

# TA-N1

## SERVICE MANUAL

*US Model  
Canadian Model  
AEP Model  
UK Model  
E Model  
Australian Model*



### SPECIFICATIONS

#### Amplifier section

##### Power Output

200 W + 200 W (8 Ω)  
400 W + 400 W (4 Ω)

##### Speaker Nominal Impedance:

4 Ω ~ 16 Ω

##### Harmonic distortion

less than 0.005% (at 8 Ω, 10 W, THD)

##### Dumping factor

150 (at 8 Ω, 1 kHz)

##### Frequency response

5 Hz ~ 300 kHz + 0/- 1 dB (at 8 Ω, 1 W)

##### Input sensitivity and Impedance

1.5 V, 20 kΩ (Unbalanced)  
1.5 V, 40 kΩ (Balanced)

##### Gain

28 dB

##### S/N

more than 115 dB (Input shorted, A-Fil)

#### General

##### System

Pure-complementary High Power Legato  
Linear SEPP MOS FET power amplifier

##### Power requirements

USA and Canadian models  
120 V AC, 60 Hz  
European models  
230 V AC, 50/60 Hz

##### Power consumption

USA and Canadian models  
6.0 A  
European models  
600 W

##### Dimensions

480 × 245 × 530 mm  
(18<sup>7</sup>/<sub>8</sub> × 9<sup>5</sup>/<sub>8</sub> × 20<sup>7</sup>/<sub>8</sub> in.)  
including projecting parts and controls

##### Mass (Approx.)

70 kg (154 lbs. 4 oz.)

##### Supplied accessories

- AC power cord (1)
- AC power plug adapter (3 to 2 prong polarized type) (1)  
(USA/Canada only)

Design and specifications are subject to change without notice.

## STEREO POWER AMPLIFIER



# SONY®

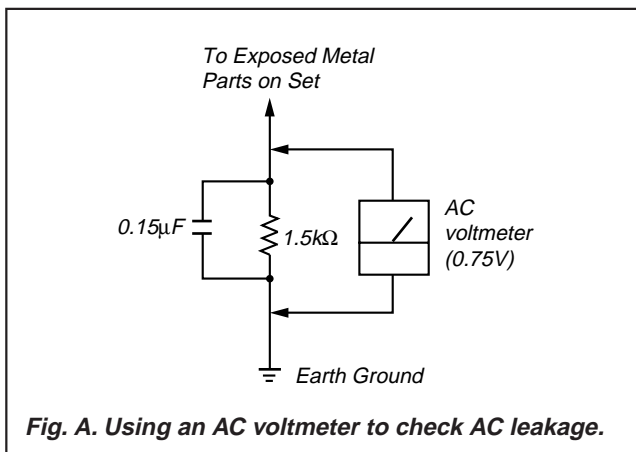
## SAFETY CHECK-OUT

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.

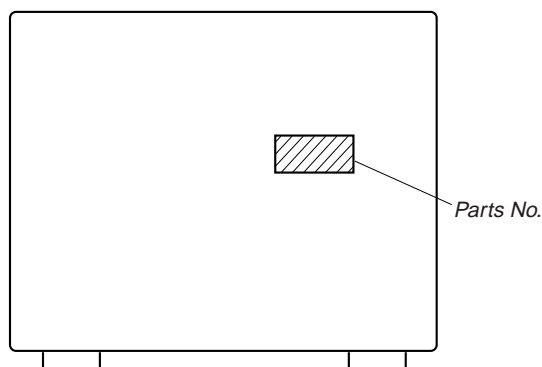
### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  $\triangle$  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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### MODEL IDENTIFICATION — BACK PANEL —



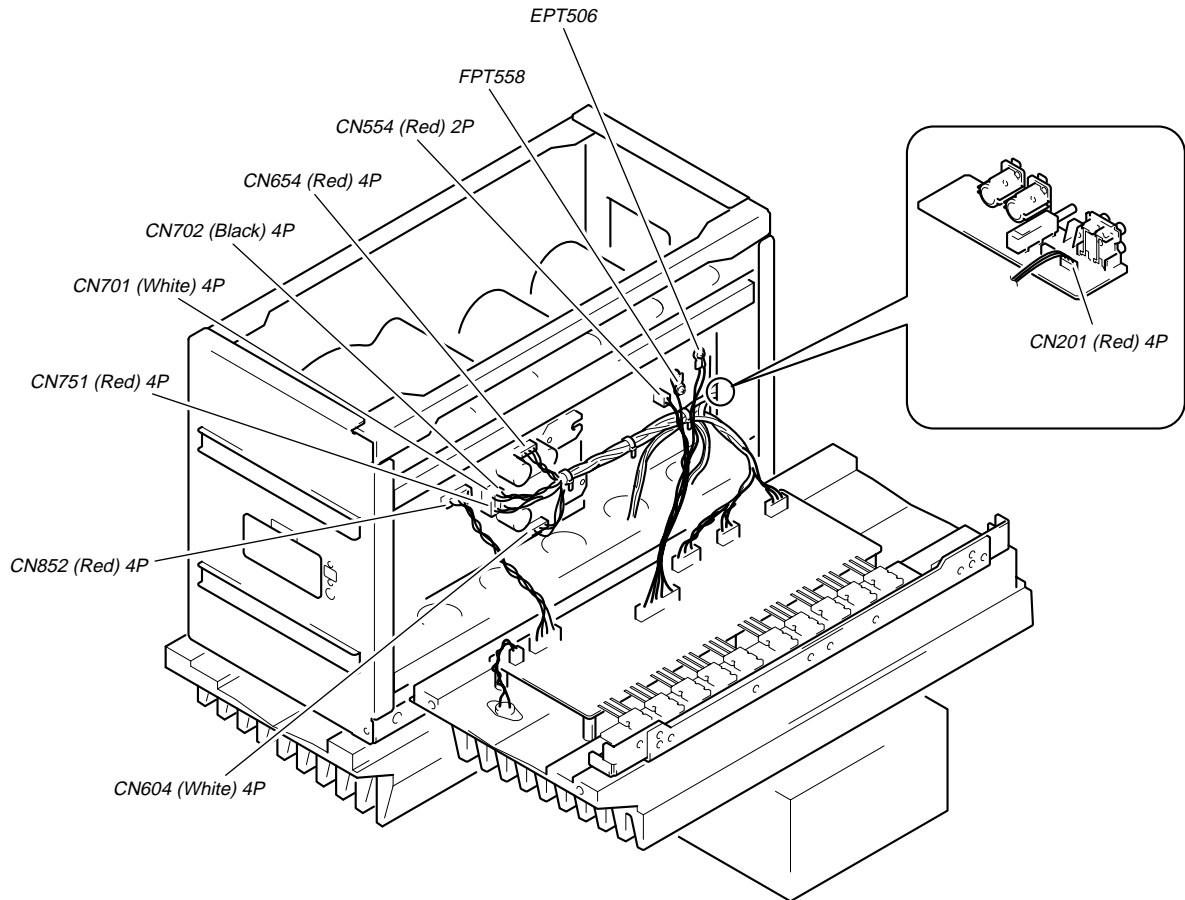
PARTS No.	MODEL
4-217-757-1□	US , CND
4-217-757-2□	AEP, UK, E, AUS

- Abbreviation  
CND : Canadian model  
AUS : Australian model

## SECTION 1 SERVICE NOTE

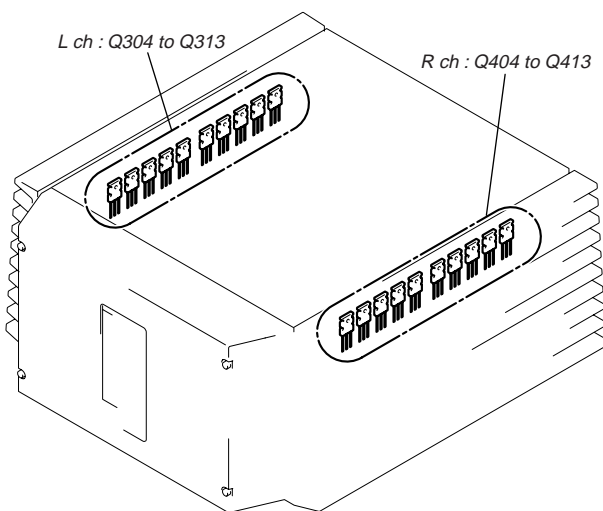
### • SERVICE POSITION

When performing servicing, use a table about 15 cm as shown in the figure.



### • REPLACING THE POWER TRANSISTOR

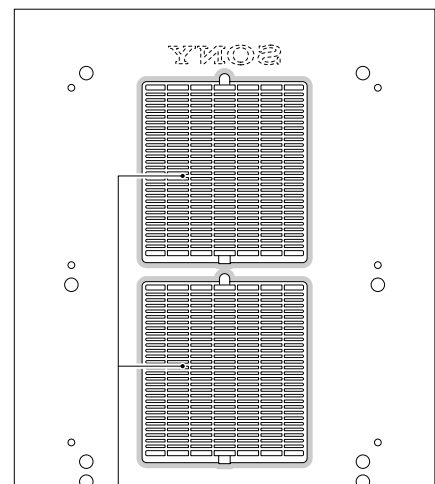
When replacing the power transistors (Q304 to Q313: L-ch, Q404 to Q413: R-ch), replace all ten together.



### • SECURING THE GRILL (A)

When securing the grill (A) to the top panel, use the Sony bond SC608LV (7-432-912-48). (■)

**Top panel (Bottom side)**

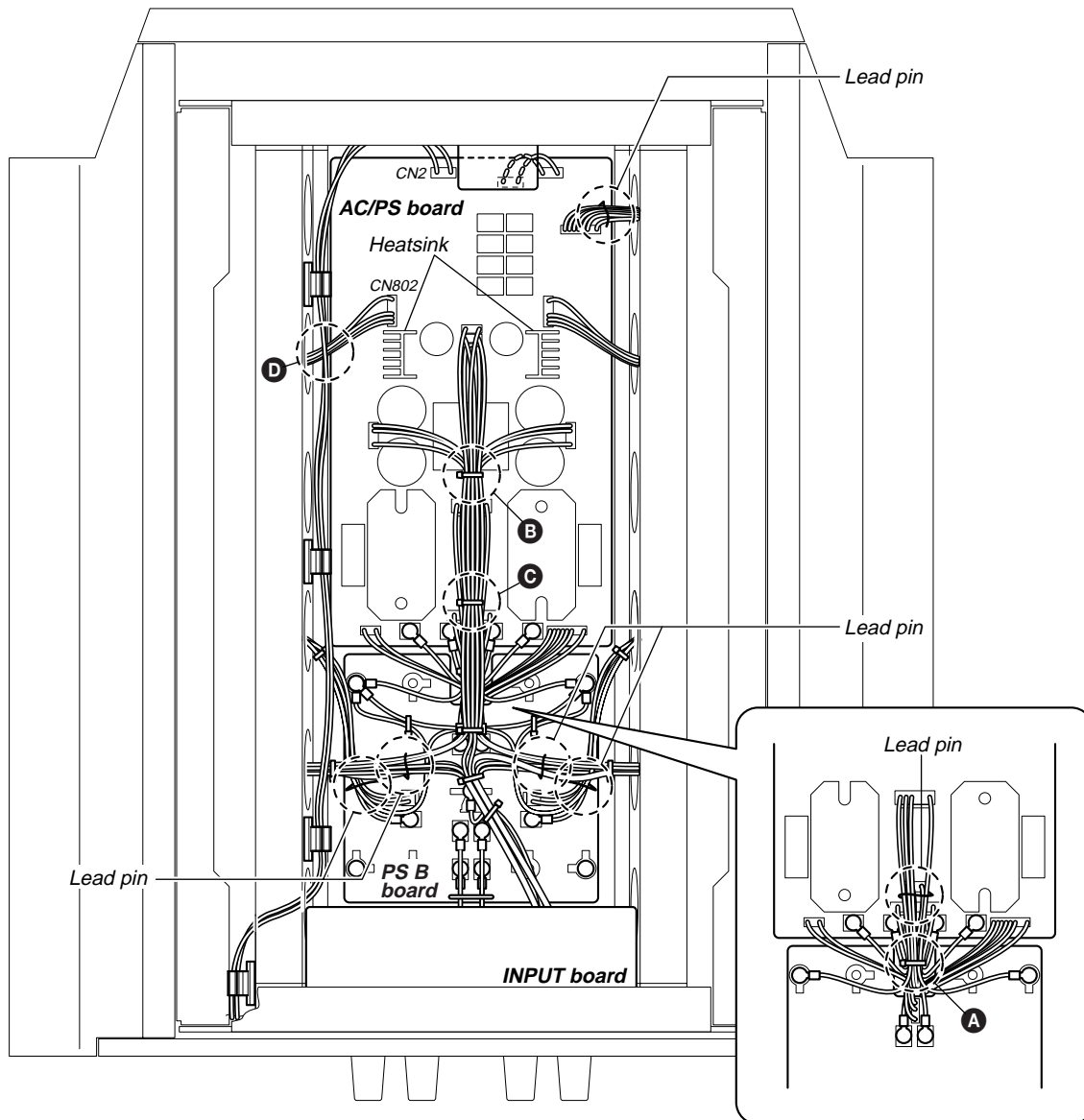


Grille (A)

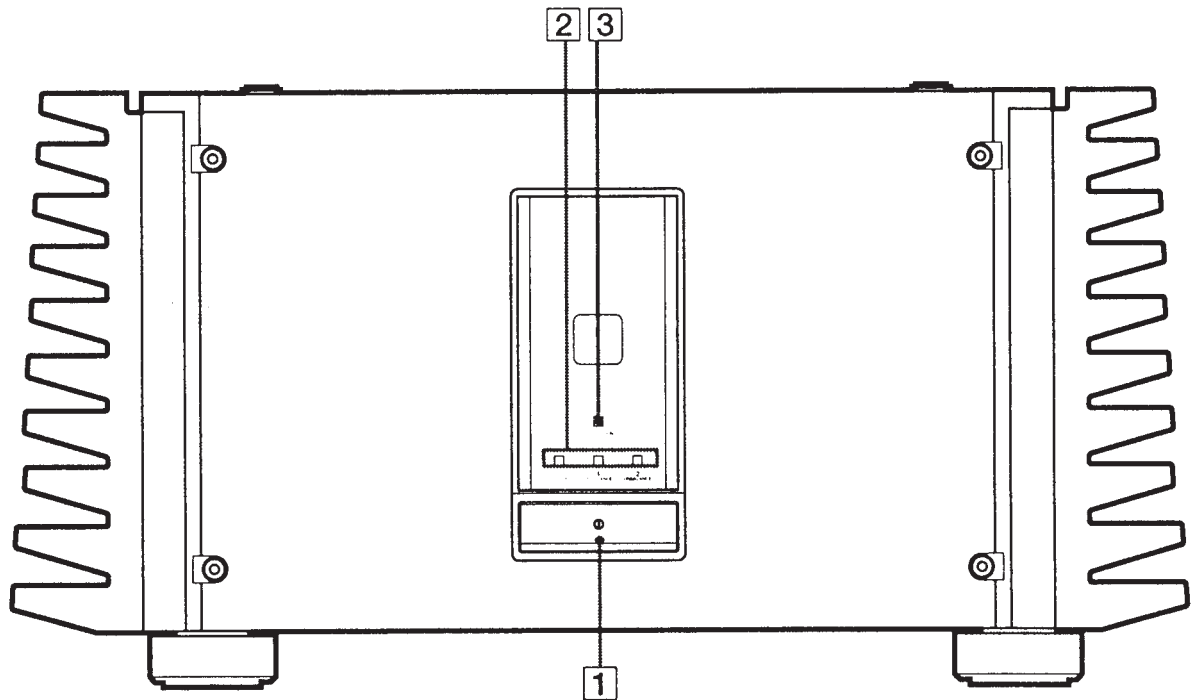
• **NOTE ON ARRANGING WIRES**

As how the wires in this unit are drawn affect the sound quality, note down the positions of wires before beginning servicing. After repairs, arrange the wires as follows.

