHz, THD 0.006 %	270 W + 270 W	—
	6 ohms 20 Hz - 20 kHz, THD 0.005 %	230 W + 230 W	190 W + 190 W
	8 ohms 20 Hz - 20 kHz, THD 0.004 %	200 W + 200 W	160 W + 160 W

Dynamic power	1 ohm	660 W	530 W
	2 ohms	800 W	640 W
	4 ohms	520 W	420 W
	6 ohms	370 W	300 W
	8 ohms	300 W	240 W
Power bandwidth (IHF)	4 ohms, 0.02 %	10 Hz - 100 kHz	—
	8 ohms, THD 0.02 %	10 Hz - 100kHz	
Dynamic headroom ('78 IHF)	4 ohms	2.8 dB	—
	8 ohms	1.8 dB	
Total harmonic distortion	4 ohms, at 10 watt output	0.004 %	—
	6 ohms, at 10 watt output	0.003 %	
	8 ohms, at 10 watt output	0.0018 %	

— Continued on page 2 —



STEREO POWER AMPLIFIER
SONY®

Intermodulation (IM) distortion 60 Hz:7 kHz = 4:1	4 ohms, at rated output	0.006 %	—
	6 ohms, at rated output	0.005 %	
	8 ohms at rated output	0.004 %	
Damping factor	8 ohms, 1 kHz	100	
Slew rate	—	150 V/μsec 300 V/μsec (inside)	
Residual noise	network A	less than 35 μV	
Frequency response	—	1 Hz - 200 kHz +3dB -3dB	
Input sensitivity	—	UNBALANCED: 1 V, 30 kohms	
		BALANCED: 0.5 V, 600 ohms	
S/N (network) '78 IHF	FIXED VARIABLE	120 dB (A)	

General

System Super legato linear, purecomplementary SEPP power amplifier, powerful power supply

Power requirements Model for U.S.A. and Canada: 120 V AC, 60 Hz
Model for other countries: 120, 220 or 240V AC adjustable, 50/60 Hz

Power consumption Model for U.S.A.: 380 watts
Model for Canada: 950 VA
Model for North European countries: 310 W
Models for European countries and other countries: 510 W

Dimensions Approx. 470 x 185 x 440 mm (w/h/d) (18 5/8 x 7 3/8 x 17 3/8 inches) including projecting parts and controls

Weight Model for European countries: Approx. 24 kg (52 lb 15 oz), net
other models: Approx. 26.3 kg (58 lb)

Supplied accessories Power control cord (1)

Design and specifications subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!



COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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SECTION 1

GENERAL

English

Precautions

- Unplug the unit from the wall outlet if it is not to be used for an extended period of time. To disconnect the cord, pull it out by grasping the plug. Never pull the plug out by the cord.
- Avoid installing or leaving the unit in a location:
 - near heat sources such as radiators, airducts or heaters
 - subject to direct sunlight
 - exposed to rain or moisture
 - where it is liable to come into contact with dust or dirt
 - that is unventilated, such as on a bookcase.
- Should any liquid or solid object fall into the unit, unplug the unit and have the unit checked by qualified personnel before operating it any further.
- AC power cord must be changed only at the qualified service shop.

If you have any question or problem concerning your unit that is not covered in this manual, please consult your nearest Sony dealer.

For the customers in the U.S.A.

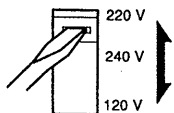
For detailed safety precautions, see the leaflet "IMPORTANT SAFEGUARDS".

This section is extracted from instruction manual.

Operating Voltage

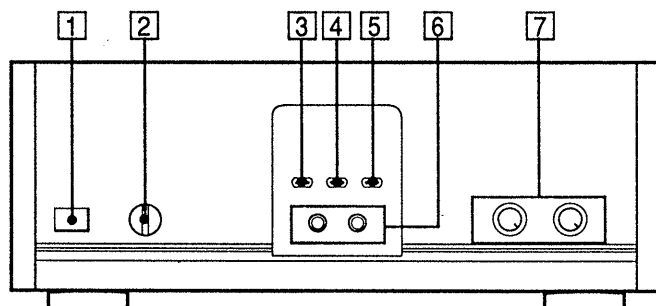
Before connecting the unit to an AC outlet, be sure that the operating voltage of your unit is identical with that of your local power supply.

U.S.A. and Canada	Operates on 120 V AC, 60 Hz.
European countries	Operates on 220 V AC, 50/60 Hz.
Other countries	Operates on either 120 V, 220 V or 240 V AC, 50/60 Hz. The voltage selector is located on the rear panel. If the selector must be reset, disconnect the AC power cord and set the selector to the proper voltage of your local power supply.



Function of Controls

Fonction des commandes



1 POWER switch

2 SPEAKERS selector

Selects speaker system A, B or both (A+B). For headphone monitoring on the connected control amplifier, set the selector to OFF.

3 PROTECTION indicator

Lights up for approximately 7 seconds immediately after turning on the unit. This indicates that the built-in muting circuit is activated.

In normal operating conditions, this does not light. If it lights up (speaker sound is not heard) while operating, an abnormality has occurred. In this case, disconnect the AC power cord and check the connected components and speaker systems.

4 STEREO indicator

Lights up when OPERATION (STEREO/MONO) is set to STEREO.

5 MONO Indicator

Lights up when OPERATION (STEREO/MONO) is set to MONO.

6 INPUT selectors

Select input source connected to the input jacks on the rear panel; FIXED or VARIABLE.

7 RIGHT and LEFT (MONO) INPUT LEVEL controls

Control input signal sound level from the control amplifier connected to the VARIABLE input jacks. Before turning ON the power, set these INPUT LEVEL controls to the "-20 dB" position.

1 Interrupteur d'alimentation (POWER)

2 Sélecteur d'enceinte (SPEAKERS)

Sélectionne le système d'enceintes A, B ou les deux (A+B). Pour écouter au casque sur l'amplificateur de contrôle raccordé, régler le sélecteur sur OFF.

3 Témoin de protection (PROTECTION)

S'allume pendant environ 7 secondes immédiatement après la mise sous tension de l'appareil. Ceci signifie que le circuit d'assourdissement incorporé est activé. En mode de fonctionnement normal, ce témoin ne s'allume pas.

S'il s'allume (le son de l'enceinte n'est plus perçu) pendant le fonctionnement, quelque chose d'anormal est arrivé. Dans ce cas, déconnecter le cordon d'alimentation secteur et les systèmes d'enceintes.

4 Témoin de stéréo (STEREO)

S'allume lorsque OPERATION (STEREO/MONO) est réglé sur STEREO.

5 Témoin de monophonie (MONO)

S'allume lorsque OPERATION (STEREO/MONO) est réglé sur MONO.

6 Sélecteurs d'entrée (INPUT)

Sélectionne la source d'entrée raccordée aux prises d'entrée sur le panneau arrière; FIXED ou VARIABLE.

7 Réglage gauche et droit (RIGHT et LEFT (MONO) INPUT LEVEL)

Règlent le niveau sonore du signal d'entrée depuis l'amplificateur de contrôle raccordé aux prises d'entrée VARIABLE. Avant de mettre l'appareil sous tension, régler ces commandes INPUT LEVEL sur la position "-20 dB".

System Connections

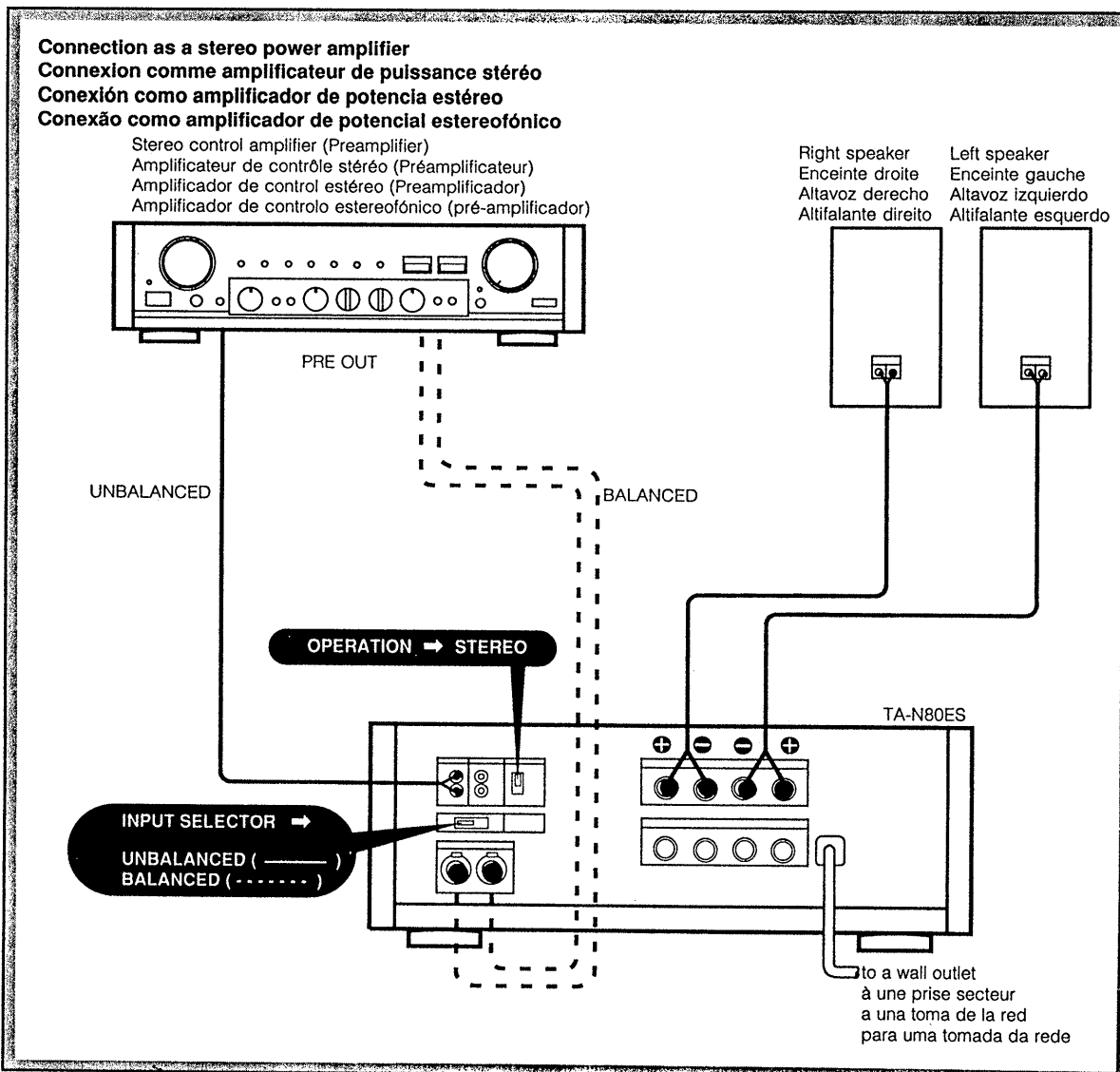
Connexions du système

Connection Notes

- The power cord should be connected last of all, first making sure that the POWER switch is turned off.
- Cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.
- Cord plugs and jacks are color coded. Red plugs and jacks are for the right channel (R) and white ones are for the left channel (L).

Remarques sur les connexions

- Le cordon d'alimentation doit être raccordé en dernier, en s'assurant au préalable que l'interrupteur POWER est sur OFF.
- Les câbles de connexions doivent être entièrement insérés dans les prises, une connexion relâchée pouvant être la cause de bruit et de ronflement.
- Les fiches et prises des cordons sont codés avec une couleur. Les fiches et prises rouges sont destinées au canal droit et les blanches au canal gauche.



