RV-6 Reverb

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.

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 ******** 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.

Specifications

BOSS RV-6: Reverb

Nominal Input Level

-20 dBu

Input Impedance

1 MΩ

Nominal Output Level

-20 dBu

Output Impedance

1 kΩ

Recommended Load Impedance

10 kΩ or greater

Controls

Pedal switch
E.LEVEL knob
TONE knob
TIME knob
MODE knob

Indicator

CHECK indicator (Serves also as battery check indicator)

Connectors

INPUT-A (MONO) jack
INPUT-B jack
OUTPUT-A (MONO) jack
OUTPUT-B jack
EXP jack
AC adaptor jack (DC 9 V)

Power Supply

Alkaline battery (9V, 6LR61) or Carbon-zinc battery (9V, 6F22)
AC adaptor (sold separately)

Current Draw

65 mA

* *Expected battery life under continuous use (These figures will vary depending on the actual conditions of use.): Alkaline: Approx. 5 hours*

Dimensions

73 (W) x 129 (D) x 59 (H) mm
2-7/8 (W) x 5-1/8 (D) x 2-3/8 (H) inches

Weight

450 g
1 lb
(including battery)

Accessories

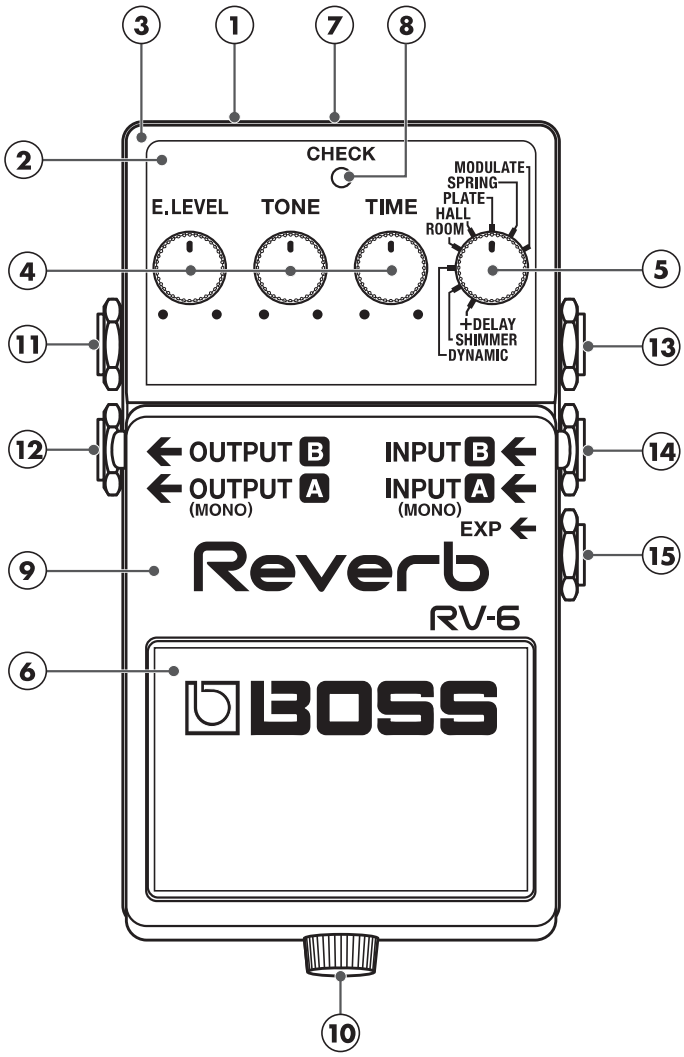
Owner's Manual (#5100045551)
Leaflet ("USING THE UNIT SAFELY," "IMPORTANT NOTE," and "Information") (#*******)
Alkaline battery (9V, 6LR61) (#*******)

Options (sold separately)

AC adaptor (PSA series)
Expression Pedal (Roland EV-5)

* *0 dBu = 0.775 Vrms*
* *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.*

