

CUBE 20X CUBE 30X

SERVICE NOTES *Issued by RJA*

Table of Contents

Cautionary Notes	2	Specifications (CUBE-30X)	22
Specifications (CUBE-20X)	2	Location of Controls (CUBE-30X)	23
Location of Controls (CUBE-20X)	3	Location of Controls Parts List (CUBE-30X)	23
Location of Controls Parts List (CUBE-20X)	3	Exploded View (CUBE-30X: Cabinet)	24
Exploded View (CUBE-20X: Cabinet)	4	Exploded View (CUBE-30X: Chassis)	26
Exploded View (CUBE-20X: Chassis)	6	Parts List (CUBE-30X)	28
Parts List (CUBE-20X)	8	Checking Version Number (CUBE-30X)	29
Checking Version Number (CUBE-20X)	10	Test Mode (CUBE-30X)	30
Test Mode (CUBE-20X)	10	Block Diagram (CUBE-30X)	32
Block Diagram (CUBE-20X)	12	Circuit Board (CUBE-30X: MAIN Board/PS Board)	34
Circuit Board (CUBE-20X: MAIN Board/PS Board)	14	Circuit Diagram (CUBE-30X: MAIN Board 1)	36
Circuit Diagram (CUBE-20X: MAIN Board 1)	16	Circuit Diagram (CUBE-30X: MAIN Board 2)	38
Circuit Diagram (CUBE-20X: MAIN Board 2)	18	Circuit Board (CUBE-30X: PANEL Board/ INPUT Board)	40
Circuit Board (CUBE-20X: PANEL Board/ INPUT Board)	20	Circuit Diagram (CUBE-30X: PANEL Board/ INPUT Board)	41
Circuit Diagram (CUBE-20X: PANEL Board/ INPUT Board)	21		



CUBE-20X



CUBE-30X

Copyright © 2007 ROLAND CORPORATION

All rights reserved. No part of this publication may be reproduced in any form without the written permission of ROLAND CORPORATION.

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 silkscreened indications, but no components are mounted.

Specifications (CUBE-20X)

CUBE-20X: GUITAR AMPLIFIER

Rated Power Output

20 W

Nominal Input Level

INPUT (JC CLEAN channel): -10 dBu/1 M ohms
AUX IN: -10 dBu

Speakers

20 cm (8 inch)

Controls

POWER Switch
SELECT Switch
TUNER Switch
POWER SQUEEZER Switch

<JC CLEAN Channel>

VOLUME Knob

<LEAD Channel>

TYPE Switch (ACOUSTIC, OVERDRIVE, DISTORTION, METAL, METAL STACK, TUBE DRIVE)

GAIN Knob
VOLUME Knob

<EQUALIZER>

BASS Knob
MIDDLE Knob
TREBLE Knob

<EFX>

EFX Knob (CHORUS, FLANGER, PHASER, TREMOLO)

<DELAY/REVERB>

DELAY/REVERB Knob

Indicators

JC CLEAN Channel
LEAD Channel
EFX
TUNER
POWER SQUEEZER

Connectors

INPUT Jack (1/4-inch phone type)
AUX IN Jack (Stereo mini type)
FOOT SW Jack (SELECT, EFX) (1/4-inch phone type)
RECORDING OUT/PHONES Jack (Stereo phone type)

Power Supply

AC 117 V, AC 230 V or AC 240 V

Power Consumption

24 W

Dimensions

335 (W) x 240 (D) x 335 (H) mm
13-3/16 (W) x 9-1/2 (D) x 13-3/16 (H) inches

Weight

7.2 kg / 15 lbs 14 oz

Accessories

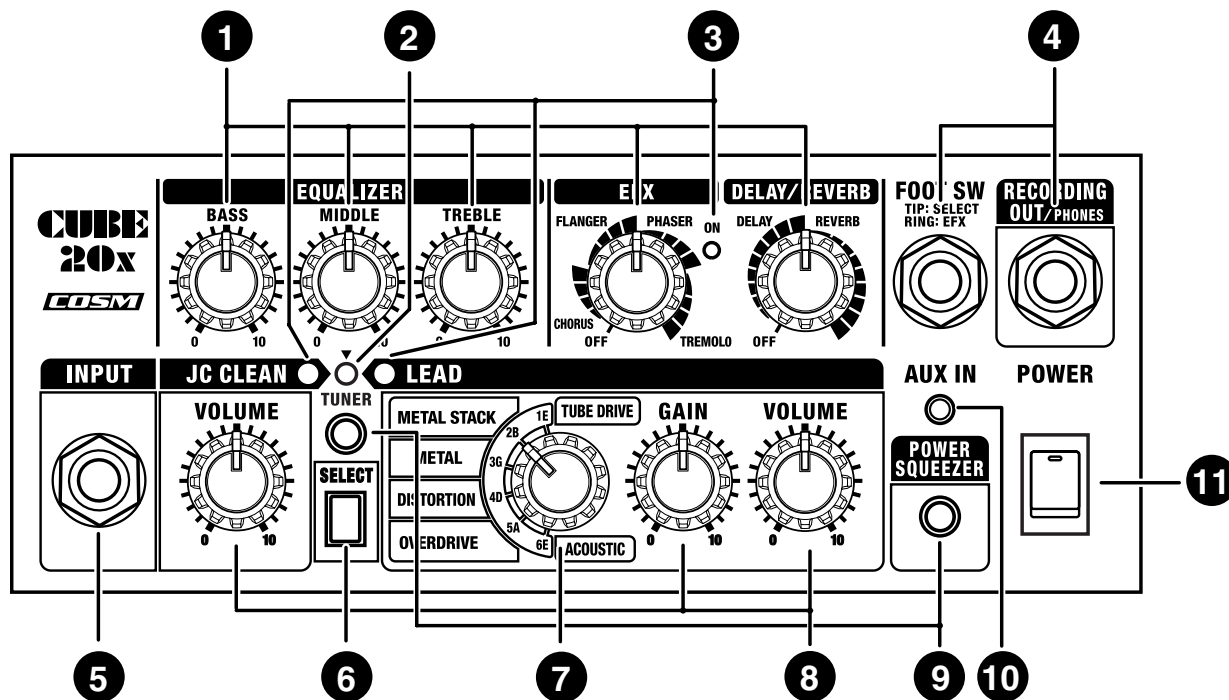
Owner's Manual English (#SD000899)

Options

Foot switch: BOSS FS-5L, BOSS FS-6
Connection Cable: PCS-31

* 0 dBu = 0.775 Vrms

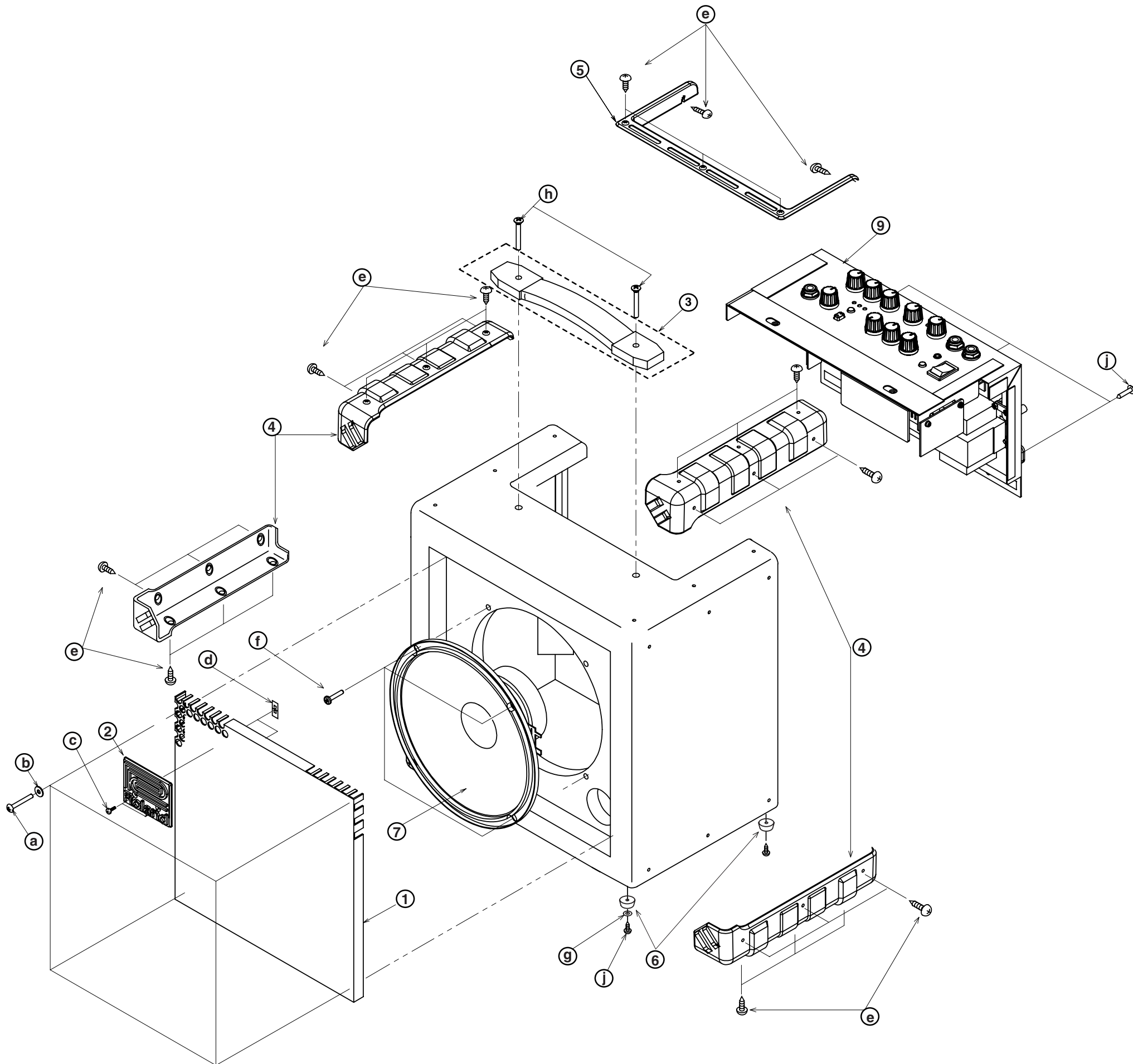
Location of Controls (CUBE-20X)



Location of Controls Parts List (CUBE-20X)

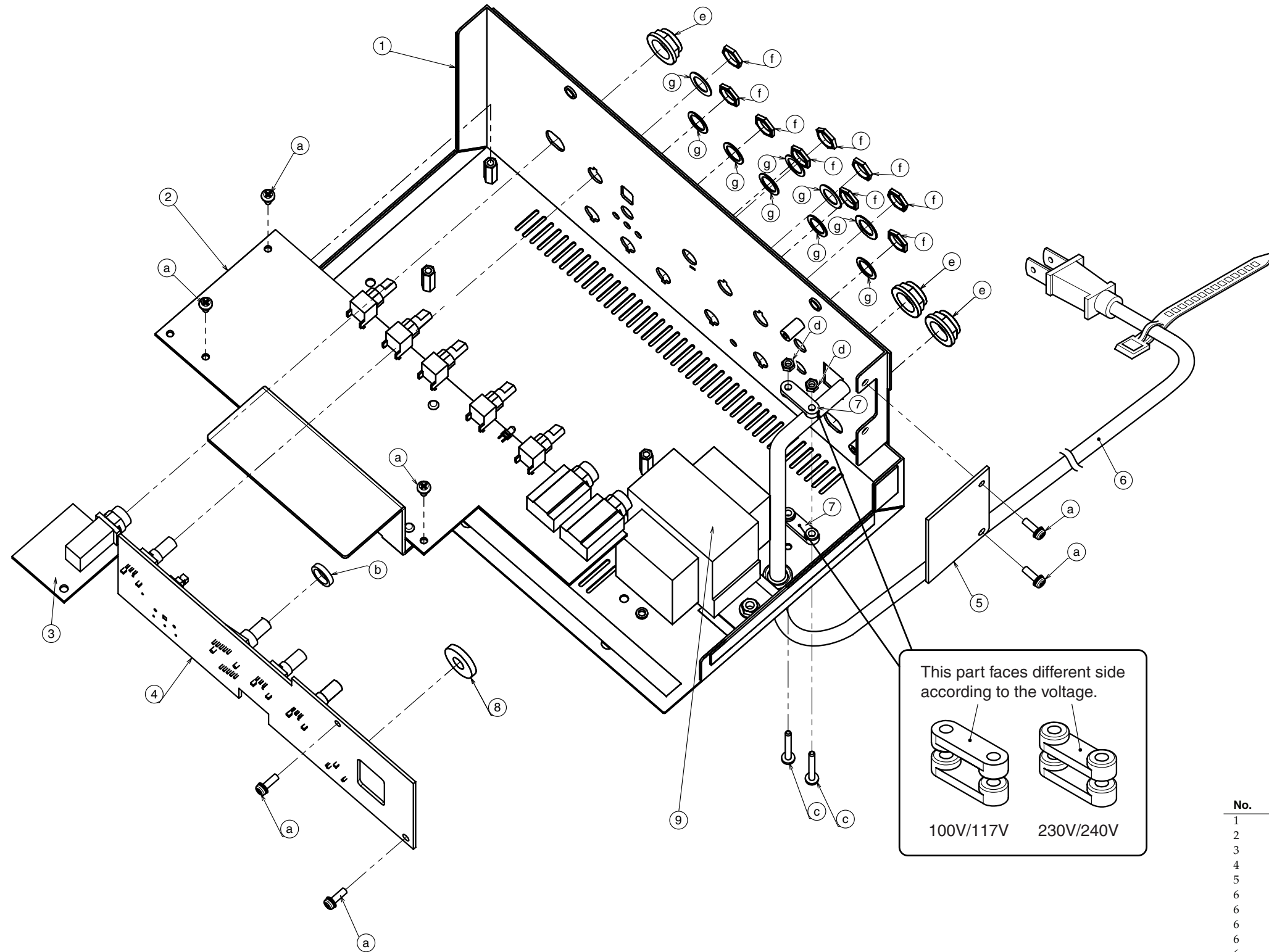
No.	Parts Code	Parts Name	Description	Q'ty
1	SD000910	POTENTIOMETER	R901F-20E1-15FW-0B10K-00DM8	5
	SD000043	R-KNOB	W/HOT STAMP	5
	17048630	VR ACCESSORY NUT M9		5
	40452178	VR WASHER M9		5
2	SD000044	LED GREEN	L-34GDSL	1
3	SD000045	LED RED	L-34HDSL	3
4	13449252	6.5MM JACK	YKB21-5006 (STEREO W/SW)	2
	22150756	JACK NUT 2	PLASTIC/BLK	2
5	13449146	6.5MM JACK	YKB21-5012 (W/SW)	1
	22150756	JACK NUT 2	PLASTIC/BLK	1
6	SD000099	PUSH SWITCH	ESB64619	1
	SD000082	PUSH BUTTON	BLACK	1
7	SD000977	ROTARY SWITCH	SR1712F-0106-175F0A-N9-N-008	1
	SD000043	R-KNOB	W/HOT STAMP	1
	17048630	VR ACCESSORY NUT M9		1
	40452178	VR WASHER M9		1
8	SD000911	POTENTIOMETER	R901F-40E1-15F-0B10K-00DM8	3
	SD000043	R-KNOB	W/HOT STAMP	3
	17048630	VR ACCESSORY NUT M9		3
	40452178	VR WASHER M9		3
9	SD000906	KEY TOP		2
9	01780101	TACT SWITCH	SKQKABD010	2
9	*****	LED RED	L-34IDSL	2
	* This part is included in CHASSIS ASSY (SD000983-SD000987).			
10	SD000908	3.5MM JACK	YKB21-5364P	1
11	02897801	SEESAW SWITCH	SDDJE13200 94V-0	1

