

TA-FA777ES

SERVICE MANUAL

AEP Model



SPECIFICATIONS

System

Power Amplifier: Pure-complementary SEPP MOS FET power amplifier with all stages directly coupled

Preamplifier: Low-noise, high-gain equalizer amplifier

Power section: Large-capacity power supply advanced STD

Rated output

4 ohms, 150 W + 150 W (DIN 0.7%)

8 ohms, 100 W + 100 W (DIN 0.7%)

Speakers impedance

4 to 16 ohms

Output bandwidth (8 ohms)

10 Hz to 100 kHz (at 40 W output, and high-frequency distortion rate of 0.08%)

Dynamic headroom

at 4 ohms: 2 dB

at 8 ohms: 1.2 dB

Total harmonic distortion

0.005% (at 8 ohms, 10 W output)

Damping factor

100 (8 ohms, 1 kHz)

Intermodulation (IM) distortion (60 Hz:7 kHz=4:1)

0.005% (8 ohms)

Throughrate

125 V / μ sec, 250 V / μ sec (Inside)

Residual noise

Less than 115 μ V (network A)

Equalizer deviation

PHONO MM: 20 Hz to 20 kHz, ± 0.2 dB

Frequency response

TUNER, SACD/CD, AUX, TAPE 1, 2, 3: 2 Hz to 100 kHz ± 3 dB

S/N

PHONO MC: 78 dB (A Fil, 0.5 mV)

MM: 87 dB (A Fil, 5 mV)

TUNER, SACD/CD, AUX, TAPE 1, 2, 3: 105 dB

Inputs

Input sensitivity and impedance

PHONO MC: 0.25 mV, 100 ohms

MM: 2.5 mV, 50 kilohms

TUNER, SACD/CD, AUX, TAPE 1, 3: 150 mV, 30 kilohms

Maximum input capability (1 kHz)

PHONO MC: 9 mV

MM: 150 mV

Outputs

Output level / impedance

REC OUT 1, 2, 3: 150 mV, 1 kilohms

PHONES: 10 mW (at 8 ohms)

Tone controls

BASS (100Hz): ± 7 dB

TREBLE (10kHz): ± 6 dB

General

Power requirements

230 V AC, 50/60 Hz

Power consumption

330 W

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

430 \times 175 \times 455 mm

(17 \times 7 \times 17 $\frac{15}{16}$ inches)

incl. projecting parts and controls

Mass (approx.)

23 kg (50 lb 12 oz)

Supplied accessories

Mains cable (1)

Design and specifications are subject to change without notice.

INTEGRATED STEREO AMPLIFIER





SONY®

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SAFETY-RELATED COMPONENT WARNING!!

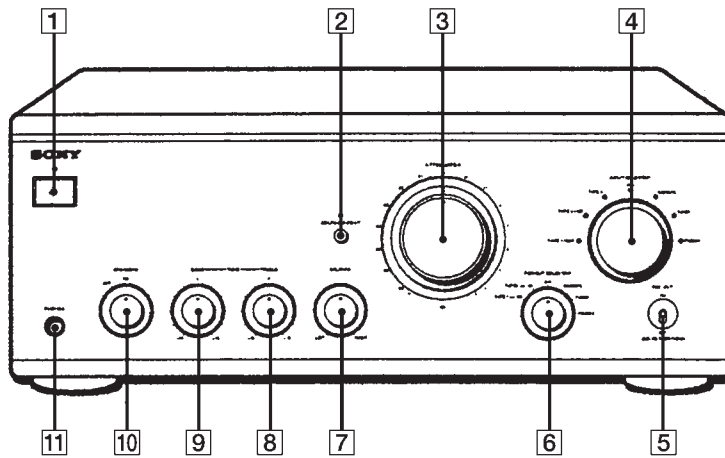
COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1 GENERAL

This section is extracted from instruction manual.

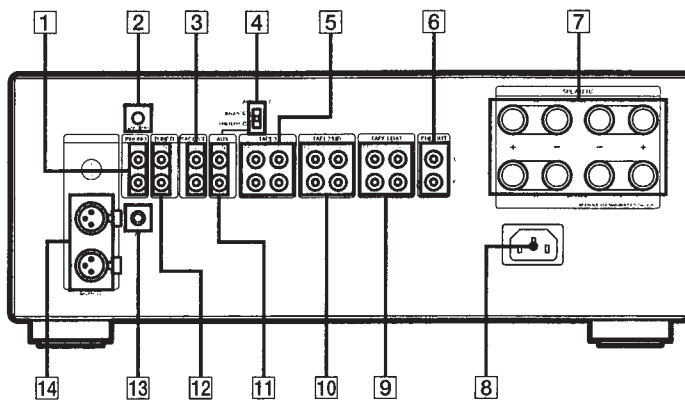
LOCATION OF CONTROLS

Front Panel Descriptions



- 1 ① (Power) switch
- 2 SOURCE DIRECT switch
- 3 ATTENUATOR control
- 4 INPUT SELECTOR switch
- 5 REC OUT switch
- 6 REC OUT SELECTOR switch
- 7 BALANCE control
- 8 TREBLE control
- 9 BASS control
- 10 SPEAKERS switch
- 11 PHONES jack

Rear Panel Descriptions

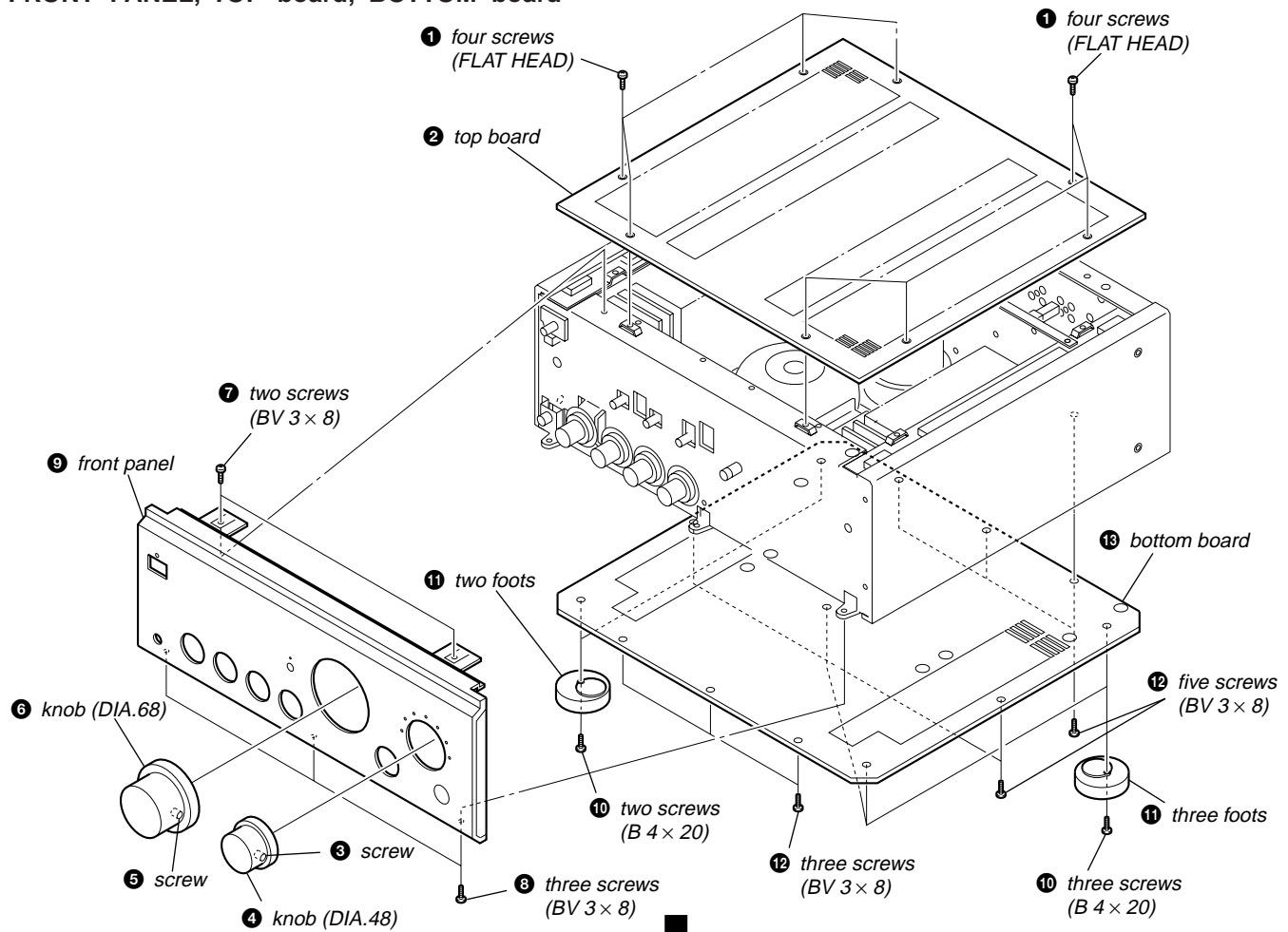


- 1 PHONO
- 2 CARTRIDGE MC/MM
- 3 SACD/CD
- 4 AUX INPUT
- 5 TAPE3
- 6 PRE OUT
- 7 SPEAKERS MAIN/BI-WIRE
- 8 AC IN terminal
- 9 TAPE1/DAT
- 10 TAPE2/MD
- 11 TUNER
- 12 AUX(UNBALANCED)
- 13 \hbar (SIGNAL GND)
- 14 AUX(BALANCED)

