

# TA-P9000ES

## SERVICE MANUAL

US Model  
Canadian Model  
AEP Model



Photo: gold type

### SPECIFICATIONS

#### Audio section

##### Harmonic distortion

Less than 0.001%  
(20 Hz ~ 20 kHz, at 1V (network A))

##### Frequency response

10 Hz ~ 100 kHz +0/-1.0 dB

##### Signal-to-noise ratio

115 dB (20 kHz LPF, A) \*  
\* 1.3 V input level

#### Inputs

Input Jacks	Sensitivity	Impedance
INPUT 1	150 mV	20 kilohms
INPUT 2	150 mV	20 kilohms
BYPASS 5.1ch	-	-
BYPASS 2ch	-	-

#### Outputs (PRE OUT)

Output Jack	Sensitivity	Impedance
FRONT L/R	1 V	100 ohms
CENTER	1 V	100 ohms
REAR L/R	1 V	100 ohms
WOOFER	1 V	100 ohms

#### General

##### Power requirements

120 V AC, 60Hz (US, Canadian models)  
220 – 230 V AC, 50/60 Hz (AEP model)

##### Power consumption

20 W

**Dimensions** 17 × 5 × 15 3/8 in. (430 × 124 × 388 mm)  
including projecting parts and controls

##### Mass (Approx.)

21 lbs 3 oz (9.6 kg)

#### Supplied accessories

- Audio cord (3)
- Remote commander RM-P9000 (remote) (1)
- LR6 (size-AA) alkaline batteries (2)
- Control A1 connecting cord (1)

Design and specifications are subject to change without notice.

## MULTICHANNEL PRE 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.

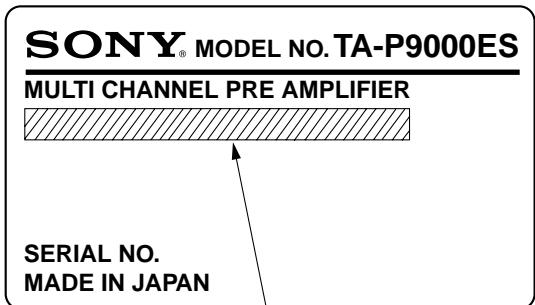
### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  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.

## SECTION 1 SERVICING NOTES

### MODEL IDENTIFICATION

#### - Specification Label -



US, Canadian models : AC 120V 60Hz 20W  
AEP model : AC 220 - 230V 50/60Hz 20W

#### Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

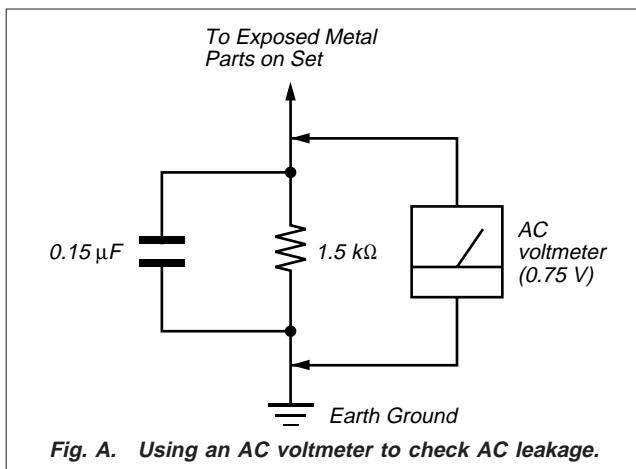
### SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check 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 TEST

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 microampers.). Leakage current can be measured by any one of three methods.

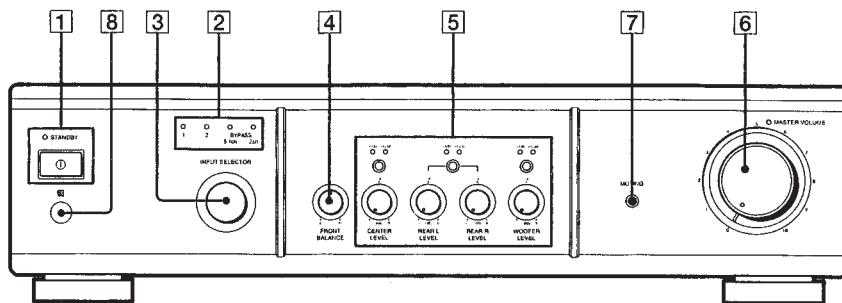
1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means 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 2 V AC range are suitable. (See Fig. A)



## SECTION 2 GENERAL

This section is extracted from instruction manual.

### Front Panel Parts Description



#### ① (1) switch

Press to turn the pre amplifier on and off.

- Before you turn on the pre amplifier, make sure that you have turned the MASTER VOLUME control to the leftmost position to avoid damaging your speakers.

#### STANDBY indicator

Lights when the pre amplifier is turned off (standby mode) using the supplied remote. Blinks momentarily after (1) is pressed to turn the unit on, then goes out to indicate that the unit is ready.

#### ② Input indicators

Light to indicate the current input.

#### ③ INPUT SELECTOR control

Turn to select the input you want to use.

To select	Turn to light
INPUT 1	1
INPUT 2	2
BYPASS 5.1ch	BYPASS 5.1ch*
BYPASS 2ch	BYPASS 2ch

After selecting the input, turn on the component(s) connected to the input you selected and play the program source.

- The audio signal input to the BYPASS 5.1ch jacks is output from the PRE OUT jacks even when this unit's power is turned off.

#### ④ FRONT BALANCE control

Rotate to adjust the balance of the front speakers.

#### Note

When BYPASS 5.1ch or 2ch is selected, use the balance control on your control amplifier (Sony TA-E9000ES, etc.) to adjust the balance of the front speakers.

#### ⑤ CENTER, REAR L, REAR R, WOOFER LEVEL controls

Rotate to adjust the center, rear, and woofer levels.

#### Gain buttons

Press repeatedly to select the gain as follows:  
+6dB → +12dB → 0dB

Use to increase the level of the respective channel relative to the level of the front channels.

#### Gain indicators

The respective indicator lights when the gain is increased to +6dB or +12dB.

#### ⑥ MASTER VOLUME control

Turn to adjust the volume when INPUT 1 or INPUT 2 is selected. The indicator on the MASTER VOLUME indicator lights to show that the volume can be adjusted. The indicator does not light and the volume cannot be adjusted when BYPASS 5.1ch or 2ch is selected.

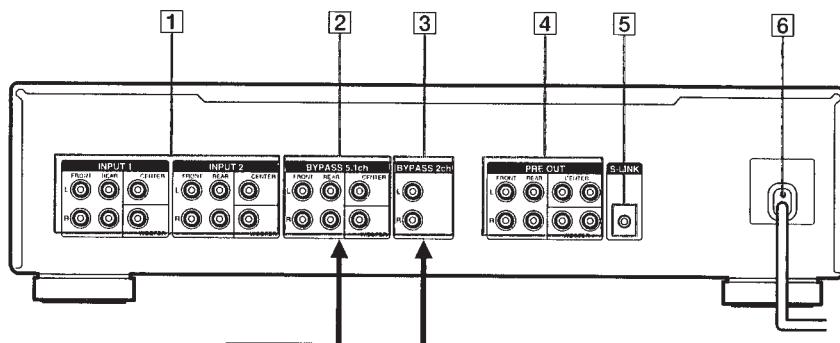
#### ⑦ MUTING button

Press to mute the sound. The indicator lights up when the sound is muted.

#### ⑧ IR receptor

Receives signals emitted by the remote.

### Rear Panel Parts Description



To prevent damage to your speakers, do not connect components whose volume cannot be controlled to the BYPASS 5.1ch or BYPASS 2ch jacks. Audio signals input to the BYPASS 5.1ch or BYPASS 2ch jacks are not routed through this unit's MASTER VOLUME control. They are output at the same level they were input.

#### ① INPUT 1 and 2 jacks

Connect to the 5.1ch OUTPUT jacks on your DVD player or secondary multi channel decoder (etc.) (see page 7).

#### ② BYPASS 5.1ch jacks

Connect to the pre out jacks on a multi channel control amplifier (see page 5). Signals input to the BYPASS 5.1ch jacks are output through the PRE OUT jacks (4) when the power is turned off.

#### ③ BYPASS 2ch jacks

Connect to the pre out jacks on a stereo control amplifier (see page 7).

#### ④ PRE OUT jacks

Connect to your power amplifier(s) (see page 6).

#### ⑤ S-LINK jack

Use to turn the TA-N9000ES power amplifier on/off automatically whenever you turn this unit on/off using the supplied remote (see page 8).

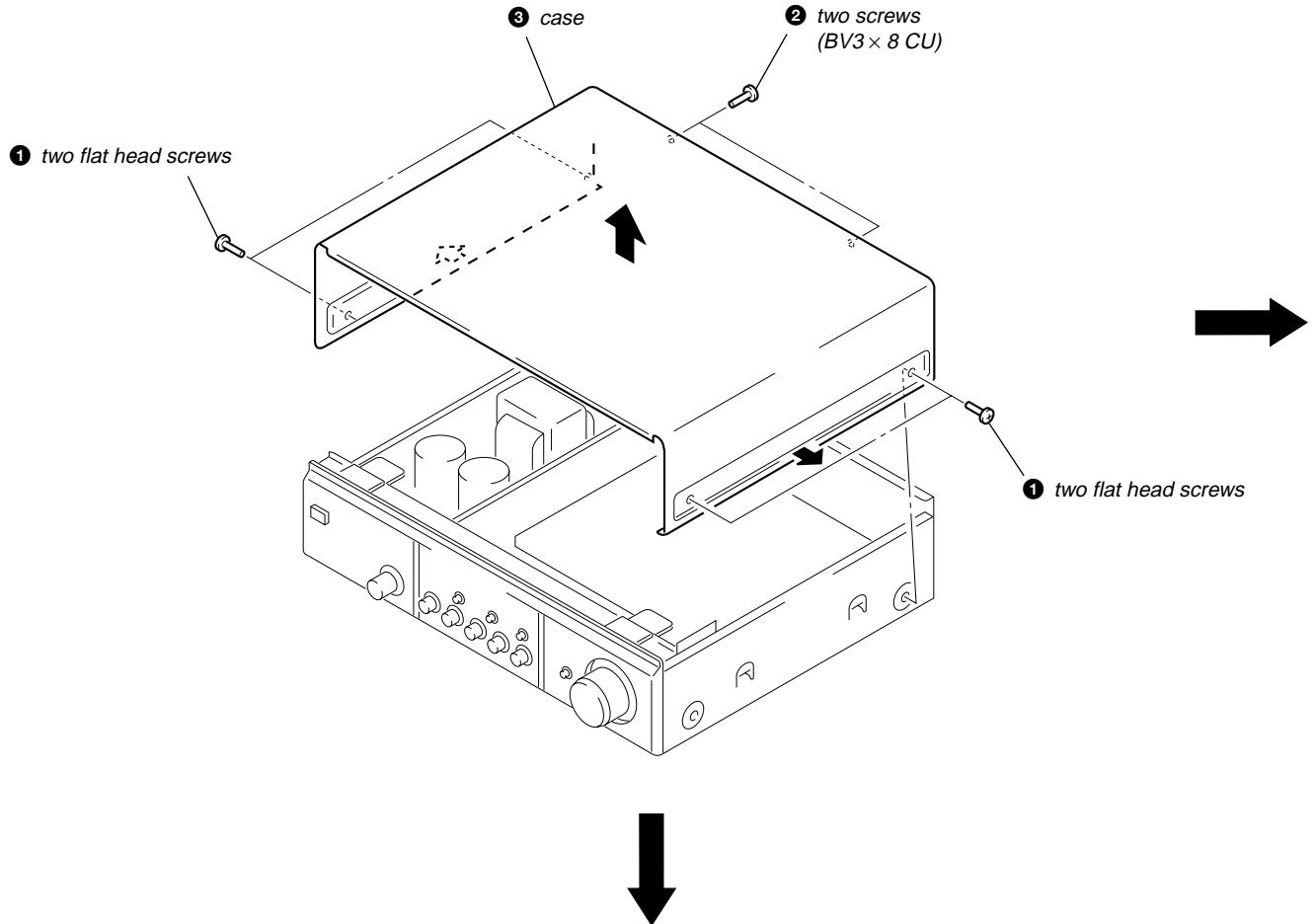
#### ⑥ AC power cord

Connect to a wall outlet.

