

# CUBE 30

## SERVICE NOTES *Issued by RJA*

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# SPECIFICATIONS

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CUBE-30 GUITAR AMPLIFIER SPECIFICATIONS

## Rated Power Output

30W

## Nominal Input Level (1kHz)

INPUT -10dBu/1Mohms  
AUX IN -10dBu

## Speaker

25cm (10inch) x1

## Controls

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 Knob (CHORUS, FLANGER, PHASER, TREMOLO)  
DELAY/REVERB Knob

SELECT Switch  
POWER Switch

## Indicators

CLEAN Channel  
LEAD Channel  
EFX

## Connectors

INPUT Jack (1/4"phone type)  
AUX IN Jack (1/4"phone type)  
RECORDING OUT/HEADPHONE (Stereo 1/4"phone type)  
FOOT Switch Jack (TIP: SELECT, RING: EFX) (1/4" Stereo phone type)

## Power Supply

AC117V, 230V, 240V

## Power Consumption

34W

## Dimension

385 (W) x240 (D) x380 (H) mm  
15"-13/16 (W) x9"-1/2 (D) x15" (H) inches

## Weights

9.2kg/20lbs 5oz

## Accessories

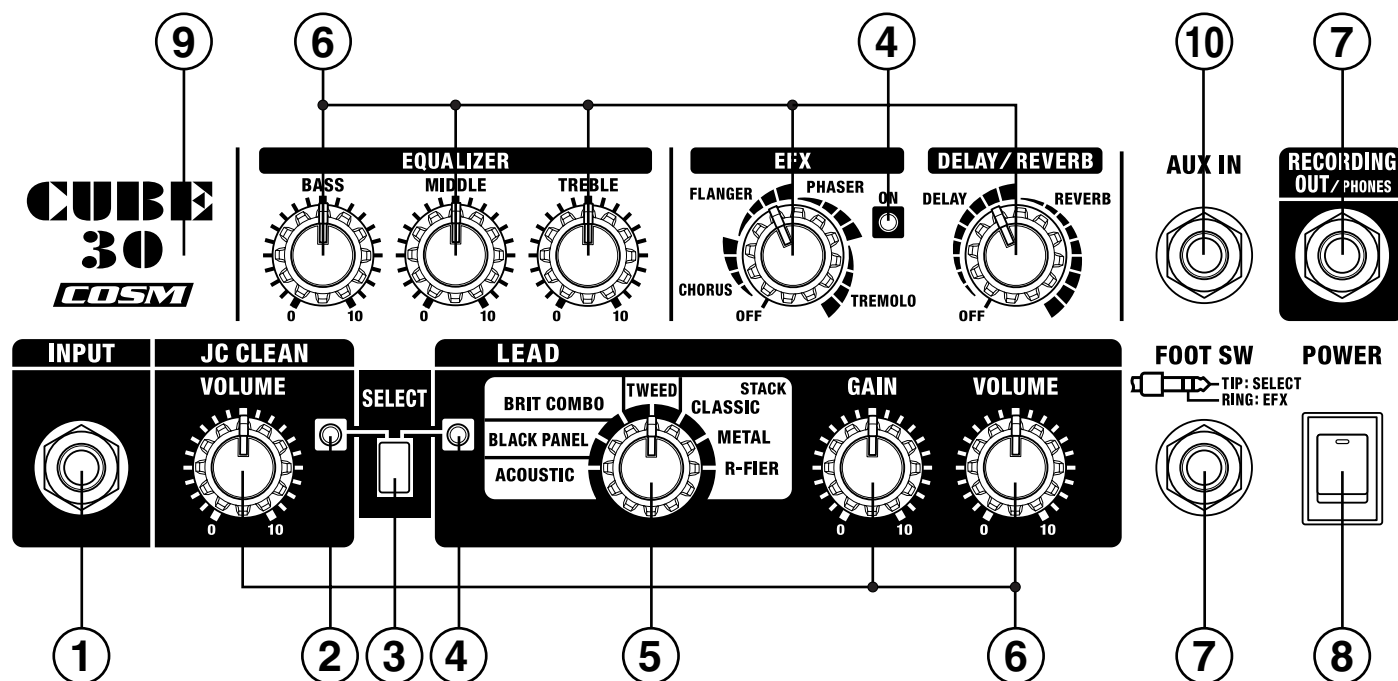
Owner's Manual English:(#SD000004)  
Japanese:(#SD000003)