Conexiones del sistema

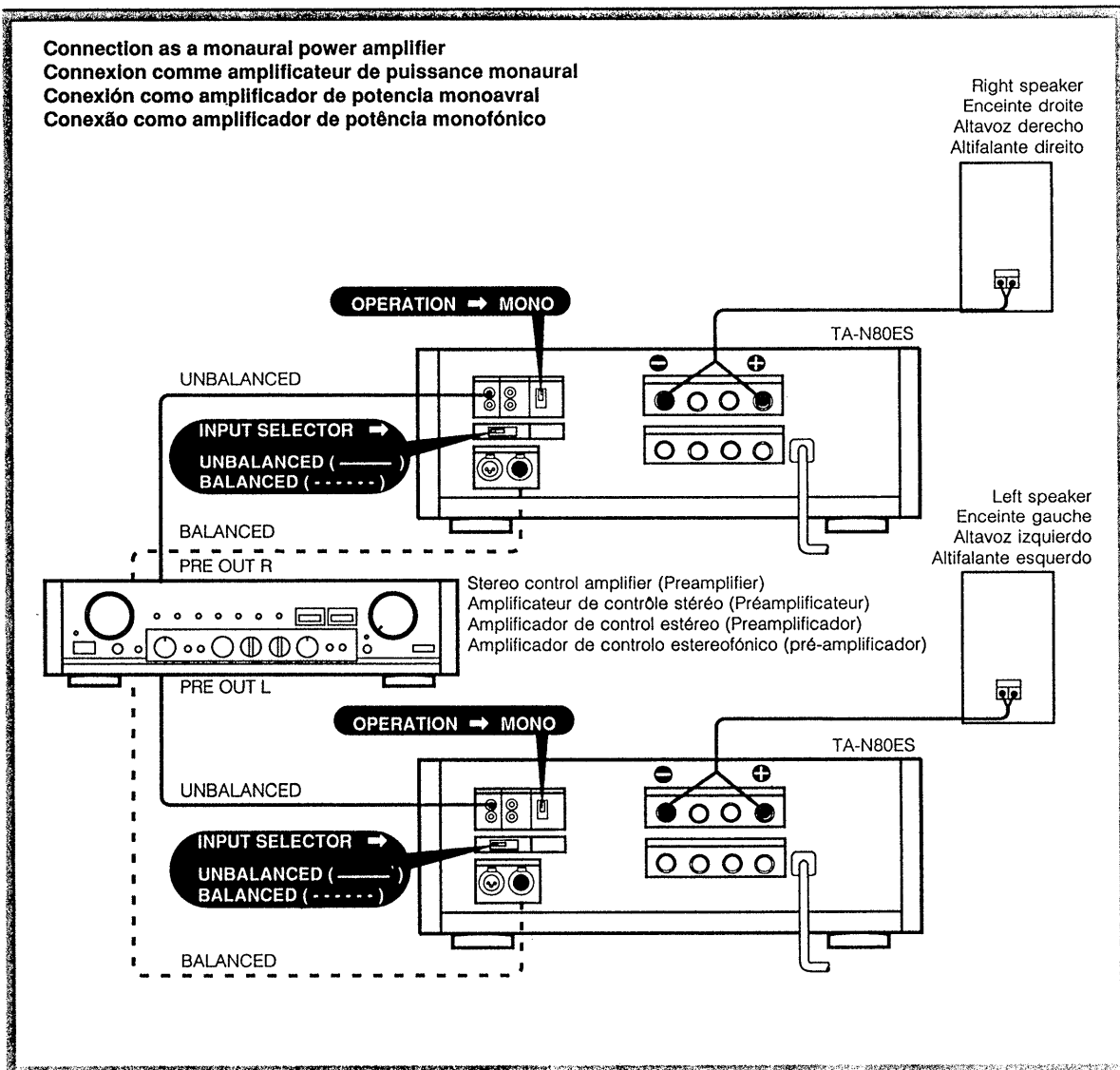
Notas sobre las conexiones

- El cable de alimentación debe conectarse al final de todo, primero asegurándose de que el interruptor POWER esté en OFF.
- Las clavijas de cables deberán insertarse firmemente en las tomas. Una conexión floja puede causar zumbido y ruido.
- Las clavijas y tomas de los cables están codificadas en color. Las clavijas y las tomas rojas son para el canal derecho y las blancas para el izquierdo.

Ligação do sistema

Notas sobre as ligações

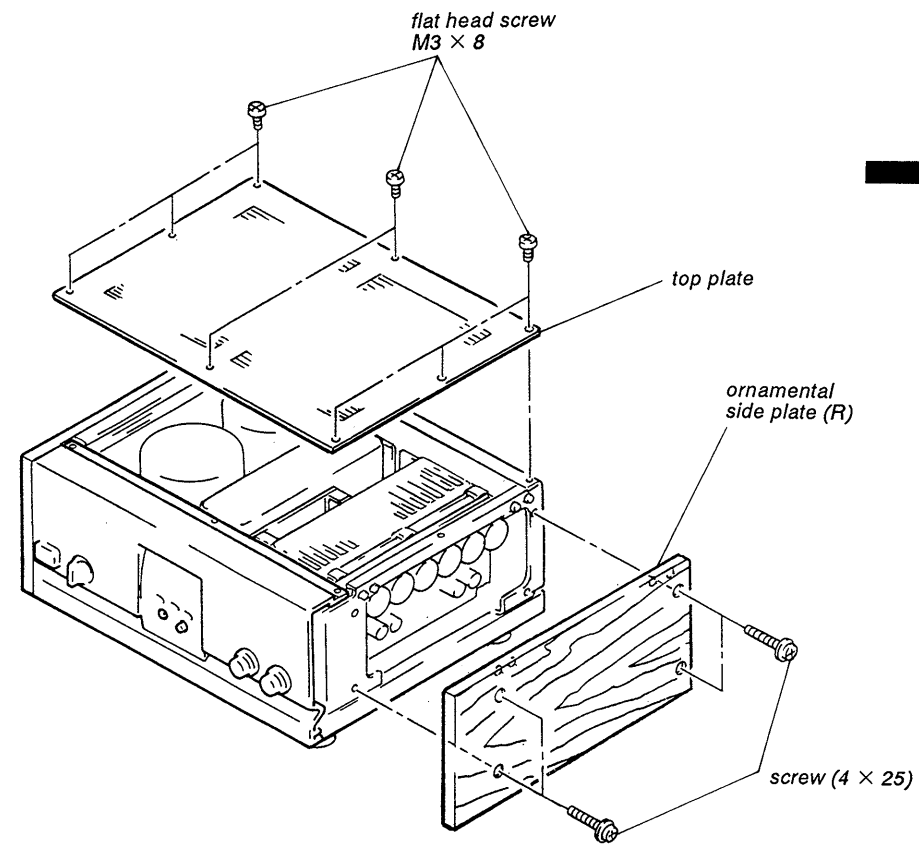
- O cabo de alimentação deve ser ligado por último. Primeiramente, assegure-se de que o interruptor de alimentação (POWER) está desligado.
- As fichas dos cabos devem estar firmemente inseridas nas suas respectivas tomadas. Ligações frouxas podem causar zumbidos e ruídos.
- As fichas estão codificadas por cores. As fichas e as tomadas vermelhas são para o canal da direita (R), e as brancas para o canal da esquerda (L).



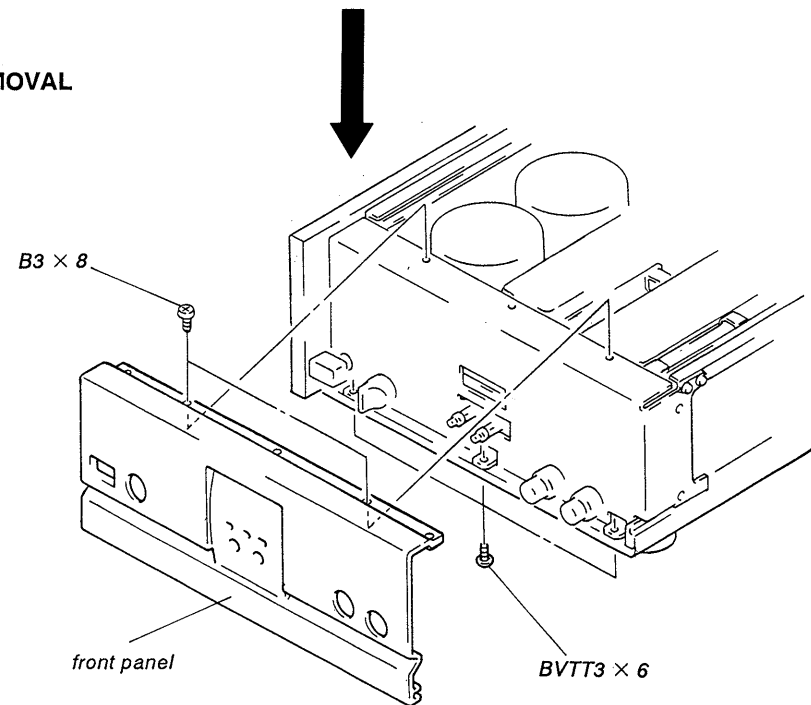
SECTION 2 DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