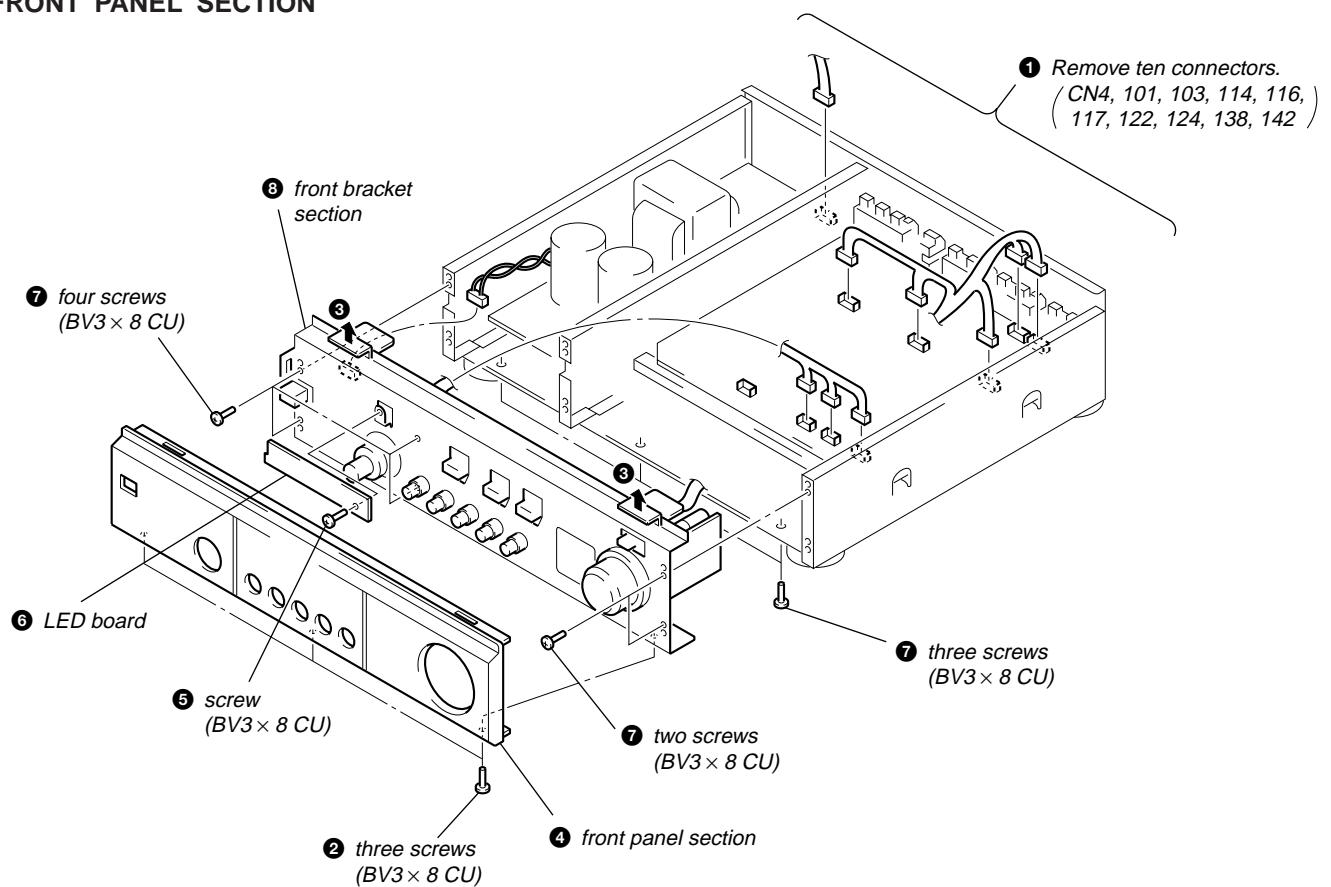
## SECTION 3 DISASSEMBLY

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

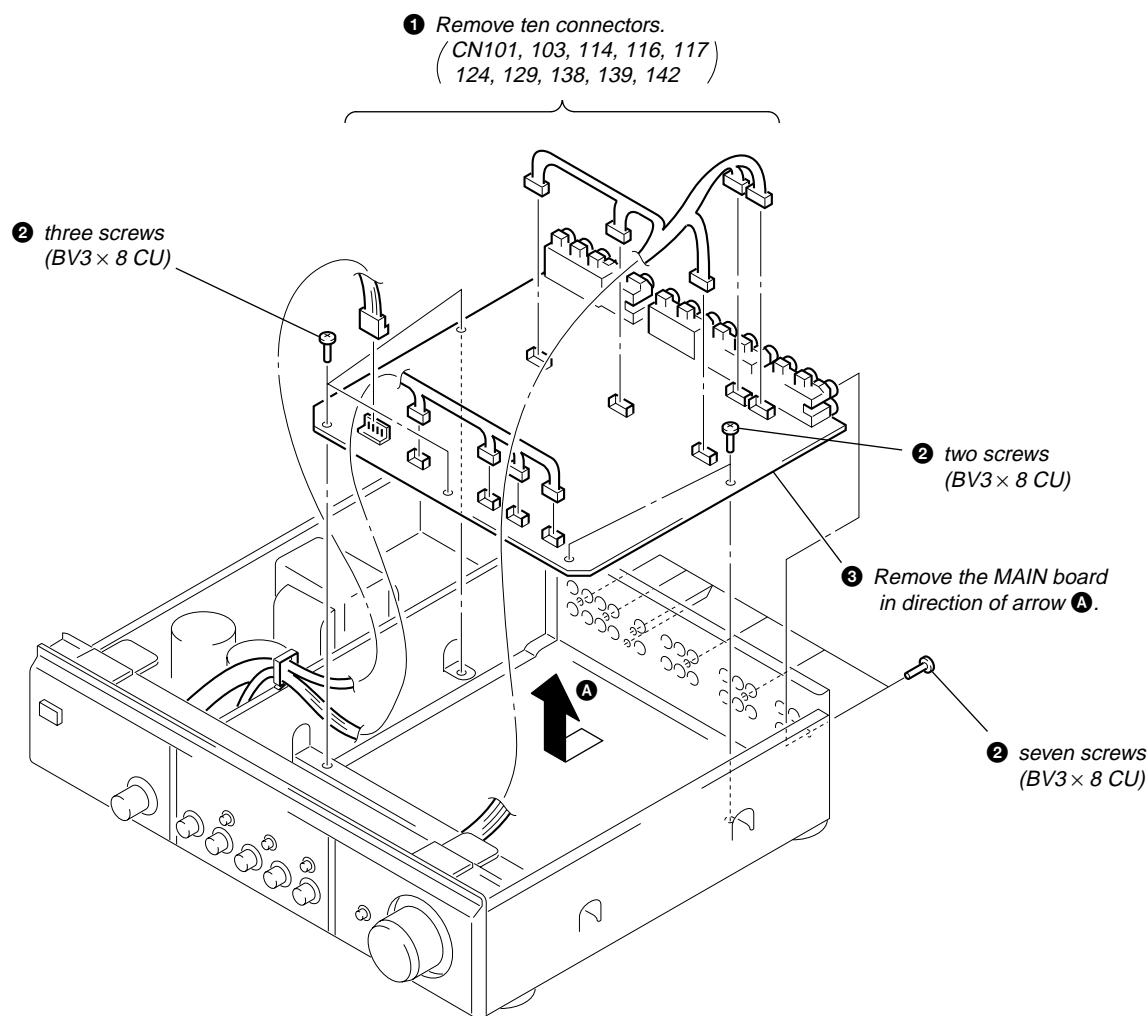
### CASE



### FRONT PANEL SECTION



## MAIN BOARD

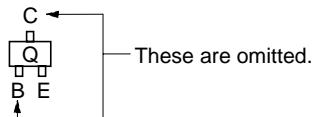


## SECTION 4 DIAGRAMS

### 4-1. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

#### Note on Printed Wiring Board:

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



#### Note on Schematic Diagram:

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

#### Note:

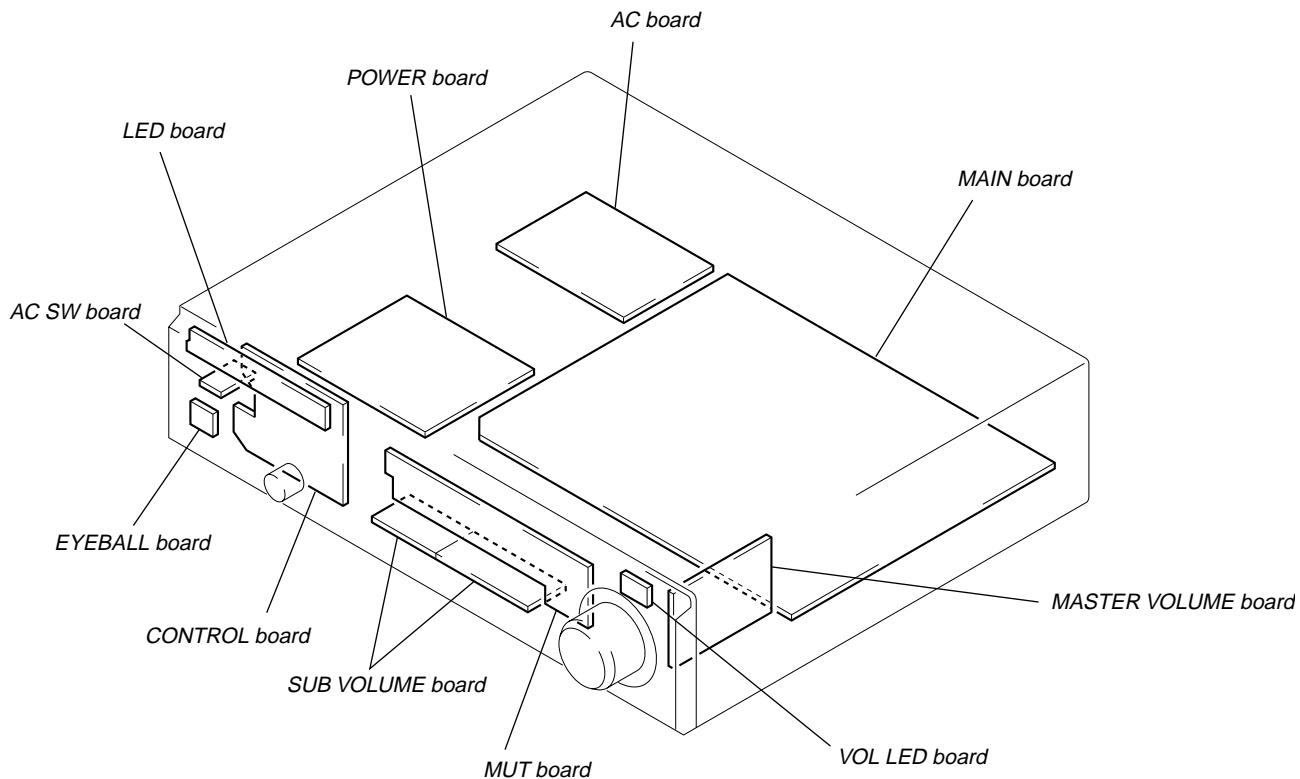
The components identified by mark or dotted line with mark are critical for safety.  
Replace only with part number specified.

#### Note:

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

- :  $\text{B+}$  Line.
- :  $\text{B-}$  Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input impedance  $10 \text{ M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path:  
 : AUDIO

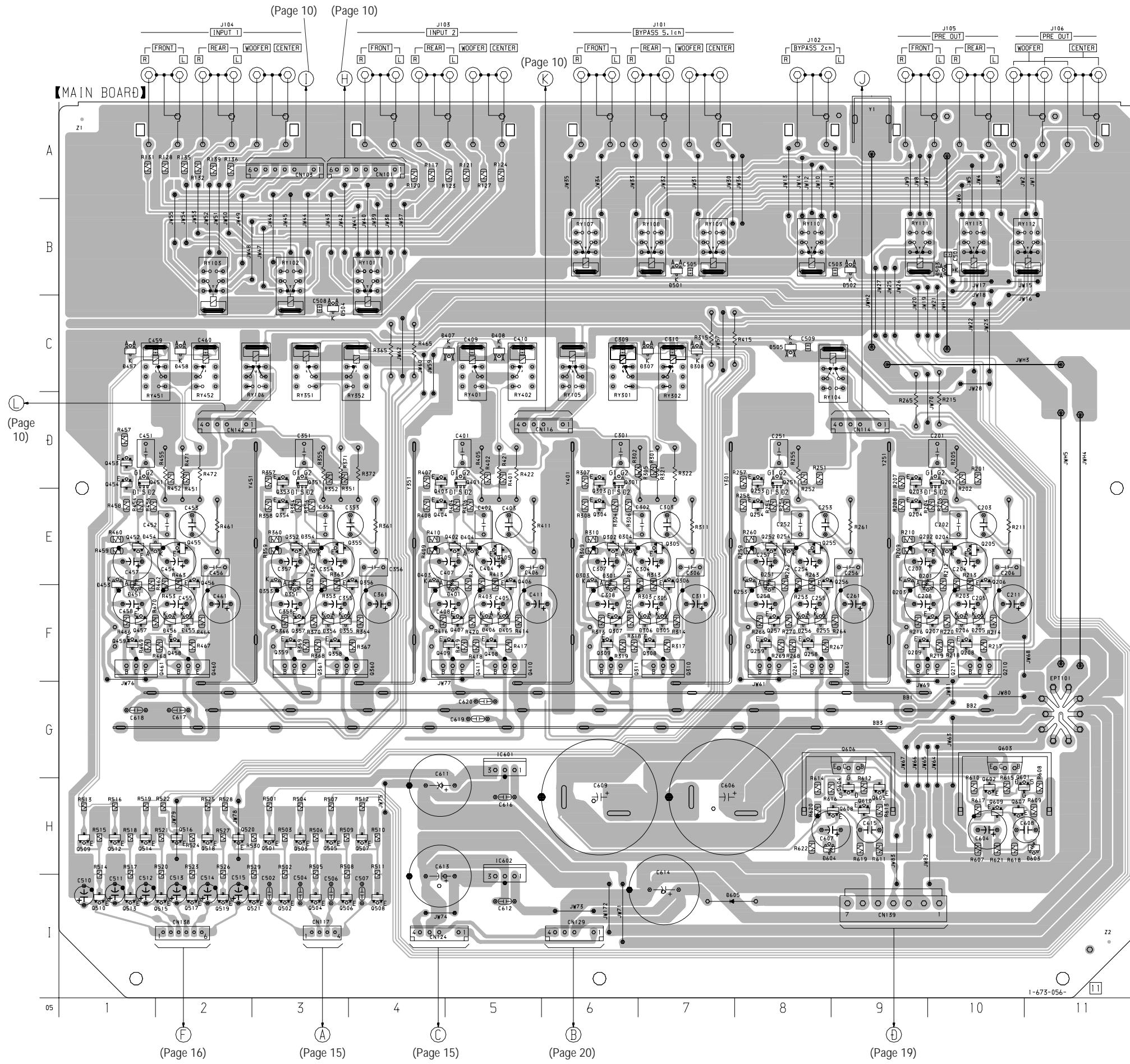
• Circuit Boards Location



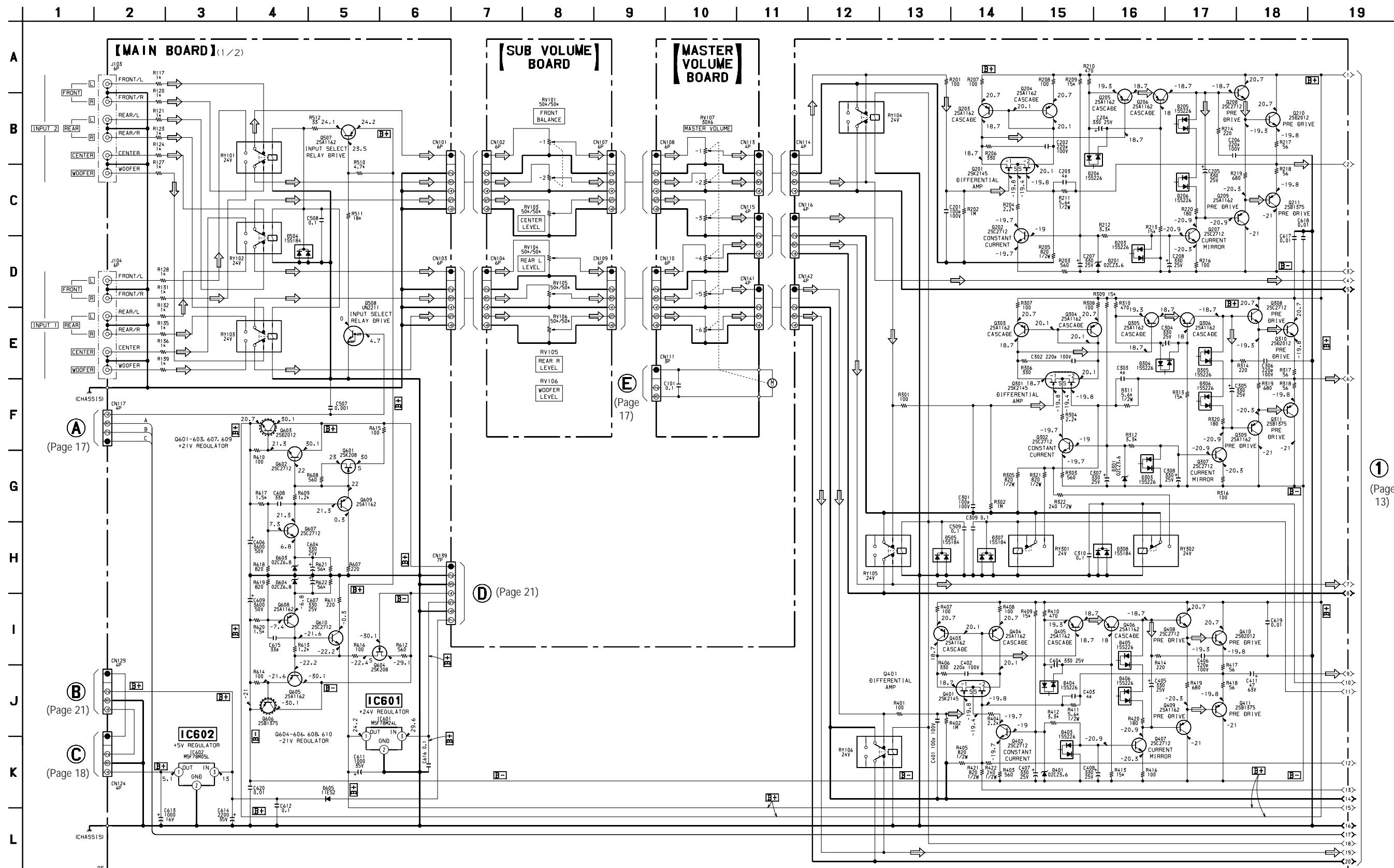
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D201	E-9	D502	B-9	Q305	E-7	Q459	F-1
D203	F-9	D503	B-10	Q306	E-7	Q460	F-2
D204	E-10	D504	C-3	Q307	F-6	Q461	F-1
D205	F-10	D505	C-8	Q308	F-7	Q501	H-3
D206	F-10	D603	H-11	Q309	F-6	Q502	I-3
D251	E-8	D604	H-8	Q310	F-7	Q503	H-3
D253	E-8	D605	I-7	Q311	F-6	Q504	I-3
D254	E-8			Q351	D-3	Q505	H-3
D255	F-8	IC601	G-5	Q352	E-3	Q506	I-3
D256	F-8	IC602	H-5	Q353	D-3	Q507	H-4
D301	E-6			Q354	E-3	Q508	I-4
D303	E-6	Q201	D-10	Q355	E-3	Q509	H-1
D304	E-6	Q202	E-10	Q356	E-4	Q510	I-1
D305	F-7	Q203	D-9	Q357	F-3	Q512	H-1
D306	F-7	Q204	E-9	Q358	F-3	Q513	I-1
D307	C-7	Q205	E-10	Q359	F-3	Q514	H-1
D308	C-7	Q206	E-10	Q360	F-3	Q515	I-2
D351	F-3	Q207	F-10	Q361	F-3	Q516	H-2
D353	F-3	Q208	F-10	Q401	D-5	Q517	I-2
D354	E-3	Q209	F-9	Q402	E-5	Q518	H-2
D355	F-3	Q210	F-10	Q403	D-4	Q519	I-2
D356	F-3	Q211	F-9	Q404	E-4	Q520	H-2
D401	E-5	Q251	D-8	Q405	E-5	Q521	I-3
D403	E-4	Q252	E-8	Q406	E-5	Q601	H-10
D404	E-5	Q253	D-8	Q407	F-5	Q602	H-10
D405	F-5	Q254	E-8	Q408	F-5	Q603	G-10
D406	F-5	Q255	E-8	Q409	F-5	Q604	H-9
D407	C-5	Q256	E-8	Q410	F-5	Q605	H-9
D408	C-5	Q257	F-8	Q411	F-5	Q606	G-9
D451	F-1	Q258	F-8	Q451	D-1	Q607	H-10
D453	F-1	Q259	F-8	Q452	E-1	Q608	H-9
D454	E-1	Q260	F-8	Q453	D-1	Q609	H-10
D455	F-2	Q261	F-8	Q454	D-1	Q610	H-9
D456	F-2	Q301	D-6	Q455	E-2		
D457	C-1	Q302	E-6	Q456	E-2		
D458	C-2	Q303	D-6	Q457	F-1		
D501	B-7	Q304	E-6	Q458	F-2		