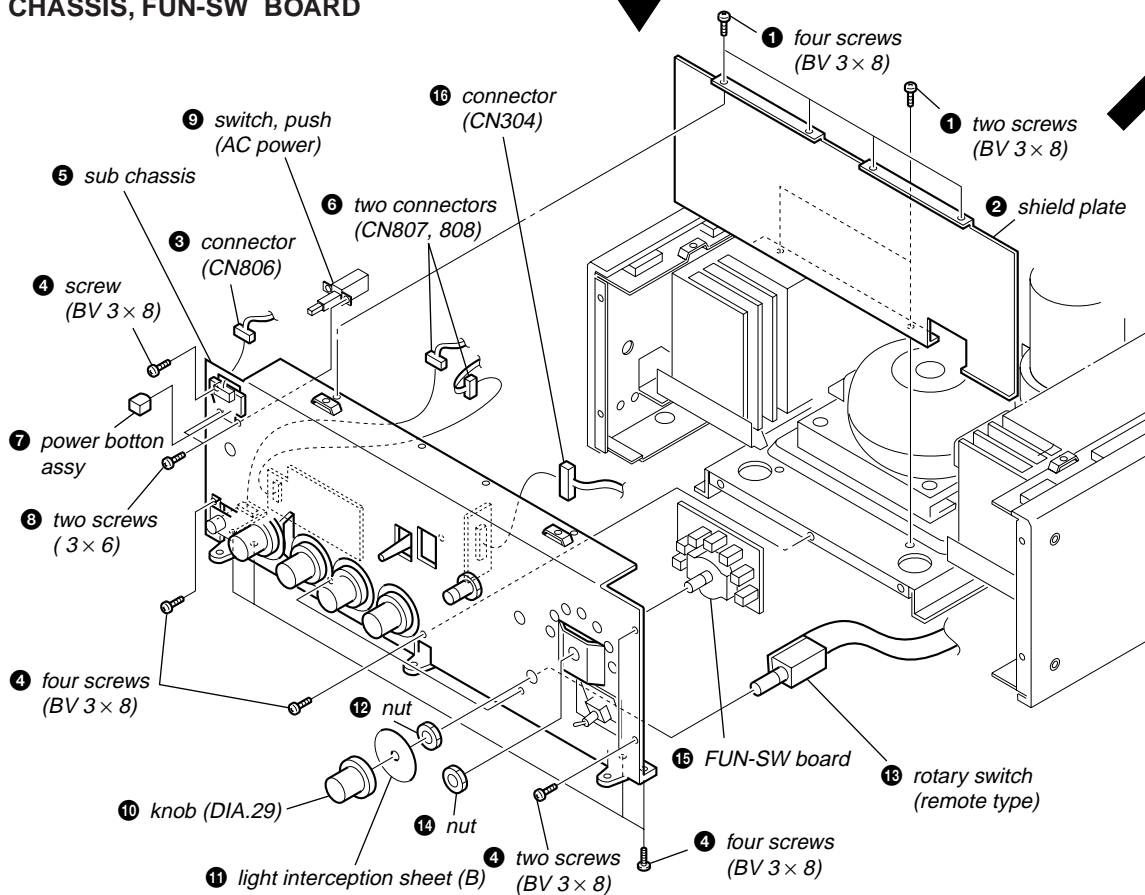
SECTION 2 DISASSEMBLY

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

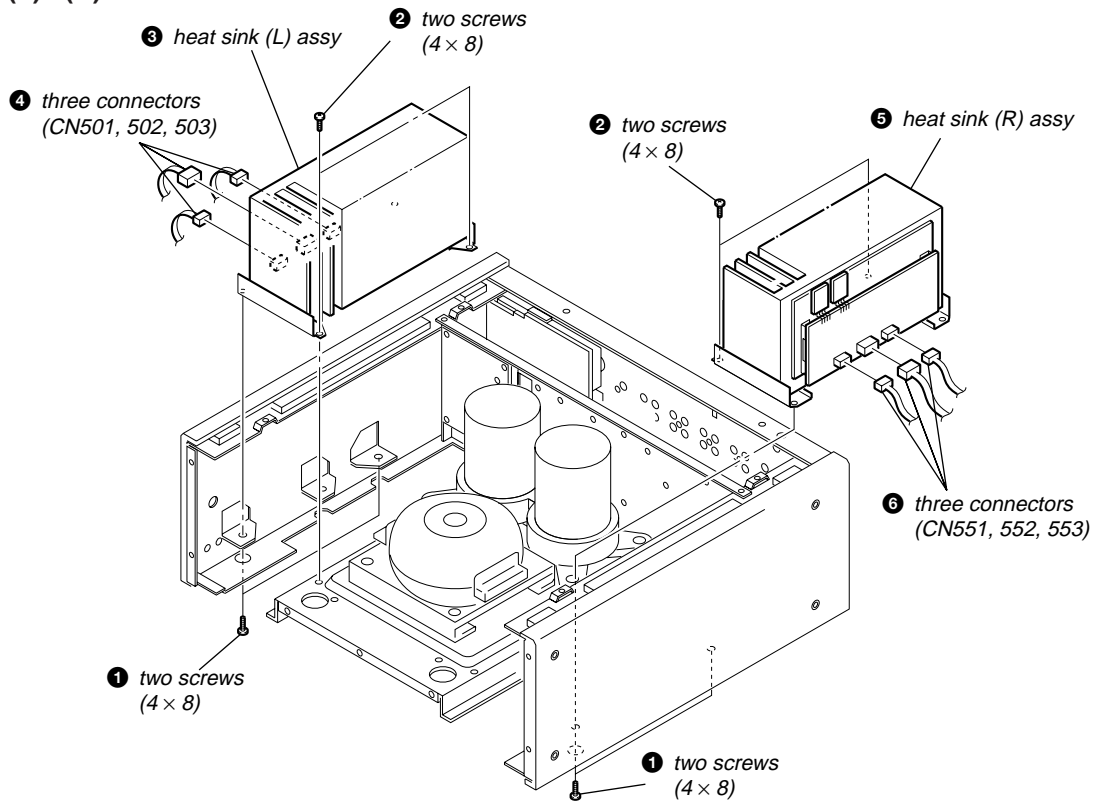
FRONT PANEL, TOP board, BOTTOM board



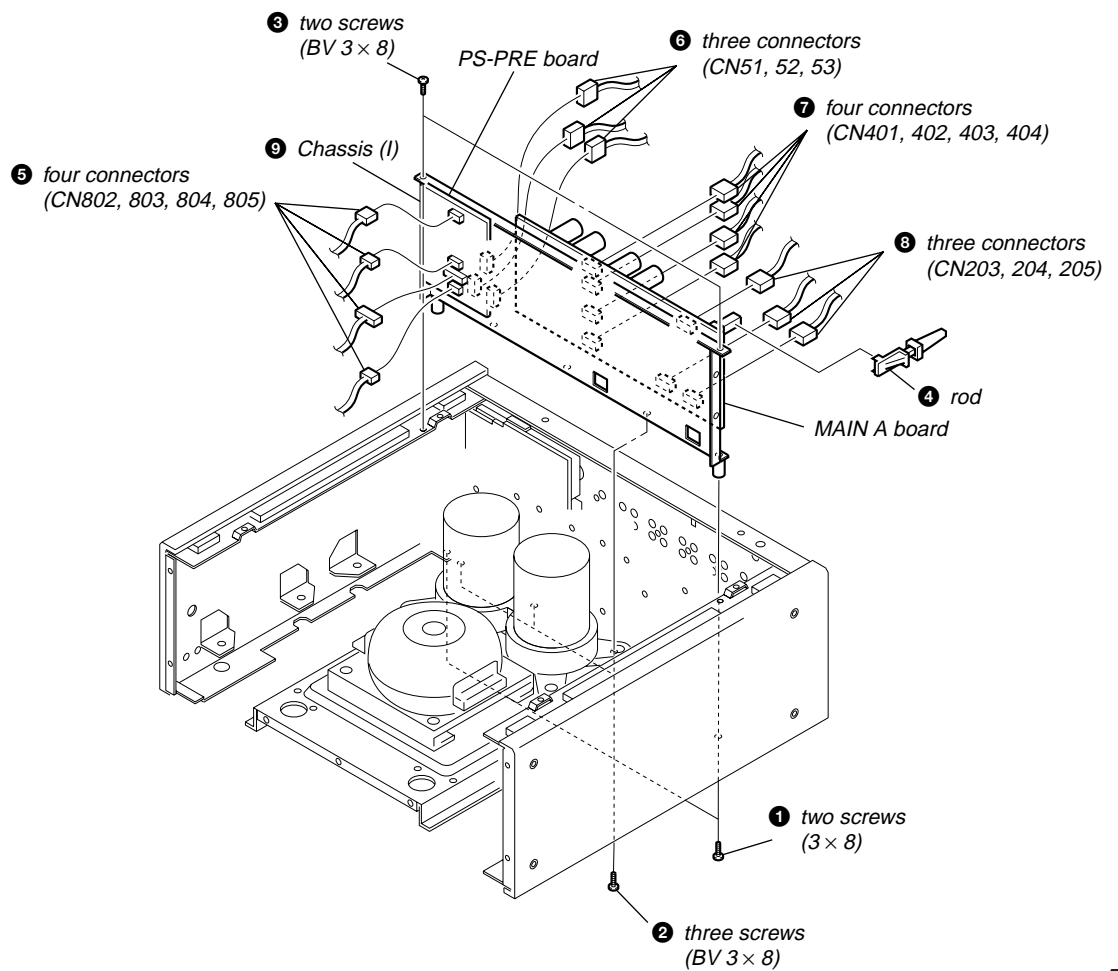
SUB CHASSIS, FUN-SW BOARD



HEAT SINK (L) / (R) ASSY



MAIN A board, PS-PRE board



SECTION 3 ELECTRICAL ADJUSTMENT

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

Bias Adjustment

Setting:

ATTENUATOR (Volume) control: minimum

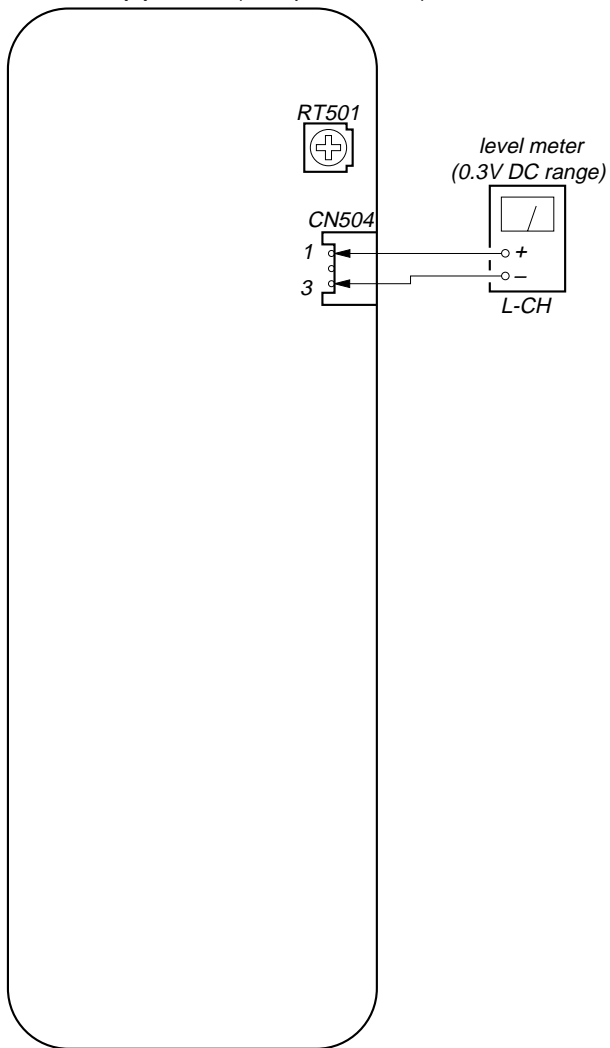
Input signal: No signal input

Procedure:

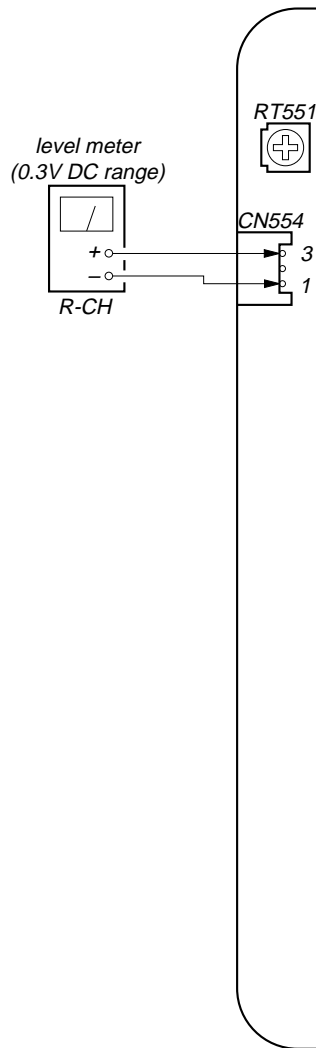
Adjust RT501 (L-CH) and RT551 (R-CH) for 70 mV reading on the VTVM.

Adjustment Location:

– MAIN-B (L) Board (Component side) –






– MAIN-B (R) Board (Component side) –







SECTION 4
DIAGRAMS

4-1. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS
(In addition to this, the necessary note is printed in each block.)



Note on Schematic Diagram:

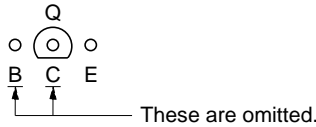
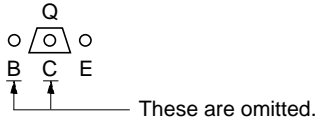
- All capacitors are in μF unless otherwise noted. pF: μpF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
-  : nonflammable resistor.
-  : fusible resistor.
-  : panel designation.

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

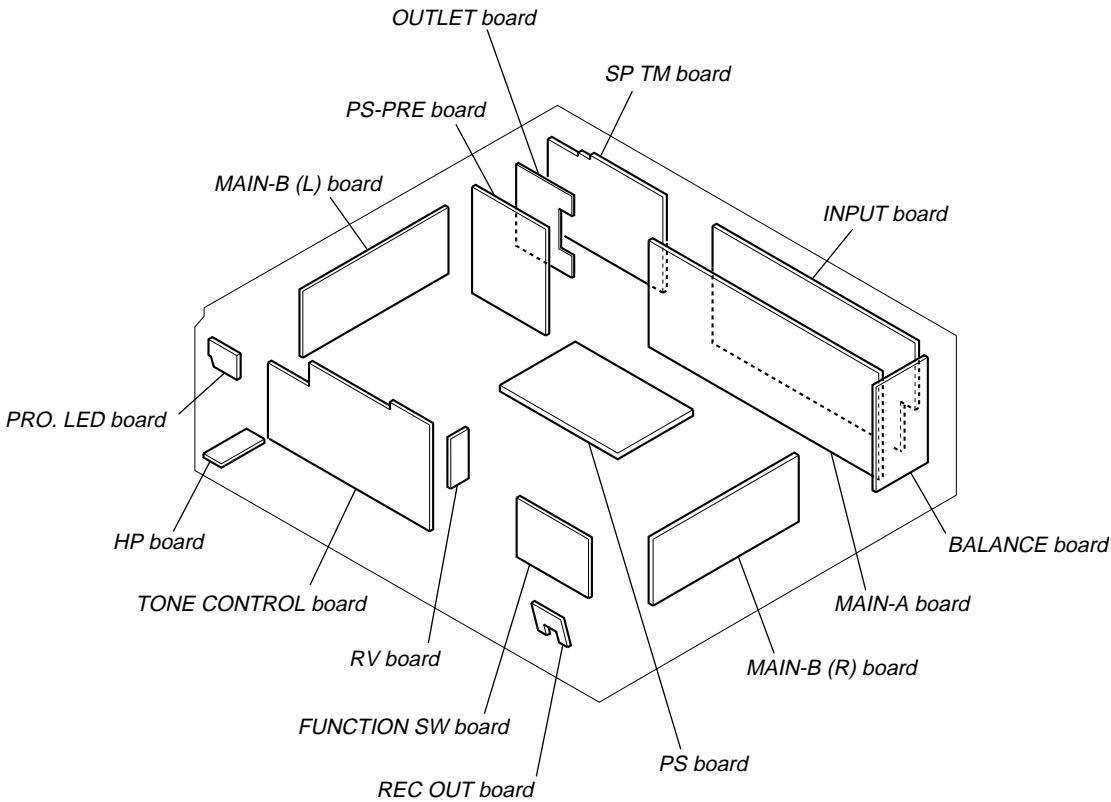
-  : B+ Line.
-  : B- Line.
-  : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark: POWER ON
- Voltages are taken with a VOM (Input impedance 10 M Ω).
Voltage variations may be noted due to normal production tolerances.
- Signal path.
 : PHONO

Note on Printed Wiring Boards:

-  : parts extracted from the component side.
-  : Pattern from the side which enables seeing.
- Indication of transistor.



• Circuit Boards Location



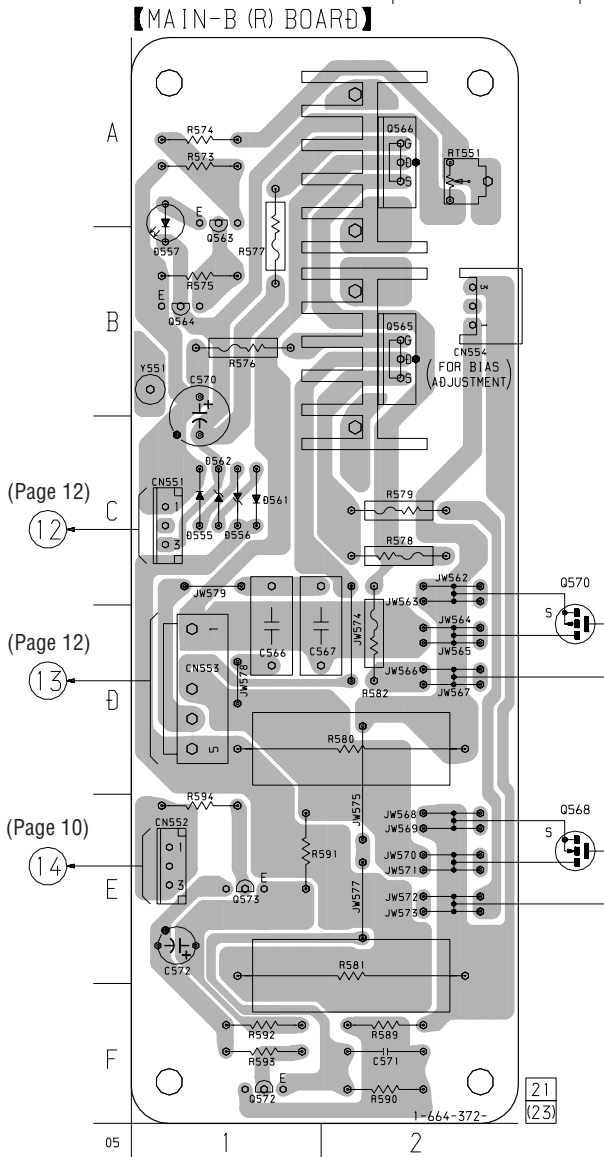
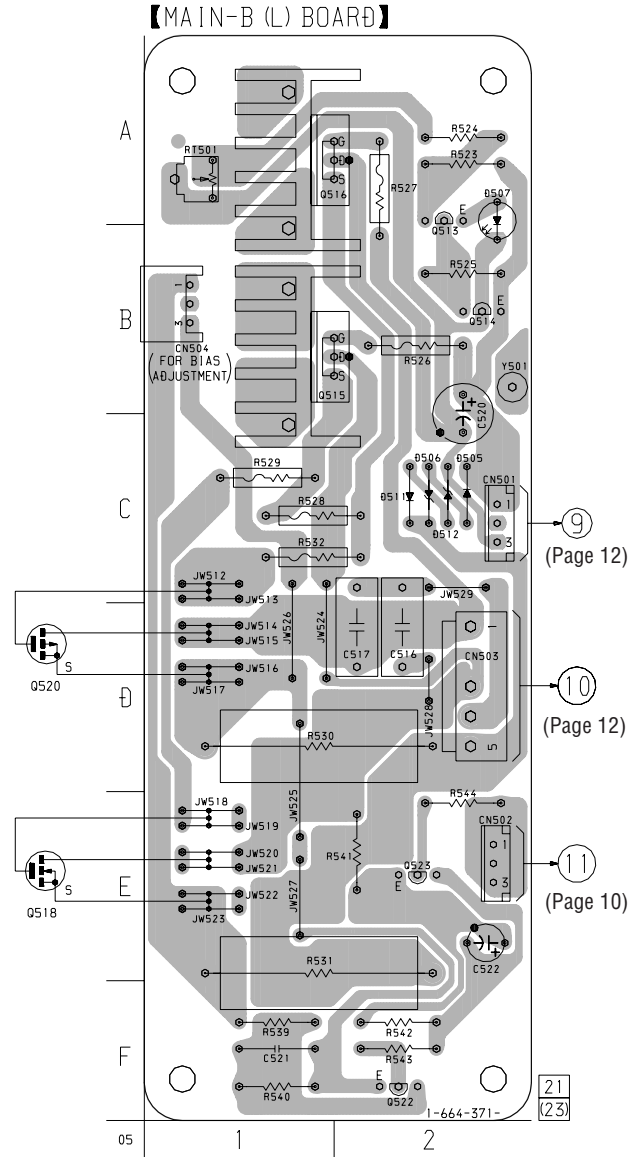
TA-FA777ES

4-2. PRINTED WIRING BOARDS – INPUT/MAIN-B (L) /MAIN-B (R) Boards –

• See page 7 for Circuit Boards Location.