Exploded View (CUBE-20X: Cabinet)



No.	Parts Code	Parts Name	Description	Q'ty
1	SD000021	GRILL		1
2	SD000017	BADGE		1
7	SD000950	SPEAKER 8inch (4OHM)	W0804-431-A	1
8	SD000946	CABINET ASSY		1
* This unit includes the following parts.				
3	SD000035	HANDLE WITH ESCUTHEON		1
4	SD000031	CORNER PROTECTOR		4
5	SD000027	TRIM SASH		1
6	12359104	RUBBER FOOT		4
9	SD000983	CHASSIS ASSY	100V	1
	SD000984	CHASSIS ASSY	117VU/CS	1
	SD000985	CHASSIS ASSY	230VEU	1
	SD000986	CHASSIS ASSY	230VE	1
	SD000987	CHASSIS ASSY	240VA	1
No.	Parts Code	Parts Name	Description	Q'ty
a	SD000975	SCREW 4X35	SPECIAL TRUSS BZC	4
b	SD000069	WASHER M4 11FAI	ADDITIONAL PLASTIC WASHER	4
c	40230789	SCREW 3X10	OVALHEAD MACHINE BZC	2
d	40011689	SPEED NUT M3	F-TYPE	2
e	40010790	SCREW 3X16	TRUSS TAPTITE A1 BZC	29
f	40010367	SCREW M4X25	BINDING MACHINE BZC	4
g	SD000370	PLATE WASHER	4.2X10X0.5T FEBC	4
h	40564601	SCREW M5X35	OVALHEAD MACHINE BZC	2
j	40010689	SCREW 4X25	TRUSS TAPPING A1 FE BZC	7

Exploded View (CUBE-20X: Chassis)



This part faces different side according to the voltage.

100V/117V 230V/240V

No.	Parts Code	Parts Name	Description	Q'ty
1	SD000976	CHASSIS		1
2	*****	MAIN BOARD ASSY		1
3	*****	INPUT BOARD		1
4	*****	PANEL BOARD		1
5	*****	PS BOARD		1
6	SD000177	AC CORD PSE	SP-18A WITH TERMINAL 100V	1
6	SD000912	AC CORD ASSY	SP-20 117V (2P)	1
6	SD000913	AC CORD ASSY	SP-026A 230V (2P)	1
6	SD000914	AC CORD ASSY	SP-61 230VE (2P)	1
6	SD000915	AC CORD ASSY	SP-501 240V (2P)	1
7	12369410	CORD BAND	1702B	2
8	*****	CUSHION D7x18xT3		1
9	SD000980	TRANSFORMER	BG431L (100V /117V)	1
9	SD000981	TRANSFORMER	BG431H (230V /240V)	1
a	40013067	SCREW M3x8	PAN MACHINE W/SW+SMALL PW ZC	7
b	SD000916	WASHER M9 t=2.5		1
c	40010301	SCREW M3x20	BINDING MACHINE BZC	2
d	40011756	FLANGE HEX NUT M3	ZC	2
e	22150756	JACK NUT 2		3
f	17048630	VR ACCESSORY NUT		9
g	40452178	VR WASHER M9		9

Parts List (CUBE-20X)

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					
	SD000017	BADGE			1
	SD000946	CABINET ASSY			1
	22360705	CORD HOOK			2
	SD000031	CORNER PROTECTOR			4
	SD000021	GRILL			1
	SD000035	HANDLE WITH ESCUTHEON			1
	12359104	RUBBER FOOT	G-5R		4
	SD000027	TRIM			1
CHASSIS					
#	SD000987	CHASSIS ASSY	240VA		1
#	SD000985	CHASSIS ASSY	230VEU	for EU market	1
#	SD000986	CHASSIS ASSY	230VE	for UK market	1
#	SD000984	CHASSIS ASSY	117VU/CS		1
#	SD000983	CHASSIS ASSY	100V		1
#	SD000976	CHASSIS			1
KNOB, BUTTON					
	SD000043	R-KNOB	W/HOT STAMP		9
	SD000906	KEYTOP			2
	SD000082	PUSH BUTTON			1
SWITCH					
#	SD000977	ROTARY SWITCH	SR1712F-0106-175F0A-N9-N-008	RSW1 on PANEL	1
	01780101	TACT SWITCH	SKQKABD010	SW1,SW3 on PANEL BOARD	2
	02897801	SEESAW SWITCH	SDDJE13200 94V-0		1
	SD000099	PUSH SWITCH	ESB64619	SW2 on PANEL BOARD	1
JACK, EXT TERMINAL					
	SD000908	3.5MM JACK	YKB21-5364P	JK7 on PANEL BOARD	1
	13449146	6.5MM JACK	YKB21-5012 (W/SW)	JK9 on INPUT BOARD	1
	13449252	6.5MM JACK	YKB21-5006 (STEREO W/SW)	JK1, JK2 on MAIN BOARD	2
SPEAKER, BUZZER					
	SD000950	W0804-431A (20CM/4OHM)	SPEAKER		1
DIODE					
	SD000044	LED GREEN	L-34GDSL		1
	SD000045	LED RED	L-34HDSL		3
POTENTIOMETER					
#	SD000911	RD901F-40E1-15F-0B10K-00DM8	POTENTIOMETER	VR1,VR3,VR4 on PANELBOARD	3
#	SD000910	RD901F-20E1-15FW-0B10K-00DM8	POTENTIOMETER	VR4, VR5, VR6, VR7, VR8 on MAIN BOARD	5
FUSE, FUSE HOLDER					
#	SD000979	5ST 315MA/250V(230V/240V)	FUSE	F1on PS BOARD	1
#	03674001	5ST 630MA/250V(100V/117V)	FUSE	F1on PS BOARD	1
TRANSFORMER					
#	SD000981	BG431H (230/240)	TRANSFORMER		1
#	SD000980	BG431L (100/117)	TRANSFORMER		1

AC CORD ASSY (Installed)				
	SD000177	SP-18A WITH TERMINAL 100V	AC CORD PSE	1
	SD000913	SP-026A 230V(2P)	AC CORD ASSY	1
	SD000912	SP-20 117V(2P)	AC CORD ASSY	1
	SD000915	SP-501 240V(2P)	AC CORD ASSY	1
	SD000914	SP-61 230VE(2P)	AC CORD ASSY	1
SCREWS				
	40011756	FLANGE HEX NUT M3	ZC	CORD CLAMP
	40347534	WASHER M4	SPRING BZC	TRANSFORMER
	22150756	JACK NUT 2	PLASTIC/BLK	
	40564601	SCREW M5X35	OVALHEAD MACHINE BZC	for HANDLE
	40230789	SCREW 3X10	OVAL MACHINE BZC	for BADGE
	SD000975	SCREW M4X35	ORIGINAL TRUSS BZC	for GRILL
	SD000916	WASHER	M9 T=2.5	
	40011889	EXTERNAL TOOTH WASHER M4	FECM	WIRING
	40011767	FLANGE HEX NUT M4	FE ZC	TRANSFORMER, WIRING
	40011689	SPEED NUT M3	F-TYPE	for BADGE
	40010790	SCREW 3X16	BINDING TAPPING A BZC	for CORNER PROTECTOR, TRIM SASH
	40010301	SCREW M3X20	BINDING MACHINE BZC	CORD CLAMP
	40010367	SCREW M4X25	BINDING MACHINE BZC	for SPEAKER
	SD000069	WASHER M4 11FAI	ADDITIONAL PLASTIC WASHER	for GRILL
	SD000370	PLATE WASHER	4.2X10X0.5T FEBC	for FOOT
	17048630	VR ACCESSORY NUT M9		
	40010689	SCREW 4X25	TRUSS TAPPING A1 FE BZC	for CHASSIS, FOOT
	40452178	VR WASHER M9		
	40013067	SCREW M3X8	PAN MACHINE W/ SW+SMALL PW ZC	for PCB
	40230023	SPRING WASHER	M4 ZC	for TRANSFORMER
PACKING				
#	SD000982	PACKING CASE		1
	SD000323	PAD		8
MISCELLANEOUS				
	12369410	CORD BAND	1702B	2
ACCESSORIES (Standard)				
#	SD000902	OWNER'S MANUAL	JAPANESE	1
#	SD000899	OWNER'S MANUAL	ENGLISH	1

Checking Version Number (CUBE-20X)

Required Items

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

Procedure

1. Connect the Foot Switch to the FOOT SW jack.

* Set the polarity switch of FS-5 to the jack side.

2. Set each switch of the panel as follows.

POWER SW: OFF

SELECT: JC CLEAN (The push switch is up.)

AMP TYPE: ACOUSTIC

All knobs: Minimum (0 or OFF)

3. Hold down the pedal of FS-5U which is connected to [TIP: SELECT] of the FOOT SW jack.

At this time, 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	JC CLEAN	TUNER	LEAD
1.00	o		
1.01		o	
1.02			o
1.03	o	o	
1.04	o		o
1.05		o	o

o: blinks, blank: goes off

5. Turn off the power of the CUBE-20X.

Test Mode (CUBE-20X)

Notes for User Data

CUBE-20X has no User Data.

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 Version Number (CUBE-20X)** (p. 10).

After checking the version number, press FS-5U connected TIP: SELECT of the FOOT SW jack (described as "FOOT SW [TIP: SELECT]" in the following sections). 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

DST Test starts automatically as soon as you enter the Test Mode. In DSP Test, the LED of JC CLEAN, TUNER and LEAD will light in this order corresponding to the progress of the test.

When the result of test is OK:

LEDs of JC CLEAN, TUNER and LEAD blink.

When the result of test is NG:

LED of EFX blinks.

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

2. Switch Test

When entering Switch Test, all LEDs go off temporarily.

- Operate buttons, rotary switches, pedals and plugs as the order in the following table.
LEDs with "o" in the table will light, and LEDs with blank column will go off.
** If you mistake the order of operations or operate more than one item at a time, LEDs of JC CLEAN and LEAD will blink.*

Operation	Lighting LED				
	JC CLEAN	TUNER (green)	LEAD	TUNER button	POWER SQUEESER

Press button						
1	SELECT	o	o	o		
2	TUNER	o	o	o	o	
3	POWER SQUEESER	o	o	o	o	o

Rotate rotary switch						
4	OVER-DRIVE	o				
5	DISTORTION			o		
6	METAL	o				
7	METAL STACK			o		
8	TUBE DRIVE	o				
9	METAL STACK			o		
10	METAL	o				
11	DISTORTION			o		
12	OVER-DRIVE	o				
13	ACOUSTIC	o		o		

Press pedal						
14	FOOT SW [RING: EFX]	o				

Pull out/Insert plug						
15	Pull out from FOOT SW			o		
16	Insert into FOOT SW	o				

Insert a dummy plug						
17	Insert into RECORDING OUT			o		

o: lights, blank: goes off

- Pull out the plug from RECORDING OUT/PHONES jack. After while, LEDs of JC CLEAN, TUNER and LEAD will blink.
- Press FOOT SW [TIP: SELECT] to advance to the next test item.

