

TA-N90ES

SERVICE MANUAL

*US Model
AEP Model*

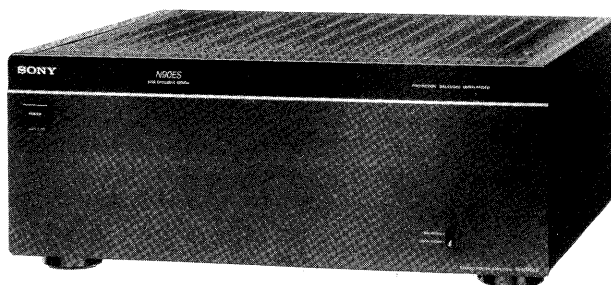


Photo : BLACK

SPECIFICATIONS

System

Super legato linear, pure complementary SEPP power amplifier, powerful power supply

Intermodulation (IM) distortion at rated output 60 Hz : 7 kHz = 4 : 1
0.004%

Residual noise at network A
Less than 35 μ V

Frequency response
1 Hz - 180 kHz $\pm$ 3 dB

S/N (network)
120 dB (A)

Dynamic power

1 ohm: 400 W
2 ohms: 640 W
4 ohms: 440 W
6 ohms: 320 W
8 ohms: 240 W

Power bandwidth (IHF)

4 ohms, THD 0.12%: 10 Hz - 30 kHz
8 ohms, THD 0.12%: 10 Hz - 50 kHz

Dynamic headroom (*78 IHF)

4 ohms: 2.8 dB
8 ohms: 1.6 dB

Damping factor

8 ohms, 1 kHz: 100

Input

Input sensitivity/impedance

UNBALANCED: 1 V, 50 kilohms
BALANCED: 0.5 V, 100 kilohms

Output

Continuous RMS power output (both channels driven simultaneously)

4 ohms 20 Hz - 20 kHz, THD 0.015%: 140 + 140 W
8 ohms 20 Hz - 20 kHz, THD 0.01%: 100 + 100 W

Total harmonic distortion

4 ohms, at 10 watt output: 0.004%
8 ohms, at 10 watt output: 0.0018%

General

Power requirements

European countries model: 220 - 230 V AC, 50/60 Hz
U.S.A. model: 120 V AC, 60 Hz

Power consumption

European countries model: 390 W
U.S.A. model: 330 W

Dimensions (approx.) (w/h/d)

430 x 175 x 440 mm (17 x 7 x 17 ³/₈ inches)
incl. projecting parts and controls

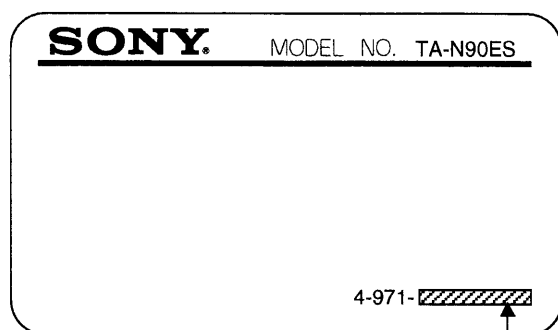
Mass (approx.)

European countries model: 21.0 kg (46 lb 5 oz)
U.S.A. model: 21.8 kg (48 lb 1 oz)

Design and specifications are subject to change without notice.

STEREO POWER AMPLIFIER
SONY®

— **MODEL IDENTIFICATION** —
(Specification Label)



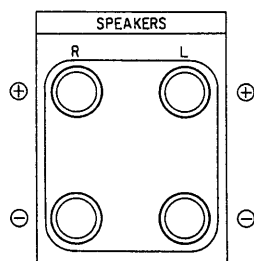
US model : 665-□□
AEP1, CE3 model : 663-□□
German model : 664-□□

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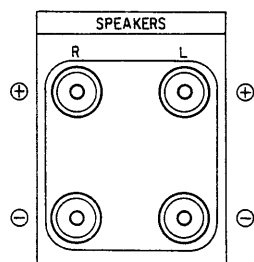
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— **SPEAKERS TERMINAL** —

CE3 model :



Other model :



Note :

When looking over schematic diagrams and printed wiring boards of the set, see the speaker terminal of the back panel to judge which kind of type of it.

SAFETY CHECK-OUT

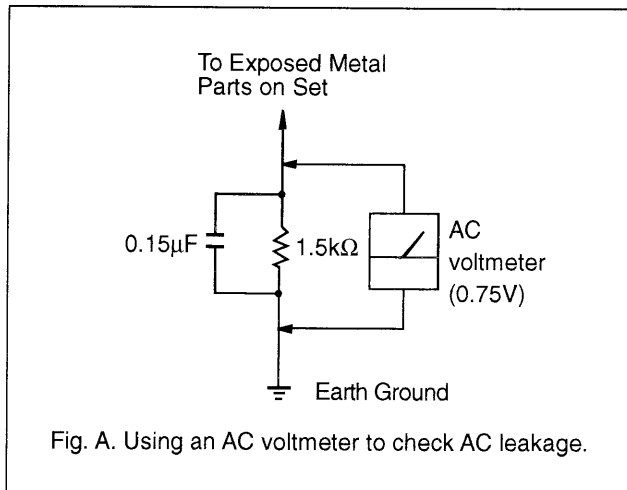
After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)



SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK $\triangle$ OR DOTTED LINE WITH MARK $\triangle$ 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.

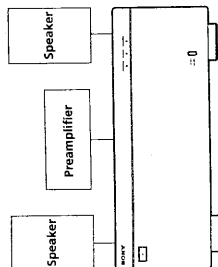
SECTION 1 GENERAL

This section is extracted from instruction manual.

Hooking Up the System

Overview

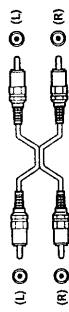
This section describes how to hook up the power amplifier to a preamplifier and speakers. Hook up your preamplifier and speakers according to the connection diagrams that follow.



What cords will I need?

Depending on whether the preamplifier has balanced output jacks or not, use either of the two following ways to connect the power amplifier to a preamplifier:

- (1) Use an audio connecting cord (not supplied) to connect the power amplifier to a preamplifier.



- (2) Use two balanced cables (equivalent to Canon XLR-3; contact your dealer) when connecting a preamplifier with balanced output jacks.

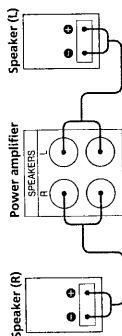
Use one speaker cord (not supplied) for each speaker for speaker connections.



Hookup procedure

- Turn off the power to all components before making any connections.
- Do not connect the AC power cords until all connections are completed.
- Be sure to make connections firmly to prevent hum and noise.
- When connecting an audio cord, be sure to connect the R (right) and L (left) connectors of the power amplifier to the R and L connectors of the other equipment.

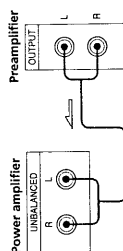
Speakers



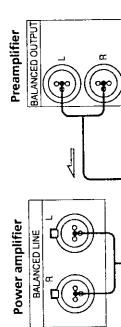
Preamplifier

You can select either an unbalanced or balanced connection.

Unbalanced connection



Balanced connection



Connection assignment of balanced cables for European model



Connection assignment of balanced cables for U.S.A. model



Connecting the AC power cord

Connect the AC power cords from this power amplifier and the preamplifier to a wall outlet.

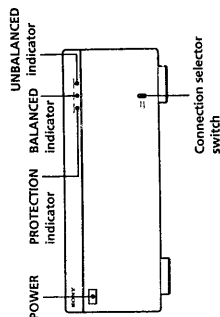
Where do I go next?

Now you're ready to use your power amplifier. First, turn on the preamplifier, then the power amplifier.

Listening to a Program Source

This section describes how to listen to a program source.

Before you begin, make sure you have connected the power amplifier to a preamplifier and speakers correctly and firmly as indicated on page 3.



- 1 Turn on the preamplifier.
- 2 Press POWER to turn on the power amplifier. The PROTECTION indicator flashes for about 9 seconds, then turns off.
- 3 Select either BALANCED or UNBALANCED with the connection selector switch, depending on the connection of the preamplifier. The BALANCED or UNBALANCED indicator will light.
- 4 Select the program source through the preamplifier.
- 5 Start playing the program source.

Note

While the PROTECTION indicator is flashing, the built-in muting circuit is activating. If the indicator lights and you cannot hear the speaker output while a program source is playing, an error has occurred. If this happens, disconnect the AC power cord and check the preamplifier, speakers and connections.

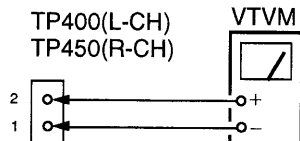
SECTION 2 ELECTRICAL ADJUSTMENTS

Note :

1. DC BIAS adjustments should be made one minute after the POWER switch is turned on (POWER ON).
2. After replacing the power transistors, DC BIAS adjustments should be made.