- Ⓐ : After binding wires, push down.
- Ⓑ : Bind avoiding touching the heatsink.
- Ⓒ : Bind avoiding touching the wires below (binder Ⓐ).
- Ⓓ : Arrange so that the wires from CN802 pass below the wires from CN2.



## Front Panel Parts Description



**1** **⓪ (power) switch**

Press to turn the power amplifier on and off.

- When turning the power on, turn down the volume on the preamplifier to a minimum, then turn the preamplifier and this unit on respectively. Similarly, when turning the power off, turn down the volume on the preamplifier, then turn the amplifier and preamplifier off respectively. This is done to prevent damage to the speakers.

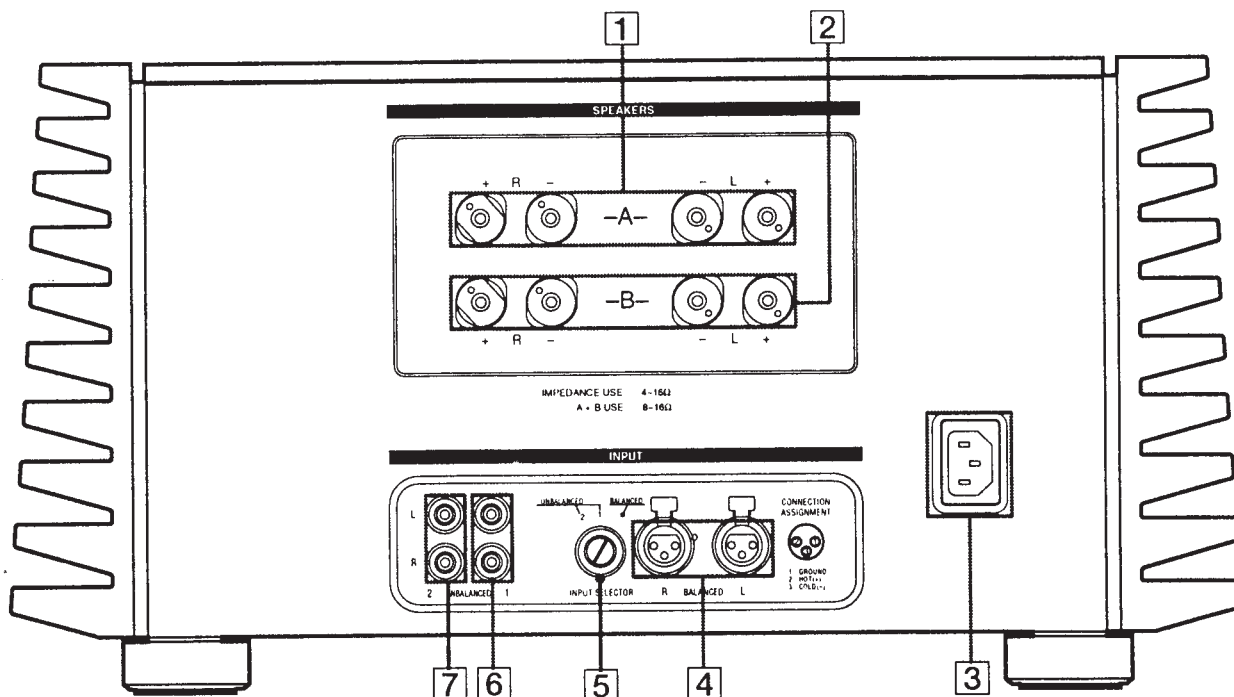
**2** **Input indicators (BALANCED/UNBALANCED 1/  
UNBALANCED 2)**

Light to indicate the input selected with the INPUT SELECTOR control on the rear panel.

**3** **PROTECTION indicator**

Lights for about 16 seconds after the power is turned on. After that, the blue light above the indicator lights. When there is a short circuit in one of the speakers, the protection circuitry in this unit is automatically activated. The PROTECTION indicator lights when the protection circuitry is activated, and sound is not produced from the speakers. Should this occur, turn the power off, and check that the speakers connections are correct.

## Rear Panel Parts Description



**1** SPEAKERS A jacks

**2** SPEAKERS B jacks

Use with SPEAKERS A terminals when bi-wired speaker connections are made .

**3** AC IN terminal

Use to connect the supplied power cord to the AC IN terminal to supply power to this unit from a wall outlet.

**4** BALANCED input jacks

Use to connect the BALANCED output jacks on a preamplifier to this unit. Select BALANCED with the INPUT SELECTOR knob (**5**).

**5** INPUT SELECTOR control

Turn to select the input.

**6** UNBALANCED 1 input jack

Use to connect the PRE OUT jacks on a preamplifier to this unit . Select UNBALANCED 1 with the INPUT SELECTOR knob (**5**).

**7** UNBALANCED 2 input jack

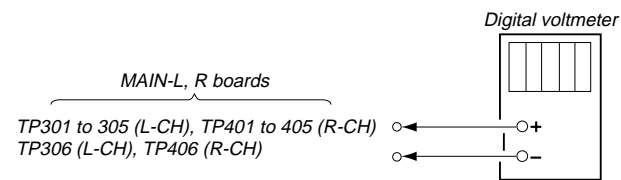
Use to connect the PRE OUT jacks on a preamplifier to this unit . Select UNBALANCED 2 with the INPUT SELECTOR knob (**5**).

## SECTION 3 ELECTRICAL ADJUSTMENT

### BIAS CURRENT ADJUSTMENT

- As the voltage changes according to the time the power is supplied, adjust correctly according to the following procedure.

#### Connection:



#### Procedure:

- Measure the voltage at the five measuring points just after supplying the power, and adjust RV301 (L-CH) and RV401 (R-CH) so that the measuring point with the lowest voltage becomes approx 15 mV.

	Measuring Point	Adjusting Point
L-CH	Between the 5 measuring points (+) TP301, TP302, TP303, TP304, TP305 and TP306 (-)	RV301
R-CH	Between the 5 measuring points (+) TP401, TP402, TP403, TP404, TP405 and TP406 (-)	RV401

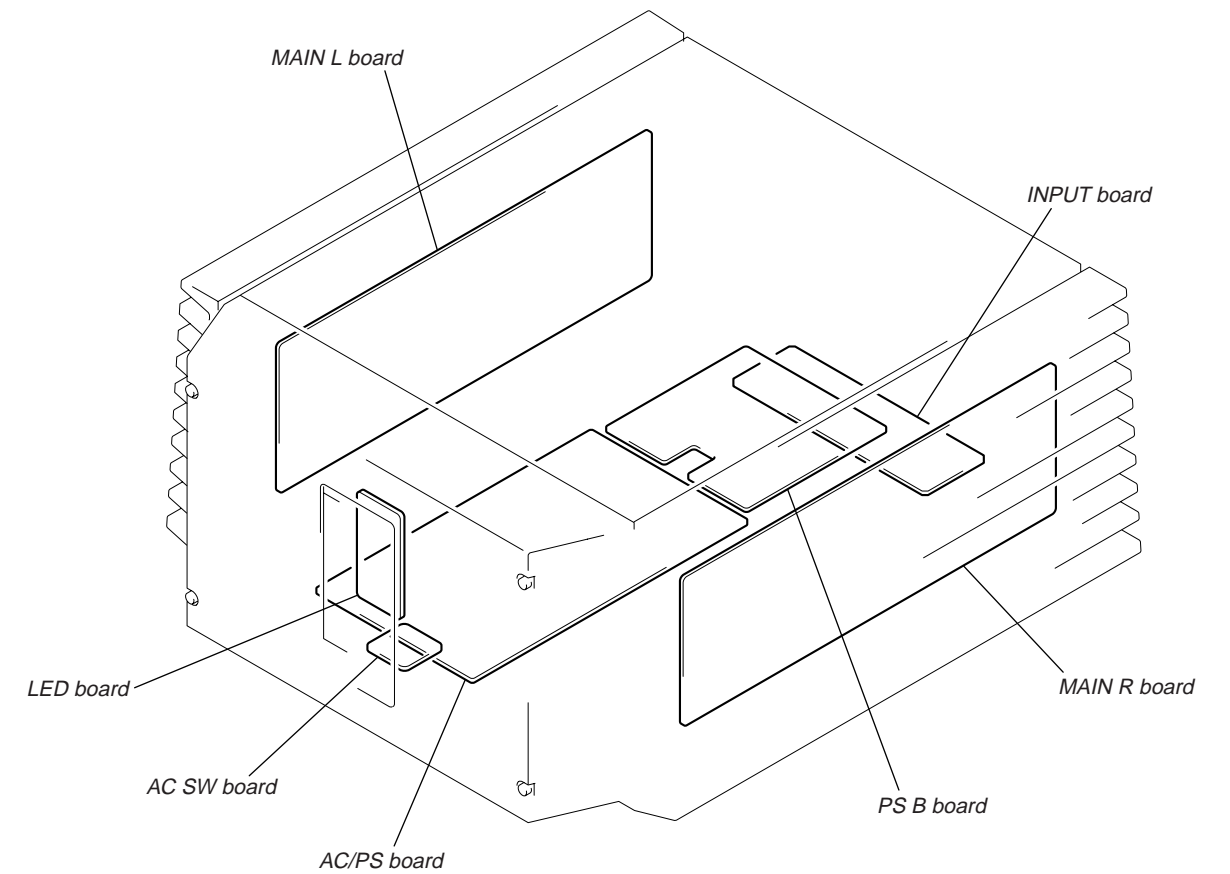
- Leave for one hour with the power supplied. (Aging)
- Measure the voltage at the respective measuring points and adjust RV301 (L-CH) and RV401 (R-CH) so that the voltages become within the ranges shown in the following table. Adjust to the voltage with the highest priority shown in the table as much as possible.

Priority Order	Adjusting Value
1st (Highest priority)	19.8 mV to 22.0 mV
2nd	19.8 mV to 24.2 mV
3rd	18.7 mV to 24.2 mV
4th	18.7 mV to 25.2 mV
5th	15.0 mV to 25.2 mV

- Leave for another 30 minutes if the adjustment control has been rotated.
- Measure the voltage again and check that it is within the adjusting value. If outside, repeat from step 3 again.
- Be sure to perform aging for more than 30 minutes if the adjustment control has been rotated. Finally check the voltage before ending the adjustment.

## SECTION 4 DIAGRAMS

### 4-1. CIRCUIT BOARDS LOCATION



**THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.**  
(In addition to this, the necessary note is printed in each block.)

#### For schematic diagrams.

##### Note:

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

##### Note:

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

##### Note:

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

#### For printed wiring boards.

##### Note:

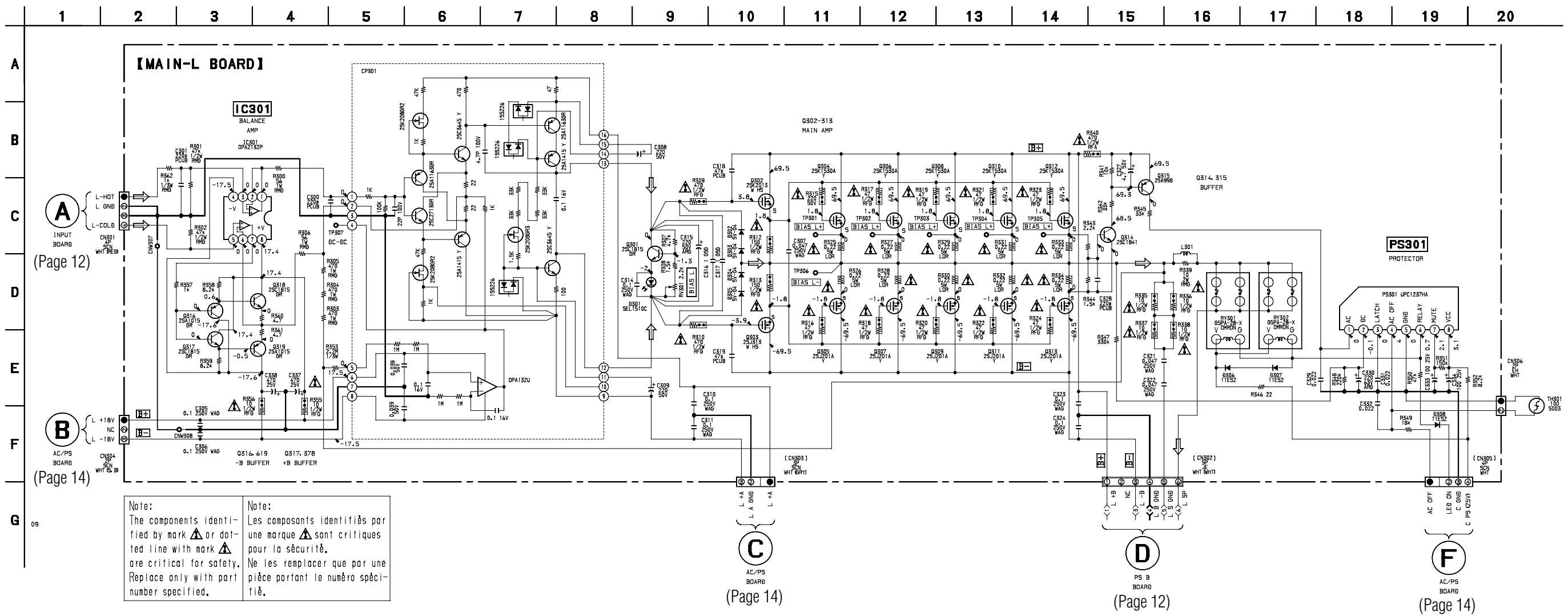
- : parts extracted from the component side.
- : Through hole.
- : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

##### Caution:

Pattern face side: Parts on the pattern face side seen from the (Side B) pattern face are indicated.  
Parts face side: Parts on the parts face side seen from the (Side A) parts face are indicated.

