

ACOUSTIC CHORUS AC-33

SERVICE NOTES

Issued by RJA

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Cautionary Notes

Before beginning the procedure, please read through this document. The matters described may differ according to the model.

No User Data

This product cannot save user data. Backing up user data during servicing is not required.

Parts List

A component whose part code is ***** will not be supplied as a service part because one of the following reasons applies.

- Because it is supplied as an assembled part (under a different part code).
- Because a number of circuit boards are grouped together and supplied as a single circuit board (under a different part code).
- Because supply is prohibited due to copyright restrictions.
- Because reissuance is restricted.
- Because the part is made to order (at current market price).
- Because it is carried in electronic data on the Roland web site.
- Because it is a package or an accessory irrelevant to the function maintenance of the main body.
- Because it can be replaced with an article on the market. (battery or etc.)

Circuit Diagram

In the circuit diagram, "NIU" is an abbreviation for "Not in Use," and "UnPop" is an abbreviation for "Unpopulated." They both mean non-mounted components. The circuit board and circuit board diagram show silk-screened indications, but no components are mounted.

Updating the System

Updating the system is accomplished by replacing the Main Board.

Specifications

AC-33: ACOUSTIC CHORUS

Rated Power Output

15 W + 15 W (when using the AC adaptor)

10 W + 10 W (when using the Alkaline batteries)

Nominal Input Level (1 kHz)

GUITAR Channel: -10 dBu

MIC/LINE Channel: -50 dBu/-20 dBu

AUX IN: -10 dBu

Nominal Output Level (1 kHz)

LINE OUT: -10 dBu

* 0 dBu = 0.775 Vrms

Speakers

12 cm (5 inches) x 2

Controls

(GUITAR Channel)

VOLUME Knob

Equalizer Knobs (BASS, MIDDLE, TREBLE)

CHORUS Switch

(MIC/LINE Channel)

VOLUME Knob

Equalizer Knobs (BASS, TREBLE)

CHORUS Switch

REVERB/AMBIENCE Knob

(ANTI-FEEDBACK)

ON/OFF Switch

(LOOPER)

REC/PLAY/OVERDUB Button

STOP/CLEAR Button

(AUX IN Controls)

LEVEL knob

MASTER knob

POWER Switch

Indicators

REC/PLAY/OVERDUB

POWER

Connectors

GUITAR Channel Input Jack (1/4" phone type)

MIC/LINE Channel Input Jacks (XLR type, 1/4" TRS phone type)

AUX IN Jacks (RCA phono type, Stereo miniature phone type)

LINE OUT (L/MONO, R) Jacks (1/4" phone type)

PHONES Jack (Stereo 1/4" phone type)

FOOT SWITCH Jacks (1/4" TRS phone type)

DC IN Jack

Power Supply

AC Adaptor (included, DC 13 V),

Dry battery LR6 (AA) type (alkaline) x 8, or

Rechargeable battery HR6 (AA) type (nickel metal hydride) x 8

Current Draw

490 mA

Expected battery life under continuous use:

Alkaline: about 8 hours

Nickel-metal hydride: about 9 hours

* These figures will vary depending on the actual conditions of use.

Dimensions

318 (W) x 223 (D) x 243 (H) mm

12-9/16 (W) x 8-13/16 (D) x 9-5/8 (H) inches

Weight (excluding batteries)

4.7 kg / 10 lbs 6 oz

Accessories

Owner's Manual (#5100010616)

AC Adaptor (#5100010587)

AC Cord (#5100009482, #5100012740, #5100009486, #5100009483, #5100009484, #5100009485)

Options

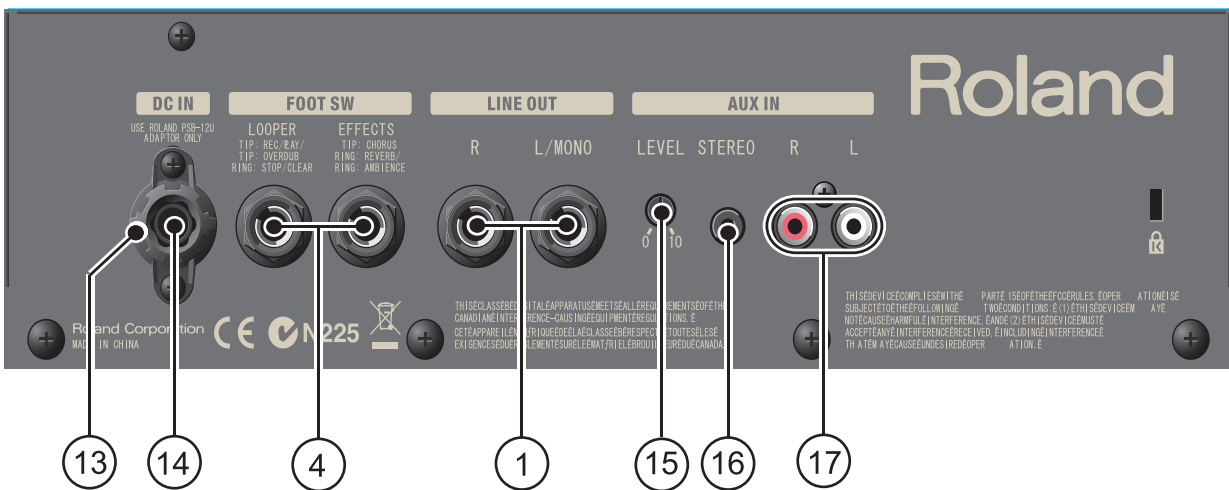
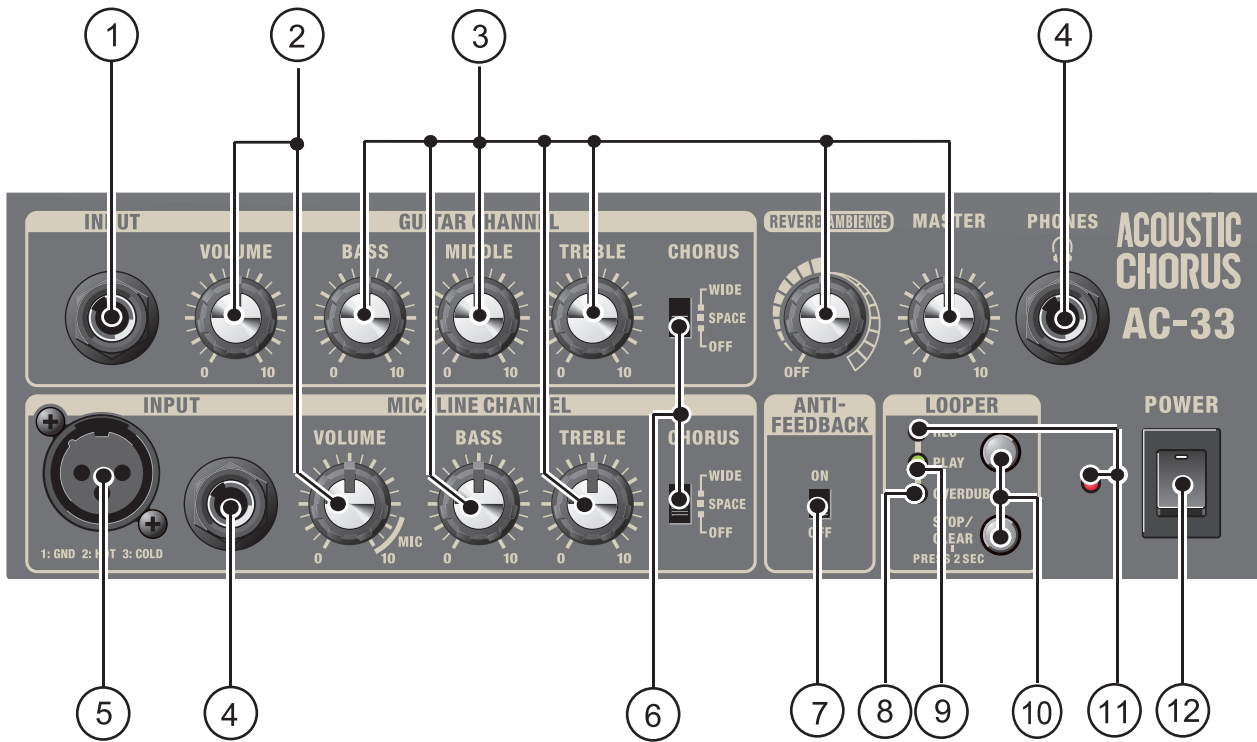
Foot Switch: BOSS FS-5U, BOSS FS-6

Connection Cable: PCS-31

* Printed matters will not be supplied after the end of the production. Then, download the electronic file from the Roland web site.

* In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

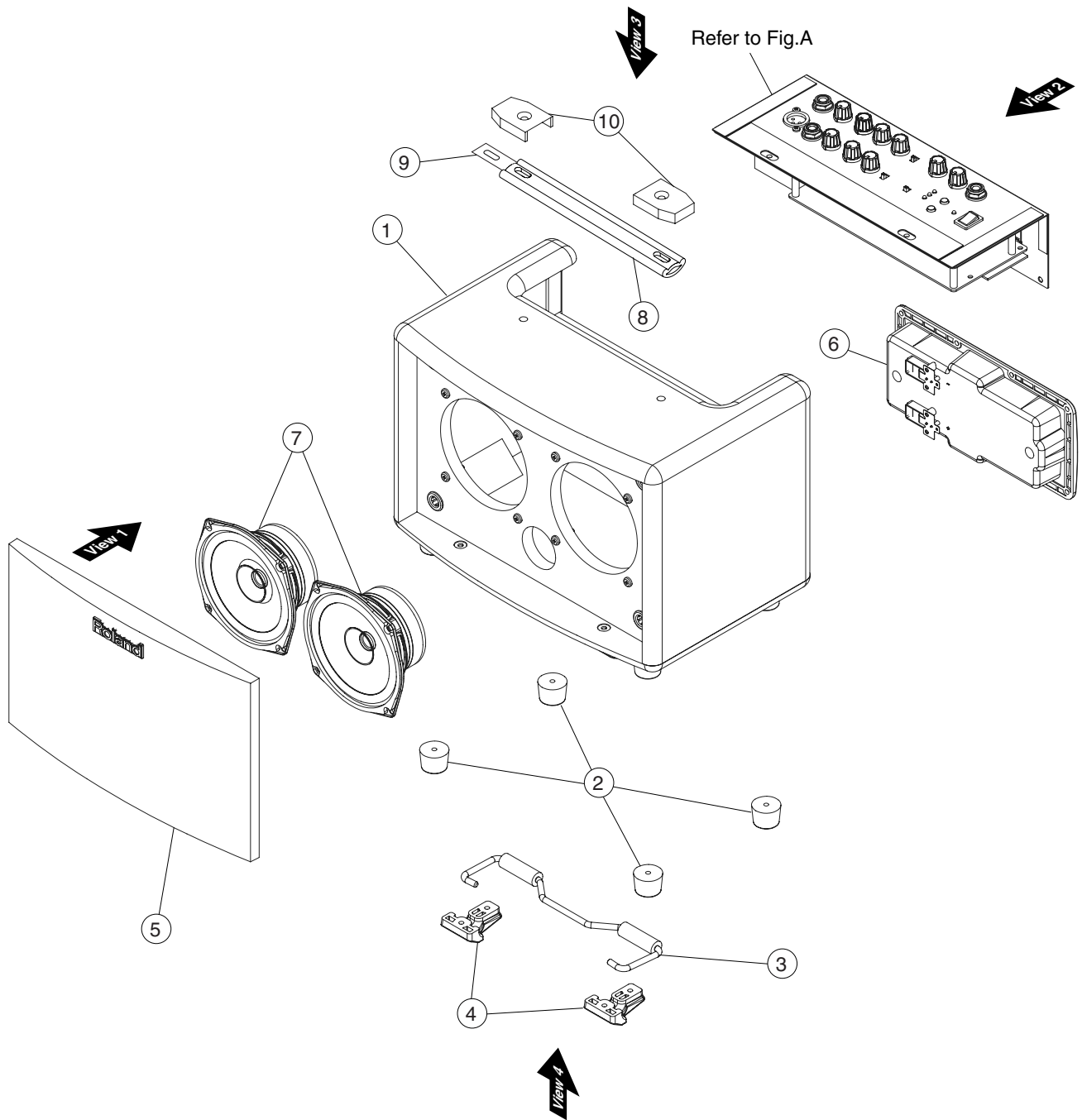
Location of Controls



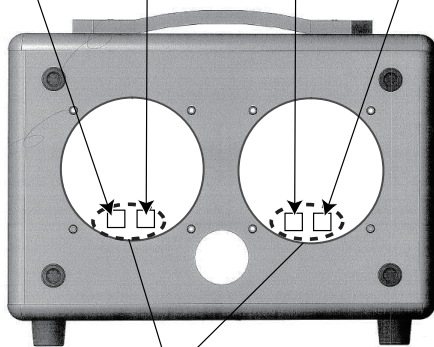
Location of Controls Parts List

No.	Part Code	Part Name	Description	Q'ty
1	13449146	6.5MM JACK	YKB21-5012 (W/SW)	3
	5100004356	JACK NUT		3
2	5100011024	R-KNOB	08203-500	2
	5100007826	ROTARY POTENTIOMETER	RD901F-20E1-125F-1B100K-00D10A	2
		<i>* This unit includes the following parts.</i>		
	*****	VR NUT M9		2
	*****	VR WASHER		2
3	5100011024	R-KNOB	08203-500	7
	5100007829	ROTARY POTENTIOMETER	RD901F-40E1-125F-0B10K-00D10A	7
		<i>* This unit includes the following parts.</i>		
	*****	VR NUT M9		7
	*****	VR WASHER		7
4	13449252	6.5MM JACK	YKB21-5006 (STEREO W/SW)	4
	5100004356	JACK NUT		4
5	03459223	XLR CONNECTOR	JY-5033A	1
	5100011617	EVA PACKING	40X25X1T W/ADH	1
6	5100007725	SWITCH	SS71020F-0103-6T-025-NP-017	2
	5100010458	HIMELON FOR SLIDE SW		2
7	5100007726	SWITCH	SS71010F-0102-6T-015-NP	1
	5100010458	HIMELON FOR SLIDE SW		1
8	05017534	LED (YELLOW)	L-34YDSL	1
	5100004216	LED SPACER	LEDH-7	1
9	03349989	LED (GREEN)	L-34GDSL-FPB	1
	5100004216	LED SPACER	LEDH-7	1
10	5100004353	KEYTOP	40285-501(#SD000906)	2
	5100010538	EVA PACKING	35X15XT0.5 W/ADH	1
	01780101	TACT SWITCH	SKQKABD010	2
11	03349978	LED(RED)	L-34HDSL-FPB	2
	5100004216	LED SPACER	LEDH-7	2
12	02897801	SEESAW SWITCH	SDDJE13200 94V-0	1
	5100010579	WIRING	192-AP011-W4	1
13	5100010457	DC PLUG SUPPORTER		1
14	03562412	DC JACK	HEC3900-010110	1
	5100009659	DC JACK HOLDER		1
	5100010540	EVA PACKING	FOR DC JACK HOLDER A	1
15	5100007731	ROTARY POTENTIOMETER	R1131GOXH1B203TG0027	1
16	05019512	3.5MM JACK	203-HTJ03509ABT	1
17	5100007830	CONNECTOR	RCA KM04048A-01	1

Exploded View (All)



RED (5100010583) BLACK (5100010584) ORANGE (5100010585) BROWN (5100010586)



* Terminals are underneath.