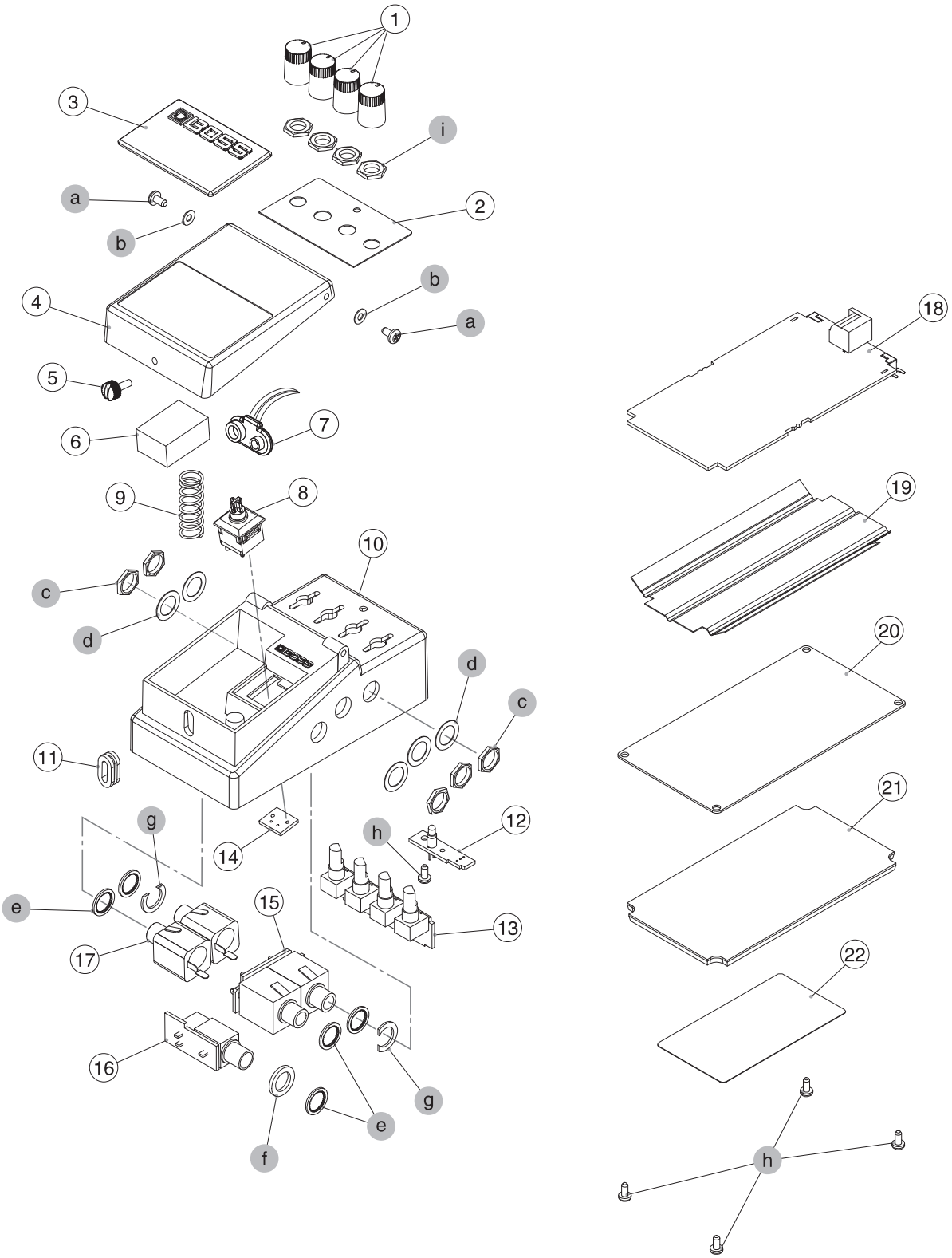
Location of Controls



Location of Controls Parts List

No.	Part Code	Part Name	Description		Q'ty
1	5100014487	COMPACT PSA LABEL			1
2	5100045507	PANEL			1
3	5100045505	CASE			1
4	04567601	P R-KNOB	MF BLK/LCG(22480260R0)		3
	F3279852R0	POTENTIOMETER	RD901-20-15FW-B54-006		3
	********	VR NUT		attached to VR	3
5	04567601	P R-KNOB	MF BLK/LCG(22480260R0)		1
	5100045910	POTENTIOMETER	RD901F-20-15FW-B50K-0853A		1
	********	VR NUT		attached to VR	1
6	5100008294	PEDAL PLATE	(22357304R0)		1
7	04908701	ADAPTOR JACK	KM02018ABM1P(F3439875R0)		1
8	05015956	LED	L-7104SRT (F5229820R0)		1
	5100043963	LED SPACER	LEDS-6S		1
9	5100045506	PEDAL			1
10	5100007512	THUMB SCREW	(FOR REPAIR ONLY)		1
11	5100006457	6.5MM JACK	HTJ-064-14D		1
	5100003918	JACK NUT M9X12X2	NI RTC(H5039510R0)		1
	5100003926	PLAIN WASHER 9X13.5X0.5T	NI(H5039158R0)		1
	5100008086	INT TOOTH WASHER 9.5X12.5X0.5	NI RTC(H5039205R0)		1
	5100015900	PLAIN WASHER 9.6X14XW11X1.0	AL (22137709R0)		1
12	5100006457	6.5MM JACK	HTJ-064-14D		1
	5100003918	JACK NUT M9X12X2	NI RTC(H5039510R0)		1
	5100003926	PLAIN WASHER 9X13.5X0.5T	NI(H5039158R0)		1
	5100008086	INT TOOTH WASHER 9.5X12.5X0.5	NI RTC(H5039205R0)		1
13	5100046955	6.5MM JACK	SCJ614M2NCS3B11TG		1
	5100003918	JACK NUT M9X12X2	NI RTC(H5039510R0)		1
	5100003926	PLAIN WASHER 9X13.5X0.5T	NI(H5039158R0)		1
	5100008086	INT TOOTH WASHER 9.5X12.5X0.5	NI RTC(H5039205R0)		1
	5100015900	PLAIN WASHER 9.6X14XW11X1.0	AL (22137709R0)		1
14	5100046955	6.5MM JACK	SCJ614M2NCS3B11TG		1
	5100003918	JACK NUT M9X12X2	NI RTC(H5039510R0)		1
	5100003926	PLAIN WASHER 9X13.5X0.5T	NI(H5039158R0)		1
	5100008086	INT TOOTH WASHER 9.5X12.5X0.5	NI RTC(H5039205R0)		1
15	5100001163	6.5MM JACK	HTJ-064-12DSMP(F3449707R1)		1
	5100015893	PLAIN WASHER 9.2X14X1.6	NI (H5039104R0)		1
	5100003918	JACK NUT M9X12X2	NI RTC(H5039510R0)		1
	5100003926	PLAIN WASHER 9X13.5X0.5T	NI(H5039158R0)		1
	5100008086	INT TOOTH WASHER 9.5X12.5X0.5	NI RTC(H5039205R0)		1

Exploded View



Exploded View Parts List

No.	Part Code	Part Name	Description		Q'ty
1	04567601	P R-KNOB	MF BLK/LCG(22480260R0)		4
2	5100045507	PANEL			1
3	5100008294	PEDAL PLATE	(22357304R0)		1
4	5100045506	PEDAL			1
5	5100007512	THUMB SCREW	(FOR REPAIR ONLY)		1
6	5100007503	BATTERY CUSHION	(22267333R0)		1
7	5100024525	BATTERY CONNECTOR	006P BATTERY SNAP		1
8	5100024133	SWITCH(PUSH)	PS017-N11AA(F3129517R0)		1
9	5100007504	COIL SPRING	(22177109R0)		1
10	5100045505	CASE			1
11	5100007505	PEDAL GUIDE BUSH	(FOR REPAIR ONLY)		1
	5100045235	MAIN SHEET ASSY			1
	* *This unit includes the following parts.*				
12	********	LED BOARD			1
13	********	VR BOARD			1
14	********	SW BOARD			1
15	********	INPUT BOARD			1
16	********	EXP BOARD			1
18	********	MAIN BOARD			1
17	5100006457	6.5MM JACK	HTJ-064-14D		2
19	5100022073	INSULATING SHEET	4-5.5X5.5(751043W0R0)		1
20	5100006632	BOTTOM COVER	(22027851R0)		1
21	5100006633	BOTTOM FOOT	(22357305R0)		1
22	5100039561	CAUTION SEAL	PSA (FCC/EMI) VER.2		1
a	40010267	SCREW M3X10	BINDING MACHINE FE BZC		2
b	5100008092	PLAIN WASHER 3X6X0.5	RESIN RTC(H5039708R0)		2
c	5100003918	JACK NUT M9X12X2	NI RTC(H5039510R0)		5
d	5100003926	PLAIN WASHER 9X13.5X0.5T	NI(H5039158R0)		5
e	5100008086	INT TOOTH WASHER 9.5X12.5X0.5	NI RTC(H5039205R0)		5
f	5100015893	PLAIN WASHER 9.2X14X1.6	NI (H5039104R0)		1
g	5100015900	PLAIN WASHER 9.6X14XW11X1.0	AL (22137709R0)		2
h	5100007965	SCREW 3X6(H5029325R0)	PAN TAPPING B1 BZC		5
i	********	VR NUT		attached to VR	4