DC Bias Adjustment (with no signal input)

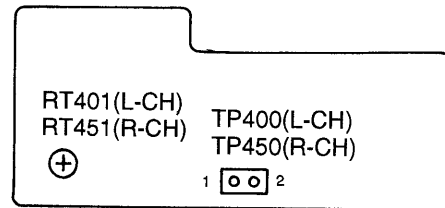
Procedure :



	Adjustment Part	Reading on VTVM
L-CH	RT401	90mV $\pm$ 10mV
R-CH	RT451	90mV $\pm$ 10mV

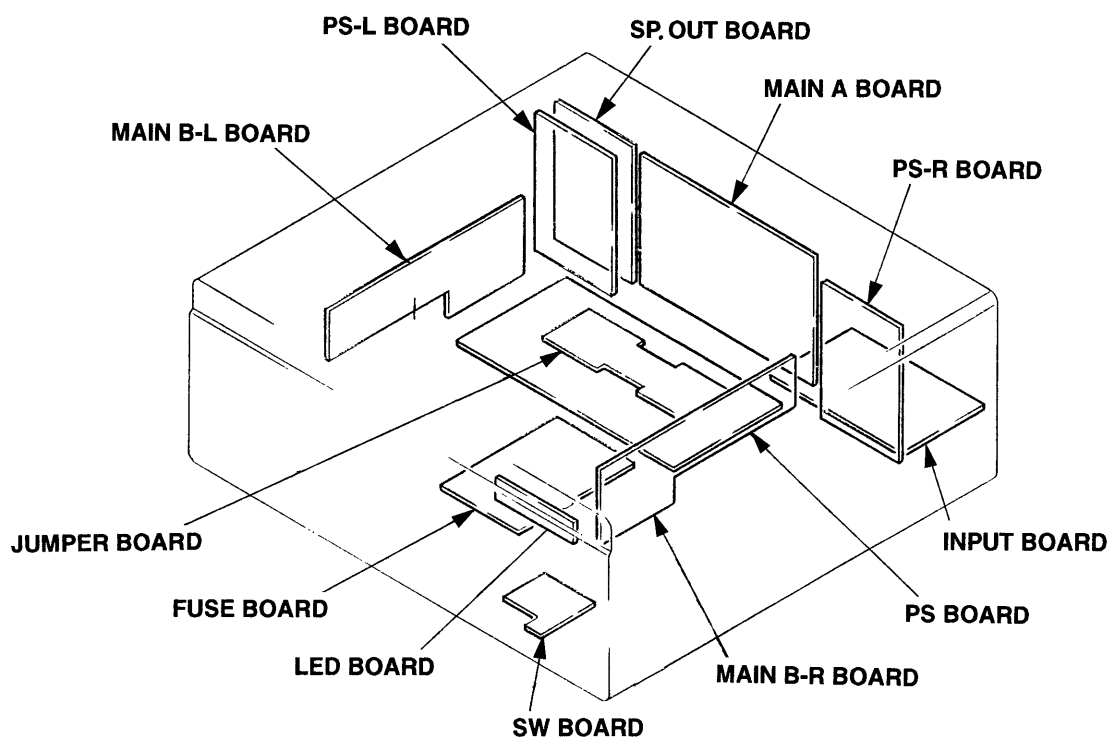
Adjustment Location

L-CH : MAIN B-L BOARD (COMPONENT SIDE)
R-CH : MAIN B-R BOARD (COMPONENT SIDE)

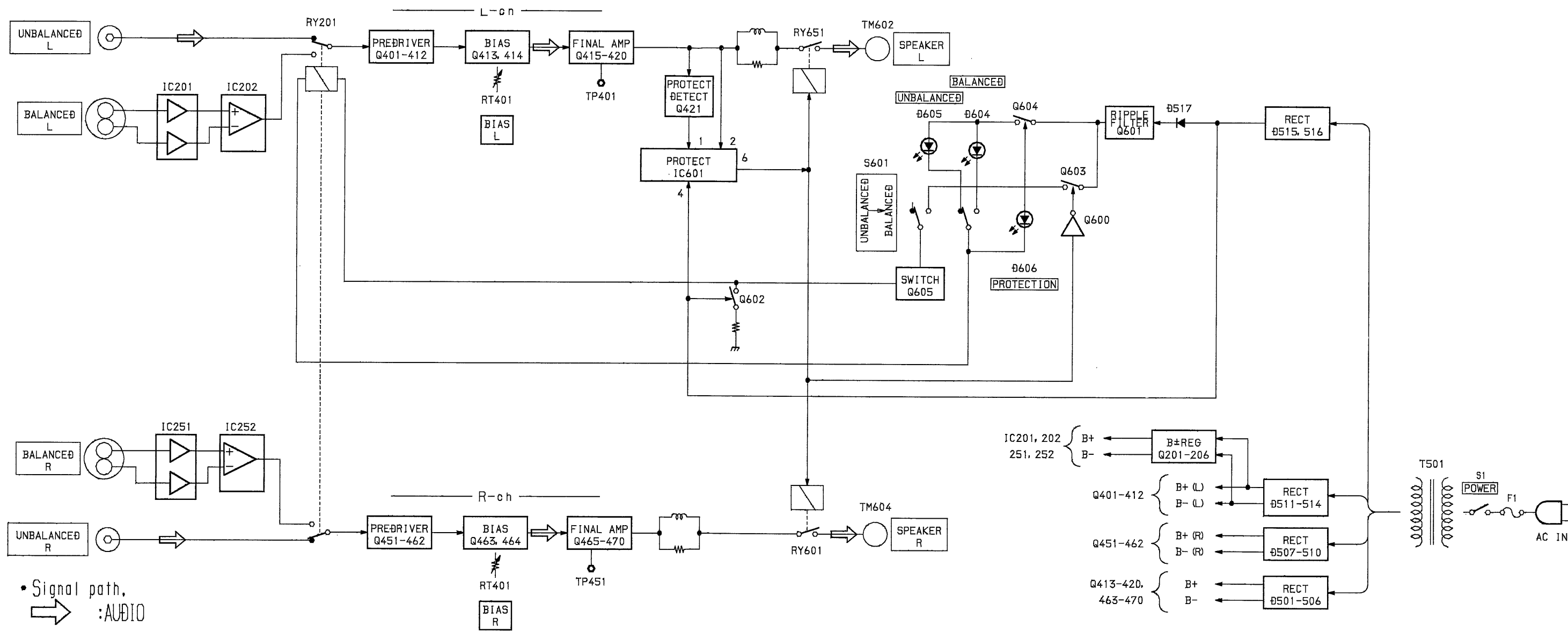


SECTION 3 DIAGRAMS

3-1. CIRCUIT BOARDS LOCATION



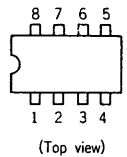
3-2. BLOCK DIAGRAM



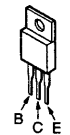
09

3-3. SEMICONDUCTOR LEAD LAYOUTS

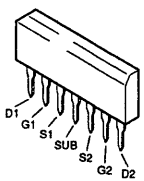
OPA2604AP
OPA604AP



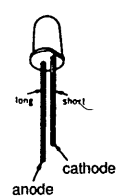
2SA1383
2SC3514
2SJ313-Y



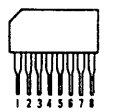
2SK389-GR



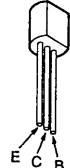
SEL1210A



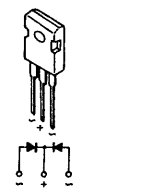
μ PC1237HA



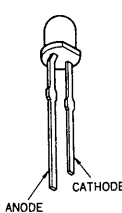
2SA988-PAFAEA



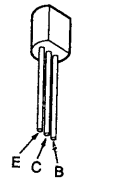
C25P20F
C25P20FR



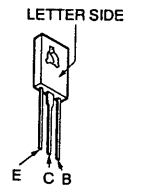
SEL2810A
SEL6210S-TH10



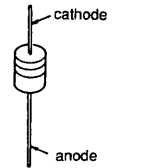
2SA1015-GR



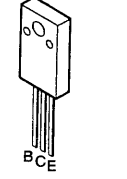
2SC2682-QPE



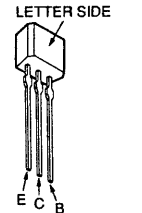
HZS4ALL
HZS6C3L
UZL-11H1



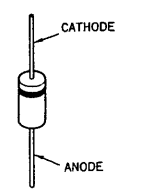
2SA1142-QPE



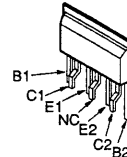
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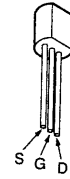
1N4148M
10E2