3. Volume Test

When entering Volume Test, all LEDs go off temporarily.

- Operate the following knobs of (1)–(8) minimum–center–maximum in numerical order 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.*

- JC CLEAN VOLUME
- LEAD GAIN
- LEAD VOLUME
- EQUALIZER BASS
- EQUALIZER MIDDLE
- EQUALIZER TREBLE
- EFX
- DELAY/REVERB

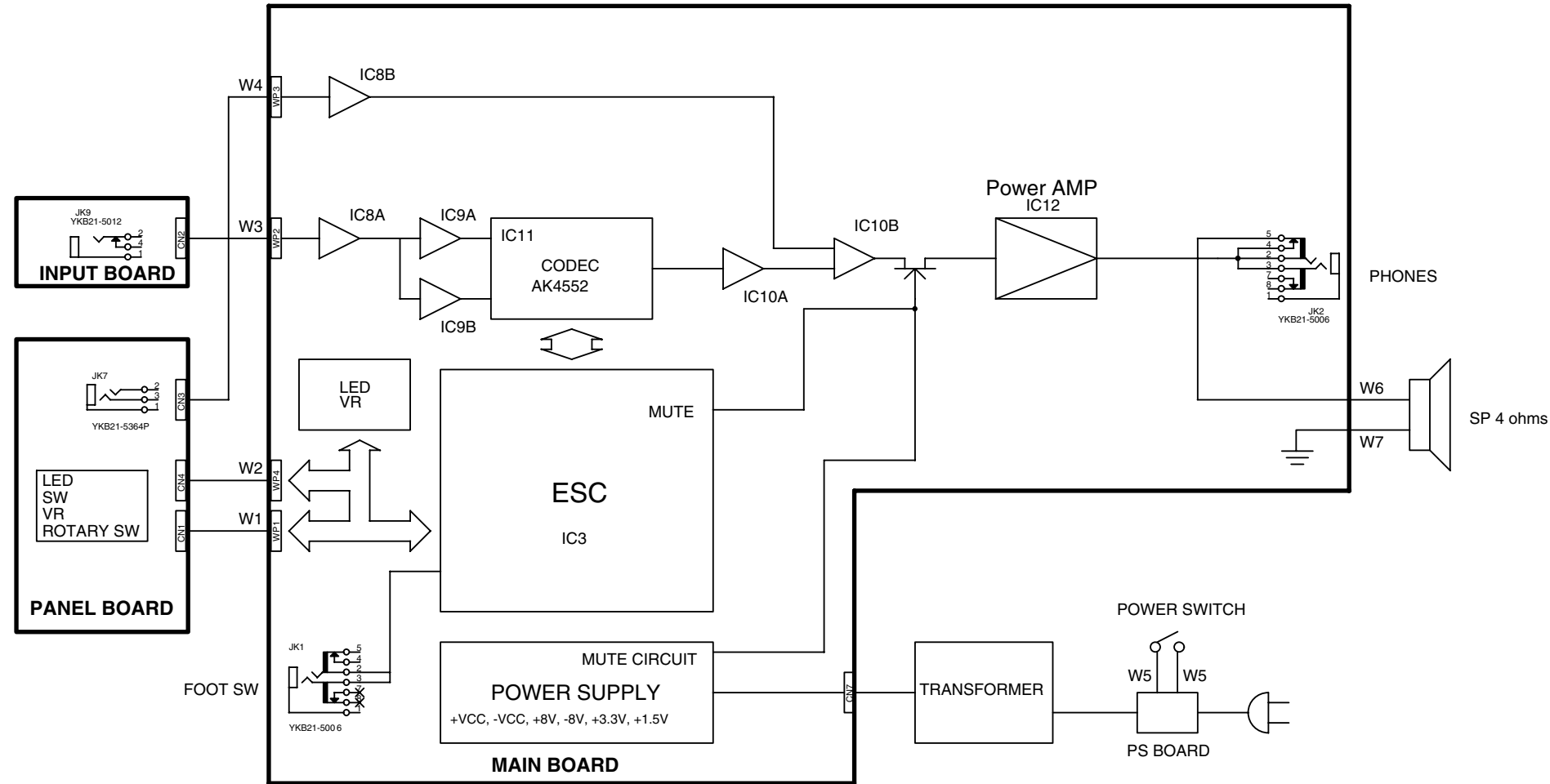
Position of Knob	Lighting LED
0, - or OFF	JC CLEAN
Center or 0	JC CLEAN, TUNER
10 or +	JC CLEAN, TUNER, LEAD

** Square wave is outputted when knobs are operated.*

When the test of all volume is completed, LEDs of JC CLEAN, TUNER and LEAD will blink.

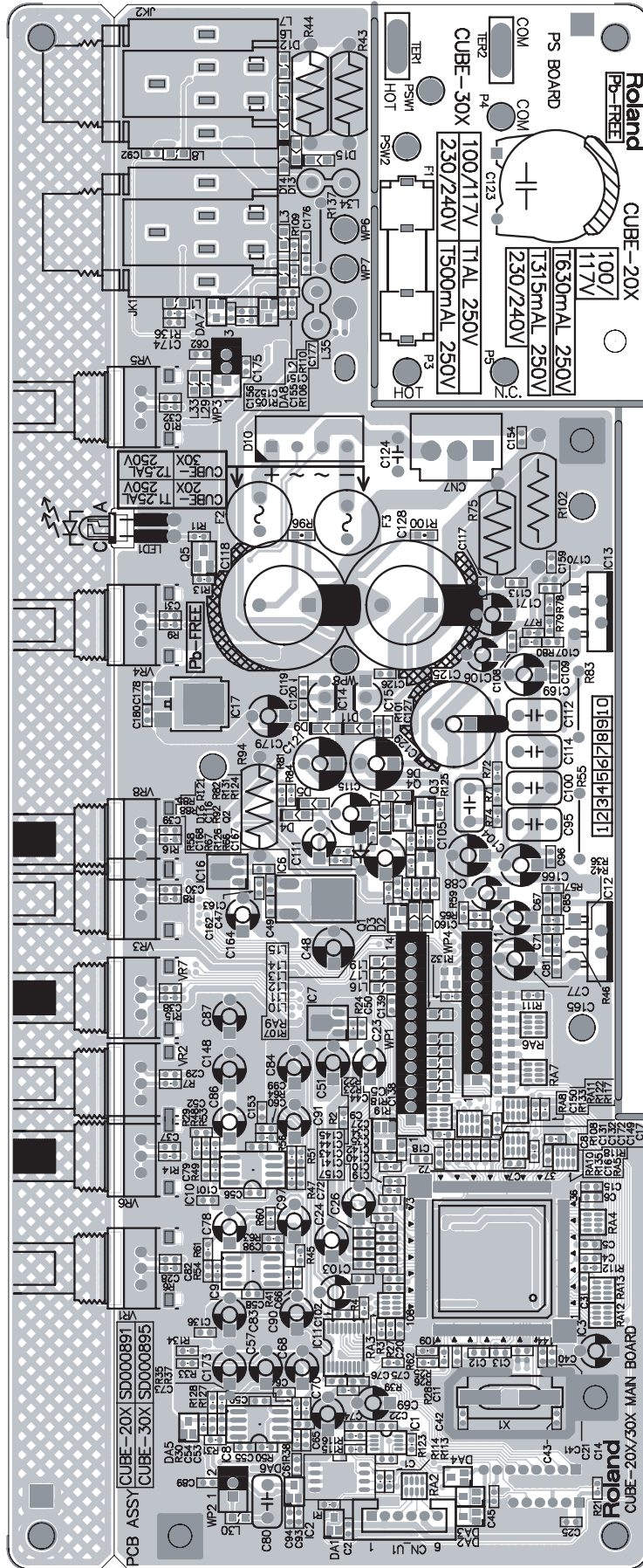
That's all for Test Mode. Turn off the power.

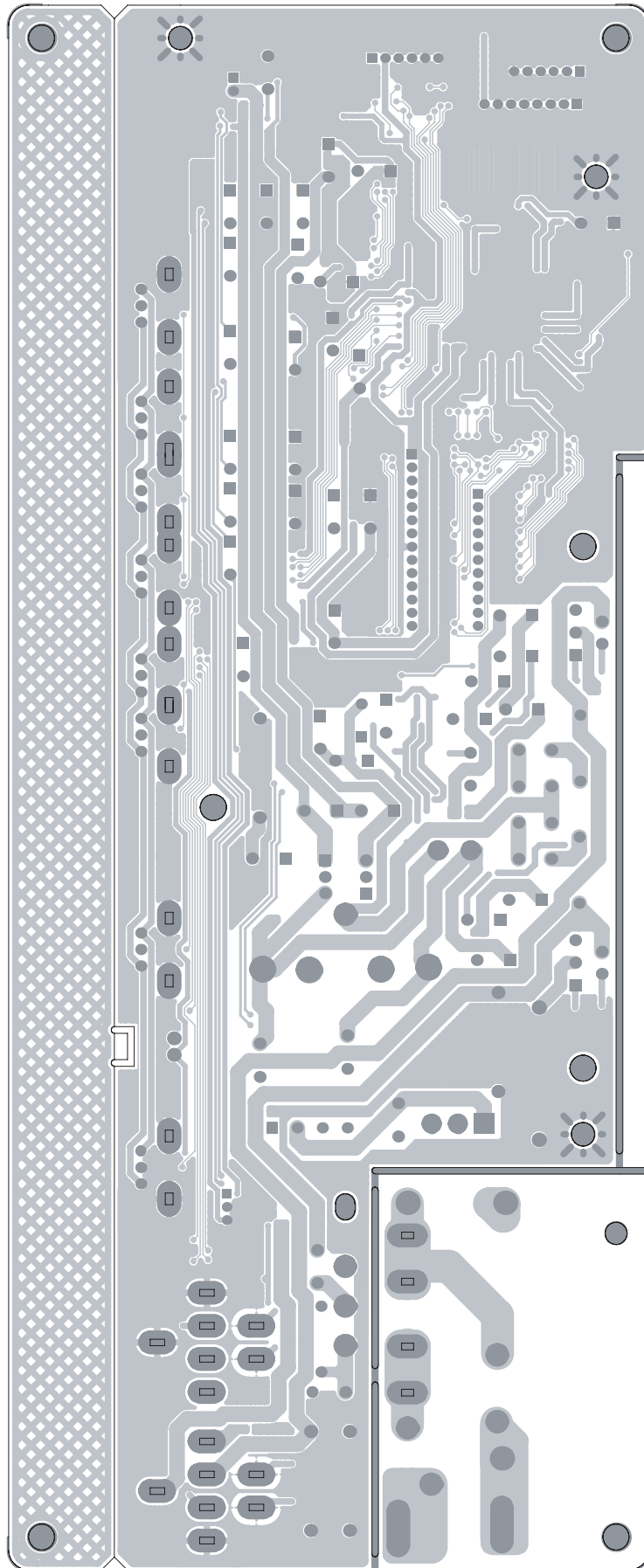
Block Diagram (CUBE-20X)



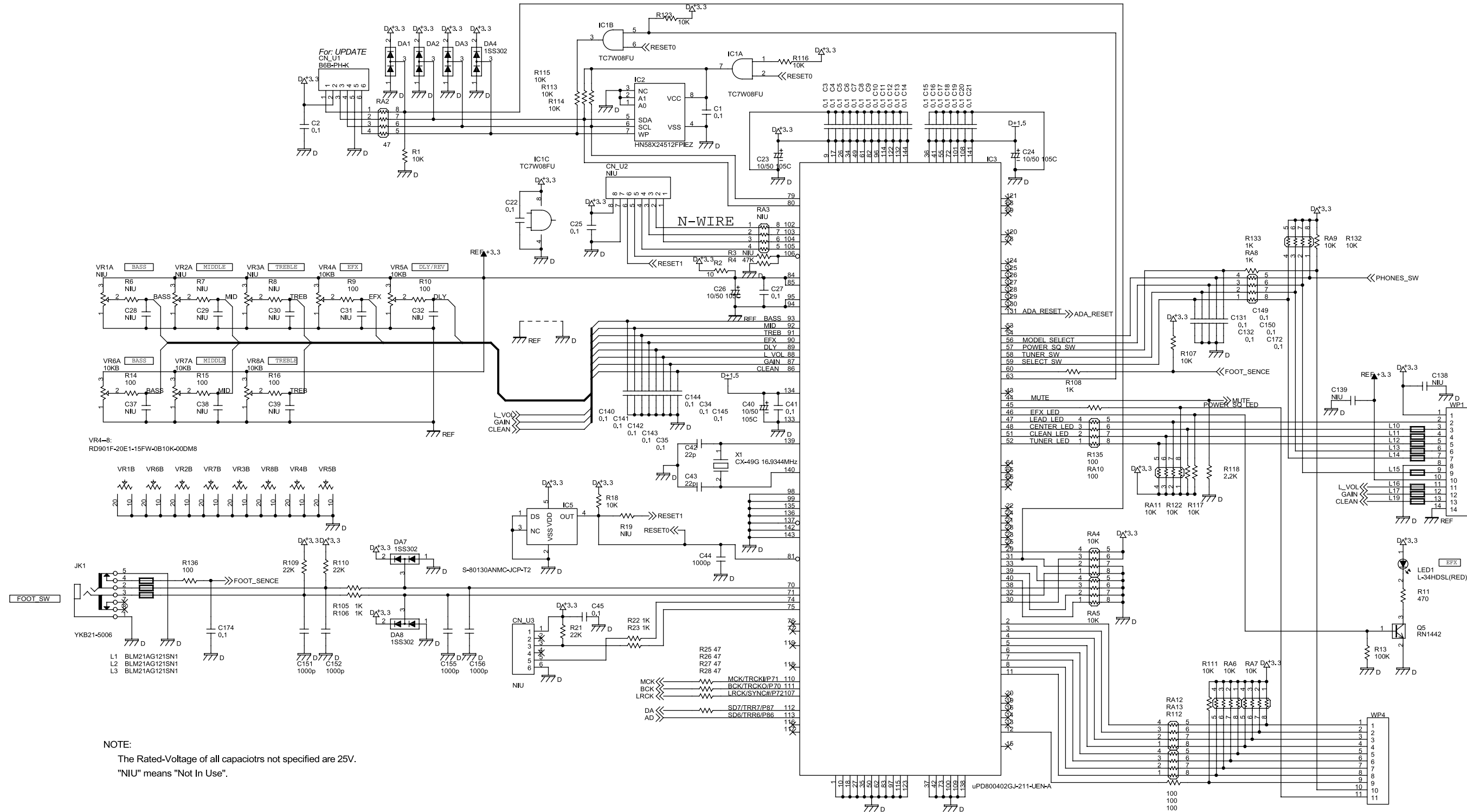
No.	Parts Code	Parts Name	Description	Q'ty
W1	*****	Wiring W1	14P	1
W2	*****	Wiring W2	11P	1
W3	*****	Wiring W3	2P	1
W4	*****	Wiring W4	3P	1
W5	*****	Wiring W5	1P	2
W6	*****	Wiring W6	1P	1
W7	*****	Wiring W7	1P	1
W8	*****	Wiring W8	1P	1

