

CUBE-ST(E) CUBE-ST-RE

SERVICE NOTES *Issued by RJA*

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Revise Information

Jan. 23, 2013	p. 5, p. 8, p. 11	Corrected errors.
Dec. 24, 2013	p. 13	Corrected errors.
Jan. 21, 2015	p. 3	Changed description.
Jan. 30, 2015	p. 12, p. 13	Added words.



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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.

Part Replacement

When replacing components near the power-supply circuit or a heat-generating circuit (such as a circuit provided with a heat sink or including a cement resistor), carry out the procedure according to the instructions with respect to the part number, direction, and attachment position (mounting so as to leave an air gap between the component and the circuit board, etc.).

Parts List

A component whose part code is ***** cannot 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).

Circuit Diagram

In the circuit diagram, "NIU" is an abbreviation for "NOT IN USE." The circuit board and circuit board diagram show silk-screened indications, but no components are mounted.

Specifications

CUBE-ST, CUBE-ST-R

Rated Power Output

STEREO 5 W (2.5 W + 2.5 W)

Nominal Input Level (1 kHz)

MIC/LINE Channel: -50/-10 dBu

GUITAR/INSTRUMENT Channel: -10 dBu

STEREO AUX IN: -10 dBu

* 0 dBu = 0.775 V rms

Speakers

16 cm (6.5 inches) x 2

Controls

POWER Switch

<MIC/LINE Channel>

SELECT Switch (MIC/LINE)

VOLUME Knob

EQUALIZER Knobs (BASS, TREBLE)

DELAY/REVERB Knob

<GUITAR/INSTRUMENT Channel>

TUNER Switch

TYPE Switch

GAIN Knob

VOLUME Knob

EQUALIZER Knobs (BASS, MIDDLE, TREBLE)

EFX Knob

DELAY/REVERB Knob

Indicators

TUNER

POWER

Connectors

<MIC/LINE Channel>

Input Jacks (XLR type, 1/4-inch phone type)

Foot Switch Jack (1/4-inch TRS phone type, TIP: mute, RING: DELAY/REVERB)

<GUITAR/INSTRUMENT Channel>

Input Jack (1/4-inch phone type)

Foot Switch Jack (1/4-inch TRS phone type, TIP: EFX, RING: DELAY/REVERB)

AUX IN Jack (Stereo miniature phone type)

PHONES Jack (Stereo 1/4-inch phone type)

AC Adaptor Jack

Power Supply

DC 9 V: AC Adaptor or Dry Battery (LR6 (AA) type) (optional) x 6

Current Draw

235 mA

Dimensions

415 (W) x 295 (D) x 250 (H) mm

16-3/8 (W) x 11-5/8 (D) x 9-7/8 (H) inches

Weight

5.2 kg (~~including Battery~~) (~~excluding Battery~~)

11 lbs 8 oz. (~~including Battery~~) (~~excluding Battery~~)

Accessories

AC Cord (#5100003142, #5100012293, #02562456, #05121389, #5100002577, #01903356, #03785590)

AC Adaptor (#04236101)

Owner's Manual English (#5100026384)

Options

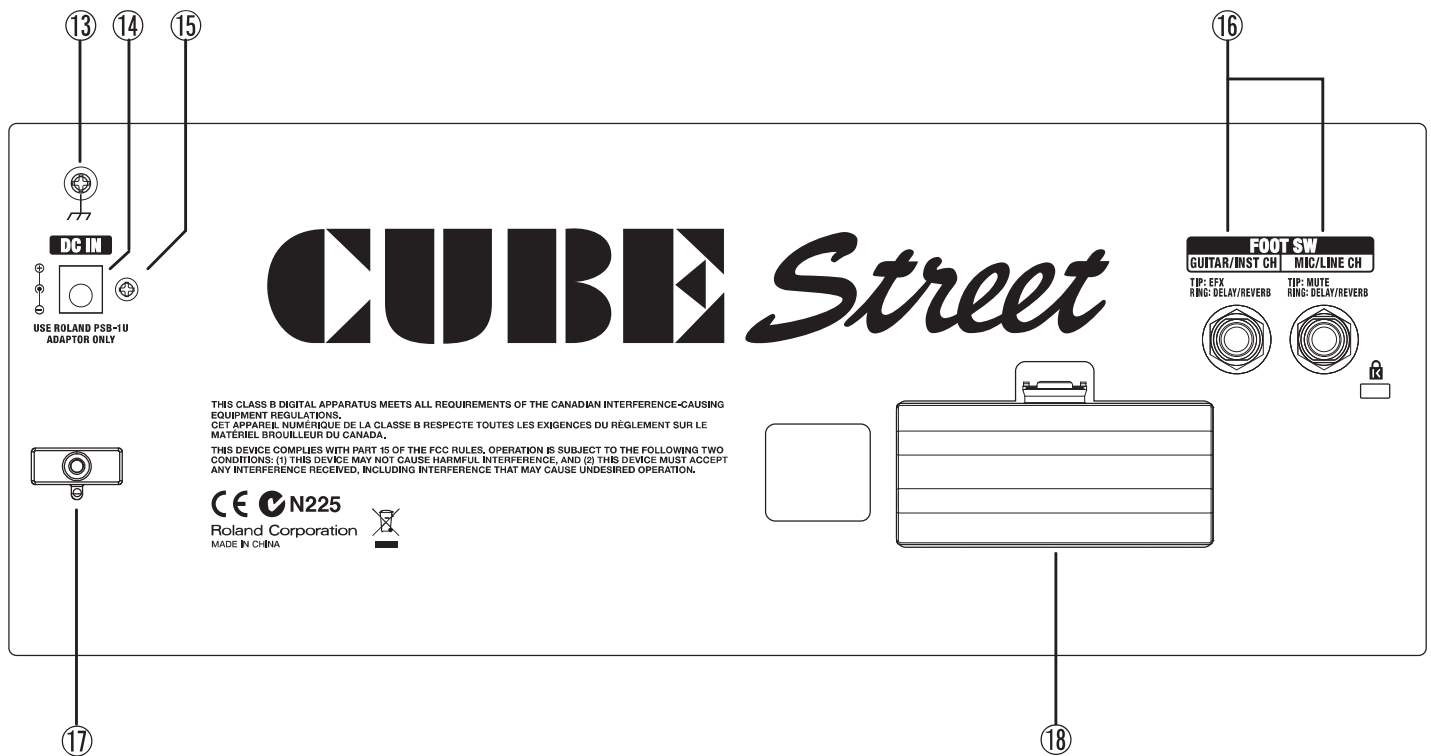
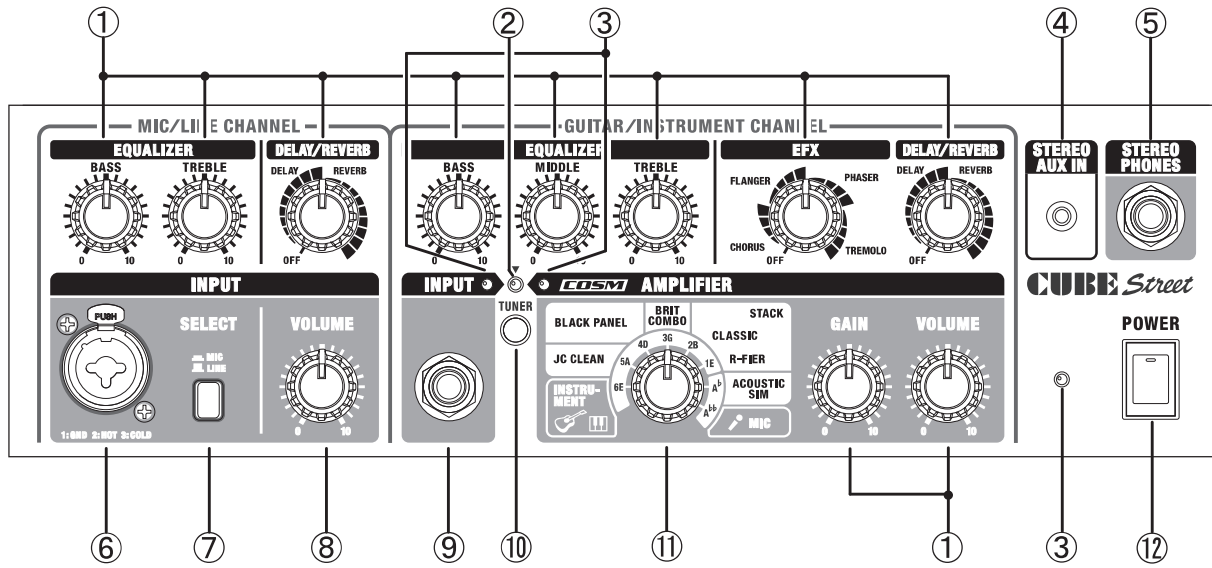
Carrying Case: CB-CS1