2SA1349-GRBL



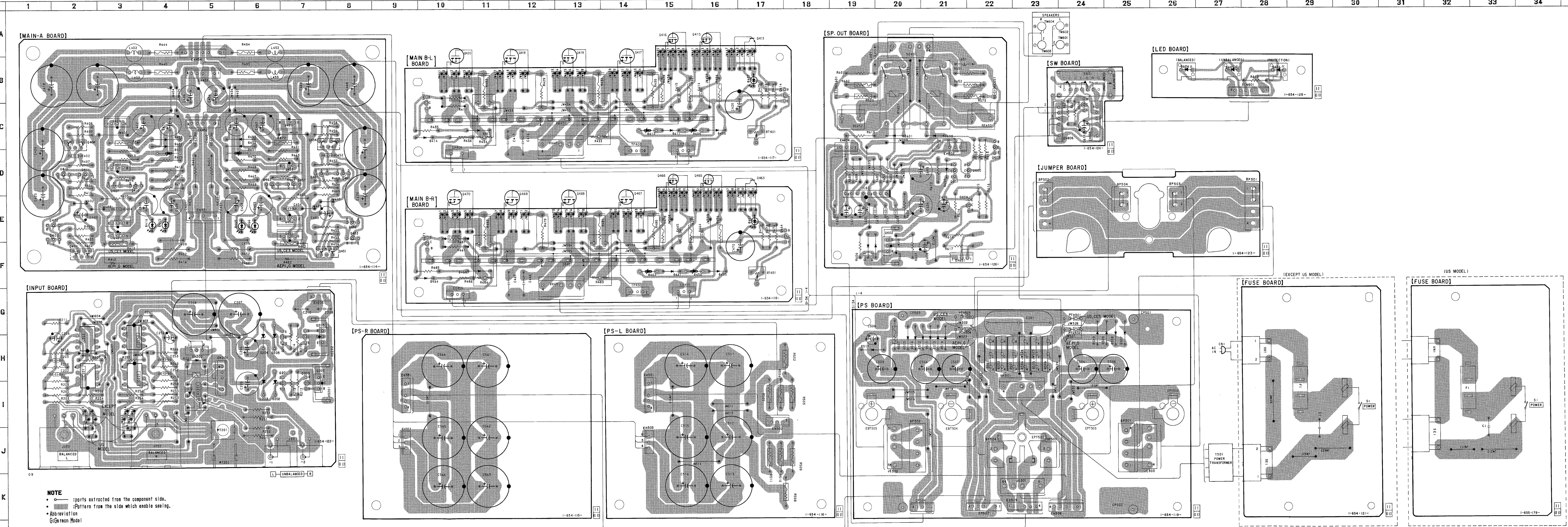
2SK246-GR3



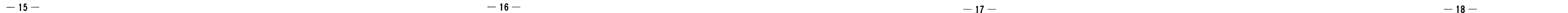
3-4. PRINTED WIRING BOARD
•See page 5 for Circuit Boards Location and see page 8 for Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D201	H-5	IC252	H-3
D202	I-6	IC601	D-19
D203	I-6		
D204	H-6	Q201	H-7
D205	H-6	Q202	H-7
D401	D-4	Q203	H-7
D402	C-4	Q204	H-7
D403	C-4	Q205	H-7
D405	C-16	Q206	H-7
D406	C-16	Q401	F-2
D407	B-17	Q402	E-1
D411	C-15	Q403	E-1
D412	C-15	Q404	C-2
D413	C-11	Q405	E-3
D414	C-10	Q406	E-3
D415	E-4	Q407	D-3
D416	E-4	Q408	D-3
D451	D-6	Q409	C-3
D452	C-6	Q410	D-2
D453	C-6	Q411	D-2
D455	F-16	Q412	D-3
D456	F-16	Q413	A-17
D457	E-17	Q414	B-18
D461	F-15	Q415	A-16
D462	F-15	Q416	A-15
D463	F-11	Q417	A-14
D464	F-10	Q418	A-12
D465	E-6	Q419	A-13
D466	E-6	Q420	A-10
D501	H-22	Q421	B-10
D502	H-22	Q451	F-7
D503	H-22	Q452	E-8
D504	H-23	Q453	E-8
D505	H-23	Q454	C-8
D506	H-23	Q455	E-7
D507	H-25	Q456	E-7
D508	H-25	Q457	D-7
D509	H-24	Q458	D-7
D510	H-24	Q459	C-7
D511	H-21	Q460	D-8
D512	H-20	Q461	D-7
D513	H-21	Q462	D-6
D514	H-21	Q463	D-17
D515	H-20	Q464	E-18
D516	H-20	Q465	D-16
D517	H-19	Q466	D-15
D600	D-21	Q467	E-14
D601	C-20	Q468	E-12
D602	F-19	Q469	E-13
D603	F-19	Q470	E-10
D604	B-26	Q471	E-10
D605	B-27	Q600	D-22
D606	B-28	Q601	D-21
D608	C-21	Q602	F-20
		Q603	D-22
IC201	H-2	Q604	E-21
IC202	H-2	Q605	C-24
IC251	H-3		



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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SECTION 4 EXPLODED VIEWS

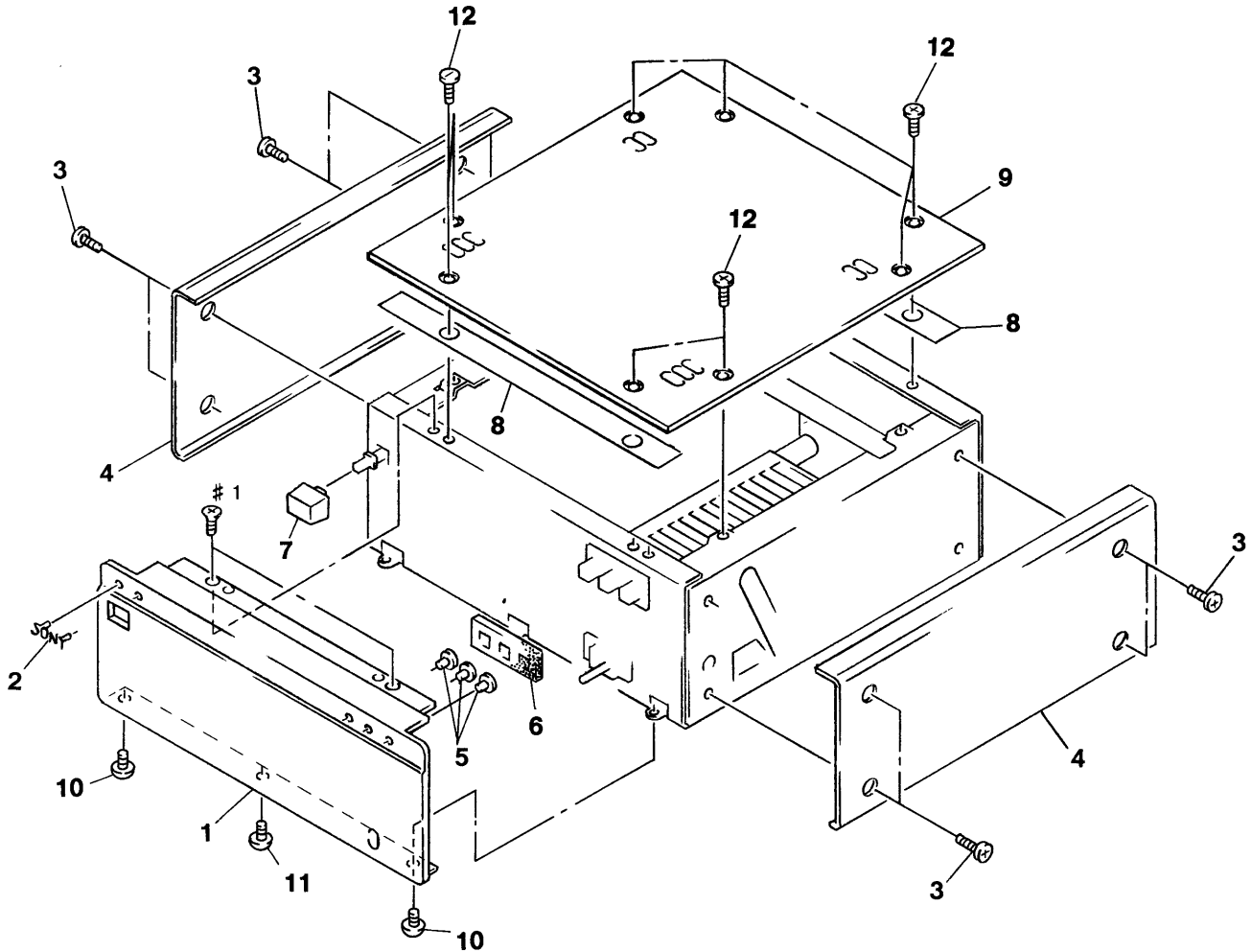
NOTE:

- Items marked “ * ” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.

- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
G : German model

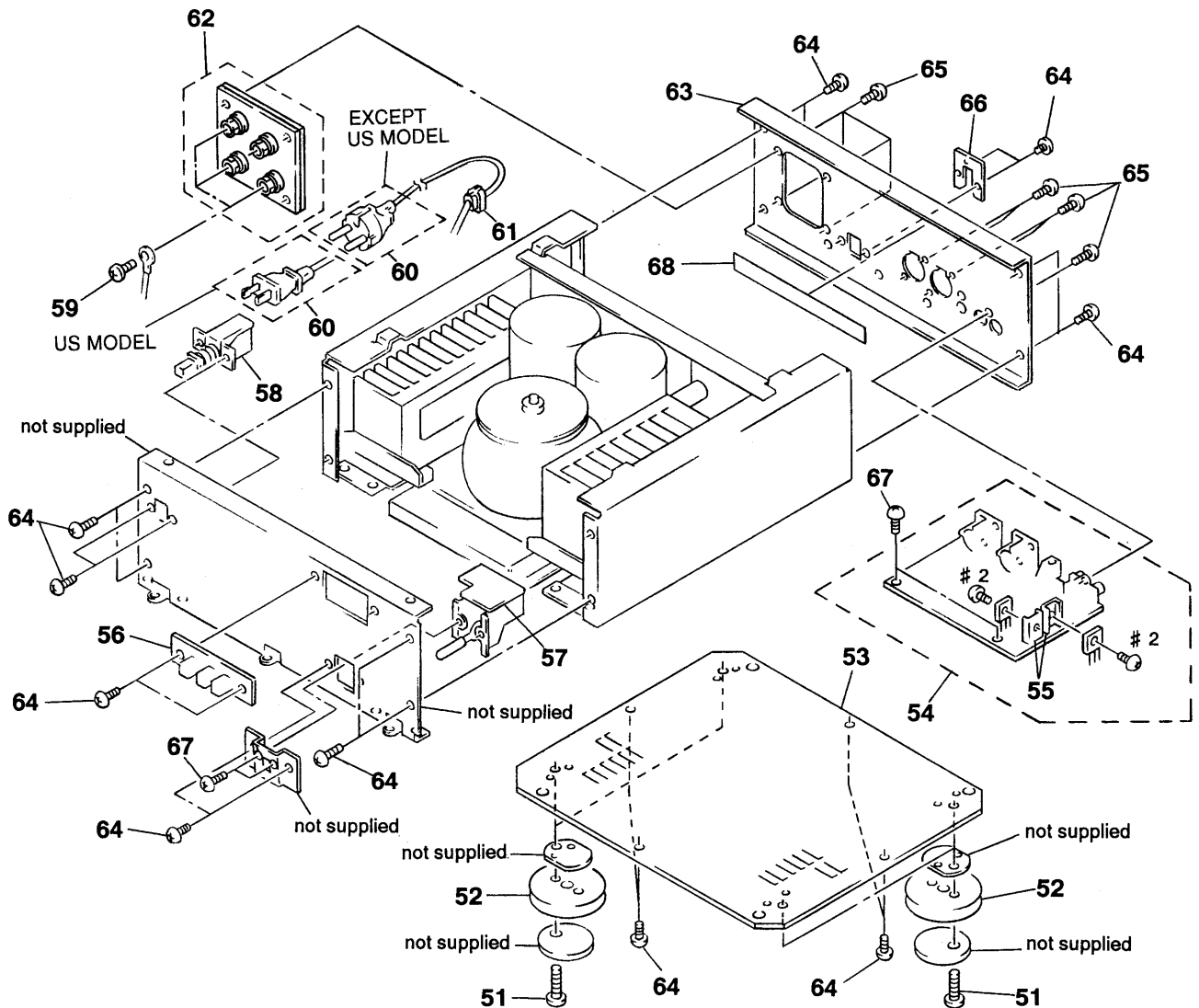
The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

