SPD-S SAMPLING PAD

SERVICE NOTES
Issued by RJA

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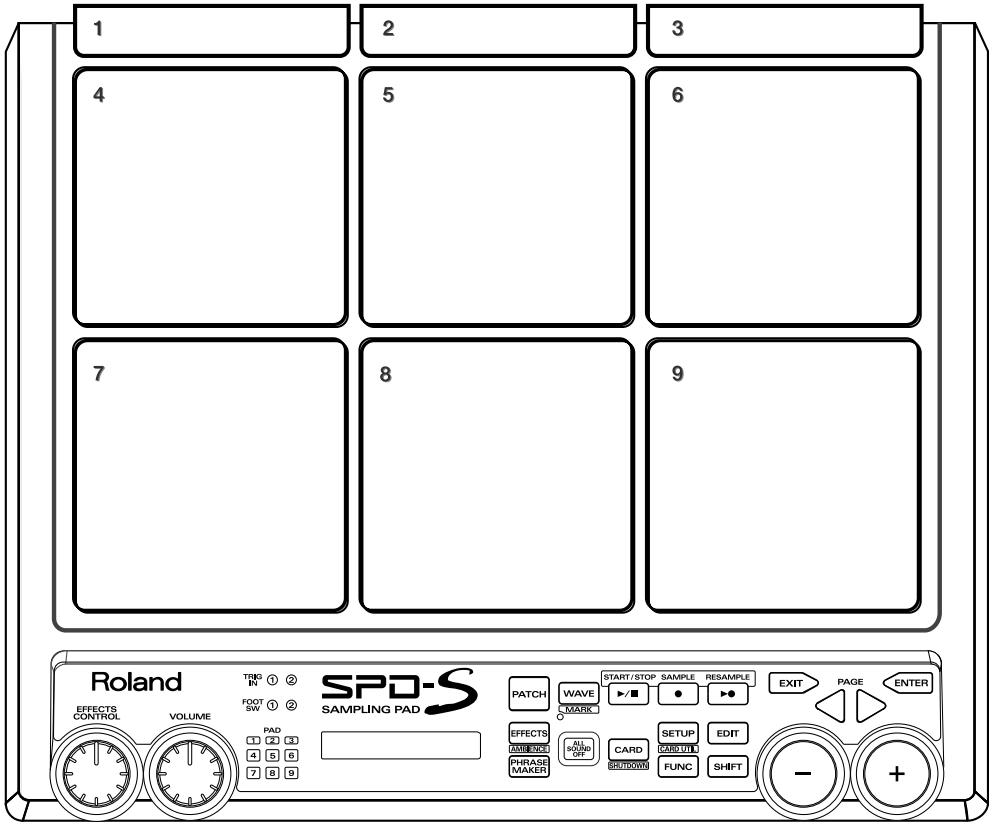


Roland

17058160E0

Printed in Japan (0800) (NB)

SPECIFICATIONS

SPD-S: Sampling Pad

Pads

Built-in Pads: 9

Maximum Polyphony

8 voices

Sampling Mode

Fine/Standard/Long

Sampling Frequency

44.1 kHz

Input Level

Line: -10 dBu
Mic: -50 dBu

Input Impedance

10 k ohm (LINE/MIC)

Output Level

Output: -10 dBu

Output Impedance

Output: 1 k ohm
Headphones: 47 ohm

Memory

Patches: 128
Waves: Internal: 399 (Pre-loaded Sound 181)
Card: 500

Maximum Sampling Time

12 min. approx. (Internal Memory, Long Mode)

Effects

Multi-Effects (30 types) + Ambience (System)

Display

16 characters, 1 line (backlit LCD)

Connectors

Output Jacks (L/Mono, R) (1/4 inch phone type)
Input Jacks (L/Mono, R) (1/4 inch phone type)
* LINE/MIC selectable
Headphones Jack (Stereo) (Stereo 1/4 inch phone type)
Trigger Input Jack (1/4 inch TRS phone type)
Expression Pedal (1/4 inch TRS phone type)
MIDI Connectors (IN, OUT)
Foot Switch Jack (1/4 inch TRS phone type)
CompactFlash Card Slot