• Semiconductor Location
– MAIN-B (L) Board –

Ref. No.	Location
D505	C-2
D506	C-2
D507	A-2
D511	C-2
D512	C-2
Q513	A-2
Q514	B-2
Q515	B-1
Q516	A-1
Q518	E-1
Q520	D-1
Q522	F-2
Q523	E-2

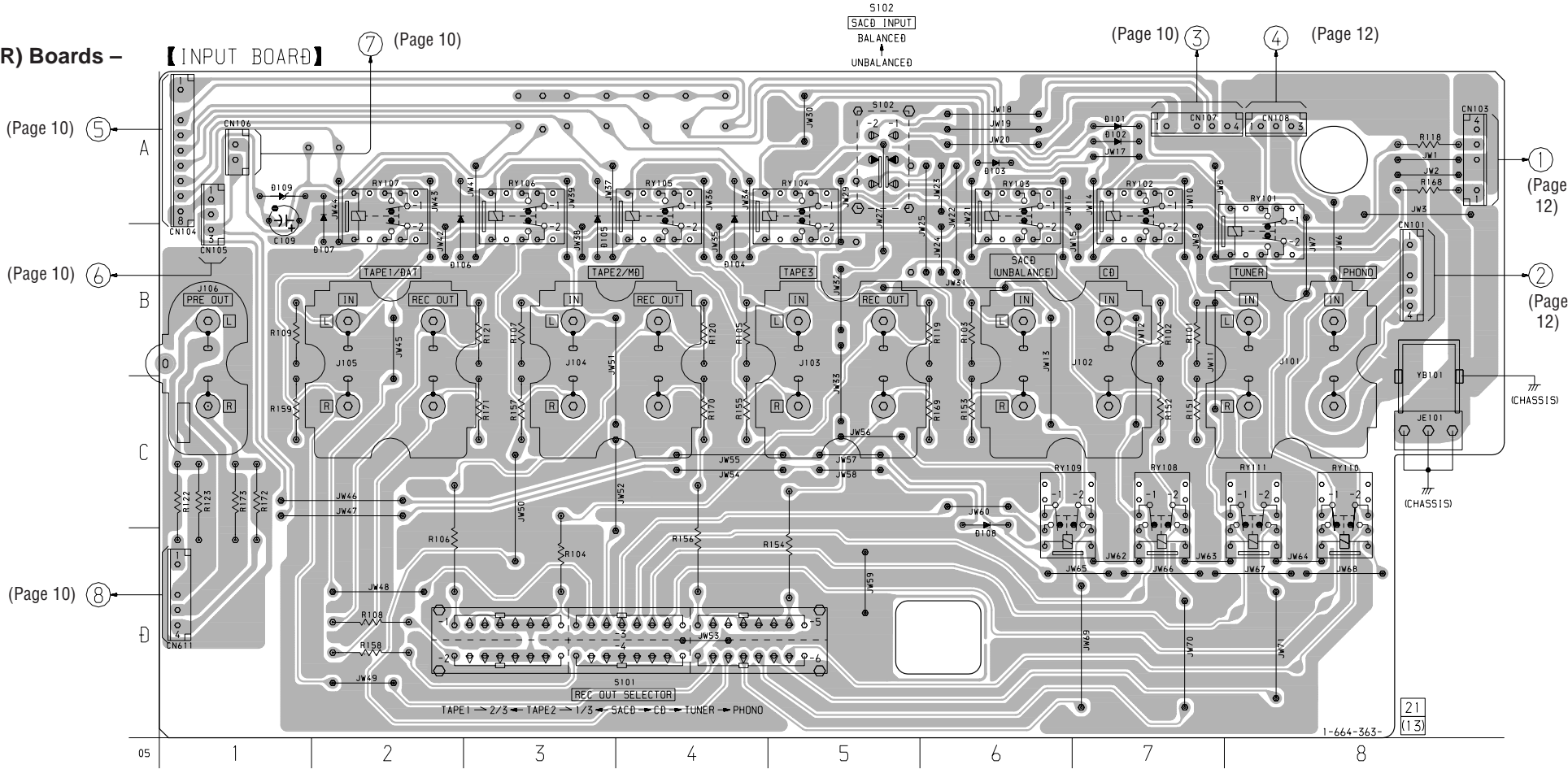


• Semiconductor Location
– MAIN-B (R) Board –

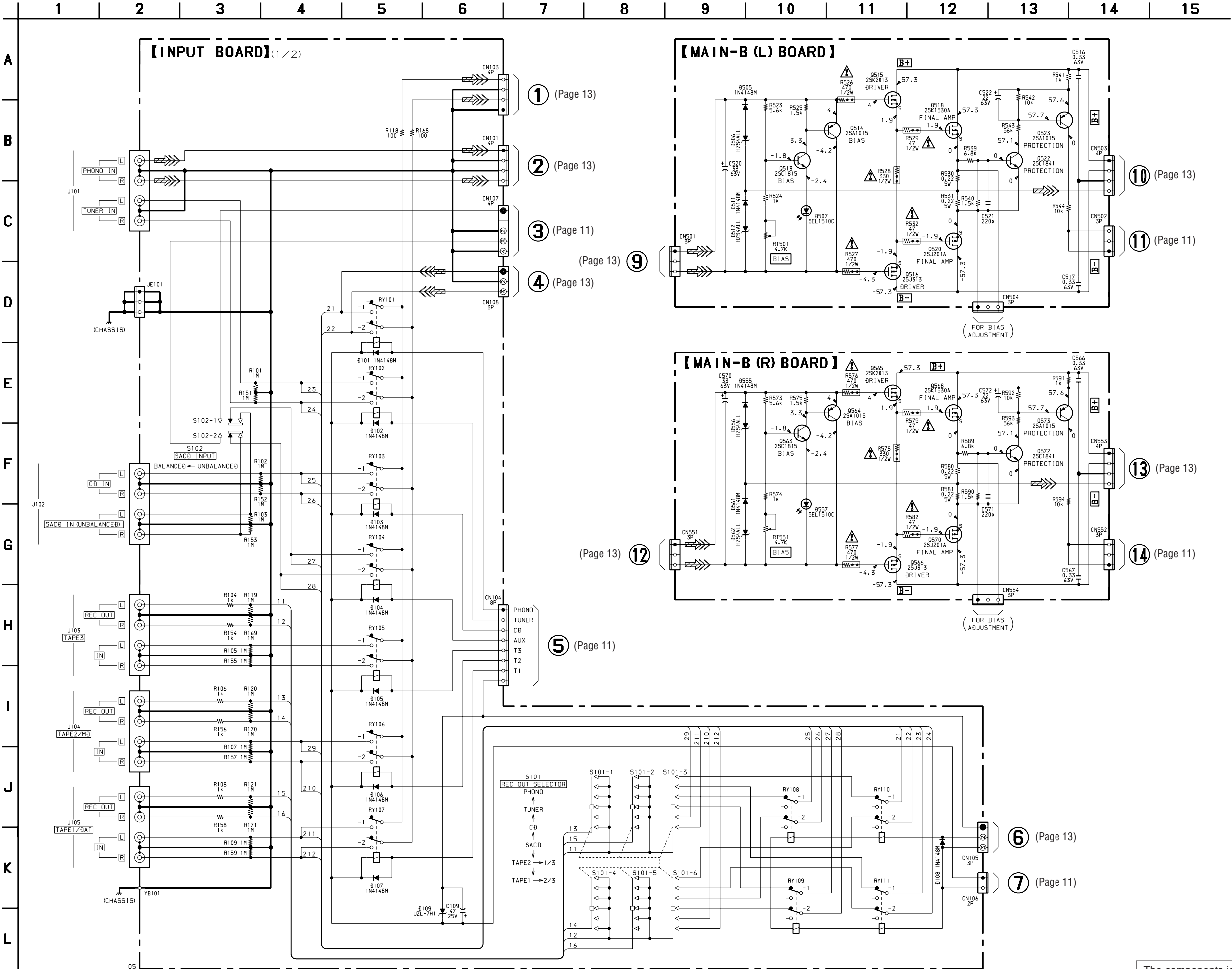
Ref. No.	Location
D555	C-1
D556	C-1
D557	A-1
D561	C-1
D562	C-1
Q563	A-1
Q564	B-1
Q565	B-2
Q566	A-2
Q568	E-2
Q570	D-2
Q572	F-1
Q573	E-1

• Semiconductor Location
– INPUT Board –

Ref. No.	Location
D101	A-7
D102	A-7
D103	A-6
D104	A-4
D105	A-3
D106	A-2
D107	A-2
D108	C-6
D109	A-1

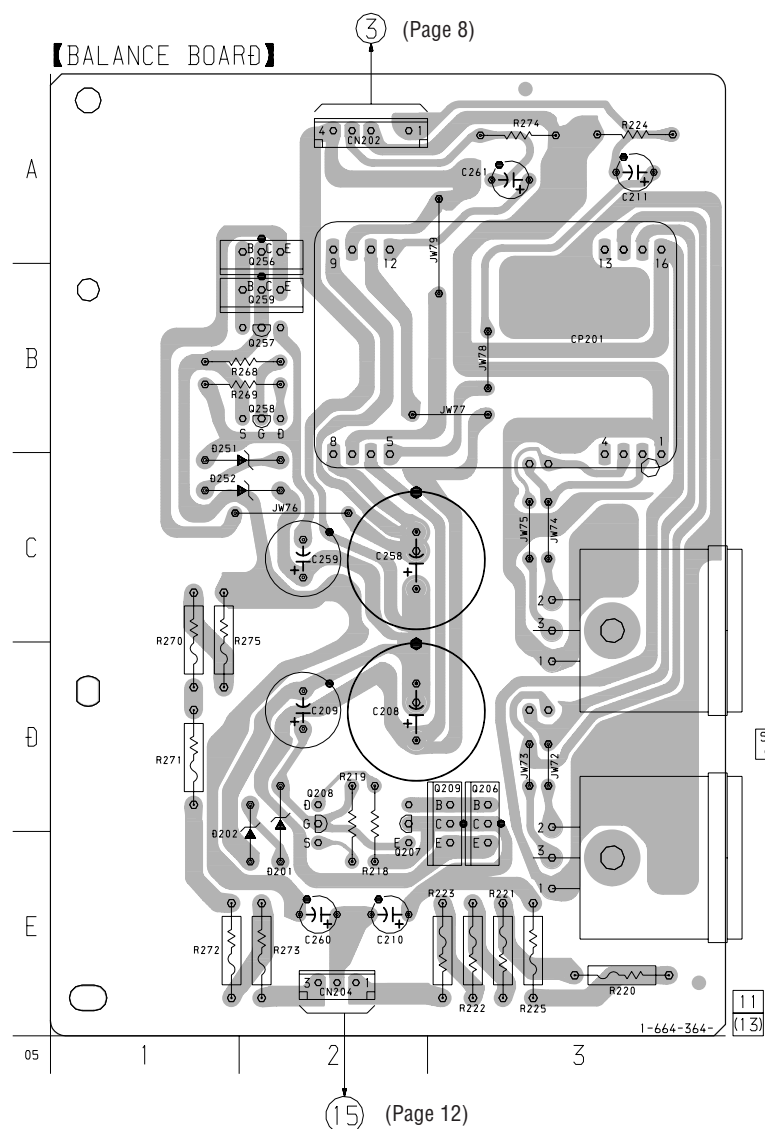


4-3. SCHEMATIC DIAGRAM – INPUT (1/2) /MAIN-B (L) /MAIN-B (R) Boards –

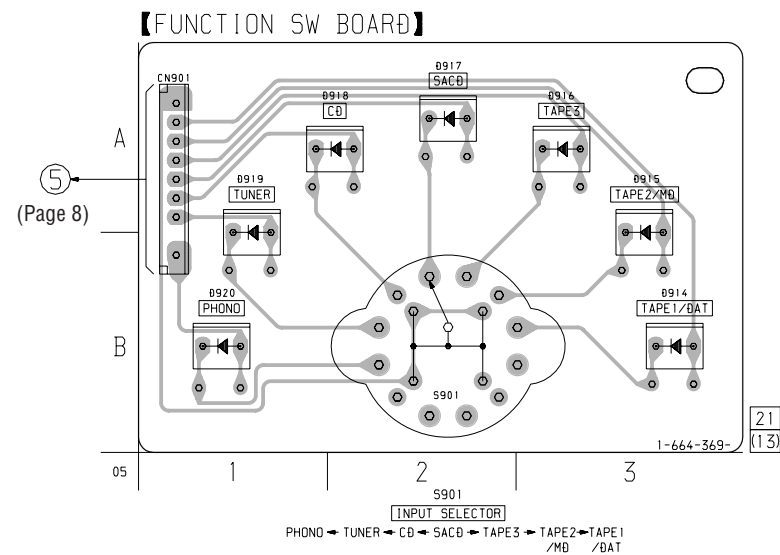


The components identified by mark \triangle or dotted line with mark \triangle are critical for safety.
Replace only with part number specified.