TOP PLATE AND ORNAMENTAL SIDE PLATE (R) REMOVAL

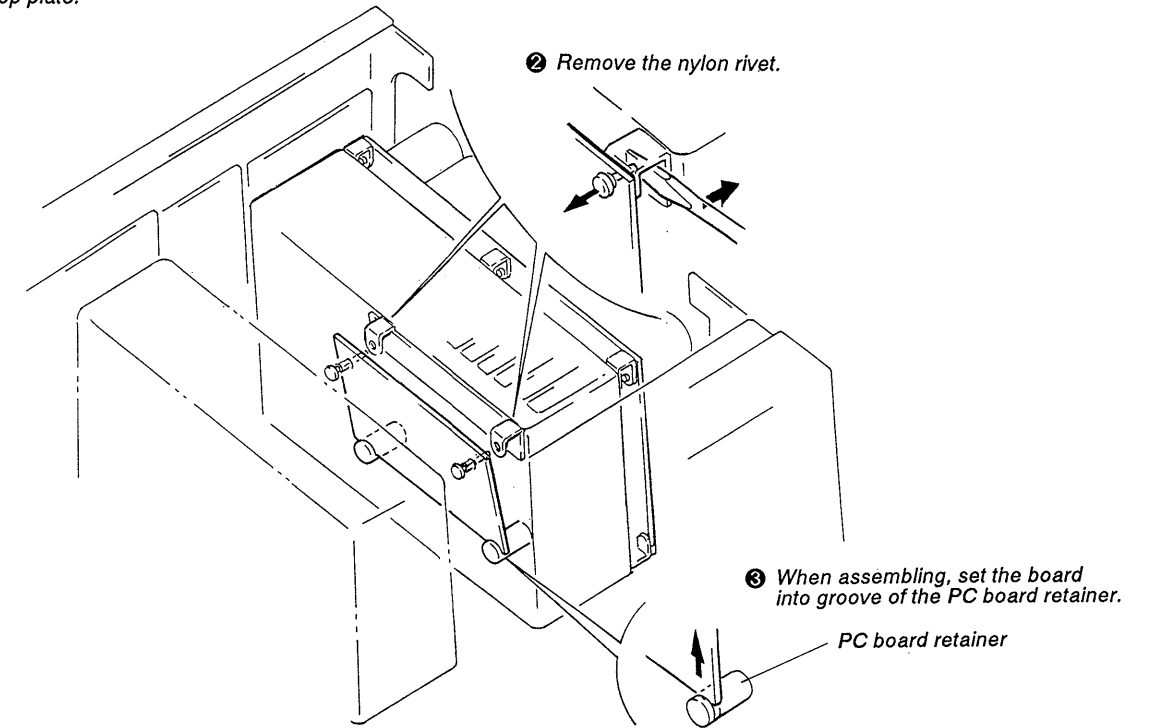


FRONT PANEL REMOVAL



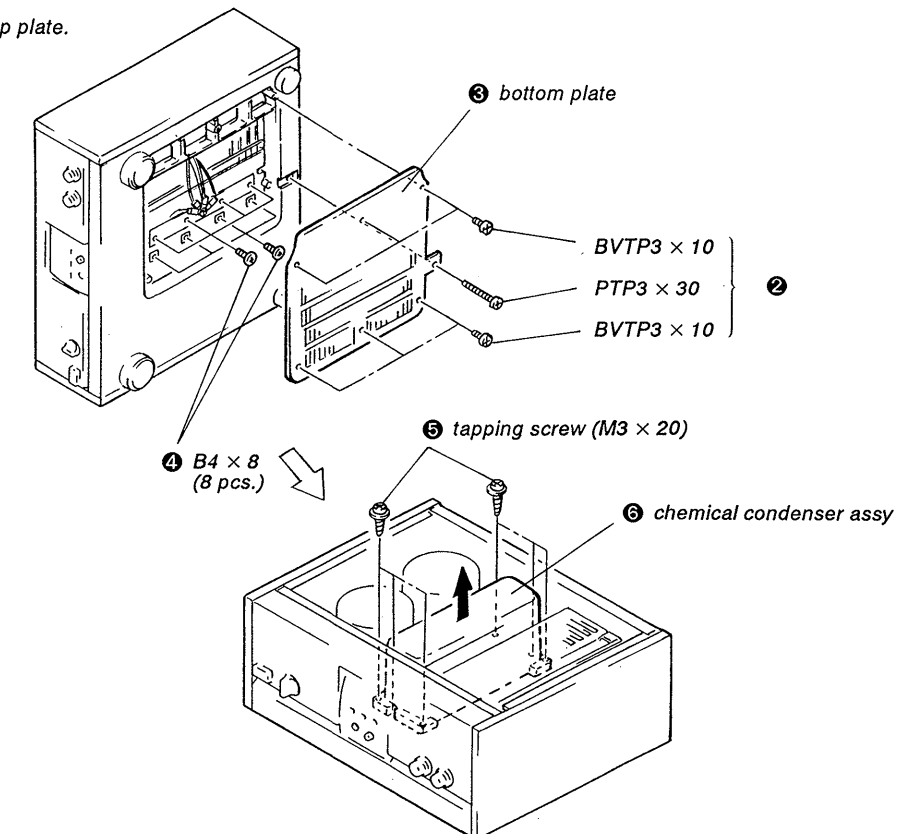
PROTECTOR BOARD REMOVAL

1 Remove the top plate.

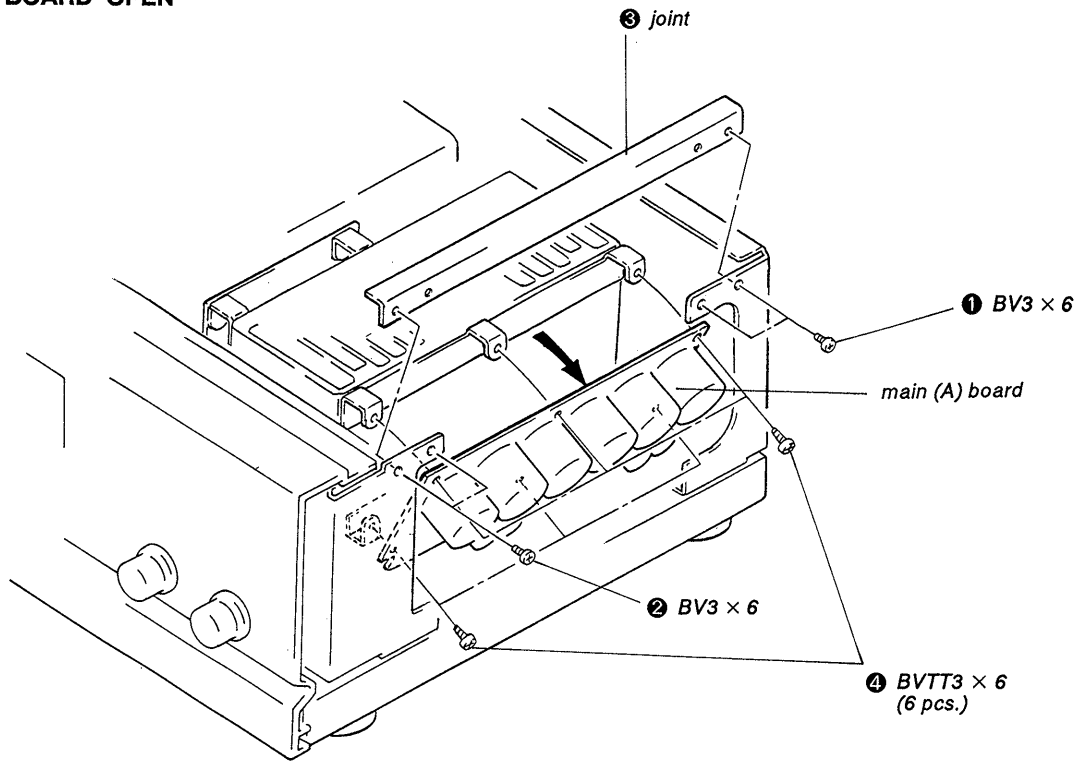


CHEMICAL CONDENSER ASSY REMOVAL

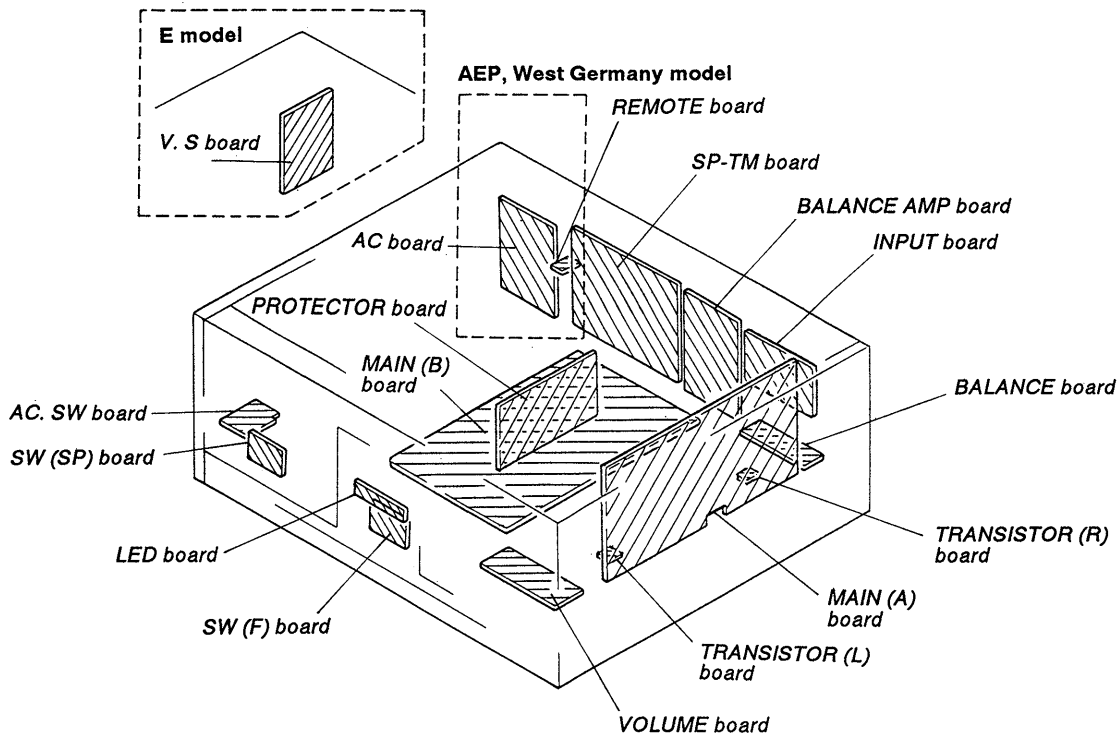
1 Remove the top plate.



MAIN (A) BOARD OPEN



CIRCUIT BOARDS LOCATION



SECTION 3 ELECTRICAL ADJUSTMENTS

Note: Adjustment should be performed 5 minutes later, after the power switch is on.

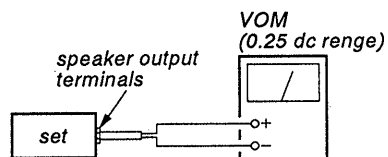
SECTION 4 DIAGRAMS

Offset Adjustment

Setting:

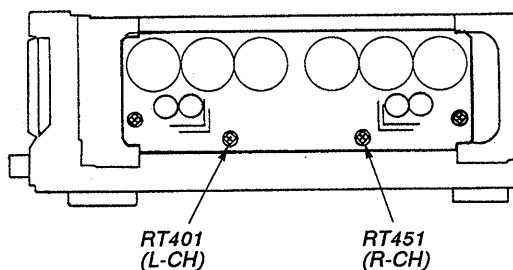
OPERATION switch: STEREO
Input signal: No signal input

Procedure:



Adjust RT401 (L-CH) and RT-451 (R-CH) for 0 V reading on the VOM.

Adjustment Location: main (A) board



Bias Current Adjustment

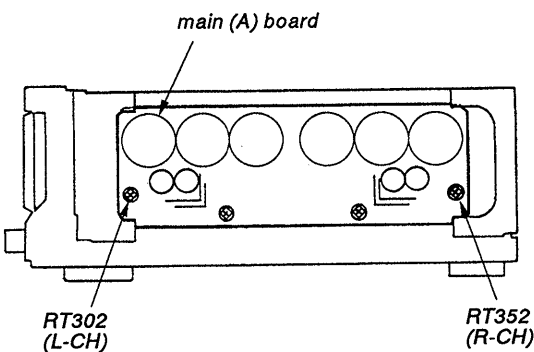
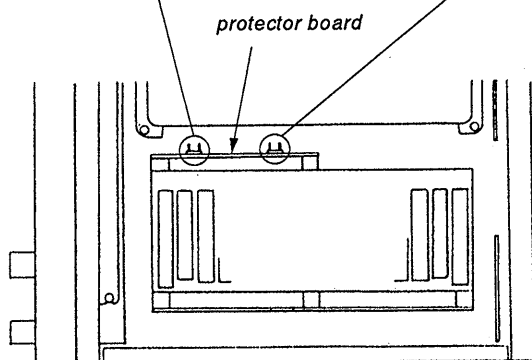
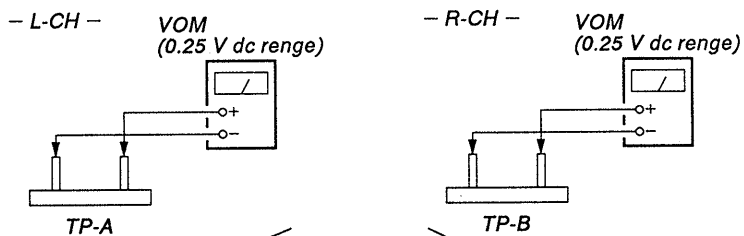
Setting:

OPERATION switch: STEREO
Input signal: No signal input

Procedure:

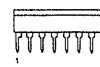
Adjust RT302 (L-CH) and RT352 (R-CH) so that VOM readings of TP-A (L-CH), TP-B (R-CH) become 15 mV.

Adjustment Location: main (A) board and protector board

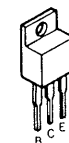


4-1. SEMICONDUCTOR LEAD LAYOUTS

M5238L



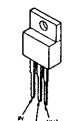
2SA1383-Q
2SC3514-Q



CTU-36R



M5F78M15



2SD774-34



CTU-36S



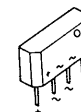
M5F79M15



2SK246-GR2



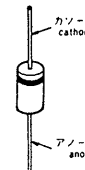
S1VB40



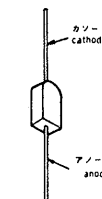
μ PA68HA-M



10E2N
HZ3ALL



SV04
SEL1210W



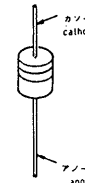
μ PC1237HA



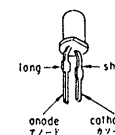
2SA988-F



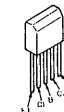
1SS120
HZS6C3L
UZL-11L1



SEL2210-5-C



2SA995



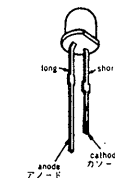
2SA1015-GR
2SC1815-BL
2SC1815-Y
2SC1845-EA



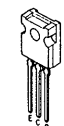
CTU-22R



SEL2510C



2SA1360-O
2SC3423-O



CTU-22S



4-2. PRINTED WIRING BOARDS • See page 11 for Semiconductor Lead Layouts.

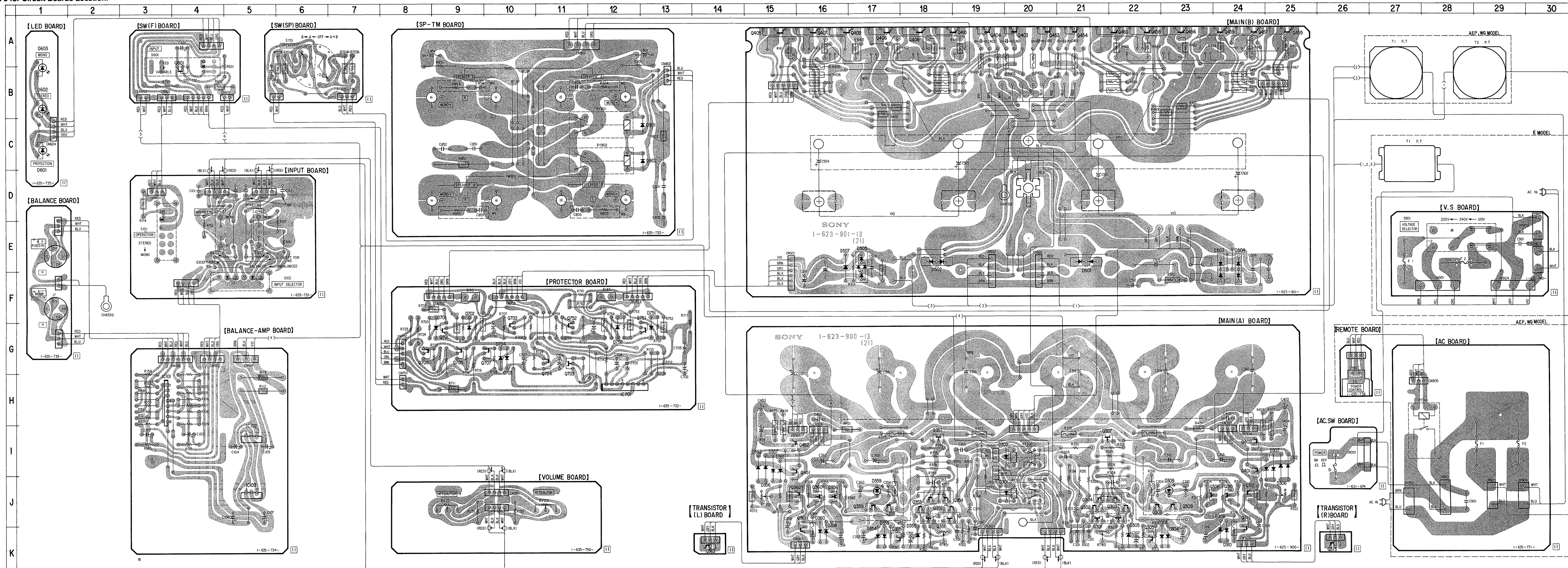
• See page 9 for Circuit Boards Location.