Power Supply

DC 9 V: AC Adaptor

Current Draw

1,000 mA

Dimensions

342 (W) x 282 (D) x 83 (H) mm
13-1/2 (W) x 11-1/8 (D) x 3-5/16 (H) inches

Weight

2.1 kg
4 lbs 11 oz (excluding AC adaptor)

Accessories

Owner's Manual English (#03129712)
AC Adaptor ACI-120C (#00975767)
AC Adaptor ACI-230C (#01018312)
AC Adaptor ACB-230E (#01458278)
AC Adaptor ACB-240A (#12449549)
Sampling CD (#03129723)
Stand Holder Mounting Screw x 4 (#40563778)
Security Screw x 2 (#02126156)
Hexagon Wrench (#********)
Slit Tape (#********)

Options

Pads (PD-120, PD-100, PD-80, PD-80R, PD-9, PD-7, PD-6, KD-7)
Expression Pedal (EV-5)
Foot Switch (BOSS FS-5U)
Hi-Hat Control Pedal (FD-7)
PCS Connecting Cord Set (PCS-31)
All Purpose Clamp Set (APC-33)

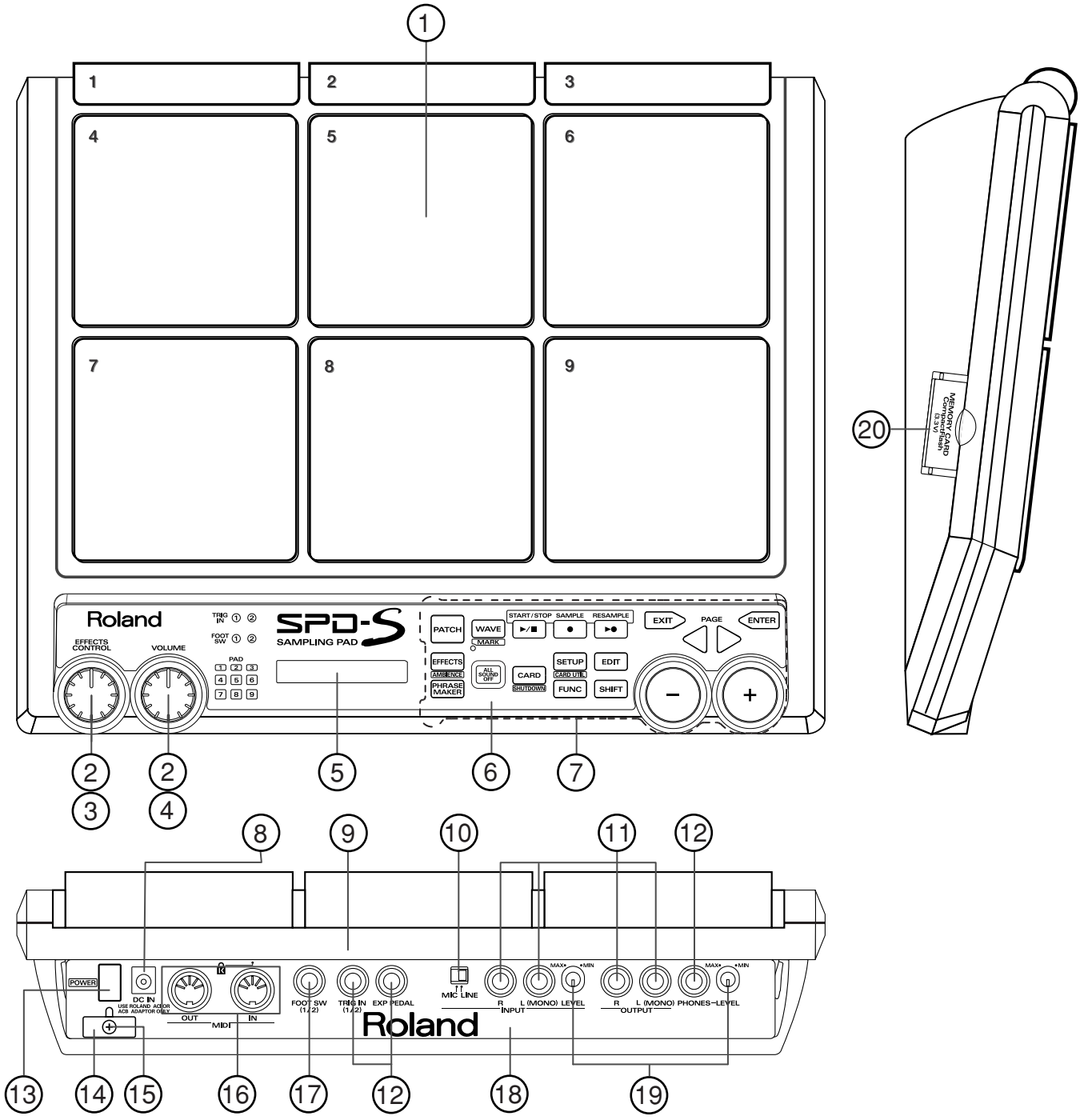
The CompactFlash which can operate by SPD-S