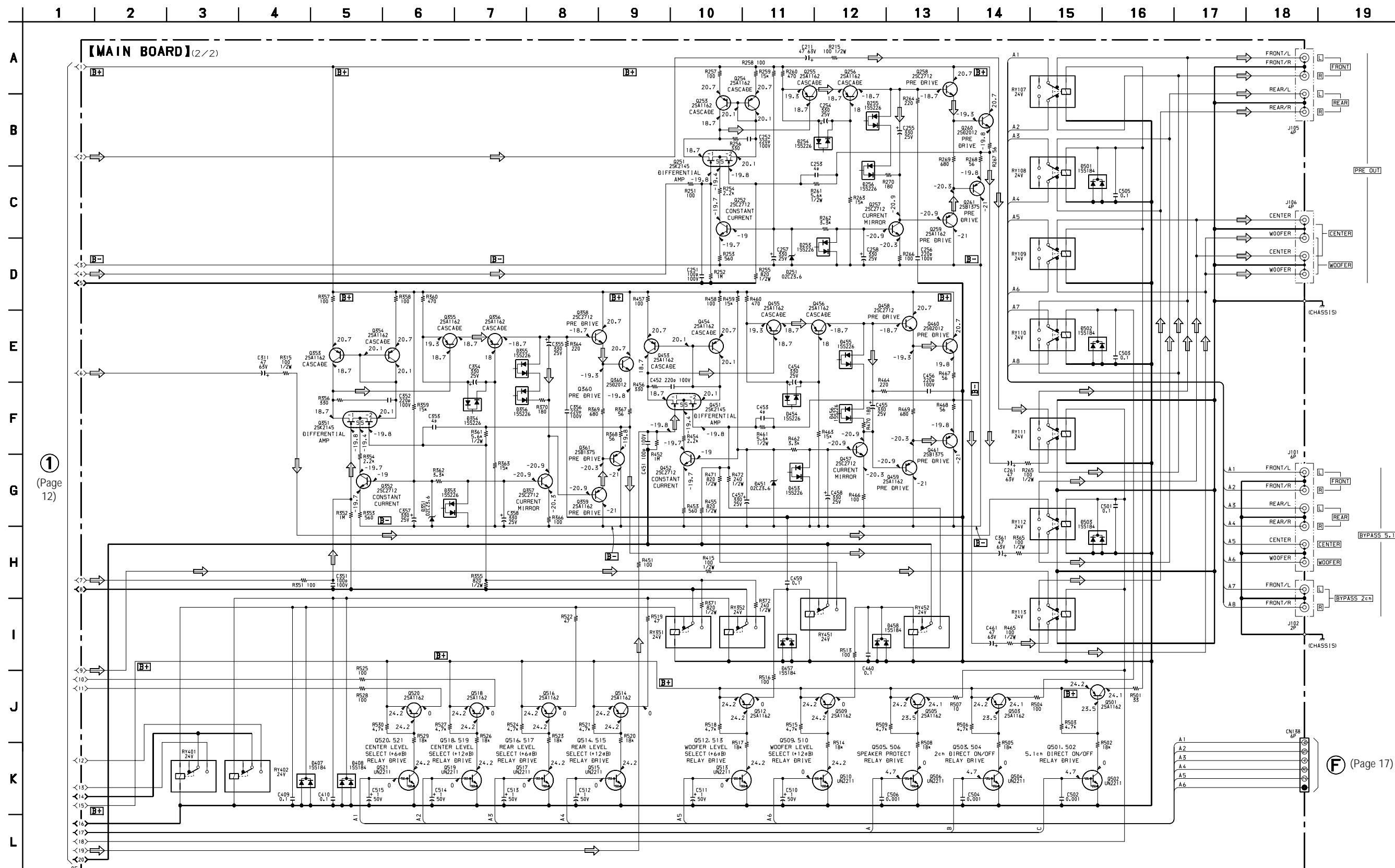
**4-2. PRINTED WIRING BOARDS – MAIN Board/SUB VOLUME Board/MASTER VOLUME Board – • See page 8 for Circuit Boards Location.**



## 4-3. SCHEMATIC DIAGRAM – MAIN Board (1/2)/SUB VOLUME Board/MASTER VOLUME Board –



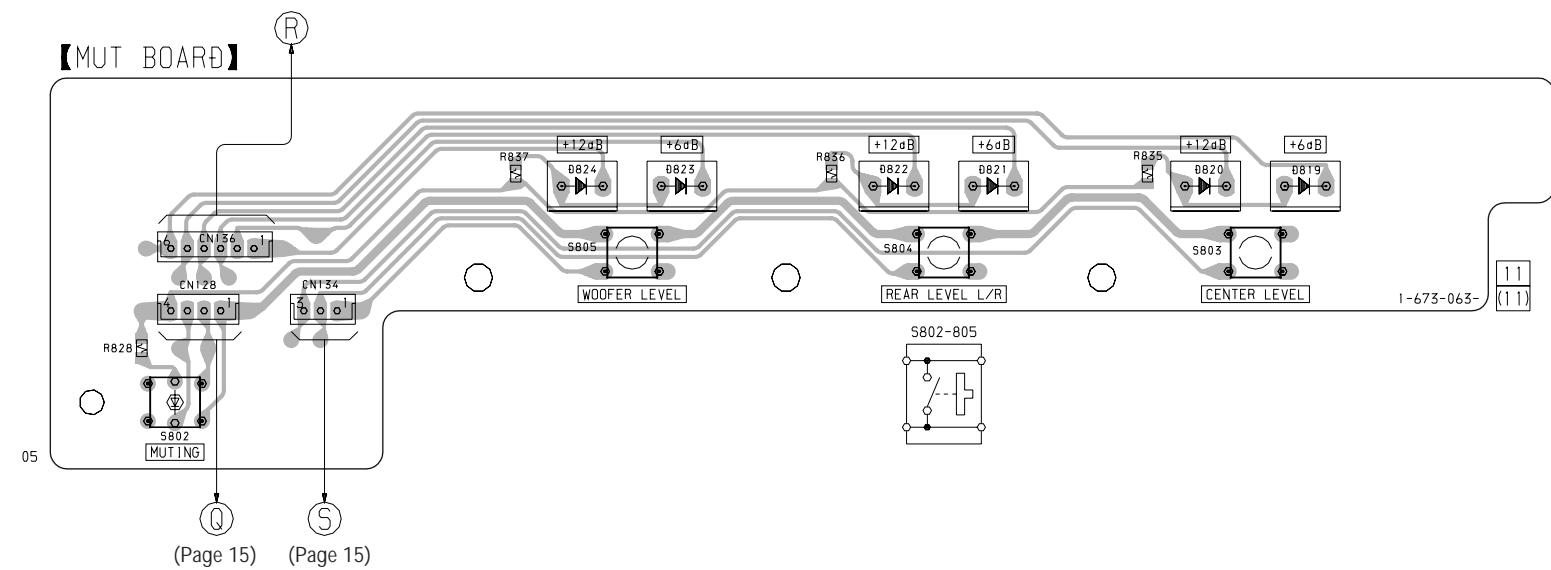
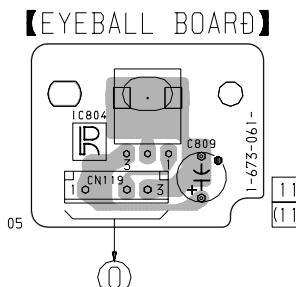
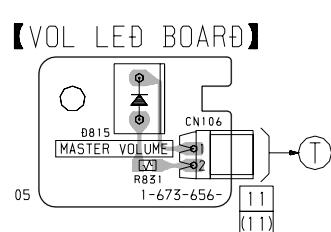
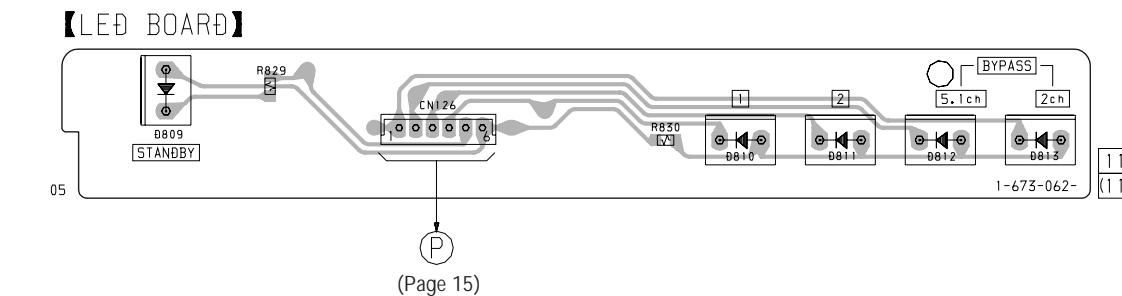
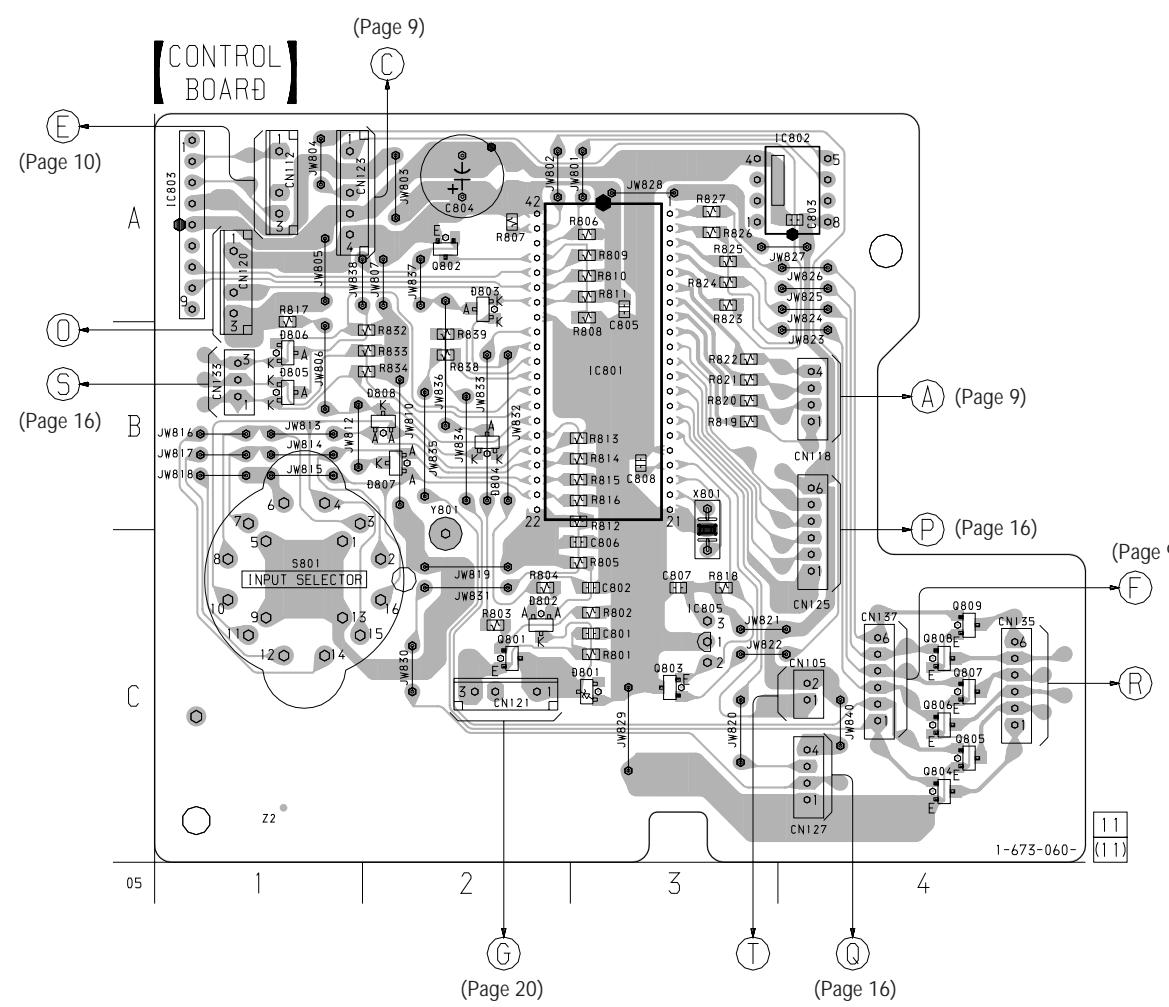
#### 4-4. SCHEMATIC DIAGRAM – MAIN Board (2/2) –