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

Connection Cable: PCS-31

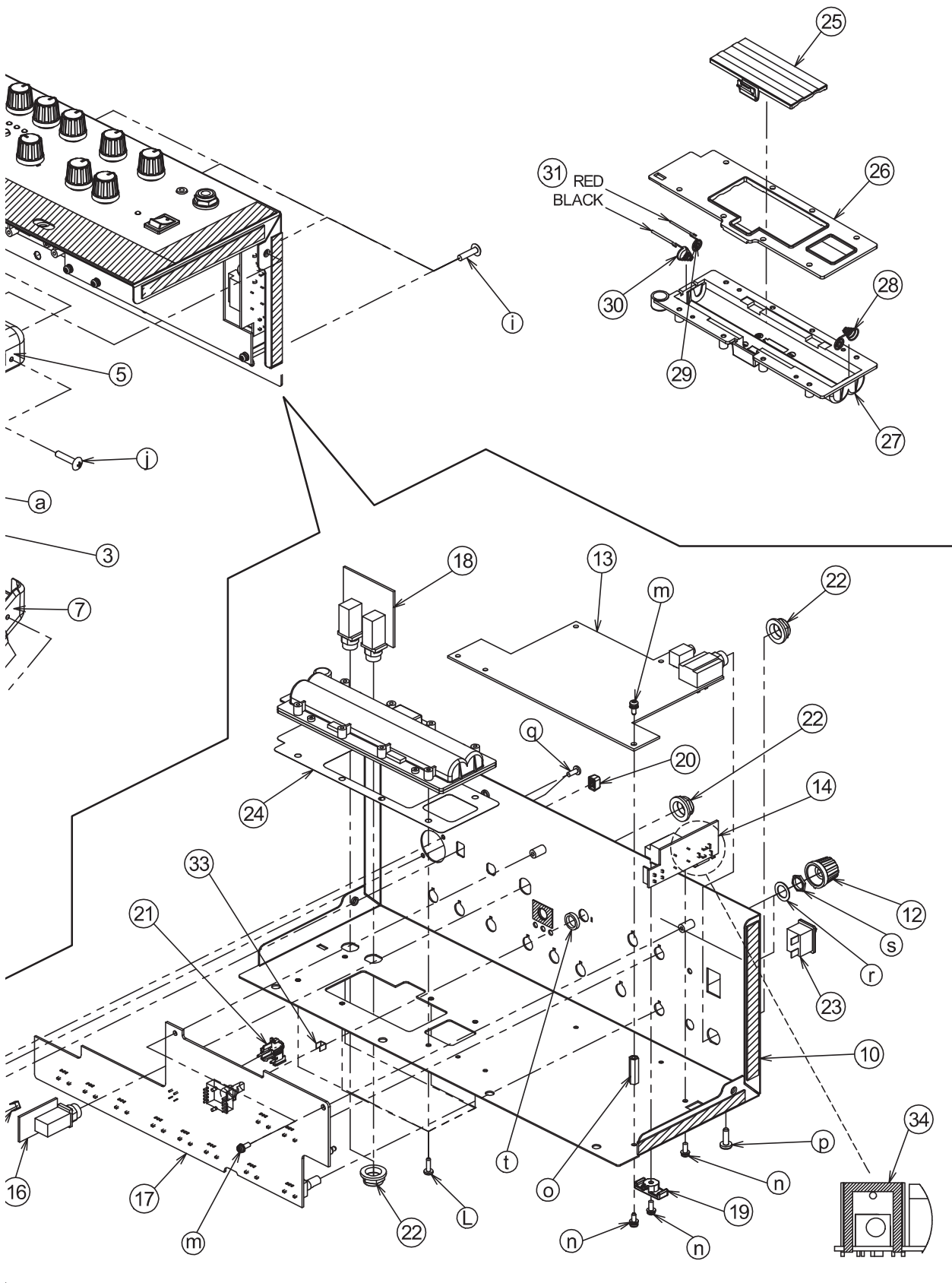
* In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

Location of Controls



Location of Controls Parts List

No.	Part Code	Part Name	Description	Q'ty
1	5100004182	POTENTIOMETER(102-901F-103BB)	RD901F-40E1-15F-0B10K-00DN6	10
	5100004351	R-KNOB	05800-515(SD000043)40A-KBG-10	10
	17048630	VR ACCESSORY NUT M9		10
	40452178	VR WASHER M9		10
2	5100019879	LED(GREEN)	L-710XVGD-E-SZ	1
3	5100019878	LED(RED)	L-710XSURD-E-SZ	3
4	02456390	3.5MM JACK	STEREO YKB21-5290	1
5	13449252	6.5MM JACK	YKB21-5006 (STEREO W/SW)	1
	22150756	JACK NUT 2	PLASTIC/BLK	1
	5100023941			
6	01901001	XLR CONNECTOR	NCJ9FI-H	1
	40011101	SCREW 3X8	BINDING TAPTITE B BZC	2
7	5100004355	BUTTON	08203-501(SD000082)	1
	01348745	SWITCH (PUSH)	SPUP192700LF	1
8	5100004351	R-KNOB	05800-515(SD000043)40A-KBG-10	1
	5100026056	ROTARY POTENTIO METER	RV110F-20E1-15A-B100K-00B7	1
	17048630	VR ACCESSORY NUT M9		1
	40452178	VR WASHER M9		1
9	13449146	6.5MM JACK	YKB21-5012 (W/SW)	1
	22150756	JACK NUT 2	PLASTIC/BLK	1
	5100023941			
10	5100004353	KEYTOP	40285-501(SD000906)	2
	5100019878	LED(RED)	L-710XSURD-E-SZ	1
11	5100026061	ROTARY SWITCH (SD000907)	SR1712F-0108-175F0A-N9-N-008	1
	5100004351	R-KNOB	05800-515(SD000043)40A-KBG-10	1
	17048630	VR ACCESSORY NUT M9		1
	40452178	VR WASHER M9		1
12	02897801	SEESAW SWITCH	SDDJE13200 94V-0	1
13	40454856	SCREW M4X10	BINDING NI	1
14	13449717	ADAPTOR JACK	HEC2392-0101509	1
15	40237101	SCREW M3X8	PAN MACHINE W/SW+SMALL PW BZC	1
16	13449252	6.5MM JACK	YKB21-5006 (STEREO W/SW)	2
	22150756	JACK NUT 2	PLASTIC/BLK	1
	5100023941			
17	22365714	CORD HOOK		1
	40237101	SCREW M3X8	PAN MACHINE W/SW+SMALL PW BZC	1
18	5100025802	BATTERY COVER ASSY		1



Exploded View Parts List

Parts

No.	Part Code	Part Name	Description	Q'ty
1	5100004363	BADGE	05800-516(SD000017)40A-BG-10	1
2	5100026107	GRILLE	(SD001028) Silver (for CUBE-ST(E))	1
	5100026108	GRILLE	(SD001029) Bright Silver (for CUBE-ST-RE)	1
3	5100025837	CABINET ASSY	Black (for CUBE-ST(E))	1
	5100025838	CABINET ASSY	Red (for CUBE-ST-RE)	1
	* This unit includes the following parts.			
4	5100027111	TRIM SASH		1
5	5100027098	CORNER PROTECTOR	TOP	2
6	5100027096	CORNER PROTECTOR	BOTTOM L	1
7	5100027097	CORNER PROTECTOR	BOTTOM R	1
8	5100027159	RUBBER FOOT	D30.5XT9.5	4
9	5100028230	SPEAKER	W6504-436B	2
10	5100025829	CHASSIS	W/CUSHION	1
	* This unit includes the following parts.			
	*****	EVA PACKING 370x40x1t W / ADH		1
	*****	EVA PACKING 100x20x1t W / ADH		2
	*****	EVA PACKING 120x10x1t W / ADH		4
	*****	EVA PACKING 19x15x0.5t W / ADH		4
11	*****	HANDLE WITH ESCUTCHEON		1
	* This unit includes the following parts.			
	5100011381	HANDLE		1
	5100011382	HANDLE PLATE		1
	5100011383	HANDLE HOLDER		1
12	5100004351	R-KNOB	05800-515(SD000043)40A-KBG-10	12
	5100025831	MAIN BOARD ASSY		1
	* This unit includes the following parts.			
13	*****	MAIN BOARD		1
14	*****	JACK BOARD		1
15	*****	MIC BOARD		1
16	*****	INPUT BOARD		1
	5100025834	PANEL BOARD ASSY		1
	* This unit includes the following parts.			
17	*****	PANEL BOARD		
18	*****	PEDAL BOARD		1
19	22365714	CORD HOOK		1
20	5100004355	BUTTON	08203-501(SD000082)	1
21	5100004353	KEYTOP	40285-501(SD000906)	1
22	22150756	JACK NUT 2	PLASTIC/BLK	4
	5100023941			
23	02897801	SEESAW SWITCH	SDDJE13200 94V-0	1
24	5100026596	BATTERY SHEET		1
25	5100025802	BATTERY COVER ASSY		1
	* This unit includes the following parts.			
	*****	EVA PACKING 28x2x0.5t W / ADH		2
	*****	BATTERY CUSHION		1
26	5100026589	BATTERY PLATE		1
27	5100026590	BATTERY CASE	(SD000418)	1
28	5100026102	BATTERY SPRING +-		1
29	5100026101	BATTERY SPRING +		1
30	5100026103	BATTERY SPRING -		1
31	04892645	BATTERY WIRING	(SD001035)	1
32	5100004364	HIMELON	6X50X0.5T W / ADH	3
33	5100004352	HIMELON	4X15X0.25T W / ADH(902-BG-431KN)	2
34	5100026097	DC JACK HOLDER	(SD001047)	1

* The following unit includes all the parts from No.10 to 34 mentioned above.