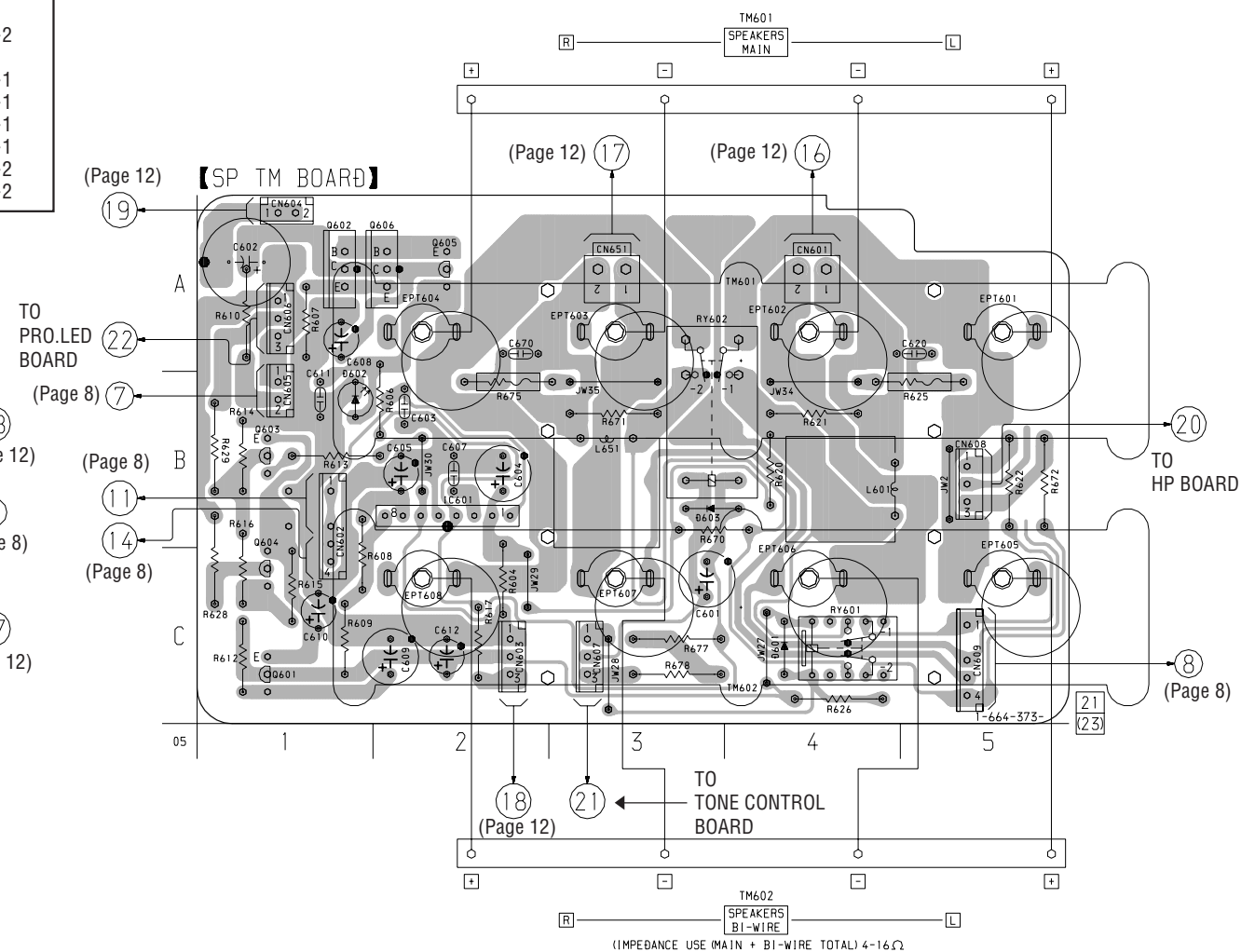
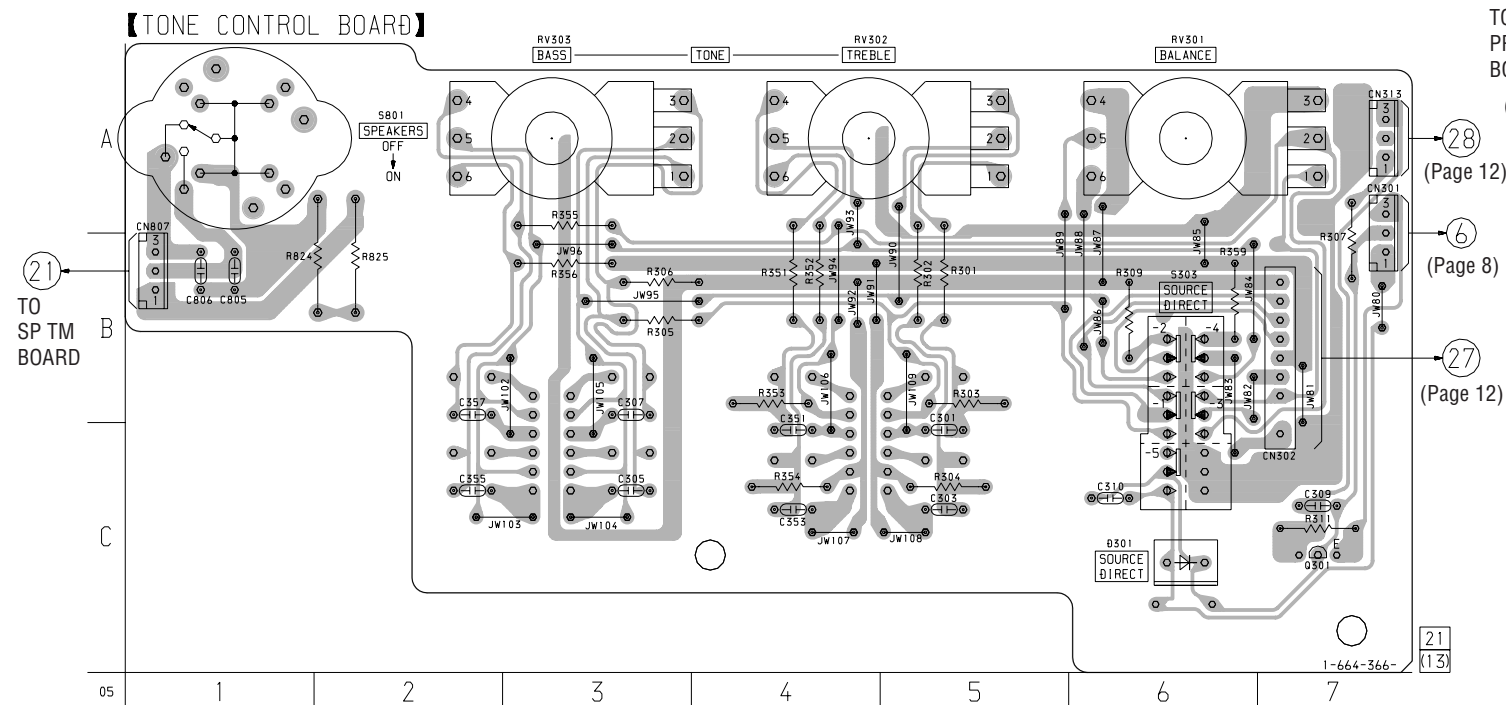
Ref. No.	Location
D201	D-2
D202	D-2
D251	C-2
D252	C-2
Q206	D-3
Q207	D-2
Q208	D-2
Q209	D-3
Q256	A-2
Q257	B-2
Q258	B-2
Q259	B-2

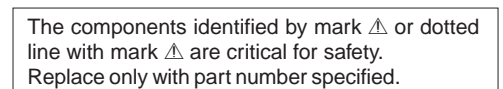


Ref. No.	Location
D914	B-3
D915	A-3
D916	A-3
D917	A-2
D918	A-2
D919	A-1
D920	B-1

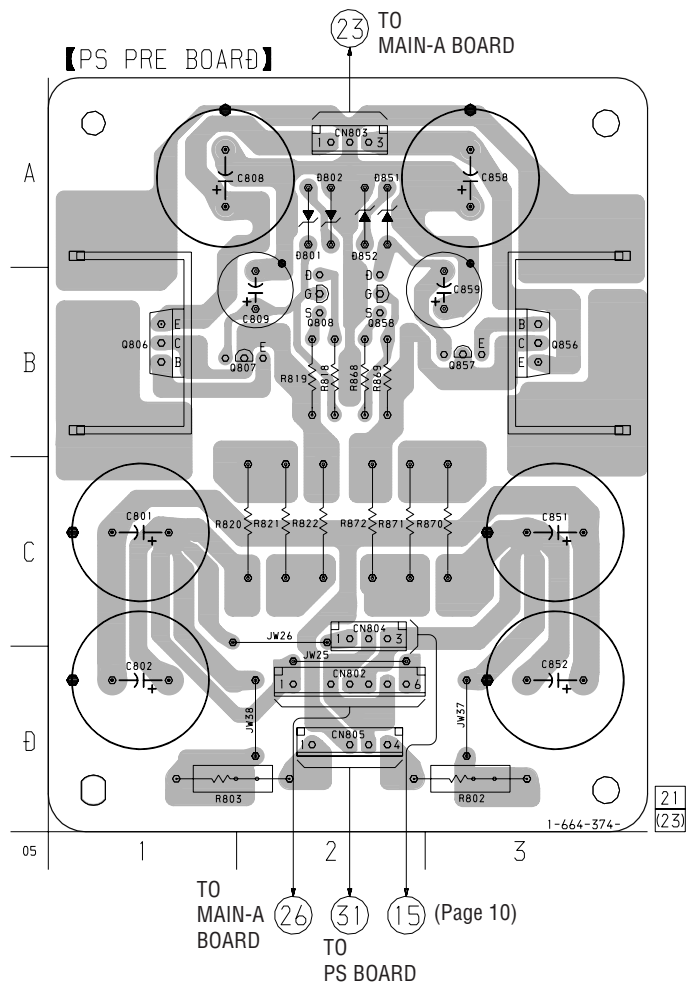


Ref. No.	Location
D601	C-4
D602	B-1
D603	B-3
IC601	B-2
Q601	C-1
Q602	A-1
Q603	B-1
Q604	C-1
Q605	A-2
Q606	A-2





4-6. PRINTED WIRING BOARDS – MAIN-A/RV/REC OUT/PS PRE/PS/OUTLET Boards – • See page 7 for Circuit Boards Location.



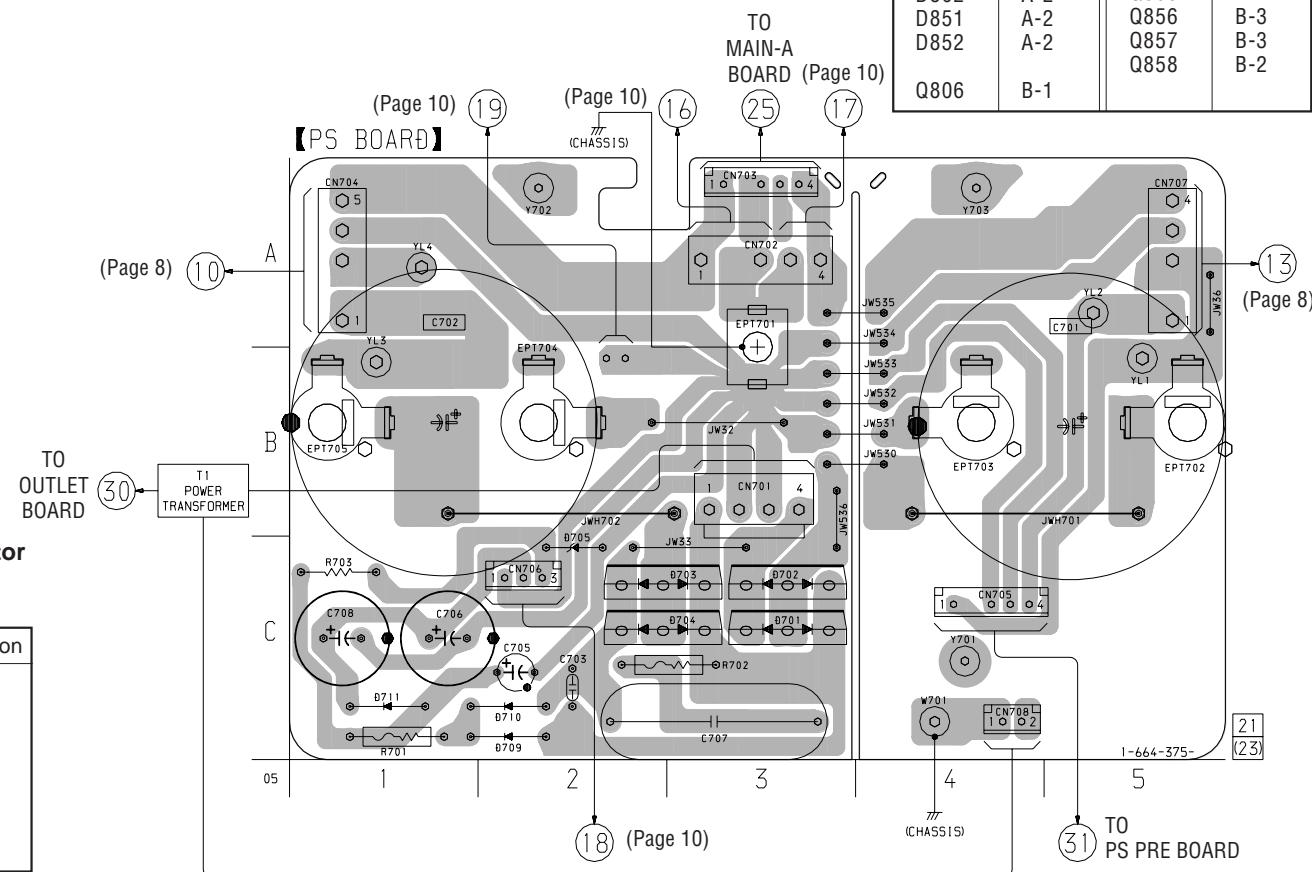
RV BOARD (Page 10)

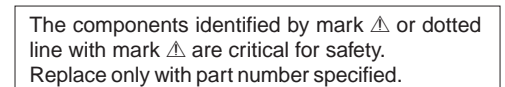
Diagram of the RV BOARD (Page 10) showing components and connections:

- Component 27: A vertical strip of components on the left side.
- Component 1: A component labeled "N305" and "N306" on the left side.
- Component 24: A component labeled "JW97" on the right side.
- Component 21: A component labeled "RV304 ATTENUATOR" on the right side.
- Component 13: A component labeled "1-664-365" on the right side.
- Component 05: A component labeled "05" on the left side.
- Component 01, 02, 03, 04, 05, 06, 07, 08: A grid of components in the center.
- TO MAIN-A BOARD: A label indicating the connection to the main board.

Ref. No.	Location
D701	C-3
D702	C-3
D703	C-2
D704	C-2
D705	B-2
D709	C-2
D710	C-2
D711	C-1

Ref. No.	Location	Ref. No.	Location
D801	A-2	Q807	B-2
D802	A-2	Q808	B-2
D851	A-2	Q856	B-3
D852	A-2	Q857	B-3
		Q858	B-2
Q806	B-1		



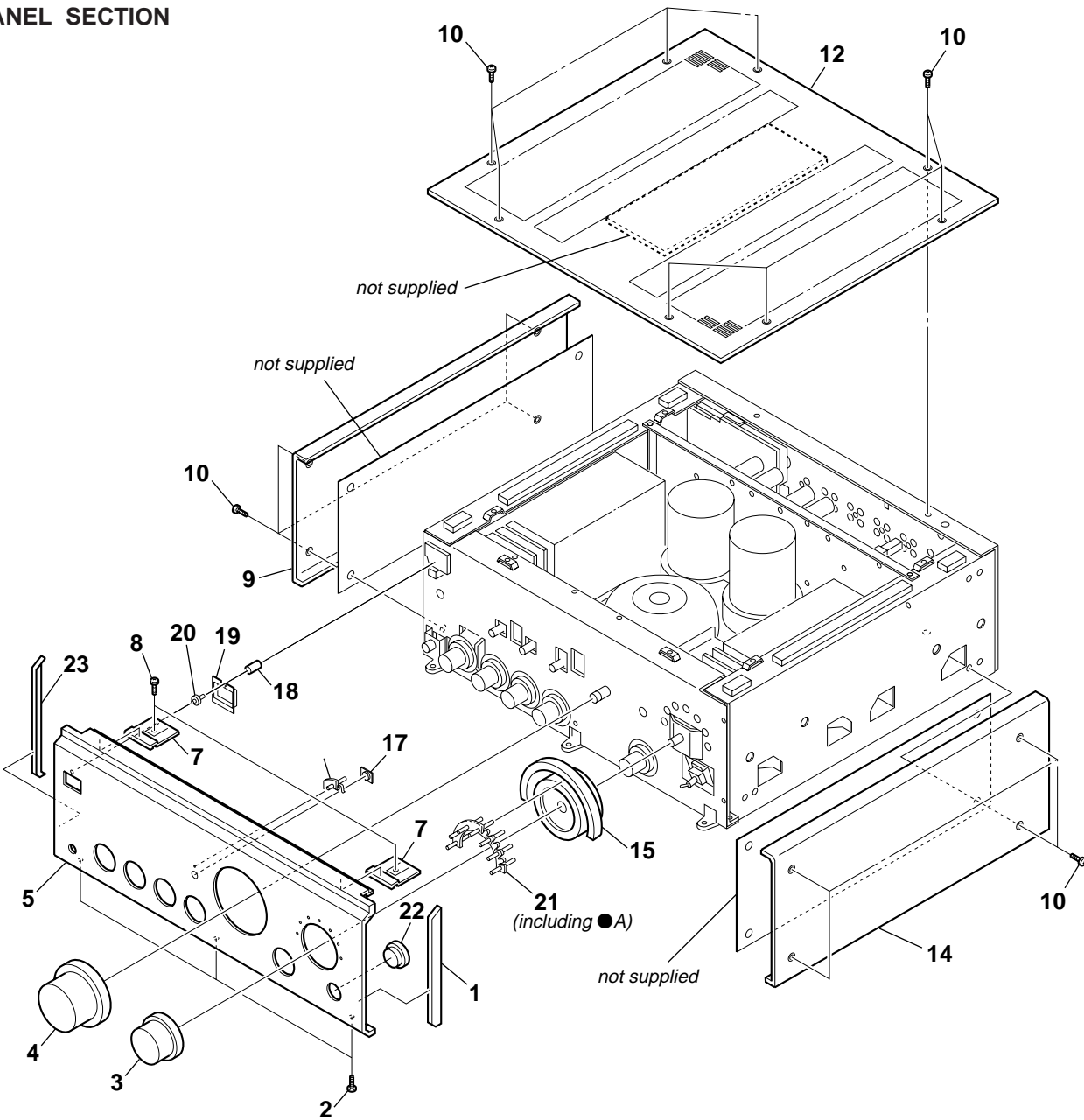


SECTION 5
EXPLODED VIEWS

- NOTE:
- XX and -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
 - Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
 - 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 the electrical parts list.