4-1. CABINET SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-969-331-01	PANEL, FRONT (US, AEP1, CE3, G(BLACK))		7	4-942-032-01	KNOB (POWER) (US, AEP1, CE3, G(BLACK))	
1	4-969-331-11	PANEL, FRONT (G(GOLD))		7	4-942-032-11	KNOB (POWER) (G(GOLD))	
2	4-942-568-01	EMBLEM (NO. 5), SONY (US, AEP1, CE3, G(BLACK))		8	4-969-347-01	CUSHION	
2	4-942-568-21	EMBLEM (NO. 5), SONY (G(GOLD))		* 9	4-969-333-01	BOARD, TOP (US, AEP1, CE3, G(BLACK))	
3	4-924-242-11	SCREW (M3X6), FLAT HEAD (US, AEP1, CE3, G(BLACK))		* 9	4-969-333-11	BOARD, TOP (G(GOLD))	
3	4-924-242-61	SCREW (M3X6), FLAT HEAD (G(GOLD))		10	4-967-961-01	SCREW (3X8) (SPECIAL)	
* 4	4-969-332-01	PANEL, SIDE (US, AEP1, CE3, G(BLACK))		11	3-704-515-41	SCREW (BV/RING)	
* 4	4-969-332-11	PANEL, SIDE (G(GOLD))		12	4-921-439-01	SCREW (M3X8), FLAT HEAD (US, AEP1, CE3, G(BLACK))	
5	4-969-325-01	LENS, LED		12	4-921-439-11	SCREW (M3X8), FLAT HEAD (G(GOLD))	
6	4-971-098-01	PLATE, LIGHT INTERCEPTION (US, AEP1, CE3, G(BLACK))					

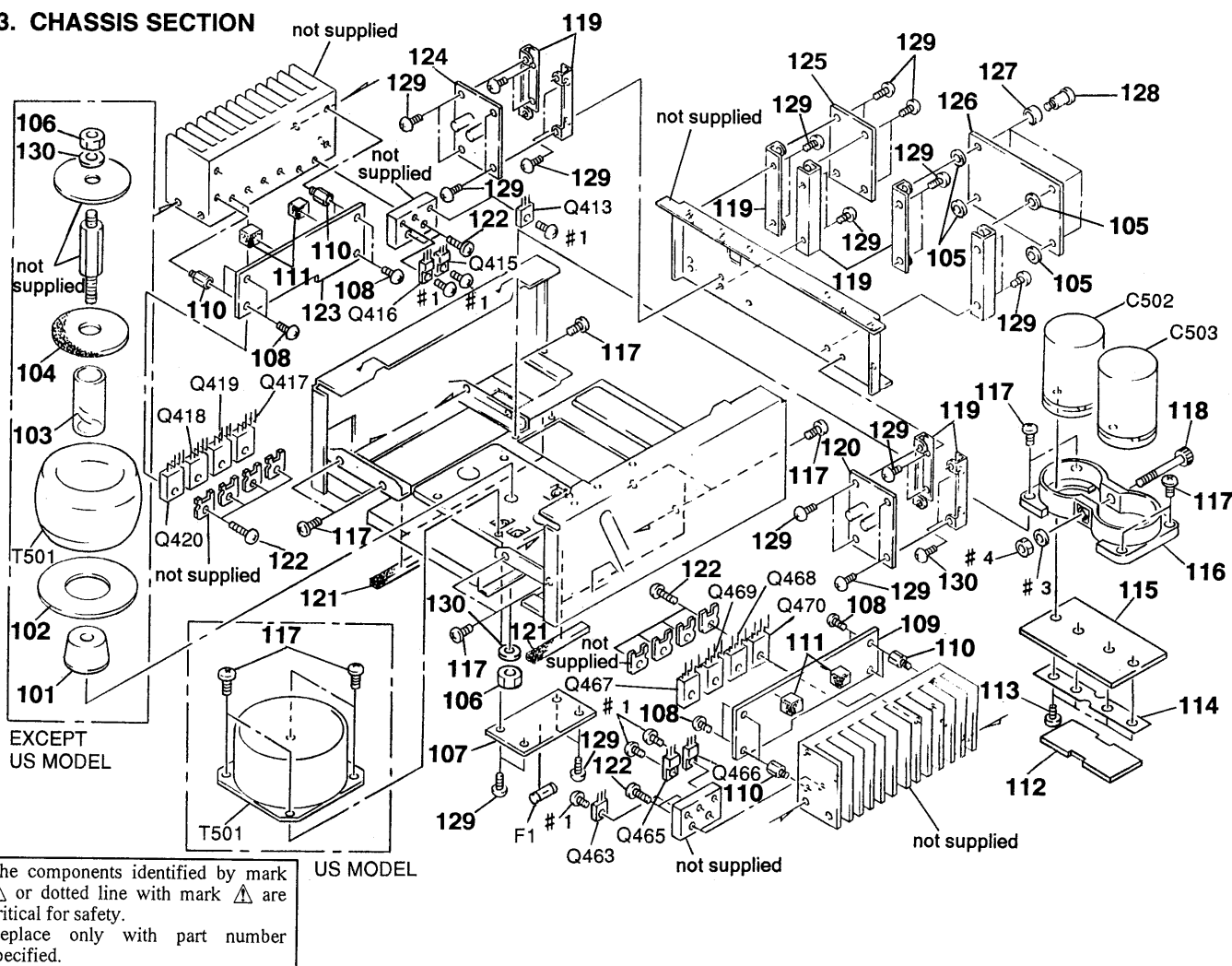
4-2. FRONT AND BACK SECTION



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

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
51	4-968-979-01	SCREW (4X20), +B		61	2-352-626-01	BUSHING, CORD (AEP1, CE3, G)	
52	4-970-487-01	FOOT (F50180S)		61	4-916-783-01	BUSHING, CORD (US)	
* 53	X-4945-489-2	PLATE ASSY, BOTTOM		* 62	1-537-800-11	TERMINAL BOARD (SP) (US, AEP1, G)	
* 54	A-4371-760-A	INPUT BOARD, COMPLETE (AEP1, CE3, G)		62	1-537-800-21	TERMINAL BOARD (SP) (CE3)	
* 54	A-4371-761-A	INPUT BOARD, COMPLETE (US)		* 63	4-969-337-01	PANEL, BACK (AEP1, CE3, G)	
* 55	4-861-002-00	HEAT SINK		* 63	4-969-337-11	PANEL, BACK (US)	
* 56	1-654-125-11	LED BOARD		64	4-967-961-01	SCREW (3X8) (SPECIAL)	
* 57	1-654-124-11	SW BOARD		65	4-968-977-11	SCREW (3X10), +BVTP	
$\triangle$ 58	1-554-538-00	SWITCH, PUSH (AC POWER) (1 KEY)		* 66	4-923-873-01	BRACKET, CORD STOPPER	
59	4-967-960-01	SCREW (4X8)		67	4-967-959-01	SCREW (3X6)	
$\triangle$ 60	1-559-479-11	CORD, POWER (US)		68	4-971-316-11	DAMPER	
$\triangle$ 60	1-575-953-11	CORD, POWER (AEP1, CE3, G)					

4-3. CHASSIS SECTION



Ref. No.	Part No.	Description
* 101	4-971-103-01	HOLDER (DT) (AEP1, CE3, G)
102	4-971-104-01	CUSHION (DT2) (AEP1, CE3, G)
* 103	4-971-105-01	CUSHION (DIA. 22) (AEP1, CE3, G)
104	4-971-101-01	CUSHION (DT1) (AEP1, CE3, G)
105	4-971-099-01	WASHER (P)
106	4-960-914-01	NUT (M10) (AEP1, CE3, G)
* 107	1-654-121-11	FUSE BOARD (AEP1, CE3, G)
* 107	1-655-179-11	FUSE BOARD (US)
108	4-967-959-01	SCREW (3X6)
* 109	A-4371-750-A	MAIN B-R BOARD, COMPLETE
* 110	4-969-349-01	BOSS (H)
111	4-971-108-01	CUSHION (H)
* 112	1-654-123-11	JAMPER BOARD
* 113	4-931-964-01	SCREW (M4X6)
* 114	4-969-346-01	PLATE, GROUND
* 115	A-4371-751-A	PS BOARD, COMPLETE (AEP1, G)
* 115	A-4371-752-A	PS BOARD, COMPLETE (CE3)
* 115	A-4371-753-A	PS BOARD, COMPLETE (US)
* 116	4-969-342-01	HOLDER (C)
117	4-967-960-01	SCREW (4X8)
118	4-971-106-01	BOLT (M5), HEXAGON HOLE
* 119	4-969-344-01	HOLDER (P)
* 120	1-654-115-11	PS-R BOARD
* 121	4-971-317-01	CUSHION (C)
122	4-956-589-01	SCREW (3X14), +B(COPPER PLATING)
* 123	A-4371-749-A	MAIN B-L BOARD, COMPLETE
* 124	1-654-116-11	PS-L BOARD
* 125	A-4371-758-A	SP. OUT BOARD, COMPLETE
* 126	A-4371-743-A	MAIN-A BOARD, COMPLETE (AEP1)