When detaching the chassis (Fig. A), remove the following screws.

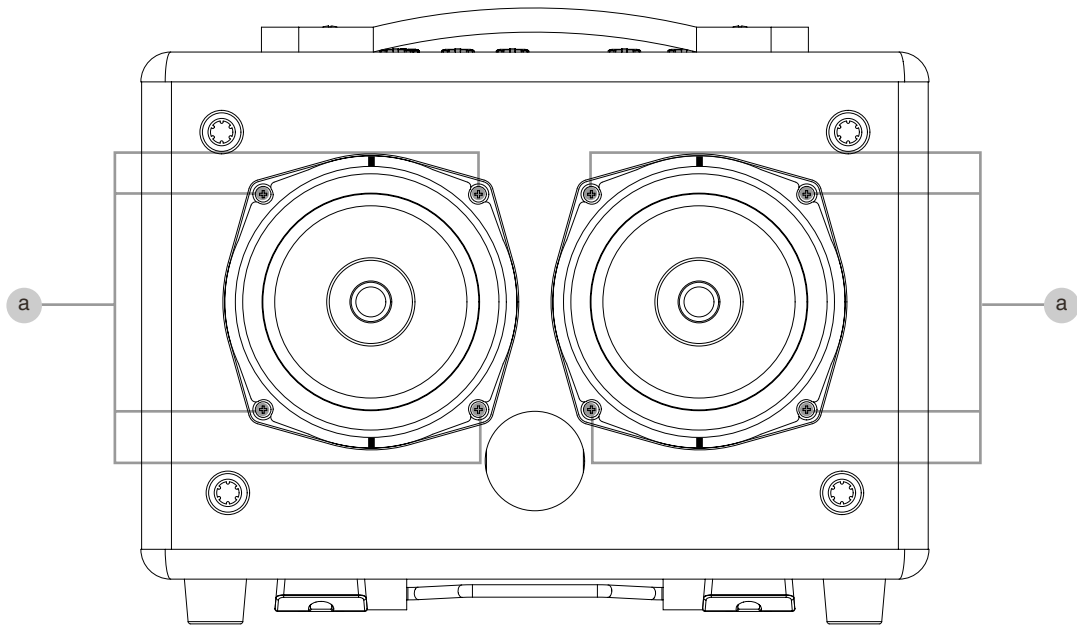
- In Plain View (1) (p. 8), the 4 screws at j in View 2
- In Plain View (2) (p. 10), the 2 screws at f in View 3

Exploded View (All) Parts List

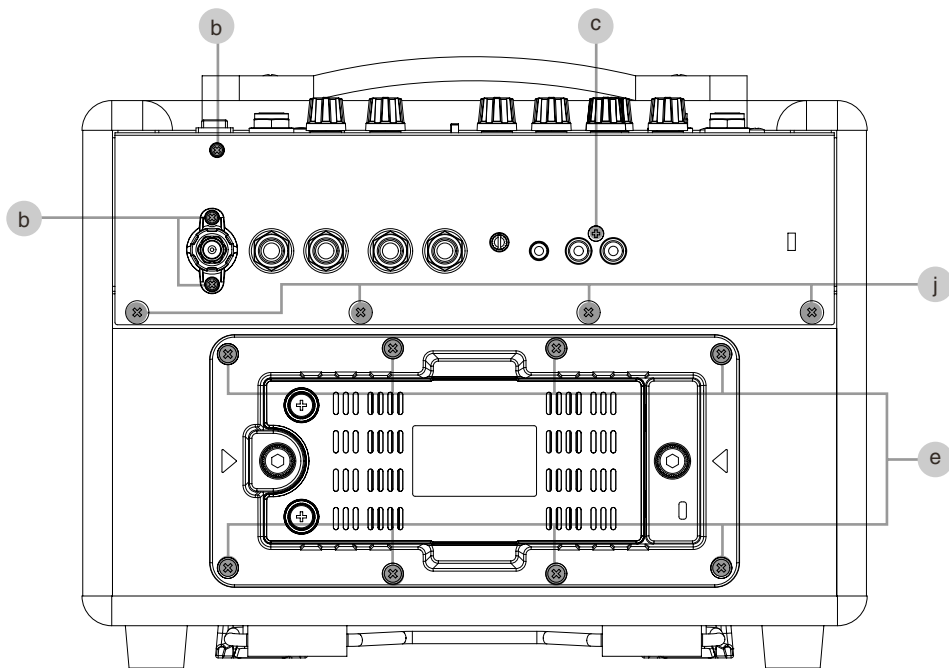
No.	Part Code	Part Name	Description	Q'ty
1	5100009315	CABINET ASSY		1
		<i>* This unit includes the following parts.</i>		
	*****	CABINET		1
	*****	CATCH		4
	*****	ABSORPTIVE FOAM		1
2	5100006069	RUBBER FOOT	D25XT18 40484-512(#SD001005)	4
3	*****	STAND		1
4	5100009863	STAND HOLDER	40484-518 (#SD001007)	2
5	5100014460	NET BOARD ASSY	W/ROLAND BADGE	1
		<i>* This unit includes the following parts.</i>		
	*****	ROLAND BADGE		1
	*****	NET BOARD		1
6	5100010591	BATTERY CASE ASSY		1
7	5100010998	SPEAKER	W0504-011 A	2
8	5100011381	HANDLE		1
9	5100011382	HANDLE PLATE		1
10	5100011383	HANDLE HOLDER		2

Plain View (1)

View 1



View 2



Plain View (1) Parts List

View 1

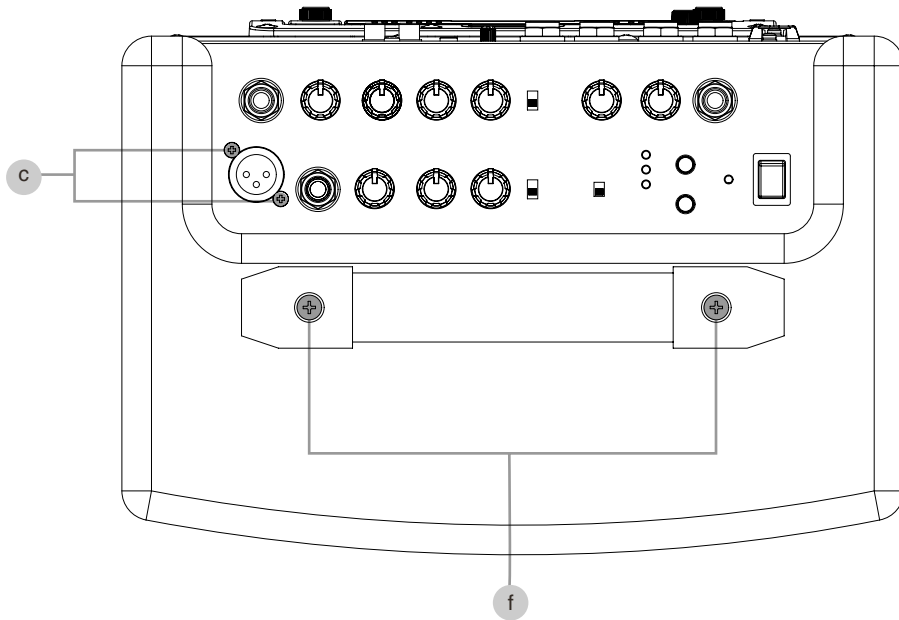
No.	Part Code	Part Name	Description	Q'ty
a	40019023	SCREW 4X20	BINDING TAPPING A BZC	8

View 2

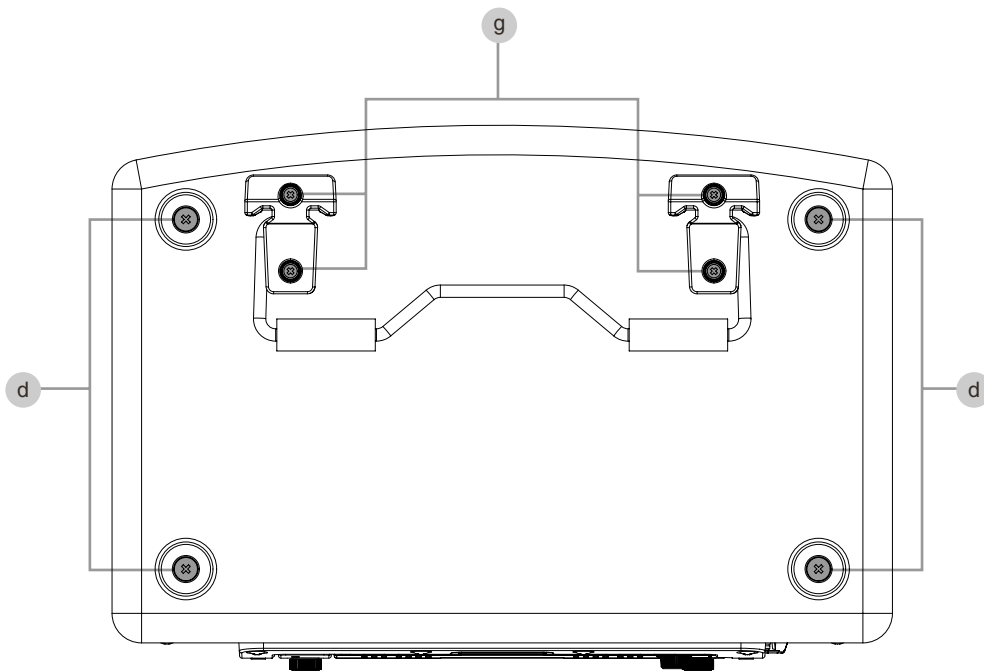
No.	Part Code	Part Name	Description	Q'ty
b	40237101	SCREW M3X8	PAN MACHINE W/SW+SMALL PW BZC	3
c	40011312	SCREW 3X8	BINDING TAPTITE P FE BZC	1
j	40010689	SCREW 4X25	TRUSS TAPPING A FE BZC	4
e	5100005098	SCREW 3X16	TRUSS TAPPING A BZC	8

Plain View (2)

View 3



View 4



Plain View (2) Parts List

View 3

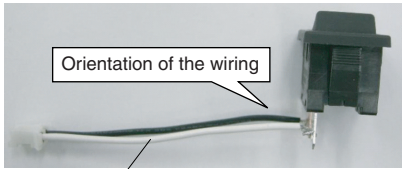
No.	Part Code	Part Name	Description	Q'ty
c	40011312	SCREW 3X8	BINDING TAPTITE P FE BZC	2
f	40564601	SCREW M5X35	OVALHEAD MACHINE BZC	2

View 4

No.	Part Code	Part Name	Description	Q'ty
d	40010678	SCREW 4X20	TRUSS TAPPING A FE BZC	4
	5100005100	WASHER	FLAT 4.2X10X0.5 BZC	4
g	40128012	SCREW M4X16	PAN MACHINE W/SW+PW BZC	4

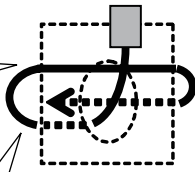
Exploded View (Fig.A)

17 Wind the wiring (#5100010579) around the power switch and solder.

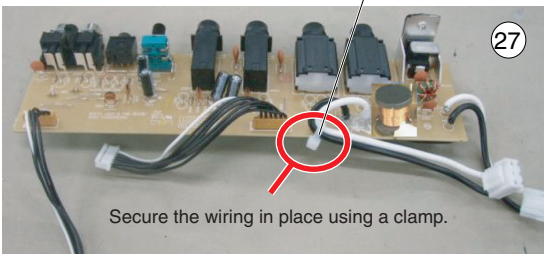
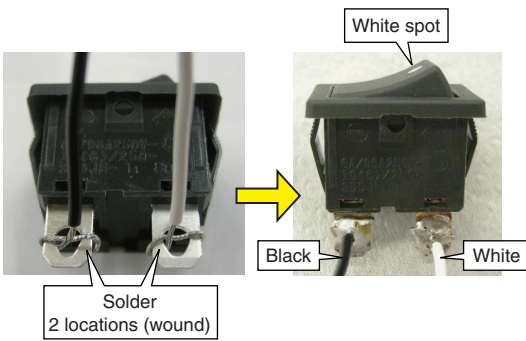


11

Solder 2 locations (wound)

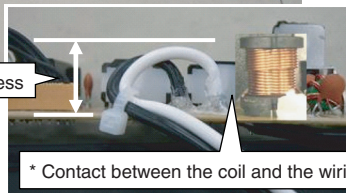


* The end of the wire must not extend below the connector.