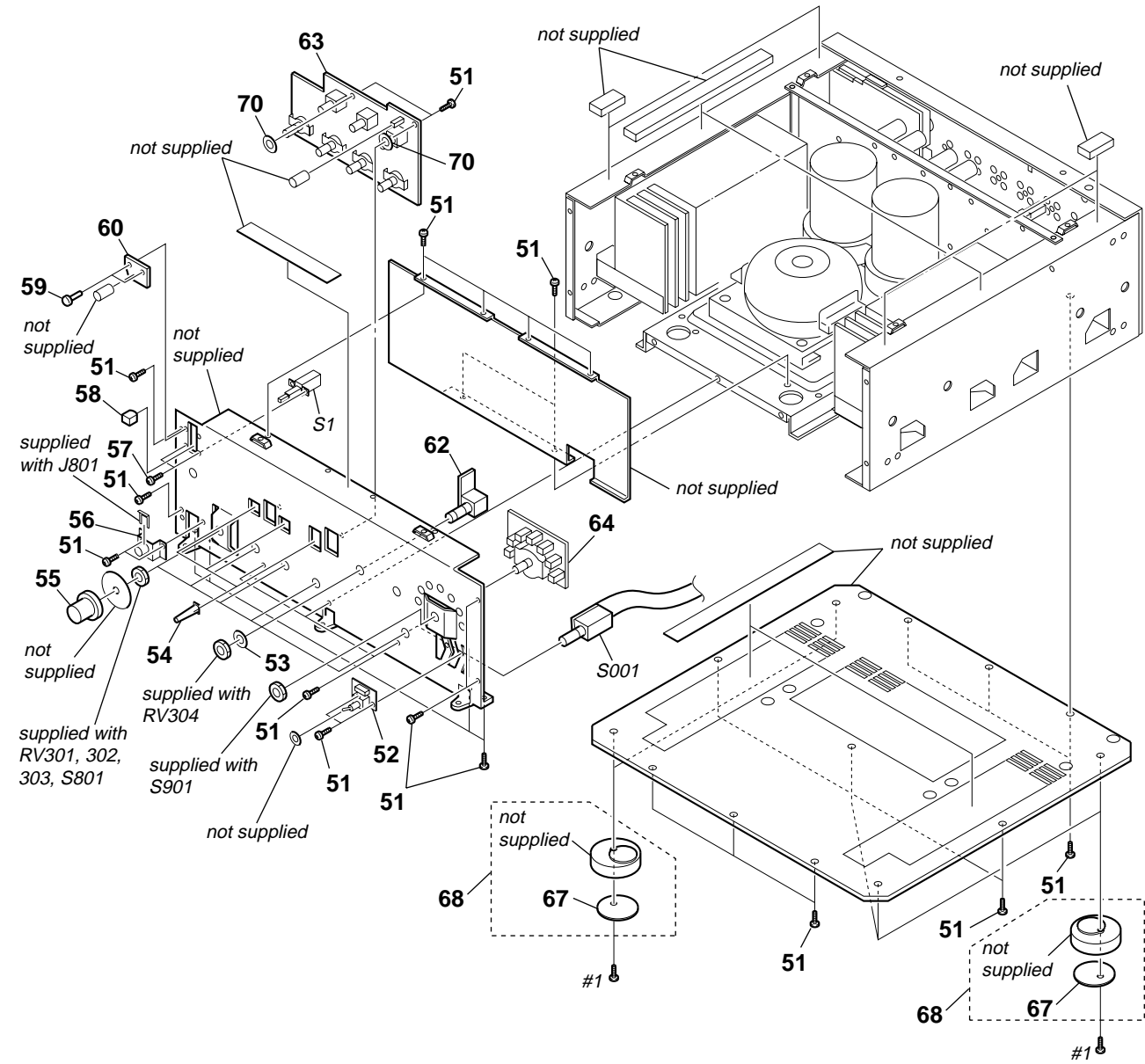
The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

(1) PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-224-463-01	PLATE (R), ORNAMENTAL		14	4-988-323-21	PANEL (R), SIDE	
2	3-703-685-21	SCREW (+BV 3X8)		15	4-988-311-01	ESCUTCHEON (B)	
3	4-224-701-01	KNOB (DIA. 48)		17	4-970-145-11	ESCUTCHEON (P)	
4	4-224-700-01	KNOB (DIA. 68)		* 18	4-971-834-11	TUBE (B), LIGHT INTERCEPTION	
5	4-224-460-01	PANEL, FRONT		19	4-921-415-13	ESCUTCHEON, POWER KNOB	
7	4-224-461-01	BRACKET (F.P)		20	4-931-646-01	LENS, LED	
8	4-974-510-01	SCREW (+BV 3X8 CU)		21	4-988-312-01	LENS, LED	
9	4-988-322-21	PANEL (L), SIDE		22	4-988-321-21	PLATE (L.S), ORNAMENTAL	
10	4-976-827-11	SCREW, FLAT HEAD		23	4-224-462-01	PLATE (L), ORNAMENTAL	
* 12	4-969-333-31	BOARD, TOP					

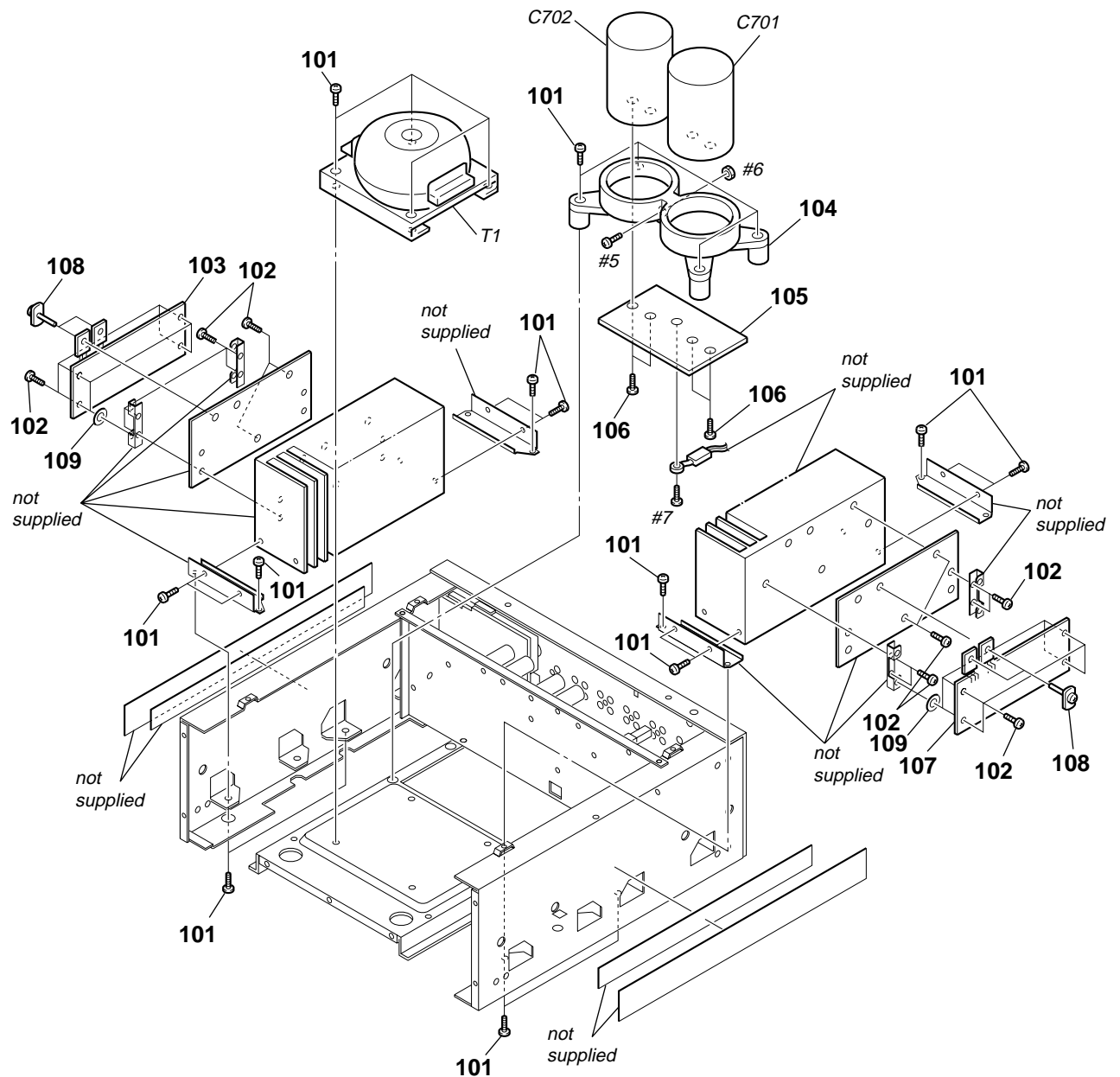
(2) FRONT CHASSIS SECTION



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	Remark	Ref. No.	Part No.	Description	Remark
51	4-974-510-01	SCREW (+BV 3X8 CU)		* 62	1-664-365-21	RV BOARD	
* 52	1-664-379-21	REC OUT BOARD		63	A-4426-973-A	TONE CONTROL BOARD, COMPLETE	
53	4-972-113-01	WASHER		* 64	1-664-369-21	FUNCTION SW BOARD	
54	4-970-146-11	BUTTON		67	4-972-889-01	CUSHION	
55	4-988-316-21	KNOB (DIA. 29)		68	X-4950-540-1	FOOT ASSY	
* 56	1-664-367-21	HP BOARD		70	4-971-099-01	WASHER (P)	
57	4-967-959-01	SCREW (3X6)		S001	1-762-921-11	SWITCH, ROTARY (REMOTE TYPE) (REC OUT SELECTOR)	
58	X-4948-011-1	BUTTON ASSY, POWER		Δ S1	1-554-538-00	SWITCH, PUSH (AC POWER) (1KEY) (POWER)	
59	4-812-134-00	RIVET (DIA. 3.5), NYLON					
* 60	1-664-368-21	PRO.LED BOARD					

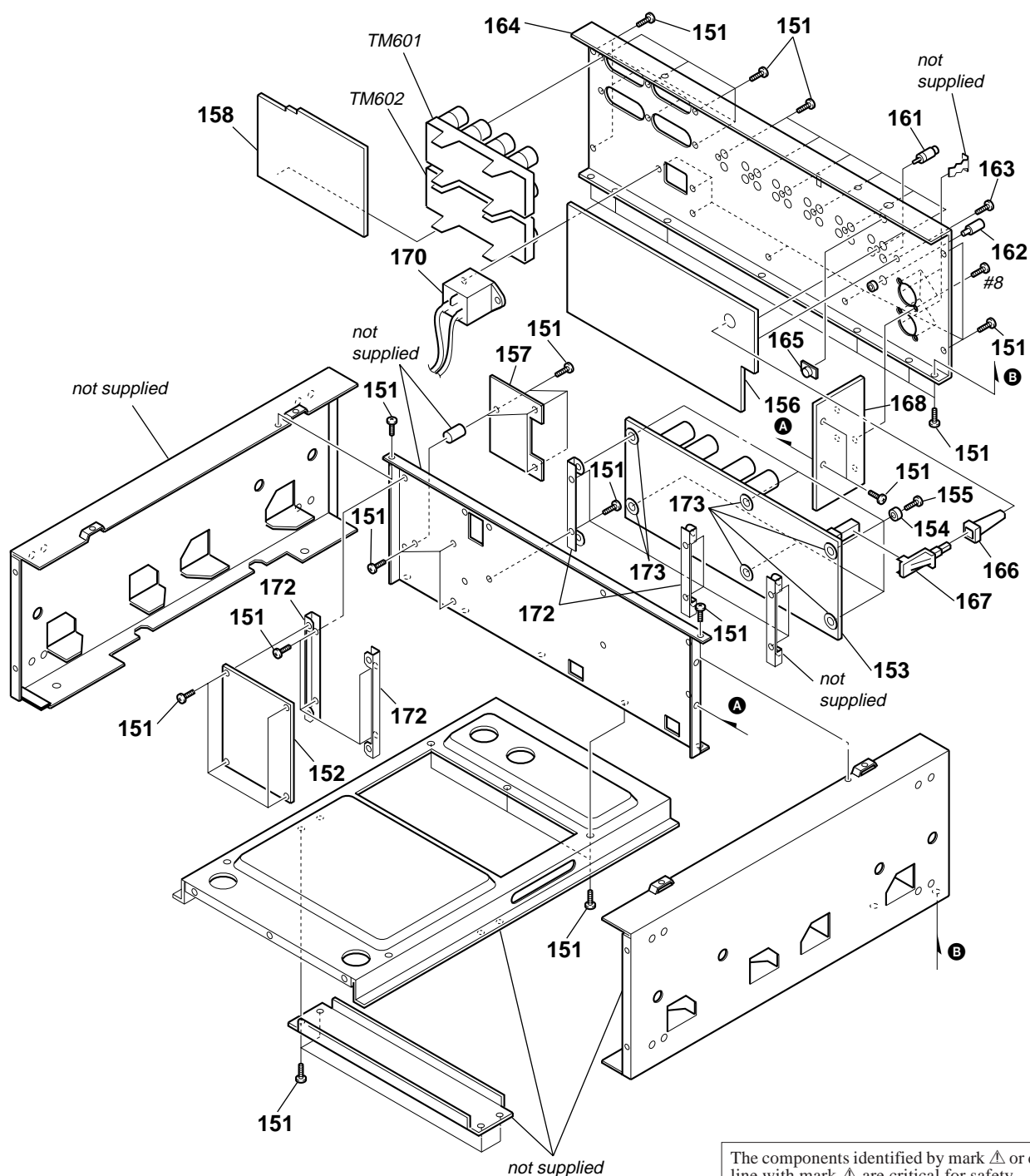
(3) MAIN CHASSIS SECTION



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
101	4-967-960-01	SCREW (4X8)		107	A-4426-969-A	MAIN-B (R) BOARD, COMPLETE	
102	4-974-510-01	SCREW (+BV 3X8 CU)		108	X-4943-354-1	SCREW (+B) ASSY, BARREL WASHER	
103	A-4426-968-A	MAIN-B (L) BOARD, COMPLETE		109	4-971-099-01	WASHER (P)	
* 104	4-970-132-01	HOLDER (C)		C701	1-131-864-11	CAP, ELECT	
105	A-4426-972-A	PS BOARD, COMPLETE		C702	1-131-864-11	CAP, ELECT	
* 106	4-931-964-01	SCREW (M4)		\triangle T1	1-431-376-11	TRANSFORMER, POWER	