Parts List

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

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

CASING

#	5100045505	CASE		1
#	5100045507	PANEL		1
#	5100045506	PEDAL		1
	5100008294	PEDAL PLATE	(22357304R0)	1
	5100006632	BOTTOM COVER	(22027851R0)	1

KNOB, BUTTON

	04567601	P R-KNOB	MF BLK/LCG(22480260R0)	4

SWITCH

	5100024133	SWITCH(PUSH)	PS017-N11AA(F3129517R0)	1

JACK, EXT TERMINAL

	04908701	ADAPTOR JACK	KM02018ABM1P(F3439875R0)	1
#	5100046955	6.5MM JACK	SCJ614M2NCS3B11TG	2
	5100001163	6.5MM JACK	HTJ-064-12DSMP(F3449707R1)	1
	5100006457	6.5MM JACK	HTJ-064-14D	2

PWB ASSY

#	5100045235	MAIN SHEET ASSY		1
	*	*This unit includes the following parts.*		
#	********	MAIN BOARD		1
#	********	SW BOARD		1
#	********	EXP BOARD		1
#	********	LED BOARD		1
#	********	VR BOARD		1
#	********	INPUT BOARD		1

DIODE

	05015956	LED	L-7104SRT (F5229820R0)	1

POTENTIOMETER

	5100045910	POTENTIOMETER	RD901F-20-15FW-B50K-0853A	1
	F3279852R0	POTENTIOMETER	RD901-20-15FW-B54-006	3

WIRING, CABLE

	5100032875	WIRING	W1(INPUT)	1
	5100021012	WIRING	UL1007 OS-1 AWG24 BLK 45X6X6	1
	5100008081	WIRING	UL1007 OS-1 AWG24 BRN 105X6X3	1
	5100032876	WIRING	UL1007 OS-1 AWG24 GRY 100X3X6	1
	5100011003	WIRING	UL1007 OS-1 AWG24 GRY 110X6EX6	1
	5100032877	WIRING	UL1007 OS-1 AWG24 ORG 100X3X6	1
	5100008083	WIRING	UL1007 OS-1 AWG24 WHT 85X6X3	1
	5100043803	WIRING	UL1007 OS-1 AWG24 YEL 110X6X6	1
	5100008080	WIRING UL1007 OS-1 AWG24	GRN 160X6EX6E (H4009499R1)	1
	5100014618	WIRING UL1007 OS-1 AWG24	GRN 80X6EX6E (H4019510R0)	1
	5100014617	WIRING UL1007 OS-1 AWG24	ORG 80X6EX6E (H4019509R0)	1
	5100008079	WIRING UL1007 OS-1 AWG24	PUR 160X6EX6E (H4009498R1)	1
	5100014307	RIBBON CABLE	6X80MM (F3477063R0)	1
	5100024525	BATTERY CONNECTOR	006P BATTERY SNAP	1

SCREWS

	40010267	SCREW M3X10	BINDING MACHINE FE BZC	2
	5100007965	SCREW 3X6(H5029325R0)	PAN TAPPING B1 BZC	5
	5100007512	THUMB SCREW	(FOR REPAIR ONLY)	1
	5100003918	JACK NUT M9X12X2	NI RTC(H5039510R0)	5
	5100008092	PLAIN WASHER 3X6X0.5	RESIN RTC(H5039708R0)	2
	5100015893	PLAIN WASHER 9.2X14X1.6	NI (H5039104R0)	1
	5100015900	PLAIN WASHER 9.6X14XW11X1.0	AL (22137709R0)	2
	5100003926	PLAIN WASHER 9X13.5X0.5T	NI(H5039158R0)	5
	5100008086	INT TOOTH WASHER 9.5X12.5X0.5	NI RTC(H5039205R0)	5

MISCELLANEOUS

	5100007503	BATTERY CUSHION	(22267333R0)	1
	5100006633	BOTTOM FOOT	(22357305R0)	1
	5100039561	CAUTION SEAL	PSA (FCC/EMI) VER.2	1
	5100007504	COIL SPRING	(22177109R0)	1
	5100014487	COMPACT PSA LABEL		1
	5100020413	EARTH TERMINAL		2
	5100005300	FILAMENT TAPE	3M #898 W20MM	-
	5100022073	INSULATING SHEET	4-5.5X5.5(751043W0R0)	1
	5100043963	LED SPACER	LEDS-6S	1
	5100007505	PEDAL GUIDE BUSH	(FOR REPAIR ONLY)	1

ACCESSORIES (Standard)

#	5100045551	OWNER'S MANUAL	MULTILANGUAGE	1

Verifying the Version

The Test Mode is used to verify the version. Refer to **1. Verifying the Version** (p. 10).

Data Backup and Restore Operations

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

Performing a Factory Reset

This product has no factory-reset feature.

Updating the System

A system update cannot be performed for this product. If an update is required, replace with an updated circuit board. Updates can be accomplished only at the factory.

Test Mode

Items Required

- AC adaptor (PSA-series device)
- Oscillator
- Oscilloscope
- Noise meter
- Tester
- Amp-equipped monitor speaker

- Battery (9 V type)

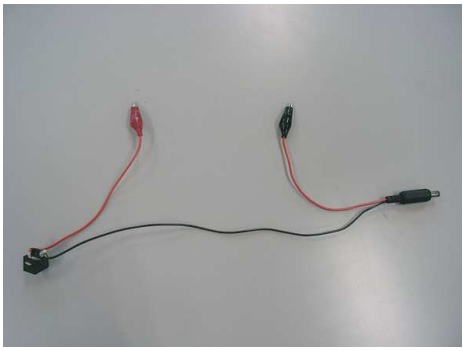
* *Set this into the unit beforehand.*

- 1/4-inch monaural phone cables (x 2)
- 1/4-inch monaural phone plug with 10-kΩ load resister
- 1/4-inch monaural phone plug with 47-kΩ load resisters (x 2)

- EV-5

* *Set the minimum volume to the minimum position.*

- Current-consumption measurement tool



Inspection Items

* ***10. Battery Operation Test*** *is carried out in the normal mode.*

Entering the Test Mode

1. Use the current-consumption measurement tool to connect the AC adaptor.

   * *When **2. Measurement of Current Consumption** (p. 10) is not executed, only an AC adaptor can be connected.*

2. Turn all knobs all the way counterclockwise.
3. Hold down the pedal and insert a 1/4-inch monaural phone cable into the **INPUT A** jack.
   The **CHECK** LED lights up, goes dark and flashes, and then the unit enters the first item of the Test Mode: **1. Verifying the Version**.