CompactFlash Capacity: 16M/32M/64M/128M/256M/512M byte

0 dBu = 0.775 Vrms

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

LOCATION OF CONTROLS

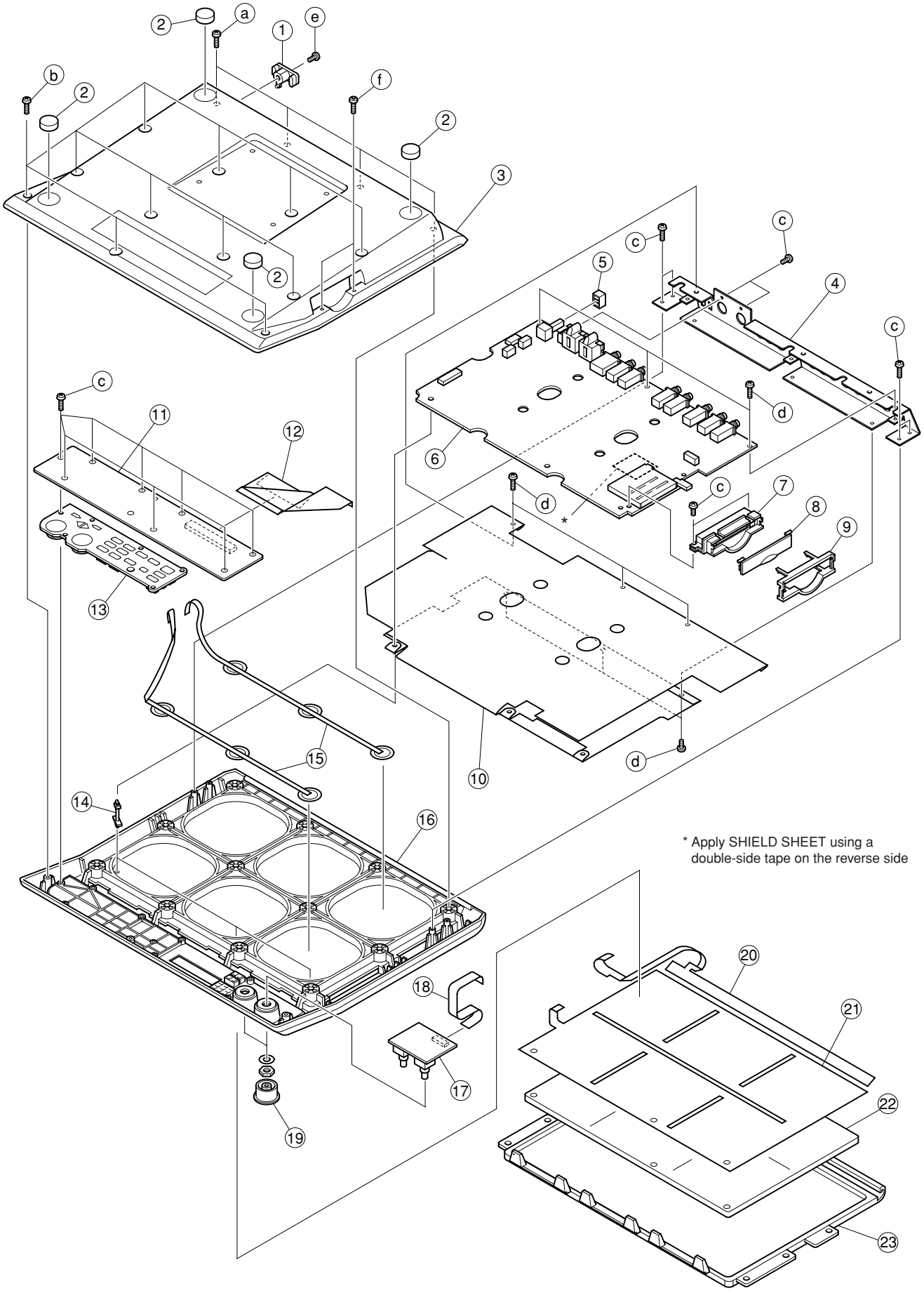


LOCATION OF CONTROLS PARTS LIST

[Parts]

NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY
1	03341889	PLAYING PLATE ASSY	for SC	1
2	03129489	R-KNOB	for SC	2
3	03230601	9M/M ROTARY POT.	EVUJFRFK1B14	1
4	F3229136	12M/M ROTARY POT.	RV112B-40E1-125A-A10K for SC	1
5	03129756	PANEL SHEET ASSY	for SC	1
6	03129545	TOP PANEL	for SC	1
7	03129512	RUBBER SWITCH	for SC	1
8	02341634	DC JACK	HTJ-020-05A	1
9	03341890	BOTTOM CASE ASSY	for SC	1
10	03235345	SLIDE SWITCH	SSSF141300	1
11	02341712	6.5MM JACK (MONORAL)	HTJ-064-10I	4
12	02897334	6.5MM JACK (STEREO)	HTJ-064-10D for SC	3
13	12499175	KEY TOP for POWER SW	JSPUE0011A	1
	01676512	POWER SWITCH	SDKLA1-B	1
14	22365714	CORD HOOK		1
15	40011312	SCREW M3x8	BINDING TAPTITE P BZC	1
16	02568867	MIDI CONNECTOR	HDC-052A-12	1
17	02341645	6.5MM JACK (STEREO)	HTJ-064-04A	1
18	03129556	REAR PANEL	for SC	1
19	02565056	9M/M ROTARY POT.	RK09K12A0D0K	2
20	03341901	CF COVER ASSY	for SC	1
	03121678	COMPACTFLASH CONNECTOR	ICM-MA2H-SS52-R21A	1