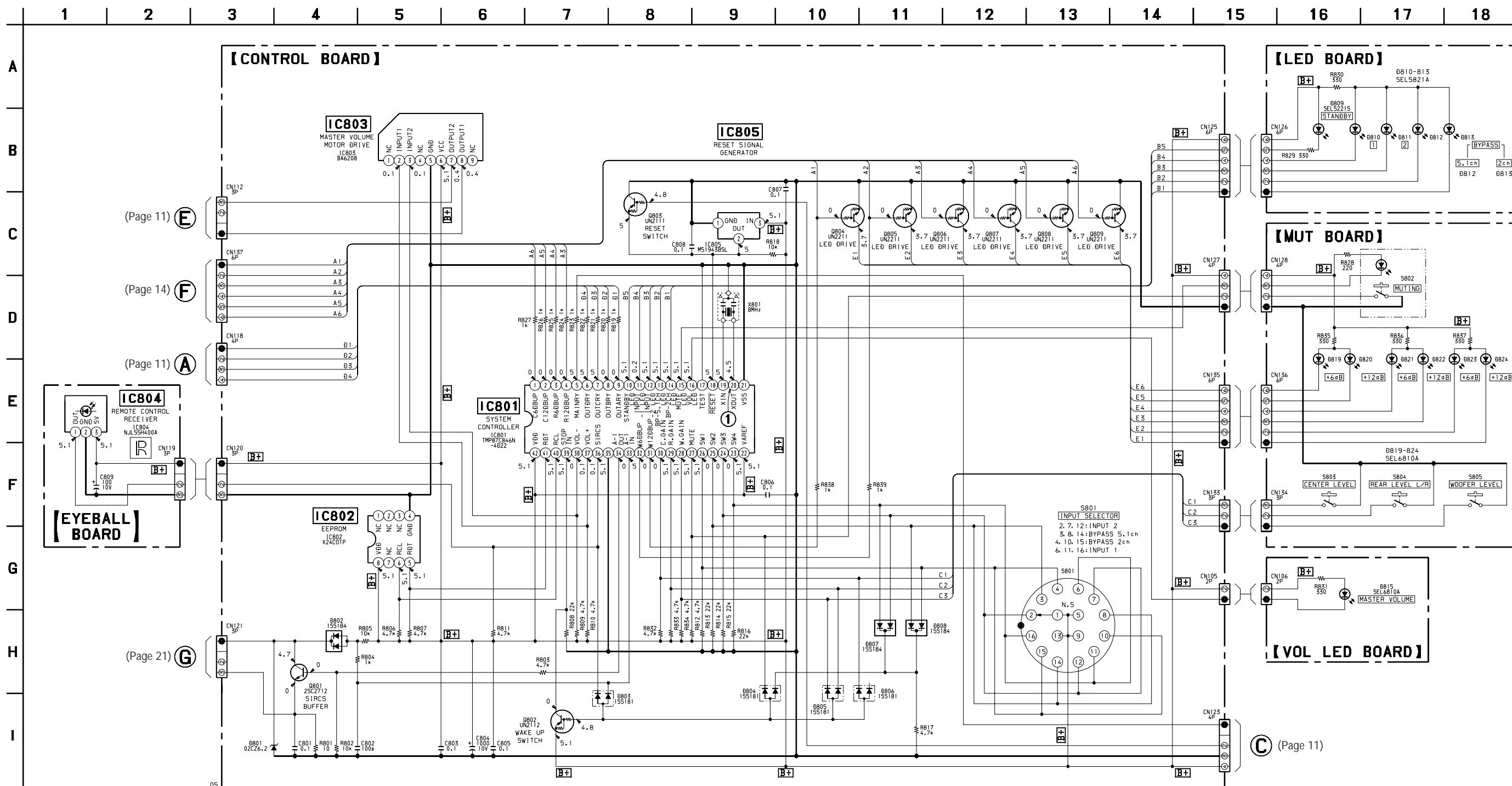
## 4-5. PRINTED WIRING BOARDS – PANEL Section – • See page 8 for Circuit Boards Location.

## • Semiconductor Location

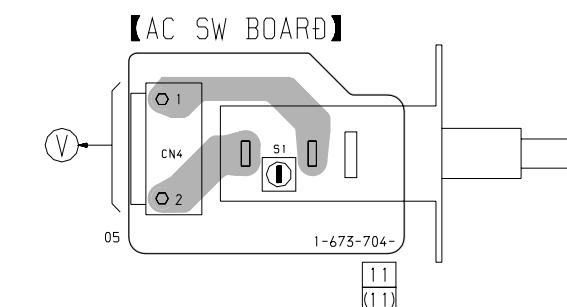
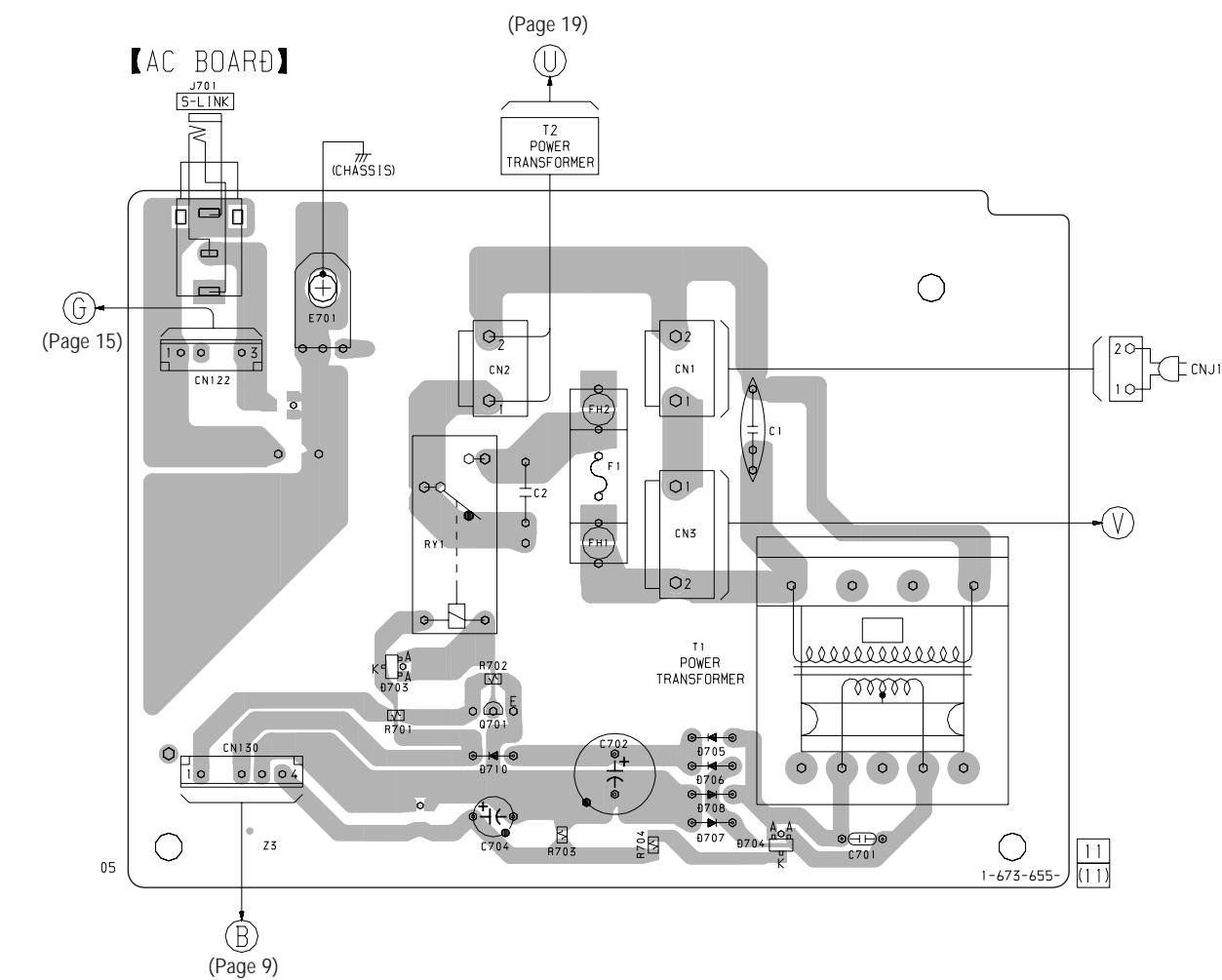
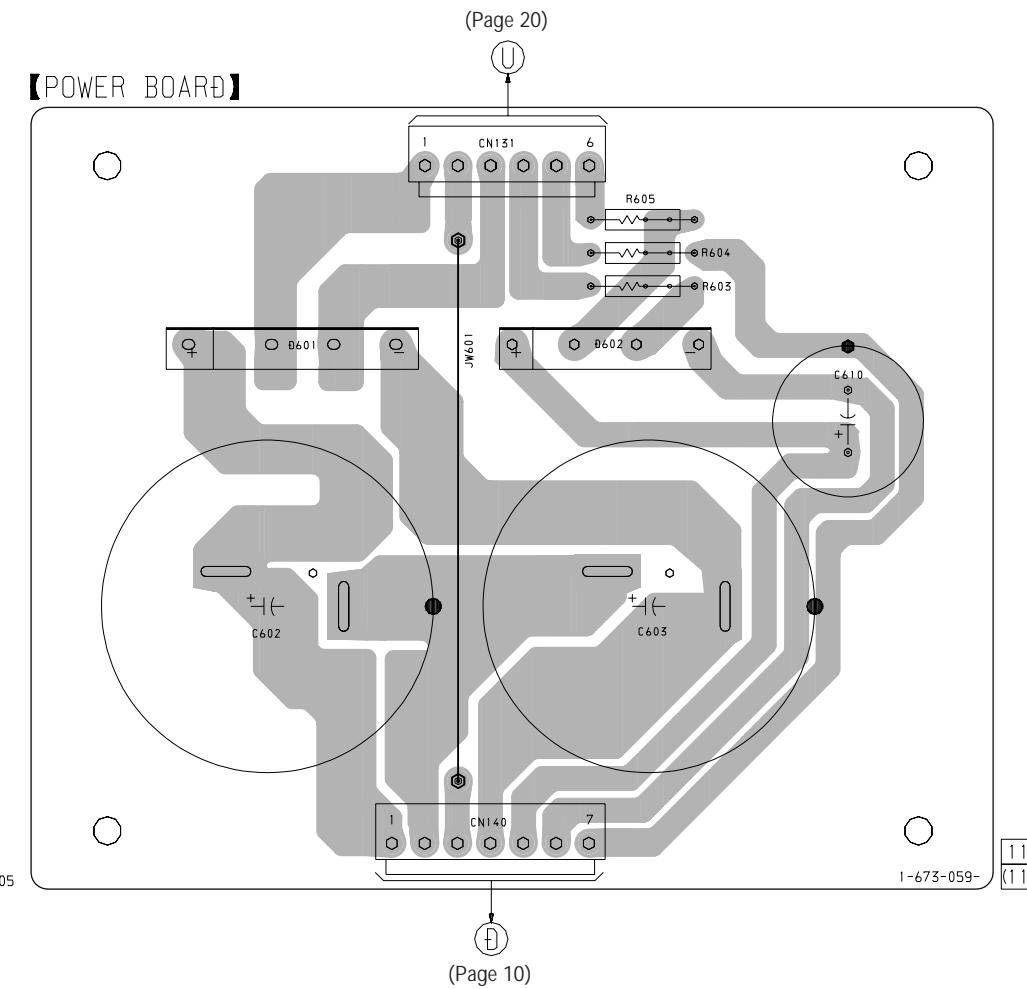
Ref. No.	Location
D801	C-3
D802	C-2
D803	A-2
D804	B-2
D805	B-1
D806	B-1
D807	B-2
D808	B-2
IC801	B-3
IC802	A-4
IC803	A-1
IC805	C-3
Q801	C-2
Q802	A-2
Q803	C-3
Q804	C-4
Q805	C-4
Q806	C-4
Q807	C-4
Q808	C-4
Q809	C-4



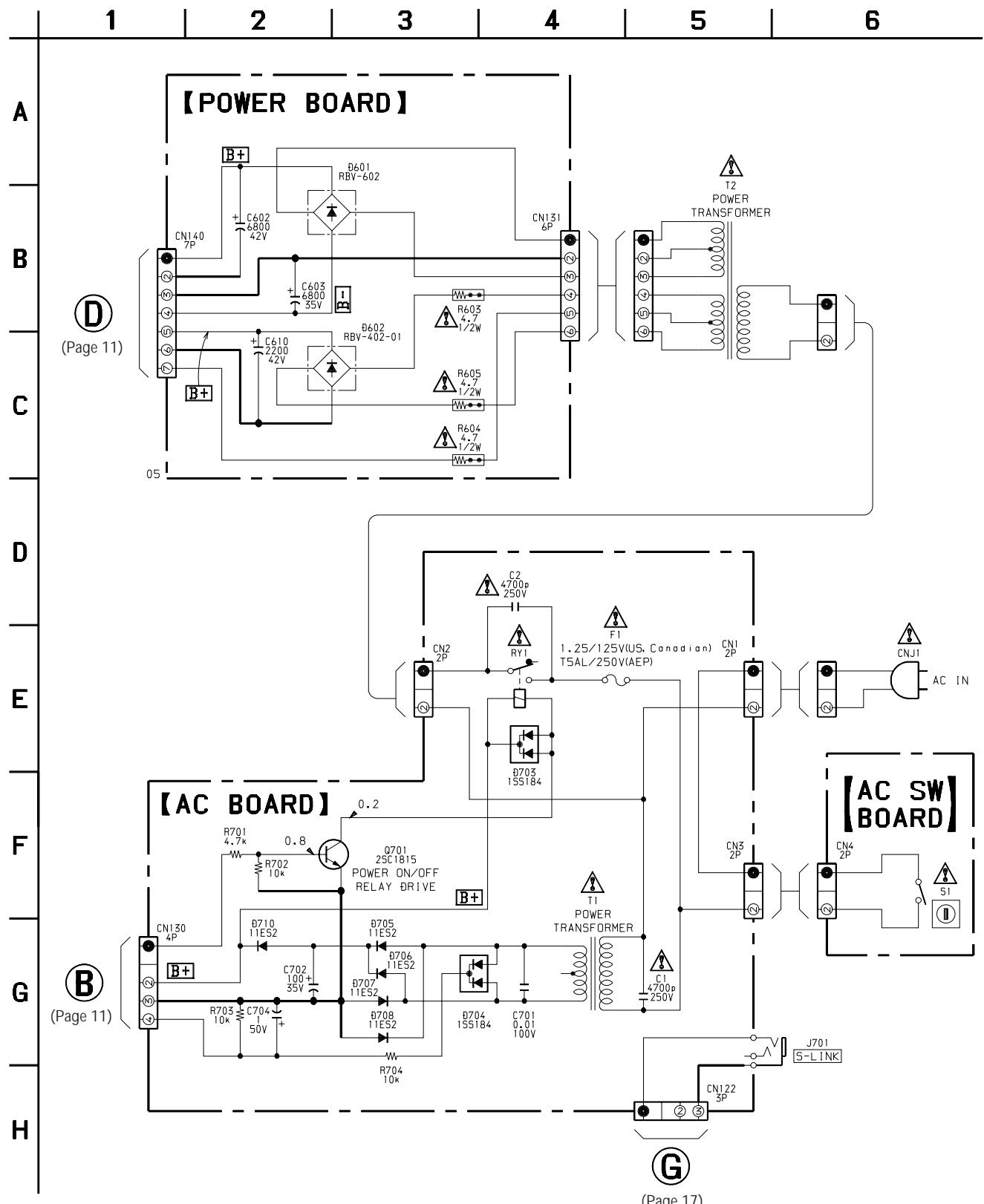
4-6. SCHEMATIC DIAGRAM – PANEL Section – • See page 22 for Waveform. • See page 22 for IC Block Diagram.



## 4-7. PRINTED WIRING BOARDS – POWER Section – • See page 8 for Circuit Boards Location.



## 4-8. SCHEMATIC DIAGRAM – POWER Section –

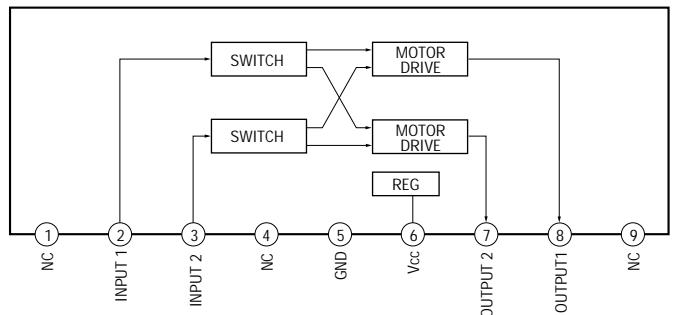


The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety.  
Replace only with part number specified.