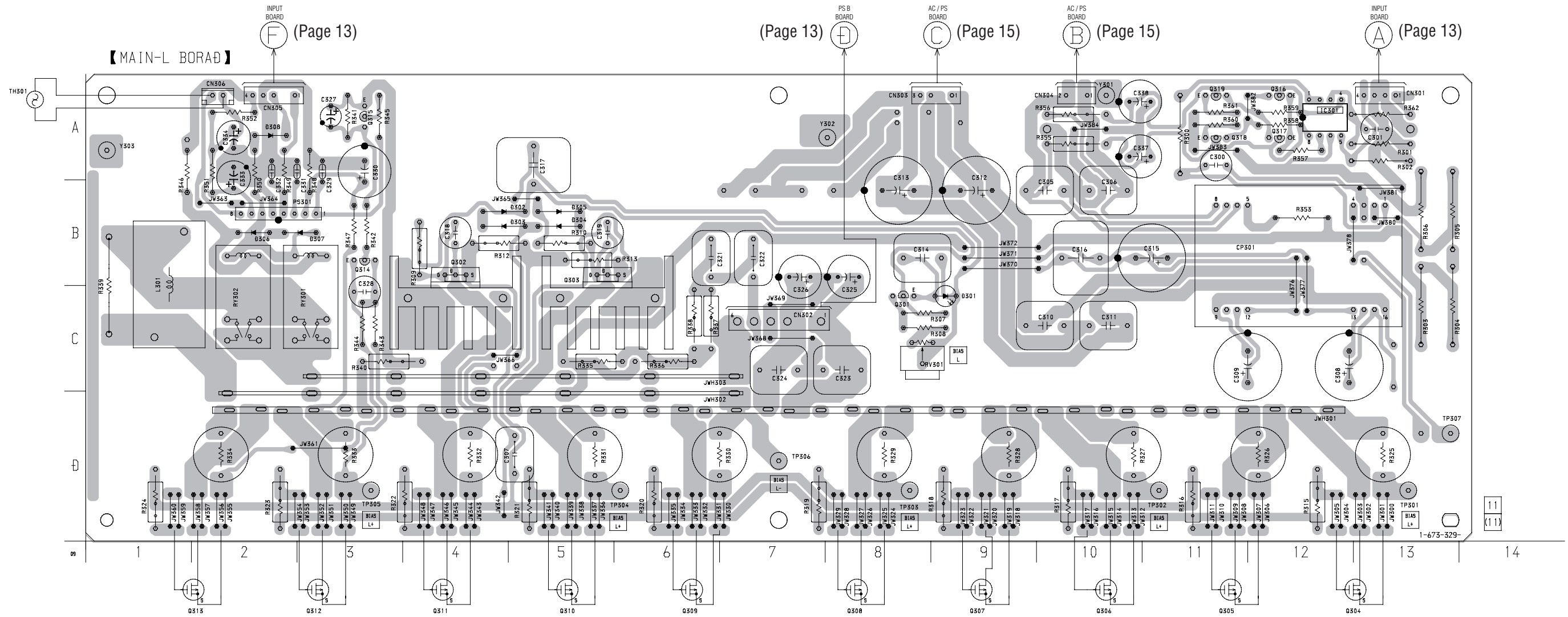
- : B+ Line.
- : B- Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground in playback mode.
- Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- : AUDIO

4-2. SCHEMATIC DIAGRAM – MAIN L SECTION –





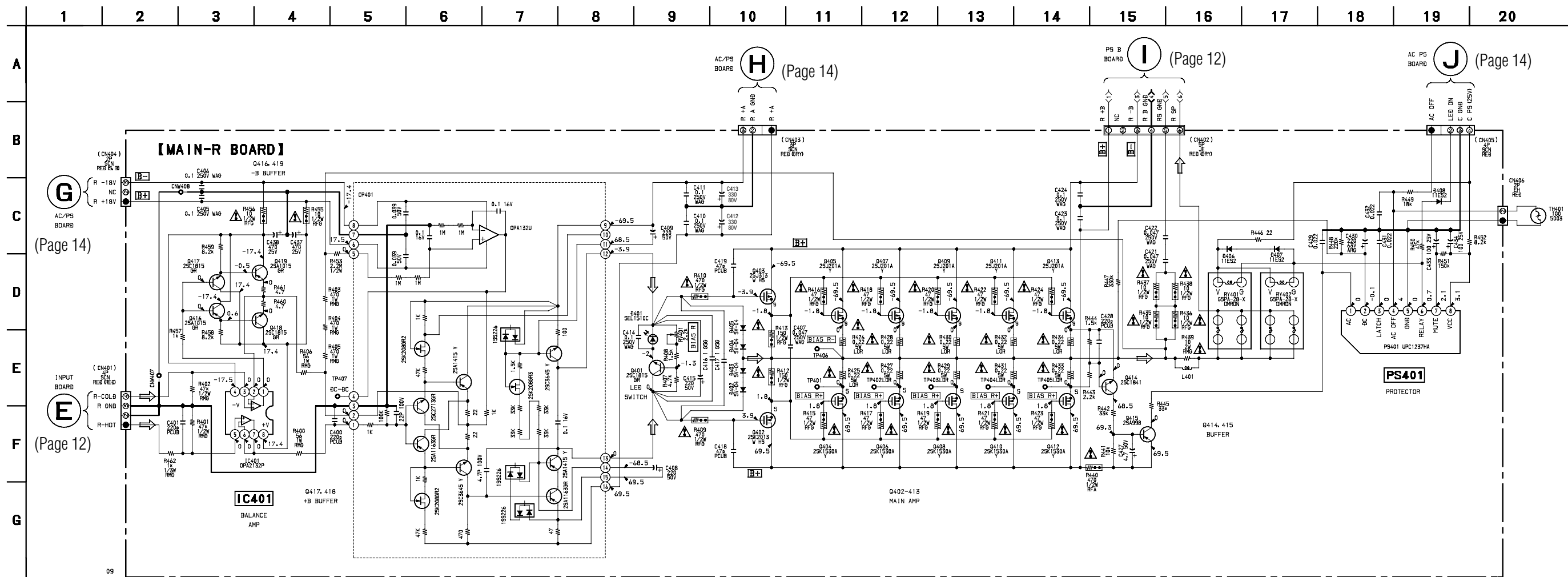
**4-3. PRINTED WIRING BOARD – MAIN L SECTION –**  
 • Refer to page 7 for Circuit Boards Location.






**• Semiconductor Location**

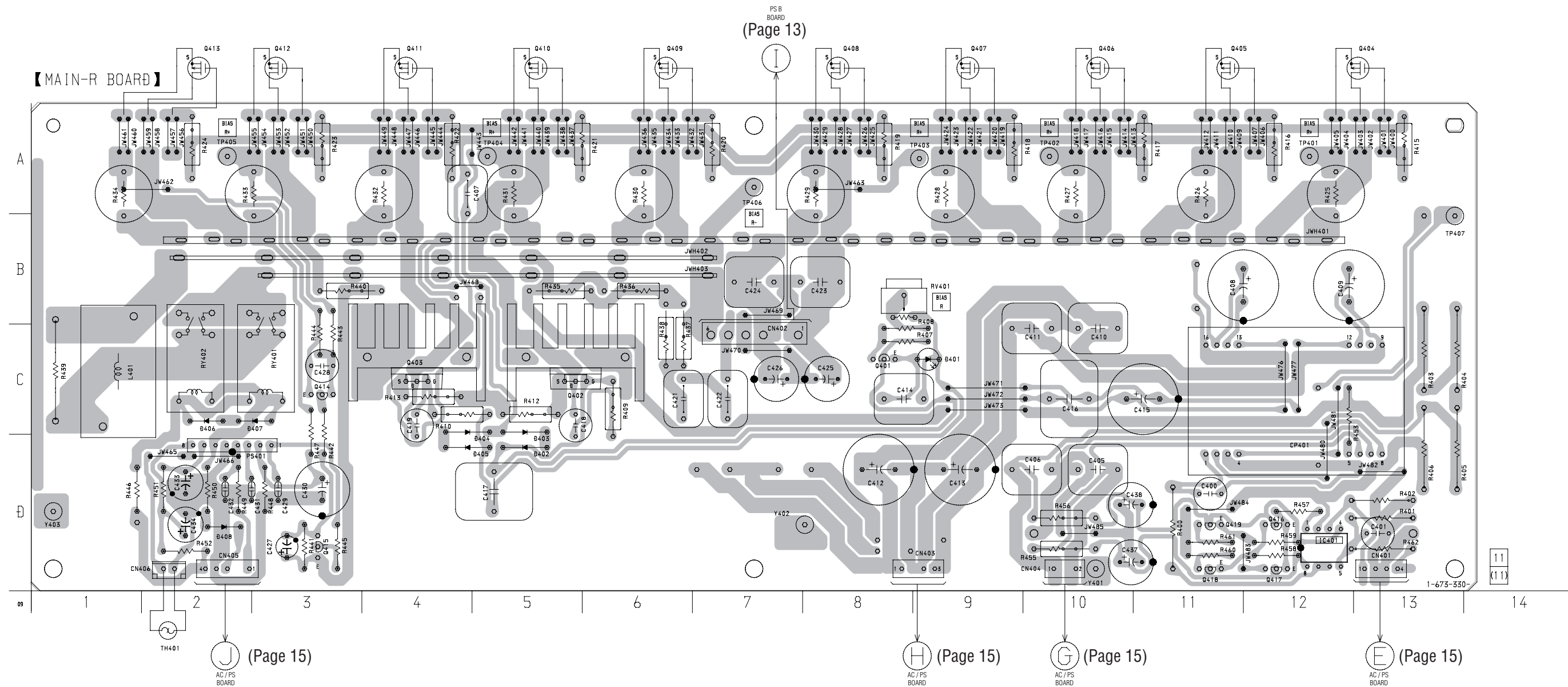
Ref. No	Location	Ref. No	Location
D301	C-9	Q305	D-11
D302	B-4	Q306	D-10
D303	B-4	Q307	D-9
D304	B-5	Q308	D-8
D305	B-5	Q309	D-6
D306	B-2	Q310	D-5
D307	B-3	Q311	D-4
D308	A-2	Q312	D-3
		Q313	D-1
		Q314	B-3
		Q315	A-3
IC301	A-12	Q316	A-12
Q301	C-8	Q317	A-12
Q302	B-4	Q318	A-11
Q303	B-5	Q319	A-11
Q304	D-13		

4-4. SCHEMATIC DIAGRAM – MAIN R SECTION –



<p>Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.</p>	<p>Note: Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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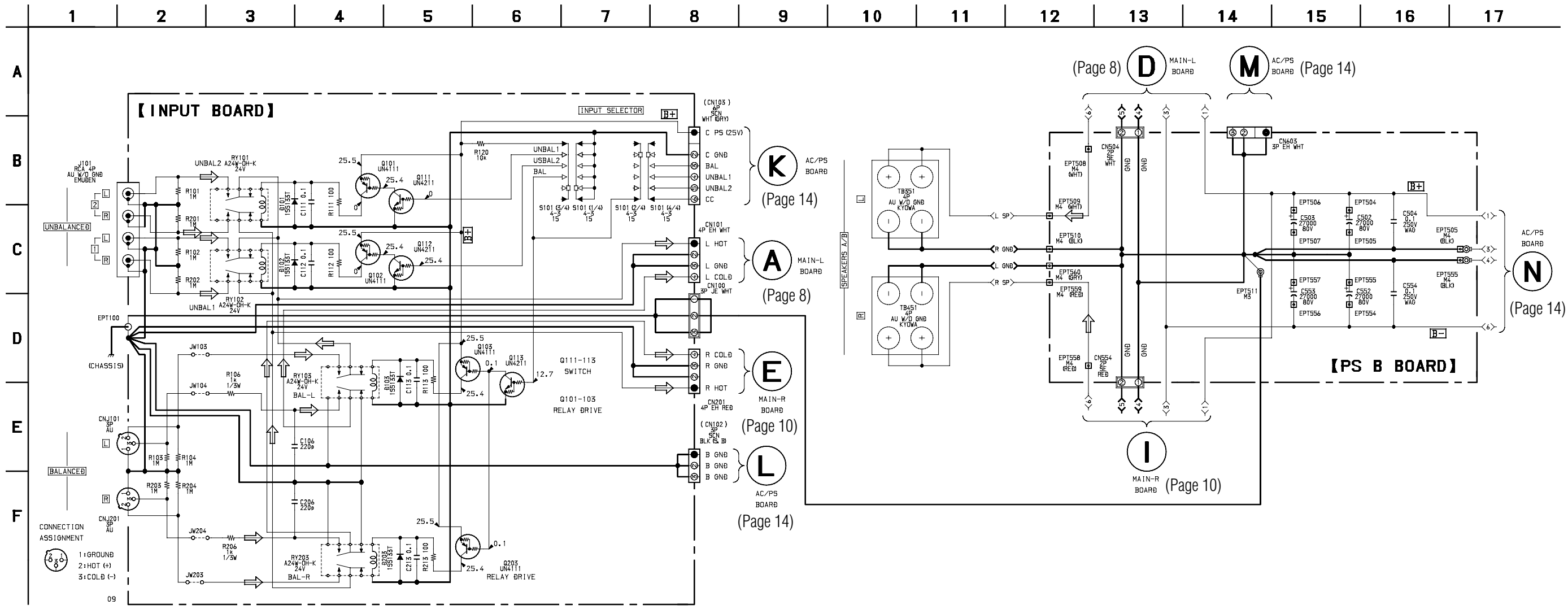
**4-5. PRINTED WIRING BOARD – MAIN R SECTION –**  
 • Refer to page 7 for Circuit Boards Location.