Quitting the Test Mode

Depress the pedal. Or, detach the plug from **INPUT A** and **INPUT B** jacks to switch off the power.

1. Verifying the Version

When the unit enters the test mode, the **CHECK** LED flashes, and the number of flashes indicates the version.

Examples: 1 flash: Ver. 1.00
2 flash: Ver. 1.01
3 flash: Ver. 1.03

2. Measurement of Current Consumption

1. Use the current-consumption measurement tool to connect the AC adaptor.
2. The unit starts up in the test mode.
3. Verify that the current consumption is from **40** to **60 mA**.

3. Detect Test

1. Connect a 1/4-inch monaural phone cable to the **INPUT B** jack.
   The **CHECK** LED goes dark.
2. Connect the another plug of the 1/4-inch monaural phone cable connected to the **INPUT A** jack to the **OUTPUT A** jack.
   The **CHECK** LED lights up.
3. Connect the another plug of the 1/4-inch monaural phone cable connected to the **INPUT B** jack to the **OUTPUT B** jack.
   The **CHECK** LED goes dark.
4. Depress the heel of the EV-5 all the way, and connect it to the **EXP** jack.
   The **CHECK** LED lights up.

4. Expression Pedal Test

1. Slightly depress the toe of the EV-5, and verify that the **CHECK** LED goes dark.
2. Depress the EV-5 to about the center, and verify that the **CHECK** LED lights up.
3. Depress the EV-5 further more, and verify that the **CHECK** LED goes dark.
4. Depress the toe of the EV-5 all the way, and verify that the **CHECK** LED lights up.
5. Slowly depress the heel of the EV-5, and verify that the **CHECK** LED goes dark, lights up and then goes dark.
6. Depress the heel of the EV-5 all the way, and verify that the **CHECK** LED lights up.
7. Detach the EV-5.

5. Volume Test

1. Turn the **E. LEVEL** knob to near the eleven o'clock position, and verify that the **CHECK** LED goes dark.
2. Turn the **E. LEVEL** knob to near the one o'clock position, and verify that the **CHECK** LED lights up.
3. Turn the **E. LEVEL** knob all the way clockwise, and verify that the **CHECK** LED goes dark.
4. Turn the **TONE** knob to near the eight o'clock position, and verify that the **CHECK** LED lights up.
5. Turn the **TONE** knob to near the eleven o'clock position, and verify that the **CHECK** LED goes dark.
6. Turn the **TONE** knob to near the one o'clock position, and verify that the **CHECK** LED lights up.
7. Turn the **TONE** knob all the way clockwise, and verify that the **CHECK** LED goes dark.
8. For the **TIME** knob, verify in the same way as steps **4** through **7**.

6. AD/DA Test

1. Adjust the mode knob (rightmost) to **SHIMMER**.
   A test signal is output from the **OUTPUT A** jack, and the signal which is input to the **INPUT A** jack via the cable is checked automatically.
   (OUTPUT A -> INPUT A)
   The **CHECK** LED goes dark while checking is in progress, and it lights up when the check result is OK or it flashes when the check result is not OK.
2. Adjust the mode knob to **DYNAMIC**.
   The same signal as step **1** is output from the **OUTPUT B** jack, and the signal which is input to the **INPUT B** jack via the cable is checked automatically.
   (OUTPUT B -> INPUT B)
   The **CHECK** LED goes dark while checking is in progress, and it lights up when the check result is OK or it flashes when the check result is not OK.
3. Disconnect the plug from the **INPUT A** jack.
4. Adjust the mode knob to **ROOM**.
   A test signal is output from the **OUTPUT B** jack, and the signal which is input to the **INPUT B** jack via the cable also flows to the circuit of the **INPUT A**, and then both signals are added together, and the signal which became the double level is checked automatically.
   (OUTPUT B -> INPUT A, INPUT B -> INPUT A + INPUT B)
   The **CHECK** LED goes dark while checking is in progress, and it lights up when the check result is OK or it flashes when the check result is not OK.
5. Connect the plug disconnected in step **3** to the **INPUT A** jack again, and disconnect the plug from the **INPUT B** jack.
6. Adjust the mode knob to **HALL**.
   The same signal as step **4** is output from the **OUTPUT A** jack, and the signal which is input to the **INPUT A** jack via the cable also flows to the circuit of the **INPUT B**, and then both signals are added together, and the signal which became the double level is checked automatically.
   (OUTPUT A -> INPUT A, INPUT B -> INPUT A + INPUT B)
   The **CHECK** LED goes dark while checking is in progress, and it lights up when the check result is OK or it flashes when the check result is not OK.

7. Bypass Test

1. Connect the 1/4-inch monaural phone plug with 47-kΩ load resistor to the **INPUT B** jack.
2. Adjust the mode knob to **PLATE**.
   The **CHECK** LED goes dark.
3. Connect the oscillator to the **INPUT A** jack.
4. Connect the oscilloscope to the **OUTPUT A** jack.
5. Input a signal like the following to the **INPUT A** jack.
   INPUT A: 200-Hz sine wave at 5 Vpp
6. Verify that a signal like the following is output from the **OUTPUT A** jack.
   OUTPUT A: 200-Hz sine wave at 4.9±0.5 Vpp
7. Disconnect the oscillator from the **INPUT A** jack and then connect the 1/4-inch monaural phone plug with 47-kΩ load resistor to the **INPUT A** jack.
8. Disconnect the 1/4-inch monaural phone plug with 47-kΩ load resistor from the **INPUT B** jack and then connect the oscillator to the **INPUT B** jack.
9. Disconnect the oscilloscope from the **OUTPUT A** jack and connect it to the **OUTPUT B** jack.
10. Input a signal like the following to the **INPUT B** jack.
    INPUT B: 200-Hz sine wave at 5 Vpp
11. Verify that a signal like the following is output from the **OUTPUT B** jack.
    OUTPUT B: 200-Hz sine wave at 4.9±0.5 Vpp
12. Detach the oscilloscope.

8. DSP Noise Test

1. Adjust the mode knob to **SPRING**.
   The **CHECK** LED lights up.
2. Disconnect the oscillator from the **INPUT B** jack and connect the 1/4-inch monaural phone plug with 47-kΩ load resistor to the **INPUT B** jack.
3. Connect the noise meter to the **OUTPUT A** jack and verify that residual noise is as follows.
   OUTPUT A: -58 dBm or less (DIN audio)
4. Disconnect the noise meter from the **OUTPUT A** jack and connect it to the **OUTPUT B** jack, and verify that residual noise is as follows.
   OUTPUT A: -58 dBm or less (DIN audio)
5. Detach the noise meter.
6. Connect the amp-equipped monitor speaker to the **OUTPUT A** jack.
7. Drop the unit from a height of about 5 centimeters more than three times and verify that no abnormal sound is heard from the monitor speaker.
8. Disconnect the amp-equipped monitor speaker from the **OUTPUT A** jack and connect it to the **OUTPUT B** jack.
9. Drop the unit from a height of about 5 centimeters more than three times and verify that no abnormal sound is heard from the monitor speaker.
10. Detach the amp-equipped monitor speaker.