## Options

Footswitch FS-5U (BOSS)  
Connection cable PCS-31

\* 0dBu = 0.775Vrms

# LOCATION OF CONTROLS

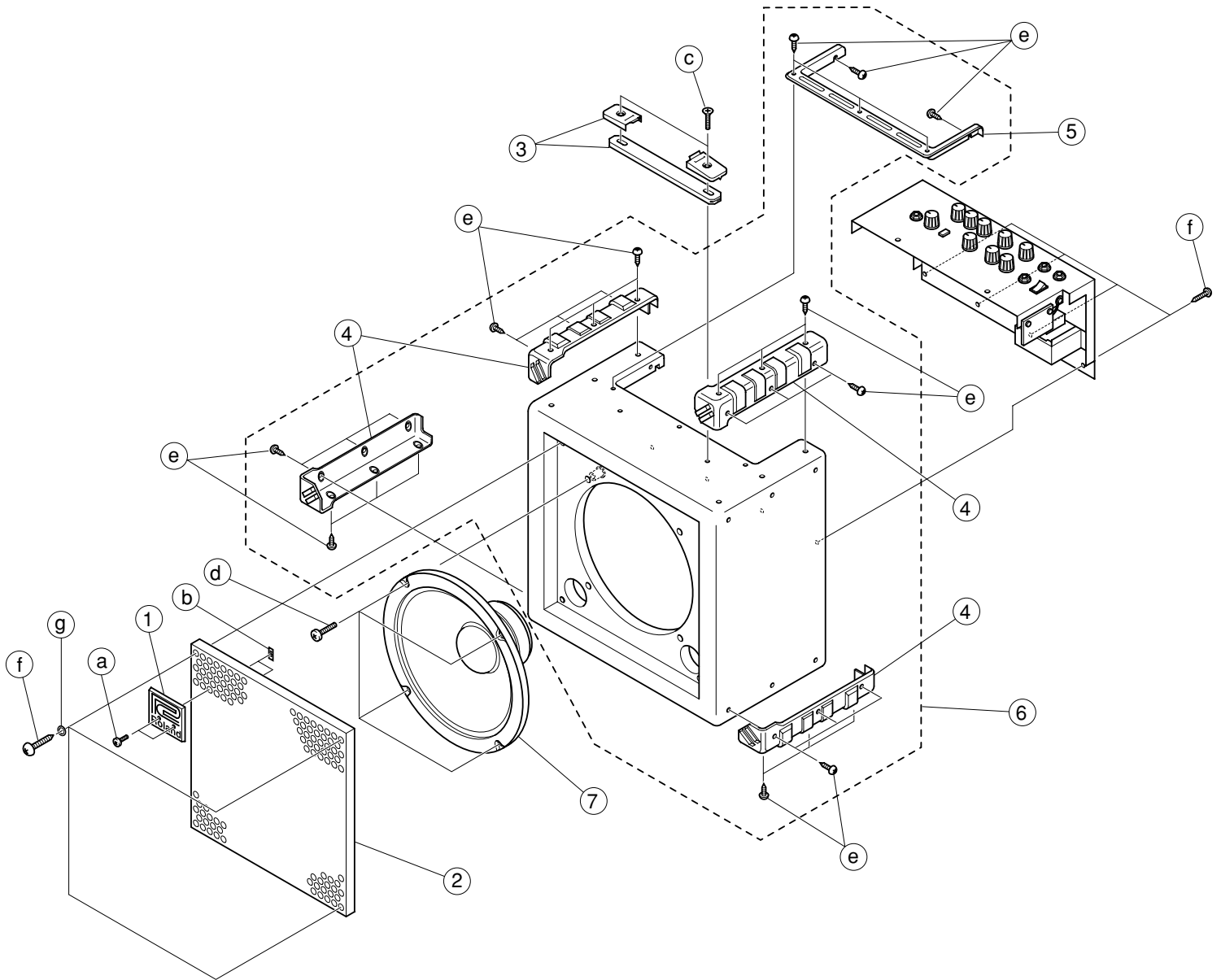


# LOCATION OF CONTROLS PARTS LIST

all JACK NUT :SD000042 JACK NUT  
 all KNOB :SD000043 KNOB

No.	Part Code	Part Name	Description	Q'ty
1	13449146	YKB21-5012 (W/SW)	6.5MM JACK	1
2	SD000044	LED GREEN		1
3	2249752100	PUSH BUTTON	BLACK #521	1
3	SD000059	SPUP128100	PUSH SWITCH	1
4	SD000045	LED RED		1