#5100025828 CHASSIS ASSY

Screws

No.	Part Code	Part Name	Description	Qty
a	510009866	SCREW 3X12	TRUSS TAPPING A BZC	23
b	40010134	SCREW M4X20	TRUSS MACHINE BZC	8
c	40010567	SCREW M4X35	SPECIAL TRUSS BZC	4
d	5100005101	WASHER	RESIN 4.1X11X1 BLACK #SD000430	4
e	40230789	SCREW M3X10	OVALHEAD MACHINE BZC	2
f	40011689	SPEED NUT M3	F-TYPE	2
g	40010689	SCREW 4X25	TRUSS TAPTITE A1 BZC	4
h	5100005100	WASHER(323-BG-405LF)	FLAT 4.2X10X0.5 BZC	4
i	40010667	SCREW 4X16	TRUSS TAPTITE A1 BZC	4
j	40010534	SCREW M4X20	ORIGINAL TRUSS MACHINE BZC	2
k	40564601	SCREW M5X35	OVALHEAD MACHINE BZC	2
L	40011323	SCREW 3X10	BINDING TAPTITE P BZC	6
m	40013067	SCREW M3x8	PAN MACHINE W/SW+SMALL PW ZC	7
n	40237101	SCREW M3x8	PAN MACHINE W/SW+SMALL PW BZC	7
o	5100011021	STANDOFF	M3-L6-H20 (311-BG436)	5
p	40454856	SCREW M4x10	BINDING MACHINE Ni	1
q	40011312	SCREW 3X8	BINDING TAPTITE P BZC	2
r	40452178	VR WASHER M9		12
s	17048630	VR ACCESSORY NUT M9		12
t	5100005097	WASHER	FLAT 9.1X12X2.5 #SD000916	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					
	5100025837	CABINET ASSY		Black (for CUBE-ST(E))	1
	5100025838	CABINET ASSY		Red (for CUBE-ST-RE)	1
	5100026107	GRILLE	(SD001028)	Silver (for CUBE-ST(E))	1
	5100026108	GRILLE	(SD001029)	Bright Silver (for CUBE-ST-RE)	1
#	5100025829	CHASSIS	W/CUSHION		1
	5100011381	HANDLE			1
	5100027098	CORNER PROTECTOR	TOP		2
	5100027096	CORNER PROTECTOR	BOTTOM L		1
	5100027097	CORNER PROTECTOR	BOTTOM R		1
	5100027111	TRIM SASH			1
	5100025802	BATTERY COVER ASSY			1
CHASSIS					
	5100026590	BATTERY CASE	(SD000418)		1
	5100026589	BATTERY PLATE	(SD000421)		1
	5100011383	HANDLE HOLDER			2
	5100011382	HANDLE PLATE			1
	5100026097	DC JACK HOLDER	(SD001047)		1
KNOB, BUTTON					
	5100004351	R-KNOB	05800-515(SD000043)40A-KBG-10		12
	5100004353	KEYTOP	40285-501(SD000906)		1
	5100004355	BUTTON	08203-501(SD000082)		1
SWITCH					
	5100026061	ROTARY SWITCH (SD000907)	SR1712F-0108-175F0A-N9-N-008		1
	01348745	SWITCH(PUSH)	SPUP192700		1
	02897801	SEESAW SWITCH	SDDJE13200 94V-0		1
JACK, EXT TERMINAL					
	02456390	3.5MM JACK	STEREO YKB21-5290		1
	13449146	6.5MM JACK	YKB21-5012 (W/SW)		1
	13449252	6.5MM JACK	YKB21-5006 (STEREO W/SW)		3
	13449717	ADAPTOR JACK	HEC2392-01-150		1
	01901001	XLR CONNECTOR	NCJ9FI-H		1
SPEAKER, BUZZER					
	Δ 5100028230	SPEAKER	W6504-436B		2
PWB ASSY					
	5100025831	MAIN BOARD ASSY			1
	5100025834	PANEL BOARD ASSY			1
IC					
	5100014604	TP POWER AMP	TPA2000D1PWR	IC5	1
DIODE					
	5100019879	LED(GREEN)	L-710XVGD-E-SZ		1
	5100019878	LED(RED)	L-710XSURD-E-SZ		4
POTENTIOMETER					
	5100026056	ROTARY POTENTIO METER	RV110F-20E1-15A-B100K-00B7		1
	5100004182	POTENTIOMETER(102-901F-103BB)	RD901F-40E1-15F-0B10K-00DN6		10
FUSE, FUSE HOLDER					
	Δ 5100005120	FUSE	MRT160		1
	Δ 5100005123	FUSE	MRT1.6		1

WIRING, CABLE				
	04892645	BATTERY WIRING	(SD001035)	1
SCREWS				
	40013067	SCREW M3X8	PAN MACHINE W/SW+SMALL PW ZC	7
	40237101	SCREW M3X8	PAN MACHINE W/SW+SMALL PW BZC	8
	40230789	SCREW M3X10	OVAL MACHINE BZC	2
	40454856	SCREW M4X10	BINDING NI	1
	40010134	SCREW M4X20	TRUSS MACHINE BZC	8
	40010534	SCREW M4X20	ORIGINAL TRUSS MACHINE BZC	2
	40010567	SCREW M4X35	ORIGINAL TRUSS FE BZC	4
	40564601	SCREW M5X35	OVALHEAD MACHINE BZC	2
	40011101	SCREW 3X8	BINDING TAPTITE B BZC	2
	40011312	SCREW 3X8	BINDING TAPTITE P FE BZC	2
	40011323	SCREW 3X10	BINDING TAPTITE P BZC	8
	510009866	SCREW 3X12	TRUSS TAPPING A BZC	23
	40010667	SCREW 4X16	TRUSS TAPPING A FE BZC	4
	40010689	SCREW 4X25	TRUSS TAPPING A FE BZC	4
	22150756	JACK NUT 2	PLASTIC/BLK	4
	5100023941			
	40011689	SPEED NUT M3	F-TYPE	2
	5100011021	STANDOFF	M3-L6-H20 (311-BG436)	5
	17048630	VR ACCESSORY NUT M9		12
	5100005101	WASHER	RESIN 4.1X11X1 BLACK #SD000430	4
	5100005100	WASHER(323-BG-405LF)	FLAT 4.2X10X0.5 BZC	4
	5100005097	WASHER	FLAT 9.1X12X2.5 #SD000916	1
	40452178	VR WASHER M9		12
MISCELLANEOUS				
	5100004363	BADGE	05800-516(SD000017),40A-BG-10	1
	5100027159	RUBBER FOOT	D30.5XT9.5	4
	5100004364	HIMELON	6X50X0.5T W/ADH	3
	5100004352	HIMELON	4X15X0.25T W/ADH(902-BG-431KN)	2
	5100026102	BATTERY TERMINAL +-	(SD000427)	1
	5100026101	BATTERY TERMINAL +	(SD000426)	1
	5100026103	BATTERY TERMINAL -	(SD000425)	1
	5100026596	BATTERY SHEET	(SD000422)	1
	22365714	CORD HOOK		1
ACCESSORIES (Standard)				
△	04236101	AC ADAPTOR WITHOUT AC CORD	PSB-1U(S) UNIVERSAL	1
△	01903334	AC CORD SET PSE	100V 1.0M FOR PSB	for 100V 1
△	5100003142	AC CORD	115VTW 1.0M FOR PSB	for 115VTW 1
△	5100012293	AC CORD SET	117VBL 1.0M FOR PSB	for 117VBL 1
△	02562456	AC CORD SET	120V 1.0M (NON POLAR)	for 117VU, 117VU/CS 1
△	05121389	AC CORD SET	VM0350-R 220V 1.0M	for 220VCN 1
△	5100002577	AC CORD	230VE 1.0M FOR PSB	for 230VE 1
△	01903356	AC CORD SET	230V 1.0M FOR PSB	for 230VEU 1
△	03785590	AC CORD SET	SC-078-NA05 240VA	for 240VA 1
	5100026383	OWNER'S MANUAL	JAPANESE (SD001040)	1
	5100026384	OWNER'S MANUAL	ENGLISH (SD001041)	1

Checking the Version

Required Items

- Foot Switch (BOSS FS-5U x 2 or FS-6)
- Connection Cable for Foot Switch (PCS-31 or PCS-33)

Procedure

1. Connect the Foot Switch to FOOT SW [MIC/LINE CH].
 - * Set the polarity switch of FS-5 to the jack side.
2. Set each switch of the panel as follows.
POWER SW:OFF
INPUT SELECT:LINE
AMP TYPE: INSTRUMENT
All knobs: Minimum (0 or OFF)
3. Hold down the pedal of FS-5U which is connected to [TIP: MUTE] of the FOOT SW jack.
All LEDs on the panel light for about one second. Hold down the FS-5U while the LEDs is lighting.
4. Release your hand immediately after the LEDs go off, and then press it two times.
After the all LEDs blink for a while, the version number is displayed as follows.