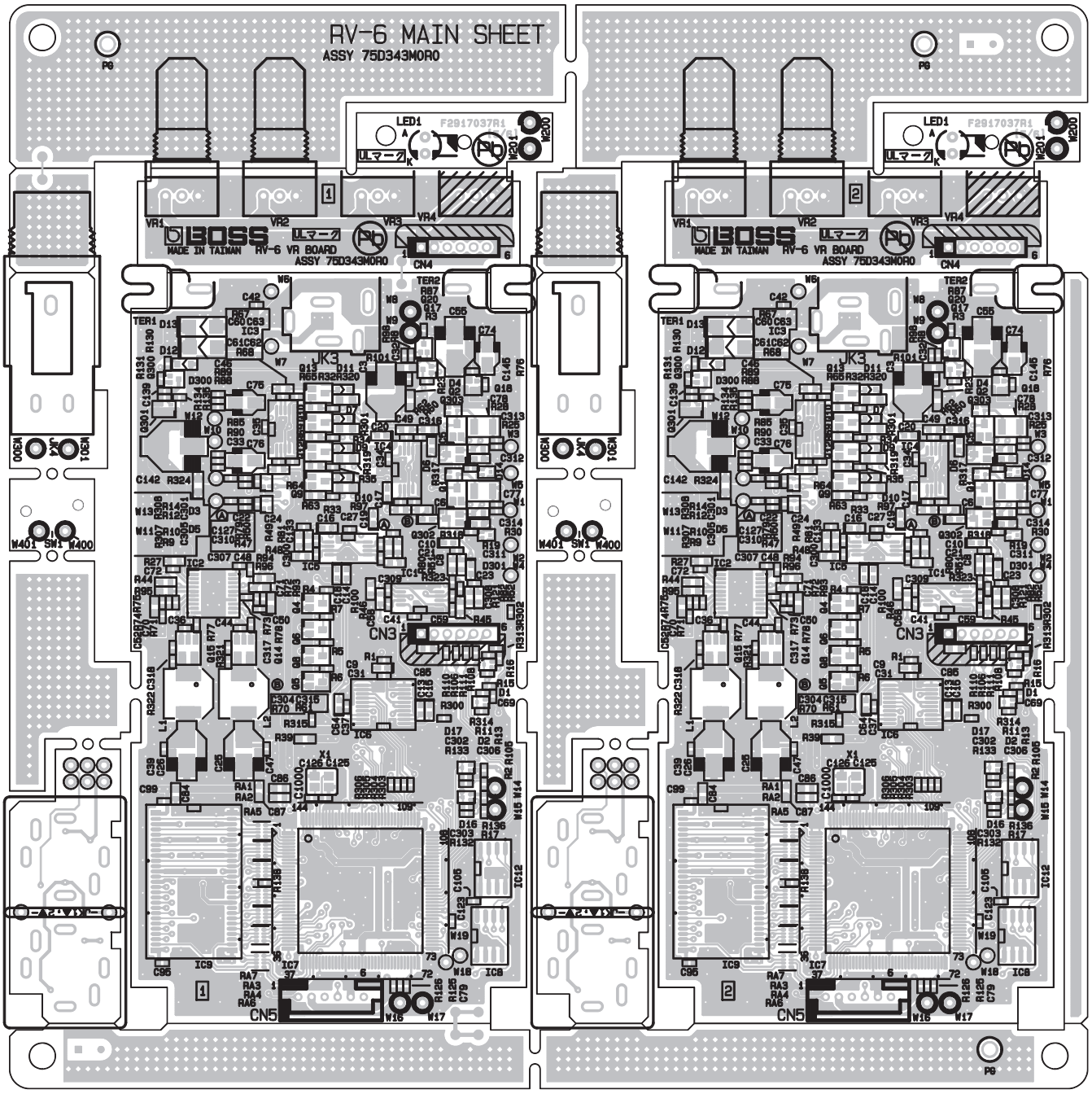
9. Bypass Noise Test

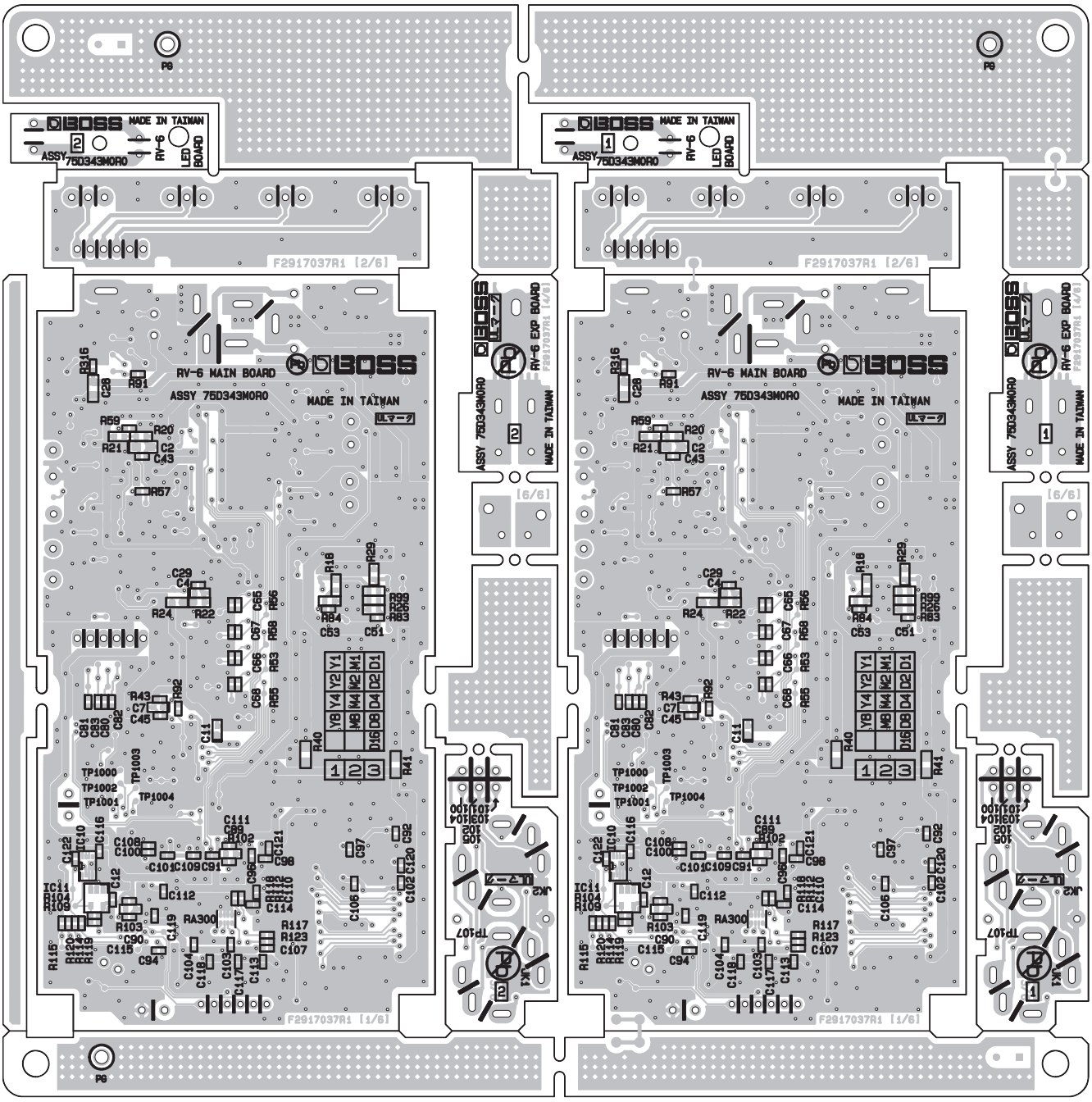
1. Adjust the mode knob to **MODULATE**.
   The **CHECK** LED goes dark.
2. Connect the noise meter to the **OUTPUT A** jack and verify that residual noise is as follows.
   OUTPUT A: -97 dBm or less (DIN-audio)
3. Disconnect the noise meter from the **OUTPUT A** jack and connect it to the **OUTPUT B** jack and verify that residual noise is as follows.
   OUTPUT B: -97 dBm or less (DIN-audio)
4. Detach the noise meter.