	03121689	COMPACTFLASH EJECTOR	ICM-MAE-R21	1

EXPLODED VIEW



EXPLODED VIEW PARTS LIST

[Parts]

NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY
1	22365714	CORD HOOK		1
2	01344967	FOOT		4
3	03341890	BOTTOM CASE ASSY	(INC. BOTTOM CASE)	1
4	********	REAR HOLDER		1
5	12499175	KEY TOP for POWER SW	JSPUE0011A	1
6	03129745	MAIN BOARD ASSY		1
7	03341901	CF COVER ASSY	(INC. CF ESCUTCHEON)	1
8	03341901	CF COVER ASSY	(INC. CF COVER)	1
9	03341901	CF COVER ASSY	(INC. CF HOLDER)	1
10	********	SHIELD SHEET		1
11	03129756	PANEL SHEET ASSY	(INC. PANEL BOARD)	1
12	********	WIRING 1	40 PIN	1
13	03129512	RUBBER SWITCH		1
14	03341889	PLAYING PLATE ASSY	(INC. PCB SPACER CBS-19K)	3
15	03341889	PLAYING PLATE ASSY	(INC. SENSOR ASSY)	2
16	03341889	PLAYING PLATE ASSY	(INC. TOP CASE)	1
17	03129756	PANEL SHEET ASSY	(INC. VOLUME BOARD)	1
18	********	WIRING 2	12 PIN	1
19	03129489	R-KNOB	for SC	2
20	03341889	PLAYING PLATE ASSY	(INC. EDGE SHEET SENSOR for PAD 1-3)	1
21	03341889	PLAYING PLATE ASSY	(INC. HEAD SHEET SENSOR for PAD 4-9)	1
22	03341889	PLAYING PLATE ASSY	(INC. CUSHION)	1
23	03341889	PLAYING PLATE ASSY	(INC. PLAYING PLATE)	1