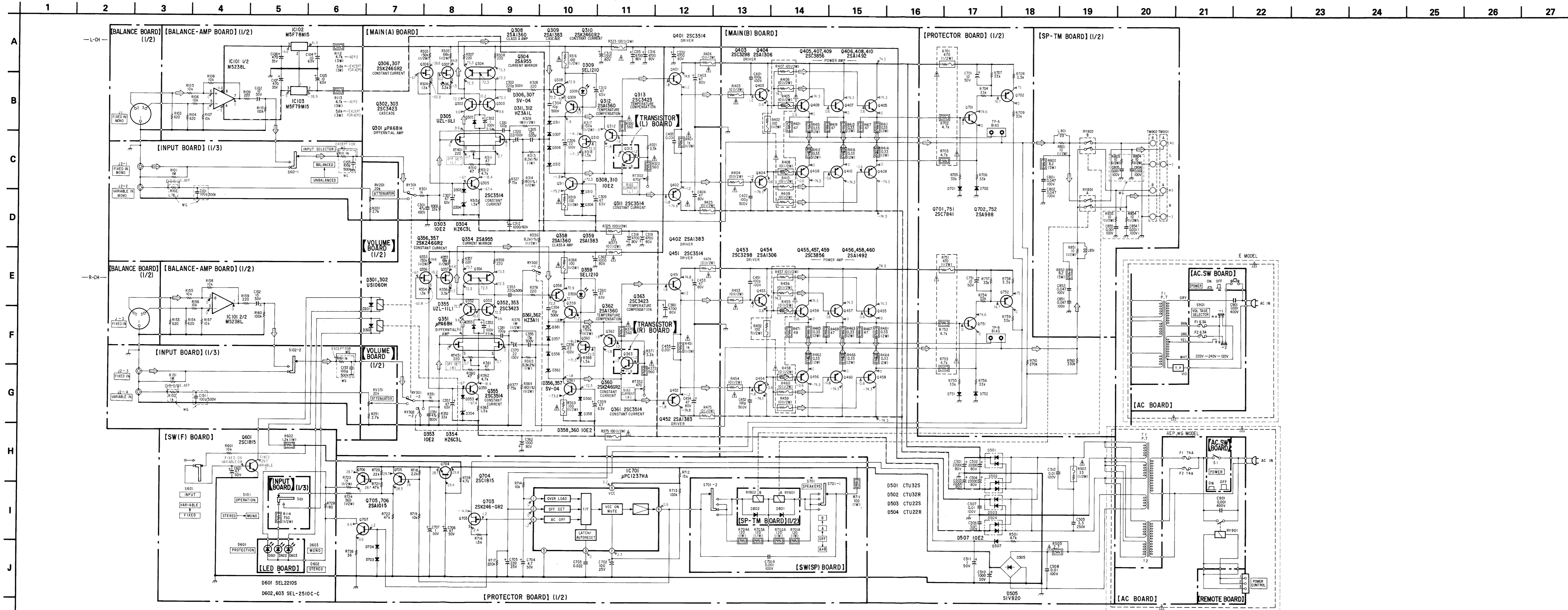
Note on Printed Wiring Board:

- Note:
- : parts extracted from the component side.
 - : Pattern on the side which is seen.
 - WG : West Germany

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D301	J-19	Q306	J-23
D302	I-19	Q307	I-21
D303	K-22	Q308	J-22
D304	K-23	Q309	J-23
D305	K-22	Q310	J-24
D306	I-25	Q311	K-24
D307	I-25	Q312	J-24
D308	K-24	Q313	K-26
D309	J-23	Q351	J-18
D310	K-24	Q352	J-18
D311	I-24	Q353	J-18
D312	I-25	Q354	J-18
D353	K-17	Q355	K-17
D354	K-17	Q356	J-16
D355	K-18	Q357	I-18
D356	I-15	Q358	J-17
D357	I-15	Q359	J-17
D358	K-16	Q360	J-16
D359	J-17	Q361	K-15
D360	K-16	Q362	J-15
D361	I-15	Q363	K-14
D362	I-15	Q401	J-24
D501	E-21	Q402	I-24
D502	E-18	Q403	A-20
D503	F-24	Q404	A-19
D504	F-24	Q405	A-15
D505	E-17	Q406	A-17
D507	E-16	Q407	A-18
D601	C-1	Q408	A-18
D602	B-1	Q409	A-16
D603	A-1	Q410	A-18
D701	G-9	Q451	J-15
D702	G-9	Q452	I-15
D703	G-10	Q453	A-20
D704	G-10	Q454	A-21
D751	G-13	Q455	A-25
D752	G-12	Q456	A-23
D801	C-13	Q457	A-24
D802	C-13	Q458	A-22
		Q459	A-24
IC101	H-3	Q460	A-22
IC102	I-5	Q601	B-4
IC103	J-5	Q701	G-9
IC152	J-5	Q702	G-10
IC701	H-12	Q703	G-11
		Q704	G-11
Q301	J-21	Q705	G-9
Q302	J-21	Q706	G-8
Q303	J-22	Q707	G-9
Q304	J-21	Q751	G-12
Q305	K-22	Q752	G-11





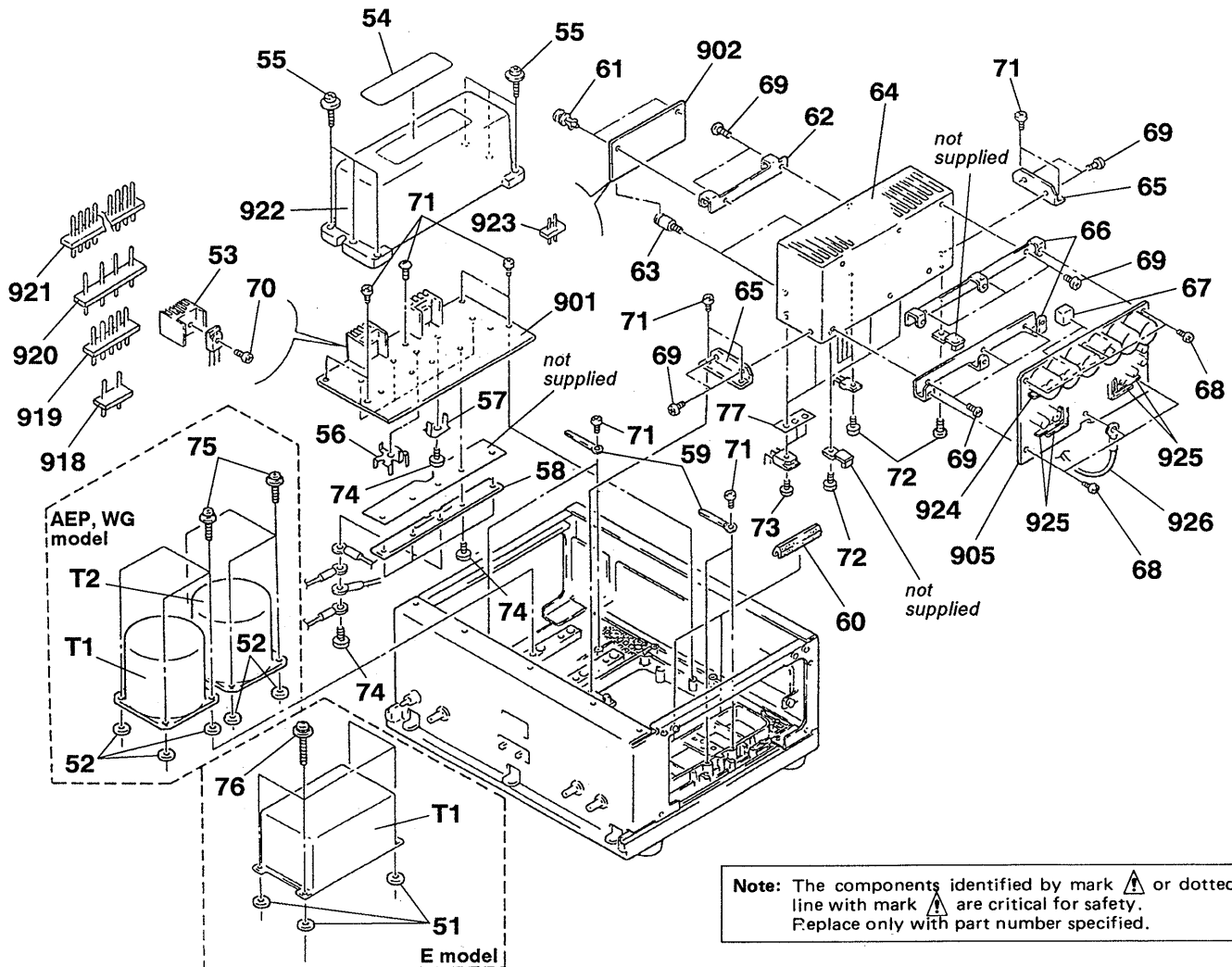
Note on Schematic Diagram:
Note:

- All capacitors are in μF unless otherwise noted. pF : μF F 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise specified.
- % : indicates tolerance.
- : nonflammable resistor.
- : fusible resistor.

Note: The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

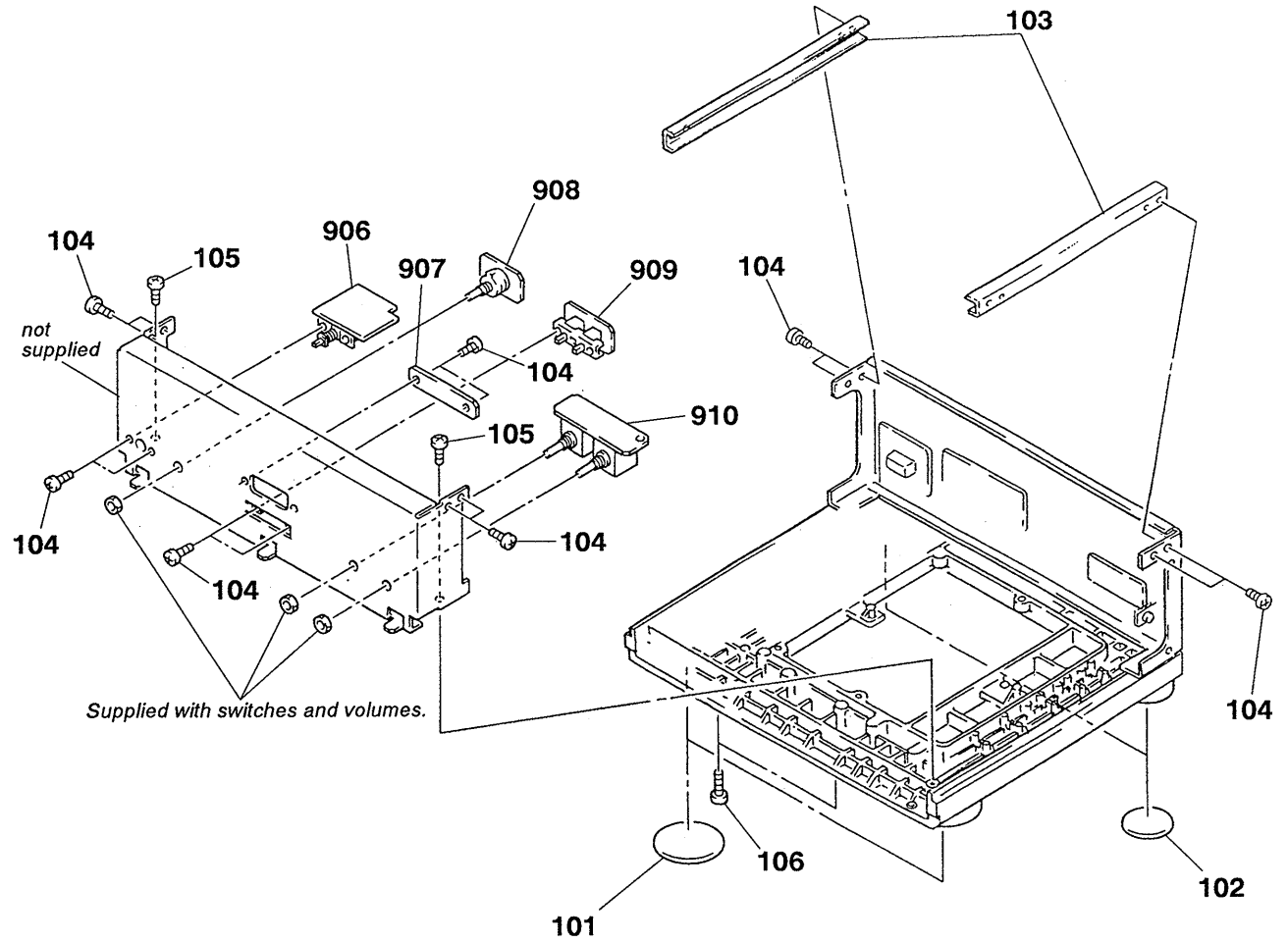
- : B+ Line.
- : B- Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (10 M Ω /V). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- : Signal path
- WG : West Germany