Remark	Ref. No.	Part No.	Description	Remark
	* 126	A-4371-744-A	MAIN-A BOARD, COMPLETE (CE3)	
	* 126	A-4371-745-A	MAIN-A BOARD, COMPLETE (G)	
	* 126	A-4371-746-A	MAIN-A BOARD, COMPLETE (US)	
	127	4-969-896-01	SPACER	
	128	4-971-720-01	SCREW, (+) STEP	
	129	4-967-961-01	SCREW (3X8) (SPECIAL)	
	130	3-376-862-01	WASHER	
	C502	1-110-496-11	CAP, ELECT 18000uF	
	C503	1-110-496-11	CAP, ELECT 18000uF	
	$\triangle$ F1	1-532-299-00	FUSE, TIME-LAG (T5A, 250) (AEP1, CE3, G)	
	$\triangle$ F1	1-532-749-11	FUSE, GLASS TUBE (8A, 125V) (US)	
	Q413	8-729-203-45	TRANSISTOR 2SC3423-0	
	Q415	8-729-018-19	TRANSISTOR 2SK2013-Y	
	Q416	8-729-018-21	TRANSISTOR 2SJ313-Y	
	Q417	8-729-018-11	TRANSISTOR 2SK1530A-Y	
	Q418	8-729-018-11	TRANSISTOR 2SK1530A-Y	
	Q419	8-729-018-13	TRANSISTOR 2SJ201A-Y	
	Q420	8-729-018-13	TRANSISTOR 2SJ201A-Y	
	Q463	8-729-203-45	TRANSISTOR 2SC3423-0	
	Q465	8-729-018-19	TRANSISTOR 2SK2013-Y	
	Q466	8-729-018-21	TRANSISTOR 2SJ313-Y	
	Q467	8-729-018-11	TRANSISTOR 2SK1530A-Y	
	Q468	8-729-018-11	TRANSISTOR 2SK1530A-Y	
	Q469	8-729-018-13	TRANSISTOR 2SJ201A-Y	
	Q470	8-729-018-13	TRANSISTOR 2SJ201A-Y	
	$\triangle$ T501	1-427-646-11	TRANSFORMER, POWER (AEP1, CE3, G)	
	$\triangle$ T501	1-427-647-11	TRANSFORMER, POWER (US)	

FUSE

INPUT

SECTION 5

ELECTRICAL PARTS LIST

NOTE:

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

When indicating parts by reference number, please include the board name.

- 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.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts Example:
KNOB, BALANCE (WHITE) . . . (RED)

↑

Parts color

↑

Cabinet's color
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

- RESISTORS
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F : nonflammable
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA...: μ PA..., uPB...: μ PB...,
uPC...: μ PC..., uPD...: μ PD...
- CAPACITORS
uF : μ F
- COILS
uH : μ H
- Abbreviation
G : German model

Ref.No.	Part No.	Description	Remark		
*	1-654-121-11	FUSE BOARD (AEP1, CE3, G) *****			
*	1-655-179-11	FUSE BOARD (US) *****			
	1-533-183-11	HOLDER, FUSE < CAPACITOR >			
C1	1-161-742-00	CERAMIC < FUSE >	0.0022uF	20%	400V
 F1	1-532-299-00	FUSE, TIME-LAG (T5AL, 250V) (AEP1, CE3, G)			
 F1	1-532-749-11	FUSE, GLASS TUBE (8A, 125V) (US) < CONNECTOR >			
SE1	1-580-614-21	PIN, CONNECTOR 2P			
* VH1	1-568-226-11	PIN, CONNECTOR 2P			

*	A-4371-760-A	INPUT BOARD, COMPLETE (AEP1, CE3, G) *****			
*	A-4371-761-A	INPUT BOARD, COMPLETE (US) *****			
	4-861-002-00	HEAT SINK (HS201, 202)			
*	4-946-336-01	BRACKET (GROUND) (MT202)			
	7-682-548-09	SCREW (3X8) < CAPACITOR >			
C202	1-107-590-11	CERAMIC	11PF	5%	500V
C203	1-107-590-11	CERAMIC	11PF	5%	500V
C204	1-124-927-11	ELECT	4.7uF	20%	100V
C205	1-126-025-11	ELECT	330uF	20%	25V
C206	1-126-025-11	ELECT	330uF	20%	25V
C207	1-124-922-11	ELECT	1000uF	20%	63V
C208	1-124-922-11	ELECT	1000uF	20%	63V
C209	1-164-159-11	CERAMIC	0.1uF		50V
C210	1-164-159-11	CERAMIC	0.1uF		50V
C252	1-107-590-11	CERAMIC	11PF	5%	500V
C253	1-107-590-11	CERAMIC	11PF	5%	500V
C254	1-124-927-11	ELECT	4.7uF	20%	100V

Ref.No.	Part No.	Description	Remark			
< DIODE >						
D201	8-719-987-63	DIODE	1N4148M			
D202	8-719-001-51	DIODE	UZL-11H1			
D203	8-719-001-51	DIODE	UZL-11H1			
D204	8-719-001-51	DIODE	UZL-11H1			
D205	8-719-001-51	DIODE	UZL-11H1			
< CONNECTOR >						
EH201	1-691-766-11	PLUG (MICRO CONNECTOR)	4P			
* EH202	1-564-506-11	PLUG, CONNECTOR	3P			
* EH203	1-564-506-11	PLUG, CONNECTOR	3P			
< IC >						
IC201	8-759-259-12	IC	OPA2604AP			
IC202	8-759-259-11	IC	OPA604AP			
IC251	8-759-259-12	IC	OPA2604AP			
IC252	8-759-259-11	IC	OPA604AP			
< JACK >						
J201	1-568-250-21	JACK, PIN 2P (UNBALANCED)				
J202	1-766-803-11	CONNECTOR (CANON) (BALANCED L)				
J252	1-766-803-11	CONNECTOR (CANON) (BALANCED R)				
< TRANSISTOR >						
Q201	8-729-202-67	TRANSISTOR	2SK246-GR3			
Q202	8-729-141-05	TRANSISTOR	2SC2682-QPE			
Q203	8-729-119-78	TRANSISTOR	2SC403SP-51			
Q204	8-729-202-67	TRANSISTOR	2SK246-GR3			
Q205	8-729-141-06	TRANSISTOR	2SA1142-QPE			
Q206	8-729-201-53	TRANSISTOR	2SA1015-GR			
< RESISTOR >						
R201	1-214-937-00	METAL	1M	1%	1/2W	
R202	1-247-713-11	CARBON	1K	5%	1/4W	F
R203	1-247-713-11	CARBON	1K	5%	1/4W	F
R204	1-249-465-11	CARBON	47K	5%	1/4W	
R205	1-247-713-11	CARBON	1K	5%	1/4W	F
R206	1-249-465-11	CARBON	47K	5%	1/4W	
R207	1-247-725-11	CARBON	10K	5%	1/4W	F
R208	1-247-725-11	CARBON	10K	5%	1/4W	F
R209	1-247-725-11	CARBON	10K	5%	1/4W	F
R210	1-247-725-11	CARBON	10K	5%	1/4W	F

INPUT

JUMPER

LED

MAIN-A

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R211	1-247-704-11	CARBON	220 5% 1/4W F	*	A-4371-743-A	MAIN-A BOARD, COMPLETE (AEP1)	
R212	1-247-717-11	CARBON	2.2K 5% 1/4W F			*****	
R213	1-249-556-11	CARBON	1.5K 5% 1/4W	*	A-4371-744-A	MAIN-A BOARD, COMPLETE (CE3)	
R214	1-249-556-11	CARBON	1.5K 5% 1/4W			*****	
R215	1-247-717-11	CARBON	2.2K 5% 1/4W F	*	A-4371-745-A	MAIN-A BOARD, COMPLETE (G)	