Version	Left (RED)	Center (GREEN)	Right (RED)
1.00	*	-	-
1.01	-	*	-
1.02	-	-	*
1.03	*	*	-
1.04	*	-	*
1.05	-	*	*

*: blinks, -: goes off

5. Turn off the power of the CUBE-ST.

Test Mode

Required Items

- Foot Switch (BOSS FS-5U x 2 or FS-6)
- Connection Cable for Foot Switch (PCS-31 or PCS-33)
- Dummy Plug

Entering Test Mode

Execute the step **1–4** of ?Checking the Version? (p. 12).

After checking the version number, press FS-5U connected [TIP: MUTE] of the FOOT SW jack. Then you'll enter ?1. DSP Test? for the first test item.

Exiting Test Mode

Turn off the power.

Skipping Test Items

You can't skip test items.

Details for Test Items

1. DSP Test

DSP Test starts automatically as soon as you enter the Test Mode.

In DSP Test, the LED of Left, Center and Right will light in this order corresponding to the progress of the test.

When the result of test is OK:

LEDs of Left, Center and Right blink.

When the result of test is NG:

LED of TUNER blinks.

If the test is OK, press FOOT SW [TIP: MUTE] to advance to the next test item.

2. Switch Test

When entering Switch Test, all LEDs go off temporarily.

Operate buttons, rotary switches, plugs and foot switches as the order in the following table.

LEDs with "o" in the table will light, LEDs with "*" in the table will blink, and LEDs with "-" will go off.

* If you mistake the order of operations or operate more than one item at a time, LEDs of Left and Right will blink.

Operation	Lighting LED			
	Left	Center	Right	TUNER

Press button					
1	SELECT	o	o	o	-
2	TUNER	o	o	o	o

Rotate rotary switch					
	INSTRUMENT	o	o	o	o
3	JC CLEAN	o	-	-	-
4	BLACK PANEL	-	-	o	-
5	BRIT COMBO	o	-	-	-
6	CLASSIC STACK	-	-	o	-
7	R-FIER STACK	o	-	-	-
8	ACOUSTIC SIM	-	-	o	-
9	MIC	o	-	-	-
10	ACOUSTIC SIM	-	-	o	-
11	R-FIER STACK	o	-	-	-
12	CLASSIC STACK	-	-	o	-
13	BRIT COMBO	o	-	-	-
14	BLACK PANEL	-	-	o	-
15	JC CLEAN	o	-	-	-
16	INSTRUMENT	o	o	o	-

Pull out/Insert plug, Press Foot Switch					
17	Insert into PHONES	o	-	-	-
18	Pull Out from PHONES	o	o	-	-
19	Press FOOT SW [RING: DELAY/REVERB]	o	o	o	-
20	Pull Out from FOOT SW	-	-	-	-
21	Insert into FOOT SW GUITAR/INST CH	o	-	-	-
22	Press FOOT SW [TIP: EFX]	o	o	-	-
23	Press FOOT SW [RING: DELAY/REVERB]	o	o	o	-
24	Pull Out from FOOT SW	-	-	-	-
25	Insert into FOOT SW MIC/LINE CH	*	*	*	-

o: lights, *: blinks, -: goes off

If the test is OK, press FOOT SW [TIP: MUTE] to advance to the next test item.

3. Volume Test

When entering Volume Test, all LEDs go off temporarily.

Operate the following knobs minimum-center-maximum and confirm the all knobs work correctly with its LED.

* If you mistake the order, the knob will not response.

* After detecting all of the minimum, center and the maximum value, test program advances to test of the next knob.

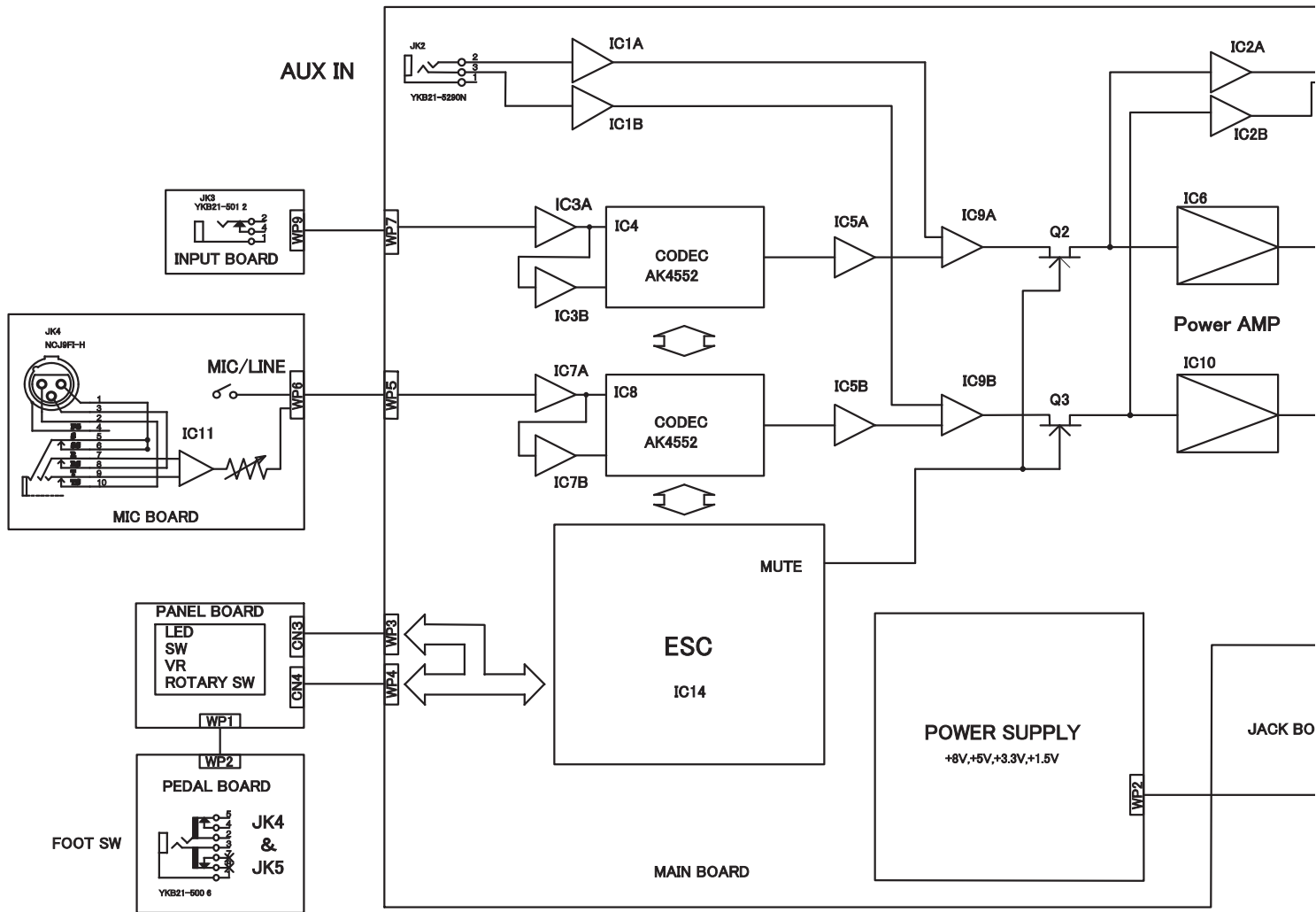
- MIC/LINE CHANNNEL BASS
- MIC/LINE CHANNNEL TREBLE
- MIC/LINE CHANNNEL DELAY/REVERB
- GUITAR/INSTRUMENT CHANNNEL BASS
- GUITAR/INSTRUMENT CHANNNEL MIDDLE
- GUITAR/INSTRUMENT CHANNNEL TREBLE
- GUITAR/INSTRUMENT CHANNNEL EFX
- GUITAR/INSTRUMENT CHANNNEL DELAY/REVERB
- GUITAR/INSTRUMENT CHANNNEL VOLUME
- GUITAR/INSTRUMENT CHANNNEL GAIN

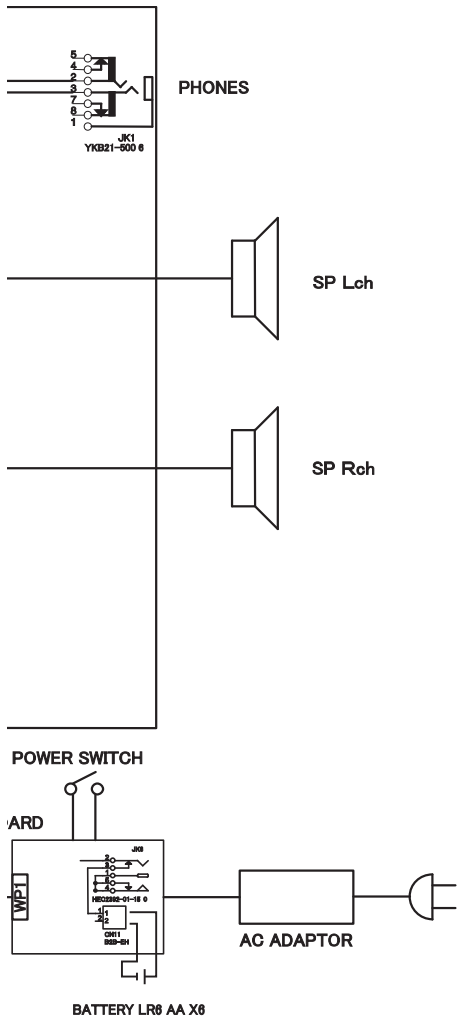
Position of Knob	Lighting LED
0 or OFF	Left
Center	Left, Center
10 or maximum	Left, Center, Right

When the test of all volume is completed, LEDs of Left, Center and Right will blink.