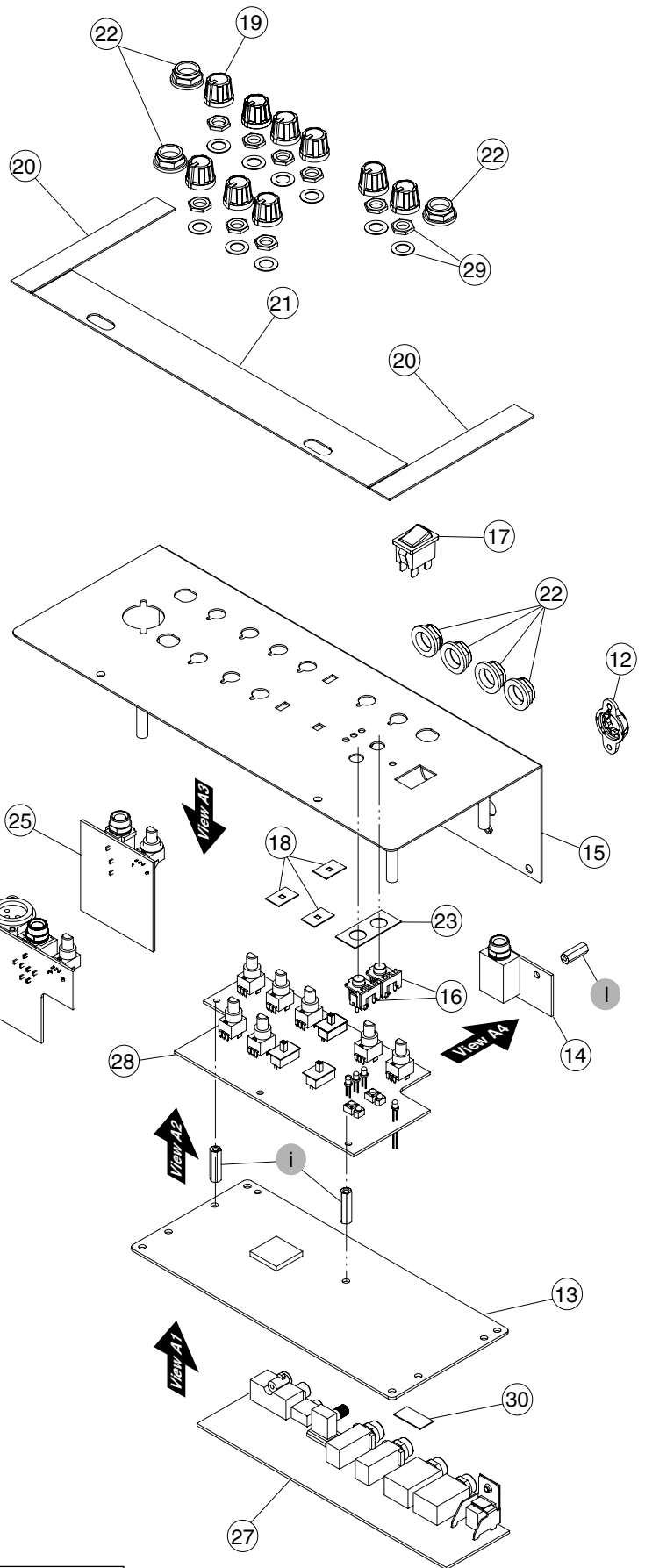


Secure the wiring in place using a clamp.

15 mm or less



* Contact between the coil and the wiring is prohibited.



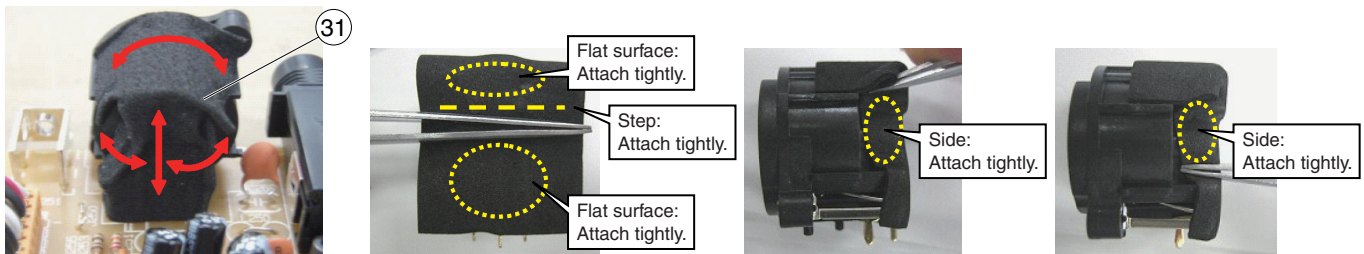
Exploded View (Fig.A) Parts List

No.	Part Code	Part Name	Description	Q'ty
11	5100010579	WIRING	192-AP011-W4	1
12	5100010457	DC PLUG SUPPORTER		1
13	5100009366	MAIN PWB BOARD ASSY		1
	5100009323	PANEL PWB SHEET ASSY		1
		<i>* This unit includes the following parts.</i>		
14	*****	PHONES BOARD		1
25	*****	GT INPUT BOARD	includes a Nut and a Washer (No.29)	1
26	*****	MIC INPUT BOARD	includes a Nut and a Washer (No.29)	1
27	*****	JACK-B BOARD		1
28	*****	PANEL BOARD	includes Nuts and Washers (No.29)	1
29	*****	Nut		9
	*****	Washer		9
15	5100010453	CHASSIS		1
16	5100004353	KEYTOP	40285-501(#SD000906)	2
17	02897801	SEESAW SWITCH	SDDJE13200 94V-0	1
18	5100010458	HIMELON FOR SLIDE SW		3
19	5100011024	R-KNOB	08203-500	9
20	5100011022	EVA PACKING	110X15X1T W/ADH	2
21	5100010539	EVA PACKING	255X30X1T W/ADH	1
22	5100004356	JACK NUT		7
23	5100010538	EVA PACKING	35X15XT0.5 W/ADH	1
24	5100005099	LOCKING CABLE TIE	120X2.5X1T DAIHWA	1
30	5100012099	EVA PACKING	25X25X1T W/ADH	1
31	5100011617	EVA PACKING	40X25X1T W/ADH	1
32	5100010540	EVA PACKING	FOR DC JACK HOLDER A	1
i	5100011021	STANDOFF	M3-L6-H20 (311-BG436LF)	2
1	5100011020	STANDOFF	M3-L6-H15 (311-BG108LF)	1

Application Sites for EVA Packing Cushions

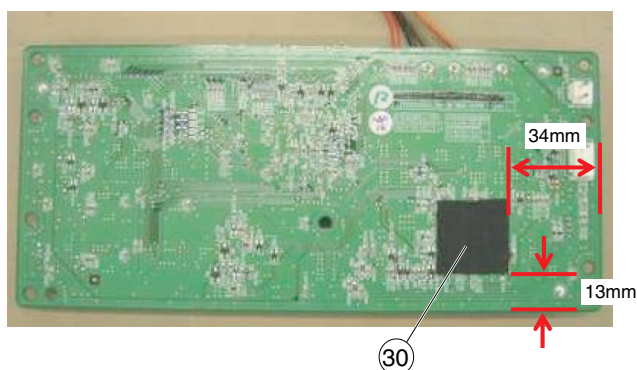
26 Mic Input Board

As shown in the figure, tightly attach the EVA Packing (#5100011617) onto the XLR connector.



13 Main Board

Affix the EVA Packing (#5100012099) at the locations shown in the figure.



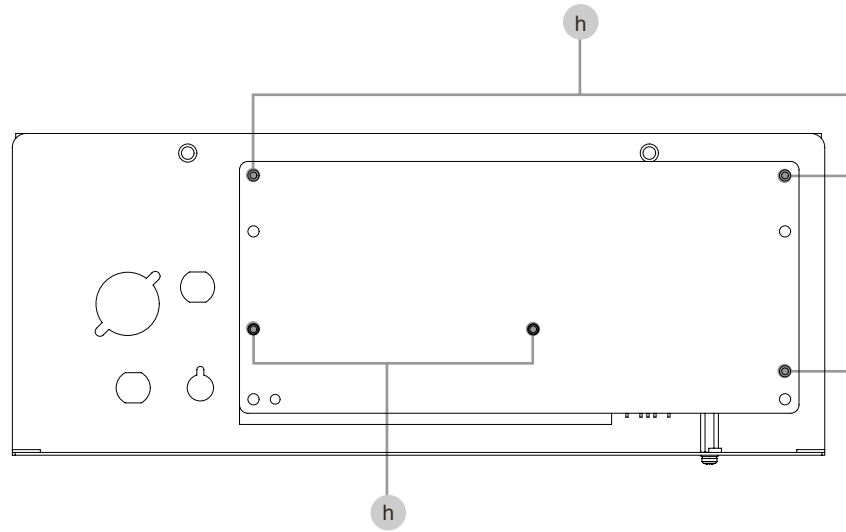
27 Jack-B Board

As shown in the figure, affix the EVA packing (#5100010540) onto the DC Jack Holder.

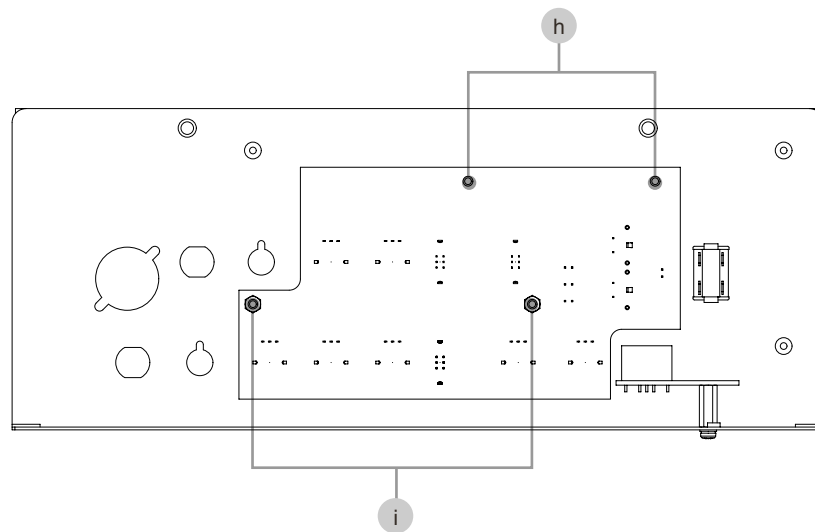


Plane View (Fig.A)

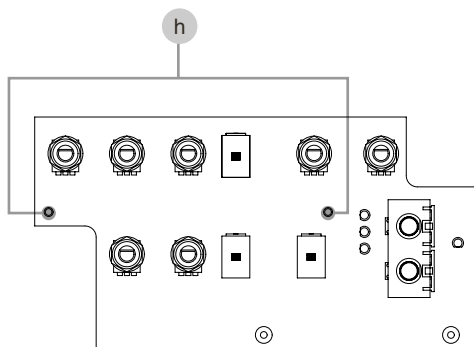
View A1



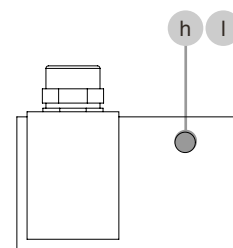
View A2



View A3



View A4



Plane View (Fig.A) Parts List

View A1

No.	Part Code	Part Name	Description	Q'ty
h	40012867	SCREW M3X8	PAN MACHINE W/SW+PW ZC	5

View A2

No.	Part Code	Part Name	Description	Q'ty
h	40012867	SCREW M3X8	PAN MACHINE W/SW+PW ZC	2
i	5100011021	STANDOFF	M3-L6-H20 (311-BG436LF)	2

View A3

No.	Part Code	Part Name	Description	Q'ty
h	40012867	SCREW M3X8	PAN MACHINE W/SW+PW ZC	2

View A4

No.	Part Code	Part Name	Description	Q'ty
h	40012867	SCREW M3X8	PAN MACHINE W/SW+PW ZC	1
l	5100011020	STANDOFF	M3-L6-H15 (311-BG108LF)	1

Parts List

Safety Precautions:
The parts marked Δ have safety-related characteristics. Use only listed parts for replacement.

Due to one or more of the following reasons, parts with parts code ***** cannot be supplied as service parts.

- Part supplied only as a component in a complete assembly
- Copyright does not permit the part to be supplied
- Part is sold commercially

Note: The parts marked # are new. (initial parts) The description "Q'ty" means a necessary number of the parts per one product.

CASING				
#	5100009315	CABINET ASSY		1
#	5100010591	BATTERY CASE ASSY		1
#	5100014460	NET BOARD ASSY	W/ROLAND BADGE	1
CHASSIS				
#	5100010453	CHASSIS		1
KNOB, BUTTON				
#	5100004353	KEYTOP	40285-501(#SD000906)	2
#	5100011024	R-KNOB	08203-500	9
SWITCH				
	01780101	TACT SWITCH	SKQKABD010	2
	02897801	SEESAW SWITCH	SDDJE13200 94V-0	1
#	5100007725	SWITCH	SS71020F-0103-6T-025-NP-017	2
#	5100007726	SWITCH	SS71010F-0102-6T-015-NP	1
JACK, EXT TERMINAL				
	03459223	XLR CONNECTOR	JY-5033A	1
#	03562412	DC JACK	HEC3900-010110	1
	05019512	3.5MM JACK	203-HTJ03509ABT	1
	13449146	6.5MM JACK	YKB21-5012 (W/SW)	3
	13449252	6.5MM JACK	YKB21-5006 (STEREO W/SW)	4
	5100007830	CONNECTOR	RCA KM04048A-01	1
SPEAKER, BUZZER				
#	Δ 5100010998	SPEAKER	W0504-011 A	2
PWB ASSY				
#	5100009366	MAIN PWB BOARD ASSY		1
#	5100009323	PANEL PWB SHEET ASSY		1
		<i>* This unit includes the following parts.</i>		
#	*****	PANEL BOARD		1
#	*****	GT INPUT BOARD		1
#	*****	MIC INPUT BOARD		1
#	*****	PHONES BOARD		1
#	*****	JACK-B BOARD		1
DIODE				
	03349978	LED (RED)	L-34HDSL-FPB	2
	03349989	LED (GREEN)	L-34GDSL-FPB	1
	05017534	LED (YELLOW)	L-34YDSL	1
POTENTIOMETER				
	5100007731	ROTARY POTENTIOMETER	R1131GOXH1B203TG0027	1
#	5100007826	ROTARY POTENTIOMETER	RD901F-20E1-125F-1B100K-00D10	2
#	5100007829	ROTARY POTENTIOMETER	RD901F-40E1-125F-0B10K-00D10A	7
FUSE, FUSE HOLDER				
#	Δ 5100011069	FUSE	MET 0.250	1
#	Δ 5100011086	FUSE	MET 002	1
#	Δ 5100011065	FUSE	MET 3.150	1

WIRING, CABLE

#	5100010578	WIRING	192-AP011-W3	1
#	5100010579	WIRING	192-AP011-W4	1
#	5100010583	WIRING	196-AP011-W8	1
#	5100010584	WIRING	196-AP011-W9	1
#	5100010585	WIRING	196-AP011-W10	1
#	5100010586	WIRING	196-AP011-W11	1