[Screws]

NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY
a	40562967	SCREW 4x16	BINDING TAPTITE P NI	4
b	40012501	SCREW 4x12	BINDING TAPTITE P BZC	11
c	40011278	SCREW 3x8	BINDING TAPTITE P ZC	16
d	40011056	SCREW 3x6	BINDING TAPTITE B ZC	9
e	40011312	SCREW 3x8	BINDING TAPTITE P BZC	1
f	02126156	SECURITY SCREW	HEX CAP SCREW M3x10 TAPTITE P NI	2

PARTS LIST

SAFETY PRECAUTIONS:
The parts marked ⚠ 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)

CASING					Q'TY
#	03341889	PLAYING PLATE ASSY	for SC		1
	NOTE : 'PLAYING PLATE ASSY' INCLUDES 'TOP PANEL'				
#	********	EDGE SHEET SENSOR	for PAD 1-3		1
#	********	HEAD SHEET SENSOR	for PAD 4-9		1
#	********	CUSHON			1
#	********	PCB SPACER	CBS-19K		1
#	********	PLAYING PLATE			1
#	********	SENSOR ASSY			2
#	********	TOP CASE			1
#	03129545	TOP PANEL			1
#	03341890	BOTTOM CASE ASSY	for SC		1
	NOTE : 'BOTTOM CASE ASSY' INCLUDES THE FOLLOWING PARTS				
	********	BOTTOM CASE			1
	22365714	CORD HOOK			1
	01344967	FOOT			^4
#	03129556	REAR PANEL			1
#	03341901	CF COVER ASSY			1
	NOTE : 'CF COVER ASSY' INCLUDES THE FOLLOWING PARTS				
#	********	CF COVER			1
#	********	CF ESCUTCHEON			1
#	********	CF HOLDER			1

KNOB, BUTTON					
#	03129489	R-KNOB	for SC		2
	12499175	JSPUE0011A	KEY TOP for POWER SW		1

JACK, EXT TERMINAL					
#	03129512	RUBBER SWITCH	for SC		1
	01676512	PUSH SWITCH SDKLA1-B	POWER SWITCH	SW3	1
#	03235345	SLIDE SWITCH SSSF141300	SLIDE SWITCH	SW2	1

SWITCH					
	02341645	HTJ-064-04A	6.5MM JACK (STEREO)	JK9	1
	02897334	HTJ-064-10D for SC	6.5MM JACK (STEREO)	JK4,JK7,JK8	3
	02341712	HTJ-064-10I	6.5MM JACK (MONORAL)	JK2,JK3,JK5,JK6	4
	02341634	HTJ-020-05A	DC JACK	JK10	1
	02568867	HDC-052A-12	MIDI CONNECTOR	JK1	1

PWB ASSY					
#	03129745	MAIN BOARD ASSY	for SC		1
#	03129756	PANEL SHEET ASSY	for SC		1

POTENTIOMETER					
	02565056	RK09K12A0D0K	9M/M ROTARY POT.	VR1,VR2	2
#	03230601	EVUJFRFK1B14	9M/M ROTARY POT.	VR4	1
#	F3229136	RV112B-40E1-125A-A10K for SC	12M/M ROTARY POT.	VR3	1

CONNECTOR					
#	03121678	COMPACTFLASH CONNECTOR	ICM-MA2H-SS52-R21A	CN9	1
#	03121689	COMPACTFLASH EJECTOR	ICM-MAE-R21	CN9	1

WIRIING, CABLE

#	*******	WIRING 1	40 PIN	1
#	*******	WIRING 2	12 PIN	1

SCREW

	40011056	SCREW M3x6	BINDING TAPTITE B ZC	9
	40011278	SCREW M3x8	BINDING TAPTITE P ZC	16
	40011312	SCREW M3x8	BINDING TAPTITE P BZC	1
	40012501	SCREW M4x12	BINDING TAPTITE P BZC	11
#	40562967	SCREW M4x16	BINDING TAPTITE P NI	4

PACKING

#	03341878	PACKING SET	for SC	1

MISCELLANEOUS

	22365714	CORD HOOK		1
	01344967	FOOT		4
#	*******	SHIELD SHEET		1

ACCESSORIES (Standard)