Circuit Board (CUBE-20X: MAIN Board/PS Board)

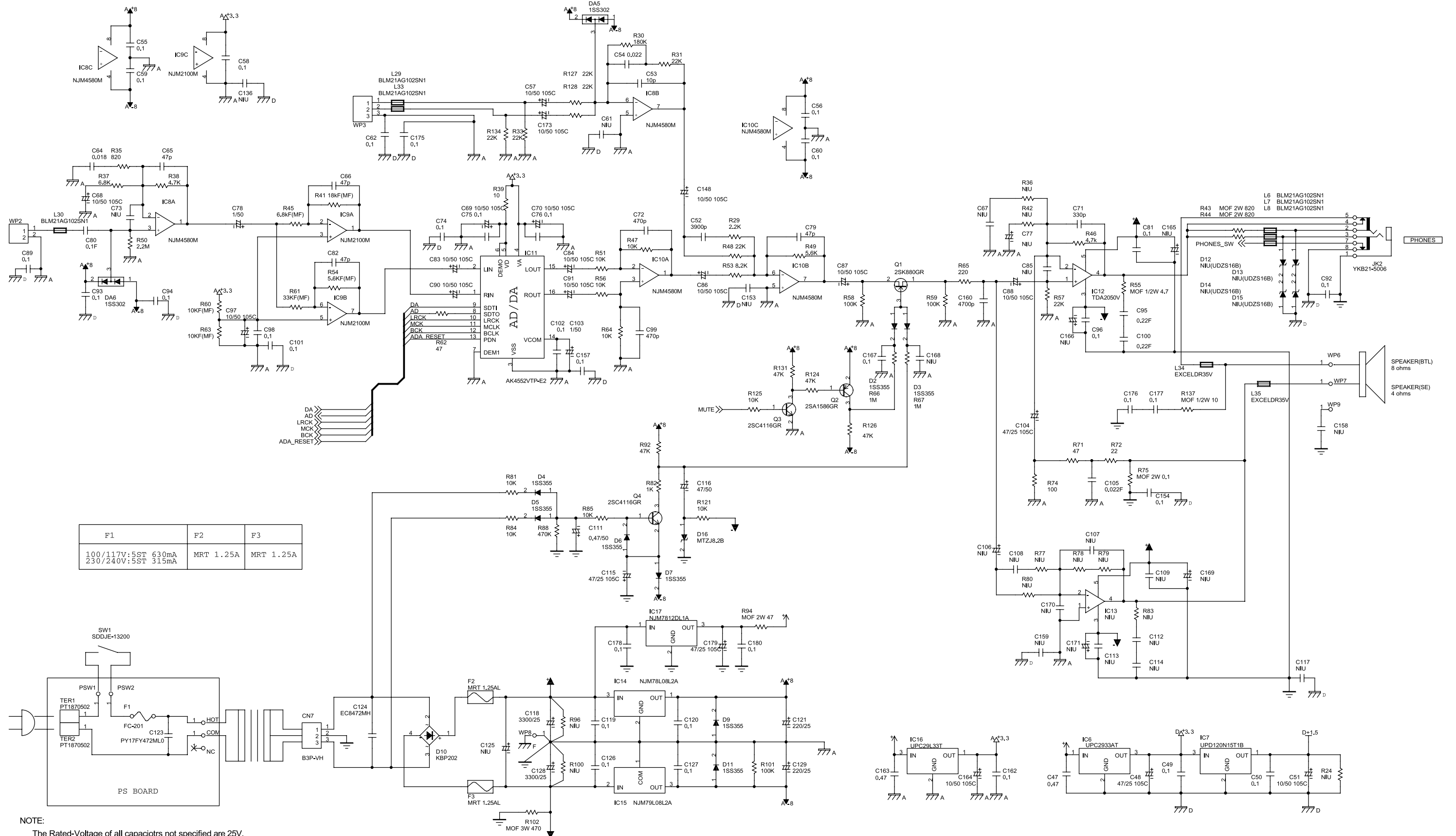




Circuit Diagram (CUBE-20X: MAIN Board 1)

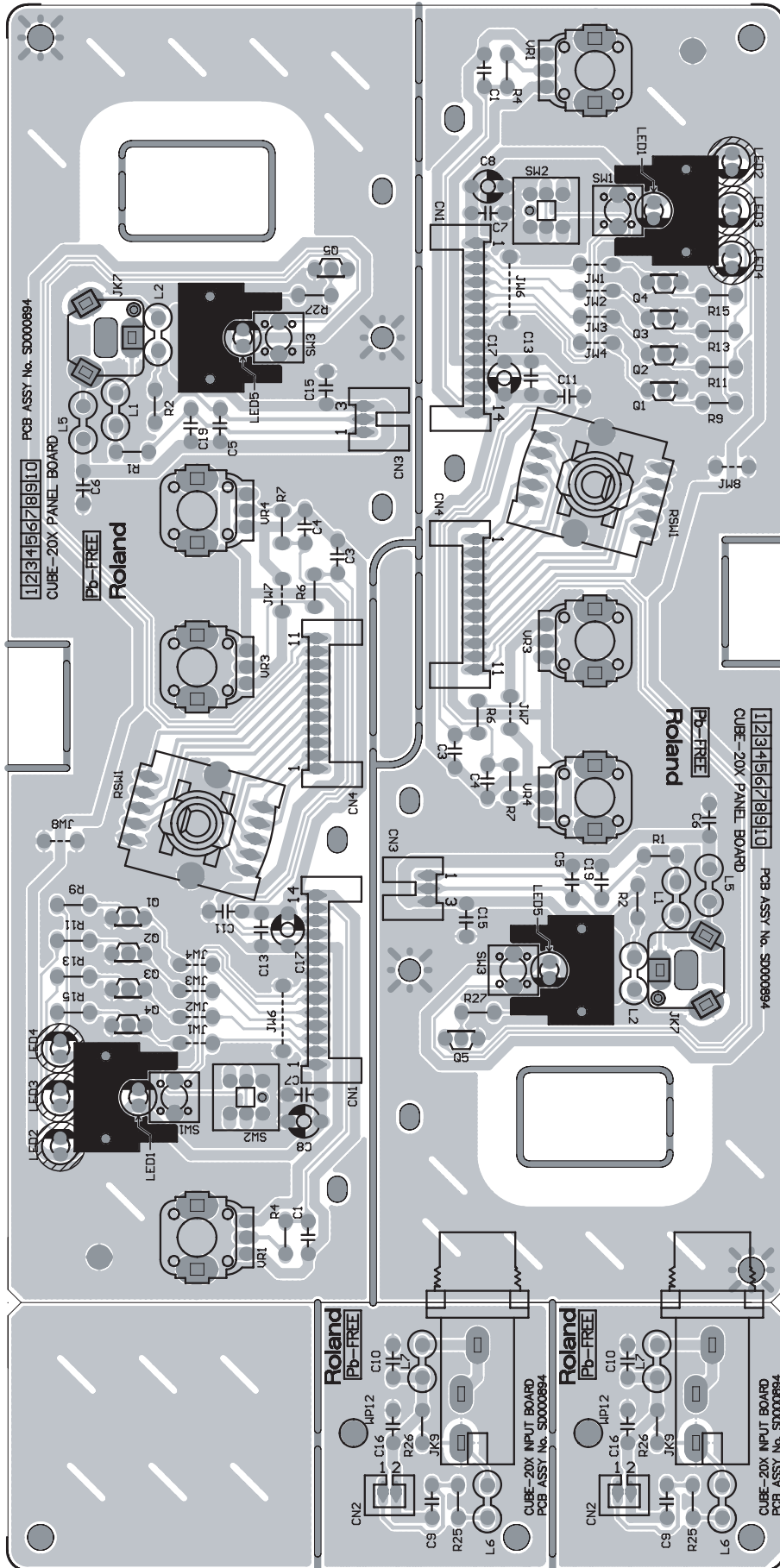


Circuit Diagram (CUBE-20X: MAIN Board 2)

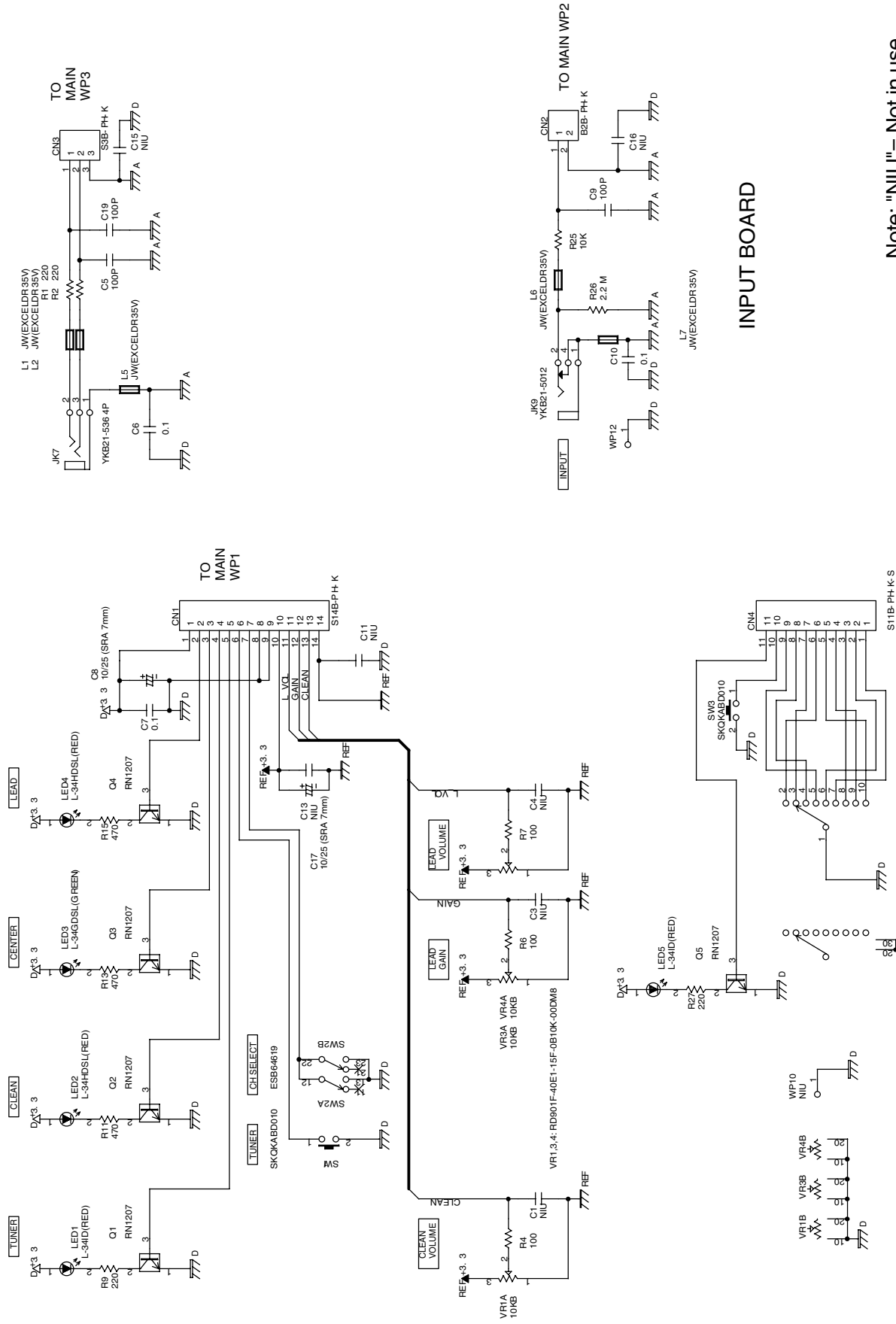


NOTE:
The Rated-Voltage of all capacitors not specified are 25V.
"NIU" means "Not In Use".