R216	1-249-469-11	CARBON	100K 5% 1/4W	*	A-4371-746-A	MAIN-A BOARD, COMPLETE (US)	
R251	1-214-937-00	METAL	1M 1% 1/2W			*****	
R252	1-247-713-11	CARBON	1K 5% 1/4W F			< CAPACITOR >	
R253	1-247-713-11	CARBON	1K 5% 1/4W F	C400	1-126-233-11	ELECT	22uF 20% 50V
R254	1-249-465-11	CARBON	47K 5% 1/4W	C401	1-136-810-11	FILM	220PF 5% 100V
				C402	1-136-810-11	FILM	220PF 5% 100V
R255	1-247-713-11	CARBON	1K 5% 1/4W F	C404	1-107-587-11	CERAMIC	7PF 0.5PF 500V
R256	1-249-465-11	CARBON	47K 5% 1/4W	C405	1-124-918-11	ELECT	47uF 20% 63V
R257	1-247-725-11	CARBON	10K 5% 1/4W F	C406	1-124-918-11	ELECT	47uF 20% 63V
R258	1-247-725-11	CARBON	10K 5% 1/4W F	C408	1-124-929-11	ELECT	22uF 20% 100V
R259	1-247-725-11	CARBON	10K 5% 1/4W F	C409	1-137-174-11	FILM	0.1uF 10% 100V
				C410	1-107-606-11	CERAMIC	56PF 5% 500V
R260	1-247-725-11	CARBON	10K 5% 1/4W F	C411	1-126-365-51	ELECT	100uF 20% 63V
R261	1-247-704-11	CARBON	220 5% 1/4W F	C412	1-126-365-51	ELECT	100uF 20% 63V
R266	1-249-469-11	CARBON	100K 5% 1/4W	C418	1-128-474-11	ELECT	1000uF 20% 63V
				C419	1-128-474-11	ELECT	1000uF 20% 63V
				C425	1-124-922-11	ELECT	1000uF 20% 63V
				C426	1-124-922-11	ELECT	1000uF 20% 63V
				C450	1-126-233-11	ELECT	22uF 20% 50V
				C451	1-136-810-11	FILM	220PF 5% 100V
				C452	1-136-810-11	FILM	220PF 5% 100V
				C454	1-107-587-11	CERAMIC	7PF 0.5PF 500V
				C455	1-124-918-11	ELECT	47uF 20% 63V
				C456	1-124-918-11	ELECT	47uF 20% 63V
				C458	1-124-929-11	ELECT	22uF 20% 100V
				C459	1-137-174-11	FILM	0.1uF 10% 100V
				C460	1-107-606-11	CERAMIC	56PF 5% 500V
				C461	1-126-365-51	ELECT	100uF 20% 63V
				C462	1-126-365-51	ELECT	100uF 20% 63V
				C468	1-128-474-11	ELECT	1000uF 20% 63V
				C469	1-128-474-11	ELECT	1000uF 20% 63V
				C475	1-124-922-11	ELECT	1000uF 20% 63V
				C476	1-124-922-11	ELECT	1000uF 20% 63V
						< DIODE >	
				D401	8-719-933-41	DIODE	HZS6C3L
				D402	8-719-987-63	DIODE	1N4148M
				D403	8-719-987-63	DIODE	1N4148M
				D415	8-719-303-13	DIODE	SEL1210W
				D416	8-719-303-13	DIODE	SEL1210W
				D451	8-719-933-41	DIODE	HZS6C3L
				D452	8-719-987-63	DIODE	1N4148M

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

MAIN-A

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D453	8-719-987-63	DIODE 1N4148M		R408	1-247-704-11	CARBON 220 5% 1/4W F	
D465	8-719-303-13	DIODE SEL1210W		R409	1-247-704-11	CARBON 220 5% 1/4W F	
D466	8-719-303-13	DIODE SEL1210W					
< CONNECTOR >				R410	1-249-586-11	CARBON 27K 5% 1/4W	
EH451	1-691-766-11	PLUG (MICRO CONNECTOR) 4P		△R412	1-219-193-11	FUSIBLE 220 5% 1/2W F	(US, CE3)
EH452	1-691-766-31	PLUG (MICRO CONNECTOR) 4P		R412	1-249-657-11	CARBON 220 5% 1/2W	(AEP1, G)
EH453	1-691-766-21	PLUG (MICRO CONNECTOR) 4P		R413	1-249-492-11	CARBON 47K 5% 1/3W	
EH454	1-691-768-11	PLUG (MICRO CONNECTOR) 6P		R414	1-249-556-11	CARBON 1.5K 5% 1/4W	
< COIL >				R415	1-249-461-11	CARBON 18K 5% 1/4W	
* L402	1-428-203-11	COIL, AIR-CORE		R416	1-247-231-00	CARBON 430 5% 1/3W	
* L403	1-428-203-11	COIL, AIR-CORE		R417	1-247-761-11	CARBON 5.6K 5% 1/3W	
* L452	1-428-203-11	COIL, AIR-CORE		R418	1-247-761-11	CARBON 5.6K 5% 1/3W	
* L453	1-428-203-11	COIL, AIR-CORE		R419	1-214-937-00	METAL 1M 1% 1/2W	
< TRANSISTOR >				R420	1-249-556-11	CARBON 1.5K 5% 1/4W	
Q401	8-729-203-21	TRANSISTOR 2SK389-GR		R421	1-247-721-11	CARBON 4.7K 5% 1/4W F	
Q402	8-729-119-78	TRANSISTOR 2SC403SP-51		△R422	1-219-022-11	FUSIBLE 100 5% 1/2W	
Q403	8-729-119-78	TRANSISTOR 2SC403SP-51		△R444	1-219-022-11	FUSIBLE 100 5% 1/2W F	
Q404	8-729-232-00	TRANSISTOR 2SA1349-GRBL		△R445	1-219-022-11	FUSIBLE 100 5% 1/2W F	
Q405	8-729-018-21	TRANSISTOR 2SJ313-Y					
Q406	8-729-104-91	TRANSISTOR 2SA1383		R450	1-247-713-11	CARBON 1K 5% 1/4W F	
Q407	8-729-202-67	TRANSISTOR 2SK246-GR3		R451	1-249-492-11	CARBON 47K 5% 1/3W	
Q408	8-729-104-18	TRANSISTOR 2SC3514		R452	1-249-210-11	CARBON 1K 5% 1/3W	
Q409	8-729-104-18	TRANSISTOR 2SC3514		R453	1-249-883-11	CARBON 22 5% 1/4W	
Q410	8-729-202-67	TRANSISTOR 2SK246-GR3		R454	1-249-883-11	CARBON 22 5% 1/4W	
Q411	8-729-202-67	TRANSISTOR 2SK246-GR3		R455	1-247-717-11	CARBON 2.2K 5% 1/4W F	
Q412	8-729-202-67	TRANSISTOR 2SK246-GR3		R456	1-247-723-11	CARBON 6.8K 5% 1/4W F	
Q451	8-729-203-21	TRANSISTOR 2SK389-GR		R457	1-247-704-11	CARBON 220 5% 1/4W F	
Q452	8-729-119-78	TRANSISTOR 2SC403SP-51		R458	1-247-704-11	CARBON 220 5% 1/4W F	
Q453	8-729-119-78	TRANSISTOR 2SC403SP-51		R459	1-247-704-11	CARBON 220 5% 1/4W F	
Q454	8-729-232-00	TRANSISTOR 2SA1349-GRBL		R460	1-249-586-11	CARBON 27K 5% 1/4W	
Q455	8-729-018-21	TRANSISTOR 2SJ313-Y		△R462	1-219-193-11	FUSIBLE 220 5% 1/2W F	(US, CE3)
Q456	8-729-104-91	TRANSISTOR 2SA1383		R462	1-249-657-11	CARBON 220 5% 1/2W	(AEP1, G)
Q457	8-729-202-67	TRANSISTOR 2SK246-GR3		R463	1-249-492-11	CARBON 47K 5% 1/3W	
Q458	8-729-104-18	TRANSISTOR 2SC3514		R464	1-249-556-11	CARBON 1.5K 5% 1/4W	
Q459	8-729-104-18	TRANSISTOR 2SC3514		R465	1-249-461-11	CARBON 18K 5% 1/4W	
Q460	8-729-202-67	TRANSISTOR 2SK246-GR3		R466	1-247-231-00	CARBON 430 5% 1/3W	
Q461	8-729-202-67	TRANSISTOR 2SK246-GR3		R467	1-247-761-11	CARBON 5.6K 5% 1/3W	
Q462	8-729-202-67	TRANSISTOR 2SK246-GR3		R468	1-247-761-11	CARBON 5.6K 5% 1/3W	
				R469	1-214-937-00	METAL 1M 1% 1/2W	
< RESISTOR >				R470	1-249-556-11	CARBON 1.5K 5% 1/4W	
R400	1-247-713-11	CARBON 1K 5% 1/4W F		R471	1-247-721-11	CARBON 4.7K 5% 1/4W F	
R401	1-249-492-11	CARBON 47K 5% 1/3W		△R472	1-219-022-11	FUSIBLE 100 5% 1/2W F	
R402	1-249-210-11	CARBON 1K 5% 1/3W		△R494	1-219-022-11	FUSIBLE 100 5% 1/2W F	
R403	1-249-883-11	CARBON 22 5% 1/4W		△R495	1-219-022-11	FUSIBLE 100 5% 1/2W F	
R404	1-249-883-11	CARBON 22 5% 1/4W		*****			
R405	1-247-717-11	CARBON 2.2K 5% 1/4W F					
R406	1-247-723-11	CARBON 6.8K 5% 1/4W F					
R407	1-247-704-11	CARBON 220 5% 1/4W F					

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

MAIN B-L

MAIN B-R

Ref.No.	Part No.	Description	Remark
*	A-4371-749-A	MAIN B-L BOARD, COMPLETE *****	
		< BUS BAR >	
BB401	1-564-295-00	BAR, BUS	
		< CAPACITOR >	
C414	1-107-593-11	CERAMIC 15PF 5% 500V	
C415	1-107-593-11	CERAMIC 15PF 5% 500V	
C416	1-137-163-11	FILM 0.33uF 10% 63V	
C417	1-137-163-11	FILM 0.33uF 10% 63V	
C420	1-124-920-11	ELECT 330uF 20% 63V	
		< DIODE >	
D405	8-719-987-63	DIODE 1N4148M	
D406	8-719-985-53	DIODE HZS4ALL	
D407	8-719-303-13	DIODE SEL1210W	
D411	8-719-987-63	DIODE 1N4148M	
D412	8-719-985-53	DIODE HZS4ALL	
D413	8-719-987-63	DIODE 1N4148M	
D414	8-719-987-63	DIODE 1N4148M	
		< CONNECTOR >	
* EH405	1-564-506-11	PLUG, CONNECTOR 3P	
* EH406	1-564-506-11	PLUG, CONNECTOR 3P	
		< TRANSISTOR >	
Q413	8-729-203-45	TRANSISTOR 2SC3423-0	
Q414	8-729-201-53	TRANSISTOR 2SA1015-GR	
Q415	8-729-018-19	TRANSISTOR 2SK2013-Y	
Q416	8-729-018-21	TRANSISTOR 2SJ313-Y	
Q417	8-729-018-11	TRANSISTOR 2SK1530A-Y	
Q418	8-729-018-11	TRANSISTOR 2SK1530A-Y	
Q419	8-729-018-13	TRANSISTOR 2SJ201A-Y	
Q420	8-729-018-13	TRANSISTOR 2SJ201A-Y	
Q421	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
		< RESISTOR >	
R411	1-247-713-11	CARBON 1K 5% 1/4W F	
R423	1-247-722-11	CARBON 5.6K 5% 1/4W F	
R424	1-249-926-11	CARBON 1.3K 5% 1/4W	
R425	1-247-714-11	CARBON 1.2K 5% 1/4W F	
△R426	1-202-954-71	FUSIBLE 470 5% 1/2W F	
△R427	1-202-954-71	FUSIBLE 470 5% 1/2W F	
△R428	1-219-193-11	FUSIBLE 220 5% 1/2W F	
△R429	1-219-185-11	FUSIBLE 47 5% 1/2W F	
△R430	1-219-185-11	FUSIBLE 47 5% 1/2W F	
△R431	1-219-185-11	FUSIBLE 47 5% 1/2W F	
△R432	1-219-185-11	FUSIBLE 47 5% 1/2W F	
R433	1-219-117-11	RES, WIREWOUND (0.47+0.47)	