10. Battery Operation Test

1. Depress the pedal.
2. Verify that the **CHECK** LED flashes and goes dark.
   The unit exits from the test mode and returns to the normal mode.
3. Depress the pedal.
4. Verify that the **CHECK** LED lights up.
5. Disconnect the plug of the AC adaptor rapidly and verify that the **CHECK** LED does not become fainter or go dark.

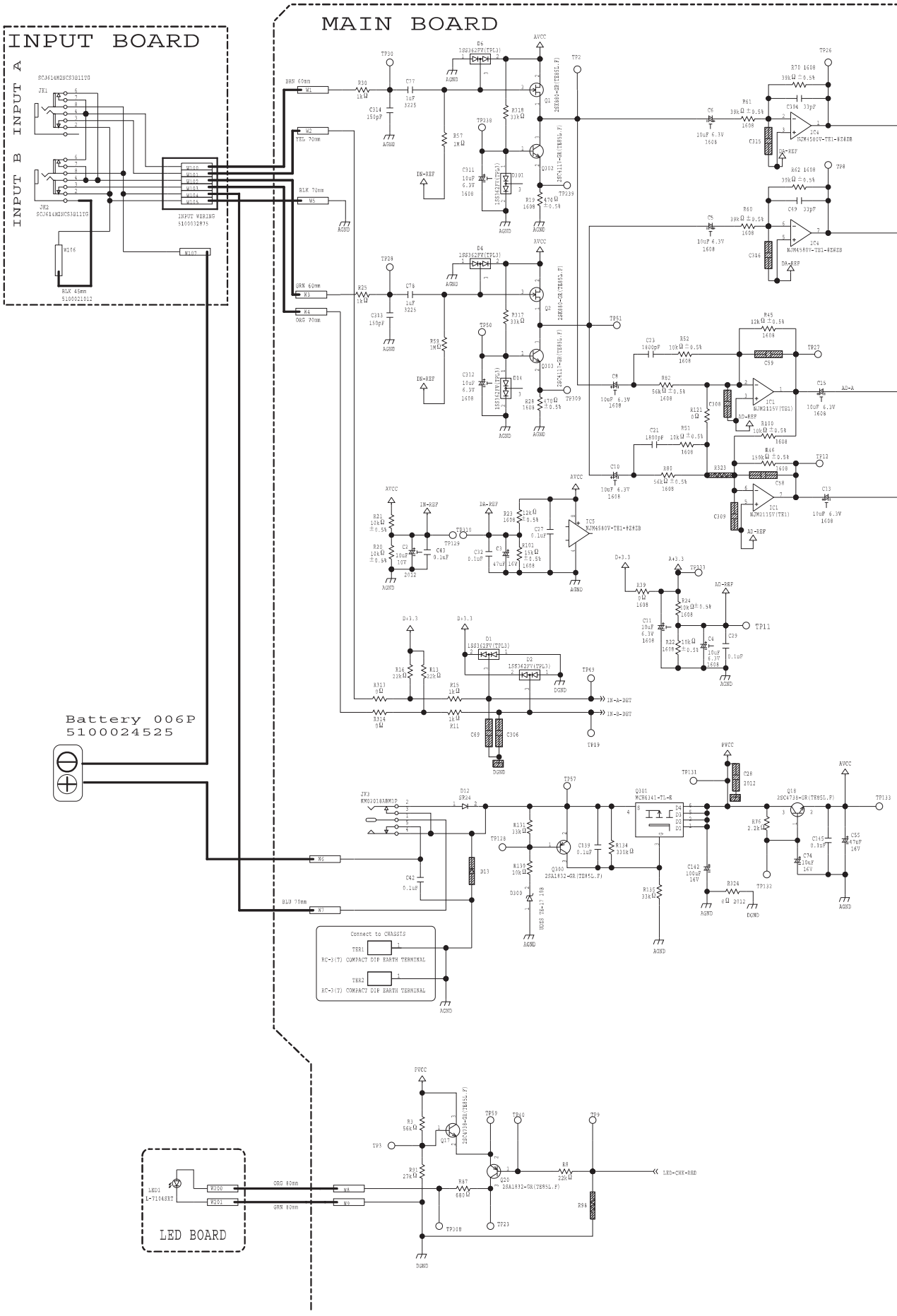
Circuit Board (Main, VR, Input, SW, LED, EXP Board)