5	SD000061	SRBV17	ROTARY SWITCH	1
6	SD000055	RK09L1120 10KB	9MM ROTARY	8
7	13449252	YKB21-5006 (STEREO W/SW)	6.5MM JACK	1
8	02897801	SDDJE13200 94V-0	SEESAW SWITCH	1
9	SD000030	CHASSIS		1
10	13449145	YKB21-5010	6.5MM JACK	2

# EXPLODED VIEW(CABNET)



**NOTE**

Don't keep a speaker cable from contact a Heatsink and a primary power supply unit when equipping with a chassis.

## EXPLODED VIEW PARTS LIST(CABINET)

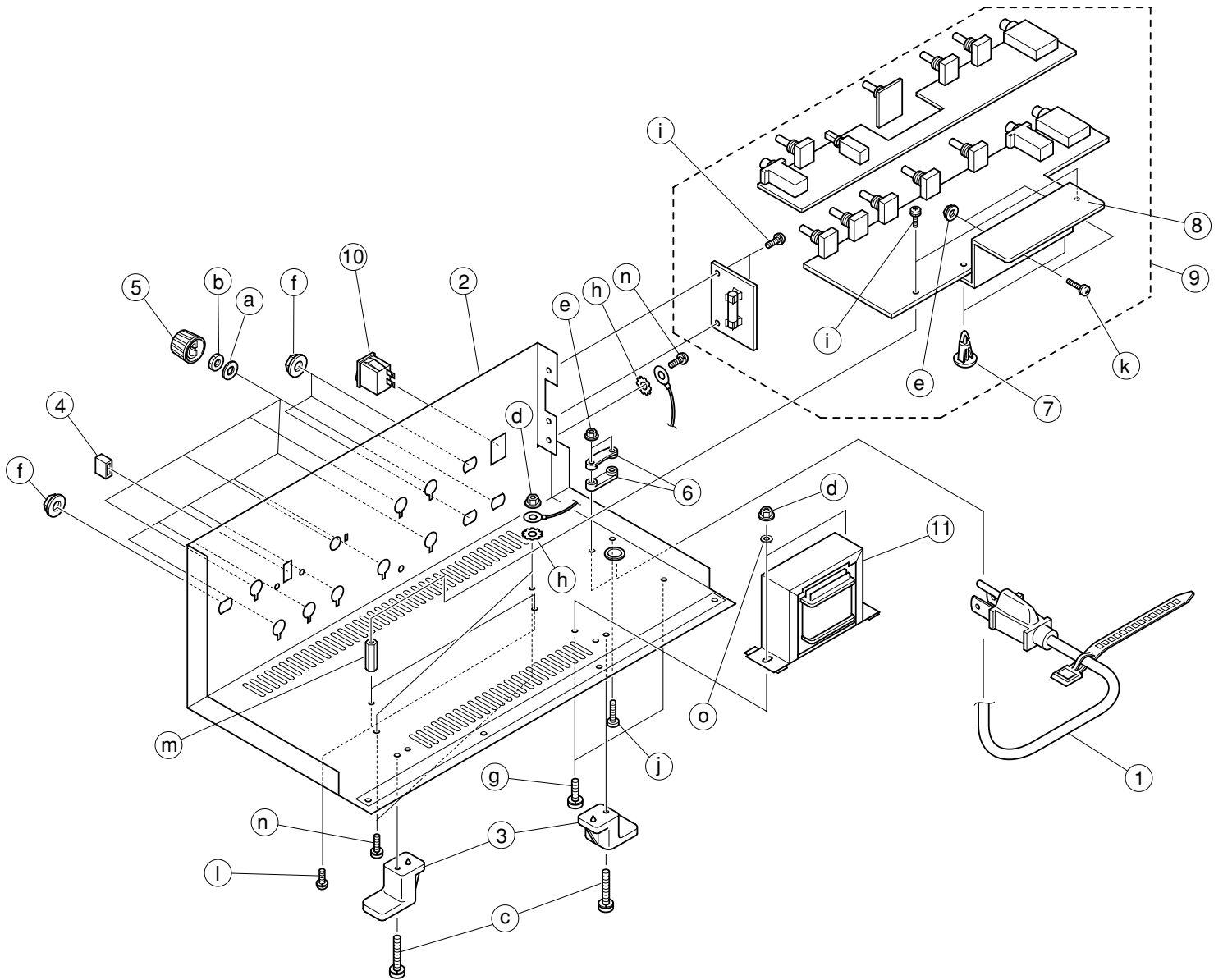
### [PART]