Ref.No.	Part No.	Description	Remark
R434	1-219-117-11	RES, WIREWOUND (0.47+0.47)	
R435	1-249-460-11	CARBON 15K 5% 1/4W	
R436	1-247-725-11	CARBON 10K 5% 1/4W F	
△R437	1-249-931-11	CARBON 2.2K 5% 1/4W F	
		< VARIABLE RESISTOR >	
RT401	1-224-489-11	RES, ADJ, METAL FILM 2.2K	
		< CONNECTOR >	
* TP400	1-564-518-11	PLUG, CONNECTOR 3P	
VH401	1-766-897-11	PIN, CONNECTOR (PC BOARD) 4P	

*	A-4371-750-A	MAIN B-R BOARD, COMPLETE *****	
		< BUS BAR >	
BB451	1-564-295-00	BAR, BUS	
		< CAPACITOR >	
C464	1-107-593-11	CERAMIC 15PF 5% 500V	
C465	1-107-593-11	CERAMIC 15PF 5% 500V	
C466	1-137-163-11	FILM 0.33uF 10% 63V	
C467	1-137-163-11	FILM 0.33uF 10% 63V	
C470	1-124-920-11	ELECT 330uF 20% 63V	
		< DIODE >	
D455	8-719-987-63	DIODE 1N4148M	
D456	8-719-985-53	DIODE HZS4ALL	
D457	8-719-303-13	DIODE SEL1210W	
D461	8-719-987-63	DIODE 1N4148M	
D462	8-719-985-53	DIODE HZS4ALL	
D463	8-719-987-63	DIODE 1N4148M	
D464	8-719-987-63	DIODE 1N4148M	
		< CONNECTOR >	
* EH455	1-564-506-11	PLUG, CONNECTOR 3P	
* EH456	1-564-506-11	PLUG, CONNECTOR 3P	
		< TRANSISTOR >	
Q463	8-729-203-45	TRANSISTOR 2SC3423-0	
Q464	8-729-201-53	TRANSISTOR 2SA1015-GR	
Q465	8-729-018-19	TRANSISTOR 2SK2013-Y	
Q466	8-729-018-21	TRANSISTOR 2SJ313-Y	
Q467	8-729-018-11	TRANSISTOR 2SK1530A-Y	
Q468	8-729-018-11	TRANSISTOR 2SK1530A-Y	
Q469	8-729-018-13	TRANSISTOR 2SJ201A-Y	
Q470	8-729-018-13	TRANSISTOR 2SJ201A-Y	
Q471	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	

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	Remark
< RESISTOR >			
R461	1-247-713-11	CARBON 1K 5% 1/4W F	
R473	1-247-722-11	CARBON 5.6K 5% 1/4W F	
R474	1-249-926-11	CARBON 1.3K 5% 1/4W	
R475	1-247-714-11	CARBON 1.2K 5% 1/4W F	
△R476	1-202-954-71	FUSIBLE 470 5% 1/2W F	
△R477	1-202-954-71	FUSIBLE 470 5% 1/2W F	
△R478	1-219-193-11	FUSIBLE 220 5% 1/2W F	
△R479	1-219-185-11	FUSIBLE 47 5% 1/2W F	
△R480	1-219-185-11	FUSIBLE 47 5% 1/2W F	
△R481	1-219-185-11	FUSIBLE 47 5% 1/2W F	
△R482	1-219-185-11	FUSIBLE 47 5% 1/2W F	
R483	1-219-117-11	RES, WIREWOUND (0.47+0.47)	
R484	1-219-117-11	RES, WIREWOUND (0.47+0.47)	
R485	1-249-460-11	CARBON 15K 5% 1/4W	
R486	1-247-725-11	CARBON 10K 5% 1/4W F	
△R487	1-249-931-11	CARBON 2.2K 5% 1/4W F	
< VARIABLE RESISTOR >			
RT451	1-224-489-11	RES, ADJ, METAL FILM 2.2K	
< CONNECTOR >			
* TP450	1-564-518-11	PLUG, CONNECTOR 3P	
VH451	1-766-897-11	PIN, CONNECTOR (PC BOARD) 4P	

*	A-4371-751-A	PS BOARD, COMPLETE (AEP1, G)	

*	A-4371-752-A	PS BOARD, COMPLETE (CE3)	

*	A-4371-753-A	PS BOARD, COMPLETE (US)	

*	4-916-791-01	PLATE, GROUND, 5P (EPT501)	
*	3-346-266-21	PLATE, GROUND (EPT502-505)	
< TERMINAL >			
* BP501	1-535-117-00	TERMINAL	
* BP502	1-535-117-00	TERMINAL	
* BP503	1-535-115-00	TERMINAL	
* BP504	1-535-115-00	TERMINAL	
< CAPACITOR >			
C501	1-136-880-11	FILM 2.2uF 10% 160V	
C502	1-110-496-11	ELECT 18000uF 63V	
C503	1-110-496-11	ELECT 18000uF 63V	
C504	1-110-395-11	ELECT 330uF 20% 63V (US)	
C504	1-124-920-11	ELECT 330uF 20% 63V	(AEP1, CE3, G)

Ref.No.	Part No.	Description	Remark
C505	1-110-395-11	ELECT 330uF 20% 63V (US)	
C505	1-124-920-11	ELECT 330uF 20% 63V	(AEP1, CE3, G)
C506	1-110-395-11	ELECT 330uF 20% 63V (US)	
C506	1-124-920-11	ELECT 330uF 20% 63V	(AEP1, CE3, G)
C507	1-110-395-11	ELECT 330uF 20% 63V (US)	
C507	1-124-920-11	ELECT 330uF 20% 63V	(AEP1, CE3, G)
C508	1-124-791-11	ELECT 1.0uF 20% 100V	
C509	1-110-395-11	ELECT 330uF 20% 63V (US)	
C509	1-124-920-11	ELECT 330uF 20% 63V	(AEP1, CE3, G)
< DIODE >			
D501	8-719-210-25	DIODE C25P20F	
D502	8-719-210-25	DIODE C25P20F	
D503	8-719-210-25	DIODE C25P20F	
D504	8-719-210-26	DIODE C25P20FR	
D505	8-719-210-26	DIODE C25P20FR	
D506	8-719-210-26	DIODE C25P20FR	
D507	8-719-200-02	DIODE 10E2	
D508	8-719-200-02	DIODE 10E2	
D509	8-719-200-02	DIODE 10E2	
D510	8-719-200-02	DIODE 10E2	
D511	8-719-200-02	DIODE 10E2	
D512	8-719-200-02	DIODE 10E2	
D513	8-719-200-02	DIODE 10E2	
D514	8-719-200-02	DIODE 10E2	
D515	8-719-200-02	DIODE 10E2	
D516	8-719-200-02	DIODE 10E2	
D517	8-719-200-02	DIODE 10E2	
< CONNECTOR >			
EH506	1-691-766-11	PLUG (MICRO CONNECTOR) 4P	
EH507	1-691-766-21	PLUG (MICRO CONNECTOR) 4P	
* EH508	1-564-506-11	PLUG, CONNECTOR 3P	
EH509	1-691-766-31	PLUG (MICRO CONNECTOR) 4P	
< TRANSFORMER >			
PTH501	1-806-882-11	THERMISTOR, POSITIVE 2.2 (US, CE3)	
PTH502	1-806-882-11	THERMISTOR, POSITIVE 2.2 (US, CE3)	
PTH503	1-806-882-11	THERMISTOR, POSITIVE 2.2 (US, CE3)	
PTH504	1-806-882-11	THERMISTOR, POSITIVE 2.2 (US, CE3)	
< RESISTOR >			
△R501	1-219-185-11	FUSIBLE 47 5% 1/2W F	
< CONNECTOR >			
VH501	1-564-241-00	PIN, CONNECTOR 4P (US)	
VH501	1-766-897-11	PIN, CONNECTOR (PC BOARD) 4P (AEP, G)	

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

PS-L

PS-R

SP.OUT

Ref. No.	Part No.	Description	Remark
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* 1-654-116-11 PS-L BOARD

< CAPACITOR >

C511	1-124-922-11	ELECT	1000uF	20%	63V
C512	1-128-474-11	ELECT	1000uF	20%	63V
C513	1-124-922-11	ELECT	1000uF	20%	63V
C514	1-124-922-11	ELECT	1000uF	20%	63V
C515	1-124-922-11	ELECT	1000uF	20%	63V
C516	1-128-474-11	ELECT	1000uF	20%	63V