Circuit Board (CUBE-20X: PANEL Board/INPUT Board)



Circuit Diagram (CUBE-20X: PANEL Board/INPUT Board)



Note: "NIU" = Not in use

PANEL BOARD

INPUT BOARD

Specifications (CUBE-30X)

CUBE-30X: GUITAR AMPLIFIER

Rated Power Output

30W

Nominal Input Level (@1 kHz)

INPUT (JC CLEAN channel): -10 dBu/1 M ohms

AUX IN: -10 dBu

Speakers

25 cm

Controls

POWER Switch

SELECT Switch

TUNER Switch

POWER SQUEEZER Switch

<JC CLEAN Channel>

VOLUME Knob

<LEAD Channel>

TYPE Switch (ACOUSTIC, BLACK PANEL, BRIT COMBO, TWEED, CLASSIC STACK, METAL STACK, R-FIER STACK)

GAIN Knob

VOLUME Knob

<EQUALIZER>

BASS Knob

MIDDLE Knob

TREBLE Knob

<EFX>

EFX Knob (CHORUS, FLANGER, PHASER, TREMOLO)

<DELAY/REVERB>

DELAY / REVERB Knob

Indicators

JC CLEAN Channel

LEAD Channel

EFX

TUNER

POWER SQUEEZER

Connectors

INPUT Jack (1/4-inch phone type)

AUX IN Jack (Stereo mini type)

FOOT SW Jack (SELECT, EFX) (1/4-inch phone type)

RECORDING OUT/PHONES Jack (Stereo phone type)

Power Supply

AC 117 V, AC 230 V or AC 240 V

Power Consumption

34 W

Dimensions

385 (W) x 240 (D) x 380 (H) mm

15-3/16 (W) x 9-1/2 (D) x 15 (H) inches

Weight

9.3 kg / 20 lbs 9 oz

Accessories

Owner's Manual English (#SD000903)

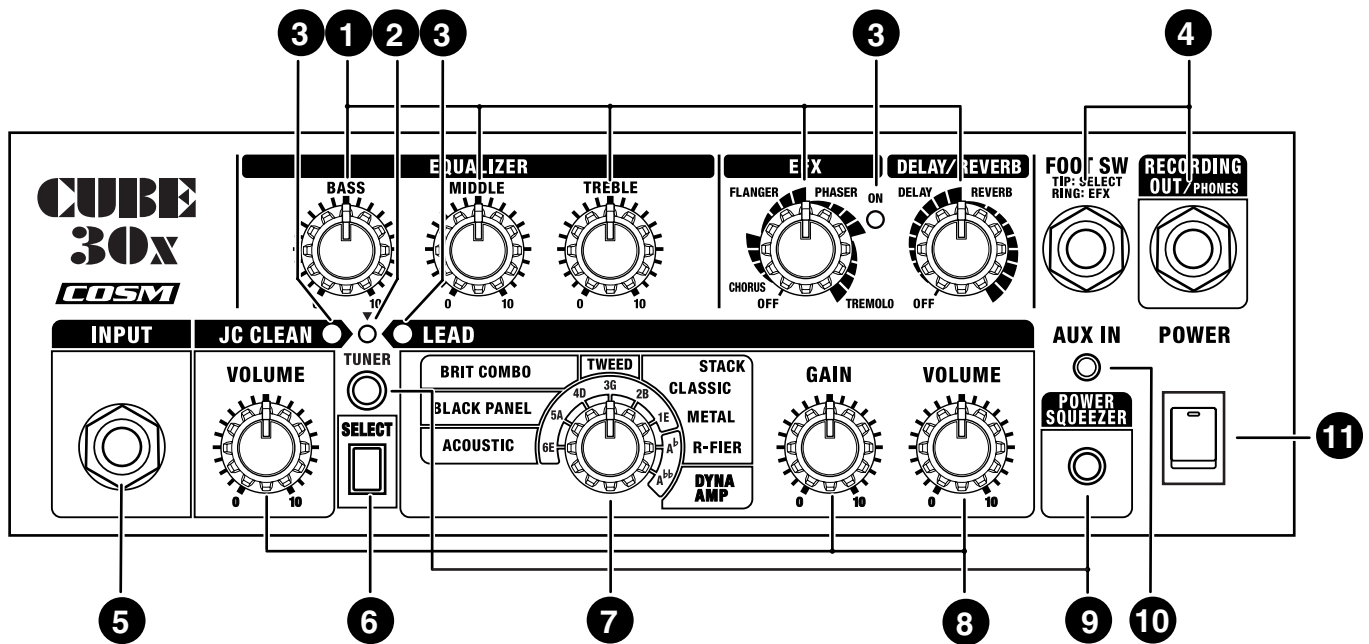
Options

Foot switch: BOSS FS-5L, BOSS FS-6

Connection Cable: PCS-31

* 0 dBu = 0.775 Vrms

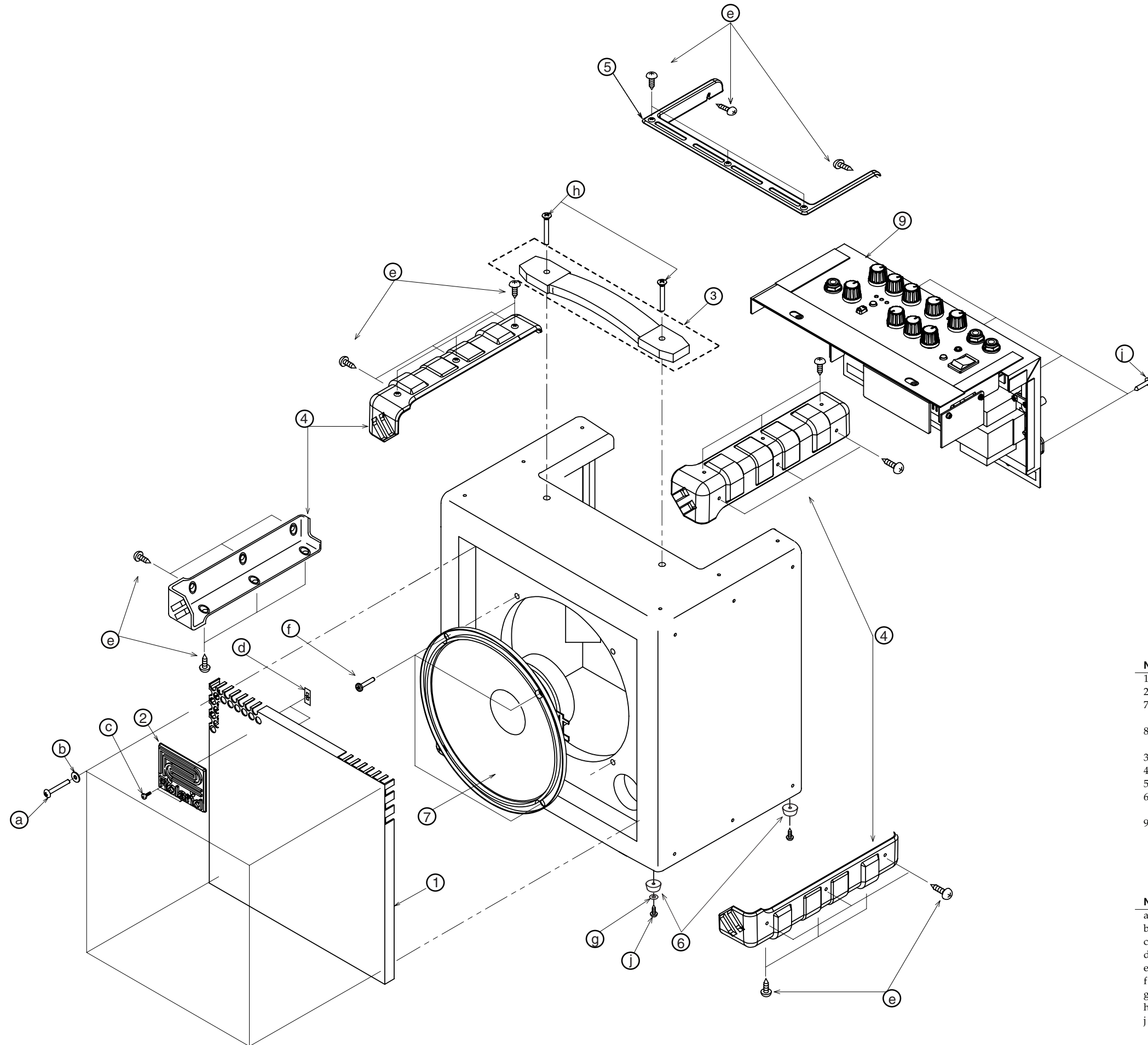
Location of Controls (CUBE-30X)



Location of Controls Parts List (CUBE-30X)

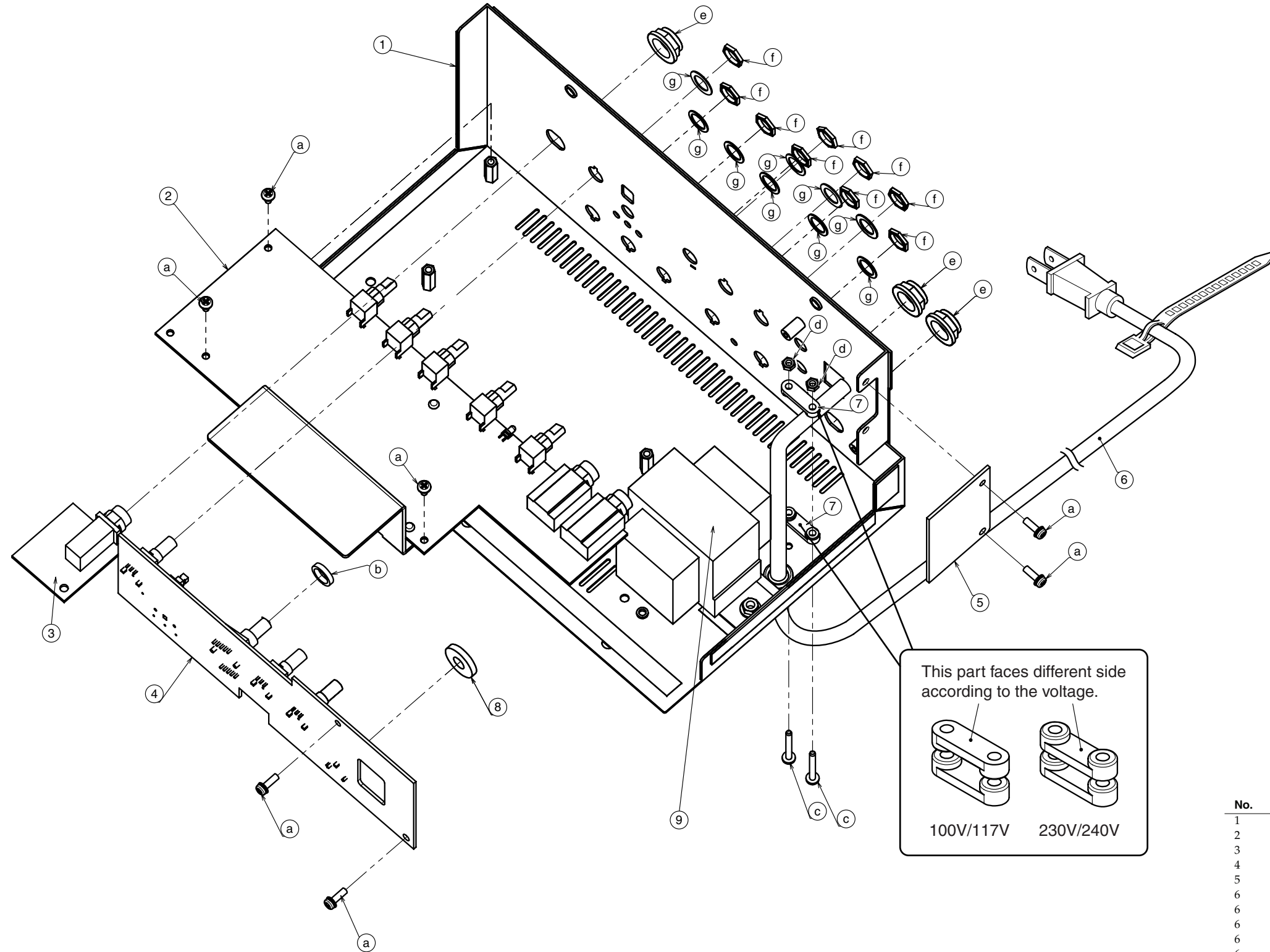
No.	Parts Code	Parts Name	Description	Q'ty
1	SD000910	POTENTIOMETER	R901F-20E1-15FW-0B10K-00DM8	5
	SD000043	R-KNOB	W/HOT STAMP	5
	17048630	VR ACCESSORY NUT M9		5
	40452178	VR WASHER M9		5
2	SD000044	LED GREEN	L-34GDSL	1
	SD000045	LED RED	L-34HDSL	3
4	13449252	6.5MM JACK	YKB21-5006 (STEREO W/SW)	2
	22150756	JACK NUT 2	PLASTIC/BLK	2
5	13449146	6.5MM JACK	YKB21-5012 (W/SW)	1
	22150756	JACK NUT 2	PLASTIC/BLK	1
6	SD000099	PUSH SWITCH	ESB64619	1
	SD000082	PUSH BUTTON	BLACK	1
7	SD000907	ROTARY SWITCH	SR1712F-0108-175F0A-N9-N-008	1
	SD000043	R-KNOB	W/HOT STAMP	1
	17048630	VR ACCESSORY NUT M9		1
	40452178	VR WASHER M9		1
8	SD000911	POTENTIOMETER	R901F-40E1-15F-0B10K-00DM8	3
	SD000043	R-KNOB	W/HOT STAMP	3
	17048630	VR ACCESSORY NUT M9		3
	40452178	VR WASHER M9		3
9	SD000906	KEY TOP		2
9	01780101	TACT SWITCH	SKQKABD010	2
9	*****	LED RED	L-34IDSL	2
		* This part is included in CHASSIS ASSY (SD000921-SD000924, SD000988).		
10	SD000908	3.5MM JACK	YKB21-5364P	1
11	02897801	SEESAW SWITCH	SDDJE13200 94V-0	1