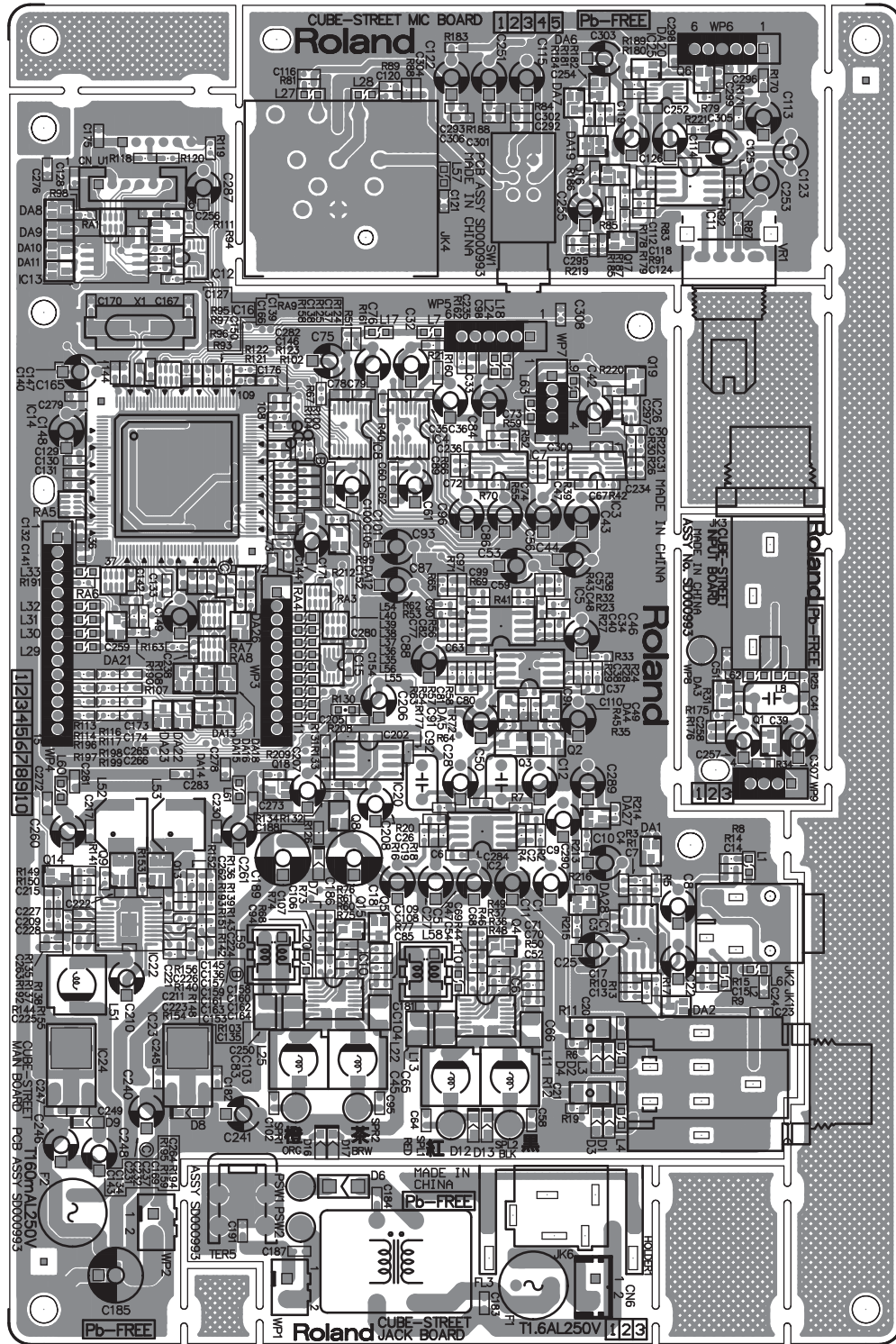
Then, test is finished.