(4) BACK PANEL 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
151	4-974-510-01	SCREW (+BV 3X8 CU)		164	4-975-263-42	PANEL, BACK	
152	A-4426-971-A	PS-PRE BOARD, COMPLETE		165	4-970-145-01	ESCUTCHEON (P)	
153	A-4426-967-A	MAIN-A BOARD, COMPLETE		166	4-970-146-01	BUTTON	
154	4-969-896-01	SPACER		* 167	4-970-147-01	ROD	
155	4-973-106-01	SCREW, COLLAR		* 168	A-4392-510-A	BALANCE BOARD, COMPLETE	
* 156	A-4392-509-A	INPUT BOARD, COMPLETE		\triangle 170	1-580-375-41	INLET 3P	
157	1-664-378-21	OUTLET BOARD		* 172	4-969-344-01	HOLDER (P)	
158	A-4426-970-A	SP TM BOARD, COMPLETE		173	4-971-099-01	WASHER (P)	
161	1-506-113-00	SHORT PLUG		TM601	1-694-308-11	TERMINAL BOARD (SP) (SPEAKERS MAIN)	
* 162	1-535-691-31	TERMINAL		TM602	1-694-308-11	TERMINAL BOARD (SP) (SPEAKERS BI-WIRE)	
163	3-703-685-21	SCREW (+BV 3X8)					

SECTION 6 ELECTRICAL PARTS LIST

BALANCE

FUNCTION SW

HP

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.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- 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

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

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-4392-510-A	BALANCE BOARD, COMPLETE *****		Δ R223	1-202-950-31	FUSIBLE 120 5% 1/2W F	
		< CAPACITOR >		R224	1-259-239-11	CARBON 1M 5% 1/4W	
C208	1-110-397-11	ELECT 1000uF 20% 63V		Δ R225	1-202-950-31	FUSIBLE 120 5% 1/2W F	
C209	1-110-393-11	ELECT 100uF 20% 63V		R268	1-259-171-21	CARBON 1.5K 5% 1/4W	
C210	1-110-390-11	ELECT 22uF 20% 63V		R269	1-259-175-11	CARBON 2.2K 5% 1/4W	
C211	1-110-390-11	ELECT 22uF 20% 63V		Δ R270	1-202-950-31	FUSIBLE 120 5% 1/2W F	
C258	1-110-397-11	ELECT 1000uF 20% 63V		Δ R271	1-202-950-31	FUSIBLE 120 5% 1/2W F	
				Δ R272	1-202-950-31	FUSIBLE 120 5% 1/2W F	
C259	1-110-393-11	ELECT 100uF 20% 63V		Δ R273	1-202-950-31	FUSIBLE 120 5% 1/2W F	
C260	1-110-390-11	ELECT 22uF 20% 63V		R274	1-259-239-11	CARBON 1M 5% 1/4W	
C261	1-110-390-11	ELECT 22uF 20% 63V		Δ R275	1-202-950-31	FUSIBLE 120 5% 1/2W F	
		< CONNECTOR >		*****			
CN202	1-691-766-31	PLUG (MICRO CONNECTOR) 4P		*	1-664-369-21	FUNCTION SW BOARD *****	
* CN204	1-564-506-11	PLUG, CONNECTOR 3P				< CONNECTOR >	
CNP201	1-766-896-11	CONNECTOR (CANON) (SACD INPUT L)					
CNP251	1-766-896-11	CONNECTOR (CANON) (SACD INPUT R)		CN901	1-691-770-11	PLUG (MICRO CONNECTOR) 8P	
		< COMPOSITION CIRCUIT BLOCK >				< DIODE >	
CP201	1-233-250-11	ENCAPSULATED COMPONENT		D914	8-719-313-50	LED SEL6810A-TH12 (TAPE1/DAT)	
		< DIODE >		D915	8-719-313-50	LED SEL6810A-TH12 (TAPE2/MD)	
D201	8-719-935-52	DIODE UZL-7H1-TP		D916	8-719-313-50	LED SEL6810A-TH12 (TAPE3)	
D202	8-719-935-52	DIODE UZL-7H1-TP		D917	8-719-313-50	LED SEL6810A-TH12 (SACD)	
D251	8-719-935-52	DIODE UZL-7H1-TP		D918	8-719-313-50	LED SEL6810A-TH12 (CD)	
D252	8-719-935-52	DIODE UZL-7H1-TP		D919	8-719-313-50	LED SEL6810A-TH12 (TUNER)	
		< TRANSISTOR >		D920	8-719-313-50	LED SEL6810A-TH12 (PHONO)	
Q206	8-729-018-60	TRANSISTOR 2SD2012-LC				< SWITCH >	
Q207	8-729-281-54	TRANSISTOR 2SC1815BL-TPE2		S901	1-762-920-11	SWITCH, ROTARY (INPUT SELECTOR)	
Q208	8-729-202-67	FET 2SK246GR3-TPE2		*****			
Q209	8-729-018-60	TRANSISTOR 2SD2012-LC		*	1-664-367-21	HP BOARD *****	
Q256	8-729-018-59	TRANSISTOR 2SB1375 (LB-SONY)				< CONNECTOR >	
Q257	8-729-201-53	TRANSISTOR 2SA1015TP-GR					
Q258	8-729-202-67	FET 2SK246GR3-TPE2		* CN808	1-564-506-11	PLUG, CONNECTOR 3P	
Q259	8-729-018-59	TRANSISTOR 2SB1375 (LB-SONY)				< JACK >	
		< RESISTOR >		J801	1-507-796-71	JACK (PHONES)	
R218	1-259-171-21	CARBON 1.5K 5% 1/4W		*****			
R219	1-259-175-11	CARBON 2.2K 5% 1/4W					
Δ R220	1-202-950-31	FUSIBLE 120 5% 1/2W F					
Δ R221	1-202-950-31	FUSIBLE 120 5% 1/2W F					
Δ R222	1-202-950-31	FUSIBLE 120 5% 1/2W F					

INPUT

MAIN-A

Ref. No.	Part No.	Description	Remark		
*	A-4392-509-A	INPUT BOARD, COMPLETE *****			
*	1-535-730-21	LEAD, JUMPER (OFC)			
*	1-537-738-21	TERMINAL, EARTH			
		<CAPACITOR>			
C109	1-126-967-11	ELECT	47uF	20%	25V
		< CONNECTOR >			
CN101	1-691-766-11	PLUG (MICRO CONNECTOR) 4P			
CN103	1-691-766-21	PLUG (MICRO CONNECTOR) 4P			
CN104	1-691-770-11	PLUG (MICRO CONNECTOR) 8P			
* CN105	1-564-506-11	PLUG, CONNECTOR 3P			
* CN106	1-564-505-11	PLUG, CONNECTOR 2P			
CN107	1-691-766-31	PLUG (MICRO CONNECTOR) 4P			
* CN108	1-564-506-11	PLUG, CONNECTOR 3P			
CN611	1-691-766-11	PLUG (MICRO CONNECTOR) 4P			
		< DIODE >			
D101	8-719-911-19	DIODE 1N4148M-TP			
D102	8-719-911-19	DIODE 1N4148M-TP			
D103	8-719-911-19	DIODE 1N4148M-TP			
D104	8-719-911-19	DIODE 1N4148M-TP			
D105	8-719-911-19	DIODE 1N4148M-TP			
D106	8-719-911-19	DIODE 1N4148M-TP			
D107	8-719-911-19	DIODE 1N4148M-TP			
D108	8-719-911-19	DIODE 1N4148M-TP			
D109	8-719-935-52	DIODE UZL-7H1-TP			
		< JACK >			
J101	1-766-895-21	JACK, PIN 4P (TUNER, PHONO)			
J102	1-766-895-21	JACK, PIN 4P (SACD (UNBALANCED), CD)			
J103	1-766-895-21	JACK, PIN 4P (TAPE3)			
J104	1-766-895-21	JACK, PIN 4P (TAPE2/MD)			
J105	1-766-895-21	JACK, PIN 4P (TAPE1/DAT)			
J106	1-766-894-41	JACK 2P (PRE OUT)			
		< RESISTOR >			
R101	1-259-239-11	CARBON	1M	5%	1/4W
R102	1-259-239-11	CARBON	1M	5%	1/4W
R103	1-259-239-11	CARBON	1M	5%	1/4W
R104	1-249-923-11	CARBON	1K	5%	1/4W
R105	1-259-239-11	CARBON	1M	5%	1/4W
R106	1-249-923-11	CARBON	1K	5%	1/4W
R107	1-259-239-11	CARBON	1M	5%	1/4W
R108	1-249-923-11	CARBON	1K	5%	1/4W
R109	1-259-239-11	CARBON	1M	5%	1/4W
R118	1-259-143-21	CARBON	100	5%	1/4W
R119	1-259-239-11	CARBON	1M	5%	1/4W
R120	1-259-239-11	CARBON	1M	5%	1/4W
R121	1-259-239-11	CARBON	1M	5%	1/4W
R122	1-249-226-11	CARBON	4.7K	5%	1/3W
R123	1-249-194-11	CARBON	220	5%	1/3W
R151	1-259-239-11	CARBON	1M	5%	1/4W
R152	1-259-239-11	CARBON	1M	5%	1/4W
R153	1-259-239-11	CARBON	1M	5%	1/4W
R154	1-249-923-11	CARBON	1K	5%	1/4W

Ref. No.	Part No.	Description	Remark			
R155	1-259-239-11	CARBON	1M	5%	1/4W	
R156	1-249-923-11	CARBON	1K	5%	1/4W	
R157	1-259-239-11	CARBON	1M	5%	1/4W	
R158	1-249-923-11	CARBON	1K	5%	1/4W	
R159	1-259-239-11	CARBON	1M	5%	1/4W	
R168	1-259-143-21	CARBON	100	5%	1/4W	
R169	1-259-239-11	CARBON	1M	5%	1/4W	
R170	1-259-239-11	CARBON	1M	5%	1/4W	
R171	1-259-239-11	CARBON	1M	5%	1/4W	
R172	1-249-226-11	CARBON	4.7K	5%	1/3W	
R173	1-249-194-11	CARBON	220	5%	1/3W	
< RELAY >						
RY101	1-755-060-11	RELAY				
RY102	1-755-060-11	RELAY				
RY103	1-755-060-11	RELAY				
RY104	1-755-060-11	RELAY				
RY105	1-755-060-11	RELAY				
RY106	1-755-060-11	RELAY				
RY107	1-755-060-11	RELAY				
RY108	1-755-060-11	RELAY				
RY109	1-755-060-11	RELAY				
RY110	1-755-060-11	RELAY				
RY111	1-755-060-11	RELAY				
< SWITCH >						
S101	1-570-076-11	SWITCH, SLIDE (REMOTE TYPE)				
		(REC OUT SELECTOR)				
S102	1-762-181-11	SWITCH, SLIDE (SACD INPUT)				
< BRACKET >						
* YB101	4-946-336-01	BRACKET (GROUND)				

A-4426-967-A	MAIN-A BOARD, COMPLETE					

< CAPACITOR >						
C201	1-125-852-11	FILM	330PF	5%	50V	
C202	1-130-973-00	FILM	0.022uF	2%	100V	
C203	1-130-341-00	FILM	0.056uF	2%	100V	
C204	1-137-332-11	FILM	0.016uF	2%	100V	
C205	1-119-800-11	ELECT	100uF	20%	25V	
C206	1-119-834-11	ELECT	22uF	20%	63V	
C207	1-119-834-11	ELECT	22uF	20%	63V	
C251	1-125-852-11	FILM	330PF	5%	50V	
C252	1-130-973-00	FILM	0.022uF	2%	100V	
C253	1-130-341-00	FILM	0.056uF	2%	100V	
C254	1-137-332-11	FILM	0.016uF	2%	100V	
C255	1-119-800-11	ELECT	100uF	20%	25V	
C256	1-119-834-11	ELECT	22uF	20%	63V	
C257	1-119-834-11	ELECT	22uF	20%	63V	
C401	1-125-845-21	FILM	47PF	10%	50V	
C402	1-136-810-11	FILM	220PF	5%	100V	
C404	1-125-842-11	FILM	4PF	10%	50V	
C405	1-119-830-11	ELECT	330uF	20%	25V	
C406	1-119-830-11	ELECT	330uF	20%	25V	
C408	1-128-198-11	ELECT	22uF	20%	63V	