Exploded View (CUBE-30X: Cabinet)



No.	Parts Code	Parts Name	Description	Q'ty
1	SD000034	GRILL		1
2	SD000017	BADGE		1
7	SD000909	SPEAKER 10inch (8OHM)	W1008-432-A	1
8	SD000920	CABINET ASSY		1
* This unit includes the following parts.				
3	SD000035	HANDLE WITH ESCUTHEON		1
4	SD000031	CORNER PROTECTOR		4
5	SD000066	TRIM SASH		1
6	12359104	RUBBER FOOT		4
9	SD000921	CHASSIS ASSY	100V	1
	SD000922	CHASSIS ASSY	117VU/CS	1
	SD000988	CHASSIS ASSY	230VEU	1
	SD000923	CHASSIS ASSY	230VE	1
	SD000924	CHASSIS ASSY	240VA	1
No.	Parts Code	Parts Name	Description	Q'ty
a	SD000975	SCREW 4X35	ORIGINAL TRUSS BZC	4
b	SD000069	WASHER M4 11FAI	ADDITIONAL PLASTIC WASHER	4
c	40230789	SCREW 3X10	OVALHEAD MACHINE BZC	2
d	40011689	SPEED NUT M3	F-TYPE	2
e	40010790	SCREW 3X16	TRUSS TAPTITE A1 BZC	29
f	40010367	SCREW M4X25	BINDING MACHINE BZC	4
g	SD000370	PLANE WASHER	4.2X10X0.5T FEBC	4
h	40564601	SCREW M5X35	OVALHEAD MACHINE BZC	2
j	40010689	SCREW 4X25	TRUSS TAPTITE A1 FE BZC	8

Exploded View (CUBE-30X: Chassis)



This part faces different side according to the voltage.

100V/117V 230V/240V

No.	Parts Code	Parts Name	Description	Q'ty
1	SD000991	CHASSIS		1
2	*****	MAIN BOARD ASSY		1
3	*****	INPUT BOARD		1
4	*****	PANEL BOARD		1
5	*****	PS BOARD		1
6	SD000177	AC CORD PSE	SP-18A WITH TERMINAL 100V	1
6	SD000912	AC CORD ASSY	SP-20 117V (2P)	1
6	SD000913	AC CORD ASSY	SP-026A 230V (2P)	1
6	SD000914	AC CORD ASSY	SP-61 230VE (2P)	1
6	SD000915	AC CORD ASSY	SP-501 240V (2P)	1
7	12369410RT	AC CORD HOLDER	1702B	2
8	*****	CUSHION D7x18xT3		1
9	SD000917	TRANSFORMER	BG432L 100V/117V	1
9	SD000918	TRANSFORMER	BG432H 230V/240V	1
a	40013067	SCREW M3X8	PAN MACHINE W/SW+SMALL PW ZC	7
b	SD000916	WASHER	M9 T=2.5	1
c	40010301	SCREW M3X20	BINDING MACHINE BZC	2
d	40011756	FLANGE HEX NUT M3	ZC	2
e	22150756	JACK NUT 2	PLASTIC/BLK	3
f	17048630	VR ACCESSORY NUT M9		9
g	40452178	VR WASHER M9		9

Parts List (CUBE-30X)

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					
	SD000017	BADGE			1
#	SD000920	CABINET ASSY			1
	SD000031	CORNER PROTECTOR			4
	SD000034	GRILL			1
	SD000035	HANDLE WITH ESCUTHEON			1
	12359104	RUBBER FOOT			4
	SD000066	TRIM SASH			1
CHASSIS					
#	SD000921	CHASSIS ASSY	100V		1
#	SD000922	CHASSIS ASSY	117VU/CS		1
#	SD000988	CHASSIS ASSY	230VEU	for EU market	1
#	SD000923	CHASSIS ASSY	230VE	for UK market	1
#	SD000924	CHASSIS ASSY	240VA		1
#	SD000991	CHASSIS			1
KNOB, BUTTON					
#	SD000906	KEYTOP			2
	SD000082	PUSH BUTON			1
	SD000043	R-KNOB	W/HOT STAMP		9
SWITCH					
#	SD000907	ROTARY SWITCH	SR1712F-0108-175F0A-N9-N-008	RSW1 on PANEL	1
	01780101	PUSH SWITCH	SKQKABD010	SW1, SW3 on PANEL BOARD	2
Δ	02897801	SEESAW SWITCH	SDDJE13200 94V-0		1
	SD000099	PUSH SWITCH	ESB64619	SW2 on PANEL BOARD	1
JACK, EXT TERMINAL					
#	SD000908	3.5MM JACK	YKB21-5364P	JK7 on PANEL BOARD	1
	13449146	6.5MM JACK	YKB21-5012	JK9 on INPUT BOARD	1
	13449252	6.5MM JACK	YKB21-5006	JK1, JK2 on MAIN BOARD	2
SPEAKER, BUZZER					
# Δ	SD000909	SPEAKER 10INCH (8OHM)	W1008-432-A		1
DIODE					
	SD000044	LED GREEN	L-34GDSL		1
	SD000045	LED RED	L-34HDSL		3
POTENTIOMETER					
#	SD000911	POTENTIOMETER	RD901F-40E1-15F-0B10K-00DM8	VR1, VR3, VR4 on PANELBOARD	3
#	SD000910	POTENTIOMETER	RD901F-20E1-15FW-0B10K-00DM8	VR1, VR2, VR3, VR4, VR5 on MAIN BOARD	5
FUSE, FUSE HOLDER					
Δ	SD000008	5ST 500MA/250V	230V/240V	F1 on PS BOARD	1
Δ	03673990	5ST 1A/250V	100V/117V	F1 on PS BOARD	1
TRANSFORMER					
# Δ	SD000917	TRANSFORMER	BG432L (100/117)		1
# Δ	SD000918	TRANSFORMER	BG432H (230/240)		1

AC CORD ASSY (Installed)					
△	SD000177	AC CORD ASSY	SP-18A 100V (2P)		1
△	SD000912	AC CORD ASSY	SP-20 117V (2P)		1
△	SD000913	AC CORD ASSY	SP-026A 230V (2P)		1
△	SD000914	AC CORD ASSY	SP-61 230VE (2P)		1
△	SD000915	AC CORD ASSY	SP-501 240V (2P)		1
SCREWS					
	40010790	SCREW 3X16	TRUSS TAPTITE A1 BZC	for CORNER PROTECTOR, TRIM SASH	29
	SD000975	SCREW 4X35	ORIGINAL TRUSS BZC	for GRILL	4
	40230789	SCREW 3X10	OVALHEAD MACHINE BZC	for BADGE	2
	40564601	SCREW 5X35	OVALHEAD MACHINE BZC	for HANDLE	2
	40011689	SPEED NUT M3	F-TYPE	for BADGE	2
	40010367	SCREW 4X25	BINDING MACHINE BZC	for SPEAKER	4
	SD000069	WASHER M4 11 FAI	ADDITIONAL PLASTIC WASHER	for GRILL	4
	22150756	JACK NUT 2			4
#	SD000916	WASHER	M9 T=2.5		1
	17048630	VR ACCESSORY NUT M9			9
	40452178	VR WASHER M9			9
	SD000370	PLATE WASHER	4.2X10X0.5T FEBC	for FOOT	4
	40010301	SCREW M3X20	BINDING MACHINE BZC	for CORD CLAMP	2
	40011756	FLANGE HEX NUT M3	ZC	for CORD CLAMP	2
	40013067	SCREW M3X8	PAN MACHINE W/ SW+SMALL PW ZC	for PCB	7
	40010689	SCREW 4X25	TRUSS TAPPING A1 FE BZC	for CHASSIS, FOOT	8
	40011889	EXTERNAL TOOTH WASHER MR	FECM	for WIRING	2
	40011767	FLANGE HEX NUT M4	FE ZC	for TRANSFORMER, WIRING	4
	40230023	SPRING WASHER	M4 ZC	for TRANSFORMER	2
MISCELLANEOUS					
	12369410RT	AC CORD HOLDER	1702B		2
PACKING					
#	SD000919	PACKING CASE			1
#	SD000323	PAD			8
ACCESSORIES (Standard)					
#	SD000900	OWNER'S MANUAL	JAPANESE		1
#	SD000903	OWNER'S MANUAL	ENGLISH		1

Checking Version Number (CUBE-30X)

Required Items

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

Procedure

1. Connect the Foot Switch to the FOOT SW jack.
* Set the polarity switch of FS-5 to the jack side.
2. Set each switch of the panel as follows.
POWER SW: OFF
SELECT: JC CLEAN (The push switch is up.)
AMP TYPE: ACOUSTIC
All knobs: Minimum (0 or OFF)
3. Hold down the pedal of FS-5U which is connected to [TIP: SELECT] of the FOOT SW jack.
At this time, 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	JC CLEAN	TUNER	LEAD
1.00	o		
1.01		o	
1.02			o
1.03	o	o	
1.04	o		o
1.05		o	o

o: blinks, blank: goes off

5. Turn off the power of the CUBE-30X.

Test Mode (CUBE-30X)

Notes for User Data

CUBE-30X has no User Data.

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 Version Number (CUBE-30X)** (p. 29). After checking the version number, press FS-5U connected TIP: SELECT of the FOOT SW jack (described as “FOOT SW [TIP: SELECT]” in the following sections). 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

DST Test starts automatically as soon as you enter the Test Mode. In DSP Test, the LED of JC CLEAN, TUNER and LEAD will light in this order corresponding to the progress of the test.

When the result of test is OK:

LEDs of JC CLEAN, TUNER and LEAD blink.

When the result of test is NG:

LED of EFX blinks.

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

2. Switch Test

When entering Switch Test, all LEDs go off temporarily.

- Operate buttons, rotary switches, pedals and plugs as the order in the following table.
LEDs with “o” in the table will light, and LEDs with blank column will go off.

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

Operation	Lighting LED				
	JC CLEAN	TUNER (green)	LEAD	TUNER button	POWER SQUEESES-ER

Press button					
1	SELECT	o	o	o	
2	TUNER	o	o	o	o
3	POWER SQUEESES-ER	o	o	o	o

Rotate rotary switch					
4	BLACK PANEL	o			
5	BRIT			o	
6	TWEED	o			
7	CLASSIC			o	
8	METAL	o			
9	R-FIER			o	
10	DYNA	o			
11	R-FIER			o	
12	METAL	o			
13	CLASSIC			o	
14	TWEED	o			
15	BIRT			o	
16	BLACK PANEL	o			
17	ACOUSTIC	o		o	

Press pedal					
18	FOOT SW [RING: EFX]	o			

Pull out/Insert plug					
19	Pull out from FOOT SW			o	
20	Insert into FOOT SW	o			

Insert a dummy plug					
21	Insert into RECORDING OUT			o	

o: lights, blank: goes off

- Pull out the plug from RECORDING OUT/PHONES jack. After while, LEDs of JC CLEAN, TUNER and LEAD will blink.
- Press FOOT SW [TIP: SELECT] to advance to the next test item.

3. Volume Test

When entering Volume Test, all LEDs go off temporarily.