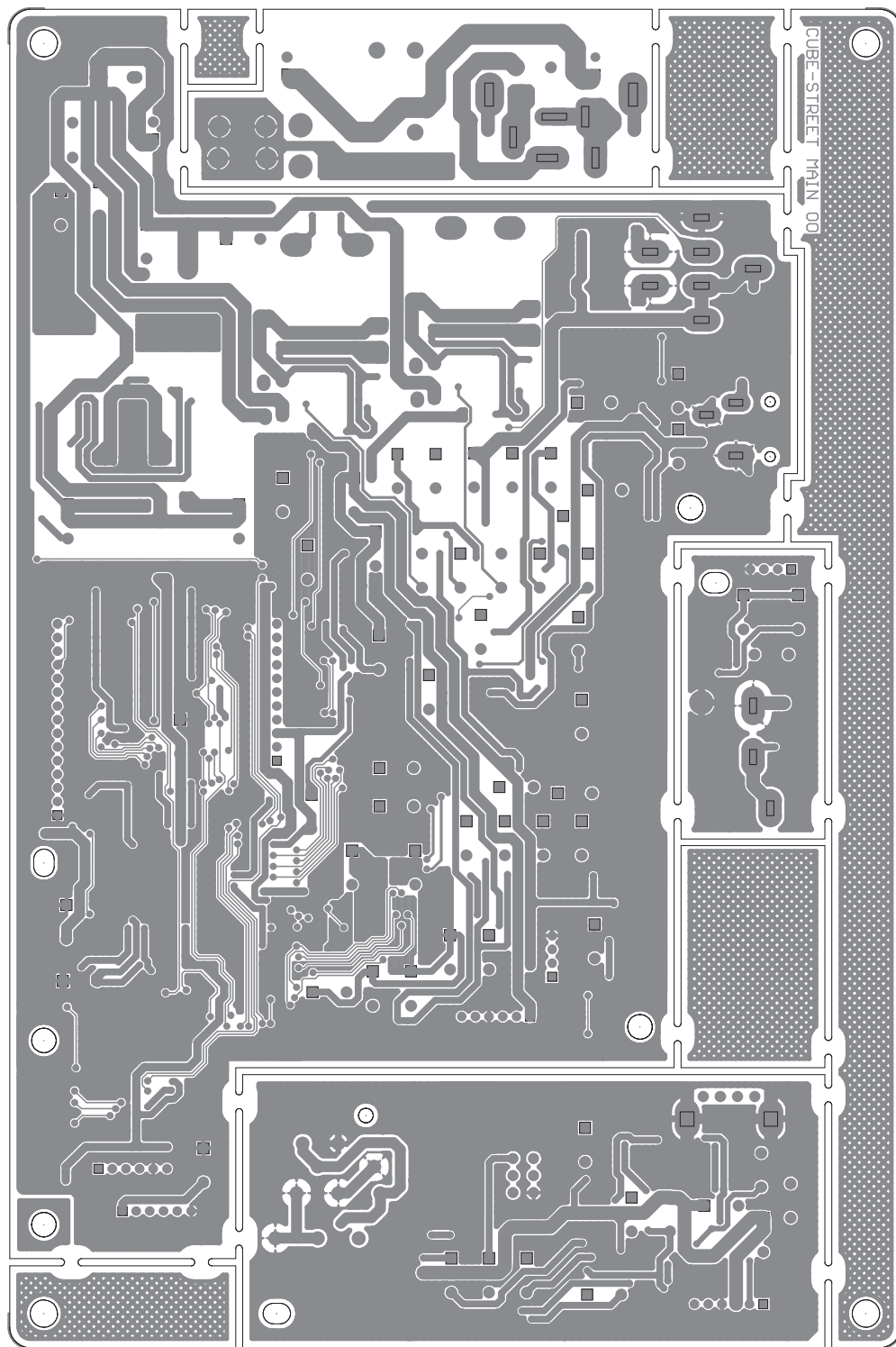
Block Diagram



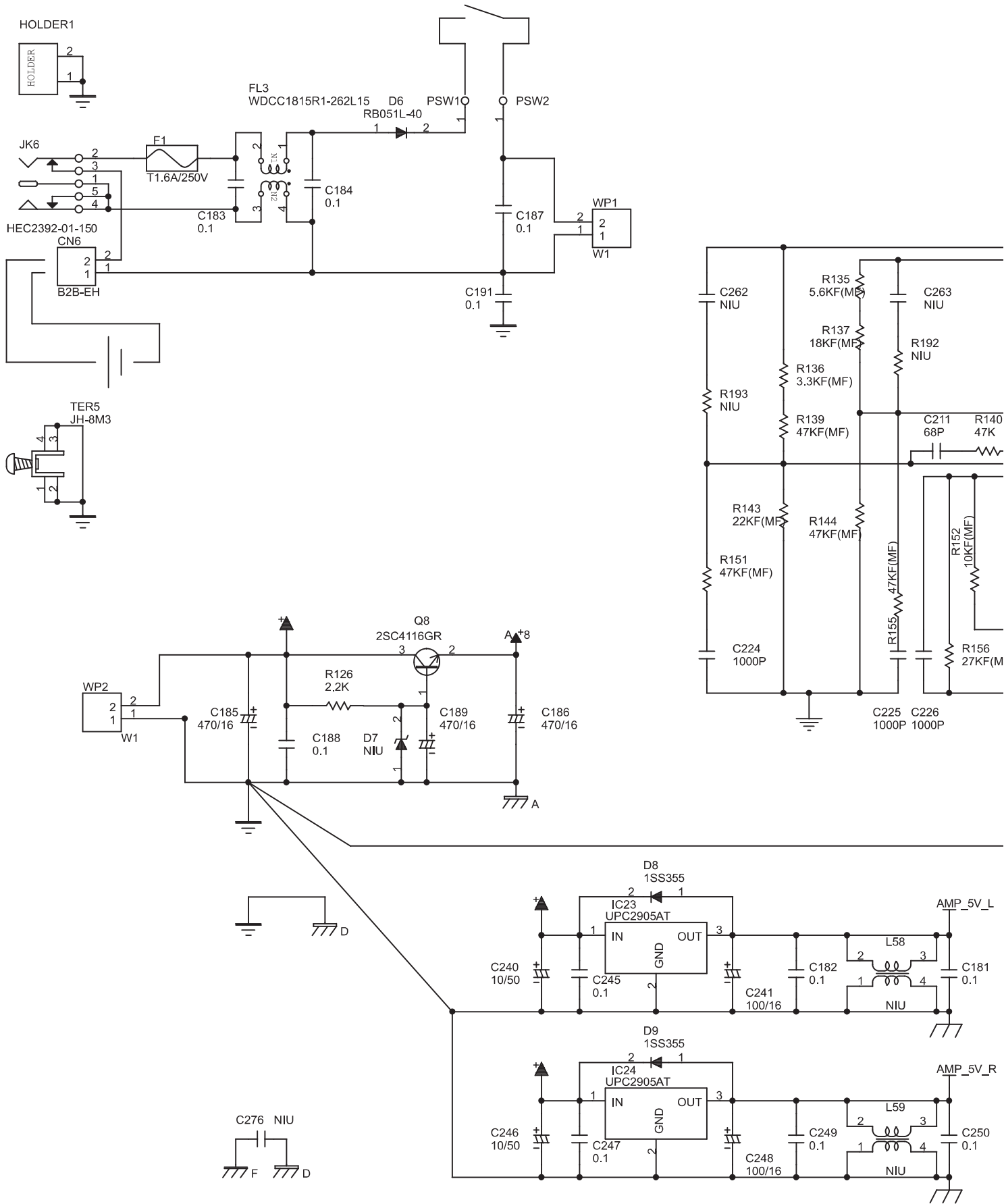


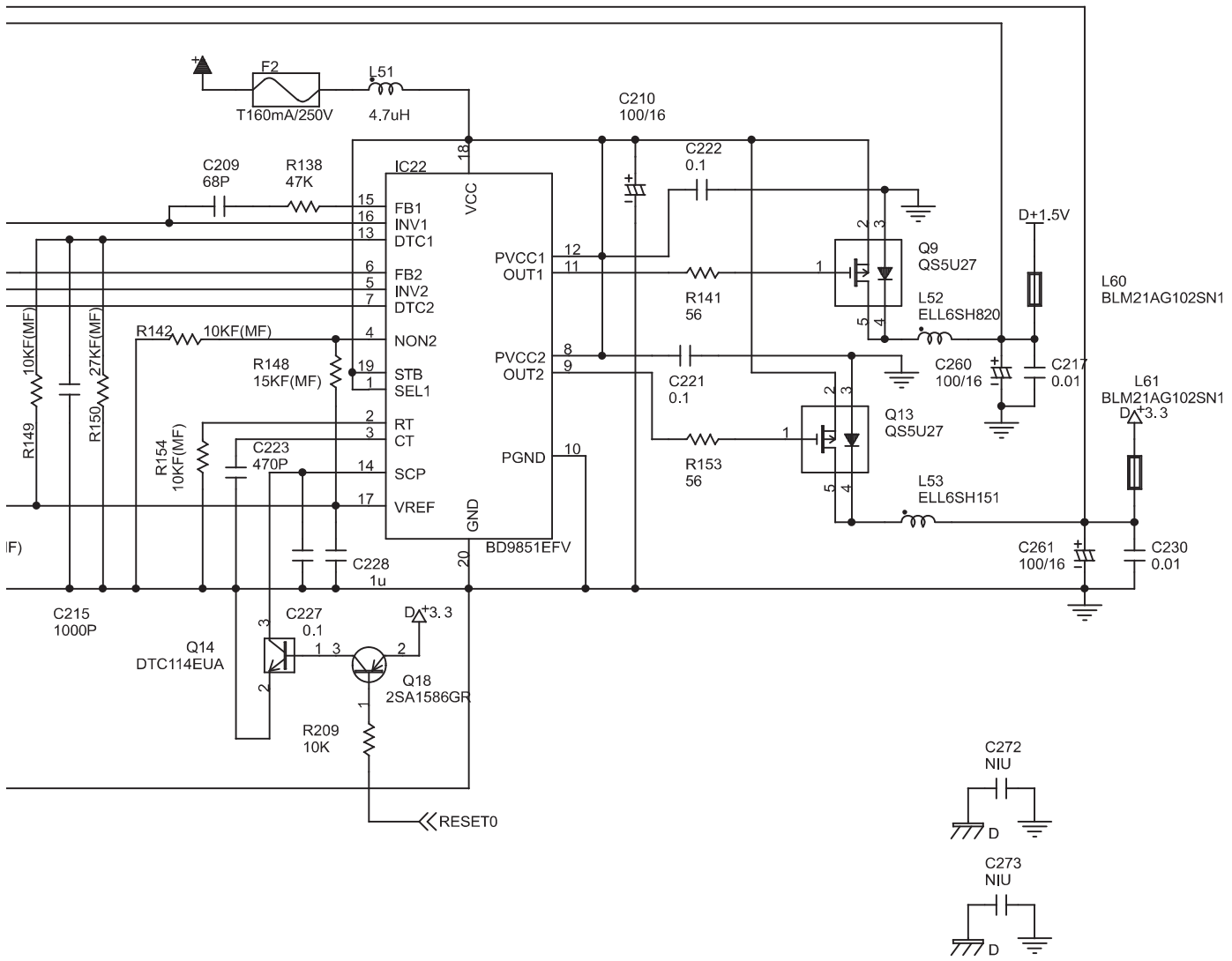
Circuit Board (Main, Jack, Input, Mic Board)