No	Part Code	Part Name	Description	Q'ty
1	SD000017	BADGE		1
2	SD000034	GRILL		1
3	SD000035	HANDLE WITH ESCUTHEON		1
4	SD000031	CORNER PROTECTOR		4
5	SD000066	TRIM		1
6	SD000028	CABINET ASSY		1
		CABINET ASSY include the following parts.		
		SD000031	CORNER PROTECTOR	
		SD000066	TRIM	
7	SD000033	SPEAKER 364510		1

### [SCREW]

No	Part Code	Part Name	Description	Q'ty
a	SD000047	SCREW 3X8	OVALHEAD MACHINE BZC	2
b	40011689	SPEED NUT M3	F-TYPE	2
c	SD000048	SCREW 5X35	OVALHEAD MACHINE BZC	2
d	SD000019	SCREW 4X25	BINDING MACHINE BZC	4
e	SD000067	SCREW 3X12	TRUSS TAPTITE A1 BZC	29
f	SD000068	SCREW 4X25	TRUSS TAPTITE A1 BZC	8
g	SD000069	WASHER M4 11FAI	ADDITIONAL PLASTIC WASHER	4

# EXPLODED VIEW(CHASSIS)



## EXPLODED VIEW PARTS LIST(CHASSIS)

### [PART]

No	Part Code	Part Name	Description	Q'ty
1	SD000015	AC CORD	SP-502B 240V	1
1	SD000014	AC CORD	SP-301 117V	1
1	SD000012	AC CORD	SP-023 230V	1
1	SD000016	AC CORD	SP-60 230VE	1
2	SD000030	CHASSIS		1
3	72360705	CORD HOOK		2
4	2249752100	PUSH BUTTON	BLACK #521	1
5	SD000043	KNOB		9
6	12369410RT	AC CORD HOLDER	1702B	2
7	SD000053	PCB SPACER*	SCC-6 94V-0	3
8	SD000036	HEATSINK		1
9	SD000001	PCB ASSY	100/117V	1
10	02897801	SEESAW SWITCH	SDDJE13200 94V-0	1
11	SD000064	TRANSFORMER	ST-11544 230V/240V	1
11	SD000065	TRANSFORMER	ST-11545 100V/117V	1

\* i SCREW M3X6 is not included in PCB ASSY.

### [SCREW]

No	Part Code	Part Name	Description	Q'ty
a	17048631	VR ACCESSORY WASHER M9		9
b	17048630	VR ACCESSORY NUT M9		9
c	40345534	SCREW M4X25	PAN MACHINE W/SW+PW BZC	2
d	40011767	FLANGE HEX NUT M4	FE CM	4
e	40011756	FLANGE HEX NUT M3	ZC	4
f	SD000042	JACK NUT		4
g	SD000018	SCREW 4X12	BINDING MACHINE BZC	2
h	40011889	EXTERNAL TOOTH WASHER M4	FECM	3
i	40017934	SCREW M3X6	PAN MACHINE W/SW+PW FE ZC	4
j	40010301	SCREW M3X20	BINDING MACHINE BZC	2
k	40012878	SCREW M3X10	PAN MACHINE W/SW+PW ZC	2
l	40012945	SCREW M3X6	PAN MACHINE W/SW+PW BZC	2
m	22150518	STANDOFF	HEX.BOSS 5.5X15 M3	2
n	SD000052	SCREW 4X8	PAN MACHINE BZC	3
o	40347534	M4 SPRING WASHER	BZC	2

# PARTS LIST

**SAFETY PRECAUTIONS:**

The parts marked  $\Delta$  have safety-related characteristics. Use only listed parts for replacement.

**CONSIDERATION ON PARTS ORDRING**

When ordering any parts listed in the parts list, please specify the following items in the order sheet.

	QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER
Ex.	10	22575241	Sharp Key	C-20/50
	15	2247017300	Knob (orange)	DAC-15D

Failure to completely fill the above items with correct number and description will result in delayed or even undelivered replacement.