SCREWS

	40012867	SCREW M3X8	PAN MACHINE W/SW+PW ZC	10
	40237101	SCREW M3X8	PAN MACHINE W/SW+SMALL PW BZC	3
	40128012	SCREW M4X16	PAN MACHINE W/SW+PW BZC	4
	40564601	SCREW M5X35	OVALHEAD MACHINE BZC	2
	5100005098	SCREW 3X16	TRUSS TAPPING A BZC	8
	40011312	SCREW 3X8	BINDING TAPTITE P FE BZC	3
#	40019023	SCREW 4X20	BINDING TAPPING A BZC	8
	40010678	SCREW 4X20	TRUSS TAPPING A FE BZC	4
	40010689	SCREW 4X25	TRUSS TAPPING A FE BZC	4
#	5100004356	JACK NUT		7
	5100005100	WASHER	FLAT 4.2X10X0.5 BZC	4
#	5100011020	STANDOFF	M3-L6-H15 (311-BG108LF)	1
#	5100011021	STANDOFF	M3-L6-H20 (311-BG436LF)	2

MISCELLANEOUS

#	5100011381	HANDLE		1
#	5100011382	HANDLE PLATE		1
#	5100011383	HANDLE HOLDER		2
	5100004216	LED SPACER	LEDH-7	4
	5100009863	STAND HOLDER	40484-518 (#SD001007)	2
	5100006069	RUBBER FOOT	D25XT18 40484-512(#SD001005)	4
#	5100009659	DC JACK HOLDER		1
#	5100010457	DC PLUG SUPPORTER		1
	5100005099	LOCKING CABLE TIE	120X2.5X1T DAIHWA	1
#	5100010458	HIMELON FOR SLIDE SW		3
#	5100012099	EVA PACKING	25X25X1T W/ADH	1
#	5100010538	EVA PACKING	35X15X1T0.5 W/ADH	1
#	5100010539	EVA PACKING	255X30X1T W/ADH	1
#	5100010540	EVA PACKING	FOR DC JACK HOLDER A	1
#	5100010541	EVA PACKING	FOR DC JACK HOLDER	1
#	5100011022	EVA PACKING	110X15X1T W/ADH	2
#	5100011617	EVA PACKING	40X25X1T W/ADH	1

ACCESSORIES (Standard)

#	△	5100010587	AC ADAPTOR	PSB-12U	1
	△	5100009481	AC CORD	181-AP009-J 100V 1.0M	1
	△	5100009482	AC CORD	181-AP009-UC 117V 1.0M	1
#	△	5100012740	AC CORD	181-AP009-BL 117VBL 1.0M	1
	△	5100009486	AC CORD	181-AP009-CN 220VCN 1.0M	1
	△	5100009483	AC CORD	181-AP009-G 230V EU 1.0M	1
	△	5100009484	AC CORD	181-AP009-B 230VE	1
	△	5100009485	AC CORD	181-AP009-A 240VA 1.0M	1
#		5100010615	OWNER'S MANUAL	JAPANESE	1
#		5100010616	OWNER'S MANUAL	MULTILANGUAGE	1

Verifying the Version Number

Items Required

- Foot switches (BOSS FS-5U) x 2
- Foot-switch connection cable (PCS-31) x 1

Procedure

1. Connect a foot switch to the **FOOT SW EFFECTS** jack.
The PCS-31 foot-switch connection cable is an adapter cable from stereo to mono x 2.
The white end of the mono standard plug is for **TIP:CHORUS**, and the red end is for **RING:REVERB/AMBIENCE**.
2. Connect the monaural standard plugs to the respective FS-5U foot switches.
You can connect the white and red ends to either FS-5U unit.
Set the polarity switches on the FS-5U units to the "jack" side.
3. Make the following settings on the main unit.
 - POWER switch: OFF
 - GUITAR CHANNEL CHORUS: OFF
 - MIC/LINE CHANNEL CHORUS: OFF
 - ANTI-FEEDBACK: OFF
 - All controls: Minimum
4. Hold down the **TIP:CHORUS** (white) foot switch and switch on the power.
Immediately after the power is switched on, all LEDs light up.
* *Continue to hold down the foot switch.*
5. All LEDs light up, then flash once. Within 3 seconds of this, press the **TIP:CHORUS** (white) foot switch twice.
All LEDs flash rapidly several times, then flash to indicate the software version.
The **POWER** LED lights up in an intermittent pattern that indicates the software version as shown below.

Version	POWER LED illumination pattern
1.00	One long and no short
1.01	One long and one short
1.02	One long and two short
1.03	One long and three short
:	:
2.00	Two long and no short

6. Switch off the power to the unit.

Test Mode

Items Required

- Foot switches (BOSS FS-5U) x 2
- Foot-switch connection cable (PCS-31) x 1
- Level meter (used only during signal-level testing)
- Signal generator (only when inspecting the signal level)
- Dummy load resistor tool (only during signal-level testing)
 - Resistor (4 Ω , 100 W or more)
 - Stereo standard plug with 100 Ω (1/2 W or more) load resistor connected between L, R, and GND
 - Standard plug with 47 k Ω load resistor connected between HOT and GND

Entering the Test Mode

Go to **Verifying the Version Number** (p. 18) and carry out steps **1** through **5**.
After verifying the version number, depress the **TIP:CHORUS** (white) foot switch connected to the **FOOT SW EFFECTS** jack to enable the first test item, **1. DSP Test**.

Quitting the Test Mode

Switch off the power.

Skipping

Test items cannot be skipped.

1. DSP/SDRAM Test

When testing starts, all LEDs go dark.

The **LOOPER** LEDs light up in the sequence of **REC** -> **PLAY** -> **OVERDUB** to indicate the progress of the testing.

If the Test Is Passed (OK)

Execution automatically advances to the next test.

If the Test Is Failed (Not OK)

The **POWER** LED flashes rapidly. Execution does not advance to the next test.

2. Switch Test

Carry out operations in the sequence shown below, and check the status of the corresponding LEDs.

No.	Operation	REC LED	PLAY LED	OVERDUB LED	POWER LED
	(Initial state)	-	-	-	o
1	Set MIC/LINE CHANNEL CHORUS to SPACE.	o	o	o	o
2	Set MIC/LINE CHANNEL CHORUS to WIDE.	o	o	-	o
3	Set GUITAR CHANNEL CHORUS to SPACE.	o	-	-	o
4	Set GUITAR CHANNEL CHORUS to WIDE.	-	-	-	o
5	Set ANTI-FEEDBACK to ON.	o	o	o	o
6	Press LOOPER STOP/CLEAR.	o	o	-	o
7	Press LOOPER REC/PLAY/OVERDUB.	o	-	-	o
↓		*	*	*	*
8	Disconnect the foot-switch plug from EFFECTS.	-	-	-	o
9	Insert the foot-switch plug into EFFECTS.	o	o	o	o
10	Depress the TIP (white) side of the foot switch.	o	o	-	o
11	Depress the RING (red) side of the foot switch.	o	-	-	o
12	Disconnect the foot-switch plug from EFFECTS.	-	-	-	o
13	Insert the foot-switch plug into LOOPER.	o	o	o	o
14	Depress the TIP (white) side of the foot switch.	o	o	-	o
15	Depress the RING (red) side of the foot switch.	o	-	-	o
16	Disconnect the foot-switch plug from LOOPER.	-	-	-	o
17	Insert the 1/4-inch stereo phone plug into PHONES.	o	o	o	o
18	Disconnect the 1/4 stereo phone plug from PHONES.	-	-	-	*

o: illuminated, -: dark, *: flashing

When the operations up through No. 18 have been completed, the **POWER LED** flashes.

Inserting the foot-switch plug into the **EFFECTS** jack and depressing **TIP:CHORUS** (white) makes execution advance to the next test.

3. Volume Test (1)

When the volume test starts, all LEDs light up.

Working in the sequence shown below, change the settings of the controls from minimum to intermediate and to maximum and vice versa, and verify that the LEDs light up and the speaker plays sound.

1. GUITAR CHANNEL BASS
2. GUITAR CHANNEL MIDDLE
3. GUITAR CHANNEL TREBLE
4. REVERB/AMBIENCE
5. MASTER
6. MIC/LINE CHANNEL TREBLE
7. MIC/LINE CHANNEL BASS

On detection of minimum value: The **OVERDUB LED** lights up.

On detection of intermediate value: The **PLAY LED** lights up.

On detection of maximum value: The **REC LED** lights up.

The volume level of the speaker sound increases as the control is operated toward the maximum position, and from the intermediate position on, the pitch rises.

When all volume testing has been completed, all LEDs flash.

This concludes the testing.

4. Signal-level Test (for Reference)

After **3. Volume Test (1)** has been completed, depress **TIP:CHORUS** (white) to enter the Signal-level Test mode.

1. When verifying speaker output, connect a 4Ω load resistor to the speaker lines. When verifying headphones output, connect a 1/4-inch stereo phone plug with 100Ω load resistors (x 2) to the **PHONES** jack.

2. Connect a 1/4-inch phone plug with a 47 kΩ load resistor to the **LINE OUT** jack.

3. Connect a signal generator to the **INPUT** or **AUX IN** jack and input the signal described below.

GUITAR CHANNEL INPUT: -10 dBu, 1 kHz, sine wave

MIC/LINE CHANNEL INPUT (balanced): -42 dBu, 1 kHz, sine wave
(unbalanced): -36 dBu, 1 kHz, sine wave

AUX IN L and R: -23 dBu, 1 kHz, sine wave

* 0 dBu = 0.775 Vrms

4. Set the panel controls as shown below.

CHORUS: OFF

ANTI-FEEDBACK: OFF

GUITAR CHANNEL VOLUME: Maximum

MIC/LINE CHANNEL VOLUME: Maximum

AUX IN LEVEL: Maximum

Other controls: Minimum

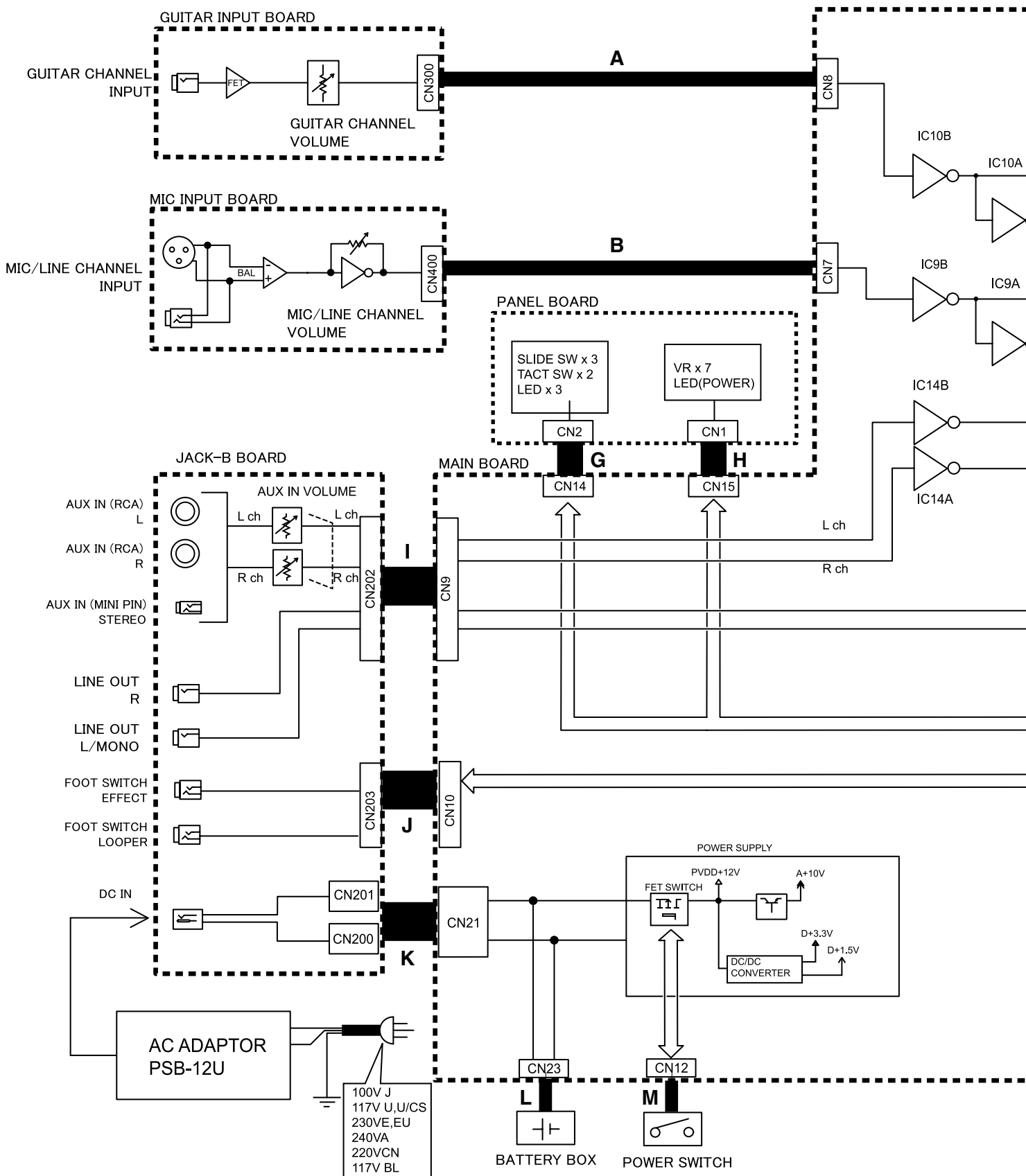
5. Verify the values at the measurement points shown in the **Circuit Diagram (Main Board: Analog)** (p. 28).