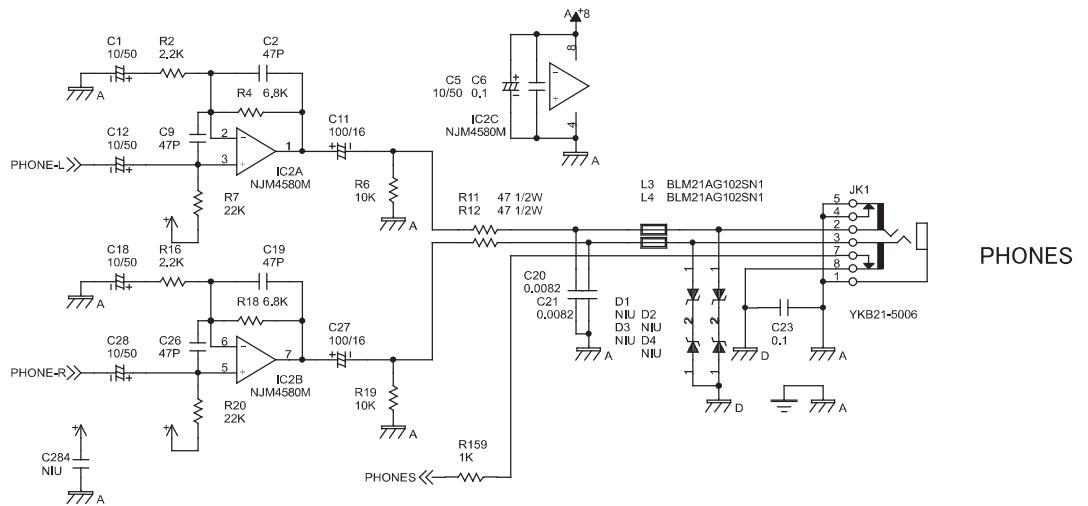




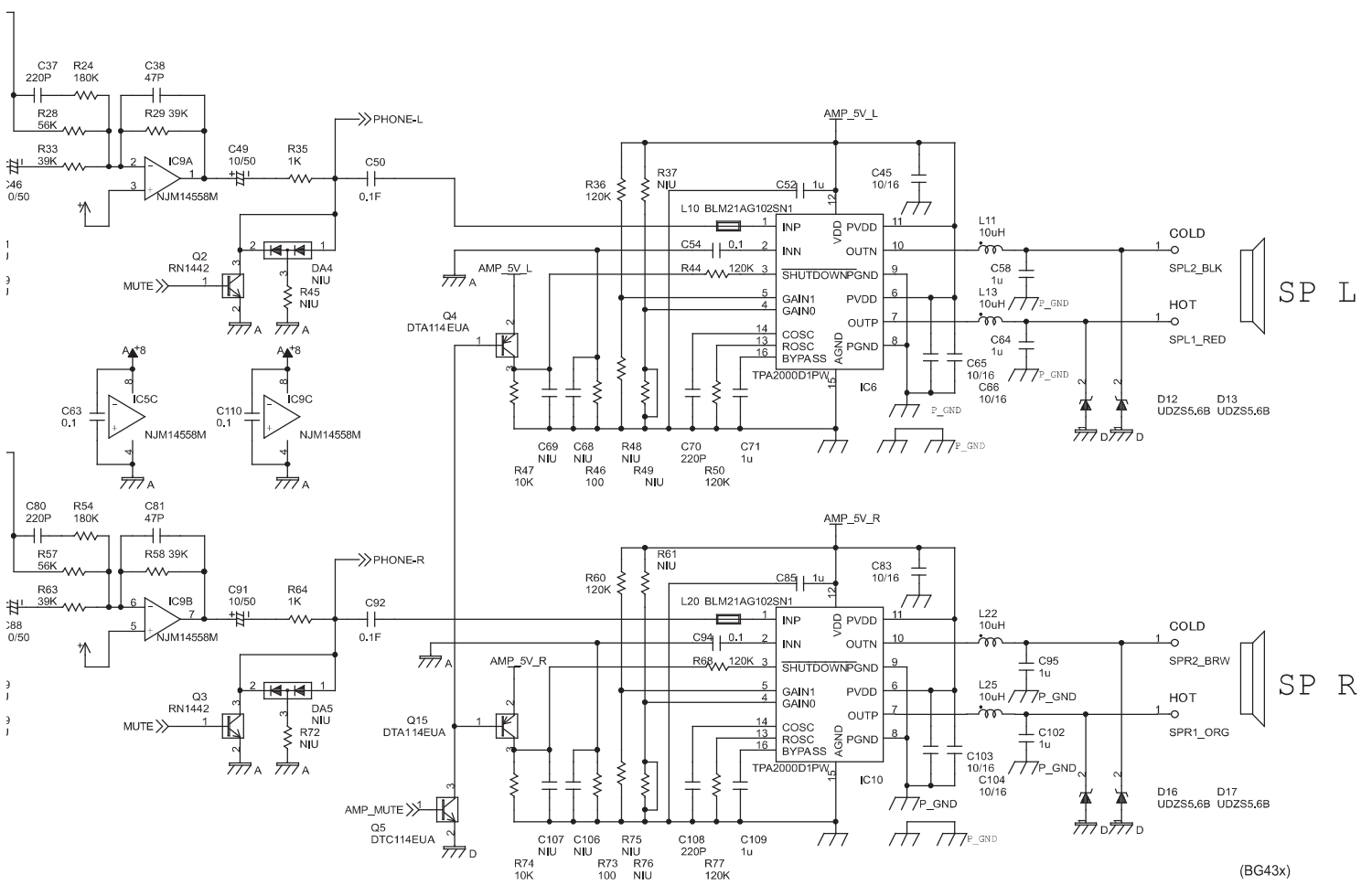
Circuit Diagram (Main Board: 1/3, Jack Board)







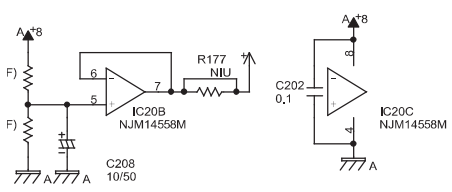
PHONES



SP L

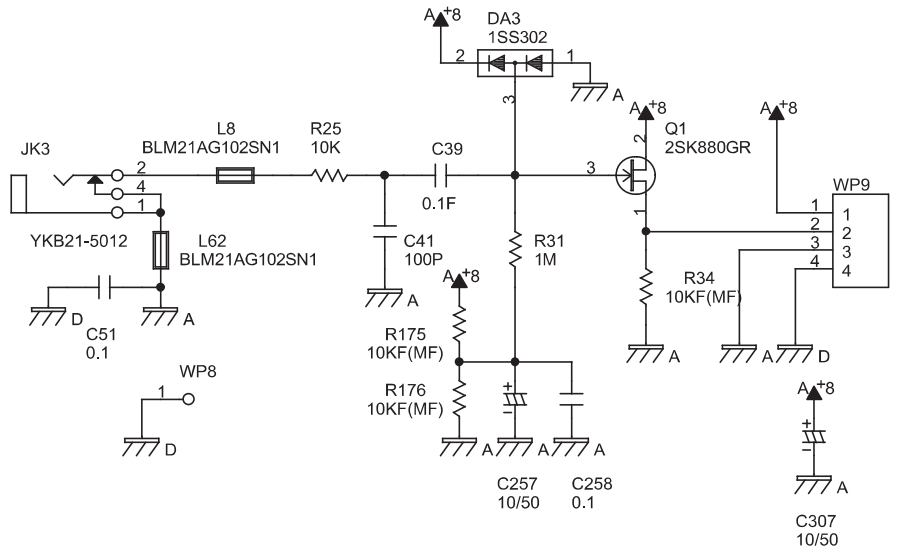
SP R

(BG43x)

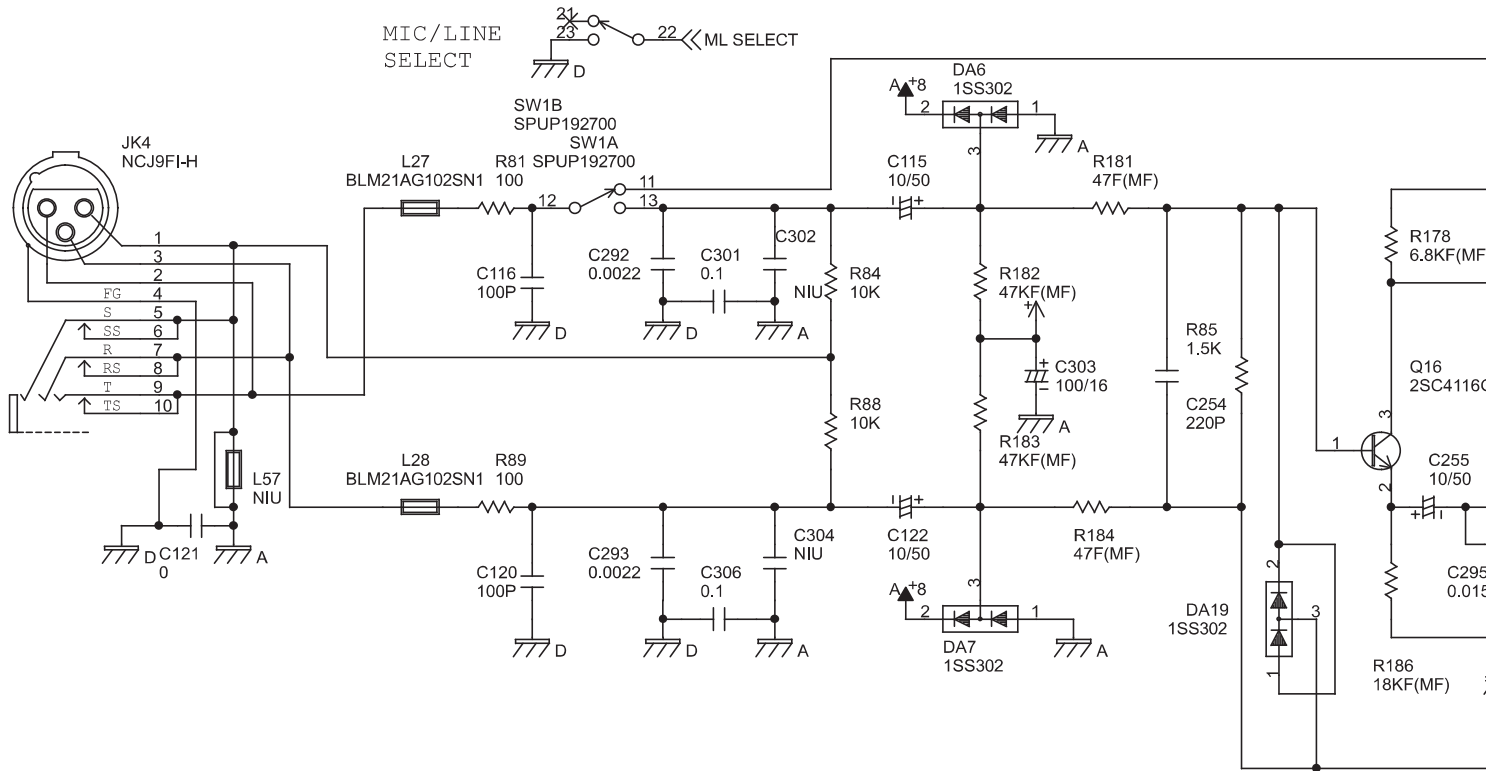


Circuit Diagram (Input, Mic Board)