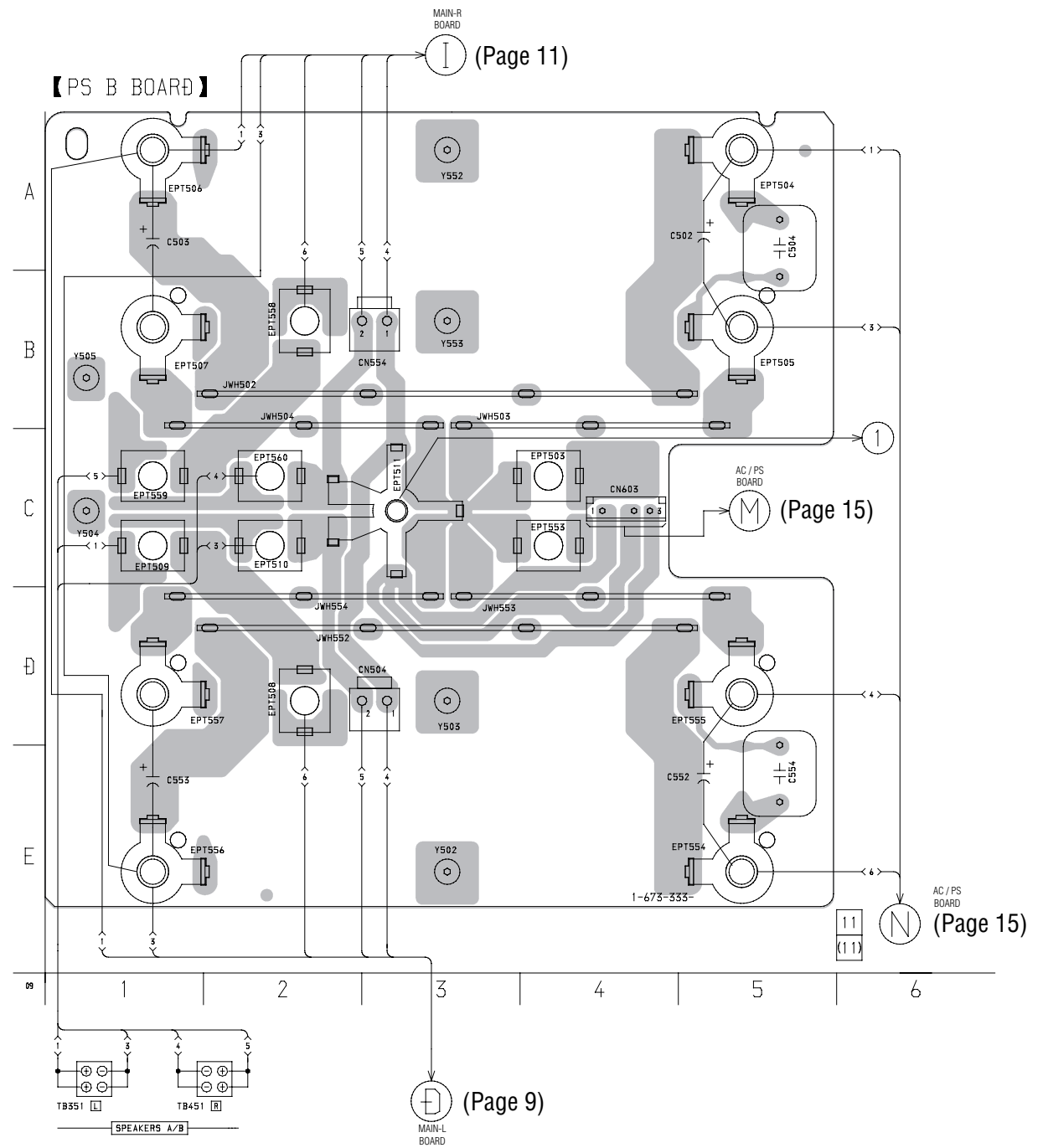
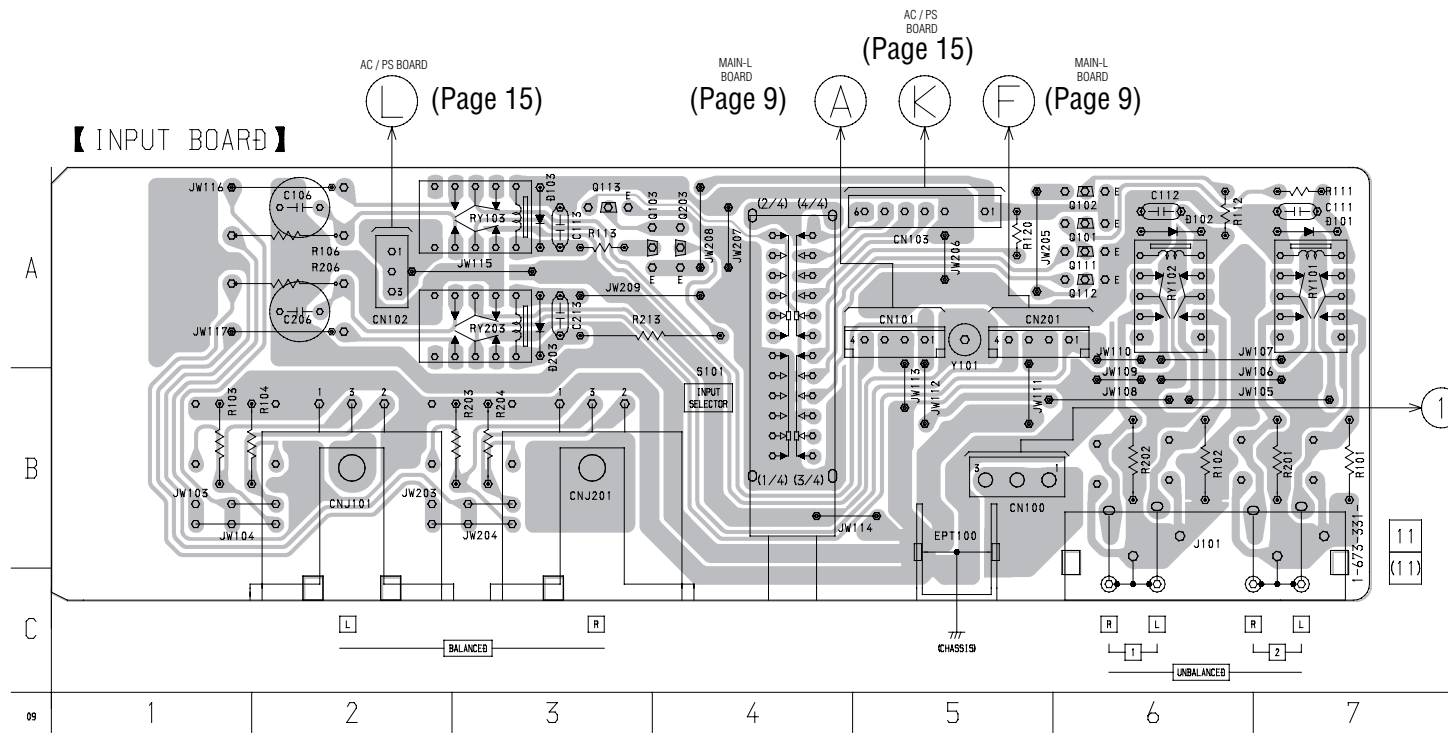
**• Semiconductor Location**

Ref. No	Location	Ref. No	Location
D401	C-9	Q405	A-11
D402	C-5	Q406	A-11
D403	C-5	Q407	A-9
D404	C-4	Q408	A-8
D405	C-4	Q409	A-6
D406	C-2	Q410	A-5
D407	C-2	Q411	A-4
D408	D-2	Q412	A-3
		Q413	A-2
IC401	D-12	Q414	C-3
		Q415	D-3
Q401	C-8	Q416	D-12
Q402	C-5	Q417	D-12
Q403	C-4	Q418	D-11
Q404	A-13	Q419	D-11

4-6. SCHEMATIC DIAGRAM – INPUT SECTION –



4-7. PRINTED WIRING BOARD – INPUT SECTION –  
 • Refer to page 7 for Circuit Boards Location.

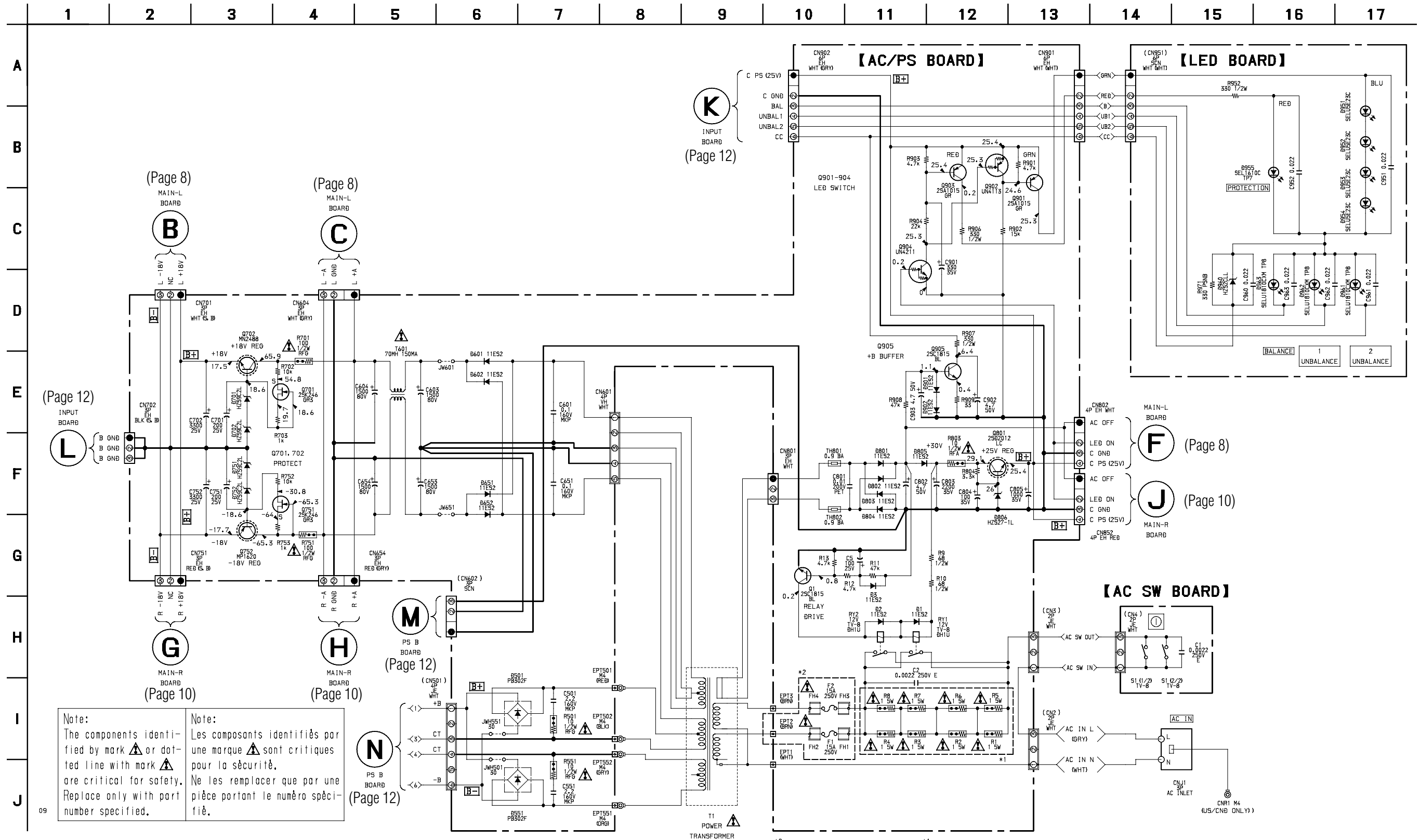


• Semiconductor Location

Ref. No	Location
D101	A-7
D102	A-6
D103	A-3
D203	A-3
Q101	A-6
Q102	A-6
Q103	A-4
Q111	A-6
Q112	A-6
Q113	A-3
Q203	A-4



4-8. SCHEMATIC DIAGRAM – POWER SECTION –

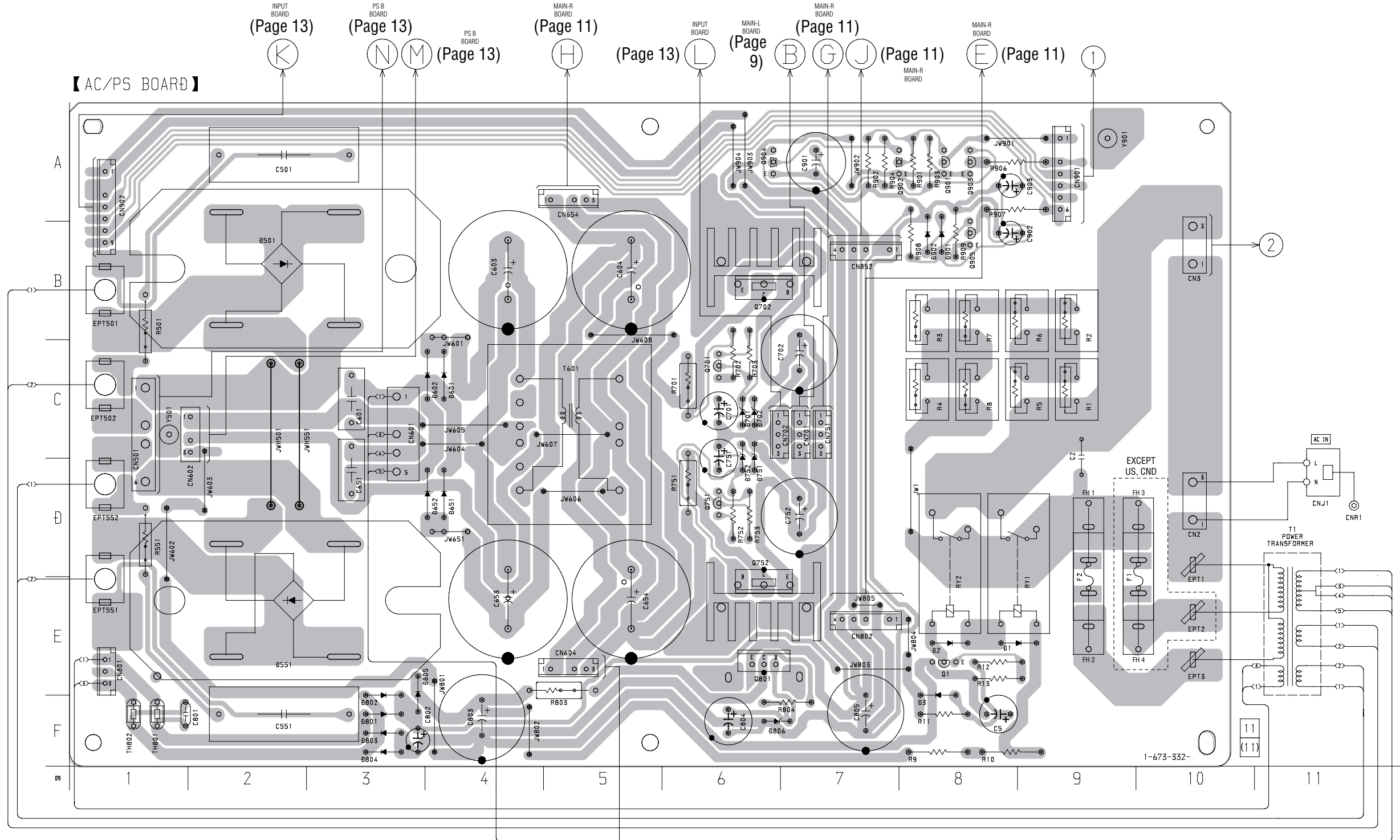


Note: The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

	*2		*1	
	US. CND	EXCEPT US. CND	US. CND	EXCEPT US. CND
F1	X	T4AL/250V	R1-8	1/5W
F2	15A/250V	T4AL/250V		2.2/5W
FH1, 2	X	○		
FH3, 4	○	○		
EPT2	X	○		

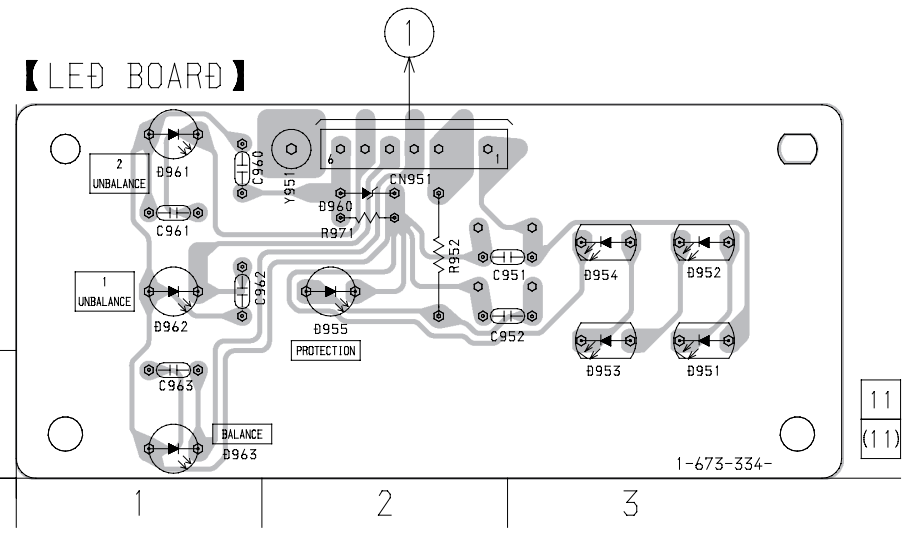
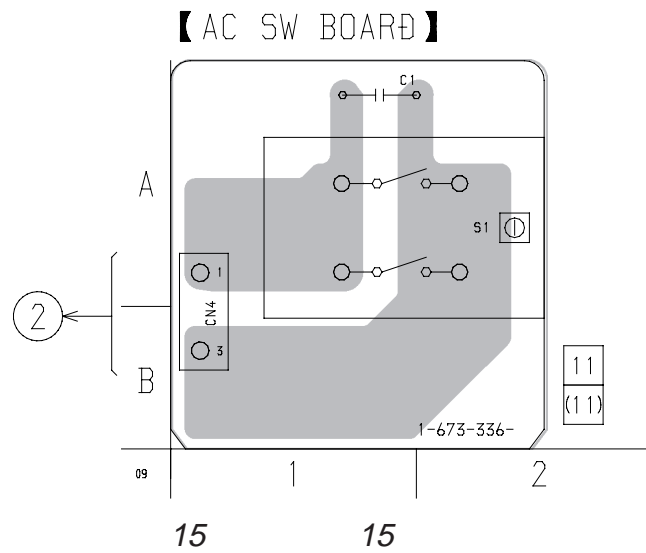
**4-9. PRINTED WIRING BOARD – POWER SECTION –**  
 • Refer to page 7 for Circuit Boards Location.