(2) MAIN CHASSIS SECTION



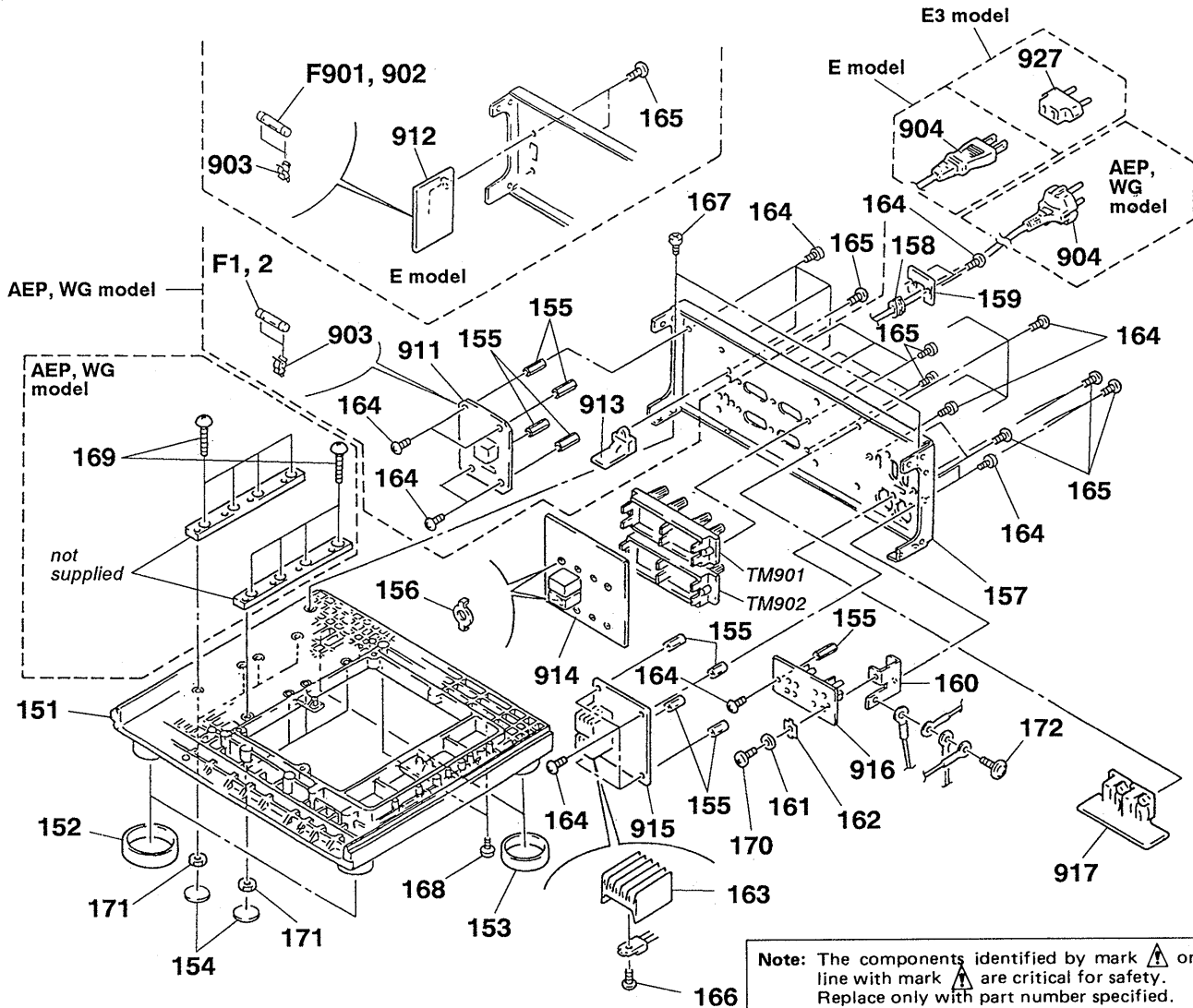
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	4-931-976-01	(E)...WASHER (BS)		76	7-682-669-09	(E)...SCREW +PSW 4X35	
52	4-916-751-01	(AEP)...WASHER		77	4-921-419-01	SHEET, INSULATING	
53	*4-921-402-01	HEAT SINK		901	*A-4341-090-A	(AEP1,E)...MOUNTED PCB, MAIN (B)	
54	*4-941-346-01	LABEL, CAPACITOR			*A-4341-101-A	(AEP2)...MOUNTED PCB, MAIN (B)	
55	4-921-437-01	SCREW (M3X20), TAPPING			*A-4341-108-A	(WG)...MOUNTED PCB, MAIN (B)	
56	*4-916-769-01	PLATE, GROUND, 4P		902	*A-4341-098-A	MOUNTED PCB, PROTECTOR	
57	*4-835-639-00	PLATE, GROUND		905	*A-4341-089-A	(AEP,E)...MOUNTED PCB, MAIN (A)	
58	*4-921-422-01	BAR, BUS			*A-4341-103-A	(WG)...MOUNTED PCB, MAIN (A)	
59	*4-908-882-01	CLAMP		918	1-535-135-11	BASE POST 14MM (10MM PITCH) 2P	
60	*4-921-413-01	RUBBER, DAMPING		919	*1-508-812-00	BASE POST (14MM) 5P	
61	4-812-134-00	RIVET NYLON, 3.5		920	*1-535-137-00	BASE POST 14MM (10MM PITCH)	
62	*4-921-424-21	BRACKET, PC BOARD		921	*1-508-817-00	14MM BASE POST	
63	*4-921-417-01	RETAINER, PC BOARD		922	⚠A-4323-662-A	CHEMICAL CONDENSER ASSY	
64	*4-921-430-01	HEAT SINK		923	*1-508-809-00	BASE POST (14MM) 2P	
65	*4-921-418-01	BRACKET, HEAT SINK		924	*3-311-617-01	REINFORCEMENT, PCB	
66	*4-921-424-01	BRACKET, PC BOARD		925	*1-560-242-21	BUS BAR 4P	
67	4-921-410-51	CUSHION		926	1-559-512-11	(AEP,WG)...CORD (WITH CONNECTOR)	
68	7-682-547-09	SCREW +BVTT 3X6 (S)		T1	⚠.1-450-177-11	(E)...TRANSFORMER, POWER	
69	7-685-645-79	SCREW +BVTP 3X6 TYPE2 SLIT		T1	⚠.1-450-179-11	(AEP1,WG)...TRANSFORMER, POWER	
70	7-682-549-09	SCREW +B 3X10		T1	⚠.1-450-181-11	(AEP2)...TRANSFORMER, POWER	
71	7-685-647-79	SCREW +BVTP 3X10 TYPE2 SLIT		T2	⚠.1-450-178-11	(AEP1,WG)...TRANSFORMER, POWER	
72	7-682-649-09	SCREW +PSW 3X10		T2	⚠.1-450-180-11	(AEP2)...TRANSFORMER, POWER	
73	7-682-650-09	SCREW +PSW 3X12					
74	7-682-561-10	SCREW +B 4X8					
75	4-847-802-01	(WG)...SCREW					
	7-682-962-01	(AEP)...SCREW +PSW 4X10					

(3) FRONT CHASSIS SECTION



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
101	4-916-704-11	FOOT		906	*1-636-674-11	PC BOARD, AC.SW	
102	4-916-704-01	FOOT		907	*1-635-735-11	PC BOARD, LED	
103	*4-921-421-01	JOINT		908	*1-635-736-11	PC BOARD, SW (SP)	
104	7-682-547-09	SCREW +BVTT 3X6 (S)		909	*1-635-737-11	PC BOARD, SW (F)	
105	7-685-647-79	SCREW +BVTP 3X10 TYPE2 SLIT		910	*1-635-750-11	PC BOARD, VOLUME	
106	7-685-650-79	SCREW +BVTP 3X16 TYPE2 SLIT					

(4) BACK CHASSIS SECTION



No.	Part No.	Description	Remarks
151	X-4941-088-1	CHASSIS ASSY, MAIN	152,153
152	4-923-882-02	RING (LARGE-16), ORNAMENTAL, FOOT	
153	4-923-883-02	RING (SMALL-14), ORNAMENTAL, FOOT	
154	*4-908-892-01	SPACER	
155	*4-876-607-21	COLLAR (E), PLATE, JACK	
156	*4-843-416-11	PLATE, FIXED, CAP	
157	*4-933-030-01	(AEP,WG)...PANEL, BACK	
	*4-933-030-11	(E).....PANEL, BACK	
158	2-352-626-01	BUSHING, CORD	
159	*4-923-873-01	BRACKET, CORD STOPPER	
160	*4-921-416-01	BRACKET	
161	4-908-961-11	WASHER	
162	*4-835-639-00	PLATE, GROUND	
163	*4-921-402-01	HEAT SINK	
164	7-682-547-09	SCREW +BVTT 3X6 (S)	
165	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
166	7-682-548-09	SCREW +B 3X8	
167	7-685-647-79	SCREW +BVTP 3X10 TYPE2 SLIT	
168	7-685-650-79	SCREW +BVTP 3X16 TYPE2 SLIT	
169	7-682-668-09	(AEP,WG)...SCREW +PS 4X30	

No.	Part No.	Description	Remarks
170	7-682-148-15	SCREW, TR	
171	7-684-024-04	N 4, TYPE 2	
172	7-685-647-71	SCREW +BVTP 3X10	
903	⚠ 1-533-183-11	HOLDER, FUSE	
904	⚠.1-559-297-31	(E).....CORD, POWER	
	⚠.1-575-953-11	(AEP,WG)...CORD, POWER	
911	*1-635-731-11	(AEP,WG)...PC BOARD, AC	
912	*1-635-740-11	(E)...PC BOARD, V.S	
913	*1-635-738-11	(AEP,WG)...PC BOARD, REMOTE	
914	*1-635-730-11	PC BOARD, SP-TM	
915	*1-635-734-11	PC BOARD, BALANCE-AMP	
916	*1-635-733-11	PC BOARD, INPUT	
917	*1-635-739-11	PC BOARD, BALANCE	
927	⚠.1-569-007-11	(E3)...ADAPTOR, CONVERSION 2P	
F1	⚠.1-532-350-00	(AEP,WG)...FUSE, TIME-LAG	
F2	⚠.1-532-350-00	(AEP,WG)...FUSE, TIME-LAG	
F901	⚠.1-532-325-00	(E).....FUSE, TIME-LAG	
F902	⚠.1-532-325-00	(E).....FUSE, TIME-LAG	
TM901	1-537-102-11	TERMINAL BOARD (SP)	
TM902	1-537-102-11	TERMINAL BOARD (SP)	

SECTION 6 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μ F, PF: μ μ F.

RESISTORS
• All resistors are in ohms.
• F: nonflammable

COILS
• MMH: mH, UH: μ H

SEMICONDUCTORS
In each case, U: μ , for example:
UA...: μ A..., UPA...: μ PA...,
UPC...: μ PC, UPD...: μ PD...