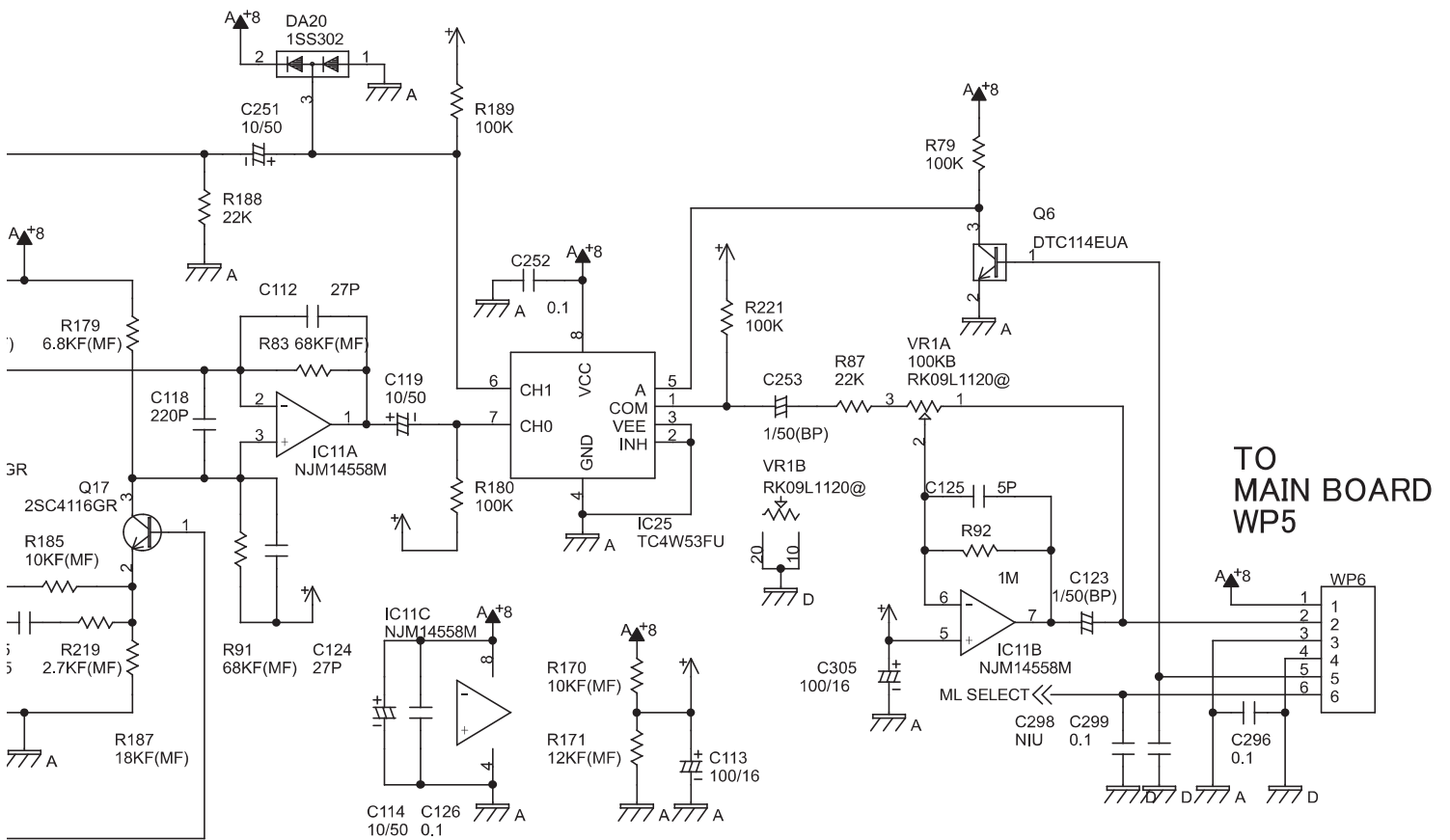
INPUT BOARD



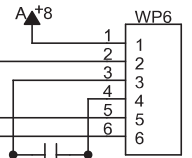
MIC BOARD



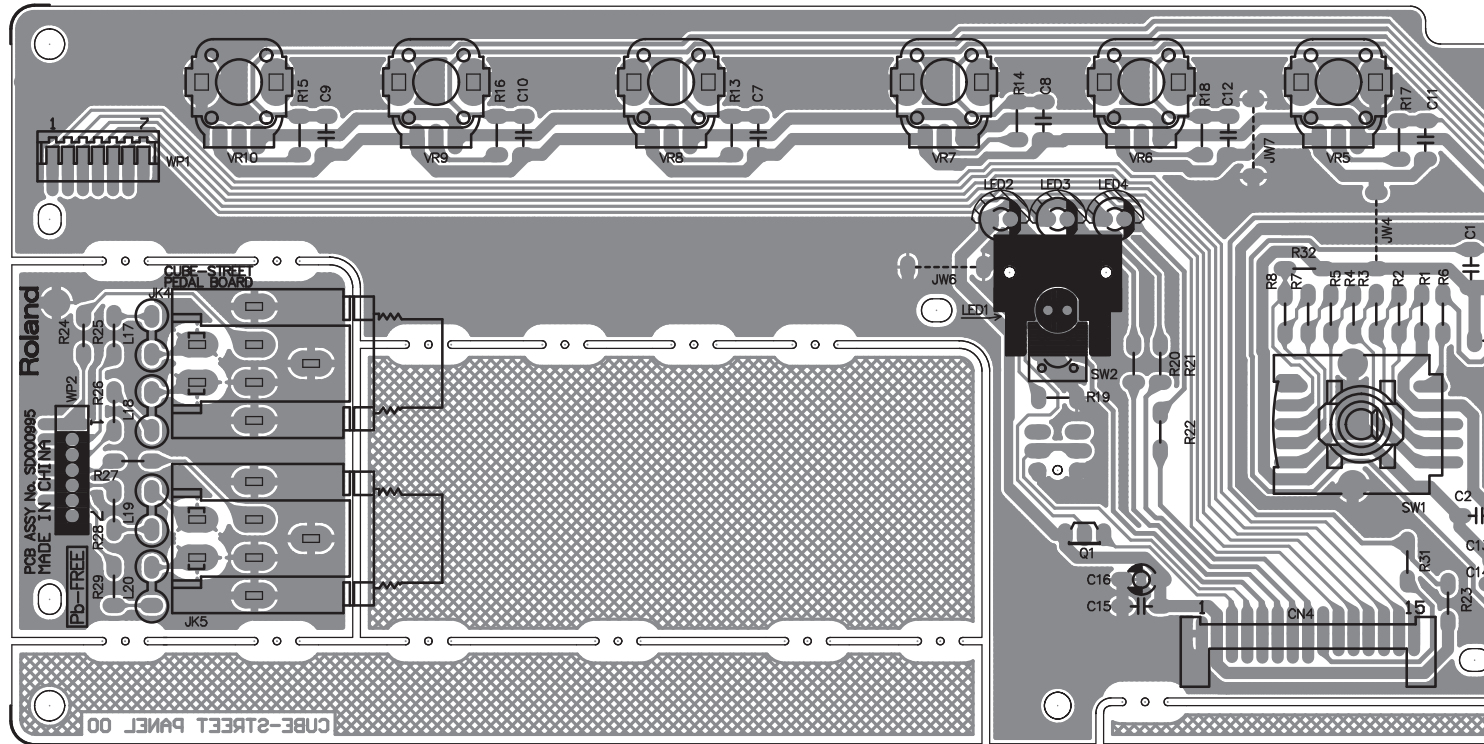
TO
MAIN BOARD
WP7

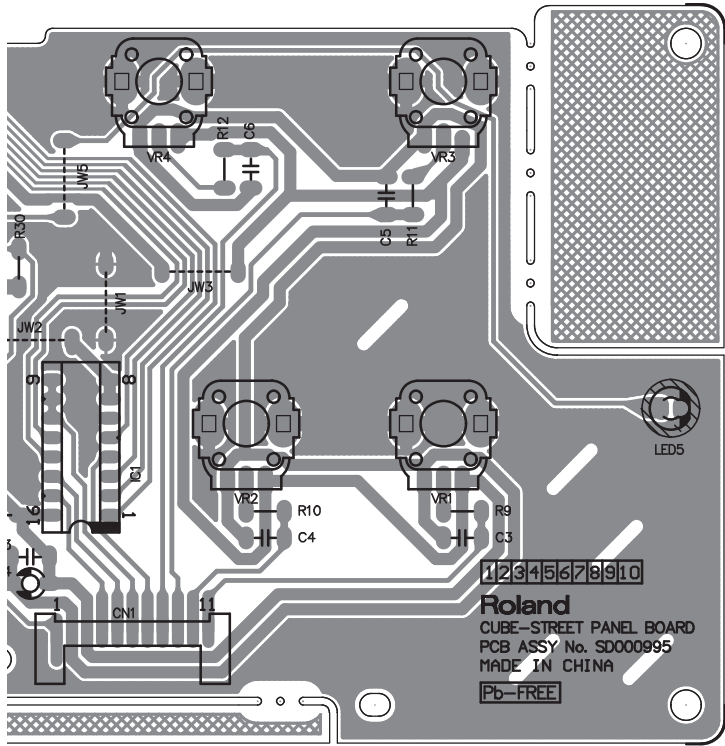


TO
MAIN BOARD
WP5



Circuit Board (Panel, Pedal Board)





Circuit Diagram (Panel, Pedal Board)