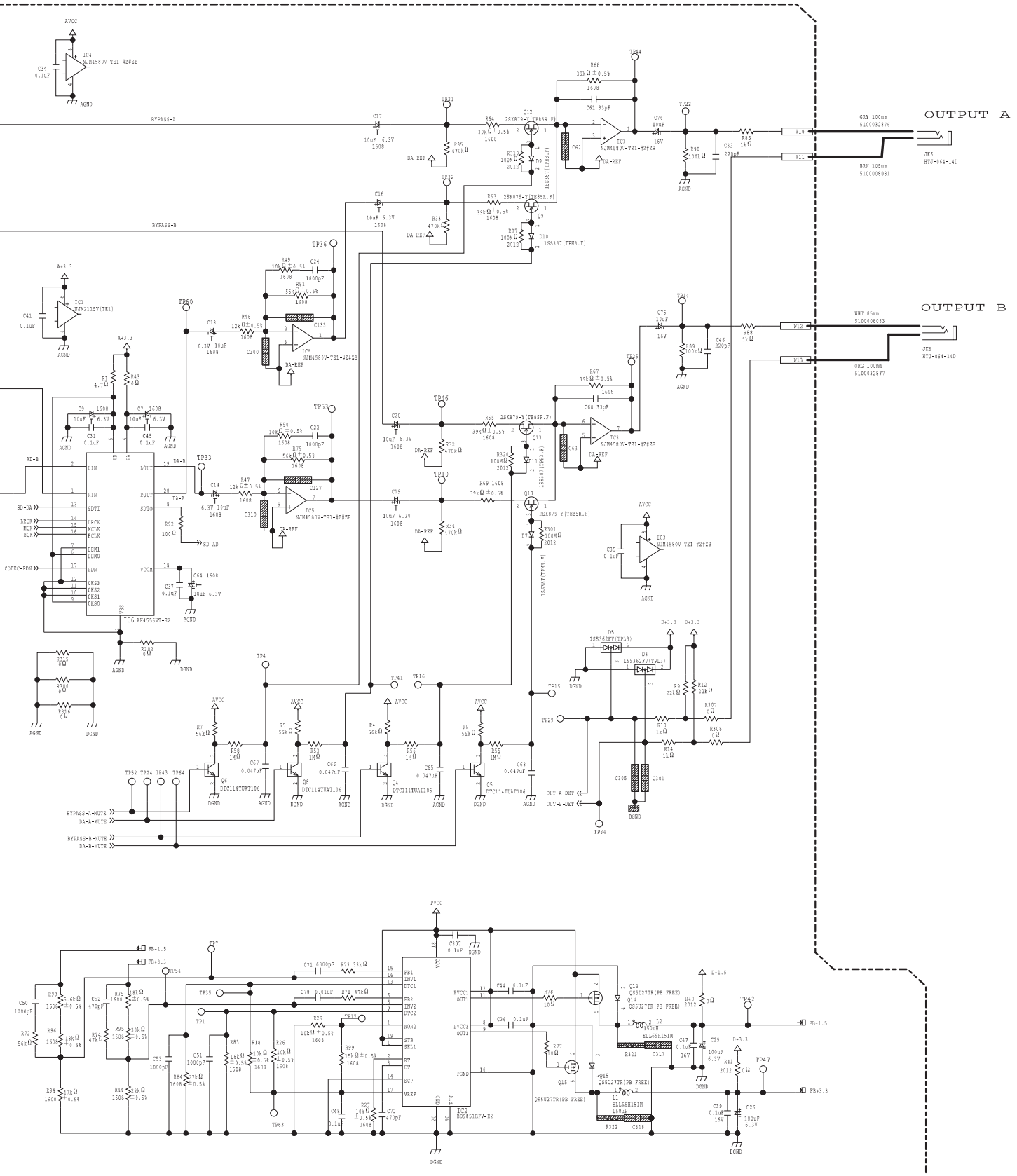



RV-6 MAIN BOARD
ASSY 75D343M0R0
MADE IN TAIWAN
RV-6 EXP BOARD
F2917037R1 [2/6]
F2917037R1 [1/6]
F2917037R1 [4/6]
[6/6]

Circuit Diagram (Main, Input, LED Board)