**• Semiconductor Location**

Ref. No	Location	Ref. No	Location
D1	E-8	D805	E-3
D2	E-8	D806	F-6
D3	E-8	D901	B-8
D501	B-2	D902	B-8
D551	E-2		
D601	C-4	Q1	E-8
D602	C-3	Q701	C-6
D651	C-4	Q702	B-6
D652	C-3	Q751	D-6
D701	C-6	Q752	E-6
D702	C-6	Q801	E-6
D751	C-6	Q901	A-8
D752	C-6	Q902	A-7
D801	F-3	Q903	A-8
D802	E-3	Q904	A-6
D803	F-3	Q905	B-8
D804	F-3		

(Page 9)



## SECTION 5 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.
- Color Indication of Appearance Parts Example:  
KNOB, BALANCE (WHITE)

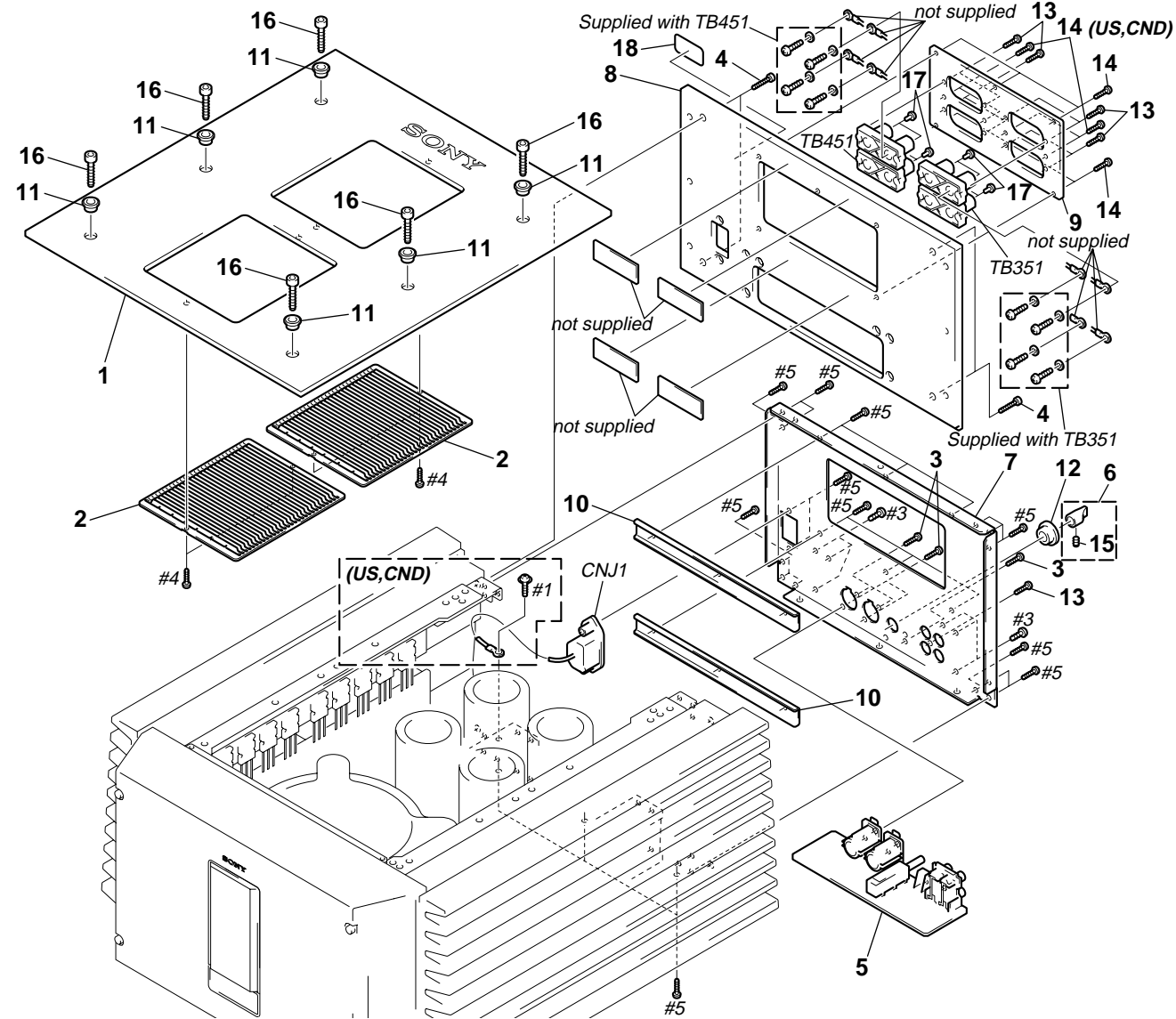
↑  
Cabinets color

- 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  
CND : Canadian model

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

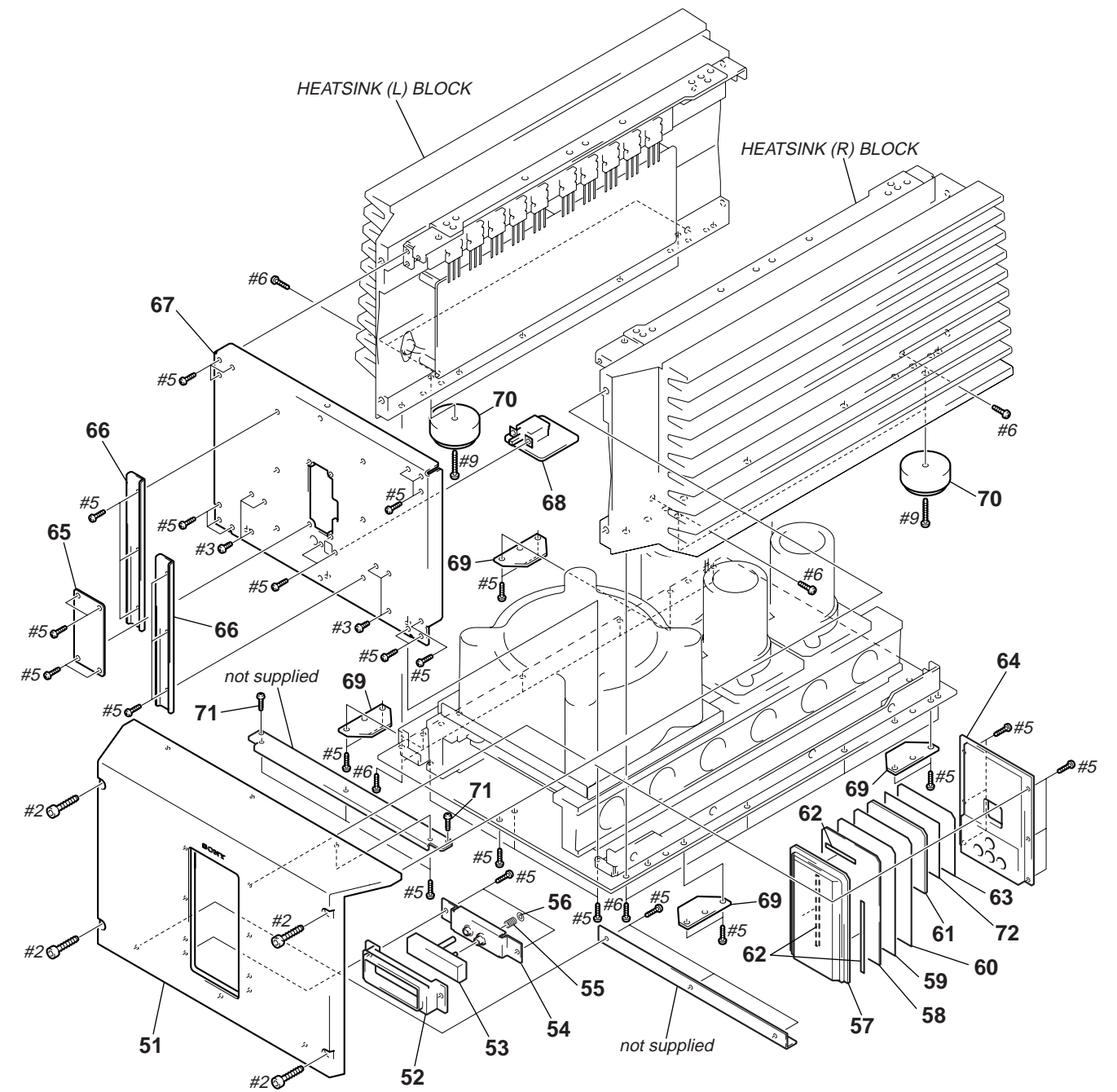
Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

### 5-1. TOP AND BACK PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-217-753-01	PANEL, TOP		12	4-219-878-01	ESCUTCHEON (KNOB)	
2	4-935-228-11	GRILLE (A)		13	4-974-510-01	SCREW (+BV 3X8 CU)	
3	3-703-685-41	SCREW (+BV 3X8)		14	4-911-049-21	SCREW (3X8)	
4	4-219-096-01	BOLT (M5X16), 6 SQUARE HOLE		15	3-701-505-00	SET SCREW, DOUBLE POINT 3X3	
5	1-673-331-11	INPUT BOARD		16	4-219-097-01	BOLT (M4X12), 6 SQUARE HOLE	
6	4-987-527-01	KNOB (VOL)		17	3-696-090-11	RIVET, NYLON	
7	4-217-756-11	PANEL (C), BACK		* 18	3-703-044-11	LABEL, CAUTION (US,CND)	
8	4-217-757-11	PANEL (A), BACK (US,CND)		CNJ1	1-580-375-41	INLET 3P	
8	4-217-757-22	PANEL (A), BACK (EXCEPT US,CND)		TB351	1-694-541-11	TERMINAL BOARD (SP)(EXCEPT US,CND)	
9	4-218-397-11	BRACKET (SPEAKER T)(EXCEPT US,CND)		TB351	1-694-541-21	TERMINAL BOARD (SP)(US,CND)	
9	4-218-397-21	BRACKET (SPEAKER T)(US,CND)		TB451	1-694-541-11	TERMINAL BOARD (SP)(EXCEPT US,CND)	
10	4-217-770-01	REINFORCEMENT (R)		TB451	1-694-541-21	TERMINAL BOARD (SP)(US,CND)	
11	4-217-765-01	ESCUTCHEON					

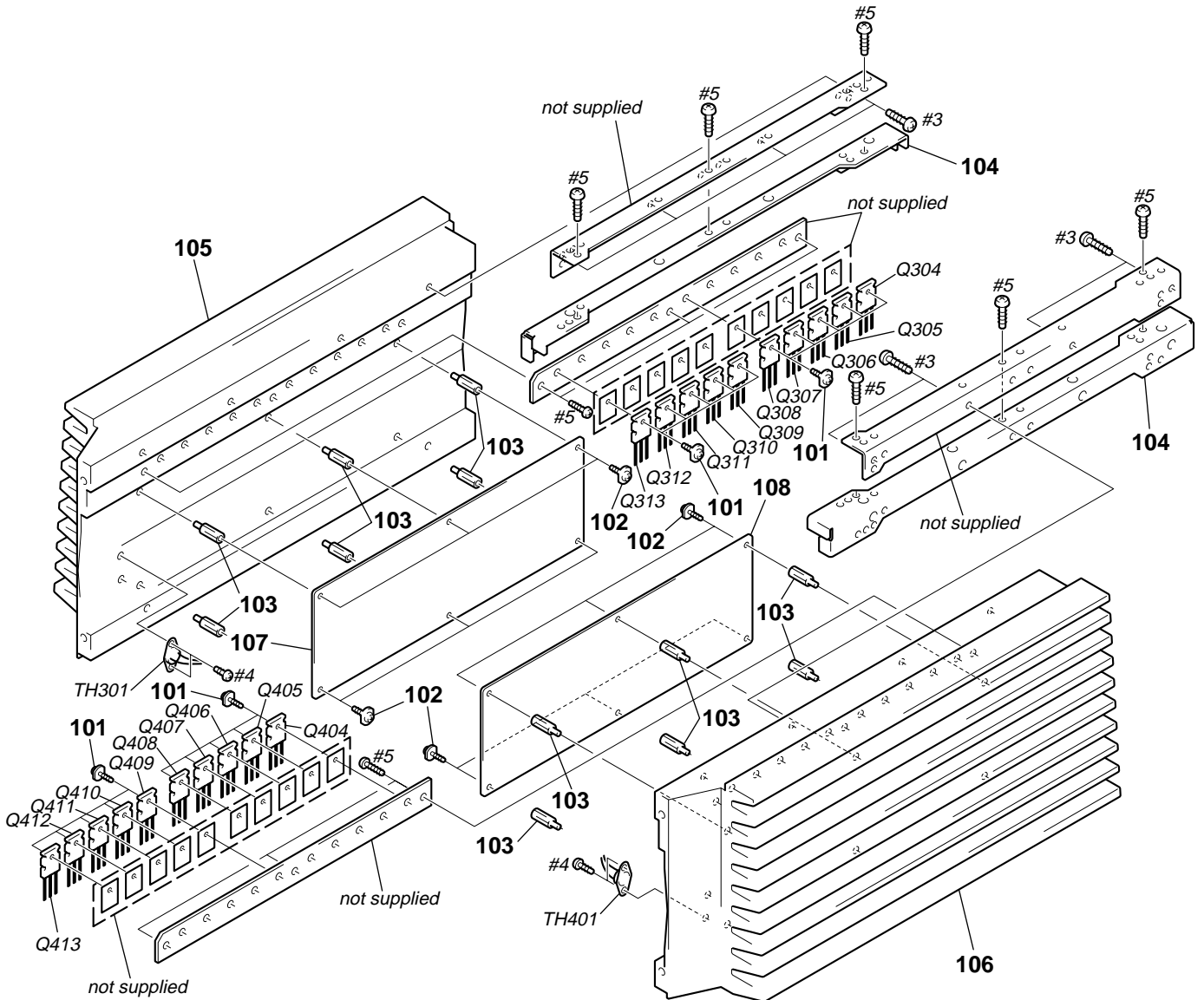
### 5-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-217-750-01	PANEL, FRONT		62	4-221-068-01	PLATE (SPACER), INDICATION	
52	4-217-782-01	ESCUTCHEON (POWER BUTTON)		63	4-218-441-01	PLATE (FILTER 2), INDICATION (MILKY WHITE)	
53	X-4951-184-1	BUTTON ASSY, POWER		64	4-217-779-01	PLATE (BASE), INDICATION	
54	X-4951-185-1	BRACKET (POWER BUTTON) ASSY		65	1-673-334-11	LED BOARD	
* 55	4-880-426-00	SPRING, COMPRESSION		66	4-217-769-01	REINFORCEMENT (F)	
56	4-862-338-00	RING, STOPPER		67	4-217-755-01	PANEL, SUB	
57	4-217-777-01	PLATE (FRONT), INDICATION		68	1-673-336-11	AC-SW BOARD	
58	4-217-771-01	PLATE (HALF MIRROR),INDICATION		69	4-218-443-01	BRACKET (FOOT)	
59	4-217-772-01	PLATE (MASK), INDICATION (BLACK)		70	X-4942-178-1	FOOT ASSY	
60	4-217-778-01	PLATE (FILTER), INDICATION (MILKY WHITE)		71	4-911-049-21	SCREW (3X8)	
61	4-218-442-01	PLATE (BASE 2), INDICATION (WHITE)		72	4-222-564-01	PLATE (FILTER C), INDICATION (ORANGE)	