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

- WG : West Germany

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description				
901	*A-4341-090-A	(AEP1,E)...MOUNTED PCB, MAIN (B)	C303	1-109-621-00	MICA	220PF	5%	500V	
	*A-4341-101-A	(AEP2)...MOUNTED PCB, MAIN (B)	C304	1-107-202-00	MICA	10PF	0.5PF	500V	
	*A-4341-108-A	(WG)...MOUNTED PCB, MAIN (B)	C305	1-107-206-00	MICA	15PF	5%	500V	
902	*A-4341-098-A	MOUNTED PCB, PROTECTOR	C306	1-124-748-11	ELECT	22MF	20%	100V	
903	Δ 1-533-183-11	HOLDER, FUSE	C307	1-124-918-11	ELECT	47MF	20%	63V	
904	Δ 1-559-297-31	(E)...CORD, POWER	C309	1-124-918-11	ELECT	47MF	20%	63V	
	Δ 1-575-953-11	(AEP,WG)...CORD, POWER	C310	1-124-918-11	ELECT	47MF	20%	63V	
905	*A-4341-089-A	(AEP,E)...MOUNTED PCB, MAIN (A)	C312	1-126-370-11	ELECT	1000MF	20%	80V	
	*A-4341-103-A	(WG)...MOUNTED PCB, MAIN (A)	C313	1-126-370-11	ELECT	1000MF	20%	80V	
906	*1-636-674-11	PC BOARD, AC.SW	C315	1-125-488-11	ELECT(BLOCK)	4700MF	20%	80V	
907	*1-635-735-11	PC BOARD, LED	C316	1-125-488-11	ELECT(BLOCK)	4700MF	20%	80V	
908	*1-635-736-11	PC BOARD, SW (SP)	C318	1-125-488-11	ELECT(BLOCK)	4700MF	20%	80V	
909	*1-635-737-11	PC BOARD, SW (F)	C319	1-125-488-11	ELECT(BLOCK)	4700MF	20%	80V	
910	*1-635-750-11	PC BOARD, VOLUME	C320	1-124-748-11	ELECT	22MF	20%	100V	
911	*1-635-731-11	(AEP,WG)...PC BOARD, AC	C330	1-125-488-11	ELECT(BLOCK)	4700MF	20%	80V	
912	*1-635-740-11	(E)...PC BOARD, V.S	C331	1-162-282-11	(WG)...CERAMIC	100PF	10%	50V	
913	*1-635-738-11	(AEP,WG)...PC BOARD, REMOTE	C351	1-107-163-00	MICA	47PF	5%	500V	
914	*1-635-730-11	PC BOARD, SP-TM	C352	1-123-380-00	ELECT	1MF	20%	100V	
915	*1-635-734-11	PC BOARD, BALANCE-AMP	C353	1-109-621-00	MICA	220PF	5%	500V	
916	*1-635-733-11	PC BOARD, INPUT	C354	1-107-202-00	MICA	10PF	0.5PF	500V	
917	*1-635-739-11	PC BOARD, BALANCE	C355	1-107-206-00	MICA	15PF	5%	500V	
918	1-535-135-11	BASE POST 14MM (10MM PITCH) 2P	C356	1-124-748-11	ELECT	22MF	20%	100V	
919	*1-508-812-00	BASE POST (14MM) 5P	C357	1-124-918-11	ELECT	47MF	20%	63V	
920	*1-535-137-00	BASE POST 14MM (10MM PITCH)	C359	1-124-918-11	ELECT	47MF	20%	63V	
921	*1-508-817-00	14MM BASE POST	C360	1-124-918-11	ELECT	47MF	20%	63V	
922	Δ A-4323-662-A	CHEMICAL CONDENSER ASSY	C362	1-126-370-11	ELECT	1000MF	20%	80V	
923	*1-508-809-00	BASE POST (14MM) 2P	C363	1-126-370-11	ELECT	1000MF	20%	80V	
924	*3-311-617-01	REINFORCEMENT, PCB	C370	1-124-748-11	ELECT	22MF	20%	100V	
925	*1-560-242-21	BUS BAR 4P	C380	1-125-488-11	ELECT(BLOCK)	4700MF	20%	80V	
926	1-559-512-11	(AEP,WG)...CORD (WITH CONNECTOR)	C381	1-162-282-11	(WG)...CERAMIC	100PF	10%	50V	
927	Δ 1-569-007-11	(E3)...ADAPTOR, CONVERSION 2P	C401	1-107-169-00	MICA	100PF	5%	500V	
C101	1-107-169-00	(WG)...MICA	C402	1-107-169-00	MICA	100PF	5%	500V	
C102	1-126-059-11	ELECT	C403	1-126-359-11	ELECT	47MF	20%	80V	
C103	1-107-169-00	(WG)...MICA	C404	1-126-359-11	ELECT	47MF	20%	80V	
C104	1-124-915-11	ELECT	C405	1-130-471-00	MYLAR	0.001MF	5%	50V	
C105	1-124-915-11	ELECT	C451	1-107-169-00	MICA	100PF	5%	500V	
C106	1-124-713-11	ELECT	C452	1-107-169-00	MICA	100PF	5%	500V	
C107	1-124-713-11	ELECT	C453	1-126-359-11	ELECT	47MF	20%	80V	
C151	1-107-169-00	(WG)...MICA	C454	1-126-359-11	ELECT	47MF	20%	80V	
C152	1-126-059-11	ELECT	C455	1-130-471-00	MYLAR	0.001MF	5%	50V	
C153	1-107-169-00	(WG)...MICA	C505	1-130-801-11	FILM	3.3MF	10%	250V	
C301	1-107-163-00	MICA	C506	1-130-955-00	FILM	0.01MF	10%	100V	
C302	1-123-380-00	ELECT	C507	1-130-955-00	FILM	0.01MF	10%	100V	
			C508	1-130-955-00	FILM	0.01MF	10%	100V	
			C510	1-124-637-11	ELECT	1000MF	20%	50V	

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description			
C511	1-124-791-11	ELECT	1MF	20%	50V
C512	1-130-955-00	FILM	0.01MF	10%	100V
C601	1-124-927-11	ELECT	4.7MF	20%	50V
C701A	1-106-343-00	MYLAR	0.001MF	10%	100V
C701	1-123-875-11	ELECT	10MF	20%	50V
C702	1-124-478-11	ELECT	100MF	20%	25V
C703	1-136-157-00	FILM	0.022MF	5%	50V
C704	1-124-927-11	ELECT	4.7MF	20%	50V
C705	1-126-024-11	ELECT	220MF	20%	25V
C706	1-124-910-11	ELECT	47MF	20%	50V
C707	1-124-791-11	ELECT	1MF	20%	50V
C751	1-123-875-11	ELECT	10MF	20%	50V
C801	1-130-857-00	FILM	0.047MF	5%	100V
C802	1-130-857-00	FILM	0.047MF	5%	100V
C804	1-106-343-00	(WG)...MYLAR	0.001MF	10%	100V
C805	1-106-343-00	(WG)...MYLAR	0.001MF	10%	100V
C851	1-130-857-00	FILM	0.047MF	5%	100V
C852	1-130-857-00	FILM	0.047MF	5%	100V
C854	1-106-343-00	(WG)...MYLAR	0.001MF	10%	100V
C855	1-106-343-00	(WG)...MYLAR	0.001MF	10%	100V
C901	△.1-161-741-00	CERAMIC	0.001MF	10%	400V
CN001	*1-564-321-00	PIN, CONNECTOR 2P			
CN101	*1-564-518-11	PLUG, CONNECTOR 3P			
CN102	*1-564-519-11	PLUG, CONNECTOR 4P			
CN103	*1-564-519-11	PLUG, CONNECTOR 4P			
CN104	*1-564-104-00	PIN, CONNECTOR 3P			
CN105	*1-564-507-11	PLUG, CONNECTOR 4P			
CN106	*1-564-509-11	PLUG, CONNECTOR 6P			
CN201	*1-564-507-11	PLUG, CONNECTOR 4P			
CN301	*1-564-505-11	PLUG, CONNECTOR 2P			
CN302	*1-564-505-11	PLUG, CONNECTOR 2P			
CN303	*1-564-506-11	PLUG, CONNECTOR 3P			
CN304	*1-564-506-11	PLUG, CONNECTOR 3P			
CN305	*1-564-506-11	PLUG, CONNECTOR 3P			
CN306	*1-564-506-11	PLUG, CONNECTOR 3P			
CN307	*1-564-506-11	PLUG, CONNECTOR 3P			
CN308	*1-564-506-11	PLUG, CONNECTOR 3P			
CN309	*1-564-508-11	PLUG, CONNECTOR 5P			
CN310	*1-564-507-11	PLUG, CONNECTOR 4P			
CN501	*1-564-509-11	PLUG, CONNECTOR 6P			
CN502	*1-564-241-00	PIN, CONNECTOR 4P			
CN503	*1-564-241-00	PIN, CONNECTOR 4P			
CN601	*1-564-505-11	PLUG, CONNECTOR 2P			
CN602	*1-564-505-11	PLUG, CONNECTOR 2P			
CN603	*1-564-506-11	PLUG, CONNECTOR 3P			
CN604	*1-564-507-11	PLUG, CONNECTOR 4P			
CN701	*1-564-505-11	PLUG, CONNECTOR 2P			
CN702	*1-564-508-11	PLUG, CONNECTOR 5P			
CN703	*1-564-508-11	PLUG, CONNECTOR 5P			
CN704	*1-564-508-11	PLUG, CONNECTOR 5P			
CN705	*1-564-509-11	PLUG, CONNECTOR 6P			
CN706	*1-564-506-11	PLUG, CONNECTOR 3P			
CN801	*1-564-241-00	PIN, CONNECTOR 4P			
CN802	*1-564-506-11	PLUG, CONNECTOR 3P			
CN901	*1-564-687-11	(E).....PIN, CONNECTOR 3P			
CN901	*1-565-792-11	(AEP,WG)...PIN, CONNECTOR 2P			
CN902	*1-564-321-00	PIN, CONNECTOR 2P			
CN903	*1-564-321-00	PIN, CONNECTOR 2P			

Ref.No.	Part No.	Description			
CN904	*1-564-321-00	(AEP,WG)...PIN, CONNECTOR 2P			
CN904	*1-564-687-11	(E).....PIN, CONNECTOR 3P			
CN905	*1-564-506-11	(AEP,WG)...PLUG, CONNECTOR 3P			
CN907	*1-569-625-11	(AEP,WG)...SOCKET, CONNECTOR 3P			
D301	8-719-912-20	DIODE 1SS120			
D302	8-719-912-20	DIODE 1SS120			
D303	8-719-200-77	DIODE 10E2N			
D304	8-719-933-41	DIODE HZS6C3L			
D305	8-719-001-33	DIODE UZL-11L1			
D306	8-719-300-04	DIODE SV-04			
D307	8-719-300-04	DIODE SV-04			
D308	8-719-200-77	DIODE 10E2N			
D309	8-719-303-13	DIODE SEL1210W			
D310	8-719-200-77	DIODE 10E2N			
D311	8-719-942-31	DIODE HZ3ALL			
D312	8-719-942-31	DIODE HZ3ALL			
D353	8-719-200-77	DIODE 10E2N			
D354	8-719-933-41	DIODE HZS6C3L			
D355	8-719-001-33	DIODE UZL-11L1			
D356	8-719-300-04	DIODE SV-04			
D357	8-719-300-04	DIODE SV-04			
D358	8-719-200-77	DIODE 10E2N			
D359	8-719-303-13	DIODE SEL1210W			
D360	8-719-200-77	DIODE 10E2N			
D361	8-719-942-31	DIODE HZ3ALL			
D362	8-719-942-31	DIODE HZ3ALL			
D501	8-719-300-49	DIODE CTU-36S			
D502	8-719-300-48	DIODE CTU-36R			
D503	8-719-300-27	DIODE CTU-22S			
D504	8-719-300-25	DIODE CTU-22R			
D505	8-719-511-40	DIODE S1VB40			
D507	8-719-200-77	DIODE 10E2N			
D601	8-719-301-38	DIODE SEL2210S-C			
D602	8-719-303-00	DIODE SEL2510C			
D603	8-719-303-00	DIODE SEL2510C			
D701	8-719-912-20	DIODE 1SS120			
D702	8-719-912-20	DIODE 1SS120			
D703	8-719-912-20	DIODE 1SS120			
D704	8-719-912-20	DIODE 1SS120			
D751	8-719-912-20	DIODE 1SS120			
D752	8-719-912-20	DIODE 1SS120			
D801	8-719-912-20	DIODE 1SS120			
D802	8-719-912-20	DIODE 1SS120			
F1	△.1-532-350-00	(AEP,WG)...FUSE, TIME-LAG			
F2	△.1-532-350-00	(AEP,WG)...FUSE, TIME-LAG			
F901	△.1-532-325-00	(E).....FUSE, TIME-LAG			
F902	△.1-532-325-00	(E).....FUSE, TIME-LAG			
IC101	8-759-604-28	IC M5238L			
IC102	8-759-604-40	IC M5F78M15			
IC103	8-759-604-46	IC M5F79M15			
IC701	8-759-111-68	IC UPC1237HA			
J1	1-580-060-11	RECEPTACLE, CONNECTOR 3P (FIXED IN L)			
J2	1-566-880-21	JACK, PIN 4P (FIXED IN/VARIABLE IN)			
J3	1-580-060-11	RECEPTACLE, CONNECTOR 3P (FIXED IN R)			
L801	*1-422-009-13	COIL, AIR-CORE			
L851	*1-422-009-13	COIL, AIR-CORE			