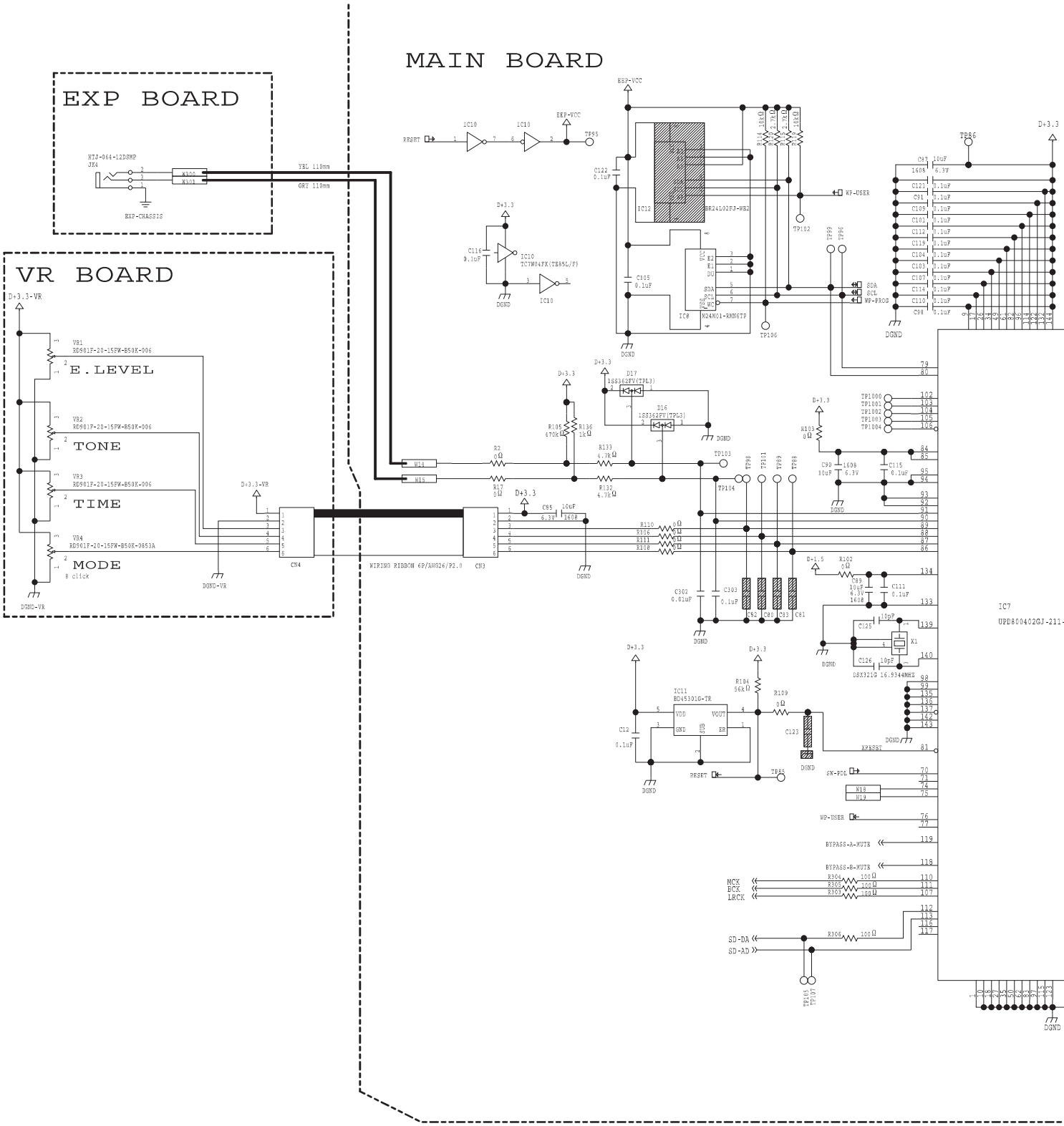
RV-6 Circuit(1)/ANALOG,POWER

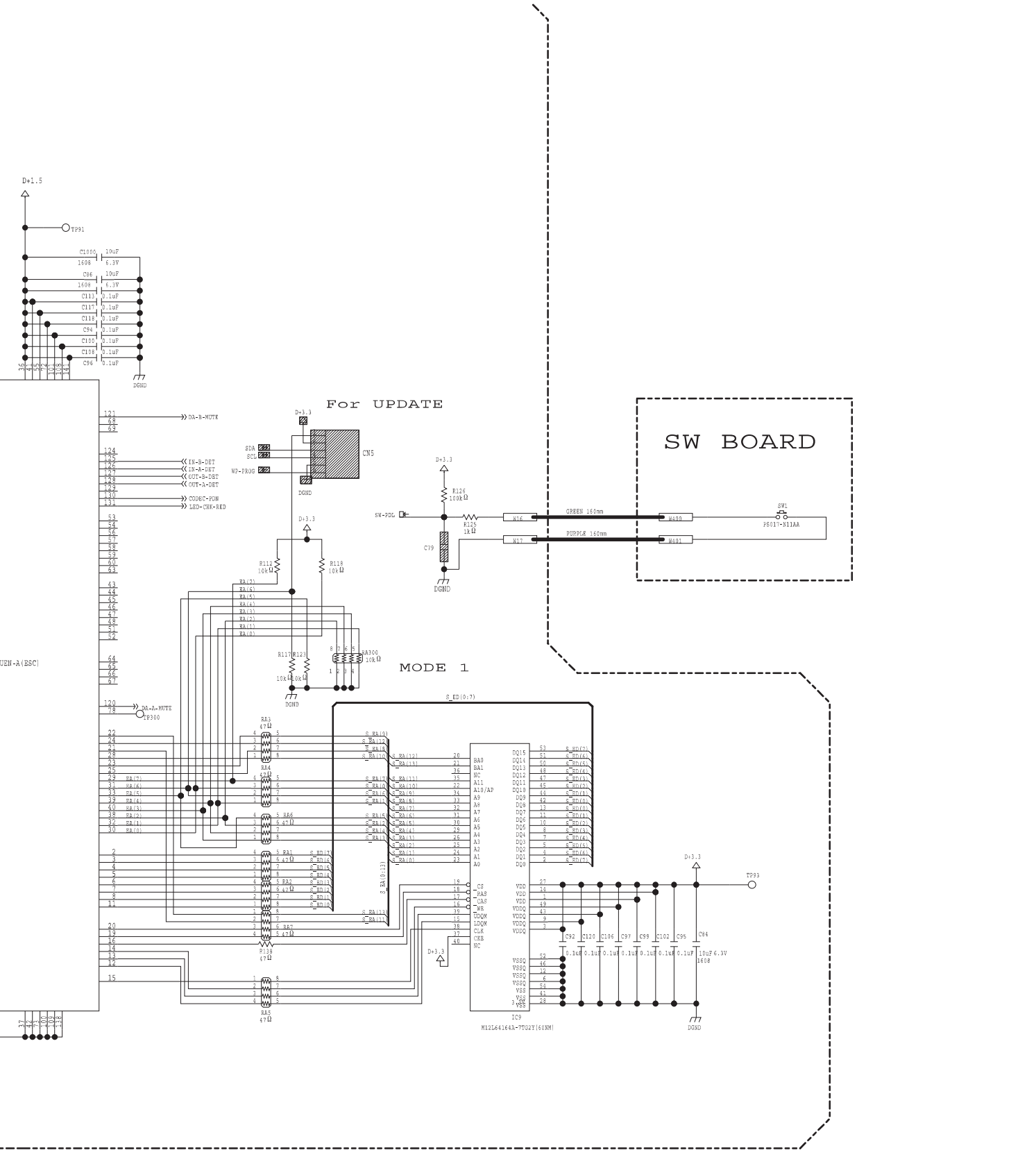



OUTPUT A
OUTPUT B
BYPASS-A
BYPASS-B
DA-A
DA-B
SD-DA
SD-AD
LRCK
MCK
BCK
CODEC-RSN
BYPASS-A-MUTE
DA-A-MUTE
BYPASS-B-MUTE
DA-B-MUTE
OUT-A-DET
OUT-B-DET
AVCC
AGND
DGND
PVCC
GRY 100mm
5100032876
BRN 105mm
5100008981
WHT 85mm
5100008083
ORG 100mm
5100032877

Circuit Diagram (Main, VR, SW, EXP Board)

RV-6 Circuit(2)/DIGITAL




For UPDATE
SW BOARD
MODE 1
CN5
SW1
PS017-N11AA
GREEN 160mm
PURPLE 160mm
W400
W401
W16
W17
R126 100kΩ
R125 1kΩ
C79
R112 10kΩ
R118 10kΩ
R117 10kΩ
R123 10kΩ
RA300 10kΩ
RA3 47Ω
RA4 47Ω
RA6 47Ω
RA1 47Ω
RA2 47Ω
RA7 47Ω
R138 47Ω
RA5 47Ω
IC9
M12L64164A-7TG2Y(160NM)
TP91
TP300
TP93
D+1.5
D+3.3
DGND
DA-B-MUTE
DA-A-MUTE
IN-B-DET
IN-A-DET
OUT-B-DET
OUT-A-DET
CODEC-PDN
LED-CHK-RED
SDA
SCL
WP-PROG
SW-PDL
S_ED(0:7)
S_RA(0:13)