1. Operate the following knobs of (1)–(8) minimum–center–maximum in numerical order 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.*

- (1) JC CLEAN VOLUME
- (2) LEAD GAIN
- (3) LEAD VOLUME
- (4) EQUALIZER BASS
- (5) EQUALIZER MIDDLE
- (6) EQUALIZER TREBLE
- (7) EFX
- (8) DELAY/REVERB

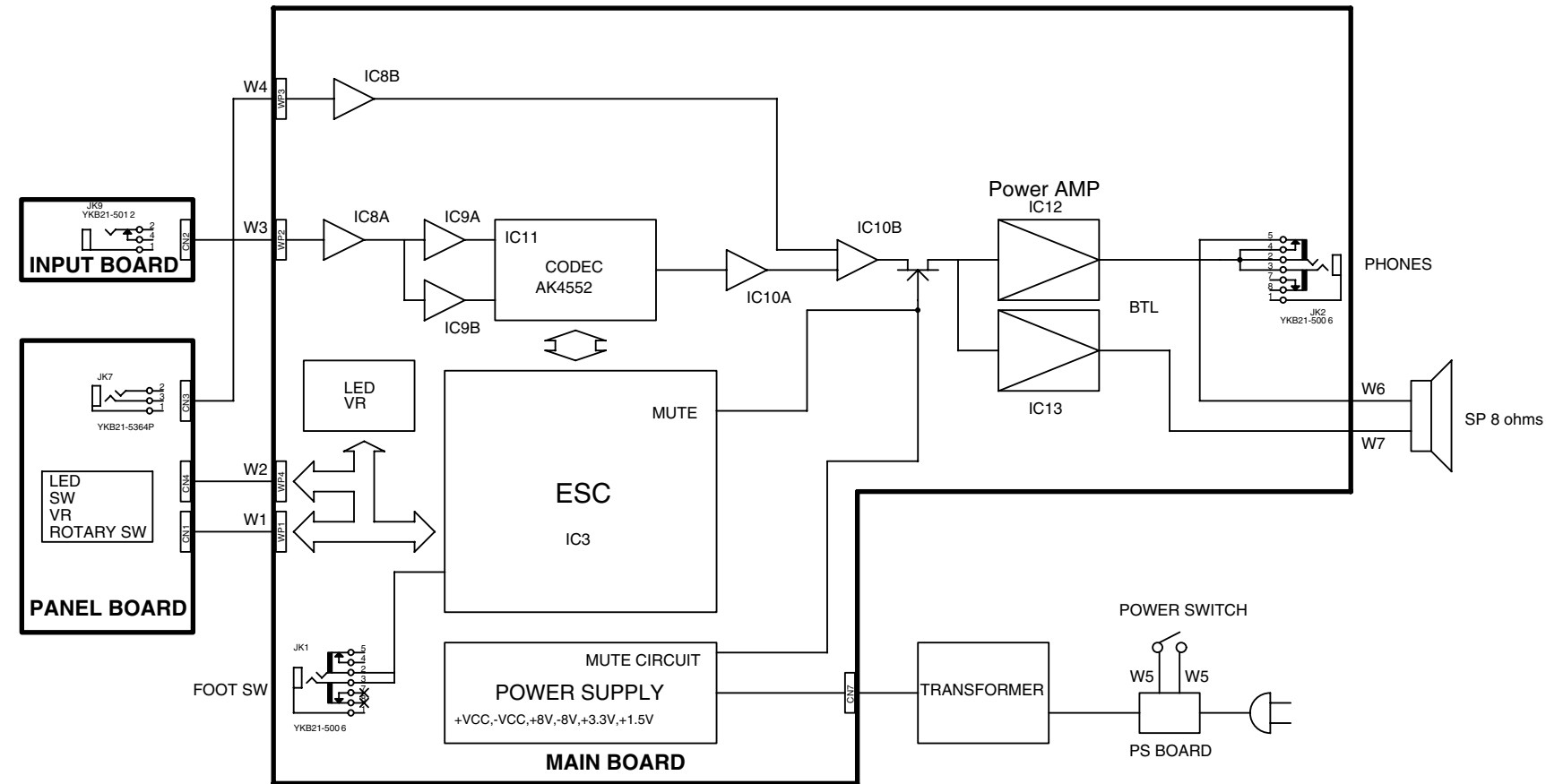
Position of Knob	Lighting LED
0, - or OFF	JC CLEAN
Center or 0	JC CLEAN, TUNER
10 or +	JC CLEAN, TUNER, LEAD

* *Square wave is outputted when knobs are operated.*

When the test of all volume is completed, LEDs of JC CLEAN, TUNER and LEAD will blink.

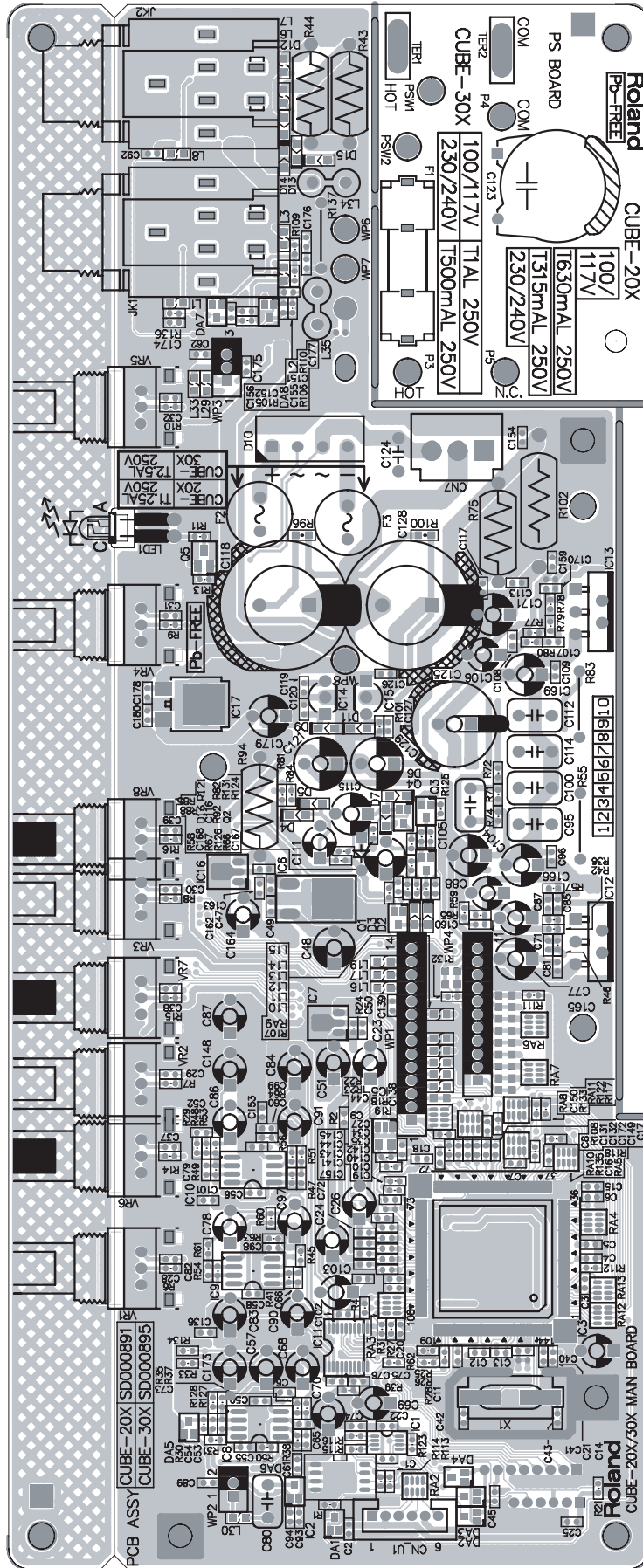
That's all for Test Mode. Turn off the power.

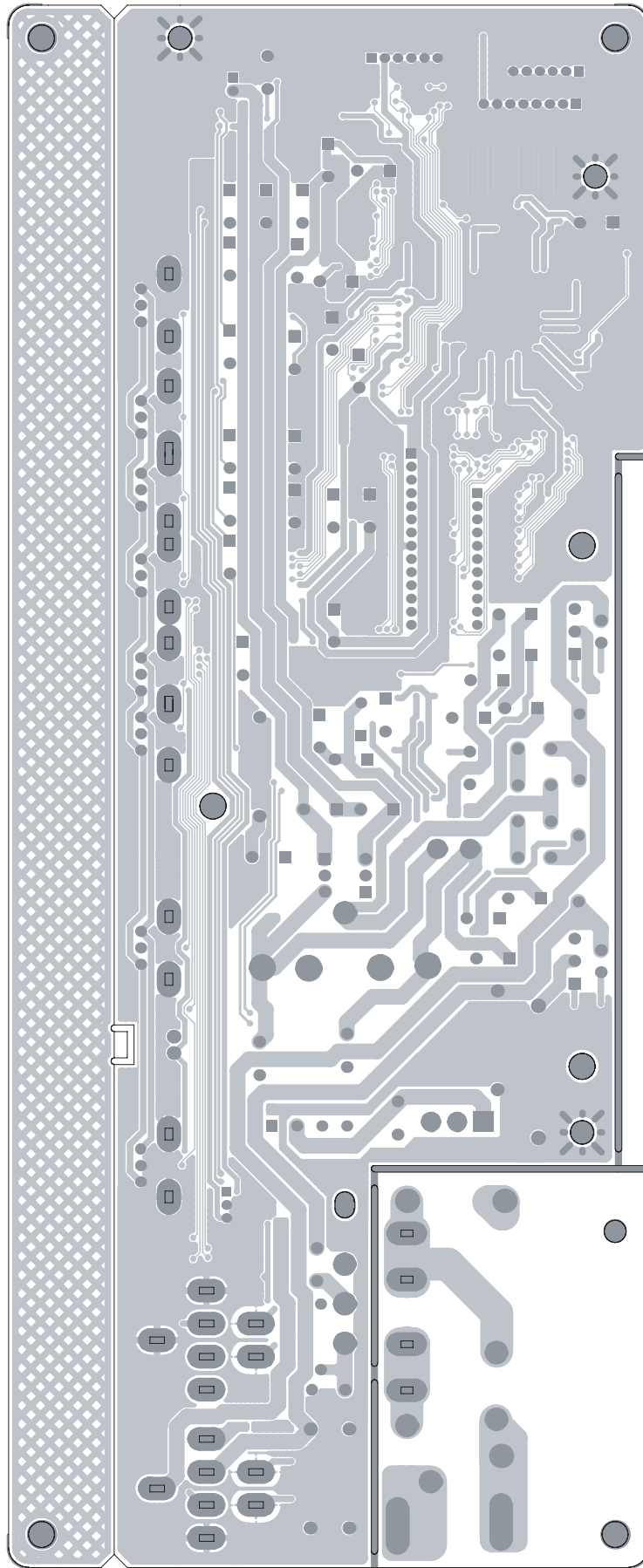
Block Diagram (CUBE-30X)



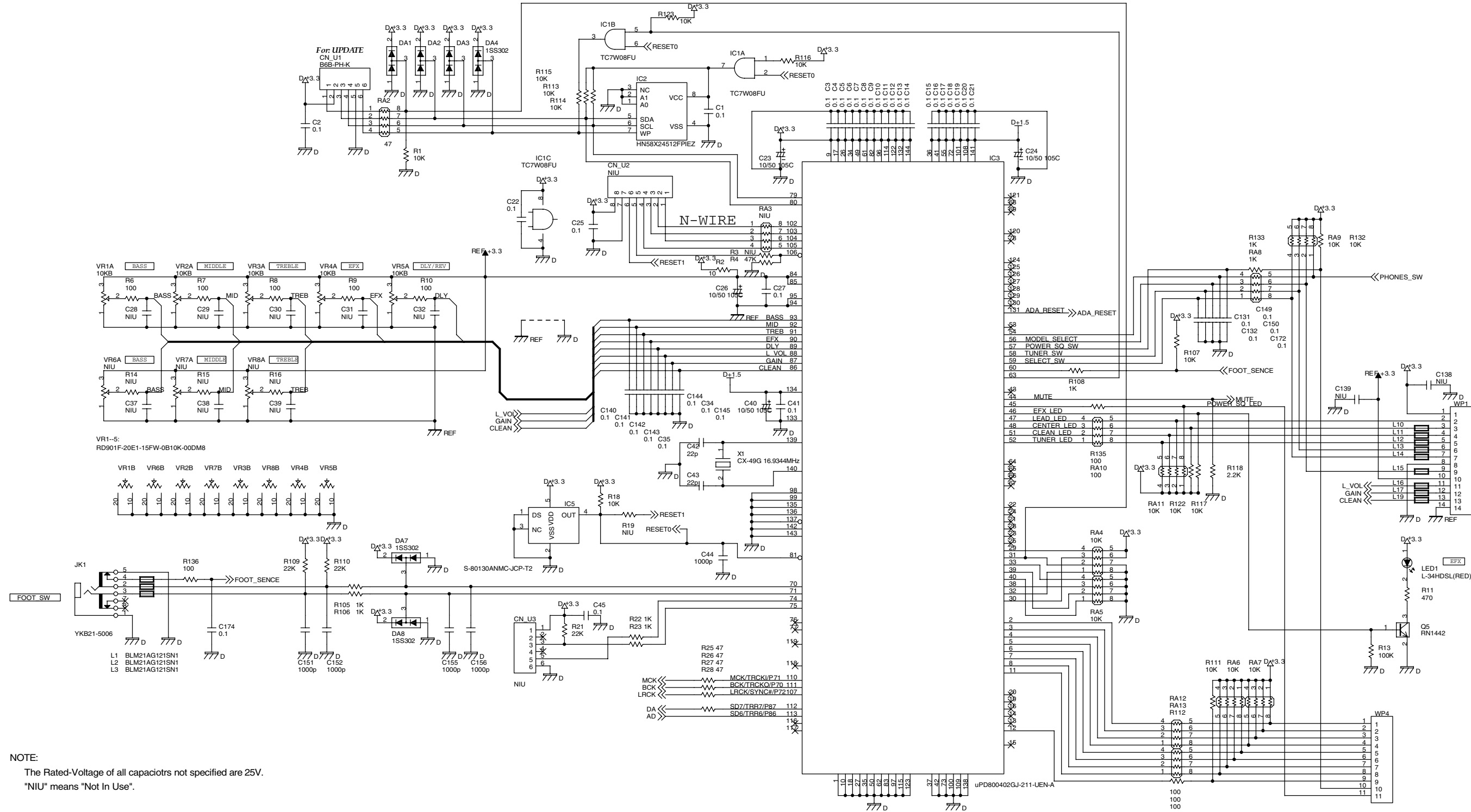
No.	Parts Code	Parts Name	Description	Q'ty
W1	*****	Wiring W1	14P	1
W2	*****	Wiring W2	11P	1
W3	*****	Wiring W3	2P	1
W4	*****	Wiring W4	3P	1
W5	*****	Wiring W5	1P	2
W6	*****	Wiring W6	1P	1
W7	*****	Wiring W7	1P	1
W8	*****	Wiring W8	1P	1