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description				
Q301	8-759-108-01	TRANSISTOR UPA68HA-M	R101	1-246-545-00	CARBON	1M	5%	1/4W	
Q302	8-729-203-45	TRANSISTOR 2SC3423-0	R102	1-247-713-11	(WG)...CARBON	1K	5%	1/4W	
Q303	8-729-203-45	TRANSISTOR 2SC3423-0	R103	1-249-547-11	CARBON	620	5%	1/4W	
Q304	8-729-699-51	TRANSISTOR 2SA995	R104	1-249-547-11	CARBON	620	5%	1/4W	
Q305	8-729-104-18	TRANSISTOR 2SC3514-Q	R105	1-247-725-11	CARBON	10K	5%	1/4W	
Q306	8-729-201-56	TRANSISTOR 2SK246-GR2	R106	1-247-725-11	CARBON	10K	5%	1/4W	
Q307	8-729-201-56	TRANSISTOR 2SK246-GR2	R107	1-247-725-11	CARBON	10K	5%	1/4W	
Q308	8-729-209-17	TRANSISTOR 2SA1360-0	R108	1-247-725-11	CARBON	10K	5%	1/4W	
Q309	8-729-104-91	TRANSISTOR 2SA1383-Q	R109	1-247-704-11	CARBON	220	5%	1/4W	
Q310	8-729-201-56	TRANSISTOR 2SK246-GR2	R110	1-249-469-11	CARBON	100K	5%	1/4W	
Q311	8-729-104-18	TRANSISTOR 2SC3514-Q	R111	1-247-713-11	(WG)...CARBON	1K	5%	1/4W	
Q312	8-729-209-17	TRANSISTOR 2SA1360-0	R112	1-215-921-51	(AEP2)...METAL OXIDE	4.7K	5%	3W	F
Q313	8-729-203-45	TRANSISTOR 2SC3423-0	R112	1-216-485-11	(EXCEPT AEP2) ...METAL OXIDE	5.6K	5%	3W	F
Q351	8-759-108-01	TRANSISTOR UPA68HA-M	R113	1-215-921-51	(AEP2)...METAL OXIDE	4.7K	5%	3W	F
Q352	8-729-203-45	TRANSISTOR 2SC3423-0	R113	1-216-485-11	(EXCEPT AEP2) ...METAL OXIDE	5.6K	5%	3W	F
Q353	8-729-203-45	TRANSISTOR 2SC3423-0	R114	1-247-237-00	CARBON	750	5%	1/2W	F
Q354	8-729-699-51	TRANSISTOR 2SA995	R151	1-246-545-00	CARBON	1M	5%	1/4W	
Q355	8-729-104-18	TRANSISTOR 2SC3514-Q	R152	1-247-713-11	(WG)...CARBON	1K	5%	1/4W	
Q356	8-729-201-56	TRANSISTOR 2SK246-GR2	R153	1-249-547-11	CARBON	620	5%	1/4W	
Q357	8-729-201-56	TRANSISTOR 2SK246-GR2	R154	1-249-547-11	CARBON	620	5%	1/4W	
Q358	8-729-209-17	TRANSISTOR 2SA1360-0	R155	1-247-725-11	CARBON	10K	5%	1/4W	
Q359	8-729-104-91	TRANSISTOR 2SA1383-Q	R156	1-247-725-11	CARBON	10K	5%	1/4W	
Q360	8-729-201-56	TRANSISTOR 2SK246-GR2	R157	1-247-725-11	CARBON	10K	5%	1/4W	
Q361	8-729-104-18	TRANSISTOR 2SC3514-Q	R158	1-247-725-11	CARBON	10K	5%	1/4W	
Q362	8-729-209-17	TRANSISTOR 2SA1360-0	R159	1-247-704-11	CARBON	220	5%	1/4W	
Q363	8-729-203-45	TRANSISTOR 2SC3423-0	R160	1-249-469-11	CARBON	100K	5%	1/4W	
Q401	8-729-104-18	TRANSISTOR 2SC3514-Q	R161	1-247-713-11	(WG)...CARBON	1K	5%	1/4W	
Q402	8-729-104-91	TRANSISTOR 2SA1383-Q	R201	1-247-718-11	CARBON	2.7K	5%	1/4W	
Q403	8-729-208-72	TRANSISTOR 2SC3298B-Y	R251	1-247-718-11	CARBON	2.7K	5%	1/4W	
Q404	8-729-208-38	TRANSISTOR 2SA1306A-0	R301	1-247-713-11	CARBON	1K	5%	1/4W	
Q405	8-729-303-89	TRANSISTOR 2SC3856-Y	R302	1-249-497-11	CARBON	33K	5%	1/4W	
Q406	8-729-303-86	TRANSISTOR 2SA1492-Y	R303	1-249-725-11	CARBON	150K	5%	1/2W	
Q407	8-729-303-89	TRANSISTOR 2SC3856-Y	R304	1-249-556-11	CARBON	1.5K	5%	1/4W	
Q408	8-729-303-86	TRANSISTOR 2SA1492-Y	R305	1-249-717-11	CARBON	68K	5%	1/2W	
Q409	8-729-303-89	TRANSISTOR 2SC3856-Y	R306	1-247-719-11	CARBON	3.3K	5%	1/4W	
Q410	8-729-303-86	TRANSISTOR 2SA1492-Y	R307	1-247-704-11	CARBON	220	5%	1/4W	
Q451	8-729-104-18	TRANSISTOR 2SC3514-Q	R308	1-247-704-11	CARBON	220	5%	1/4W	
Q452	8-729-104-91	TRANSISTOR 2SA1383-Q	R310	1-249-520-11	CARBON	47	5%	1/4W	
Q453	8-729-208-72	TRANSISTOR 2SC3298B-Y	R311	1-249-520-11	CARBON	47	5%	1/4W	
Q454	8-729-208-38	TRANSISTOR 2SA1306A-0	R312	1-247-721-11	CARBON	4.7K	5%	1/4W	
Q455	8-729-303-89	TRANSISTOR 2SC3856-Y	R313	1-249-556-11	CARBON	1.5K	5%	1/4W	
Q456	8-729-303-86	TRANSISTOR 2SA1492-Y	R314	1-249-784-11	CARBON	180	1%	1/2W	
Q457	8-729-303-89	TRANSISTOR 2SC3856-Y	R315	1-259-698-11	CARBON	8.2K	2%	1W	
Q458	8-729-303-86	TRANSISTOR 2SA1492-Y	R316	△,1-219-022-11	FUSIBLE	100	5%	1/2W	F
Q459	8-729-303-89	TRANSISTOR 2SC3856-Y	R317	1-249-725-11	CARBON	150K	5%	1/2W	
Q460	8-729-303-86	TRANSISTOR 2SA1492-Y	R318	1-249-556-11	CARBON	1.5K	5%	1/4W	
Q601	8-729-281-54	TRANSISTOR 2SC1815-BL	R319	△,1-219-022-11	FUSIBLE	100	5%	1/2W	F
Q701	8-729-184-53	TRANSISTOR 2SC1845-EA	R320	△,1-247-710-11	CARBON	560	5%	1/4W	F
Q702	8-729-108-14	TRANSISTOR 2SA988-F	R321	1-247-719-11	CARBON	3.3K	5%	1/4W	
Q703	8-729-201-56	TRANSISTOR 2SK246-GR2	R322	△,1-247-710-11	CARBON	560	5%	1/4W	F
Q704	8-729-281-52	TRANSISTOR 2SC1815-Y	R323	△,1-219-022-11	FUSIBLE	100	5%	1/2W	F
Q705	8-729-201-53	TRANSISTOR 2SA1015GR	R325	△,1-219-022-11	FUSIBLE	100	5%	1/2W	F
Q706	8-729-201-53	TRANSISTOR 2SA1015GR	R326	1-214-937-00	CARBON	1M	5%	1/2W	
Q707	8-729-140-96	TRANSISTOR 2SD774-34	R327	1-249-597-11	CARBON	75K	5%	1/4W	
Q751	8-729-184-53	TRANSISTOR 2SC1845-EA							
Q752	8-729-108-14	TRANSISTOR 2SA988-F							

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description				
R328	1-247-704-11	CARBON	220	5%	1/4W	
R330	1-249-824-11	CARBON	8.2K	1%	1/2W	
R351	1-247-713-11	CARBON	1K	5%	1/4W	
R352	1-249-497-11	CARBON	33K	5%	1/4W	
R353	1-249-725-11	CARBON	150K	5%	1/2W	
R354	1-249-556-11	CARBON	1.5K	5%	1/4W	
R355	1-249-717-11	CARBON	68K	5%	1/2W	
R356	1-247-719-11	CARBON	3.3K	5%	1/4W	
R357	1-247-704-11	CARBON	220	5%	1/4W	
R358	1-247-704-11	CARBON	220	5%	1/4W	
R360	1-249-520-11	CARBON	47	5%	1/4W	
R361	1-249-520-11	CARBON	47	5%	1/4W	
R362	1-247-721-11	CARBON	4.7K	5%	1/4W	
R363	1-249-556-11	CARBON	1.5K	5%	1/4W	
R364	1-249-784-11	CARBON	180	1%	1/2W	
R365	1-259-698-11	CARBON	8.2K	2%	1W	
R366	△,1-219-022-11	FUSIBLE	100	5%	1/2W	F
R367	1-249-725-11	CARBON	150K	5%	1/2W	
R368	1-249-556-11	CARBON	1.5K	5%	1/4W	
R369	△,1-219-022-11	FUSIBLE	100	5%	1/2W	F
R370	△,1-247-710-11	CARBON	560	5%	1/4W	F
R371	1-247-719-11	CARBON	3.3K	5%	1/4W	
R372	△,1-247-710-11	CARBON	560	5%	1/4W	F
R373	△,1-219-022-11	FUSIBLE	100	5%	1/2W	F
R375	△,1-219-022-11	FUSIBLE	100	5%	1/2W	F
R376	1-214-937-00	CARBON	1M	5%	1/2W	
R377	1-249-597-11	CARBON	75K	5%	1/4W	
R378	1-247-704-11	CARBON	220	5%	1/4W	
R401	△,1-247-240-51	CARBON	1K	5%	1/2W	F
R402	△,1-219-022-11	FUSIBLE	100	5%	1/2W	F
R403	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R404	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R405	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R406	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R407	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R408	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R409	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R410	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R411	1-217-152-00	RES, METAL PLATE	0.33			
R412	1-217-152-00	RES, METAL PLATE	0.33			
R413	1-217-152-00	RES, METAL PLATE	0.33			
R414	1-217-152-00	RES, METAL PLATE	0.33			
R415	1-217-152-00	RES, METAL PLATE	0.33			
R416	1-217-152-00	RES, METAL PLATE	0.33			
R417	1-247-696-11	CARBON	47	5%	1/4W	F
R419	1-247-696-11	CARBON	47	5%	1/4W	F
R421	1-247-696-11	CARBON	47	5%	1/4W	F
R424	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R425	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R451	△,1-247-240-51	CARBON	1K	5%	1/2W	F
R452	△,1-219-022-11	FUSIBLE	100	5%	1/2W	F
R453	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R454	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R455	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R456	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R457	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R458	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F

Ref.No.	Part No.	Description				
R459	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R460	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R461	1-217-152-00	RES, METAL PLATE	0.33			
R462	1-217-152-00	RES, METAL PLATE	0.33			
R463	1-217-152-00	RES, METAL PLATE	0.33			
R464	1-217-152-00	RES, METAL PLATE	0.33			
R465	1-217-152-00	RES, METAL PLATE	0.33			
R466	1-217-152-00	RES, METAL PLATE	0.33			
R467	1-247-696-11	CARBON	47	5%	1/4W	F
R469	1-247-696-11	CARBON	47	5%	1/4W	F
R471	1-247-696-11	CARBON	47	5%	1/4W	F
R474	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R475	△,1-217-997-11	FUSIBLE	10	5%	1/2W	F
R501	1-247-721-11	CARBON	4.7K	5%	1/4W	F
R502	△,1-219-010-11	FUSIBLE	33	5%	1/2W	F
R503	△,1-249-452-11	CARBON	2.7	5%	1/4W	F
R601	1-247-725-11	CARBON	10K	5%	1/4W	F
R602	1-216-433-00	METAL OXIDE	1.2K	5%	1W	F
R701	△,1-212-998-00	FUSIBLE	470	5%	1/2W	F
R701A	1-216-427-00	METAL OXIDE	120	5%	1W	F
R702	△,1-247-721-11	CARBON	4.7K	5%	1/4W	F
R702A	1-216-427-00	METAL OXIDE	120	5%	1W	F
R703	△,1-247-721-11	CARBON	4.7K	5%	1/4W	F
R703A	1-216-427-00	METAL OXIDE	120	5%	1W	F
R704	1-249-497-11	CARBON	33K	5%	1/4W	F
R704A	1-216-427-00	METAL OXIDE	120	5%	1W	F
R705	1-249-497-11	CARBON	33K	5%	1/4W	F
R706	1-249-497-11	CARBON	33K	5%	1/4W	F
R707	1-249-497-11	CARBON	33K	5%	1/4W	F
R708	1-247-719-11	CARBON	3.3K	5%	1/4W	F
R709	1-249-497-11	CARBON	33K	5%	1/4W	F
R710	1-246-531-00	CARBON	270K	5%	1/4W	F
R711	1-215-863-11	METAL OXIDE	100	5%	1W	F
R712	1-249-460-11	CARBON	15K	5%	1/4W	F
R713	1-249-469-11	CARBON	100K	5%	1/4W	F
R714	1-247-725-11	CARBON	10K	5%	1/4W	F
R716	1-249-556-11	CARBON	1.5K	5%	1/4W	F
R717	1-247-887-00	CARBON	220K	5%	1/4W	F
R718	1-247-717-11	CARBON	2.2K	5%	1/4W	F
R719	1-247-725-11	CARBON	10K	5%	1/4W	F
R720	1-249-462-11	CARBON	22K	5%	1/4W	F
R721	1-249-465-11	CARBON	47K	5%	1/4W	F
R722	1-249-465-11	CARBON	47K	5%	1/4W	F
R723	1-249-673-11	CARBON	1K	5%	1/2W	F
R724	1-249-662-11	CARBON	360	5%	1/2W	F
R726	1-249-517-11	CARBON	36	5%	1/4W	F
R728	1-247-721-11	CARBON	4.7K	5%	1/4W	F
R729	1-247-703-11	CARBON	180	5%	1/4W	F
R751	△,1-212-998-00	FUSIBLE	470	5%	1/2W	F
R752	△,1-247-721-11	CARBON	4.7K	5%	1/4W	F
R753	△,1-247-721-11	CARBON	4.7K	5%	1/4W	F
R754	1-249-497-11	CARBON	33K	5%	1/4W	F
R755	1-249-497-11	CARBON	33K	5%	1/4W	F
R756	1-249-497-11	CARBON	33K	5%	1/4W	F
R757	1-249-497-11	CARBON	33K	5%	1/4W	F
R758	1-247-719-11	CARBON	3.3K	5%	1/4W	F