< CONNECTOR >

EH501 1-691-766-11 PLUG (MICRO CONNECTOR) 4P
* EH502 1-564-506-11 PLUG, CONNECTOR 3P
* EH503 1-564-506-11 PLUG, CONNECTOR 3P

< RESISTOR >

△R502	1-202-947-71	FUSIBLE	68	5%	1/2W	F
△R503	1-202-947-71	FUSIBLE	68	5%	1/2W	F
△R504	1-202-947-71	FUSIBLE	68	5%	1/2W	F
△R505	1-202-947-71	FUSIBLE	68	5%	1/2W	F
△R508	1-202-947-71	FUSIBLE	68	5%	1/2W	F
△R509	1-202-947-71	FUSIBLE	68	5%	1/2W	F
△R510	1-202-947-71	FUSIBLE	68	5%	1/2W	F
△R511	1-202-947-71	FUSIBLE	68	5%	1/2W	F

* 1-654-115-11 PS-R BOARD

< CAPACITOR >

C561	1-124-922-11	ELECT	1000uF	20%	63V
C562	1-128-474-11	ELECT	1000uF	20%	63V
C563	1-124-922-11	ELECT	1000uF	20%	63V
C564	1-124-922-11	ELECT	1000uF	20%	63V
C565	1-128-474-11	ELECT	1000uF	20%	63V
C566	1-124-922-11	ELECT	1000uF	20%	63V

< CONNECOTR >

EH551 1-691-766-21 PLUG (MICRO CONNECTOR) 4P
* EH553 1-564-506-11 PLUG, CONNECTOR 3P

* A-4371-758-A SP.OUT BOARD, COMPLETE

4-861-002-00 HEAT SINK (HS601)

Ref. No.	Part No.	Description	Remark
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< CAPACITOR >

C601	1-130-973-00	FILM	0.022uF	2%	100V
C603	1-136-157-00	FILM	0.022uF	5%	50V
C604	1-124-911-11	ELECT	220uF	20%	50V
C605	1-124-478-11	ELECT	100uF	20%	25V
C606	1-136-157-00	FILM	0.022uF	5%	50V
C607	1-136-157-00	FILM	0.022uF	5%	50V
C608	1-124-927-11	ELECT	4.7uF	20%	100V
C609	1-124-918-11	ELECT	47uF	20%	63V
C610	1-124-927-11	ELECT	4.7uF	20%	100V
C612	1-124-915-11	ELECT	10uF	20%	63V
C613	1-136-157-00	FILM	0.022uF	5%	50V
C651	1-130-973-00	FILM	0.022uF	2%	100V

< DIODE >

D600	8-719-987-63	DIODE	1N4148M
D601	8-719-987-63	DIODE	1N4148M
D602	8-719-987-63	DIODE	1N4148M
D603	8-719-987-63	DIODE	1N4148M
D608	8-719-987-63	DIODE	1N4148M

< CONNECTOR >

EH600 1-691-767-11 PLUG (MICRO CONNECTOR) 5P
* EH601 1-564-506-11 PLUG, CONNECTOR 3P
EH602 1-691-766-11 PLUG (MICRO CONNECTOR) 4P
* EH604 1-564-506-11 PLUG, CONNECTOR 3P

< IC >

IC601 8-759-111-68 IC uPC1237HA

< COIL >

* L601 1-422-009-13 COIL, AIR-CORE 1uH
* L651 1-422-009-13 COIL, AIR-CORE 1uH

< TRANSISTOR >

Q600	8-729-119-78	TRANSISTOR	2SC403SP-51
Q601	8-729-119-78	TRANSISTOR	2SC403SP-51
Q602	8-729-141-05	TRANSISTOR	2SC2682-QPE
Q603	8-729-201-53	TRANSISTOR	2SA1015-GR
Q604	8-729-201-53	TRANSISTOR	2SA1015-GR

< RESISTOR >

△R523	1-202-934-71	FUSIBLE	4.7	5%	1/2W	F
△R573	1-202-934-71	FUSIBLE	4.7	5%	1/2W	F
R600	1-249-437-11	CARBON	47K	5%	1/4W	
R601	1-247-727-11	CARBON	10	5%	1/2W	
△R602	1-202-934-71	FUSIBLE	4.7	5%	1/2W	F
R603	1-247-891-00	CARBON	330K	5%	1/4W	
R604	1-247-887-00	CARBON	220K	5%	1/4W	
R605	1-249-462-11	CARBON	22K	5%	1/4W	

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SP.OUT**SW**

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
R606	1-247-721-11	CARBON	4.7K 5% 1/4W F			MISCELLANEOUS	
R607	1-249-520-11	CARBON	47 5% 1/4W			*****	
R608	1-249-469-11	CARBON	100K 5% 1/4W	△58	1-554-538-00	SWITCH, PUSH (AC POWER) (1 KEY)	
R609	1-249-461-11	CARBON	18K 5% 1/4W	△60	1-559-479-11	CORD, POWER (US)	
R610	1-249-657-11	CARBON	220 5% 1/2W	△60	1-575-953-11	CORD, POWER (AEP1, CE3, G)	
R611	1-249-437-11	CARBON	47K 5% 1/4W	* 62	1-537-800-11	TERMINAL BOARD (SP) (US, AEP1, G)	
R612	1-247-721-11	CARBON	4.7K 5% 1/4W F	62	1-537-800-21	TERMINAL BOARD (SP) (CE3)	
R613	1-249-437-11	CARBON	47K 5% 1/4W	C502	1-110-496-11	CAP, ELECT 18000uF	
R614	1-249-437-11	CARBON	47K 5% 1/4W	C503	1-110-496-11	CAP, ELECT 18000uF	
R615	1-249-462-11	CARBON	22K 5% 1/4W	△F1	1-532-299-00	FUSE, TIME-LAG (T5A, 250V) (AEP1, CE3, G)	
R616	1-249-437-11	CARBON	47K 5% 1/4W	△F1	1-532-749-11	FUSE, GLASS TUBE (8A, 125V) (US)	
R617	1-249-799-11	CARBON	750 5% 1/2W	Q413	8-729-203-45	TRANSISTOR 2SC3423-O	
R618	1-249-799-11	CARBON	750 5% 1/2W	Q415	8-729-018-19	TRANSISTOR 2SK2013-Y	
R651	1-247-727-11	CARBON	10 5% 1/2W	Q416	8-729-018-21	TRANSISTOR 2SJ313-Y	
△R652	1-202-934-71	FUSIBLE	4.7 5% 1/2W F	Q417	8-729-018-11	TRANSISTOR 2SK1530A-Y	
R653	1-247-891-00	CARBON	330K 5% 1/4W	Q418	8-729-018-11	TRANSISTOR 2SK1530A-Y	
		< RELAY >		Q419	8-729-018-13	TRANSISTOR 2SJ201A-Y	
RY601	1-515-676-11	RELAY		Q420	8-729-018-13	TRANSISTOR 2SJ201A-Y	
RY651	1-515-676-11	RELAY		Q463	8-729-203-45	TRANSISTOR 2SC3423-O	
		< CONNECTOR >		Q465	8-729-018-19	TRANSISTOR 2SK2013-Y	
SE601	1-766-897-11	PIN, CONNECTOR (PC BOARD) 4P		Q466	8-729-018-21	TRANSISTOR 2SJ313-Y	
SE602	1-564-321-00	PIN, CONNECTOR 2P		Q467	8-729-018-11	TRANSISTOR 2SK1530A-Y	
SE652	1-564-321-00	PIN, CONNECTOR 2P		Q468	8-729-018-11	TRANSISTOR 2SK1530A-Y	
		*****		Q469	8-729-018-13	TRANSISTOR 2SJ201A-Y	
*	1-654-124-11	SW BOARD		Q470	8-729-018-13	TRANSISTOR 2SJ201A-Y	
		*****		△T501	1-427-646-11	TRANSFORMER, POWER (AEP1, CE3, G)	
		< CAPACITOR >		△T501	1-427-647-11	TRANSFORMER, POWER (US)	
C611	1-124-791-11	ELECT	1.0uF 20% 100V			*****	
		< CONNECTOR >				ACCESSORIES & PACKING MATERIALS	
EH605	1-691-767-11	PLUG (MICRO CONNECTOR) 5P				*****	
EH606	1-691-767-31	PLUG (MICRO CONNECTOR) 5P				3-703-351-00	LABEL (CTV), FTZ (AEP1, CE3, G)
		< TRANSISTOR >				3-703-710-41	STICKER, SONY SYMBOL (12) (AEP1, CE3, G)
Q605	8-729-119-78	TRANSISTOR 2SC403SP-51				3-759-992-11	MANUAL, INSTRUCTION (US, AEP1, CE3)
		< RESISTOR >					(ENGLISH, FRENCH, SPANISH, PORTUGUESE)
R620	1-247-721-11	CARBON	4.7K 5% 1/4W F			3-759-992-41	MANUAL, INSTRUCTION (AEP1, CE3, G)
R621	1-247-725-11	CARBON	10K 5% 1/4W F				(GERMAN, DUTCH, SWEDISH, ITALIAN)
		< SWITCH >				4-970-079-01	CUSHION
S601	1-554-338-00	SWITCH, LEVER SLIDE (BALANCED)				4-970-080-01	INDIVIDUAL CARTON
		*****				*****	

						HARDWARE LIST	

				#1	7-682-247-09	SCREW +K 3X6	
				#2	7-682-548-09	SCREW (3X8)	
				#3	7-623-112-05	W 5, SMALL	
				#4	7-684-025-04	N 5, TYPE 2	

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Sony Corporation
Consumer A&V Products Company
Home A&V Products Div.

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