Circuit Board (CUBE-30X: MAIN Board/PS Board)



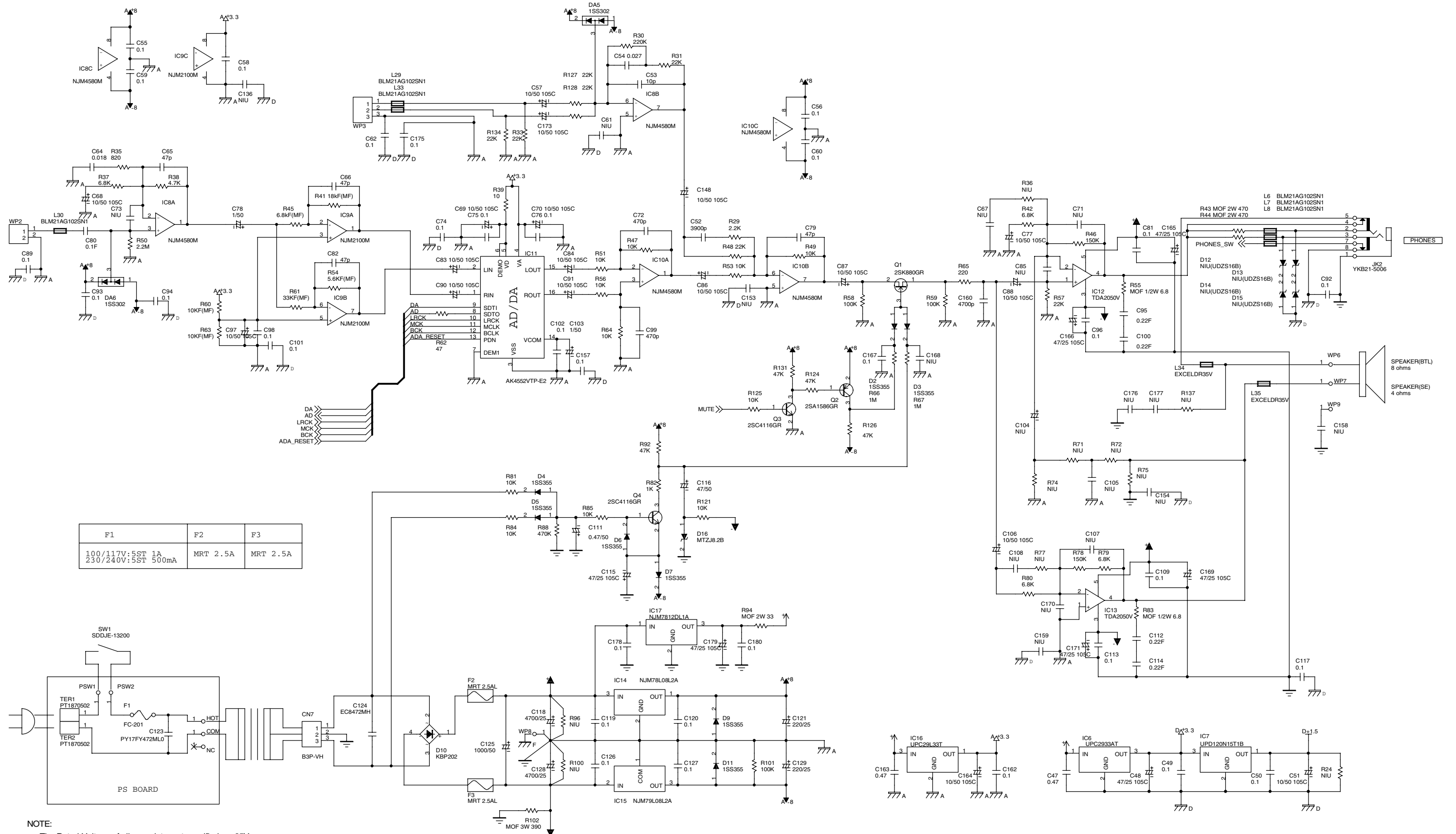


Circuit Diagram (CUBE-30X: MAIN Board 1)



NOTE:
 The Rated-Voltage of all capacitors not specified are 25V.
 "NIU" means "Not In Use".

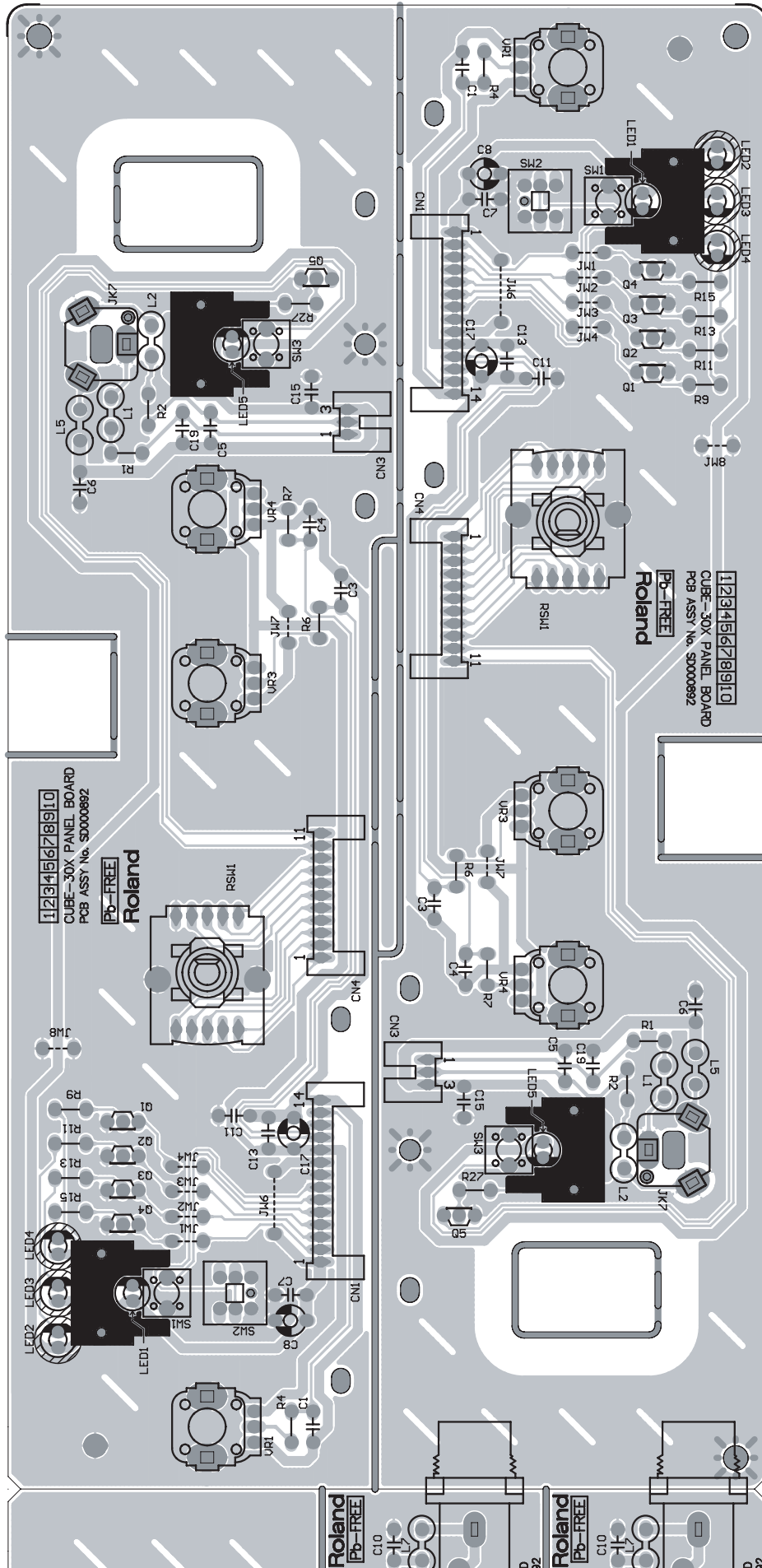
Circuit Diagram (CUBE-30X: MAIN Board 2)



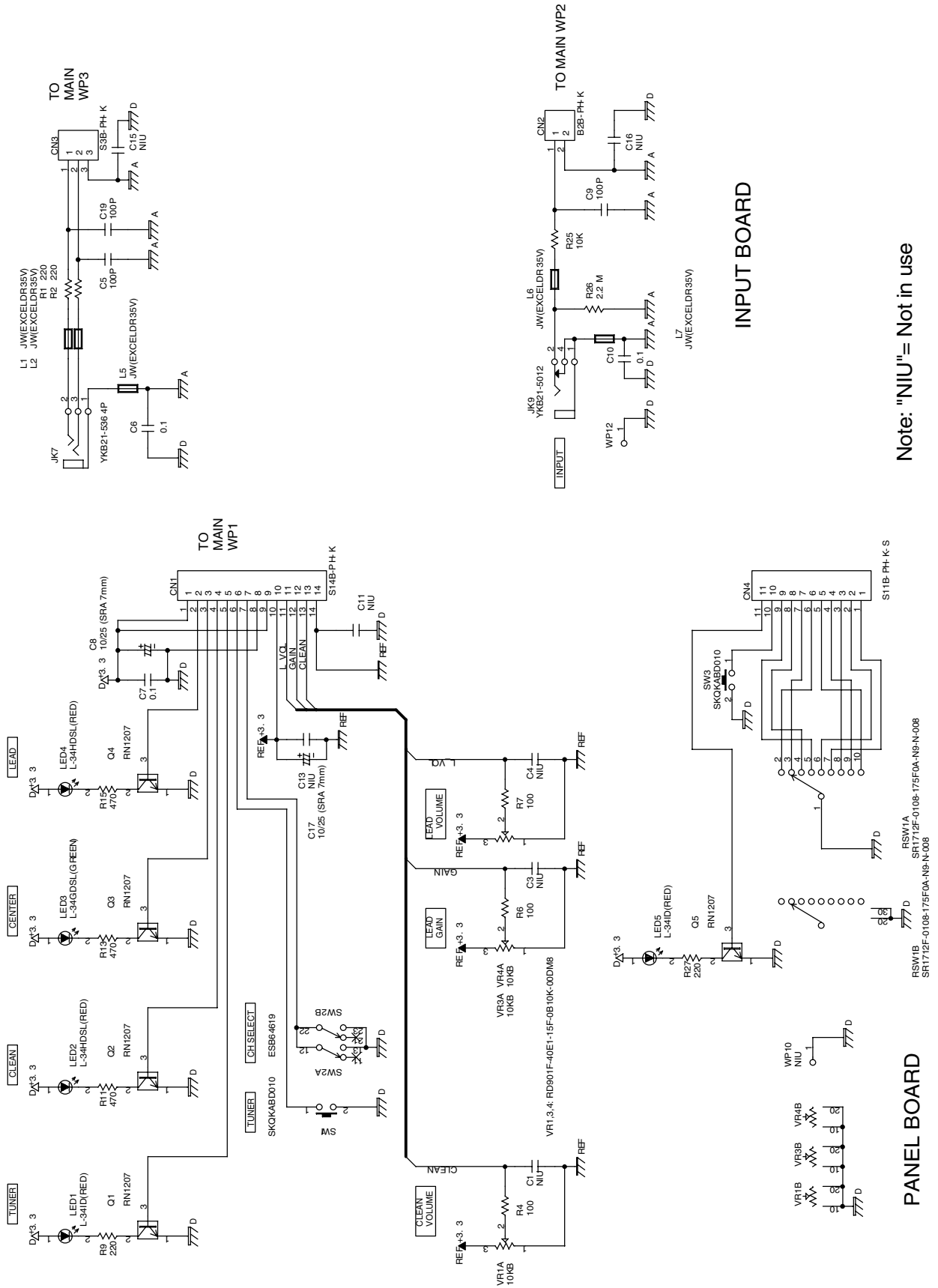
F1	F2	F3
100/117V:5ST 1A	MRT 2.5A	MRT 2.5A
230/240V:5ST 500mA		

NOTE:
The Rated-Voltage of all capacitors not specified are 25V.
"NIU" means "Not In Use".

Circuit Board (CUBE-30X: PANEL Board/INPUT Board)



Circuit Diagram (CUBE-30X: PANEL Board/INPUT Board)



Note: "NIU" = Not in use

MEMO