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description
R759	1-249-497-11	CARBON 33K 5% 1/4W
R760	1-247-891-00	CARBON 330K 5% 1/4W
R801	1-247-727-11	CARBON 10 5% 1/2W
R802	1-216-420-11	METAL OXIDE 8.2 5% 5W F
R804	1-247-727-11	(WG)...CARBON 10 5% 1/2W
R805	1-247-727-11	(WG)...CARBON 10 5% 1/2W
R851	1-247-727-11	CARBON 10 5% 1/2W
R852	1-216-420-11	METAL OXIDE 8.2 5% 5W F
R854	1-247-727-11	(WG)...CARBON 10 5% 1/2W
R855	1-247-727-11	(WG)...CARBON 10 5% 1/2W
RT302	1-224-248-XX	RES, ADJ, SOLID 470
RT352	1-224-248-XX	RES, ADJ, SOLID 470
RT401	1-224-550-21	RES, ADJ, SOLID 220
RT451	1-224-550-21	RES, ADJ, SOLID 220
RV201	1-237-849-11	RES, VAR, CARBON 20K (ATTENUATOR L)
RV251	1-237-849-11	RES, VAR, CARBON 20K (ATTENUATOR R)
RY801	1-515-703-11	RELAY
RY802	1-515-703-11	RELAY
RY901	△.1-515-617-11	(EXCEPT E)...RELAY
S1	△.1-554-538-00	SWITCH, PUSH (AC POWER)(1 KEY)
S101	1-516-785-XX	SLIDE SWITCH (OPERATION)
S102	1-516-785-XX	SLIDE SWITCH (INPUT SELECTOR)
S601	1-572-424-11	SWITCH, PUSH (2 KEY)(INPUT)
S701	1-572-425-11	SWITCH, ROTARY (SPEAKERS)
S901	1-572-009-11	(E)...SELECTOR, VOLTAGE
T1	△.1-450-177-11	(E).....TRANSFORMER, POWER
T1	△.1-450-179-11	(AEP1,WG)...TRANSFORMER, POWER
T1	△.1-450-181-11	(AEP2).....TRANSFORMER, POWER
T2	△.1-450-178-11	(AEP1,WG)...TRANSFORMER, POWER
T2	△.1-450-180-11	(AEP2).....TRANSFORMER, POWER
TM901	1-537-102-11	TERMINAL BOARD (SP)
TM902	1-537-102-11	TERMINAL BOARD (SP)

ACCESSORY & PACKING MATERIAL

1-575-952-11	(AEP,WG)...CABLE (WITH CONNECTOR)
3-752-341-11	(AEP,E)...MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE)
3-752-341-41	(AEP,WG)...MANUAL, INSTRUCTION (DUTCH, SWEDISH, ITALIAN)
4-921-404-01	CUSHION
*4-941-754-01	INDIVIDUAL CARTON

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

TA-N80ES

SONY[®] SERVICE MANUAL

AEP Model
E Model

SUPPLEMENT-1

File this supplement with the service manual.

The gold color version is added to the TA-N80ES(AEP model) released lately, and therefore only the added parts are described. For the other parts, see TA-N80ES Service Manual(9-956-025-11).

SECTION 5 EXPLODED VIEWS (Service Manual See page 21~24)

(1) CABINET SECTION (Service Manual See page 21)

<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
1	A-4325-257-A	PANEL ASSY, FRONT	
4	4-942-032-11	KNOB (POWER)	
6	4-933-031-11	KNOB	
7	4-931-926-11	BUTTON (B)	
8	4-933-032-11	KNOB	
10	X-4941-848-1	PANEL (L) ASSY, SIDE	
11	X-4941-849-1	PANEL (R) ASSY, SIDE	
16	4-921-434-41	PLATE, TOP (AEP)	
16	4-921-434-51	PLATE, TOP (G)	

(4) BACK CHASSIS SECTION (Service Manual See page 24)

<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
151	X-4941-860-1	CHASSIS ASSY, MAIN	
157	* 4-933-030-31	PANEL, BACK	
159	* 4-923-873-11	BRACKET, CORD STOPPER	

SECTION 6 ELECTRICAL PARTS LIST (Service Manual See page 26)

<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
D602	8-719-301-52	LED SEL2810A-C (STEREO)	
D603	8-719-301-52	LED SEL2810A-C (MONO)	

TA-N80ES



SONY[®] SERVICE MANUAL

AEP Model
E Model

SUPPLEMENT-2

File this supplement with the service manual.

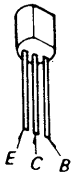
The parts numbers of service parts for the TA-N80ES have been changed. This manual covers the changed parts only. For the other parts, refer to the Service Manual (9-956-025-11) and the Supplement-1 (9-956-025-81).

 : changed portion  : added portion  : deleted portion

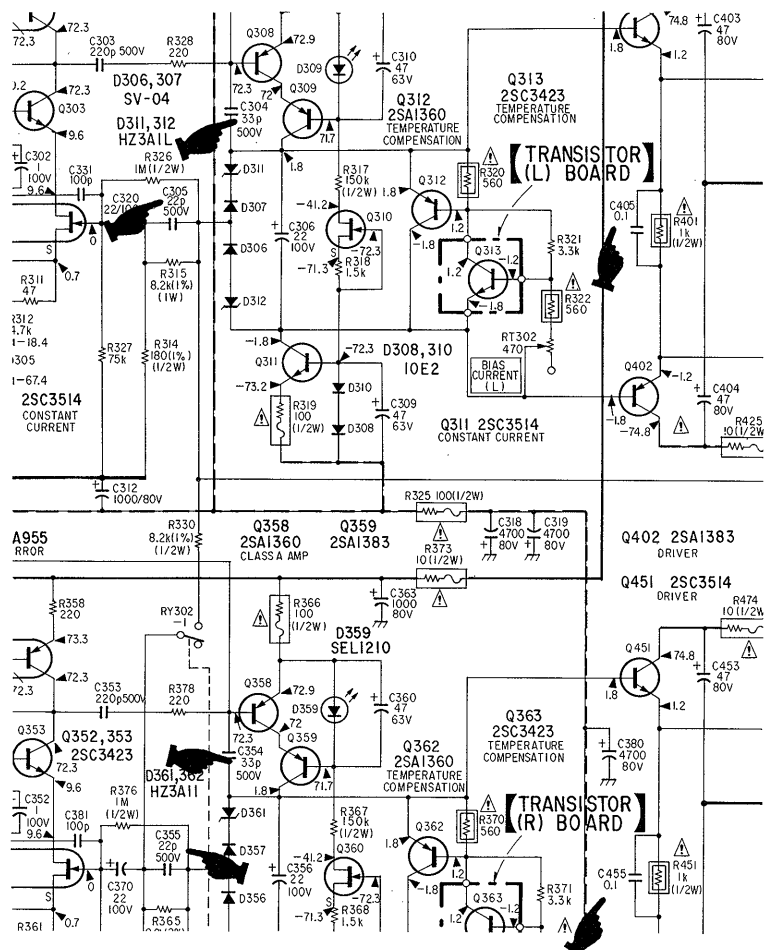
SECTION 4 DIAGRAMS

4-1. SEMICONDUCTOR LEAD LAYOUTS (Service Manual See page 11)

 2SA988-PAFAEA

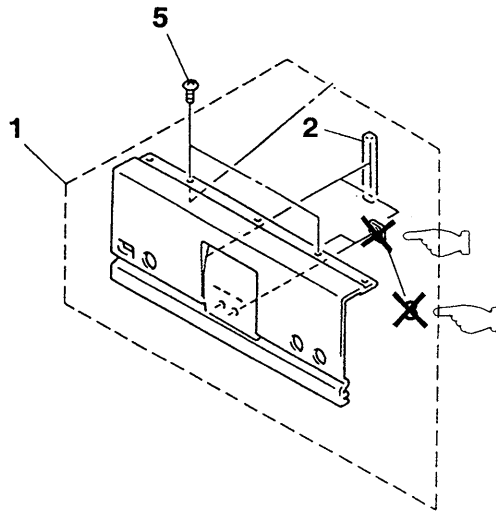


4-3. SCHEMATIC DIAGRAM (Service Manual See page 18) Location B-F, 9-12




SECTION 5 EXPLODED VIEWS

(1) CABINET SECTION (Service Manual See page 21)




<u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>
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	3-4-931-928-01	ESCUTCHEON (C), KNOB	
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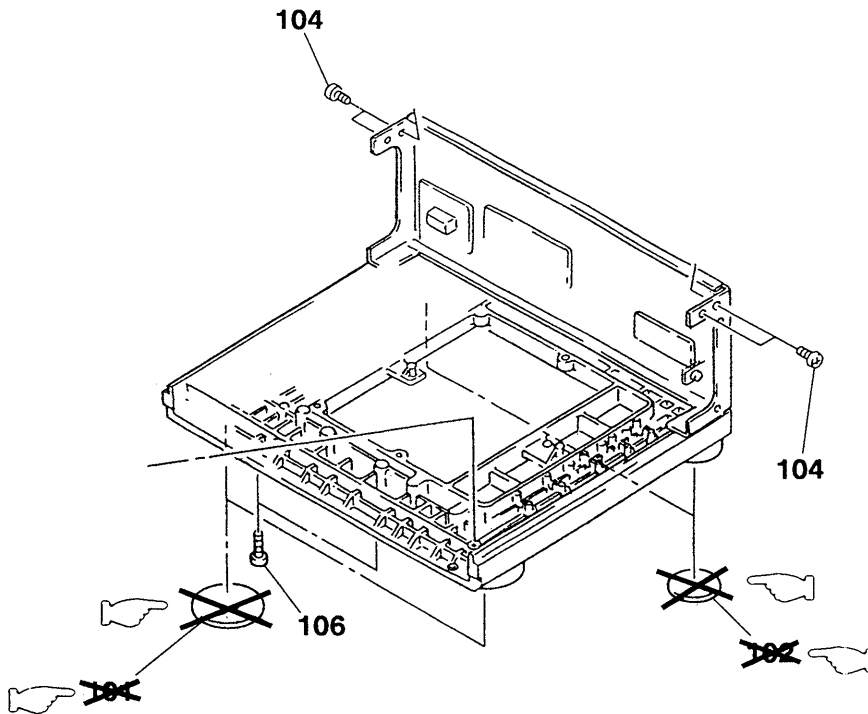
(2) MAIN CHASSIS SECTION (Service Manual See page 22)

<u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>
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	75 7-682-662-09	SCREW + PSW 4×10 (AEP)	
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	918 1-535-139-00	BASE POST (10MM PITCH) 2P	
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(3) FRONT CHASSIS SECTION (Service Manual See page 23)

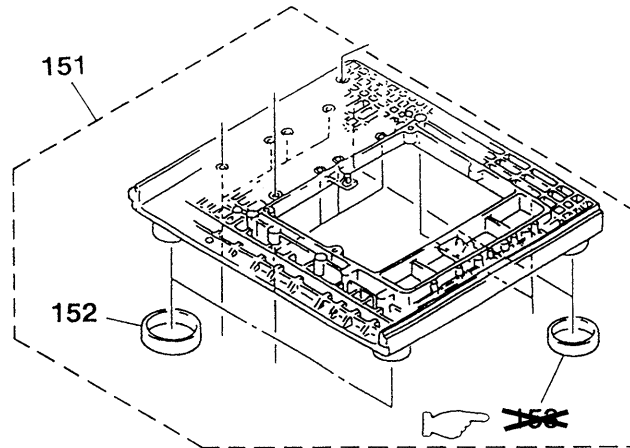


<u>No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>
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	101 4-916-704-11	FOOT	
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	102 4-916-704-01	FOOT	
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(4) BACK CHASSIS SECTION (Service Manual See page 24)



No.	Part No.	Description	Remarks
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	153	4-923-883-02	RING (SMALL-14) ORNAMENTAL, FOOT
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SECTION 6 ELECTRICAL PARTS LIST

Ref.No.	Part No.	Description		
918	1-535-139-00	BASE POST 14MM(10MM)PITCH 2P	} (Service Manual See page 25)	
C304	1-107-159-00	MICA 33PF 5% 500V		
C305	1-107-210-00	MICA 22PF 5% 500V		
C354	1-107-159-00	MICA 33PF 5% 500V		
C355	1-107-210-00	MICA 22PF 5% 500V		
C405	1-136-165-00	FILM 0.1MF 5% 50V		
	C455	1-136-165-00	FILM 0.1MF 5% 50V	} (Service Manual See page 26)
C511	1-124-903-11	ELECT 1MF 20% 50V		
C701	1-124-907-11	ELECT 10MF 20% 50V		
C707	1-124-903-11	ELECT 1MF 20% 50V		
C751	1-124-907-11	ELECT 10MF 20% 50V		
CN001	*1-565-792-11	PIN, CONNECTOR 2P	} (Service Manual See page 27)	
Q702	8-729-108-14	TRANSISTOR 2SA988-PAFAEA		
Q752	8-729-108-14	TRANSISTOR 2SA988-PAFAEA		

TA-N80ES

SONY[®] SERVICE MANUAL

AEP Model
E Model

CORRECTION-1

Correct your service manual as shown below.

____ (Under line) : indicates corrected portion.

Page	INCORRECT			CORRECT		
	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
29	_____	_____	_____	<u>RY301</u>	<u>1-515-614-11</u>	<u>RELAY</u>
	_____	_____	_____	<u>RY302</u>	<u>1-515-614-11</u>	<u>RELAY</u>

(RPC-96018)