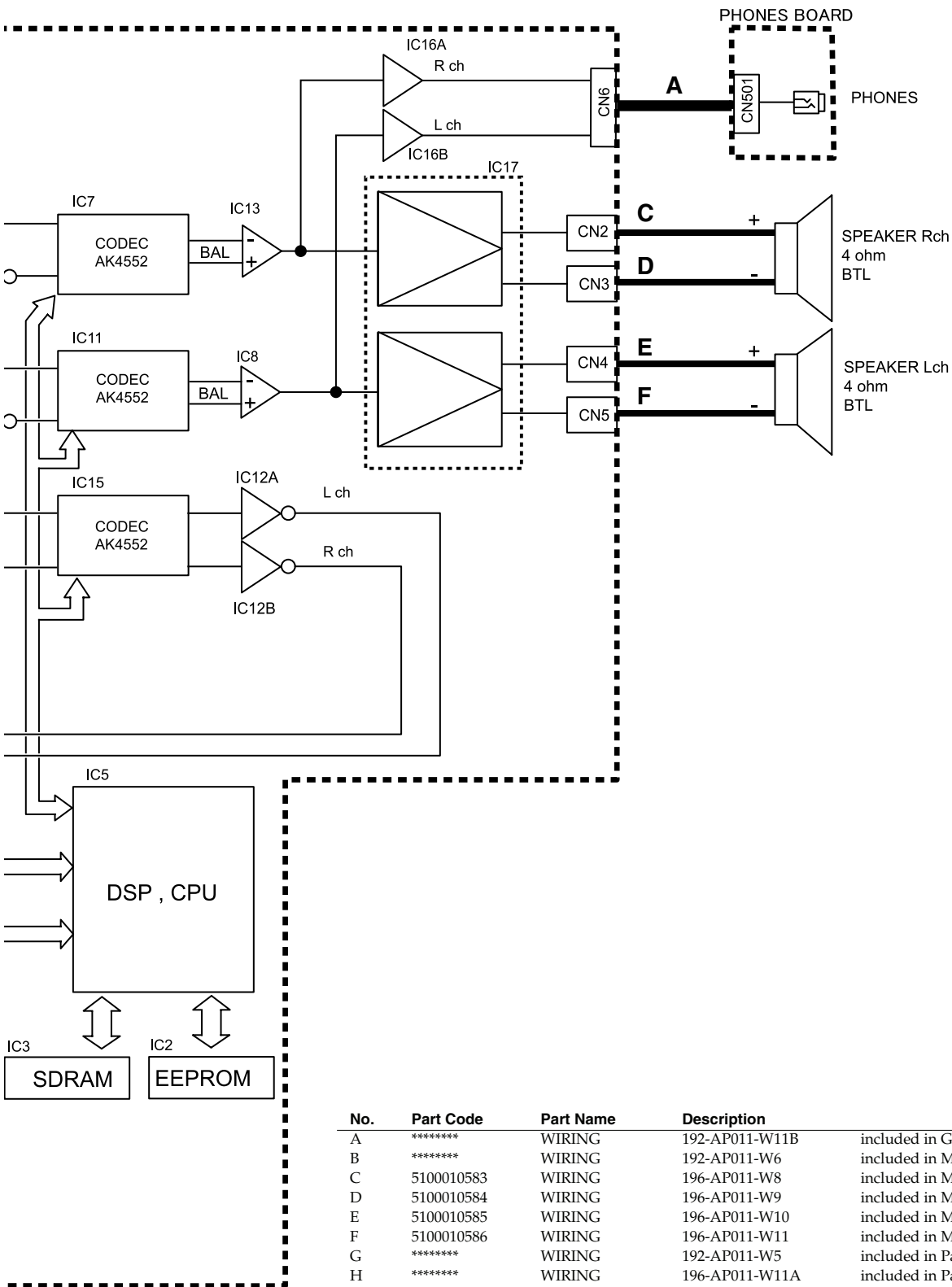
The allowed range for measured values is ±1.5 dBu.

5. Volume Test (2)

1. Reset the power and start the unit in the normal usage state.
2. Input a signal to **GUITAR CHANNEL INPUT**, turn the **GUITAR CHANNEL VOLUME** control, and verify that the volume level changes normally and that no noise occurs.
3. Carry out verification in the same way for **MIC/LINE CHANNEL** as well.

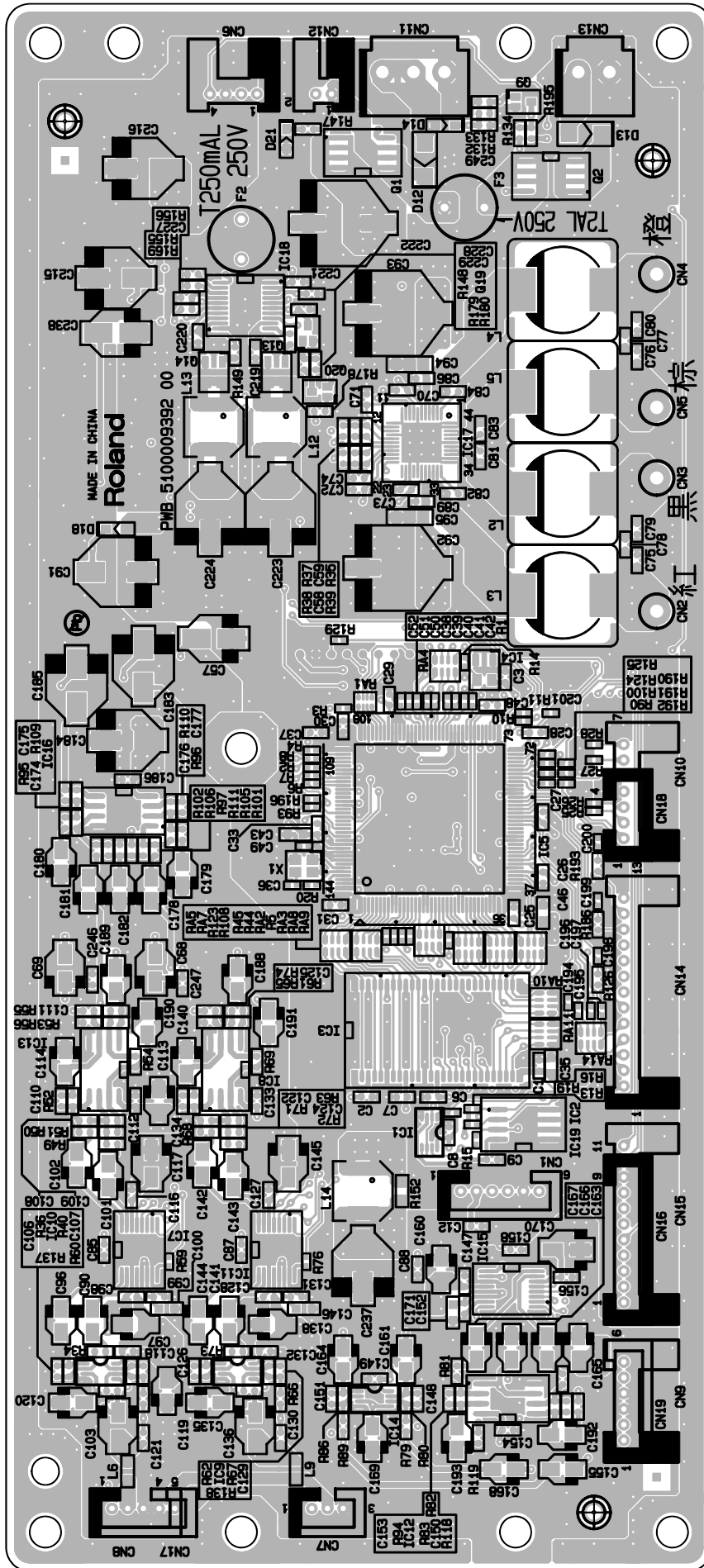
Block Diagram/Wiring Diagram

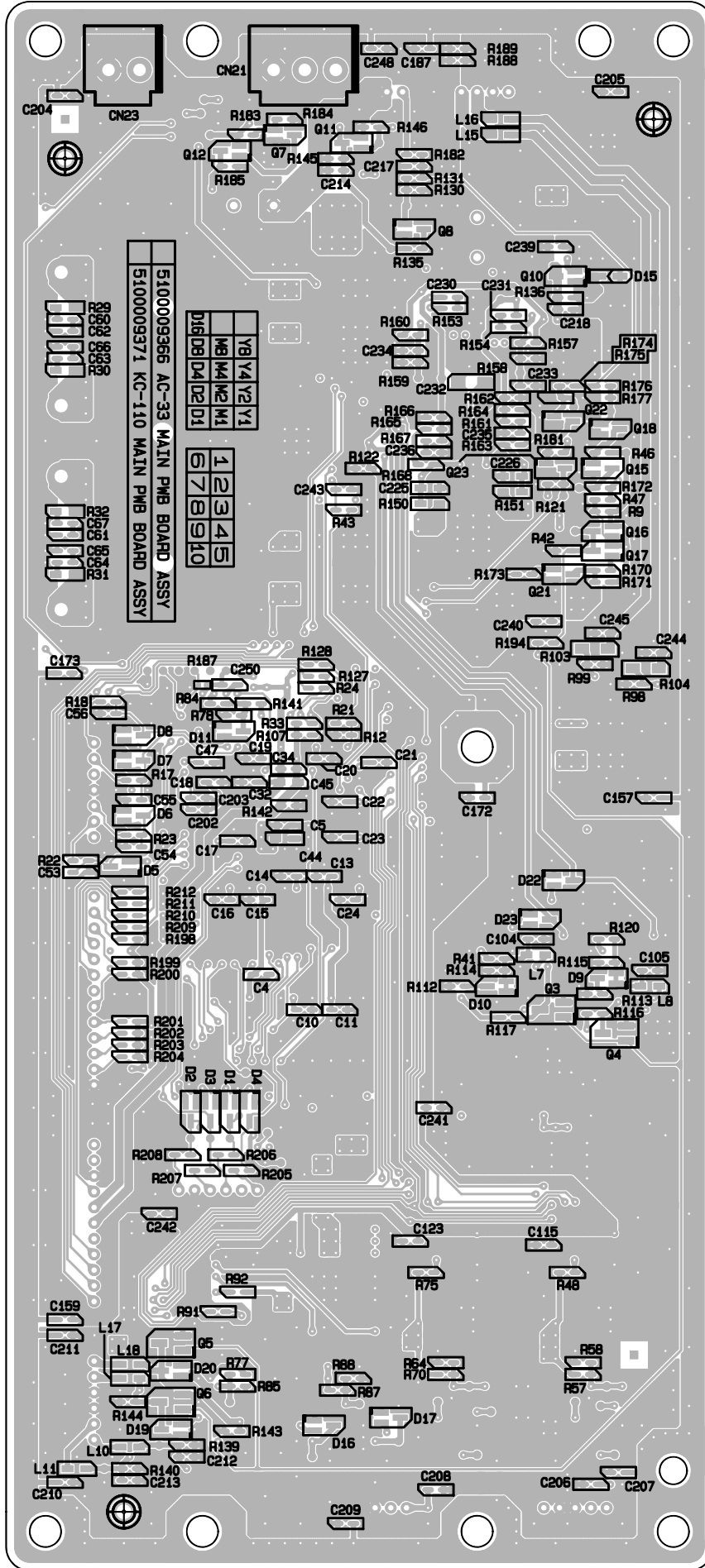




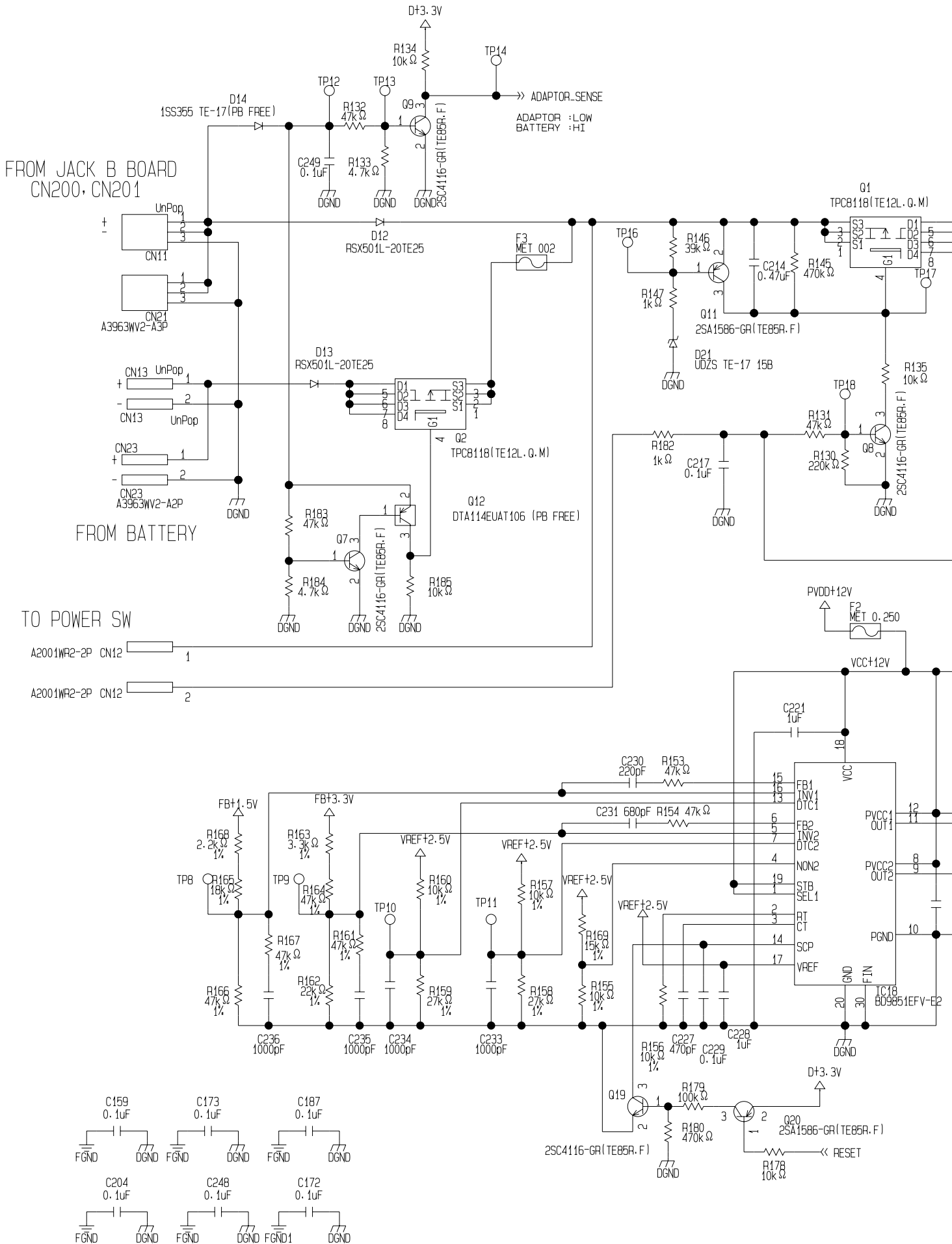
No.	Part Code	Part Name	Description	Q'ty	
A	*****	WIRING	192-AP011-W11B	included in GT Input Board	2
B	*****	WIRING	192-AP011-W6	included in Mic Input Board	1
C	5100010583	WIRING	196-AP011-W8	included in Main Board	1
D	5100010584	WIRING	196-AP011-W9	included in Main Board	1
E	5100010585	WIRING	196-AP011-W10	included in Main Board	1
F	5100010586	WIRING	196-AP011-W11	included in Main Board	1
G	*****	WIRING	192-AP011-W5	included in Panel Board	1
H	*****	WIRING	196-AP011-W11A	included in Panel Board	1
I	*****	WIRING	192-AP011-W1	included in Jack-B Board	1
J	*****	WIRING	192-AP011-W7	included in Jack-B Board	1
K	*****	WIRING	192-AP011-W2	included in Jack-B Board	1
L	5100010578	WIRING	192-AP011-W3	included in Battery Case Assy	1
M	5100010579	WIRING	192-AP011-W4		1