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

- IC Block Diagram
- CONTROL Board -

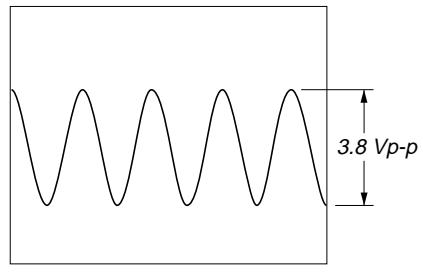
**IC803 BA6208**



• Waveform

- CONTROL Board -

① IC801 ② (X-OUT)



8 MHz

#### 4-9. IC PIN FUNCTION DESCRIPTION

##### • CONTROL BOARD IC801 TMP87C846N-4D22 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	C6DBUP	O	Relay drive signal output for the +6 dB gain control (for CENTER input signal) “H”: +6 dB on
2	C12DBUP	O	Relay drive signal output for the +12 dB gain control (for CENTER input signal) “H”: +12 dB on
3	R6DBUP	O	Relay drive signal output for the +6 dB gain control (for REAR input signal) “H”: +6 dB on
4	R12DBUP	O	Relay drive signal output for the +12 dB gain control (for REAR input signal) “H”: +12 dB on
5	MAINRY	O	Relay drive signal output for the power on/off control “L”: standby mode, “H”: power on
6	OUTDRY	O	Relay drive signal output for the INPUT 1 or 2 signal “L”: INPUT 2, “H”: INPUT 1
7	OUTCRY	O	Relay drive signal output for the output protect “L”: protect, “H”: releasing of protect
8	OUTBRY	O	Relay drive signal output for the BYPASS 2ch input signal “H”: BYPASS 2ch on
9	OUTARY	O	Relay drive signal output for the BYPASS 5.1ch input signal “H”: BYPASS 5.1ch on
10	STANDBY LED	O	LED drive signal output of the STANDBY LED (D809) “L”: LED on
11	INPUT-1 LED	O	LED drive signal output of the input 1 LED (D810) “L”: LED on
12	INPUT-2 LED	O	LED drive signal output of the input 2 LED (D811) “L”: LED on
13	BP-5.1CH LED	O	LED drive signal output of the BYPASS 5.1ch input LED (D812) “L”: LED on
14	BP-2CH LED	O	LED drive signal output of the BYPASS 2ch input LED (D813) “L”: LED on
15	MUTE LED	O	LED drive signal output of the MUTING LED (LED on S802) “L”: LED on
16	VOL LED	O	LED drive signal output of the master volume LED (D815) “L”: LED on
17	TEST	I	Test input terminal (fixed at “L”)
18	<u>RESET</u>	I	System reset signal input from the reset signal generator (IC805) “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
19	XIN	I	Main system clock input terminal (8 MHz)
20	XOUT	O	Main system clock output terminal (8 MHz)
21	VSS	—	Ground terminal
22	VAREF	I	Reference voltage (+5V) input terminal
23	SW4	I	INPUT SELECTOR switch (S801) input terminal “H”: input 1
24	SW3	I	INPUT SELECTOR switch (S801) input terminal “H”: input 2
25	SW2	I	INPUT SELECTOR switch (S801) input terminal “H”: BYPASS 5.1ch input
26	SW1	I	INPUT SELECTOR switch (S801) input terminal “H”: BYPASS 2ch input
27	MUTE	I	MUTING switch (S802) input terminal “L” is input when key pressing
28	W. GAIN	I	WOOFER LEVEL up switch (S805) input terminal “L” is input when key pressing
29	R. GAIN	I	REAR L/R LEVEL up switch (S804) input terminal “L” is input when key pressing
30	C. GAIN	I	CENTER LEVEL up switch (S803) input terminal “L” is input when key pressing
31	W12DBUP	O	Relay drive signal output for the +12 dB gain control (for WOOFER input signal) “H”: +12 dB on
32	W6DBUP	O	Relay drive signal output for the +6 dB gain control (for WOOFER input signal) “H”: +6 dB on
33	A-1 IN	I	Sircs remote control signal input for the S-LINK control A1
34	A-1 OUT	O	Sircs remote control signal output for the S-LINK control A1
35	—	I	Not used (fixed at “L”)
36	SIRCS	I	Remote control signal input from the remote control receiver (IC804)
37	VOL+	O	Motor drive signal output to the volume motor drive (IC803) (volume up direction)
38	VOL-	O	Motor drive signal output to the volume motor drive (IC803) (volume down direction)
39	STOP IN	I	Trigger input terminal
40	RCL	O	Serial clock signal output to the EEPROM (IC802)
41	RDT	I/O	Two-way data bus with the EEPROM (IC802)
42	VDD	—	Power supply terminal (+5V)

## SECTION 5 EXPLODED VIEWS

**NOTE:**

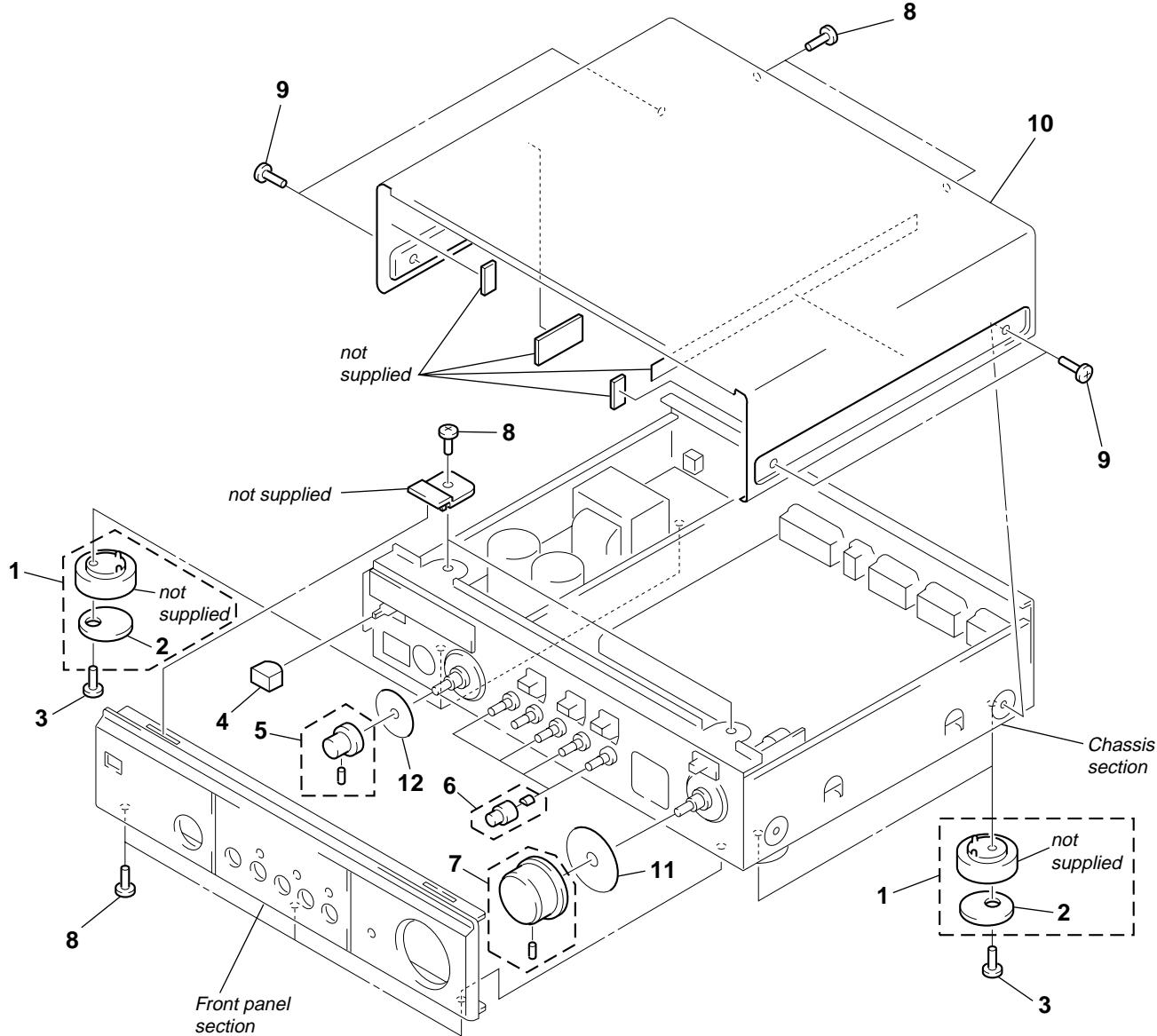
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts  
Example:  
KNOB, BALANCE (WHITE) . . . (RED)  
↑      ↑  
Parts Color Cabinet's Color

- 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.
- Accessories and packing materials are given in the last of the electrical parts list.

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

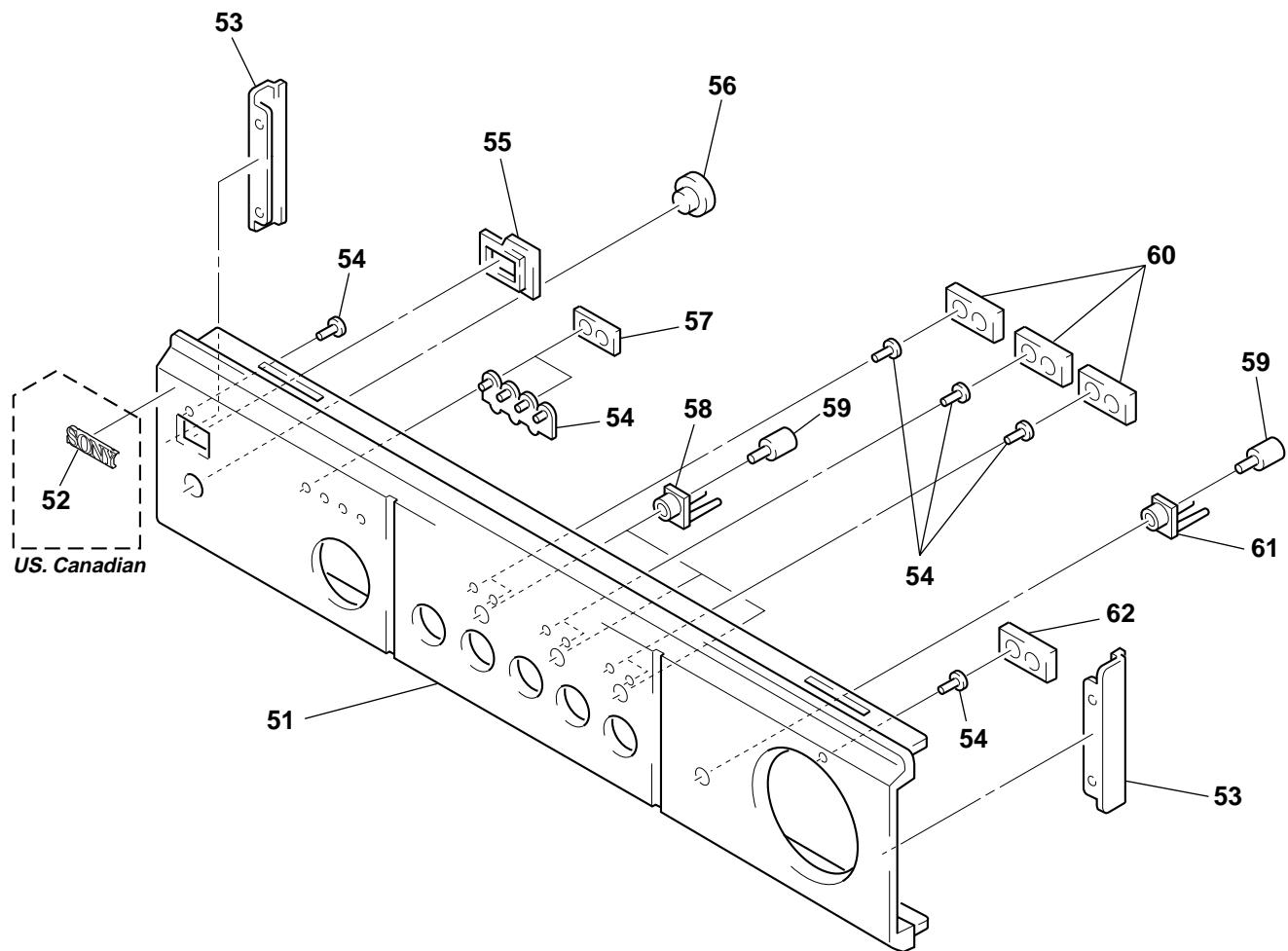
Les composants identifiés par une marque  $\triangle$  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

### (1) CASE SECTION



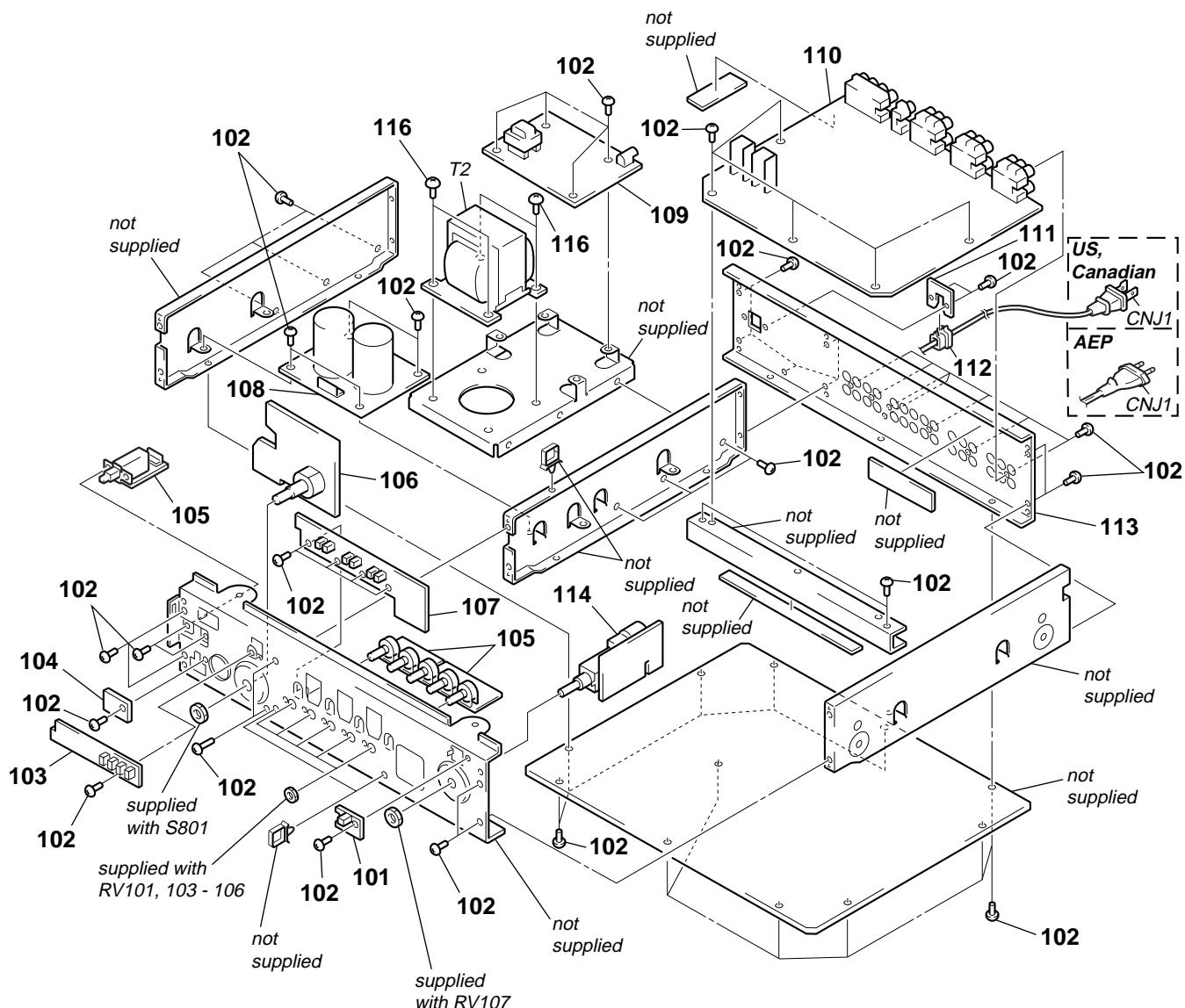
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4950-540-1	FOOT ASSY		7	4-211-436-01	KNOB (VOL) (GOLD)	
2	4-972-889-01	CUSHION		7	4-211-436-11	KNOB (VOL) (BLACK)	
3	7-685-885-09	SCREW +BVTT 4X16 (S)		8	4-974-510-11	SCREW (+BV 3X8 CU)	
4	X-4950-227-1	BUTTON ASSY, POWER (GOLD)		9	4-976-827-01	SCREW, FLAT HEAD (FOR BLACK)	
4	X-4950-228-1	BUTTON ASSY, POWER (BLACK)		9	4-976-827-11	SCREW, FLAT HEAD (FOR GOLD)	
5	4-211-468-01	KNOB (29-S) (GOLD)		10	4-218-469-01	CASE (410735E) (GOLD)	
5	4-211-468-11	KNOB (29-S) (BLACK)		10	4-218-469-01	CASE (410735E) (BLACK)	
6	4-218-473-01	KNOB (R17) (GOLD)		11	4-219-622-01	WASHER (BLIND)	
6	4-218-473-11	KNOB (R17) (BLACK)		12	4-211-466-01	SHEET (A), LIGHT INTERCEPTION	