NOTE: The parts marked # are new. (initial parts)



**NOTE**  
Safety Precautions

The method of replacing the damaged power supply cord vary with serial numbers.  
Please refer to followings.

- Up to serial No.ZP90419(100V) and NO. ZQ02579(117V,230V) and ZP91179(240V)  
Replace power supply cord and PS-1 BOARD when replacing the damaged power supply cord.  
Do not replace only power supply cord due to preventing the damage of the traces of the PS-1 BOARD by heating of the soldering iron.

NOTE: Use only the power supply cord and PS-1 BOARD served by Roland Service Center Japan.

Please order the components to Roland Service Center Japan.

PCB ASSY (P/No.SD000001) includes the PS-1 BOARD.

- From serial No.ZP90420(100V) and NO. ZQ02580(117V,230V) and ZP91180(240V)  
Please replace only the damaged power supply cord according to "Cautions for the replacement of damaged power supply cord."

CASING					Q'ty
#	SD000017	BADGE			1
#	SD000034	GRILL			1
#	SD000035	HANDLE WITH ESCUTHEON			1
#	SD000028	CABINET ASSY			1
	CABINET ASSY includes the following parts.				
	SD000031	CORNER PROTECTOR			4
#	SD000066	TRIM			1
CHASSIS					
#	22360705	CORD HOOK			2
#	SD000030	CHASSIS			1
KNOB,BUTTON					
	2249752100	PUSH BUTTON	BLACK #521		1
	SD000043	KNOB			9
SWITCH					
#	$\Delta$ 02897801	SDDJE13200 94V-0	SEESAW SWITCH	SW1	1
#	SD000061	SRBV17	ROTARY SWITCH	SW3 on RSWB	1
#	SD000059	SPUP128100	PUSH SWITCH	SW2 on CB	1
JACK,EXT TERMINAL					
	13449252	YKB21-5006 (STEREO W/SW)	6.5MM JACK	JK2 on MB	1
	13449145	YKB21-5010	6.5MM JACK	JK3 on MB, JK4 on CB	2
	13449146	YKB21-5012 (W/SW)	6.5MM JACK	JK1 on CB	1
SPEAKER,BUZZER					
#	$\Delta$ SD000033	SPEAKER 364510			1
PWB ASSY					
#	SD000001	PCB ASSY	100/117V		1
	PCB ASSY includes the following parts				
#	$\Delta$ SD000053	PCB SPACER	SCC-6 94V-0	HEATSINK	3
#	SD000036	HEATSINK			1
	*****	PS-1 BOARD			1
	PCB ASSY 100/117V is exclusively for 100/117V use.				
	For 230/240V, make the following modifications to this "Low Voltage PWB".				
	1.Replace fuse to specific one.				
	2.Write the mark in the specification voltage(230/240V) table of PCB ASSY. See Table A.				



PWB ASSY

Table A

100 / 117V	SB 1A 250V	→	<del>100 / 117V</del>	<del>CB 1A 250V</del>
<del>230 / 240V</del>	<del>T500mAL 250V</del>		230 / 240V	T 500mAL 250V

DIODE

	SD000044	LED GREEN		D13 on CB	1
	SD000045	LED RED		D14 on CB, D7 on MB	1

POTENTIOMETER

	SD000055	RK09L1120 10KB	9MM ROTARY	VR 1,2,3 on CB, V R4,5,6,7,8 on MB	8
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FUSE,FUSE HOLDER

#	△	SD000008	5ST 500MA/250V	FUSE	FH1 on PS1B	1
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TRANSFORMER

#	△	SD000064	ST-11544 230V/240V	TRANSFORMER		1
#	△	SD000065	ST-11545 100V/117V	TRANSFORMER		1

AC CORD ASSY (Installed)

	△	SD000012	SP-023 230V	AC CORD		1
	△	SD000014	SP-301 117V	AC CORD		1
	△	SD000015	SP-502B 240V	AC CORD		1
	△	SD000016	SP-60 230VE	AC CORD		1