#	03129701	OWNER'S MANUAL	JAPANESE	1
#	03129712	OWNER'S MANUAL	ENGLISH	1
#	03343323	LEAFLET	JAPANESE/ENGLISH	1
⚠	00905756	AC ADAPTOR ACI-100C		1
⚠	00905767	AC ADAPTOR ACI-120C		1
⚠	01018312	AC ADAPTOR ACI-230C		1
⚠	01458278	AC ADAPTOR ACB-230E		1
⚠	12449549	AC ADAPTOR ACB-240(A)		1
#	03129723	CD-ROM	SAMPLING CD for SC	1
#	40563778	STAND HOLDER MOUNTING SCREW	HEX CAP SCREW M5x12 BZC	4
	02126156	SECURITY SCREW	HEX CAP SCREW M3x10 TAPTITE P NI	2
#	*******	HEXAGON WRENCH	4MM	1
#	*******	SLIT TAPE		1
	40232334	WARRANTY CARD	(JAPAN ONLY)	1

IDENTIFYING THE VERSION NUMBER

1. Hold down the [ALL SOUND OFF] and [CARD] buttons and turn on the power to the unit.
2. Press the [<]/[>] buttons to sequence through the display of the following items.

- CPU Version, Build Number

```
CPU1.00  BLD0018
```

- CPU Release Date

```
CPU DATE 12/16/02
```

- CPU Release Time

```
CPU TIME 13:25:25
```

- EXT ROM Version, Build Number

```
PRG1.01  BLD0044
```

- EXT ROM Release Date

```
PRG DATE 04/10/03
```

- EXT ROM Release Time

```
PRG TIME 08:39:14
```

- Factory Data Version, Build Number

```
PRE 1.17  BLD012
```

3. Turn off the power to quit.

SAVING USER DATA & RELOADING SAVED DATA

Required equipment

- MIDI sequencer
- MIDI cable

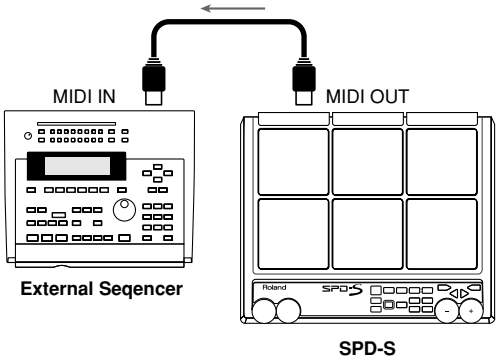
BULK DUMP

Settings for SPD-S setups and patches can be saved to an external MIDI device, such as a sequencer.
Operate the external sequencer for recording ordinary performance data and then take the following steps for the SPD-S.

MEMO

See the operation manual of the external MIDI device for details on it.

1. Connect an external MIDI sequencer (as a saving destination) to the MIDI OUT connector on the SPD-S using a MIDI cable.



2. Set the SPD-S to the patch mode or to the wave mode.
3. Press [SETUP] button to access Setup Edit.
4. Press the PAGE buttons to select “BULK DUMP,” then press [ENTER] button.
5. Press [+] button to select “ALL”.
6. Start recording on the external sequencer.
7. Press [>] button to display “bulk dump, sure?”
   Press [ENTER] button to execute bulk dumping.

NOTE

During transmission, “now sending” is displayed.
After the transmission is finished, a “complete!” indication appears and the SPD-S returns to the “Dump” screen in Step 2.
To cancel the transmission midstream, press [EXIT] button.

8. Stop the external sequencer to stop recording.

Retrieving Saved Data Back to the SPD-S

Retrieves the settings saved to sequencers and other external MIDI devices to the SPD-S.

1. Connect the MIDI IN connector on the SPD-S to the MIDI OUT connector of an external sequencer using a MIDI cable.
2. Press [PATCH] button to enter patch mode.

NOTE

Bulk data cannot be retrieved in any mode other than patch mode.