**(2) FRONT PANEL SECTION**



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-218-470-01	PANEL, FRONT (GOLD)		56	4-975-105-31	WINDOW, RAY CATCHER (GOLD)	
51	4-218-470-11	PANEL, FRONT (BLACK)		57	4-219-621-21	PLATE (P), LIGHT INTERCEPTION	
52	4-942-568-41	EMBLEM (NO.5), SONY (for BLACK)		58	4-211-465-11	ESCUTCHEON (LED) (GOLD)	
53	4-218-464-01	PANEL, SIDE (GOLD)		58	4-211-465-21	ESCUTCHEON (LED) (BLACK)	
53	4-218-464-11	PANEL, SIDE (BLACK)		59	4-211-455-01	BUTTON (LED)	
54	4-211-094-01	INDICATOR (6)		60	4-219-621-01	PLATE (P), LIGHT INTERCEPTION	
55	4-921-415-04	ESCUTCHEON, POWER KNOB (BLACK)		61	4-211-465-01	ESCUTCHEON (LED)	
55	4-921-415-13	ESCUTCHEON, POWER KNOB (GOLD)		62	4-219-621-11	PLATE (P), LIGHT INTERCEPTION	
56	4-975-105-01	WINDOW, RAY CATCHER (BLACK)					

### (3) CHASSIS 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	Ref. No.	Part No.	Description	Remark
101	1-673-656-11	VOL LED BOARD		* 111	4-923-873-01	BRACKET, CORD STOPPER	
102	4-974-510-11	SCREW (+BV 3X8 CU)		112	2-352-626-01	BUSHING, CORD	
103	1-673-062-11	LED BOARD		113	4-218-471-11	PANEL, BACK (US, Canadian)	
104	1-673-061-11	EYEBALL BOARD		113	4-218-471-21	PANEL, BACK (AEP)	
105	1-673-704-11	AC SW BOARD		114	1-673-057-11	MASTER VOLUME BOARD	
106	A-4419-502-A	CONTROL BOARD, COMPLETE		115	1-673-058-11	SUB VOLUME BOARD	
107	1-673-063-11	MUT BOARD		116	7-685-881-09	SCREW +BVTT 4X8 (S)	
108	1-673-059-11	POWER BOARD		$\triangle$ CNJ1	1-559-479-11	CORD, POWER (US, Canadian)	
109	A-4419-510-A	AC BOARD, COMPLETE (US, Canadian)		$\triangle$ CNJ1	1-575-953-11	CORD, POWER (AEP)	
109	A-4419-511-A	AC BOARD, COMPLETE (AEP)		$\triangle$ T2	1-433-651-11	TRANSFORMER, POWER (US, Canadian)	
110	A-4419-500-A	MAIN BOARD, COMPLETE		$\triangle$ T2	1-433-652-11	TRANSFORMER, POWER (AEP)	

## SECTION 6

### ELECTRICAL PARTS LIST

AC

AC SW

CONTROL

**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:  $\mu$ , 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

<p>The components identified by mark <math>\triangle</math> or dotted line with mark <math>\triangle</math> are critical for safety. Replace only with part number specified.</p>
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<p>Les composants identifiés par une marque <math>\triangle</math> sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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<p>When indicating parts by reference number, please include the board.</p>
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Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark						
	A-4419-510-A	AC BOARD, COMPLETE (US, Canadian)				R704	1-216-073-00	METAL CHIP	10K	5%	1/10W						
	A-4419-511-A	AC BOARD, COMPLETE (AEP)			*****			< RELAY >									
*****																	
1-533-293-11 FUSE HOLDER																	
< CAPACITOR >																	
$\triangle$ C1	1-113-924-11	CERAMIC	0.0047uF	20%	250V	$\triangle$ T1	1-433-735-11	TRANSFORMER, POWER (AEP)									
$\triangle$ C2	1-113-924-11	CERAMIC	0.0047uF	20%	250V	$\triangle$ T1	1-433-736-11	TRANSFORMER, POWER (US, Canadian)									
C701	1-137-393-11	FILM	0.01uF	5%	100V	*****	*****	*****	*****	*****	*****						
C702	1-126-948-11	ELECT	100uF	20%	35V												
C704	1-126-960-11	ELECT	1uF	20%	50V		1-673-704-11	AC SW BOARD									
*****																	
< CONNECTOR >																	
CN1	1-564-321-00	PIN, CONNECTOR 2P				CN4	1-580-629-11	PIN, CONNECTOR 2P									
* CN2	1-564-321-21	PIN, CONNECTOR 2P						< SWITCH >									
CN3	1-580-629-11	PIN, CONNECTOR 2P				$\triangle$ S1	1-572-267-21	SWITCH, PUSH (AC POWER) (1 KEY) (①)									
CN122	1-691-765-31	PLUG (MICRO CONNECTOR) 3P				*****	*****	*****	*****	*****	*****						
CN130	1-691-766-21	PLUG (MICRO CONNECTOR) 4P															
< DIODE >																	
D703	8-719-801-78	DIODE	1SS184					A-4419-502-A CONTROL BOARD, COMPLETE									
D704	8-719-801-78	DIODE	1SS184					*****	*****	*****	*****						
D705	8-719-200-82	DIODE	11ES2					< CAPACITOR >									
D706	8-719-200-82	DIODE	11ES2					C801	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V				
D707	8-719-200-82	DIODE	11ES2					C802	1-163-251-11	CERAMIC CHIP	100PF	5%	50V				
D708	8-719-200-82	DIODE	11ES2					C803	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V				
D710	8-719-200-82	DIODE	11ES2					C804	1-126-926-11	ELECT	1000uF	20%	10V				
< FUSE >																	
$\triangle$ F1	1-532-279-00	FUSE, TIME-LAG (5A/250V) (AEP)						C805	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V				
$\triangle$ F1	1-533-417-11	FUSE GLASS TUBE (1.25A/125V)						C806	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V				
(US, Canadian)																	
< JACK >																	
J701	1-563-330-11	JACK (S-LINK)							< CONNECTOR >								
< TRANSISTOR >																	
Q701	8-729-281-54	TRANSISTOR	2SC1815-BL					* CN105	1-568-951-11	PIN, CONNECTOR 2P							
< RESISTOR >																	
R701	1-216-065-00	RES, CHIP	4.7K	5%	1/10W			CN112	1-691-765-11	PLUG (MICRO CONNECTOR) 3P							
R702	1-216-073-00	METAL CHIP	10K	5%	1/10W			CN118	1-506-469-11	PIN, CONNECTOR 4P							
R703	1-216-073-00	METAL CHIP	10K	5%	1/10W			CN120	1-691-765-21	PLUG (MICRO CONNECTOR) 3P							
CN121																	
< CONNECTOR >																	
								CN123	1-691-766-11	PLUG (MICRO CONNECTOR) 4P							
								* CN125	1-568-955-11	PIN, CONNECTOR 6P							
								CN127	1-506-469-11	PIN, CONNECTOR 4P							
								CN133	1-506-468-11	PIN, CONNECTOR 3P							
								CN135	1-568-955-11	PIN, CONNECTOR 6P							

<b>CONTROL</b>	<b>EYEBALL</b>	<b>LED</b>	<b>MAIN</b>
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Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark			
* CN137	1-568-955-11	PIN, CONNECTOR 6P				R832	1-216-065-00	RES, CHIP	4.7K	5%	1/10W	
< DIODE >												
D801	8-719-025-33	DIODE 02CZ6.2-TE85L				R833	1-216-065-00	RES, CHIP	4.7K	5%	1/10W	
D802	8-719-801-78	DIODE 1SS184				R834	1-216-065-00	RES, CHIP	4.7K	5%	1/10W	
D803	8-719-820-05	DIODE 1SS181				R838	1-216-049-11	RES, CHIP	1K	5%	1/10W	
D804	8-719-820-05	DIODE 1SS181				R839	1-216-049-11	RES, CHIP	1K	5%	1/10W	
D805	8-719-820-05	DIODE 1SS181				< SWITCH >						
D806	8-719-820-05	DIODE 1SS181				S801	1-572-095-21	SWITCH, ROTARY (INPUT SELECTOR)				
D807	8-719-801-78	DIODE 1SS184				< VIBRATOR >						
D808	8-719-801-78	DIODE 1SS184				X801	1-579-952-11	VIBRATOR, CERAMIC (8MHz)				
*****												
IC801	8-759-590-53	IC TMP87C846N-4D22				1-673-061-11	EYEBALL BOARD					
IC802	8-759-188-67	IC X24C01P-S				*****						
IC803	8-759-962-08	IC BA6208				< CAPACITOR >						
IC805	8-759-635-63	IC M51943BSL				C809	1-126-382-11	ELECT	100uF	20%	10V	
< TRANSISTOR >												
Q801	8-729-230-49	TRANSISTOR 2SC2712-YG				< CONNECTOR >						
Q802	8-729-424-12	TRANSISTOR UN2112				CN119	1-691-765-21	PLUG (MICRO CONNECTOR) 3P				
Q803	8-729-424-08	TRANSISTOR UN2111				< IC >						
Q804	8-729-421-22	TRANSISTOR UN2211				IC804	8-759-459-83	IC NJL55H400A	(REMOTE CONTROL RECEIVER)			
Q805	8-729-421-22	TRANSISTOR UN2211				*****						
Q806	8-729-421-22	TRANSISTOR UN2211				1-673-062-11	LED BOARD		*****			
Q807	8-729-421-22	TRANSISTOR UN2211				< CONNECTOR >						
Q808	8-729-421-22	TRANSISTOR UN2211				< CONNECTOR >						
Q809	8-729-421-22	TRANSISTOR UN2211				< RESISTOR >						
< RESISTOR >												
R801	1-216-001-00	METAL CHIP	10	5%	1/10W	* CN126	1-568-955-11	PIN, CONNECTOR 6P				
R802	1-216-073-00	METAL CHIP	10K	5%	1/10W	< LED >						
R803	1-216-065-00	RES, CHIP	4.7K	5%	1/10W	D809	8-719-046-46	LED SEL5221S-TH8F (STANDBY)				
R804	1-216-049-11	RES, CHIP	1K	5%	1/10W	D810	8-719-046-38	LED SEL5821A-TH8F (1)				
R805	1-216-073-00	METAL CHIP	10K	5%	1/10W	D811	8-719-046-38	LED SEL5821A-TH8F (2)				
R806	1-216-065-00	RES, CHIP	4.7K	5%	1/10W	D812	8-719-046-38	LED SEL5821A-TH8F (BYPASS 5.1ch)				
R807	1-216-065-00	RES, CHIP	4.7K	5%	1/10W	D813	8-719-046-38	LED SEL5821A-TH8F (BYPASS 2ch)				
R808	1-216-081-00	METAL CHIP	22K	5%	1/10W	< RESISTOR >						
R809	1-216-065-00	RES, CHIP	4.7K	5%	1/10W	*****						
R810	1-216-065-00	RES, CHIP	4.7K	5%	1/10W	R829	1-216-037-00	METAL CHIP	330	5%	1/10W	
R811	1-216-065-00	RES, CHIP	4.7K	5%	1/10W	R830	1-216-037-00	METAL CHIP	330	5%	1/10W	
R812	1-216-065-00	RES, CHIP	4.7K	5%	1/10W	*****						
R813	1-216-081-00	METAL CHIP	22K	5%	1/10W	A-4419-500-A MAIN BOARD, COMPLETE						
R814	1-216-081-00	METAL CHIP	22K	5%	1/10W	*****						
R815	1-216-081-00	METAL CHIP	22K	5%	1/10W	*						
R816	1-216-081-00	METAL CHIP	22K	5%	1/10W	4-880-403-11	HEAT SINK					
R817	1-216-065-00	RES, CHIP	4.7K	5%	1/10W	< BUS BAR >						
R818	1-216-073-00	METAL CHIP	10K	5%	1/10W	*****						
R819	1-216-049-11	RES, CHIP	1K	5%	1/10W	R821	1-216-049-11	RES, CHIP	1K	5%	1/10W	
R820	1-216-049-11	RES, CHIP	1K	5%	1/10W	* BB1	1-560-242-41	BUS BAR 11P				
R821	1-216-049-11	RES, CHIP	1K	5%	1/10W	* BB2	1-560-242-41	BUS BAR 11P				
R822	1-216-049-11	RES, CHIP	1K	5%	1/10W	* BB3	1-560-242-41	BUS BAR 11P				
R823	1-216-049-11	RES, CHIP	1K	5%	1/10W	< CAPACITOR >						
R824	1-216-049-11	RES, CHIP	1K	5%	1/10W	*****						
R825	1-216-049-11	RES, CHIP	1K	5%	1/10W	R826	1-216-049-11	RES, CHIP	1K	5%	100V	
R826	1-216-049-11	RES, CHIP	1K	5%	1/10W	C201	1-136-808-11	FILM	100PF	5%	100V	
R827	1-216-049-11	RES, CHIP	1K	5%	1/10W	C202	1-136-810-11	FILM	220PF	5%	100V	