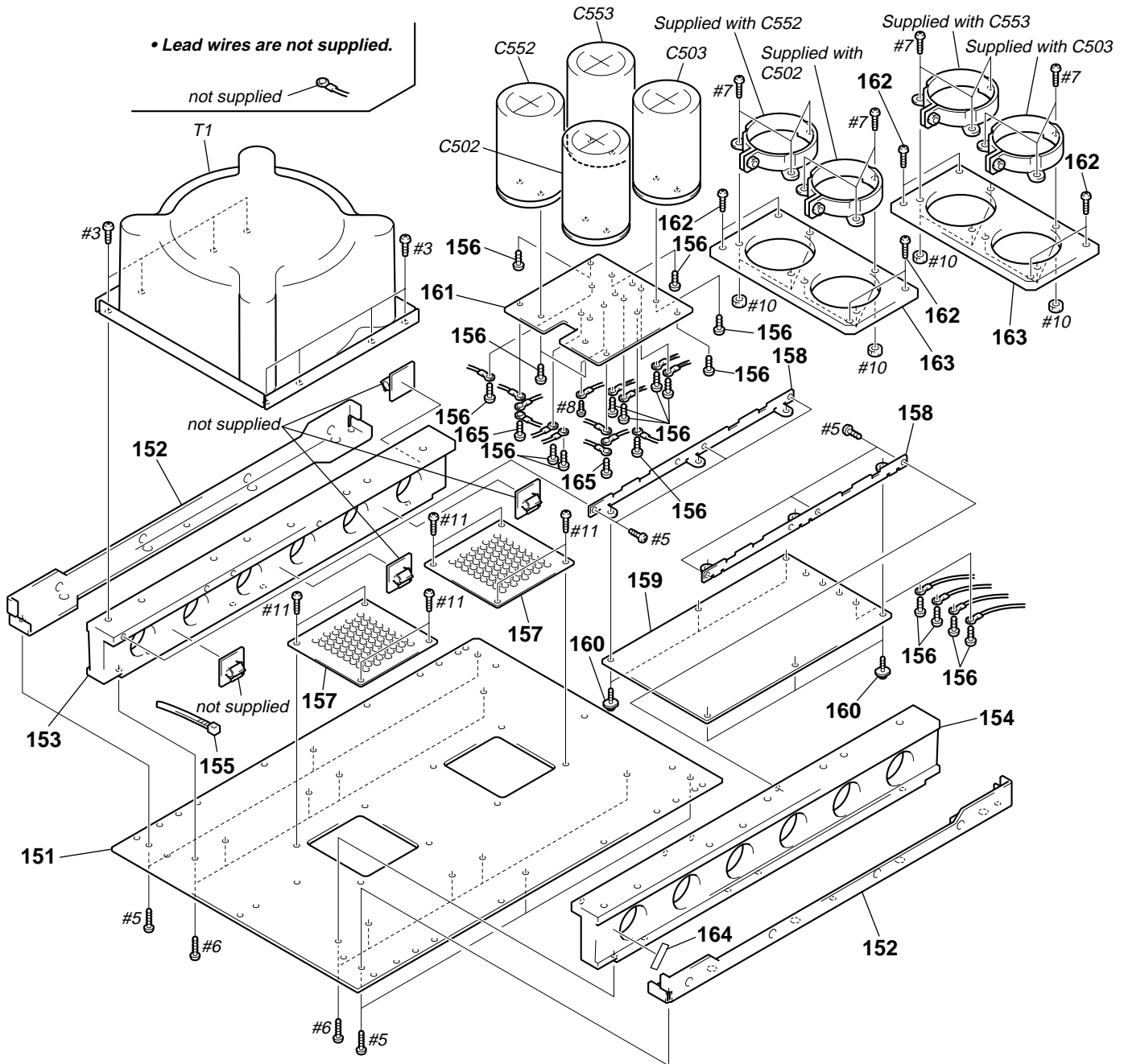


### 5-3. HEAT SINK SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	X-4952-038-1	+B 3X16 (CU) ASSY		Q310	8-729-018-11	TRANSISTOR 2SK1530A-Y	
102	X-4944-262-1	SCREW(3X8)ASSY, BARREL W +BVTT		Q311	8-729-018-13	TRANSISTOR 2SJ201A-Y	
103	4-217-766-01	BOSS		Q312	8-729-018-11	TRANSISTOR 2SK1530A-Y	
104	4-217-760-01	FRAME (F/R)		Q313	8-729-018-13	TRANSISTOR 2SJ201A-Y	
105	4-217-751-01	HEAT SINK (L)		Q404	8-729-018-11	TRANSISTOR 2SK1530A-Y	
106	4-217-752-01	HEAT SINK (R)		Q405	8-729-018-13	TRANSISTOR 2SJ201A-Y	
107	A-4426-211-A	MAIN-L BAORD, COMPLETE (US,CND)		Q406	8-729-018-11	TRANSISTOR 2SK1530A-Y	
107	A-4426-215-A	MAIN-L BOARD, COMPLETE (EXCEPT US,CND)		Q407	8-729-018-13	TRANSISTOR 2SJ201A-Y	
108	A-4426-212-A	MAIN-R BOARD, COMPLETE (US,CND)		Q408	8-729-018-11	TRANSISTOR 2SK1530A-Y	
108	A-4426-216-A	MAIN-R BOARD, COMPLETE (EXCEPT US,CND)		Q409	8-729-018-13	TRANSISTOR 2SJ201A-Y	
Q304	8-729-018-11	TRANSISTOR 2SK1530A-Y		Q410	8-729-018-11	TRANSISTOR 2SK1530A-Y	
Q305	8-729-018-13	TRANSISTOR 2SJ201A-Y		Q411	8-729-018-13	TRANSISTOR 2SJ201A-Y	
Q306	8-729-018-11	TRANSISTOR 2SK1530A-Y		Q412	8-729-018-11	TRANSISTOR 2SK1530A-Y	
Q307	8-729-018-13	TRANSISTOR 2SJ201A-Y		Q413	8-729-018-13	TRANSISTOR 2SJ201A-Y	
Q308	8-729-018-11	TRANSISTOR 2SK1530A-Y		TH301	1-576-080-11	THERMOSTAT	
Q309	8-729-018-13	TRANSISTOR 2SJ201A-Y		TH401	1-576-080-11	THERMOSTAT	

### 5-4. BOTTOM PLATE AND FRAME SECTION



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

Les composants identifiés par une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
151	4-217-754-01	PLATE, BOTTOM	
152	4-217-760-01	FRAME (F/R)	
153	4-217-761-01	FRAME (L)	
154	4-217-762-01	FRAME (R)	
155	3-655-653-21	BAND (TAITON), BINDING	
* 156	4-931-964-01	SCREW (M4X6)	
* 157	1-641-950-11	BOTTOM LID BOARD	
158	4-217-763-01	BRACKET (PC-PS)	
159	A-4426-214-A	AC/PS BOARD, COMPLETE (US,CND)	
159	A-4426-218-A	AC/PS BOARD, COMPLETE (EXCEPT US,CND)	
160	X-4944-262-1	SCREW(3X8)ASSY, BARREL W +BVTT	

Ref. No.	Part No.	Description	Remark
161	1-673-333-11	PS-B BOARD	
162	4-965-658-01	SCREW (4X16)	
163	4-218-396-01	HOLDER (BASE C)	
164	3-831-441-11	CUSHION (F)	
* 165	4-931-964-11	SCREW (M4X8)	
C502	1-128-999-11	CAP, ELECT 27000MF	
C503	1-128-999-11	CAP, ELECT 27000MF	
C552	1-128-999-11	CAP, ELECT 27000MF	
C553	1-128-999-11	CAP, ELECT 27000MF	
$\triangle$ T1	1-433-767-11	TRANSFORMER, POWER (US,CND)	
$\triangle$ T1	1-433-768-11	TRANSFORMER, POWER (EXCEPT US,CND)	

# SECTION 6 ELECTRICAL PARTS LIST

AC-SW

AC/PS

Note:

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

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

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.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS  
All resistors are in ohms  
METAL: Metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F : nonflammable

- SEMICONDUCTORS  
In each case, u:  $\mu$ , for example:  
uA...:  $\mu$  A..., uPA...:  $\mu$  PA..., uPB...:  $\mu$  PB...,  
uPC...:  $\mu$  PC..., uPD...:  $\mu$  PD...
- CAPACITORS  
uF :  $\mu$  F
- COILS  
uH :  $\mu$  H
- Abbreviation  
CND : Canadian model

Ref. No.	Part No.	Description	Remark
	1-673-336-11	AC-SW BOARD *****	
		< CAPACITOR >	
C1	1-113-920-11	CERAMIC      0.0022uF   20%   250V	
		< SWITCH >	
S1	1-771-187-11	SWITCH, AC POWER (①)	
*****			
	A-4426-214-A	AC/PS BOARD, COMPLETE (US,CND) *****	
	A-4426-218-A	AC/PS BOARD, COMPLETE (EXCEPT US, CND) *****	
	1-533-798-11	HOLDER, FUSE	
	1-535-476-11	TERMINAL	
		< CAPACITOR >	
C2	1-113-920-11	CERAMIC      0.0022uF   20%   250V	
C5	1-119-800-11	ELECT        100uF      20%   25V	
C501	1-136-880-11	FILM         2.2uF      10%   160V	
C551	1-136-880-11	FILM         2.2uF      10%   160V	
C601	1-136-960-11	FILM         0.1uF      10%   160V	
C603	1-131-657-11	CAPACITOR    1500uF    20%   80V	
C604	1-131-657-11	CAPACITOR    1500uF    20%   80V	
C651	1-136-960-11	FILM         0.1uF      10%   160V	
C653	1-131-657-11	CAPACITOR    1500uF    20%   80V	
C654	1-131-657-11	CAPACITOR    1500uF    20%   80V	
C701	1-126-024-11	ELECT        220uF      20%   25V	
C702	1-126-029-11	ELECT        3200uF    20%   25V	
C751	1-126-024-11	ELECT        220uF      20%   25V	
C752	1-126-029-11	ELECT        3200uF    20%   25V	
C801	1-104-993-11	FILM         0.01uF     5%     200V	
C802	1-119-823-11	ELECT        4.7uF      20%   50V	
C803	1-119-815-21	ELECT        2200uF    20%   35V	
C804	1-119-810-11	ELECT        100uF      20%   35V	
C805	1-119-814-21	ELECT        1000uF    20%   35V	
C901	1-119-830-11	ELECT        330uF      20%   35V	
C902	1-119-823-11	ELECT        4.7uF      20%   50V	
C903	1-119-823-11	ELECT        4.7uF      20%   50V	
		< CONNECTOR >	
* CN601	1-766-920-11	PIN, CONNECTOR 4P	

Ref. No.	Part No.	Description	Remark
	CN604	1-691-765-11	PLUG (MICRO CONNECTOR) 3P
	CN654	1-691-765-31	PLUG (MICRO CONNECTOR) 3P
*	CN701	1-564-506-11	PLUG, CONNECTOR 3P
*	CN702	1-564-506-11	PLUG, CONNECTOR 3P
		< DIODE >	
*	CN751	1-564-506-11	PLUG, CONNECTOR 3P
*	CN801	1-564-506-11	PLUG, CONNECTOR 3P
	CN802	1-691-766-11	PLUG (MICRO CONNECTOR) 4P
	CN852	1-691-766-31	PLUG (MICRO CONNECTOR) 4P
	CN901	1-691-768-11	PLUG (MICRO CONNECTOR) 6P
		< DIODE >	
	CN902	1-691-768-11	PLUG (MICRO CONNECTOR) 6P
		< DIODE >	
D1	8-719-024-99	DIODE 11ES2-NTA2B	
D2	8-719-024-99	DIODE 11ES2-NTA2B	
D3	8-719-024-99	DIODE 11ES2-NTA2B	
D501	8-719-072-90	DIODE PB302F	
D551	8-719-072-90	DIODE PB302F	
		< DIODE >	
D601	8-719-024-99	DIODE 11ES2-NTA2B	
D602	8-719-024-99	DIODE 11ES2-NTA2B	
D651	8-719-024-99	DIODE 11ES2-NTA2B	
D652	8-719-024-99	DIODE 11ES2-NTA2B	
D701	8-719-934-64	DIODE HZS9C2LT2	
		< DIODE >	
D702	8-719-934-64	DIODE HZS9C2LT2	
D751	8-719-934-64	DIODE HZS9C2LT2	
D752	8-719-934-64	DIODE HZS9C2LT2	
D801	8-719-024-99	DIODE 11ES2-NTA2B	
D802	8-719-024-99	DIODE 11ES2-NTA2B	
		< DIODE >	
D803	8-719-024-99	DIODE 11ES2-NTA2B	
D804	8-719-024-99	DIODE 11ES2-NTA2B	
D805	8-719-024-99	DIODE 11ES2-NTA2B	
D806	8-719-935-20	DIODE HZS27-1LT2	
D901	8-719-024-99	DIODE 11ES2-NTA2B	
		< DIODE >	
D902	8-719-024-99	DIODE 11ES2-NTA2B	
		< FUSE >	
$\Delta$ F1	1-532-350-11	FUSE, TIME-LAG (T4AL/250V)(EXCEPT US,CND)	
$\Delta$ F2	1-576-379-11	FUSE (15A/250V)(US,CND)	
$\Delta$ F2	1-532-350-11	FUSE, TIME-LAG (T4AL/250V)(EXCEPT US,CND)	
		< TRANSISTOR >	
Q1	8-729-281-54	TRANSISTOR 2SC1815-BL	
Q701	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q702	8-749-010-25	IC MN2488-OPY-M	
Q751	8-729-202-67	TRANSISTOR 2SK246-GR3	
Q752	8-749-010-26	IC MP1620-OPY-M	