SCREWS

		40011756	FLANGE HEX NUT M3	ZC	AC CORD BUSH, POWER IC	4
		SD000067	SCREW 3X12	TRUSS TAPTITE A1 BZC	CORNER PROTECTOR	29
		SD000068	SCREW 4X25	TRUSS TAPTITE A1 BZC	GRILL, CHASSIS	8
		40012878	SCREW M3X10	PAN MACHINE W/SW+PW ZC	POWER IC	2
		40017934	SCREW M3X6	PAN MACHINE W/SW+PW FE ZC	PCB	4
		40012945	SCREW M3X6	PAN MACHINE W/SW+PW BZC	STAND OFF NUT	2
		40345534	SCREW M4X25	PAN MACHINE W/SW+PW BZC	AC CORD HOOK	2
		SD000052	SCREW 4X8	PAN MACHINE BZC	AC CORD GND,WIRING GND	3
		SD000047	SCREW 3X8	OVALHEAD MACHINE BZC	BADGE	2
		SD000048	SCREW 5X35	OVALHEAD MACHINE BZC	HANDLE	2
		22150518	STANDOFF	HEX.BOSS 5.5X15 M3	PCB	2
		40011889	EXTERNAL TOOTH WASHER M4	FECM	AC CORD GND,WIRING GND	3
		40011767	FLANGE HEX NUT M4	FE CM	TRANSFORMER PCB WIRING	4
		40011689	SPEED NUT M3	F-TYPE	BADGE	2
		40010189	SCREW 3X8	BINDING ZC	AC CORD BUSH	2
		SD000018	SCREW 4X12	BINDING MACHINE BZC	TRANSFORMER	2
		SD000019	SCREW 4X25	BINDING MACHINE BZC	SPEAKER	4
		SD000042	JACK NUT		JACK	4
		17048630	VR ACCESSORY NUT M9		VR, ROTARY SW	9
		17048631	VR ACCESSORY WASHER M9		VR, ROTARY SW	9
		SD000069	WASHER M4 11FAI	ADDITIONAL PLASTIC WASHER	GRILL	4
		40347534	M4 SPRING WASHER	BZC	TRANSFORMER	2

PACKING

		SD000046	MIRAMIT SHEET			1
#		SD000049	PACKING BAG			1
#		SD000050	PACKING CASE			1
		SD000051	PACKING INNER			4

MISCELLANEOUS

		SD000058	ADHESIVE	SC608LVZ	Wring for primary power transformer and PS1 BOARD.	
	△	12369410RT	AC CORD HOLDER	1702B	AC CORD	2
		SD000029	CABLE TIE			6

ACCESSORIES (Standard)

#		SD000003	OWNER'S MANUAL	JAPANESE		
#		SD000004	OWNER'S MANUAL	ENGLISH		

# CHECKING THE VERSION NUMBER

1. Connection of foot switches  
 Connect two FS-5U foot switches to the [FOOT.SW] terminals with the PCS-31 foot switch cable. See "How to set the foot switch FS-5U".  
 [polarity] setting for FS-5U foot switch  
 Set the [polarity] switch to the jack side.  
 Cable of connections for foot switch  
 The PCS-31 connection cable for the foot switch is a conversion cable connecting a stereo plug and two standard plugs. Connect the standard plugs to the foot switches.  
 The "white" side of the standard plug is used to change JC CLEAN and LEAD of [SELECT].  
 The "red side" of the standard plug is used to switch [EFX] on and off. TIP and RING of the stereo (TRS) plugs of the PCS-31 correspond to SELECT and EFX, respectively.
2. Setting up of the panel  
 Set the LEAD CH rotary switch to "ACOUSTIC", and all other knobs to "0" or "off".  
 Undepress the [SELECT] button to JC CLEAN (to green LED when the power is on).
3. How to check the version number  
 After completing 1) and 2), turn on the power while pressing the foot switch for SELECT switching (white side). Then within four seconds, press it again twice to start the test mode.  
 As soon as the test mode starts, all LEDs blink several times, then some LEDs blink to display the version number (see the following on how to display the version number).



If setting up of the panel in 2) is not done correctly, the test mode cannot be started.

4. How to display the version number  
 The version number is displayed by the blinking/off combination of the green and red LEDs of [SELECT], the red LED of [EFX] ON/OFF.

LEDs used for display	1.00	1.01	1.02	1.03	...
[JC CLEAN] Green LED	○	●	●	○	
[LEAD] Red LED	●	○	●	○	
[EFX] Red LED	●	●	○	●	

○ : Blinking  
 ● : Off.