3. Transfer the settings data from the external sequencer to the SPD-S.
   The transferred settings are restored.

TEST MODE

Required items

- Expression Pedal (EV-5 etc.)
- Foot switch x3 (FS-5U etc.)
- PAD (With a RIM switch function) x2 (PD-7, PD-9, CY-12 etc.)
- Y cable (PCS-31) x2
- Stereo jack plug Cable x1
- Mono jack plug Cable x2
- MIDI cable
- CompactFlash (Formatting using the SPD-S)
- Monitor Speaker
- Headphone

Basic Test Mode Operations

1. Proceeding with series of test:
   Some of tests automatically advance to the next when the result is "OK."

   Press [>] button (the LED flashes as a prompt).

2. To advance to the next test forcefully even when the result is "NG" or while running a test:

   Hold down [SHIFT] button and press the [>] button.

3. To return to the previous test:

   Press the [<] button.

4. To return to the previous test forcefully:

   Hold down [SHIFT] button and press the [<] button.

5. To repeat the current test:

   Press [EXIT] button.

6. To quit Test mode:

   Turn off the power to the unit.

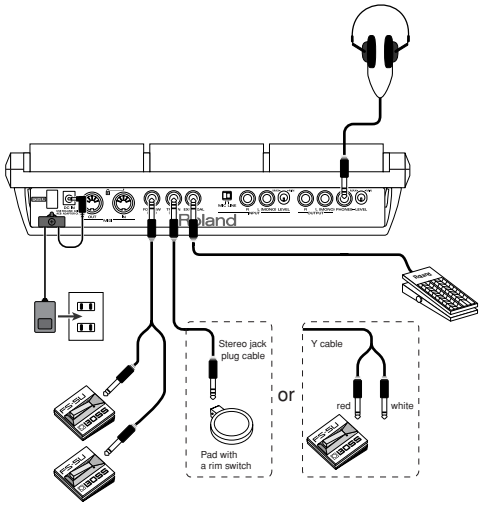
* *In each tested item, the screen initially shows the test type for a set length of time, the display switches to the actual test screen.*

* *The "BelTreeD" sound is played when "OK" is returned and the procedure advances to the subsequent test. When a test results "NG," the "FlexMtl" sound is played.*

Test Mode Procedure

NOTE

Executing Test mode deletes the User data; be sure to back up the data stored in the unit beforehand.



1. Using a Y cable, connect two foot switches to the FOOT SW jack.
   Make sure that the polarity is set properly here (set the foot switches to open when the pedal is pressed; this should be the reverse of the TRIG IN switch).
2. Use a stereo cable to connect a pad with a rim switch to the TRIG IN jack.
   Alternatively, use a Y cable to connect one foot switch to the TRIG IN jack (plug in the Y cable's red connector).
   Make sure that the polarity is set properly here (set the foot switches to short (close) when the pedal is pressed).
3. Connect an expression pedal to the EXP PEDAL jack.
4. Insert a CompactFlash card in the unit for tests.
   Use a CompactFlash card formatted on the SPD-S.
   If updating of the factory data is required in "0. Factory Data Update," use a CompactFlash card containing the factory data.

Entering Test Mode

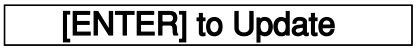
1. Insert the CompactFlash card in the card slot.
2. Hold down both [PHRASEMAKER] and [CARD] buttons and turn on the power.
3. Continue to hold down the buttons until [PATCH] and [EFFECTS] buttons light.
4. Release [PHRASEMAKER] and [CARD] buttons.
5. Press [EXIT] button.
6. Press [ENTER] button.

Test Items

0. Factory Data Load

When the CompactFlash contains factory data, the instrument compares its version with the version contained internally, and if the CompactFlash contains a newer version, the unit automatically switches to Update mode. If the data stored in the instrument is the later version, this mode is skipped.

1. Press the [ENTER] button to begin loading.



Loading.

When loading fails (in this case, press [EXIT] button to return to the previous screen).

2. When loading completes normally, the process automatically advances to the subsequent test.

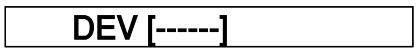
1. Version Test

1. Confirm the version number.

2. Press the [>] button to advance to the subsequent test.

2. Device Test

1. When the test results "OK", the "-" symbol changes to "o"; if the test results "NG" (fail), the symbol changes to a charactor to represent the error type.