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
C409	1-110-512-11	ELECT	1uF	10%	50V		Q253	8-729-203-45	TRANSISTOR	2SC3423-Y			
C410	1-125-845-21	FILM	47PF	10%	50V		Q254	8-729-202-67	FET	2SK246GR3-TPE2			
C411	1-119-830-11	ELECT	330uF	20%	25V		Q255	8-729-281-54	TRANSISTOR	2SC1815BL-TPE2			
C412	1-119-830-11	ELECT	330uF	20%	25V								
C413	1-119-834-11	ELECT	22uF	20%	63V		Q401	8-729-203-21	FET	2SK389-BL			
							Q402	8-729-281-54	TRANSISTOR	2SC1815BL-TPE2			
C418	1-119-841-11	ELECT	1000uF	20%	63V		Q403	8-729-281-54	TRANSISTOR	2SC1815BL-TPE2			
C419	1-119-841-11	ELECT	1000uF	20%	63V		Q404	8-729-232-00	TRANSISTOR	2SA1349-GRBL			
C425	1-119-841-11	ELECT	1000uF	20%	63V		Q405	8-729-018-21	FET	2SJ313-LB			
C426	1-119-841-11	ELECT	1000uF	20%	63V								
C451	1-125-845-21	FILM	47PF	10%	50V		Q406	8-729-104-91	TRANSISTOR	2SA1383-Q			
							Q407	8-729-202-67	FET	2SK246GR3-TPE2			
C452	1-136-810-11	FILM	220PF	5%	100V		Q408	8-729-104-18	TRANSISTOR	2SC3514-P			
C454	1-125-842-11	FILM	4PF	10%	50V		Q409	8-729-104-18	TRANSISTOR	2SC3514-P			
C455	1-119-830-11	ELECT	330uF	20%	25V		Q410	8-729-202-67	FET	2SK246GR3-TPE2			
C456	1-119-830-11	ELECT	330uF	20%	25V								
C458	1-128-198-11	ELECT	22uF	20%	63V		Q411	8-729-202-67	FET	2SK246GR3-TPE2			
							Q412	8-729-202-67	FET	2SK246GR3-TPE2			
C459	1-110-512-11	ELECT	1uF	10%	50V		Q451	8-729-203-21	FET	2SK389-BL			
C460	1-125-845-21	FILM	47PF	10%	50V		Q452	8-729-281-54	TRANSISTOR	2SC1815BL-TPE2			
C461	1-119-830-11	ELECT	330uF	20%	25V		Q453	8-729-281-54	TRANSISTOR	2SC1815BL-TPE2			
C462	1-119-830-11	ELECT	330uF	20%	25V								
C463	1-119-834-11	ELECT	22uF	20%	63V		Q454	8-729-232-00	TRANSISTOR	2SA1349-GRBL			
							Q455	8-729-018-21	FET	2SJ313-LB			
C468	1-119-841-11	ELECT	1000uF	20%	63V		Q456	8-729-104-91	TRANSISTOR	2SA1383-Q			
C469	1-119-841-11	ELECT	1000uF	20%	63V		Q457	8-729-202-67	FET	2SK246GR3-TPE2			
C475	1-119-841-11	ELECT	1000uF	20%	63V		Q458	8-729-104-18	TRANSISTOR	2SC3514-P			
C476	1-119-841-11	ELECT	1000uF	20%	63V								
< CONNECTOR >							Q459	8-729-104-18	TRANSISTOR	2SC3514-P			
* CN203	1-564-506-11	PLUG, CONNECTOR 3P					Q460	8-729-202-67	FET	2SK246GR3-TPE2			
CN205	1-691-766-11	PLUG (MICRO CONNECTOR) 4P					Q461	8-729-202-67	FET	2SK246GR3-TPE2			
* CN206	1-564-506-11	PLUG, CONNECTOR 3P					Q462	8-729-202-67	FET	2SK246GR3-TPE2			
CN401	1-691-766-11	PLUG (MICRO CONNECTOR) 4P					< RESISTOR >						
CN402	1-691-766-31	PLUG (MICRO CONNECTOR) 4P					R201	1-249-911-11	CARBON	330	5%	1/4W	
* CN403	1-564-509-21	PLUG, CONNECTOR 6P					R202	1-259-143-21	CARBON	100	5%	1/4W	
CN404	1-564-510-11	PLUG (MICRO CONNECTOR) 6P					R203	1-259-207-21	CARBON	47K	5%	1/4W	
							R204	1-259-163-11	CARBON	680	5%	1/4W	
							R205	1-259-163-11	CARBON	680	5%	1/4W	
< DIODE >							R206	1-259-183-11	CARBON	4.7K	5%	1/4W	
D401	8-719-933-41	DIODE UZL-6H3-TP					R207	1-259-143-21	CARBON	100	5%	1/4W	
D402	8-719-200-02	DIODE 11E2-TA2B					R208	1-249-915-11	CARBON	470	5%	1/4W	
D403	8-719-200-02	DIODE 11E2-TA2B					R209	1-259-143-21	CARBON	100	5%	1/4W	
D418	8-719-310-60	LED SEL1510C-C-TP					R210	1-249-485-11	CARBON	8.2	5%	1/3W	
D419	8-719-310-60	LED SEL1510C-C-TP											
							R211	1-249-887-11	CARBON	33	5%	1/4W	
D451	8-719-933-41	DIODE UZL-6H3-TP					R212	1-259-151-21	CARBON	220	5%	1/4W	
D452	8-719-200-02	DIODE 11E2-TA2B					R213	1-259-151-21	CARBON	220	5%	1/4W	
D453	8-719-200-02	DIODE 11E2-TA2B					R214	1-259-239-11	CARBON	1M	5%	1/4W	
D468	8-719-310-60	LED SEL1510C-C-TP					R215	1-249-844-11	CARBON	56K	1%	1/2W	
D469	8-719-310-60	LED SEL1510C-C-TP											
< IC >							R216	1-259-320-11	CARBON	4.7K	1%	1/2W	
IC201	8-759-259-12	IC OPA2604AP					R217	1-259-151-21	CARBON	220	5%	1/4W	
							R251	1-249-911-11	CARBON	330	5%	1/4W	
< TRANSISTOR >							R252	1-259-143-21	CARBON	100	5%	1/4W	
Q201	8-729-214-71	FET	2SK147-BL				R253	1-259-207-21	CARBON	47K	5%	1/4W	
Q202	8-729-214-71	FET	2SK147-BL										
Q203	8-729-203-45	TRANSISTOR	2SC3423-Y				R254	1-259-163-11	CARBON	680	5%	1/4W	
Q204	8-729-202-67	FET	2SK246GR3-TPE2				R255	1-259-163-11	CARBON	680	5%	1/4W	
Q205	8-729-281-54	TRANSISTOR	2SC1815BL-TPE2				R256	1-259-183-11	CARBON	4.7K	5%	1/4W	
							R257	1-259-143-21	CARBON	100	5%	1/4W	
Q251	8-729-214-71	FET	2SK147-BL				R258	1-249-915-11	CARBON	470	5%	1/4W	
Q252	8-729-214-71	FET	2SK147-BL										
							R259	1-259-143-21	CARBON	100	5%	1/4W	
							R260	1-249-485-11	CARBON	8.2	5%	1/3W	
							R261	1-249-887-11	CARBON	33	5%	1/4W	
							R262	1-259-151-21	CARBON	220	5%	1/4W	

MAIN-A

MAIN-B (L)

MAIN-B (R)

Ref. No.	Part No.	Description			Remark
R263	1-259-151-21	CARBON	220	5%	1/4W
R264	1-259-239-11	CARBON	1M	5%	1/4W
R265	1-249-844-11	CARBON	56K	1%	1/2W
R266	1-259-320-11	CARBON	4.7K	1%	1/2W
R267	1-259-151-21	CARBON	220	5%	1/4W
R401	1-214-937-00	METAL	1M	1%	1/2W
R402	1-249-210-11	CARBON	1K	5%	1/3W
R403	1-249-883-11	CARBON	22	5%	1/4W
R404	1-249-883-11	CARBON	22	5%	1/4W
R405	1-259-175-11	CARBON	2.2K	5%	1/4W
R406	1-249-943-11	CARBON	6.8K	5%	1/4W
R407	1-259-151-21	CARBON	220	5%	1/4W
R408	1-259-151-21	CARBON	220	5%	1/4W
R409	1-259-151-21	CARBON	220	5%	1/4W
R410	1-259-207-21	CARBON	47K	5%	1/4W
R411	1-249-923-11	CARBON	1K	5%	1/4W
△ R412	1-219-193-11	FUSIBLE	220	5%	1/2W F
R413	1-249-842-11	CARBON	47K	5%	1/2W
R414	1-259-171-21	CARBON	1.5K	5%	1/4W
R415	1-249-953-11	CARBON	18K	5%	1/4W
R419	1-214-937-00	METAL	1M	1%	1/2W
R420	1-259-171-21	CARBON	1.5K	5%	1/4W
R421	1-259-183-11	CARBON	4.7K	5%	1/4W
△ R422	1-219-022-11	FUSIBLE	100	5%	1/2W F
R430	1-259-828-11	CARBON	20K	2%	2W
R431	1-259-773-11	CARBON	100	2%	2W
R451	1-214-937-00	METAL	1M	1%	1/2W
R452	1-249-210-11	CARBON	1K	5%	1/3W
R453	1-249-883-11	CARBON	22	5%	1/4W
R454	1-249-883-11	CARBON	22	5%	1/4W
R455	1-259-175-11	CARBON	2.2K	5%	1/4W
R456	1-249-943-11	CARBON	6.8K	5%	1/4W
R457	1-259-151-21	CARBON	220	5%	1/4W
R458	1-259-151-21	CARBON	220	5%	1/4W
R459	1-259-151-21	CARBON	220	5%	1/4W
R460	1-259-207-21	CARBON	47K	5%	1/4W
R461	1-249-923-11	CARBON	1K	5%	1/4W
△ R462	1-219-193-11	FUSIBLE	220	5%	1/2W F
R463	1-249-842-11	CARBON	47K	5%	1/2W
R464	1-259-171-21	CARBON	1.5K	5%	1/4W
R465	1-249-953-11	CARBON	18K	5%	1/4W
R469	1-214-937-00	METAL	1M	1%	1/2W
R470	1-259-171-21	CARBON	1.5K	5%	1/4W
R471	1-259-183-11	CARBON	4.7K	5%	1/4W
△ R472	1-219-022-11	FUSIBLE	100	5%	1/2W F
R480	1-259-828-11	CARBON	20K	2%	2W
R481	1-259-773-11	CARBON	100	2%	2W
< SWITCH >					
S201	1-572-642-11	SWITCH, PUSH (1 KEY) (CARTRIDGE)			

A-4426-968-A MAIN-B (L) BOARD, COMPLETE					

< CAPACITOR >					
C516	1-137-163-11	FILM	0.33uF	10%	63V

Ref. No.	Part No.	Description	Remark		
C517	1-137-163-11	FILM	0.33uF	10%	63V
C520	1-119-835-31	ELECT	33uF	20%	63V
C521	1-162-286-31	CERAMIC	220PF	10%	50V
C522	1-119-834-11	ELECT	22uF	20%	63V
< CONNECTOR >					
* CN501	1-564-506-11	PLUG, CONNECTOR 3P			
* CN502	1-564-506-11	PLUG, CONNECTOR 3P			
CN503	1-766-897-11	PIN, CONNECTOR (PC BOARD) 4P			
* CN504	1-564-518-11	PLUG, CONNECTOR 3P			
< DIODE >					
D505	8-719-911-19	DIODE 1N4148M-TP			
D506	8-719-985-53	DIODE HZS4ALL-TA			
D507	8-719-310-60	LED SEL1510C-C-TP			
D511	8-719-911-19	DIODE 1N4148M-TP			
D512	8-719-985-53	DIODE HZS4ALL-TA			
< TRANSISTOR >					
Q513	8-729-281-54	TRANSISTOR	2SC1815BL-TPE2		
Q514	8-729-201-53	TRANSISTOR	2SA1015TP-GR		
Q515	8-729-018-19	FET	2SK2013-Y		
Q516	8-729-018-21	FET	2SJ313-Y		
Q518	8-729-018-11	FET	2SK1530A-Y		
Q520	8-729-018-13	FET	2SJ201A-Y		
Q522	8-729-140-84	TRANSISTOR	2SC1841TP-PAFAEA		
Q523	8-729-201-53	TRANSISTOR	2SA1015TP-GR		
< RESISTOR >					
R523	1-249-941-11	CARBON	5.6K	5%	1/4W
R524	1-249-923-11	CARBON	1K	5%	1/4W
R525	1-249-556-11	CARBON	1.5K	5%	1/4W
△ R526	1-202-954-11	FUSIBLE	470	5%	1/2W F
△ R527	1-202-954-11	FUSIBLE	470	5%	1/2W F
△ R528	1-202-953-11	FUSIBLE	330	5%	1/2W F
△ R529	1-219-185-11	FUSIBLE	47	5%	1/2W F
R530	1-242-822-31	REGISTER	0.22	5%	5W
R531	1-242-822-31	REGISTER	0.22	5%	5W
△ R532	1-219-185-11	FUSIBLE	47	5%	1/2W F
R539	1-249-943-11	CARBON	6.8K	5%	1/4W
R540	1-249-556-11	CARBON	1.5K	5%	1/4W
R541	1-249-923-11	CARBON	1K	5%	1/4W
R542	1-249-576-11	CARBON	10K	5%	1/4W
R543	1-249-965-11	CARBON	56K	5%	1/4W
R544	1-249-576-11	CARBON	10K	5%	1/4W
< VARIABLE RESISTOR >					
RT501	1-224-490-11	RES, ADJ, METAL FILM 4.7K			

A-4426-969-A	MAIN-B (R) BOARD, COMPLETE				

*	1-535-730-21	LEAD, JUMPER (OFC)			
< CAPACITOR >					
C566	1-137-163-11	FILM	0.33uF	10%	63V
C567	1-137-163-11	FILM	0.33uF	10%	63V
C570	1-119-835-31	ELECT	33uF	20%	63V

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

MAIN-B (R)

OUTLET

PRO.LED

PS

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C571	1-162-286-31	CERAMIC	220PF	10%	50V	CN52	1-580-629-11	PIN, CONNECTOR 2P			
C572	1-119-834-11	ELECT	22uF	20%	63V	* CN53	1-564-321-21	PIN, CONNECTOR 2P			
< CONNECTOR >						< FUSE >					
* CN551	1-564-506-11	PLUG, CONNECTOR 3P				△ F51	1-532-299-00	FUSE, TIME-LAG (T5A/250V)			
* CN552	1-564-506-11	PLUG, CONNECTOR 3P				*****					
CN553	1-766-897-21	PIN, CONNECTOR (PC BOARD) 4P									
* CN554	1-564-518-11	PLUG, CONNECTOR 3P				* 1-664-368-21	PRO.LED BOARD	*****			
< DIODE >						< CONNECTOR >					
D555	8-719-911-19	DIODE 1N4148M-TP				* CN806	1-564-506-11	PLUG, CONNECTOR 3P			
D556	8-719-985-53	DIODE HZS4ALL-TA				< DIODE >					
D557	8-719-310-60	LED SEL1510C-C-TP				D803	8-719-313-40	LED SML1516W-TP4 (POWER)			
D561	8-719-911-19	DIODE 1N4148M-TP				< RESISTOR >					
D562	8-719-985-53	DIODE HZS4ALL-TA				R801	1-249-407-11	CARBON	150	5%	1/4W
< TRANSISTOR >						*****					
Q563	8-729-281-54	TRANSISTOR	2SC1815BL-TPE2			A-4426-972-A PS BOARD, COMPLETE					
Q564	8-729-201-53	TRANSISTOR	2SA1015TP-GR			*****					
Q565	8-729-018-19	FET	2SK2013-Y								
Q566	8-729-018-21	FET	2SJ313-Y			* 3-555-872-21	SPACER				
Q568	8-729-018-11	FET	2SK1530A-Y			< CAPACITOR >					
Q570	8-729-018-13	FET	2SJ201A-Y			C703	1-130-955-00	FILM	0.01uF	5%	100V
Q572	8-729-140-84	TRANSISTOR	2SC1841TP-PAFAEA			C705	1-119-846-11	ELECT	1uF	20%	100V
Q573	8-729-201-53	TRANSISTOR	2SA1015TP-GR			C706	1-119-839-21	ELECT	330uF	20%	63V
< RESISTOR >						C707	1-136-880-11	FILM	2.2uF	10%	160V
R573	1-249-941-11	CARBON	5.6K	5%	1/4W	C708	1-119-839-21	ELECT	330uF	20%	63V
R574	1-249-923-11	CARBON	1K	5%	1/4W	< CONNECTOR >					
R575	1-249-556-11	CARBON	1.5K	5%	1/4W	* CN701	1-564-241-11	PIN, CONNECTOR (B4P-VH) 4P			
△ R576	1-202-954-11	FUSIBLE	470	5%	1/2W F	CN703	1-691-766-31	PLUG (MICRO CONNECTOR) 4P			
△ R577	1-202-954-11	FUSIBLE	470	5%	1/2W F	CN705	1-691-766-11	PLUG (MICRO CONNECTOR) 4P			
△ R578	1-202-953-11	FUSIBLE	330	5%	1/2W F	* CN706	1-564-506-11	PLUG, CONNECTOR 3P			
△ R579	1-219-185-11	FUSIBLE	47	5%	1/2W F	* CN708	1-564-505-11	PLUG, CONNECTOR 2P			
R580	1-242-822-31	REGISTER	0.22	5%	5W	< DIODE >					
R581	1-242-822-31	REGISTER	0.22	5%	5W	D701	8-719-210-25	DIODE C25P20F			
△ R582	1-219-185-11	FUSIBLE	47	5%	1/2W F	D702	8-719-210-25	DIODE C25P20F			
R589	1-249-943-11	CARBON	6.8K	5%	1/4W	D703	8-719-210-26	DIODE C25P20FR			
R590	1-249-556-11	CARBON	1.5K	5%	1/4W	D704	8-719-210-26	DIODE C25P20FR			
R591	1-249-923-11	CARBON	1K	5%	1/4W	D705	8-719-934-22	DIODE HZS30-2LT2			
R592	1-249-576-11	CARBON	10K	5%	1/4W	D709	8-719-200-02	DIODE 11E2-TA2B			
R593	1-249-965-11	CARBON	56K	5%	1/4W	D710	8-719-200-02	DIODE 11E2-TA2B			
R594	1-249-576-11	CARBON	10K	5%	1/4W	D711	8-719-200-02	DIODE 11E2-TA2B			
< VARIABLE RESISTOR >						< MOUNT TERMINAL/GROUND PLATE >					
RT551	1-224-490-11	RES, ADJ, METAL FILM 4.7K				* EPT701	4-924-264-21	TERMINAL, MOUNT			
*****						* EPT702	3-346-266-21	PLATE, GROUND			
1-664-378-21	OUTLET BOARD	*****				* EPT703	3-346-266-21	PLATE, GROUND			
* 1-533-185-11	HOLDER, FUSE					* EPT704	3-346-266-21	PLATE, GROUND			
< CAPACITOR >						* EPT705	3-346-266-21	PLATE, GROUND			
△ C51	1-113-920-11	CERAMIC	0.0022uF	20%	250V	< RESISTOR >					
< CONNECTOR >						△ R701	1-219-165-11	FUSIBLE	1	5%	1/2W F
CN51	1-564-321-00	PIN, CONNECTOR 2P				△ R702	1-202-951-71	FUSIBLE	150	5%	1/2W F

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Replace only with part number specified.