**AC/PS**

**INPUT**

Ref. No.	Part No.	Description	Remark
Q801	8-729-018-60	TRANSISTOR	2SD2012-LC
Q901	8-729-201-53	TRANSISTOR	2SA1015-GR
Q902	8-729-422-96	TRANSISTOR	UN4113-TA
Q903	8-729-201-53	TRANSISTOR	2SA1015-GR
Q904	8-729-900-80	TRANSISTOR	UN4211-TA
Q905	8-729-281-54	TRANSISTOR	2SC1815-BL
		< RESISTOR >	
△R1	1-217-780-11	FUSIBLE	1 5% 5W F (US,CND)
△R1	1-217-781-11	FUSIBLE	2.2 5% 5W F (EXCEPT US, CND)
△R2	1-217-780-11	FUSIBLE	1 5% 5W F (US,CND)
△R2	1-217-781-11	FUSIBLE	2.2 5% 5W F (EXCEPT US, CND)
△R3	1-217-780-11	FUSIBLE	1 5% 5W F (US,CND)
△R3	1-217-781-11	FUSIBLE	2.2 5% 5W F (EXCEPT US, CND)
△R4	1-217-780-11	FUSIBLE	1 5% 5W F (US,CND)
△R4	1-217-781-11	FUSIBLE	2.2 5% 5W F (EXCEPT US, CND)
△R5	1-217-780-11	FUSIBLE	1 5% 5W F (US,CND)
△R5	1-217-781-11	FUSIBLE	2.2 5% 5W F (EXCEPT US, CND)
△R6	1-217-780-11	FUSIBLE	1 5% 5W F (US,CND)
△R6	1-217-781-11	FUSIBLE	2.2 5% 5W F (EXCEPT US, CND)
△R7	1-217-780-11	FUSIBLE	1 5% 5W F (US,CND)
△R7	1-217-781-11	FUSIBLE	2.2 5% 5W F (EXCEPT US, CND)
△R8	1-217-780-11	FUSIBLE	1 5% 5W F (US,CND)
△R8	1-217-781-11	FUSIBLE	2.2 5% 5W F (EXCEPT US, CND)
R9	1-249-645-11	CARBON	68 5% 1/2W
R10	1-249-645-11	CARBON	68 5% 1/2W
R11	1-259-207-21	CARBON	47K 5% 1/4W
R12	1-259-183-11	CARBON	4.7K 5% 1/4W
R13	1-259-183-11	CARBON	4.7K 5% 1/4W
△R501	1-202-937-41	FUSIBLE	10 5% 1/2W
△R551	1-202-937-41	FUSIBLE	10 5% 1/2W
△R701	1-219-022-11	FUSIBLE	100 5% 1/2W
R702	1-259-191-21	CARBON	10K 5% 1/4W
R703	1-259-167-21	CARBON	1K 5% 1/4W
△R751	1-219-022-11	FUSIBLE	100 5% 1/2W
R752	1-259-191-21	CARBON	10K 5% 1/4W
R753	1-259-167-21	CARBON	1K 5% 1/4W
△R803	1-202-937-31	FUSIBLE	10 5% 1/2W
R804	1-259-179-21	CARBON	3.3K 5% 1/4W
R901	1-259-183-11	CARBON	4.7K 5% 1/4W
R902	1-259-195-11	CARBON	15K 5% 1/4W
R903	1-259-183-11	CARBON	4.7K 5% 1/4W
R904	1-259-199-11	CARBON	22K 5% 1/4W

Ref. No.	Part No.	Description	Remark
R906	1-259-292-11	CARBON	330 5% 1/2W
R907	1-259-292-11	CARBON	330 5% 1/2W
R908	1-259-207-21	CARBON	47K 5% 1/4W
R909	1-249-887-11	CARBON	33 5% 1/4W
		< RELAY >	
RY1	1-515-999-11	RELAY, POWER	
RY2	1-515-999-11	RELAY, POWER	
		< TRANSFORMER >	
△T601	1-427-648-11	TRANSFORMER (CHOKE)	
		< THERMISTOR >	
TH801	1-801-829-11	THERMISTOR, POSITIVE	
TH802	1-801-829-11	THERMISTOR, POSITIVE	
*****			
	1-673-331-11	INPUT BOARD	*****
	4-946-336-01	BRACKET (GROUND)	
		< CAPACITOR >	
C106	1-125-850-21	FILM	220PF 5% 50V
C111	1-136-165-00	FILM	0.1uF 5% 50V
C112	1-136-165-00	FILM	0.1uF 5% 50V
C113	1-136-165-00	FILM	0.1uF 5% 50V
C206	1-125-850-21	FILM	220PF 5% 50V
C213	1-136-165-00	FILM	0.1uF 5% 50V
		< CONNECTOR >	
* CN101	1-564-507-11	PLUG, CONNECTOR 4P	
* CN201	1-564-507-11	PLUG, CONNECTOR 4P	
		< JACK >	
CNJ101	1-766-803-11	CONNECTOR (CANON)(BALANCE L)	
CNJ201	1-766-803-11	CONNECTOR (CANON)(BALANCE R)	
		< DIODE >	
D101	8-719-911-19	DIODE 1SS119-25	
D102	8-719-911-19	DIODE 1SS119-25	
D103	8-719-911-19	DIODE 1SS119-25	
D203	8-719-911-19	DIODE 1SS119-25	
		< JACK >	
J101	1-785-547-11	JACK, PIN (UNBALANCE 1,2 L/R)	
		< TRANSISTOR >	
Q101	8-729-422-57	TRANSISTOR	UN4111
Q102	8-729-422-57	TRANSISTOR	UN4111
Q103	8-729-422-57	TRANSISTOR	UN4111
Q111	8-729-900-80	TRANSISTOR	UN4211-TA
Q112	8-729-900-80	TRANSISTOR	UN4211-TA
Q113	8-729-900-80	TRANSISTOR	UN4211-TA
Q203	8-729-422-57	TRANSISTOR	UN4111

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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Ref. No.	Part No.	Description	Remark
< RESISTOR >			
R101	1-249-995-11	CARBON 1M 5%	1/4W
R102	1-249-995-11	CARBON 1M 5%	1/4W
R103	1-249-995-11	CARBON 1M 5%	1/4W
R104	1-249-995-11	CARBON 1M 5%	1/4W
R106	1-249-210-11	CARBON 1K 5%	1/3W
R111	1-259-404-11	CARBON 100 5%	1/6W
R112	1-259-404-11	CARBON 100 5%	1/6W
R113	1-259-404-11	CARBON 100 5%	1/6W
R120	1-259-452-11	CARBON 10K 5%	1/6W
R201	1-249-995-11	CARBON 1M 5%	1/4W
R202	1-249-995-11	CARBON 1M 5%	1/4W
R203	1-249-995-11	CARBON 1M 5%	1/4W
R204	1-249-995-11	CARBON 1M 5%	1/4W
R206	1-249-210-11	CARBON 1K 5%	1/3W
R213	1-259-404-11	CARBON 100 5%	1/6W
< RELAY >			
RY101	1-755-062-11	RELAY	
RY102	1-755-062-11	RELAY	
RY103	1-755-062-11	RELAY	
RY203	1-755-062-11	RELAY	
< SWITCH >			
S101	1-771-565-11	SWITCH, ROTARY (INPUT SELECTOR)	
*****			
	1-673-334-11	LED BOARD	
*****			
< CAPACITOR >			
C951	1-136-157-00	FILM 0.022uF 5%	50V
C952	1-136-157-00	FILM 0.022uF 5%	50V
C960	1-136-157-00	FILM 0.022uF 5%	50V
C961	1-136-157-00	FILM 0.022uF 5%	50V
C962	1-136-157-00	FILM 0.022uF 5%	50V
C963	1-136-157-00	FILM 0.022uF 5%	50V
< DIODE >			
D951	8-719-069-45	DIODE SELU5E23C-TP15	
D952	8-719-069-45	DIODE SELU5E23C-TP15	
D953	8-719-069-45	DIODE SELU5E23C-TP15	
D954	8-719-069-45	DIODE SELU5E23C-TP15	
D955	8-719-075-81	DIODE SEL1610C-TP8	
D960	8-719-985-41	DIODE HZS2CLL	
D961	8-719-075-82	DIODE SELU1810CXM-TP8 (UNBALANCE 1)	
D962	8-719-075-82	DIODE SELU1810CXM-TP8 (UNBALANCE 2)	
D963	8-719-075-82	DIODE SELU1810CXM-TP8 (BALANCE)	
< RESISTOR >			
R952	1-259-292-11	CARBON 330 5%	1/2W
R971	1-259-416-11	CARBON 330 5%	1/6W

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Ref. No.	Part No.	Description	Remark
	A-4426-211-A	MAIN-L BOARD, COMPLETE (US,CND)	*****
	A-4426-215-A	MAIN-L BOARD, COMPLETE (EXCEPT US, CND)	*****
	7-682-148-15	SCREW, TR	
< CAPACITOR >			
C300	1-125-850-21	FILM 220PF 5%	50V
C301	1-125-850-21	FILM 220PF 5%	50V
C305	1-117-775-31	FILM 0.1uF 10%	250V
C306	1-117-775-31	FILM 0.1uF 10%	250V
C307	1-127-741-41	ELECT 0.047uF 10%	250V
C308	1-128-971-11	ELECT 220uF 20%	50V
C309	1-128-971-11	ELECT 220uF 20%	50V
C310	1-117-775-31	FILM 0.1uF 10%	250V
C311	1-117-775-31	FILM 0.1uF 10%	250V
C314	1-117-775-31	FILM 0.1uF 10%	250V
C315	1-128-971-11	ELECT 220uF 20%	50V
C316	1-110-512-51	FILM 1uF 10%	50V
C317	1-110-512-51	FILM 1uF 10%	50V
C318	1-125-845-21	FILM 47PF 10%	50V
C319	1-125-845-21	FILM 47PF 10%	50V
C321	1-127-741-41	ELECT 0.047uF 10%	250V
C322	1-127-741-41	ELECT 0.047uF 10%	250V
C323	1-117-775-31	FILM 0.1uF 10%	250V
C324	1-117-775-31	FILM 0.1uF 10%	250V
C327	1-119-823-11	ELECT 4.7uF 20%	50V
C328	1-125-850-21	FILM 220PF 5%	50V
C329	1-136-157-00	FILM 0.022uF 5%	50V
C330	1-110-394-21	ELECT 220uF 20%	63V
C331	1-136-157-00	FILM 0.022uF 5%	50V
C332	1-136-157-00	FILM 0.022uF 5%	50V
C333	1-119-800-11	ELECT 100uF 20%	25V
C334	1-119-800-11	ELECT 100uF 20%	25V
C337	1-126-026-11	ELECT 470uF 20%	25V
C338	1-126-026-11	ELECT 470uF 20%	25V
< CONNECTOR >			
* CN306	1-564-505-11	PLUG, CONNECTOR 2P	
< COMPOSITION CIRCUIT BLOCK >			
CP301	1-418-105-11	AMPLIFIER, UNIT	
< DIODE >			
D301	8-719-310-61	DIODE SEL1510C-D	
D302	8-719-300-04	DIODE SV-04	
D303	8-719-300-04	DIODE SV-04	
D304	8-719-300-04	DIODE SV-04	
D305	8-719-300-04	DIODE SV-04	
D306	8-719-024-99	DIODE 11ES2-NTA2B	
D307	8-719-024-99	DIODE 11ES2-NTA2B	
D308	8-719-024-99	DIODE 11ES2-NTA2B	
< IC >			
IC301	8-759-579-36	IC OPA2132P	



# MAIN-L

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< BUS BAR >		△ R326	1-205-647-11	CEMENTED	0.22 5% 5W
JWH301	1-569-232-11	BAR, BUS		△ R327	1-205-647-11	CEMENTED	0.22 5% 5W
JWH302	1-770-108-11	BAR, BUS 7P		△ R328	1-205-647-11	CEMENTED	0.22 5% 5W
* JWH303	1-566-940-11	BUS BAR 6P		△ R329	1-205-647-11	CEMENTED	0.22 5% 5W
		< COIL >		△ R330	1-205-647-11	CEMENTED	0.22 5% 5W
* L301	1-428-071-11	COIL, AIR-CORE		△ R331	1-205-647-11	CEMENTED	0.22 5% 5W
		< IC LINK >		△ R332	1-205-647-11	CEMENTED	0.22 5% 5W
PS301	8-759-111-68	IC UPC1237HA		△ R333	1-205-647-11	CEMENTED	0.22 5% 5W
		< TRANSISTOR >		△ R334	1-205-647-11	CEMENTED	0.22 5% 5W
Q301	8-729-281-53	TRANSISTOR	2SC1815-GR	△ R335	1-202-937-41	FUSIBLE	10 5% 1/2W
Q302	8-729-018-19	TRANSISTOR	2SK2013-Y	△ R336	1-202-937-41	FUSIBLE	10 5% 1/2W
Q303	8-729-018-21	TRANSISTOR	2SJ313-Y	△ R337	1-202-937-41	FUSIBLE	10 5% 1/2W
Q304	8-729-018-11	TRANSISTOR	2SK1530A-Y	△ R338	1-202-937-41	FUSIBLE	10 5% 1/2W
Q305	8-729-018-13	TRANSISTOR	2SJ201A-Y	R339	1-259-749-61	CARBON	10 2% 2W
Q306	8-729-018-11	TRANSISTOR	2SK1530A-Y	△ R340	1-202-954-11	FUSIBLE	470 5% 1/2W
Q307	8-729-018-13	TRANSISTOR	2SJ201A-Y	R341	1-259-191-21	CARBON	10K 5% 1/4W
Q308	8-729-018-11	TRANSISTOR	2SK1530A-Y	R342	1-249-959-11	CARBON	33K 5% 1/4W
Q309	8-729-018-13	TRANSISTOR	2SJ201A-Y	R343	1-259-175-11	CARBON	2.2K 5% 1/4W
Q310	8-729-018-11	TRANSISTOR	2SK1530A-Y	R344	1-259-171-21	CARBON	1.5K 5% 1/4W
Q311	8-729-018-13	TRANSISTOR	2SJ201A-Y	R345	1-249-959-11	CARBON	33K 5% 1/4W
Q312	8-729-018-11	TRANSISTOR	2SK1530A-Y	R346	1-249-883-11	CARBON	22 5% 1/4W
Q313	8-729-018-13	TRANSISTOR	2SJ201A-Y	R347	1-259-227-11	CARBON	330K 5% 1/4W
Q314	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA	R348	1-259-223-11	CARBON	220K 5% 1/4W
Q315	8-729-140-82	TRANSISTOR	2SA988-PAFAEA	R349	1-249-953-11	CARBON	18K 5% 1/4W
Q316	8-729-201-53	TRANSISTOR	2SA1015-GR	R350	1-259-207-21	CARBON	47K 5% 1/4W
Q317	8-729-281-53	TRANSISTOR	2SC1815-GR	R351	1-259-219-11	CARBON	150K 5% 1/4W
Q318	8-729-281-53	TRANSISTOR	2SC1815-GR	R352	1-249-945-11	CARBON	8.2K 5% 1/4W
Q319	8-729-201-53	TRANSISTOR	2SA1015-GR	R353	1-214-945-00	METAL	2.2M 1% 1/2W
		< RESISTOR >		△ R355	1-202-937-41	FUSIBLE	10 5% 1/2W
R300	1-259-525-11	CARBON	56 2% 1W	△ R356	1-202-937-41	FUSIBLE	10 5% 1/2W
R301	1-259-595-61	CARBON	47K 1% 1/2W	R357	1-259-167-21	CARBON	1K 5% 1/4W
R302	1-259-595-61	CARBON	47K 1% 1/2W	R358	1-249-945-11	CARBON	8.2K 5% 1/4W
R303	1-259-668-61	CARBON	470 2% 1W	R359	1-249-945-11	CARBON	8.2K 5% 1/4W
R304	1-259-668-61	CARBON	470 2% 1W	R360	1-259-111-11	CARBON	4.7 5% 1/4W
R305	1-259-668-61	CARBON	470 2% 1W	R361	1-259-111-11	CARBON	4.7 5% 1/4W
R306	1-259-525-11	CARBON	56 2% 1W	R362	1-249-210-11	CARBON	1K 5% 1/3W
R307	1-259-183-11	CARBON	4.7K 5% 1/4W			< VARIABLE RESISTOR >	
R308	1-259-171-21	CARBON	1.5K 5% 1/4W	RV301	1-224-489-11	RES, ADJ, METAL FILM 2.2K (BIAS L)	
△ R309	1-202-954-41	FUSIBLE	470 5% 1/2W			< RELAY >	
△ R310	1-202-954-41	FUSIBLE	470 5% 1/2W	RY301	1-755-310-11	RELAY	
△ R312	1-202-951-41	FUSIBLE	150 5% 1/2W	RY302	1-755-310-11	RELAY	
△ R313	1-202-951-41	FUSIBLE	150 5% 1/2W			< TEST PIN >	
△ R315	1-219-185-11	FUSIBLE	47 5% 1/2W	* TP301	3-657-235-00	POINT, TEST	
△ R316	1-219-185-11	FUSIBLE	47 5% 1/2W	* TP302	3-657-235-00	POINT, TEST	
△ R317	1-219-185-11	FUSIBLE	47 5% 1/2W	* TP303	3-657-235-00	POINT, TEST	
△ R318	1-219-185-11	FUSIBLE	47 5% 1/2W	* TP304	3-657-235-00	POINT, TEST	
△ R319	1-219-185-11	FUSIBLE	47 5% 1/2W	* TP305	3-657-235-00	POINT, TEST	
△ R320	1-219-185-11	FUSIBLE	47 5% 1/2W	* TP306	3-657-235-00	POINT, TEST	
△ R321	1-219-185-11	FUSIBLE	47 5% 1/2W	* TP307	3-657-235-00	POINT, TEST	
△ R322	1-219-185-11	FUSIBLE	47 5% 1/2W			*****	
△ R323	1-219-185-11	FUSIBLE	47 5% 1/2W				
△ R324	1-219-185-11	FUSIBLE	47 5% 1/2W				
△ R325	1-205-647-11	CEMENTED	0.22 5% 5W				