5. Turn off this unit

# TEST MODE

## 1 What is needed

- Headphones 1 set
- Foot switch BOSS FS-5U (Optional) 2 units
- Connection cable for foot switch ROLAND PCS-31 (Optional) 1 unit

## 2 How to enter the test mode

1. Connection of foot switches  
 Connect two FS-5U foot switches to the [FOOT.SW] terminals with the PCS-31 foot switch cable (See CHECKING THE VERSION NUMBER 1. Connection of foot switches).
2. Setting up of the panel  
 Set the LEAD CH rotary switch to "ACOUSTIC", and all other knobs to "0" or "off".  
 Undepress the [SELECT] button to JC CLEAN (to green LED when the power is on).
3. How to enter the test mode  
 After completing 1) and 2), turn on the power while pressing the foot switch for SELECT switching (white side). Then within four seconds, press it again twice to start the test mode.  
 As soon as the test mode starts, all LEDs blink several times, then some LEDs blink to display the version number (see the following on how to display the version number).  
 Confirm here that all LEDs can be turned on to show the succeeding check results correctly.



If setting up of the panel in 2) is not done correctly, the test mode cannot be started.

## 3 How to exit the test mode

Turn off the power to exit the test mode.

## 4 Skipping

The check mode cannot be skipped.

## 5 Test items

- 1) DSP check: (automatically judged)
- 2) Switch check:
- 3) Volume check:

## 6 Contents of test items

### 1. Display the version number

The version number is displayed by the blinking/off combination of the green and red LEDs of [SELECT], the red LED of [EFX] ON/OFF.

LEDs used for display	1.00	1.01	1.02	1.03	...
[JC CLEAN] Green LED	○	●	●	○	
[LEAD] Red LED	●	○	●	○	
[EFX] Red LED	●	●	○	●	

○ : Blinking  
● : Off.

### 2. DSP check: (automatically judged)

Press the foot switch once for SELECT switching (white side) during version display to turn off the LEDs and start automatic checks.

The LEDs come on in the order of green, red of [SELECT] and red of [EFX] during the checks.

If all the checks are completed and the results are OK, all LEDs blink.

If the results are NG (no good, fail), only the [EFX] LED blinks.

The automatic checks take approximately 5 - 6 seconds.

If the check results are OK, press the foot switch for SELECT switching (white side) to proceed to the next check.

If the results are NG, the next check cannot be started.

### 3. Switch check:

When the switch check starts, all LEDs go out.

#### 1. [SELECT] switch operation check

Press the [SELECT] button.

If the check results are OK, both of the green and red LEDs of [SELECT] come on.

If the check results are NG, none of the LEDs come on. The next check cannot be started, either.

#### 2. Operation check for "AMP TYPE switching" of LEAD rotary switch

Shift the switch slowly in the following order to check if the switch setting is read correctly.

At this time, check if the green and red LEDs of [SELECT] come on alternately as follows.

ACOUSTIC (green, red) → BLACK PANEL (green) → BRIT COMBO (red) → TWEED (green) → CLASSIC STACK (red) → METAL STACK (green) → R-FIER STACK (red) → METAL STACK (green) → CLASSIC STACK (red) → TWEED (green) → BRIT COMBO (red) → BLACK PANEL (green) → ACOUSTIC (red)

If the check results are OK, both of the green and red LEDs of [SELECT] come on.

If the check results are NG, the green and red LEDs do not come on simultaneously. The next check cannot be started, either.



If the switch knob is shifted too fast, the green and red LEDs blink.

In this case, repeat the operation slowly to allow the switch settings to be read at all positions.

#### 3. Jack switch (foot switch terminal [EFX], [RECORDING OUT/PHONES] terminal) check

##### a. Foot switch terminal [EFX] check

Press the foot switch for EFX (red side) on/off switching to check if the green LED of [SELECT] comes on.

Then disconnect the PCS-31 plug from the [EFX] terminal to check if the green LED of [SELECT] goes out and the red LED comes on.

Then insert the PCS-31 plug again to check if the green LED of [SELECT] comes on.

##### b. [RECORDING OUT/PHONES] terminal check

Then insert the headphones plug into the [RECORDING OUT/PHONES] jack to check if the green LED of [SELECT] goes out and the red LED comes on.

Finally, disconnect the headphones plug.



If the check results are NG, the next check cannot be started.

If the 2. - 4. checks are completed, both of the green and red LEDs of [SELECT] blink.