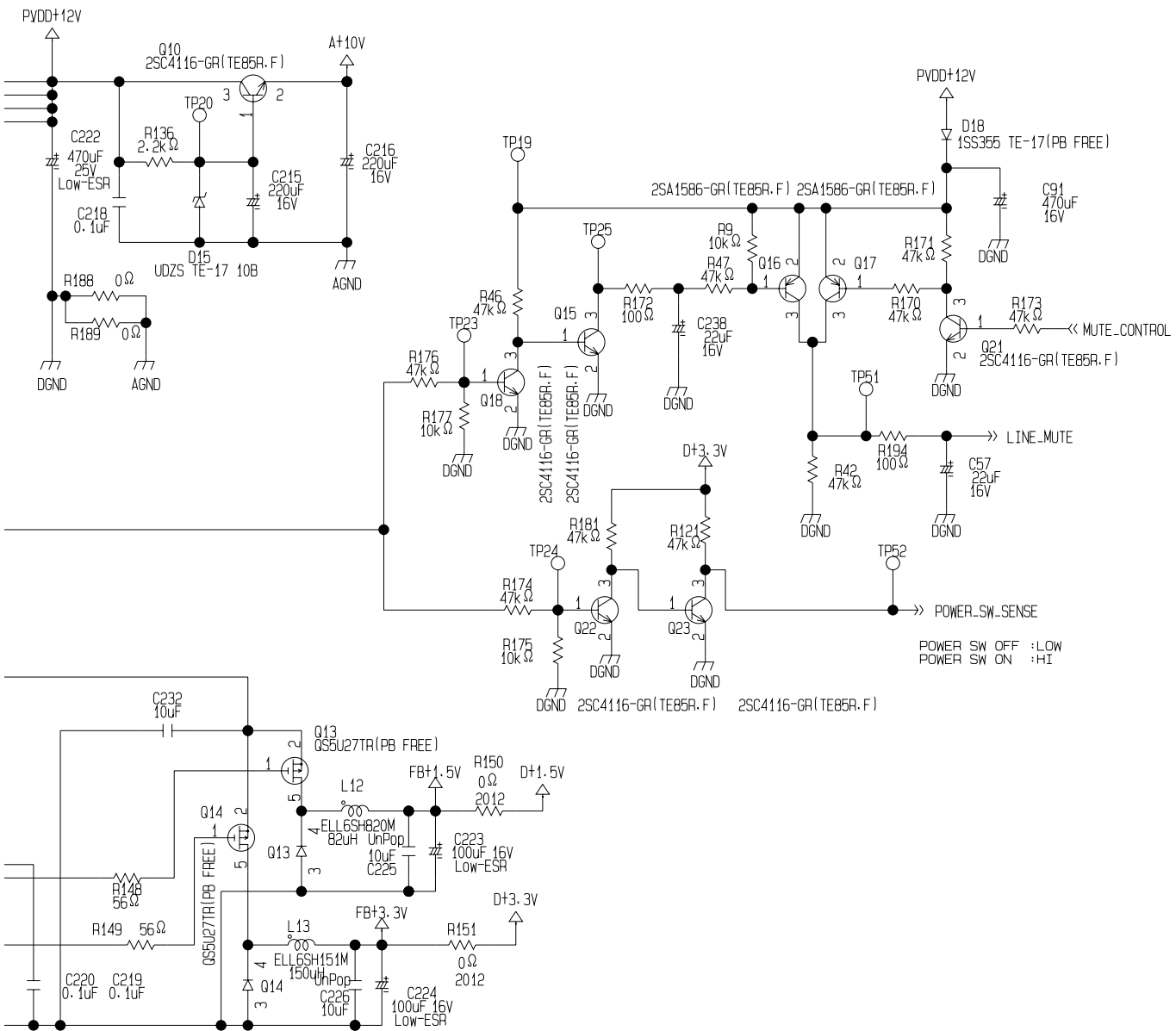
Circuit Board (Main Board)





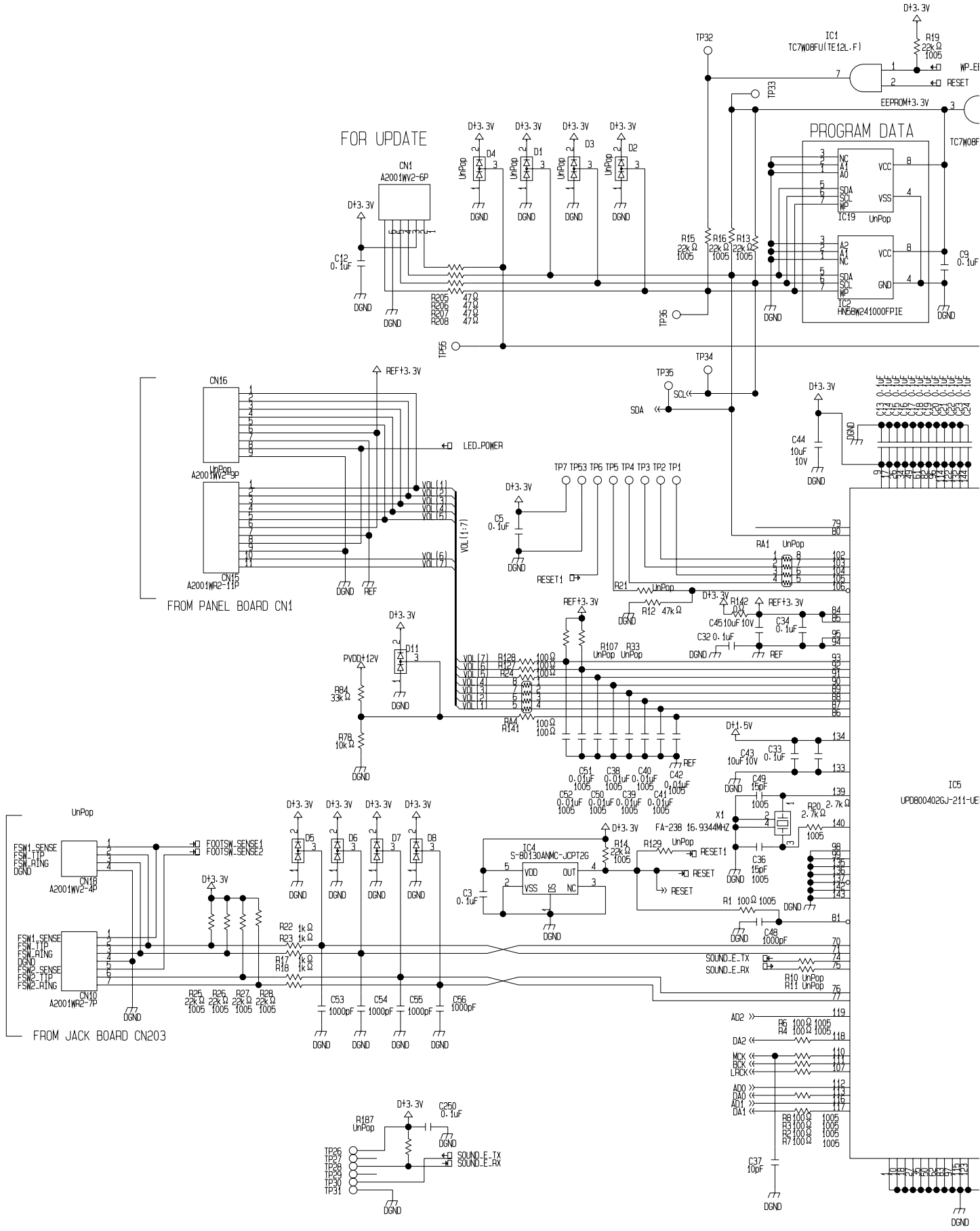
Circuit Diagram (Main Board: Power)



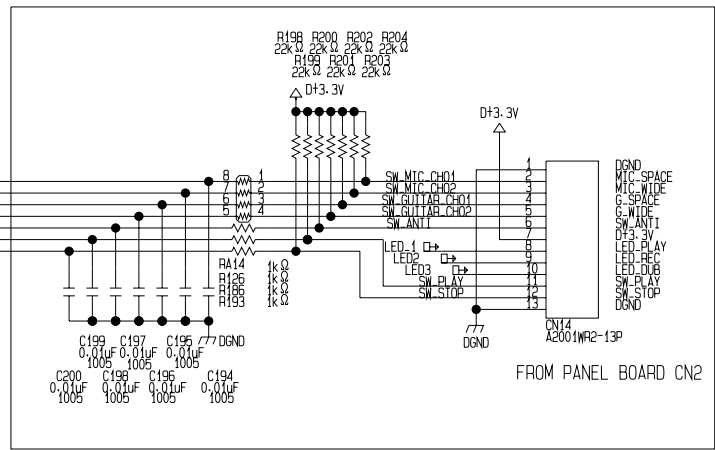
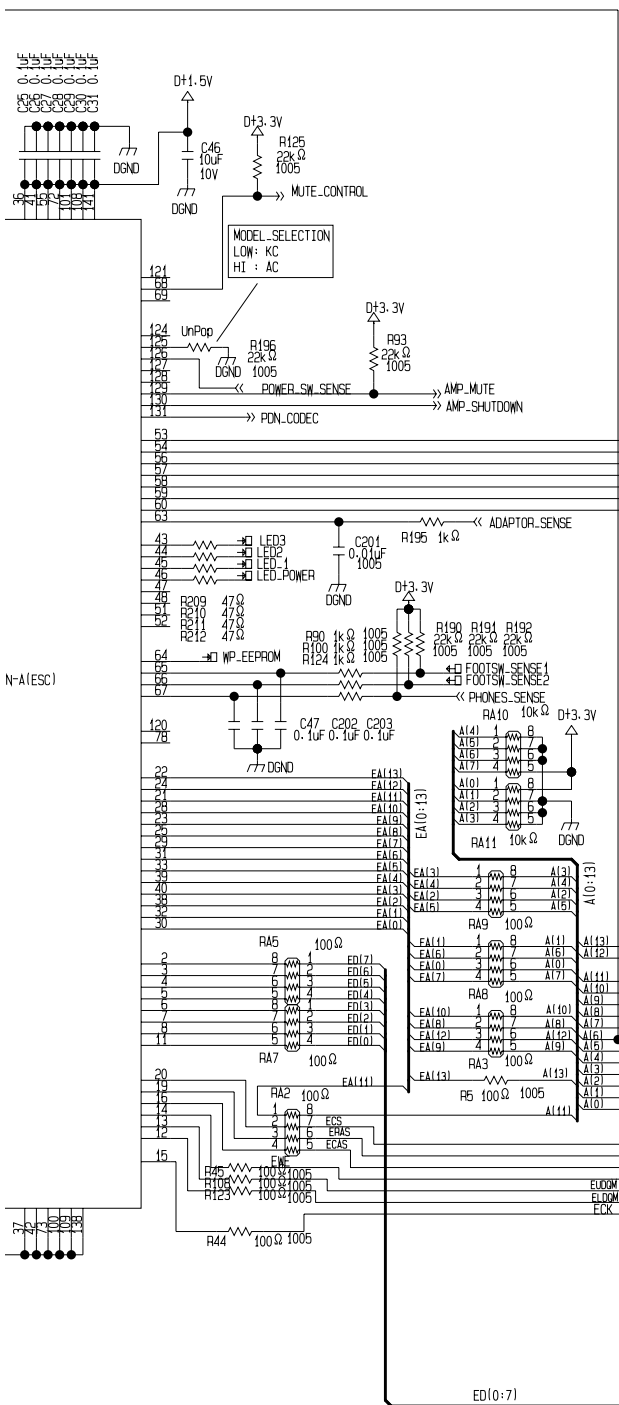
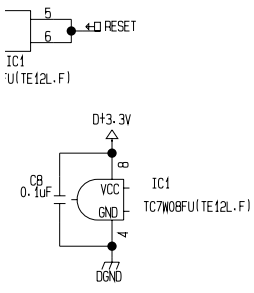


POWER SW OFF :LOW
POWER SW ON :HI

Circuit Diagram (Main Board: Digital)