Ref. No.	Part No.	Description		Remark	Ref. No.	Part No.	Description		Remark		
C203	1-125-842-11	FILM	4PF	10%	50V	C501	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C204	1-119-830-11	ELECT	330uF	20%	25V	C502	1-106-343-00	MYLAR	1000PF	5%	200V
C205	1-119-830-11	ELECT	330uF	20%	25V	C503	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C206	1-136-810-11	FILM	220PF	5%	100V	C504	1-106-343-00	MYLAR	1000PF	5%	200V
C207	1-119-830-11	ELECT	330uF	20%	25V	C505	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C208	1-119-830-11	ELECT	330uF	20%	25V	C506	1-106-343-00	MYLAR	1000PF	5%	200V
C211	1-119-836-21	ELECT	47uF	20%	63V	C507	1-106-343-00	MYLAR	1000PF	5%	200V
C251	1-136-808-11	FILM	100PF	5%	100V	C508	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C252	1-136-810-11	FILM	220PF	5%	100V	C509	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C253	1-125-842-11	FILM	4PF	10%	50V	C510	1-126-960-11	ELECT	1uF	20%	50V
C254	1-119-830-11	ELECT	330uF	20%	25V	C511	1-126-960-11	ELECT	1uF	20%	50V
C255	1-119-830-11	ELECT	330uF	20%	25V	C512	1-126-960-11	ELECT	1uF	20%	50V
C256	1-136-810-11	FILM	220PF	5%	100V	C513	1-126-960-11	ELECT	1uF	20%	50V
C257	1-119-830-11	ELECT	330uF	20%	25V	C514	1-126-960-11	ELECT	1uF	20%	50V
C258	1-119-830-11	ELECT	330uF	20%	25V	C515	1-126-960-11	ELECT	1uF	20%	50V
C261	1-119-836-21	ELECT	47uF	20%	63V	C604	1-119-830-11	ELECT	330uF	20%	25V
C301	1-136-808-11	FILM	100PF	5%	100V	C606	1-128-800-11	ELECT	3600uF	20%	50V
C302	1-136-810-11	FILM	220PF	5%	100V	C607	1-119-830-11	ELECT	330uF	20%	25V
C303	1-125-842-11	FILM	4PF	10%	50V	C608	1-125-844-21	FILM	33PF	10%	50V
C304	1-119-830-11	ELECT	330uF	20%	25V	C609	1-128-800-11	ELECT	3600uF	20%	50V
C305	1-119-830-11	ELECT	330uF	20%	25V	C611	1-119-814-21	ELECT	1000uF	20%	35V
C306	1-136-810-11	FILM	220PF	5%	100V	C612	1-130-495-00	MYLAR	0.1uF	5%	50V
C307	1-119-830-11	ELECT	330uF	20%	25V	C613	1-119-793-11	ELECT	1000uF	20%	16V
C308	1-119-830-11	ELECT	330uF	20%	25V	C614	1-119-815-21	ELECT	2200uF	20%	35V
C309	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C615	1-125-844-21	FILM	33PF	10%	50V
C310	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	C616	1-130-495-00	MYLAR	0.1uF	5%	50V
C311	1-119-836-21	ELECT	47uF	20%	63V	C617	1-130-483-00	MYLAR	0.01uF	5%	50V
C351	1-136-808-11	FILM	100PF	5%	100V	C618	1-130-483-00	MYLAR	0.01uF	5%	50V
C352	1-136-810-11	FILM	220PF	5%	100V	C619	1-130-483-00	MYLAR	0.01uF	5%	50V
C353	1-125-842-11	FILM	4PF	10%	50V	C620	1-130-483-00	MYLAR	0.01uF	5%	50V
C354	1-119-830-11	ELECT	330uF	20%	25V	< CONNECTOR >					
C355	1-119-830-11	ELECT	330uF	20%	25V	CN101	1-564-510-11	PLUG (MICRO CONNECTOR) 6P			
C356	1-136-810-11	FILM	220PF	5%	100V	CN103	1-691-768-41	PLUG (MICRO CONNECTOR) 6P			
C357	1-119-830-11	ELECT	330uF	20%	25V	CN114	1-691-766-11	PLUG (MICRO CONNECTOR) 4P			
C358	1-119-830-11	ELECT	330uF	20%	25V	CN116	1-691-766-31	PLUG (MICRO CONNECTOR) 4P			
C361	1-119-836-21	ELECT	47uF	20%	63V	CN117	1-506-469-11	PIN, CONNECTOR 4P			
C401	1-136-808-11	FILM	100PF	5%	100V	CN124	1-691-766-11	PLUG (MICRO CONNECTOR) 4P			
C402	1-136-810-11	FILM	220PF	5%	100V	CN129	1-691-766-21	PLUG (MICRO CONNECTOR) 4P			
C403	1-125-842-11	FILM	4PF	10%	50V	* CN138	1-568-955-11	PIN, CONNECTOR 6P			
C404	1-119-830-11	ELECT	330uF	20%	25V	* CN139	1-564-915-11	PIN, CONNECTOR 7P			
C405	1-119-830-11	ELECT	330uF	20%	25V	CN142	1-691-766-41	PLUG (MICRO CONNECTOR) 4P			
C406	1-136-810-11	FILM	220PF	5%	100V	< DIODE >					
C407	1-119-830-11	ELECT	330uF	20%	25V	D201	8-719-025-25	DIODE 02CZ3.6-TE85L			
C408	1-119-830-11	ELECT	330uF	20%	25V	D203	8-719-800-76	DIODE 1SS226			
C409	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	D204	8-719-800-76	DIODE 1SS226			
C410	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	D205	8-719-800-76	DIODE 1SS226			
C411	1-119-836-21	ELECT	47uF	20%	63V	D206	8-719-800-76	DIODE 1SS226			
C451	1-136-808-11	FILM	100PF	5%	100V	D251	8-719-025-25	DIODE 02CZ3.6-TE85L			
C452	1-136-810-11	FILM	220PF	5%	100V	D253	8-719-800-76	DIODE 1SS226			
C453	1-125-842-11	FILM	4PF	10%	50V	D254	8-719-800-76	DIODE 1SS226			
C454	1-119-830-11	ELECT	330uF	20%	25V	D255	8-719-800-76	DIODE 1SS226			
C455	1-119-830-11	ELECT	330uF	20%	25V	D256	8-719-800-76	DIODE 1SS226			
C456	1-136-810-11	FILM	220PF	5%	100V	D301	8-719-025-25	DIODE 02CZ3.6-TE85L			
C457	1-119-830-11	ELECT	330uF	20%	25V	D303	8-719-800-76	DIODE 1SS226			
C458	1-119-830-11	ELECT	330uF	20%	25V	D304	8-719-800-76	DIODE 1SS226			
C459	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V	D305	8-719-800-76	DIODE 1SS226			
C460	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V						
C461	1-119-836-21	ELECT	47uF	20%	63V						

# MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D306	8-719-800-76	DIODE 1SS226		Q211	8-729-018-59	TRANSISTOR 2SB1375-LC	
D307	8-719-801-78	DIODE 1SS184		Q251	8-729-023-11	FET 2SK2145GTE85L	
D308	8-719-801-78	DIODE 1SS184		Q252	8-729-230-49	TRANSISTOR 2SC2712-YG	
D351	8-719-025-25	DIODE 02CZ3.6-TE85L		Q253	8-729-216-22	TRANSISTOR 2SA1162-G	
D353	8-719-800-76	DIODE 1SS226		Q254	8-729-216-22	TRANSISTOR 2SA1162-G	
D354	8-719-800-76	DIODE 1SS226		Q255	8-729-216-22	TRANSISTOR 2SA1162-G	
D355	8-719-800-76	DIODE 1SS226		Q256	8-729-216-22	TRANSISTOR 2SA1162-G	
D356	8-719-800-76	DIODE 1SS226		Q257	8-729-230-49	TRANSISTOR 2SC2712-YG	
D401	8-719-025-25	DIODE 02CZ3.6-TE85L		Q258	8-729-230-49	TRANSISTOR 2SC2712-YG	
D403	8-719-800-76	DIODE 1SS226		Q259	8-729-216-22	TRANSISTOR 2SA1162-G	
D404	8-719-800-76	DIODE 1SS226		Q260	8-729-018-60	TRANSISTOR 2SD2012-LC	
D405	8-719-800-76	DIODE 1SS226		Q261	8-729-018-59	FET 2SB1375-LC	
D406	8-719-800-76	DIODE 1SS226		Q301	8-729-023-11	TRANSISTOR 2SK2145GTE85L	
D407	8-719-801-78	DIODE 1SS184		Q302	8-729-230-49	TRANSISTOR 2SC2712-YG	
D408	8-719-801-78	DIODE 1SS184		Q303	8-729-216-22	TRANSISTOR 2SA1162-G	
D451	8-719-025-25	DIODE 02CZ3.6-TE85L		Q304	8-729-216-22	TRANSISTOR 2SA1162-G	
D453	8-719-800-76	DIODE 1SS226		Q305	8-729-216-22	TRANSISTOR 2SA1162-G	
D454	8-719-800-76	DIODE 1SS226		Q306	8-729-216-22	TRANSISTOR 2SA1162-G	
D455	8-719-800-76	DIODE 1SS226		Q307	8-729-230-49	TRANSISTOR 2SC2712-YG	
D456	8-719-800-76	DIODE 1SS226		Q308	8-729-230-49	TRANSISTOR 2SC2712-YG	
D457	8-719-801-78	DIODE 1SS184		Q309	8-729-216-22	TRANSISTOR 2SA1162-G	
D458	8-719-801-78	DIODE 1SS184		Q310	8-729-018-60	TRANSISTOR 2SD2012-LC	
D501	8-719-801-78	DIODE 1SS184		Q311	8-729-018-59	TRANSISTOR 2SB1375-LC	
D502	8-719-801-78	DIODE 1SS184		Q351	8-729-023-11	FET 2SK2145GTE85L	
D503	8-719-801-78	DIODE 1SS184		Q352	8-729-230-49	TRANSISTOR 2SC2712-YG	
D504	8-719-801-78	DIODE 1SS184		Q353	8-729-216-22	TRANSISTOR 2SA1162-G	
D505	8-719-801-78	DIODE 1SS184		Q354	8-729-216-22	TRANSISTOR 2SA1162-G	
D603	8-719-025-34	DIODE 02CZ6.8-TE85L		Q355	8-729-216-22	TRANSISTOR 2SA1162-G	
D604	8-719-025-34	DIODE 02CZ6.8-TE85L		Q356	8-729-216-22	TRANSISTOR 2SA1162-G	
D605	8-719-200-82	DIODE 11ES2		Q357	8-729-230-49	TRANSISTOR 2SC2712-YG	
			< IC >	Q358	8-729-230-49	TRANSISTOR 2SC2712-YG	
IC601	8-759-605-03	IC M5F78M24		Q359	8-729-216-22	TRANSISTOR 2SA1162-G	
IC602	8-759-604-35	IC M5F78M05L		Q360	8-729-018-60	TRANSISTOR 2SD2012-LC	
			< JACK >	Q361	8-729-018-59	TRANSISTOR 2SB1375-LC	
J101	1-785-489-11	JACK, PIN 6P (BYPASS 5.1ch: FRONT, REAR, CENTER, WOOFER)		Q401	8-729-023-11	FET 2SK2145GTE85L	
J102	1-785-868-21	JACK, PIN 2P (BYPASS 2ch)		Q402	8-729-230-49	TRANSISTOR 2SC2712-YG	
J103	1-785-489-11	JACK, PIN 6P (INPUT 2: FRONT, REAR, CENTER, WOOFER)		Q403	8-729-216-22	TRANSISTOR 2SA1162-G	
J104	1-785-489-11	JACK, PIN 6P (INPUT 1: FRONT, REAR, CENTER, WOOFER)		Q404	8-729-216-22	TRANSISTOR 2SA1162-G	
J105	1-784-934-11	JACK, PIN 4P (PRE OUT: FRONT, REAR)		Q405	8-729-216-22	TRANSISTOR 2SA1162-G	
J106	1-785-286-11	JACK, PIN 4P (PRE OUT: CENTER, WOOFER)		Q406	8-729-216-22	TRANSISTOR 2SA1162-G	
			< TRANSISTOR >	Q407	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q201	8-729-023-11	FET 2SK2145GTE85L		Q408	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q202	8-729-230-49	TRANSISTOR 2SC2712-YG		Q409	8-729-216-22	TRANSISTOR 2SA1162-G	
Q203	8-729-216-22	TRANSISTOR 2SA1162-G		Q410	8-729-018-60	TRANSISTOR 2SD2012-LC	
Q204	8-729-216-22	TRANSISTOR 2SA1162-G		Q411	8-729-018-59	TRANSISTOR 2SB1375-LC	
Q205	8-729-216-22	TRANSISTOR 2SA1162-G		Q451	8-729-023-11	FET 2SK2145GTE85L	
Q206	8-729-216-22	TRANSISTOR 2SA1162-G		Q452	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q207	8-729-230-49	TRANSISTOR 2SC2712-YG		Q453	8-729-216-22	TRANSISTOR 2SA1162-G	
Q208	8-729-230-49	TRANSISTOR 2SC2712-YG		Q454	8-729-216-22	TRANSISTOR 2SA1162-G	
Q209	8-729-216-22	TRANSISTOR 2SA1162-G		Q455	8-729-216-22	TRANSISTOR 2SA1162-G	
Q210	8-729-018-60	TRANSISTOR 2SD2012-LC		Q456	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q457	8-729-230-49	TRANSISTOR 2SC2712-YG	
				Q458	8-729-230-49	TRANSISTOR 2SC2712-YG	
				Q459	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q460	8-729-018-60	TRANSISTOR 2SD2012-LC	
				Q461	8-729-018-59	TRANSISTOR 2SB1375-LC	
				Q501	8-729-216-22	TRANSISTOR 2SA1162-G	
				Q502	8-729-421-22	TRANSISTOR UN2211	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q503	8-729-216-22	TRANSISTOR 2SA1162-G		R216	1-259-983-11	CARBON MELF	100 2% 1/8W
Q504	8-729-421-22	TRANSISTOR UN2211		R217	1-259-980-11	CARBON MELF	56 2% 1/8W
Q505	8-729-216-22	TRANSISTOR 2SA1162-G		R218	1-259-980-11	CARBON MELF	56 2% 1/8W
Q506	8-729-421-22	TRANSISTOR UN2211		R219	1-249-415-11	CARBON	680 5% 1/4W
Q507	8-729-216-22	TRANSISTOR 2SA1162-G		R220	1-259-986-11	CARBON MELF	180 2% 1/8W
Q508	8-729-421-22	TRANSISTOR UN2211		R251	1-259-983-11	CARBON MELF	100 2% 1/8W
Q509	8-729-216-22	TRANSISTOR 2SA1162-G		R252	1-260-032-11	CARBON MELF	1M 2% 1/8W
Q510	8-729-421-22	TRANSISTOR UN2211		R253	1-259-992-11	CARBON MELF	560 2% 1/8W
Q512	8-729-216-22	TRANSISTOR 2SA1162-G		R254	1-259-999-11	CARBON MELF	2.2K 2% 1/8W
Q513	8-729-421-22	TRANSISTOR UN2211		R255	1-247-751-11	CARBON	820 5% 1/2W
Q514	8-729-216-22	TRANSISTOR 2SA1162-G		R256	1-259-989-11	CARBON MELF	330 2% 1/8W
Q515	8-729-421-22	TRANSISTOR UN2211		R257	1-259-983-11	CARBON MELF	100 2% 1/8W
Q516	8-729-216-22	TRANSISTOR 2SA1162-G		R258	1-259-983-11	CARBON MELF	100 2% 1/8W
Q517	8-729-421-22	TRANSISTOR UN2211		R259	1-260-010-11	CARBON MELF	15K 2% 1/8W
Q518	8-729-216-22	TRANSISTOR 2SA1162-G		R260	1-259-991-11	CARBON MELF	470 2% 1/8W
Q519	8-729-421-22	TRANSISTOR UN2211		R261	1-247-761-11	CARBON	5.6K 5% 1/2W
Q520	8-729-216-22	TRANSISTOR 2SA1162-G		R262	1-260-002-11	CARBON MELF	3.3K 2% 1/8W
Q521	8-729-421-22	TRANSISTOR UN2211		R263	1-260-010-11	CARBON MELF	15K 2% 1/8W
Q601	8-729-232-69	FET 2SK208GR3		R264	1-259-987-11	CARBON MELF	220 2% 1/8W
Q602	8-729-230-49	TRANSISTOR 2SC2712-YG		R265	1-247-739-11	CARBON	100 5% 1/2W
Q603	8-729-209-15	TRANSISTOR 2SD2012		R266	1-259-983-11	CARBON MELF	100 2% 1/8W
Q604	8-729-232-69	FET 2SK208GR3		R267	1-259-980-11	CARBON MELF	56 2% 1/8W
Q605	8-729-216-22	TRANSISTOR 2SA1162-G		R268	1-259-980-11	CARBON MELF	56 2% 1/8W
Q606	8-729-141-83	TRANSISTOR 2SB1094-LK		R269	1-249-415-11	CARBON	680 5% 1/4W
Q607	8-729-230-49	TRANSISTOR 2SC2712-YG		R270	1-259-986-11	CARBON MELF	180 2% 1/8W
Q608	8-729-216-22	TRANSISTOR 2SA1162-G		R301	1-259-983-11	CARBON MELF	100 2% 1/8W
Q609	8-729-216-22	TRANSISTOR 2SA1162-G		R302	1-260-032-11	CARBON MELF	1M 2% 1/8W
Q610	8-729-230-49	TRANSISTOR 2SC2712-YG		R303	1-259-992-11	CARBON MELF	560 2% 1/8W
< RESISTOR >							
R117	1-259-995-11	CARBON MELF	1K 2% 1/8W	R304	1-259-999-11	CARBON MELF	2.2K 2% 1/8W
R120	1-259-995-11	CARBON MELF	1K 2% 1/8W	R305	1-247-751-11	CARBON	820 5% 1/2W
R121	1-259-995-11	CARBON MELF	1K 2% 1/8W	R306	1-259-989-11	CARBON MELF	330 2% 1/8W
R123	1-259-995-11	CARBON MELF	1K 2% 1/8W	R307	1-259-983-11	CARBON MELF	100 2% 1/8W
R124	1-259-995-11	CARBON MELF	1K 2% 1/8W	R308	1-259-983-11	CARBON MELF	100 2% 1/8W
R127	1-259-995-11	CARBON MELF	1K 2% 1/8W	R309	1-260-010-11	CARBON MELF	15K 2% 1/8W
R128	1-259-995-11	CARBON MELF	1K 2% 1/8W	R310	1-259-991-11	CARBON MELF	470 2% 1/8W
R131	1-259-995-11	CARBON MELF	1K 2% 1/8W	R311	1-247-761-11	CARBON	5.6K 5% 1/2W
R132	1-259-995-11	CARBON MELF	1K 2% 1/8W	R312	1-260-002-11	CARBON MELF	3.3K 2% 1/8W
R135	1-259-995-11	CARBON MELF	1K 2% 1/8W	R313	1-260-010-11	CARBON MELF	15K 2% 1/8W
R136	1-259-995-11	CARBON MELF	1K 2% 1/8W	R314	1-259-987-11	CARBON MELF	220 2% 1/8W
R139	1-259-995-11	CARBON MELF	1K 2% 1/8W	R315	1-247-739-11	CARBON	100 5% 1/2W
R201	1-259-983-11	CARBON MELF	100 2% 1/8W	R316	1-259-983-11	CARBON MELF	100 2% 1/8W
R202	1-260-032-11	CARBON MELF	1M 2% 1/8W	R317	1-259-980-11	CARBON MELF	56 2% 1/8W
R203	1-259-992-11	CARBON MELF	560 2% 1/8W	R318	1-259-980-11	CARBON MELF	56 2% 1/8W
R204	1-259-999-11	CARBON MELF	2.2K 2% 1/8W	R319	1-249-415-11	CARBON	680 5% 1/4W
R205	1-247-751-11	CARBON	820 5% 1/2W	R320	1-259-986-11	CARBON MELF	180 2% 1/8W
R206	1-259-989-11	CARBON MELF	330 2% 1/8W	R321	1-247-751-11	CARBON	820 5% 1/2W
R207	1-259-983-11	CARBON MELF	100 2% 1/8W	R351	1-259-983-11	CARBON MELF	100 2% 1/8W
R208	1-259-983-11	CARBON MELF	100 2% 1/8W	R352	1-260-032-11	CARBON MELF	1M 2% 1/8W
R209	1-260-010-11	CARBON MELF	15K 2% 1/8W	R353	1-259-992-11	CARBON MELF	560 2% 1/8W
R210	1-259-991-11	CARBON MELF	470 2% 1/8W	R354	1-259-999-11	CARBON MELF	2.2K 2% 1/8W
R211	1-247-761-11	CARBON	5.6K 5% 1/2W	R355	1-247-751-11	CARBON	820 5% 1/2W
R212	1-260-002-11	CARBON MELF	3.3K 2% 1/8W	R356	1-259-989-11	CARBON MELF	330 2% 1/8W
R213	1-260-010-11	CARBON MELF	15K 2% 1/8W	R357	1-259-983-11	CARBON MELF	100 2% 1/8W
R214	1-259-987-11	CARBON MELF	220 2% 1/8W	R358	1-259-983-11	CARBON MELF	100 2% 1/8W
R215	1-247-739-11	CARBON	100 5% 1/2W	R359	1-260-010-11	CARBON MELF	15K 2% 1/8W
				R360	1-259-991-11	CARBON MELF	470 2% 1/8W
				R361	1-247-761-11	CARBON	5.6K 5% 1/2W