After completing the checks, press the foot switch for SELECT switching (white side) to proceed to the next check.

### 5. Volume check:



**When the volume knob is shifted, the DSP starts self-transmission, and sound is output from the speaker if connected during the check. The sound volume varies depending on the position of the knob during the volume setting reading.**

When the volume check starts, all LEDs go out.

The following confirmation is done for the volume check.

Readings of the respective volumes are detected at (1) "0" or "OFF", (2) center, and (3) "10" or the maximum position. Check the results by means of the green LED of [SELECT] as follows.

- (1) Detection at "0" or "OFF" Green LED of [SELECT] goes out.
- (2) Detection at the center Green LED of [SELECT] blinks once.
- (3) Detection at "10" or "maximum" Green LED of [SELECT] comes on.

Turn the volume knob slowly from position (1) to position (3). Volume reading for check in (3) is completed.

After the volume reading is completed, the green LED of [SELECT] remains on and waits for the next check.

The checks are done in the following order.

After each volume check is completed, be sure to keep the knob in position (3) (all the way clockwise). Otherwise, the next volume check cannot be started.

Order of checks

JC CLEAN [VOLUME] → LEAD [GAIN] → LEAD [VOLUME] → [BASS] → [MIDDLE] → [TREBLE] → [EFX] → [REVERB]

If a check is done in the wrong order, the operation is neglected and only the volume to be checked is detected.

If one of (1) - (3) cannot be detected at the respective volume levels, the next check cannot be started.

When all VR checks are completed, all LEDs blink.

If all the check results are OK, the green and red LEDs of [SELECT] blink.

This completes the checking process.

Turn off the power.

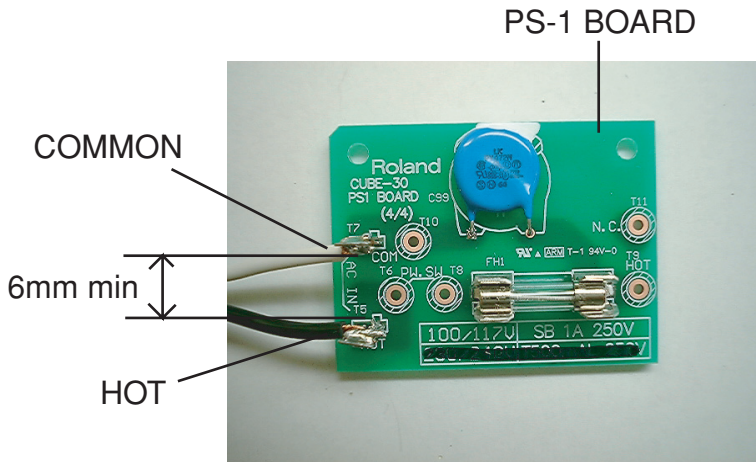
# CAUTIONS FOR THE REPLACEMENT OF DAMAGED POWER SUPPLY CORD

100V                      ZP90420 -  
 117V,230V,230VE      ZQ02580 -  
 240VA                    ZP91180 -

Please refer to the following "Notes" and confirm the Serial number when you replace the power supply cord.

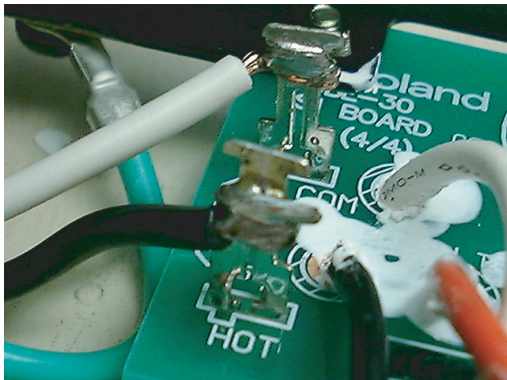
Notes

- The distance between terminal (included the part of winding the wire) is more than 6mm (refer to Fig.1).



POWER SUPPLY CORD	WIRING COLOR	
	HOT	COMMON
117V	BLACK	WHITE
230V	BROWN	BLUE
230VE	BROWN	BLUE
240V	BROWN	BLUE

- Please wind the wire around the terminal 1.5 times before soldering wire to terminal.(refer to Fig.2)



- When you remove the power supply cord from PS-1 BOARD, the dregs of a wire should not remain on a terminal.