Ref. No.	Part No.	Description	Remark			
R703	1-249-576-11	CARBON	10K	5%	1/4W	

	A-4426-971-A	PS PRE BOARD, COMPLETE				

	2-259-121-01	SCREW, TR				
*	4-880-403-11	HEAT SINK				
< CAPACITOR >						
C801	1-119-841-11	ELECT	1000uF	20%	63V	
C802	1-119-841-11	ELECT	1000uF	20%	63V	
C808	1-119-841-11	ELECT	1000uF	20%	63V	
C809	1-119-837-11	ELECT	100uF	20%	63V	
C851	1-119-841-11	ELECT	1000uF	20%	63V	
C852	1-119-841-11	ELECT	1000uF	20%	63V	
C858	1-119-841-11	ELECT	1000uF	20%	63V	
C859	1-119-837-11	ELECT	100uF	20%	63V	
< CONNECTOR >						
CN802	1-564-510-11	PLUG (MICRO CONNECTOR) 6P				
* CN803	1-564-506-11	PLUG, CONNECTOR 3P				
* CN804	1-564-506-11	PLUG, CONNECTOR 3P				
CN805	1-691-766-11	PLUG (MICRO CONNECTOR) 4P				
< DIODE >						
D801	8-719-935-52	DIODE	UZL-7H1-TP			
D802	8-719-935-52	DIODE	UZL-7H1-TP			
D851	8-719-935-52	DIODE	UZL-7H1-TP			
D852	8-719-935-52	DIODE	UZL-7H1-TP			
< TRANSISTOR >						
Q806	8-729-209-15	TRANSISTOR	2SD2012			
Q807	8-729-281-54	TRANSISTOR	2SC1815BL-TPE2			
Q808	8-729-202-67	FET	2SK246GR3-TPE2			
Q856	8-729-141-83	TRANSISTOR	2SB1375			
Q857	8-729-201-53	TRANSISTOR	2SA1015TP-GR			
Q858	8-729-202-67	FET	2SK246GR3-TPE2			
< RESISTOR >						
△ R802	1-217-469-00	FUSIBLE	1	5%	1W	F
△ R803	1-217-469-00	FUSIBLE	1	5%	1W	F
R818	1-249-556-11	CARBON	1.5K	5%	1/4W	
R819	1-249-560-91	CARBON	2.2K	5%	1/4W	
△ R820	1-215-887-00	METAL OXIDE	150	5%	2W	F
△ R821	1-215-887-00	METAL OXIDE	150	5%	2W	F
△ R822	1-215-887-00	METAL OXIDE	150	5%	2W	F
R868	1-249-556-11	CARBON	1.5K	5%	1/4W	
R869	1-249-560-91	CARBON	2.2K	5%	1/4W	
△ R870	1-215-887-00	METAL OXIDE	150	5%	2W	F
△ R871	1-215-887-00	METAL OXIDE	150	5%	2W	F
△ R872	1-215-887-00	METAL OXIDE	150	5%	2W	F

*	1-664-379-21	REC OUT BOARD				

< CONNECTOR >						
* CN315	1-564-506-11	PLUG, CONNECTOR 3P				

Ref. No.	Part No.	Description	Remark			
< SWITCH >						
S302	1-762-186-11	SWITCH, TOGGLE (RECOUT)				

*	1-664-365-21	RV BOARD				

< CONNECTOR >						
CN303	1-691-770-11	PLUG (MICRO CONNECTOR) 8P				
CN304	1-691-770-21	PLUG (MICRO CONNECTOR) 8P				
< VARIABLE RESISTOR >						
RV304	1-225-403-11	RES, VAR, CARBON 120K/120K				
(ATTENUATOR)						

A-4426-970-A		SP TM BOARD, COMPLETE				

< CAPACITOR >						
C601	1-126-868-11	ELECT	47uF	20%	50V	
C602	1-119-839-11	ELECT	330uF	20%	63V	
C603	1-136-157-00	MYLAR	0.022uF	5%	50V	
C604	1-126-053-11	ELECT	220uF	20%	25V	
C605	1-126-023-11	ELECT	100uF	20%	25V	
C607	1-136-157-00	MYLAR	0.022uF	5%	50V	
C608	1-126-058-11	ELECT	4.7uF	20%	63V	
C609	1-128-552-11	ELECT	47uF	20%	63V	
C610	1-126-058-11	ELECT	4.7uF	20%	63V	
C611	1-136-157-00	MYLAR	0.022uF	5%	50V	
C612	1-126-059-11	ELECT	10uF	20%	63V	
C620	1-130-973-00	FILM	0.022uF	2%	100V	
C670	1-130-973-00	FILM	0.022uF	2%	100V	
< CONNECTOR >						
CN601	1-564-320-00	PIN, CONNECTOR 2P				
CN602	1-691-766-41	PLUG (MICRO CONNECTOR) 4P				
* CN603	1-564-506-11	PLUG, CONNECTOR 3P				
* CN604	1-564-505-11	PLUG, CONNECTOR 2P				
* CN605	1-564-505-11	PLUG, CONNECTOR 2P				
* CN606	1-564-506-11	PLUG, CONNECTOR 3P				
* CN607	1-564-506-11	PLUG, CONNECTOR 3P				
* CN608	1-564-506-11	PLUG, CONNECTOR 3P				
CN609	1-691-766-11	PLUG (MICRO CONNECTOR) 4P				
CN651	1-564-320-00	PIN, CONNECTOR 2P				
< DIODE >						
D601	8-719-911-19	DIODE 1N4148M-TP				
D602	8-719-310-60	LED SEL1510C-C-TP				
D603	8-719-911-19	DIODE 1N4148M-TP				
< FIXED PLATE >						
* EPT601	4-843-416-11	PLATE, FIXED, CAP				
* EPT602	4-843-416-11	PLATE, FIXED, CAP				
* EPT603	4-843-416-11	PLATE, FIXED, CAP				
* EPT604	4-843-416-11	PLATE, FIXED, CAP				
* EPT605	4-843-416-11	PLATE, FIXED, CAP				

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			
* EPT606	4-843-416-11	PLATE, FIXED, CAP				
* EPT607	4-843-416-11	PLATE, FIXED, CAP				
* EPT608	4-843-416-11	PLATE, FIXED, CAP				
< IC >						
IC601	8-759-111-68	IC uPC1237HA				
< COIL >						
L601	1-411-766-11	COIL, AIR-CORE				
L651	1-411-766-11	COIL, AIR-CORE				
< TRANSISTOR >						
Q601	8-729-281-54	TRANSISTOR	2SC1815BL-TPE2			
Q602	8-729-018-60	TRANSISTOR	2SD2012-LC			
Q603	8-729-201-53	TRANSISTOR	2SA1015TP-GR			
Q604	8-729-201-53	TRANSISTOR	2SA1015TP-GR			
Q605	8-729-281-54	TRANSISTOR	2SC1815BL-TPE2			
Q606	8-729-018-60	TRANSISTOR	2SD2012-LC			
< RESISTOR >						
R604	1-259-223-11	CARBON	220K	5%	1/4W	
R606	1-259-191-21	CARBON	10K	5%	1/4W	
R607	1-259-129-11	CARBON	27	5%	1/4W	
R608	1-259-215-21	CARBON	100K	5%	1/4W	
R609	1-259-195-11	CARBON	15K	5%	1/4W	
R610	1-259-292-11	CARBON	330	5%	1/2W	
R612	1-259-183-11	CARBON	4.7K	5%	1/4W	
R613	1-259-328-11	CARBON	10K	5%	1/2W	
R614	1-259-207-21	CARBON	47K	5%	1/4W	
R615	1-259-199-11	CARBON	22K	5%	1/4W	
R616	1-259-207-21	CARBON	47K	5%	1/4W	
R617	1-259-191-21	CARBON	10K	5%	1/4W	
R620	1-259-227-11	CARBON	330K	5%	1/4W	
R621	1-259-256-11	CARBON	10	5%	1/2W	
R622	1-259-300-11	CARBON	680	5%	1/2W	
△ R625	1-202-937-31	FUSIBLE	10	5%	1/2W	F
R626	1-249-923-11	CARBON	1K	5%	1/4W	
R628	1-259-292-11	CARBON	330	5%	1/2W	
R629	1-259-292-11	CARBON	330	5%	1/2W	
R670	1-259-227-11	CARBON	330K	5%	1/4W	
R671	1-259-256-11	CARBON	10	5%	1/2W	
R672	1-259-300-11	CARBON	680	5%	1/2W	
△ R675	1-202-937-31	FUSIBLE	10	5%	1/2W	F
R677	1-259-296-11	CARBON	470	5%	1/2W	
R678	1-259-296-11	CARBON	470	5%	1/2W	
< RELAY >						
RY601	1-755-061-11	RELAY				
RY602	1-515-920-11	RELAY (24V)				
< TERMINAL >						
TM601	1-694-308-11	TERMINAL BOARD (SP) (SPEAKERS MAIN)				
TM602	1-694-308-11	TERMINAL BOARD (SP)				
(SPEAKERS BI-WIRE)						

Ref. No.	Part No.	Description	Remark			
	A-4426-973-A	TONE CONTROL BOARD, COMPLETE				

< CAPACITOR >						
C301	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C303	1-136-153-00	FILM	0.01uF	5%	50V	
C305	1-136-155-00	FILM	0.015uF	5%	50V	
C307	1-136-165-00	MYLAR	0.1uF	5%	50V	
C309	1-136-165-00	MYLAR	0.1uF	5%	50V	
C310	1-136-165-00	MYLAR	0.1uF	5%	50V	
C351	1-130-475-00	MYLAR	0.0022uF	5%	50V	
C353	1-136-153-00	FILM	0.01uF	5%	50V	
C355	1-136-155-00	FILM	0.015uF	5%	50V	
C357	1-136-165-00	MYLAR	0.1uF	5%	50V	
C805	1-106-343-00	MYLAR	1000PF	5%	200V	
C806	1-106-343-00	MYLAR	1000PF	5%	200V	
< CONNECTOR >						
* CN301	1-564-506-11	PLUG, CONNECTOR 3P				
* CN313	1-564-506-11	PLUG, CONNECTOR 3P				
* CN807	1-564-506-11	PLUG, CONNECTOR 3P				
< DIODE >						
D301	8-719-313-50	LED SEL6810A-TH12 (SOURCE DIRECT)				
< TRANSISTOR >						
Q301	8-729-281-54	TRANSISTOR	2SC1815BL-TPE2			
< RESISTOR >						
R301	1-249-568-11	CARBON	4.7K	5%	1/4W	
R302	1-249-556-11	CARBON	1.5K	5%	1/4W	
R303	1-259-502-11	CARBON	4.7M	5%	1/4W	
R304	1-259-502-11	CARBON	4.7M	5%	1/4W	
R305	1-249-955-11	CARBON	22K	5%	1/4W	
R306	1-249-568-11	CARBON	4.7K	5%	1/4W	
R307	1-249-568-11	CARBON	4.7K	5%	1/4W	
R309	1-249-469-11	CARBON	100K	5%	1/4W	
R311	1-249-568-11	CARBON	4.7K	5%	1/4W	
R351	1-249-568-11	CARBON	4.7K	5%	1/4W	
R352	1-249-556-11	CARBON	1.5K	5%	1/4W	
R353	1-259-502-11	CARBON	4.7M	5%	1/4W	
R354	1-259-502-11	CARBON	4.7M	5%	1/4W	
R355	1-249-955-11	CARBON	22K	5%	1/4W	
R356	1-249-568-11	CARBON	4.7K	5%	1/4W	
R359	1-249-469-11	CARBON	100K	5%	1/4W	
R824	1-259-547-11	CARBON	470	5%	1/2W	
R825	1-259-547-11	CARBON	470	5%	1/2W	
< VARIABLE RESISTOR >						
RV301	1-223-789-11	RES, VAR, CARBON 250K/250K (BALANCE)				
RV302	1-223-768-12	RES, VAR, CARBON 250K/250K				
		(TONE, TREBLE)				
RV303	1-223-767-12	RES, VAR, CARBON 900K/900K (TONE, BASS)				
< SWITCH >						
S303	1-571-828-11	SWITCH, PUSH (1 KEY) (SOURCE DIRECT)				

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

TONE CONTROL

Ref. No.	Part No.	Description	Remark
S801	1-762-184-11	SWITCH, ROTARY (SPEAKERS)	

MISCELLANEOUS

161	1-506-113-00	SHORT PLUG	
* 162	1-535-691-31	TERMINAL	
△ 170	1-580-375-41	INLET 3P	
C701	1-131-864-11	CAP, ELECT	
C702	1-131-864-11	CAP, ELECT	
S001	1-762-921-11	SWITCH, ROTARY (REMOTE TYPE)	
		(REC OUT SELECTOR)	
△ S1	1-554-538-00	SWITCH, PUSH (AC POWER) (1KEY) (POWER)	
△ T1	1-431-376-11	TRANSFORMER, POWER	
TM601	1-694-308-11	TERMINAL BOARD (SP) (SPEAKERS MAIN)	
TM602	1-694-308-11	TERMINAL BOARD (SP) (SPEAKERS BI-WIRE)	

 HARDWARE LIST

#1	7-685-886-09	SCREW +BVTT 4X20 (S)	
#3	7-685-883-09	SCREW +BVTT 4X12 (S)	
#4	7-682-548-09	SCREW (3X8)	
#5	7-682-564-09	SCREW +B 4X14	
#6	7-684-024-04	N 4, TYPE 2	
#7	7-682-148-15	SCREW, TR	
* #8	7-682-248-09	SCREW +K 3X8	

ACCESSORIES & PACKING MATERIALS

△	1-551-631-22	CORD, POWER	
	3-867-878-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE)	
	3-867-878-21	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN)	
*	4-970-079-01	CUSHION	

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