**MAIN**

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>		<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>		<u>Remark</u>	
R362	1-260-002-11	CARBON MELF	3.3K	2%	1/8W	R503	1-216-065-00	RES, CHIP	4.7K	5% 1/10W
R363	1-260-010-11	CARBON MELF	15K	2%	1/8W	R504	1-216-025-00	RES, CHIP	100	5% 1/10W
R364	1-259-987-11	CARBON MELF	220	2%	1/8W	R505	1-216-079-00	METAL CHIP	18K	5% 1/10W
R365	1-247-739-11	CARBON	100	5%	1/2W	R506	1-216-065-00	RES, CHIP	4.7K	5% 1/10W
R366	1-259-983-11	CARBON MELF	100	2%	1/8W	R507	1-216-001-00	METAL CHIP	10	5% 1/10W
R367	1-259-980-11	CARBON MELF	56	2%	1/8W	R508	1-216-079-00	METAL CHIP	18K	5% 1/10W
R368	1-259-980-11	CARBON MELF	56	2%	1/8W	R509	1-216-065-00	RES, CHIP	4.7K	5% 1/10W
R369	1-249-415-11	CARBON	680	5%	1/4W	R510	1-216-065-00	RES, CHIP	4.7K	5% 1/10W
R370	1-259-986-11	CARBON MELF	180	2%	1/8W	R511	1-216-079-00	METAL CHIP	18K	5% 1/10W
R371	1-247-751-11	CARBON	820	5%	1/2W	R512	1-216-013-00	METAL CHIP	33	5% 1/10W
R372	1-249-658-11	CARBON	240	5%	1/2W	R513	1-216-025-00	RES, CHIP	100	5% 1/10W
R401	1-259-983-11	CARBON MELF	100	2%	1/8W	R514	1-216-079-00	METAL CHIP	18K	5% 1/10W
R402	1-260-032-11	CARBON MELF	1M	2%	1/8W	R515	1-216-065-00	RES, CHIP	4.7K	5% 1/10W
R403	1-259-992-11	CARBON MELF	560	2%	1/8W	R516	1-216-025-00	RES, CHIP	100	5% 1/10W
R404	1-259-999-11	CARBON MELF	2.2K	2%	1/8W	R517	1-216-079-00	METAL CHIP	18K	5% 1/10W
R405	1-247-751-11	CARBON	820	5%	1/2W	R518	1-216-065-00	RES, CHIP	4.7K	5% 1/10W
R406	1-259-989-11	CARBON MELF	330	2%	1/8W	R519	1-216-017-00	RES, CHIP	47	5% 1/10W
R407	1-259-983-11	CARBON MELF	100	2%	1/8W	R520	1-216-079-00	METAL CHIP	18K	5% 1/10W
R408	1-259-983-11	CARBON MELF	100	2%	1/8W	R521	1-216-065-00	RES, CHIP	4.7K	5% 1/10W
R409	1-260-010-11	CARBON MELF	15K	2%	1/8W	R522	1-216-017-00	RES, CHIP	47	5% 1/10W
R410	1-259-991-11	CARBON MELF	470	2%	1/8W	R523	1-216-079-00	METAL CHIP	18K	5% 1/10W
R411	1-247-761-11	CARBON	5.6K	5%	1/2W	R524	1-216-065-00	RES, CHIP	4.7K	5% 1/10W
R412	1-260-002-11	CARBON MELF	3.3K	2%	1/8W	R525	1-216-025-00	RES, CHIP	100	5% 1/10W
R413	1-260-010-11	CARBON MELF	15K	2%	1/8W	R526	1-216-079-00	METAL CHIP	18K	5% 1/10W
R414	1-259-987-11	CARBON MELF	220	2%	1/8W	R527	1-216-065-00	RES, CHIP	4.7K	5% 1/10W
R415	1-247-739-11	CARBON	100	5%	1/2W	R528	1-216-025-00	RES, CHIP	100	5% 1/10W
R416	1-259-983-11	CARBON MELF	100	2%	1/8W	R529	1-216-079-00	METAL CHIP	18K	5% 1/10W
R417	1-259-980-11	CARBON MELF	56	2%	1/8W	R530	1-216-065-00	RES, CHIP	4.7K	5% 1/10W
R418	1-259-980-11	CARBON MELF	56	2%	1/8W	R607	1-259-987-11	CARBON MELF	220	2% 1/8W
R419	1-249-415-11	CARBON	680	5%	1/4W	R608	1-259-992-11	CARBON MELF	560	2% 1/8W
R420	1-259-986-11	CARBON MELF	180	2%	1/8W	R609	1-259-996-11	CARBON MELF	1.2K	2% 1/8W
R421	1-247-751-11	CARBON	820	5%	1/2W	R610	1-216-025-00	RES, CHIP	100	5% 1/10W
R422	1-249-658-11	CARBON	240	5%	1/2W	R611	1-259-987-11	CARBON MELF	220	2% 1/8W
R451	1-259-983-11	CARBON MELF	100	2%	1/8W	R612	1-259-992-11	CARBON MELF	560	2% 1/8W
R452	1-260-032-11	CARBON MELF	1M	2%	1/8W	R613	1-259-996-11	CARBON MELF	1.2K	2% 1/8W
R453	1-259-992-11	CARBON MELF	560	2%	1/8W	R614	1-216-025-00	RES, CHIP	100	5% 1/10W
R454	1-259-999-11	CARBON MELF	2.2K	2%	1/8W	R615	1-259-983-11	CARBON MELF	100	2% 1/8W
R455	1-247-751-11	CARBON	820	5%	1/2W	R616	1-259-983-11	CARBON MELF	100	2% 1/8W
R456	1-259-989-11	CARBON MELF	330	2%	1/8W	R617	1-259-997-11	CARBON MELF	1.5K	2% 1/8W
R457	1-259-983-11	CARBON MELF	100	2%	1/8W	R618	1-259-994-11	CARBON MELF	820	2% 1/8W
R458	1-259-983-11	CARBON MELF	100	2%	1/8W	R619	1-259-994-11	CARBON MELF	820	2% 1/8W
R459	1-260-010-11	CARBON MELF	15K	2%	1/8W	R620	1-259-997-11	CARBON MELF	1.5K	2% 1/8W
R460	1-259-991-11	CARBON MELF	470	2%	1/8W	R621	1-260-017-11	CARBON MELF	56K	2% 1/8W
R461	1-247-761-11	CARBON	5.6K	5%	1/2W	R622	1-260-017-11	CARBON MELF	56K	2% 1/8W
R462	1-260-002-11	CARBON MELF	3.3K	2%	1/8W	< RELAY >				
R463	1-260-010-11	CARBON MELF	15K	2%	1/8W	RY101	1-755-295-11	RELAY		
R464	1-259-987-11	CARBON MELF	220	2%	1/8W	RY102	1-755-295-11	RELAY		
R465	1-247-739-11	CARBON	100	5%	1/2W	RY103	1-755-295-11	RELAY		
R466	1-259-983-11	CARBON MELF	100	2%	1/8W	RY104	1-755-295-11	RELAY		
R467	1-259-980-11	CARBON MELF	56	2%	1/8W	RY105	1-755-295-11	RELAY		
R468	1-259-980-11	CARBON MELF	56	2%	1/8W	RY106	1-755-295-11	RELAY		
R469	1-249-415-11	CARBON	680	5%	1/4W	RY107	1-755-295-11	RELAY		
R470	1-259-986-11	CARBON MELF	180	2%	1/8W	RY108	1-755-295-11	RELAY		
R471	1-247-751-11	CARBON	820	5%	1/2W	RY109	1-755-295-11	RELAY		
R472	1-249-658-11	CARBON	240	5%	1/2W	RY110	1-755-295-11	RELAY		
R501	1-216-013-00	METAL CHIP	33	5%	1/10W	RY111	1-755-295-11	RELAY		
R502	1-216-079-00	METAL CHIP	18K	5%	1/10W					

MAIN

MASTER VOLUME

MUT

POWER

SUB VOLUME

VOL LED

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
RY112	1-755-295-11	RELAY					
RY113	1-755-295-11	RELAY					
RY301	1-755-295-11	RELAY					
RY302	1-755-295-11	RELAY					
RY351	1-755-295-11	RELAY					
RY352	1-755-295-11	RELAY					
RY401	1-755-295-11	RELAY					
RY402	1-755-295-11	RELAY					
RY451	1-755-295-11	RELAY					
RY452	1-755-295-11	RELAY					
*****							
1-673-057-11 MASTER VOLUME BOARD							
*****							
< CAPACITOR >							
C101	1-136-165-00	FILM	0.1uF	5%	50V		
< CONNECTOR >							
CN108	1-691-768-11	PLUG (MICRO CONNECTOR) 6P					
CN110	1-691-767-11	PLUG (MICRO CONNECTOR) 6P					
CN111	1-691-765-11	PLUG (MICRO CONNECTOR) 3P					
CN113	1-691-766-11	PLUG (MICRO CONNECTOR) 4P					
CN115	1-691-766-31	PLUG (MICRO CONNECTOR) 4P					
CN141	1-691-766-41	PLUG (MICRO CONNECTOR) 4P					
< VARIABLE RESISTOR >							
RV107	1-225-757-11	RES, VAR, CARBON (WITH MOTOR) 30X6 (MASTER VOLUME)					
*****							
1-673-063-11 MUT BOARD							
*****							
< CONNECTOR >							
CN128	1-506-469-11	PIN, CONNECTOR 4P					
CN134	1-506-468-11	PIN, CONNECTOR 3P					
CN136	1-568-955-11	PIN, CONNECTOR 6P					
< LED >							
D819	8-719-313-50	LED SEL6810A-TH12 (+6dB)					
D820	8-719-313-50	LED SEL6810A-TH12 (+12dB)					
D821	8-719-313-50	LED SEL6810A-TH12 (+6dB)					
D822	8-719-313-50	LED SEL6810A-TH12 (+12dB)					
D823	8-719-313-50	LED SEL6810A-TH12 (+6dB)					
D824	8-719-313-50	LED SEL6810A-TH12 (+12dB)					
< RESISTOR >							
R828	1-216-033-00	METAL CHIP	220	5%	1/10W		
R835	1-216-037-00	METAL CHIP	330	5%	1/10W		
R836	1-216-037-00	METAL CHIP	330	5%	1/10W		
R837	1-216-037-00	METAL CHIP	330	5%	1/10W		
< SWITCH >							
S802	1-570-101-11	SWITCH, KEY BOARD (MUTING)					
S803	1-571-800-11	SWITCH, KEY BOARD (CENTER LEVEL)					
S804	1-571-800-11	SWITCH, KEY BOARD (REAR LEVEL L/R)					
S805	1-571-800-11	SWITCH, KEY BOARD (WOOFER LEVEL)					
*****							
1-673-656-11 VOL LED BOARD							
*****							
< CONNECTOR >							
CN106	1-506-481-11	PIN, CONNECTOR 2P					
< LED >							
D815	8-719-313-45	LED SEL6810A-TH10 (MASTER VOLUME)					
< RESISTOR >							
R831	1-216-037-00	METAL CHIP	330	5%	1/10W		
*****							

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.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
		MISCELLANEOUS	
		*****	

△ CNJ1	1-559-479-11	CORD, POWER (US, Canadian)
△ CNJ1	1-575-953-11	CORD, POWER (AEP)
△ T2	1-433-651-11	TRANSFORMER, POWER (US, Canadian)
△ T2	1-433-652-11	TRANSFORMER, POWER (AEP)
		*****

## ACCESSORIES &amp; PACKING MATERIALS

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1-418-243-11	REMOTE COMMANDER (RM-P9000)
1-590-925-31	CORD, CONNECTION (AUDIO)
1-783-106-11	CORD, CONNECTION (S-LINK)
3-866-165-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH)
3-866-165-21	MANUAL, INSTRUCTION (GERMAN, SPANISH, DUTCH, SWEDISH, ITALIAN, PORTUGUESE) (AEP)

4-981-643-01 COVER, BATTERY (FOR RM-P9000)

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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