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	A-4426-212-A	MAIN-R BOARD, COMPLETE (US,CND) *****				< BUS BAR >	
	A-4426-216-A	MAIN-R BOARD, COMPLETE (EXCEPT US, CND) *****		JWH401	1-569-232-11	BAR, BUS	
				JWH402	1-770-108-11	BAR, BUS 7P	
				* JWH403	1-566-940-11	BUS BAR 6P	
*	3-657-235-00	POINT, TEST				< COIL >	
	7-682-148-15	SCREW, TR		* L401	1-428-071-11	COIL, AIR-CORE	
		< CAPACITOR >				< IC LINK >	
C400	1-125-850-21	FILM	220PF 5% 50V	PS401	8-759-111-68	IC UPC1237HA	
C401	1-125-850-21	FILM	220PF 5% 50V			< TRANSISTOR >	
C405	1-117-775-31	FILM	0.1uF 10% 250V				
C406	1-117-775-31	FILM	0.1uF 10% 250V	Q401	8-729-281-53	TRANSISTOR	2SC1815-GR
C407	1-127-741-41	ELECT	0.047uF 10% 250V	Q402	8-729-018-19	TRANSISTOR	2SK2013-Y
				Q403	8-729-018-21	TRANSISTOR	2SJ313-Y
C408	1-128-971-11	ELECT	220uF 20% 50V	Q404	8-729-018-11	TRANSISTOR	2SK1530A-Y
C409	1-128-971-11	ELECT	220uF 20% 50V	Q405	8-729-018-13	TRANSISTOR	2SJ201A-Y
C410	1-117-775-31	FILM	0.1uF 10% 250V				
C411	1-117-775-31	FILM	0.1uF 10% 250V	Q406	8-729-018-11	TRANSISTOR	2SK1530A-Y
C414	1-117-775-31	FILM	0.1uF 10% 250V	Q407	8-729-018-13	TRANSISTOR	2SJ201A-Y
				Q408	8-729-018-11	TRANSISTOR	2SK1530A-Y
C415	1-128-971-11	ELECT	220uF 20% 50V	Q409	8-729-018-13	TRANSISTOR	2SJ201A-Y
C416	1-110-512-51	FILM	1uF 10% 50V	Q410	8-729-018-11	TRANSISTOR	2SK1530A-Y
C417	1-110-512-51	FILM	1uF 10% 50V				
C418	1-125-845-21	FILM	47PF 10% 50V	Q411	8-729-018-13	TRANSISTOR	2SJ201A-Y
C419	1-125-845-21	FILM	47PF 10% 50V	Q412	8-729-018-11	TRANSISTOR	2SK1530A-Y
				Q413	8-729-018-13	TRANSISTOR	2SJ201A-Y
C421	1-127-741-41	ELECT	0.047uF 10% 250V	Q414	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA
C422	1-127-741-41	ELECT	0.047uF 10% 250V	Q415	8-729-140-82	TRANSISTOR	2SA988-PAFAEA
C423	1-117-775-31	FILM	0.1uF 10% 250V				
C424	1-117-775-31	FILM	0.1uF 10% 250V	Q416	8-729-201-53	TRANSISTOR	2SA1015-GR
C427	1-119-823-11	ELECT	4.7uF 20% 50V	Q417	8-729-281-53	TRANSISTOR	2SC1815-GR
				Q418	8-729-281-53	TRANSISTOR	2SC1815-GR
C428	1-125-850-21	FILM	220PF 5% 50V	Q419	8-729-201-53	TRANSISTOR	2SA1015TP-GR
C429	1-136-157-00	FILM	0.022uF 5% 50V			< RESISTOR >	
C430	1-110-394-21	ELECT	220uF 20% 63V	R400	1-259-525-11	CARBON	56 2% 1W
C431	1-136-157-00	FILM	0.022uF 5% 50V	R401	1-259-595-61	CARBON	47K 1% 1/2W
C432	1-136-157-00	FILM	0.022uF 5% 50V	R402	1-259-595-61	CARBON	47K 1% 1/2W
				R403	1-259-668-61	CARBON	470 2% 1W
C433	1-119-800-11	ELECT	100uF 20% 25V	R404	1-259-668-61	CARBON	470 2% 1W
C434	1-119-800-11	ELECT	100uF 20% 25V				
C437	1-126-026-11	ELECT	470uF 20% 25V	R405	1-259-668-61	CARBON	470 2% 1W
C438	1-126-026-11	ELECT	470uF 20% 25V	R406	1-259-525-11	CARBON	56 2% 1W
		< CONNECTOR >		R407	1-259-183-11	CARBON	4.7K 5% 1/4W
* CN406	1-564-505-11	PLUG, CONNECTOR 2P		R408	1-259-171-21	CARBON	1.5K 5% 1/4W
		< COMPOSITION CIRCUIT BLOCK >		△ R409	1-202-954-41	FUSIBLE	470 5% 1/2W
CP401	1-418-105-11	AMPLIFIER, UNIT		△ R410	1-202-954-41	FUSIBLE	470 5% 1/2W
		< DIODE >		△ R412	1-202-951-41	FUSIBLE	150 5% 1/2W
D401	8-719-310-61	DIODE SEL1510C-D		△ R413	1-202-951-41	FUSIBLE	150 5% 1/2W
D402	8-719-300-04	DIODE SV-04		△ R415	1-219-185-11	FUSIBLE	47 5% 1/2W
D403	8-719-300-04	DIODE SV-04		△ R416	1-219-185-11	FUSIBLE	47 5% 1/2W
D404	8-719-300-04	DIODE SV-04					
D405	8-719-300-04	DIODE SV-04		△ R417	1-219-185-11	FUSIBLE	47 5% 1/2W
				△ R418	1-219-185-11	FUSIBLE	47 5% 1/2W
D406	8-719-024-99	DIODE 11ES2-NTA2B		△ R419	1-219-185-11	FUSIBLE	47 5% 1/2W
D407	8-719-024-99	DIODE 11ES2-NTA2B		△ R420	1-219-185-11	FUSIBLE	47 5% 1/2W
D408	8-719-024-99	DIODE 11ES2-NTA2B		△ R421	1-219-185-11	FUSIBLE	47 5% 1/2W
		< IC >		△ R422	1-219-185-11	FUSIBLE	47 5% 1/2W
IC401	8-759-579-36	IC OPA2132P		△ R423	1-219-185-11	FUSIBLE	47 5% 1/2W
				△ R424	1-219-185-11	FUSIBLE	47 5% 1/2W

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**MAIN-R**

**PS-B**

Ref. No.	Part No.	Description			Remark
△ R425	1-205-647-11	CEMENTED	0.22	5%	5W
△ R426	1-205-647-11	CEMENTED	0.22	5%	5W
△ R427	1-205-647-11	CEMENTED	0.22	5%	5W
△ R428	1-205-647-11	CEMENTED	0.22	5%	5W
△ R429	1-205-647-11	CEMENTED	0.22	5%	5W
△ R430	1-205-647-11	CEMENTED	0.22	5%	5W
△ R431	1-205-647-11	CEMENTED	0.22	5%	5W
△ R432	1-205-647-11	CEMENTED	0.22	5%	5W
△ R433	1-205-647-11	CEMENTED	0.22	5%	5W
△ R434	1-205-647-11	CEMENTED	0.22	5%	5W
△ R435	1-202-937-41	FUSIBLE	10	5%	1/2W
△ R436	1-202-937-41	FUSIBLE	10	5%	1/2W
△ R437	1-202-937-41	FUSIBLE	10	5%	1/2W
△ R438	1-202-937-41	FUSIBLE	10	5%	1/2W
△ R439	1-259-749-61	CARBON	10	2%	2W
△ R440	1-202-954-11	FUSIBLE	470	5%	1/2W
R441	1-259-191-21	CARBON	10K	5%	1/4W
R442	1-249-959-11	CARBON	33K	5%	1/4W
R443	1-259-175-11	CARBON	2.2K	5%	1/4W
R444	1-259-171-21	CARBON	1.5K	5%	1/4W
△ R445	1-249-959-11	CARBON	33K	5%	1/4W
△ R446	1-249-883-11	CARBON	22	5%	1/4W
R447	1-259-227-11	CARBON	330K	5%	1/4W
R448	1-259-223-11	CARBON	220K	5%	1/4W
R449	1-249-953-11	CARBON	18K	5%	1/4W
R450	1-259-207-21	CARBON	47K	5%	1/4W
R451	1-259-219-11	CARBON	150K	5%	1/4W
R452	1-249-945-11	CARBON	8.2K	5%	1/4W
R453	1-214-945-00	METAL	2.2M	1%	1/2W
R455	1-202-937-41	FUSIBLE	10	5%	1/2W
R456	1-202-937-41	FUSIBLE	10	5%	1/2W
R457	1-259-167-21	CARBON	1K	5%	1/4W
R458	1-249-945-11	CARBON	8.2K	5%	1/4W
R459	1-249-945-11	CARBON	8.2K	5%	1/4W
R460	1-259-111-11	CARBON	4.7	5%	1/4W
R461	1-259-111-11	CARBON	4.7	5%	1/4W
R462	1-249-210-11	CARBON	1K	5%	1/3W
< VARIABLE RESISTOR >					
RV401	1-224-489-11	RES, ADJ, METAL FILM 2.2K (BIAS R)			
< RELAY >					
RY401	1-755-310-11	RELAY			
RY402	1-755-310-11	RELAY			
*****					
	1-673-333-11	PS-B BOARD			
*****					
*	3-346-266-21	PLATE, GROUND			
*	4-916-791-01	PLATE, GROUND, 5P			
	7-682-148-15	SCREW, TR			
< CAPACITOR >					
C502	1-128-999-11	CAP, ELECT	27000MF	20%	80V
C503	1-128-999-11	CAP, ELECT	27000MF	20%	80V
C504	1-117-775-31	FILM	0.1uF	10%	250V
C552	1-128-999-11	CAP, ELECT	27000MF		80V

Ref. No.	Part No.	Description			Remark
C553	1-128-999-11	CAP, ELECT	27000MF	20%	80V
C554	1-117-775-31	FILM	0.1uF	10%	250V
< CONNECTOR >					
CN504	1-564-320-00	PIN, CONNECTOR 2P			
CN554	1-564-320-00	PIN, CONNECTOR 2P			
CN603	1-691-765-11	PLUG (MICRO CONNECTOR) 3P			
< BUS BAR >					
* JWH502	1-569-135-11	BAR, BUS 4P			
JWH503	1-566-940-21	BUS BAR 3P			
JWH504	1-566-940-21	BUS BAR 3P			
* JWH552	1-569-135-11	BAR, BUS 4P			
JWH553	1-566-940-21	BUS BAR 3P			
JWH554	1-566-940-21	BUS BAR 3P			
*****					
MISCELLANEOUS					
*****					
C502	1-128-999-11	CAP, ELECT	27000uF	20%	80V
C503	1-128-999-11	CAP, ELECT	27000uF	20%	80V
C552	1-128-999-11	CAP, ELECT	27000uF	20%	80V
C553	1-128-999-11	CAP, ELECT	27000uF	20%	80V
CNJ1	1-580-375-41	INLET 3P			
Q304	8-729-018-11	TRANSISTOR	2SK1530A-Y		
Q305	8-729-018-13	TRANSISTOR	2SJ201A-Y		
Q306	8-729-018-11	TRANSISTOR	2SK1530A-Y		
Q307	8-729-018-13	TRANSISTOR	2SJ201A-Y		
Q308	8-729-018-11	TRANSISTOR	2SK1530A-Y		
Q309	8-729-018-13	TRANSISTOR	2SJ201A-Y		
Q310	8-729-018-11	TRANSISTOR	2SK1530A-Y		
Q311	8-729-018-13	TRANSISTOR	2SJ201A-Y		
Q312	8-729-018-11	TRANSISTOR	2SK1530A-Y		
Q313	8-729-018-13	TRANSISTOR	2SJ201A-Y		
Q404	8-729-018-11	TRANSISTOR	2SK1530A-Y		
Q405	8-729-018-13	TRANSISTOR	2SJ201A-Y		
Q406	8-729-018-11	TRANSISTOR	2SK1530A-Y		
Q407	8-729-018-13	TRANSISTOR	2SJ201A-Y		
Q408	8-729-018-11	TRANSISTOR	2SK1530A-Y		
Q409	8-729-018-13	TRANSISTOR	2SJ201A-Y		
Q410	8-729-018-11	TRANSISTOR	2SK1530A-Y		
Q411	8-729-018-13	TRANSISTOR	2SJ201A-Y		
Q412	8-729-018-11	TRANSISTOR	2SK1530A-Y		
Q413	8-729-018-13	TRANSISTOR	2SJ201A-Y		
△ T1	1-433-767-11	TRANSFORMER, POWER (US,CND)			
△ T1	1-433-768-11	TRANSFORMER, POWER (EXCEPT US,CND)			
TB351	1-694-541-11	TERMINAL BOARD (SP)(EXCEPT US,CND)			
TB351	1-694-541-21	TERMINAL BOARD (SP)(US,CND)			
TB451	1-694-541-11	TERMINAL BOARD (SP)(EXCEPT US,CND)			
TB451	1-694-541-21	TERMINAL BOARD (SP)(US,CND)			
TH301	1-576-080-11	THERMOSTAT			
TH401	1-576-080-11	THERMOSTAT			
*****					

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Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		*****	
△	1-551-631-22	CORD, POWER (EXCEPT US,CND)	
△	1-551-812-11	CORD, POWER (US,CND)	
	3-866-957-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH)	
	3-866-957-21	MANUAL, INSTRUCTION (GERMAN,SPANISH, DUTCH,SWEDISH,ITALIAN,PORTUGUESE)(EXCEPT US,CND)	
*	4-396-077-01	JOINT	

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\*\*\*\*\*  
HARDWARE LIST  
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#1	7-682-962-01	SCREW +PSW4X10
#2	7-683-438-04	BOLT, HEXAGON SOCKET 5X16
#3	7-682-561-09	SCREW +B 4X8
#4	7-682-546-09	SCREW +B 3X5
#5	7-682-548-09	SCREW +B 3X8
#6	7-682-562-09	SCREW +B 4X10
#7	7-682-563-09	SCREW +B 4X12
#8	7-682-148-15	SCREW, TR
#9	7-682-568-09	SCREW +B 4X30
#10	7-684-024-04	N 4, TYPE 2
#11	7-685-870-01	SCREW +BVTT 3X5 (S)

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