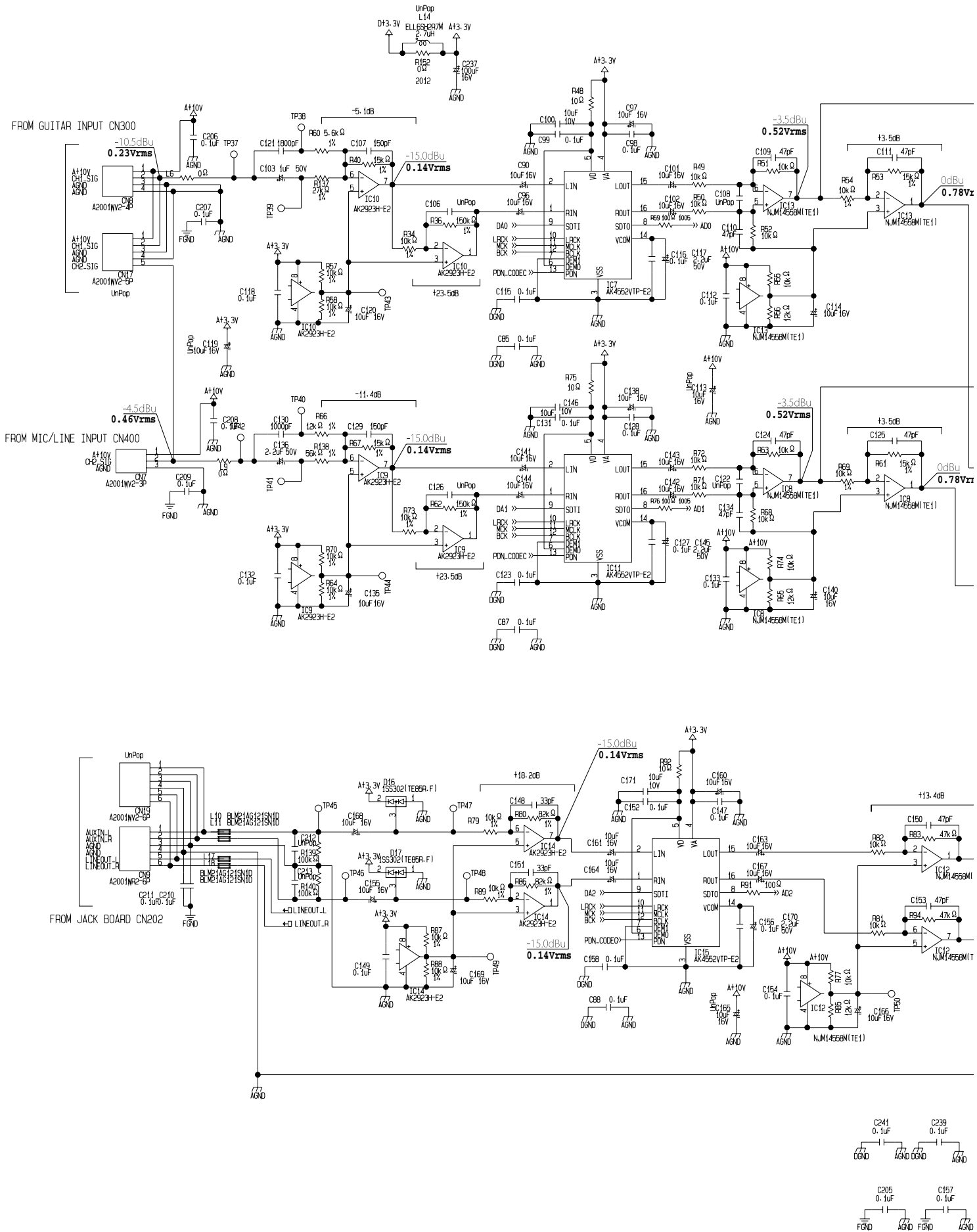


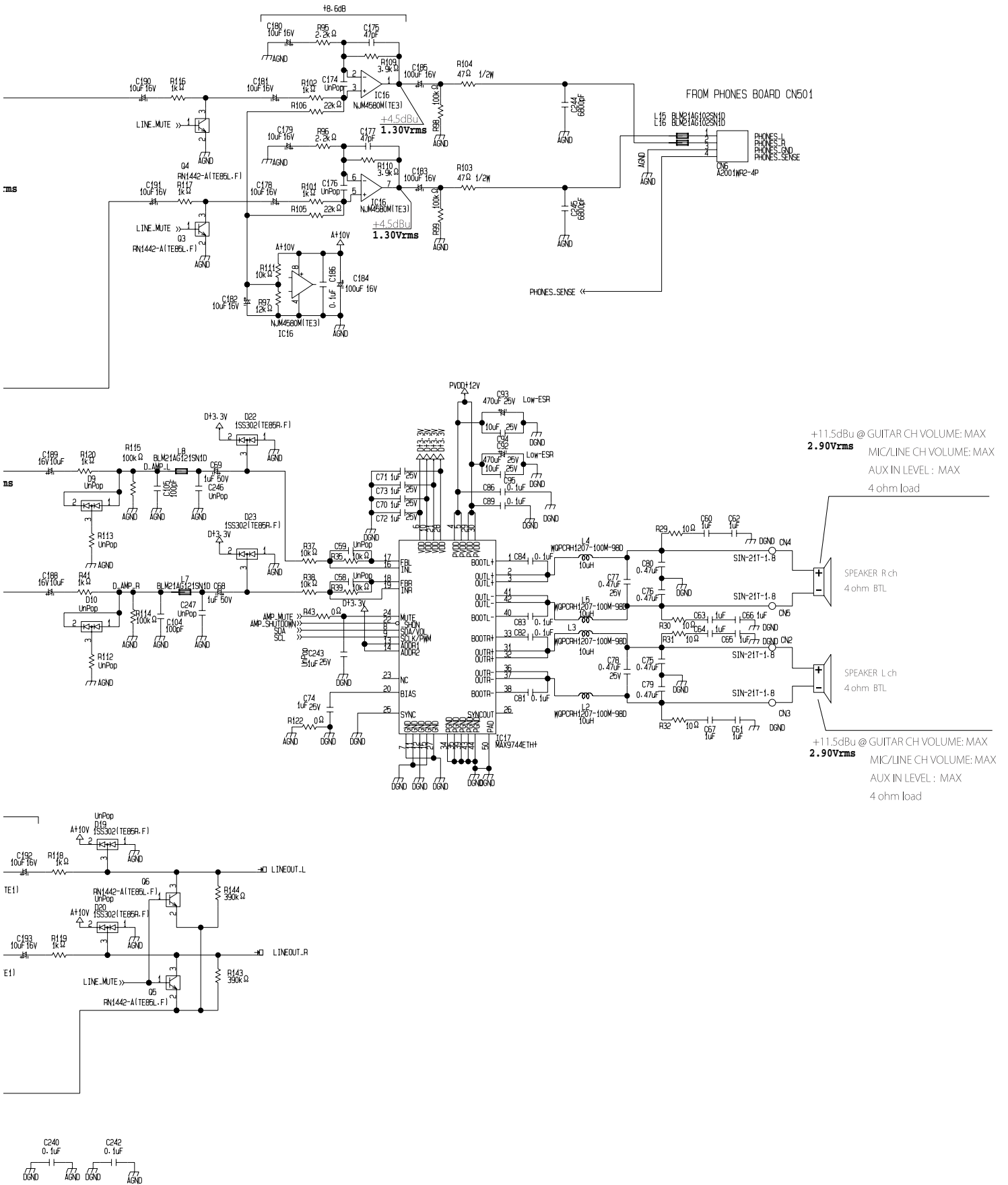
EPPROM



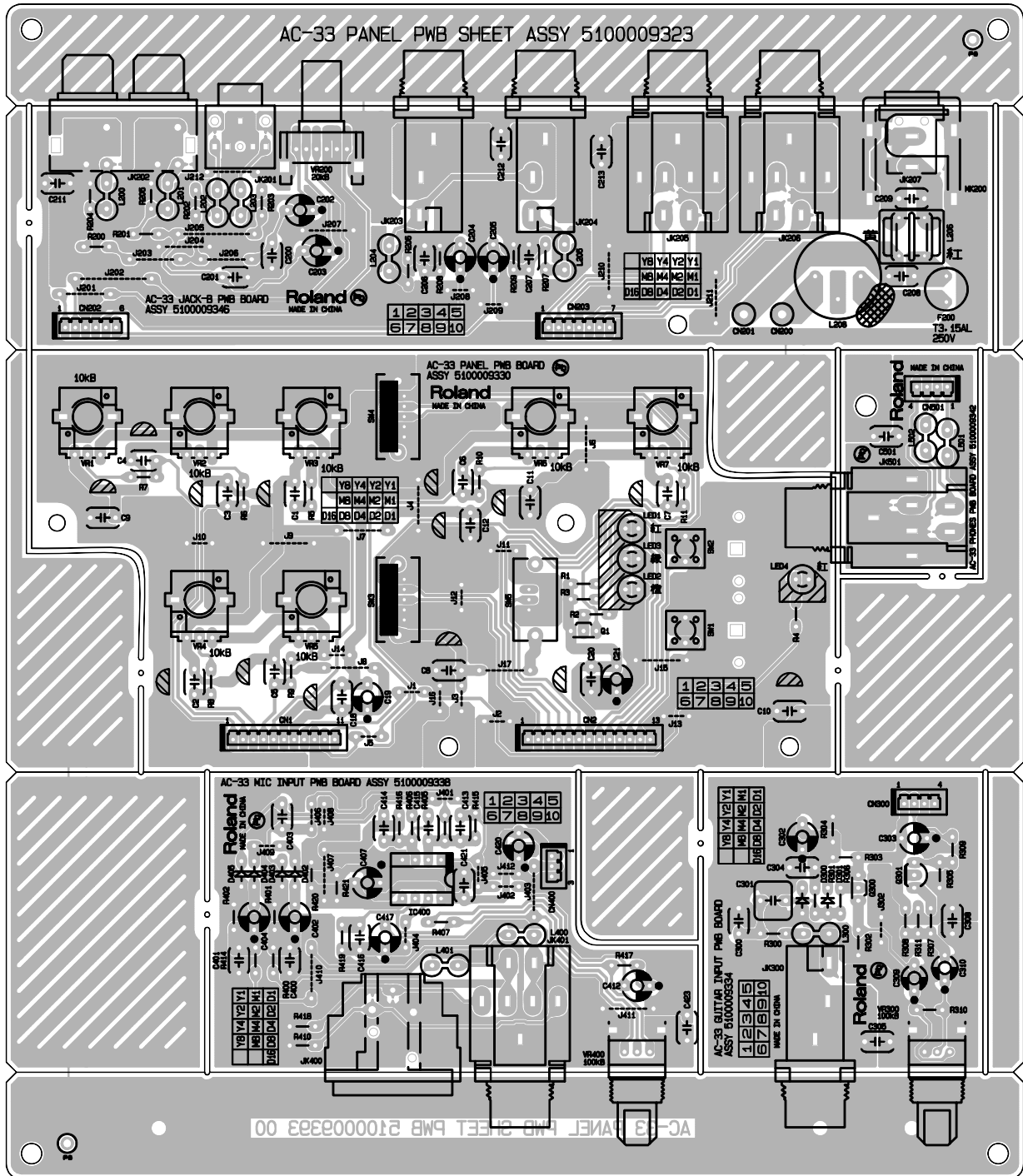
N:(ESC)

Circuit Diagram (Main Board: Analog)

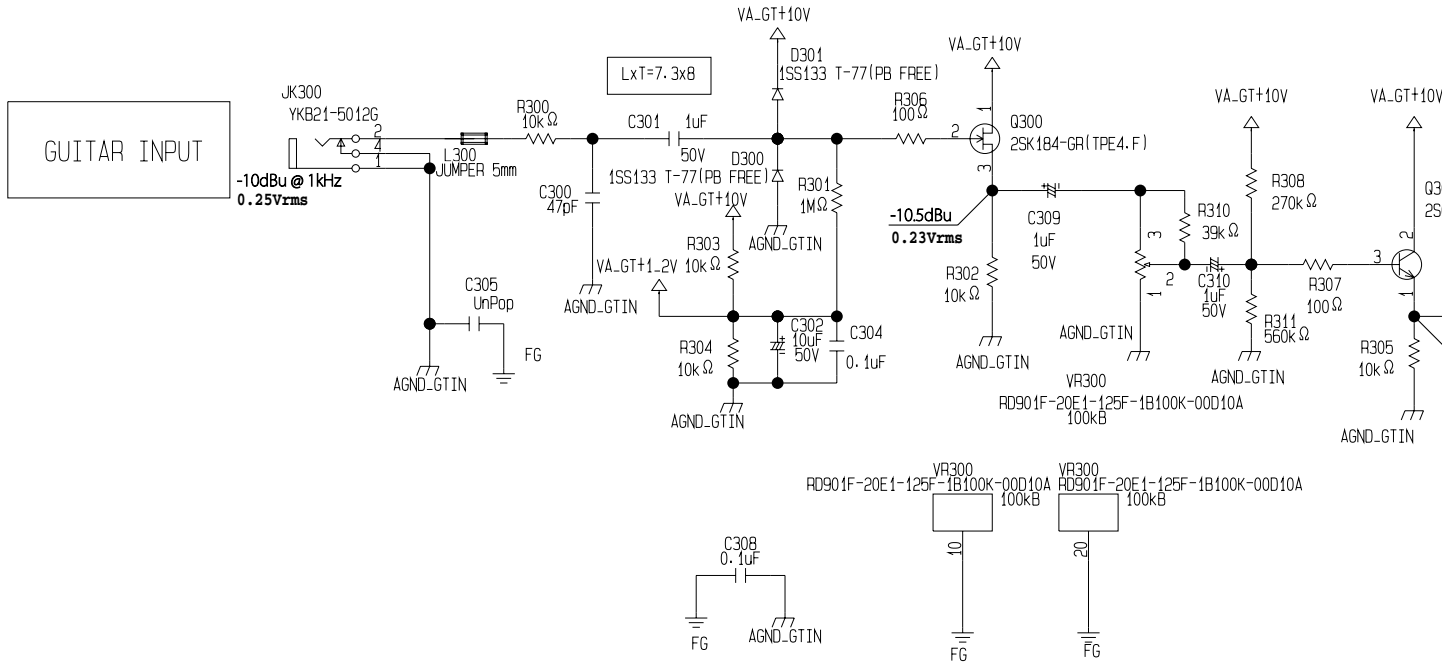




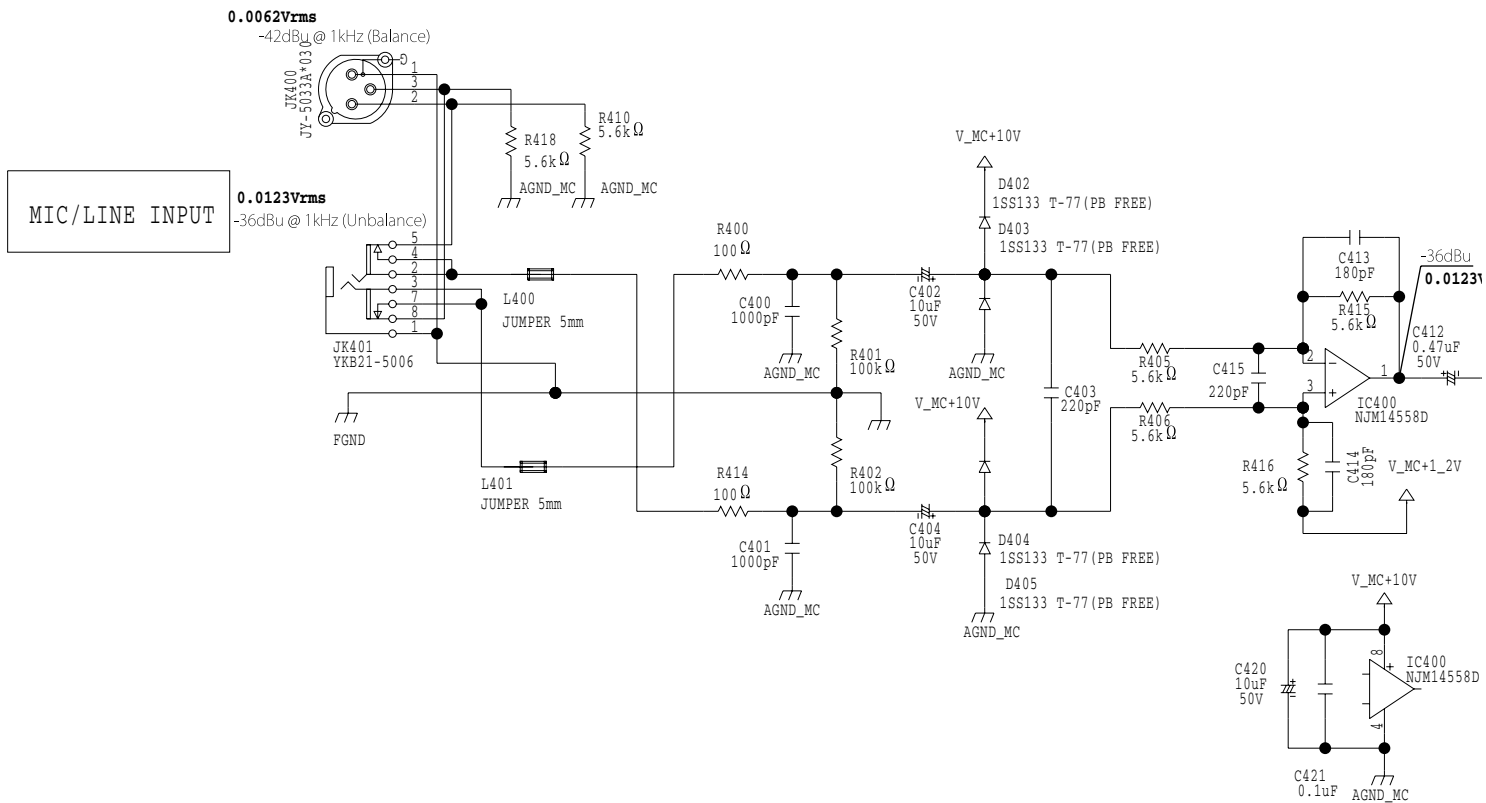
Circuit Board (Guitar Input, Mic Input, Panel, Jack B, Phones Board)



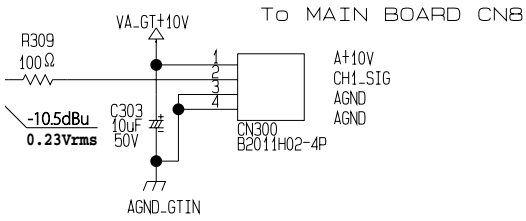
Circuit Diagram (Guitar Input Board)



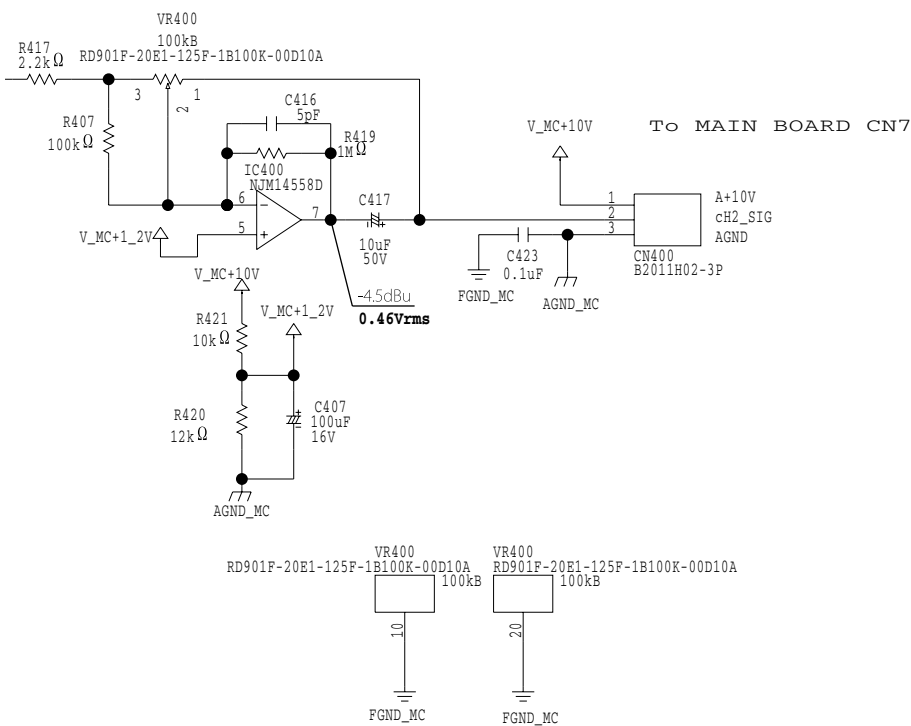
Circuit Diagram (Mic Input Board)



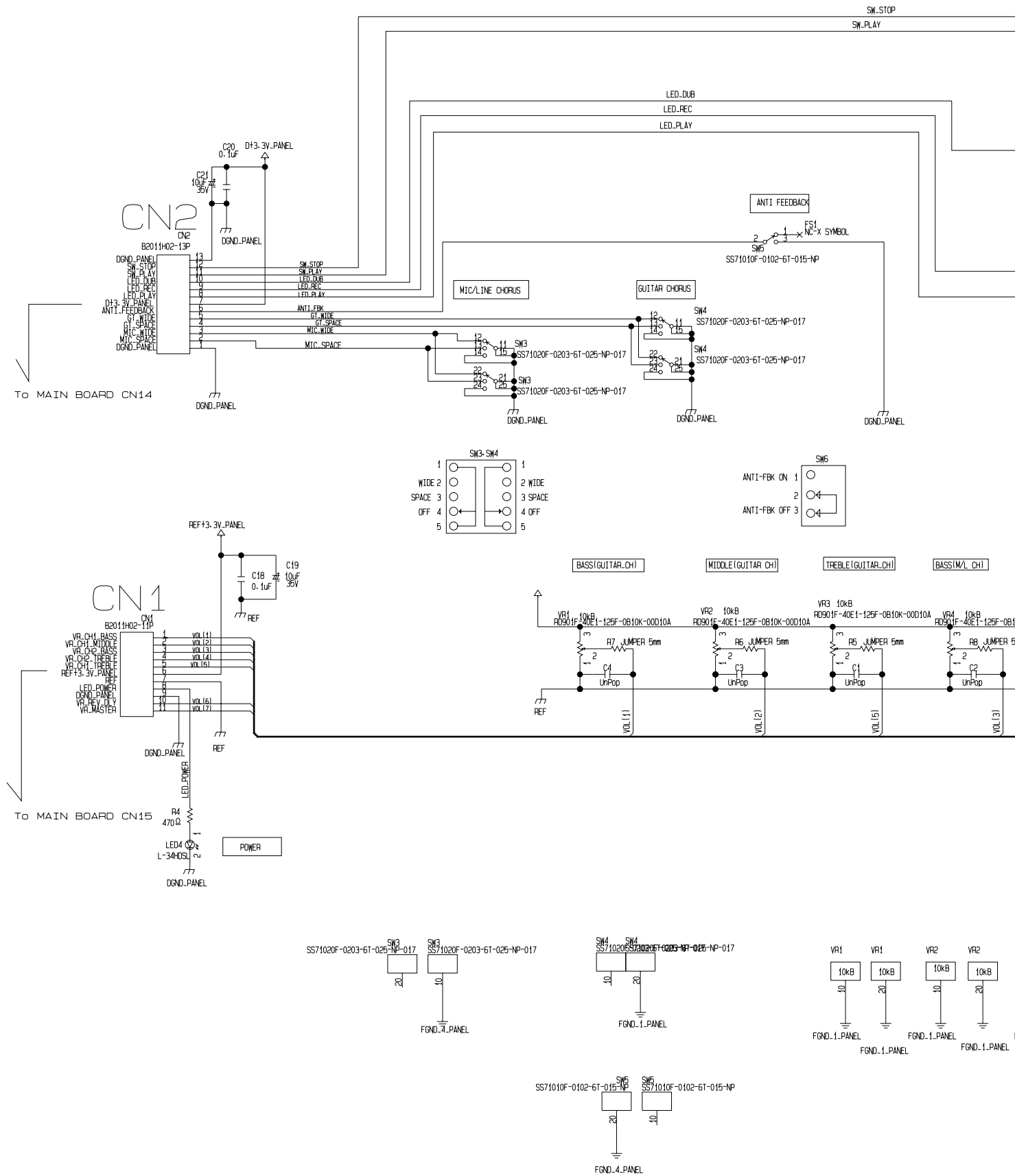
01
C2235-Y(TPE6.F)



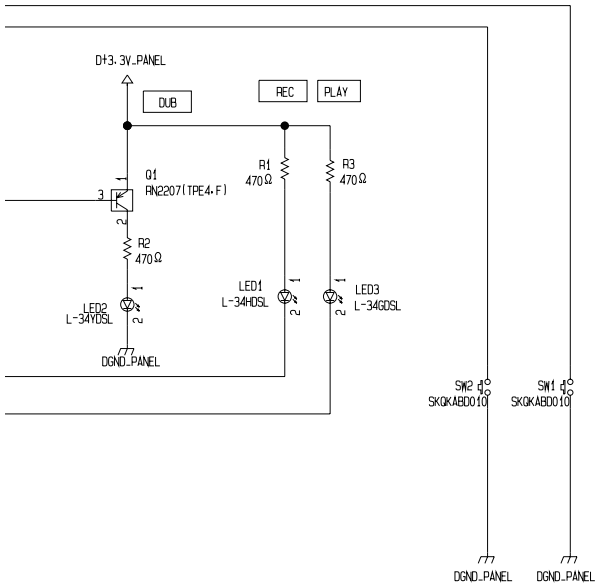
Vrms



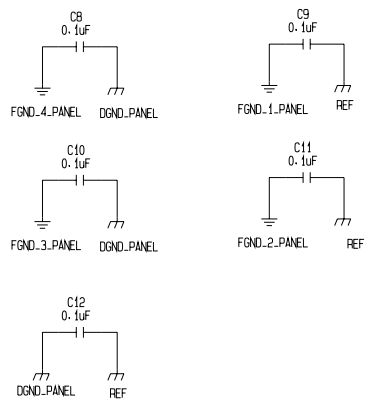
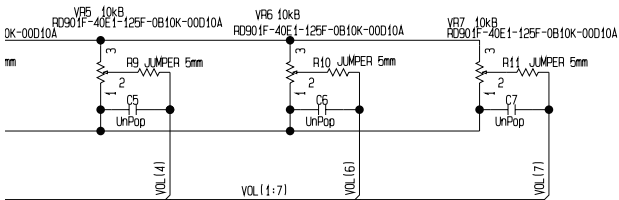
Circuit Diagram (Panel Board)



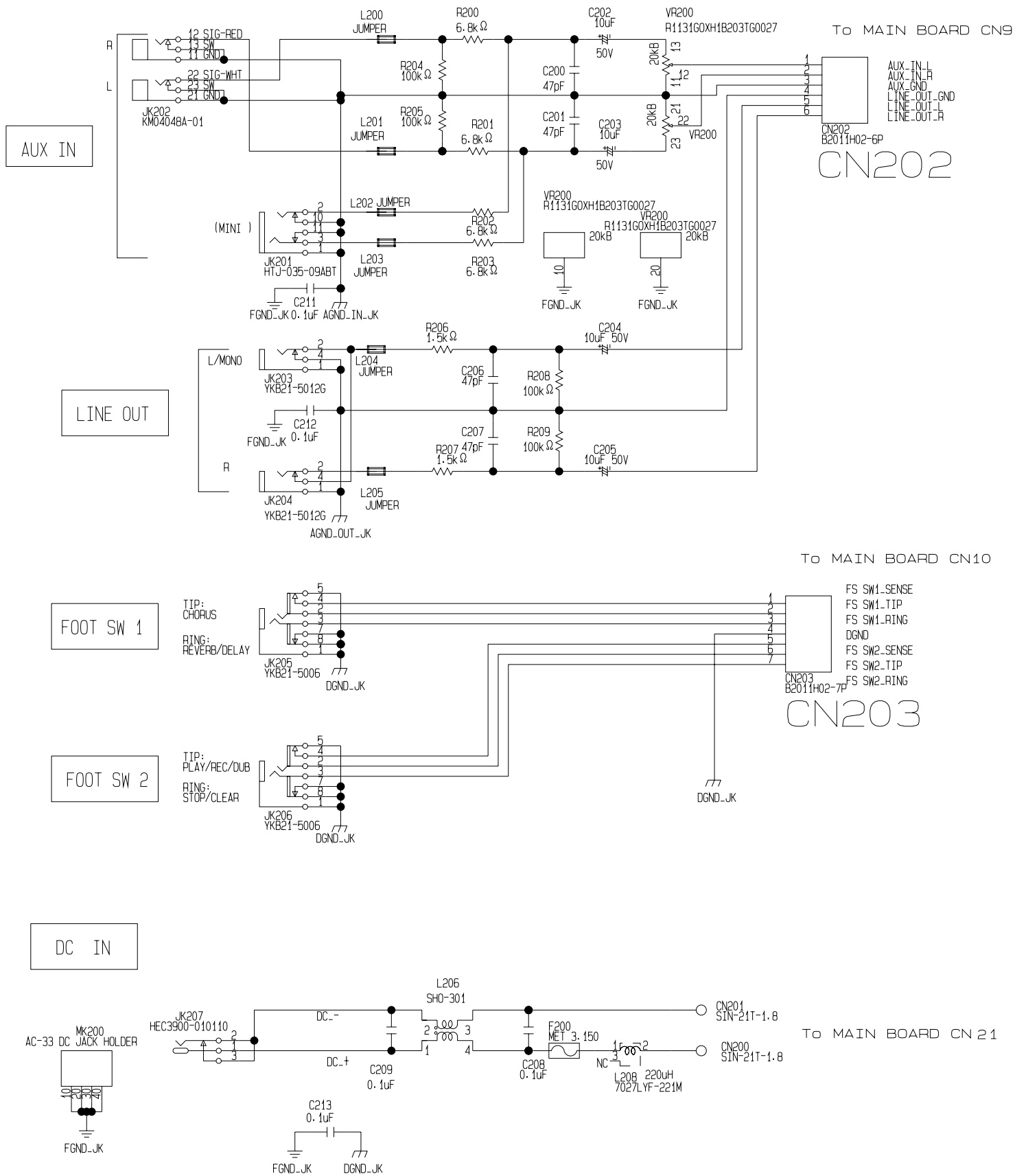
PLAY/REC/DUB STOP/CLEAR



REBLE (W/L CH) REVERB/DELAY MASTER



Circuit Diagram (Jack B Board)



Circuit Diagram (Phones Board)