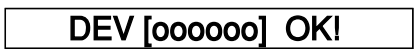


Checked Items

I: CPU Internal: Checksum Comparison
P: Program ROM: Checksum Comparison
S: SDRAM: Write/Read
M: MR3 Chip: Write/Read
N: NAND Flash: Write/Read/Format
C: CompactFlash: Format (Write/Read Check)

2. Press the [>] button to show which tests failed.
   If multiple tests fail, use the [<] and [>] buttons to navigate (the [<] and [>] buttons flash as a prompt).

3. If all tests result "OK," the process automatically advances to the subsequent test.



3. MIDI Test

1. Use a MIDI cable to connect SPD-S's MIDI IN and MIDI OUT.

Before Connecting

Connected

2. If the test results "OK," the process automatically advances to the subsequent test.

4. Switch/LED Test

```
4.SW/LED Test
```

```
(22)
```

NOTE

The number of switches that have not been checked is indicated in parentheses.

1. Using a Y cable, connect two foot switches to the FOOT SW jack.
2. Use a stereo cable to connect a PD-7 to the TRIG IN jack.
   Alternatively, use a Y cable to connect one foot switch to the TRIG IN jack (plug in the Y cable's red connector).
3. Press the panel switches individually to comfirm that the name of the switch being pressed appears in the display and that the corresponding sound is played.
   If the switch includes an LED, also confirm that the LED turns off when the switch is pressed.

* *For pad switches, press (grasp) the rim section.*

* *The test doesn't result "OK" when two or more panel switches are pressed simultaneously.*
The test also doesn't result "OK" when the foot switches (or a foot switch and pad switch) are pressed simultaneously.

```
(14) ALLSOUNDOFF
```

4. The PAD LEDs turn off with each press of the [+] button.
   Confirm that all of the PAD LEDs go off.

```
(0) + (PAD1 LED)
```

Switches

[PATCH]	[WAVE]	[PLAY/STOP]	[SAMPLE]
[RESAMPLE]	[EXIT]	[ENTER]	
[EFFECTS]	[ALLSOUNDOFF]	[CARD]	[SETUP]
[EDIT]	[LEFT/<]	[RIGHT/>]	
[PHRASEMAKER]	[FUNC]	[SHIFT]	[-] [+]
[FOOTSW1]	[FOOTSW2]	[TRIGINSW]	

5. If all of the switches pass their tests, the process automatically advances to the subsequent test.

```
(0)        OK!
```

5. Effects Control Knob Test

```
5.CtrlKnob Test
```

1. Turn the [EFFECTS CONTROL] knob completely to the left (counterclockwise), and confirm that the value is "0" when the knob is fully turned.

```
KNOB  (108)
```

   The following screen appears when the knob is turned fully to the left.
   At this time, confirm that the "CowbMmbo" sound is played.

```
KNOB   (0)
```

2. Turn the [EFFECTS CONTROL] knob completely to the right.
   At this time, confirm that the "BelTreeD" sound is played.
3. If the test results in "OK," the process automatically advances to the subsequent test.

```
KNOB  (127)  OK!
```

6. Expression Pedal Test

```
6.Exp.Pedal Test
```

1. Connect an expression pedal to the EXP PEDAL jack.
2. Confirm that the value is "0" when the pedal heel is pressed down fully.

```
PEDAL  (108)
```

   The following screen appears in the display when the pedal heel is pressed down fully.
   At this time, confirm that the "CowbMmbo" sound is played.

```
PEDAL   (0)
```

3. Press the pedal toe down completely.
   At this time, confirm that the "BelTreeD" sound is played.
4. If the test results in "OK," the process automatically advances to the subsequent test.

```
PEDAL  (127)  OK!
```

7. LCD Test

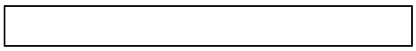
7.LCD Test

1. Hold down the [INC/+] button and confirm that the LCD contrast changes gradually.
   Holding down the [INC/+] button and pressing the [DEC/-] button causes the contrast to change more rapidly.
   When the contrast is at the maximum level, the screen shown below appears.
   At this time, confirm that the "Agogo Hi" sound is played.

2. Hold down the [DEC/-] button and confirm that the LCD contrast changes gradually.
   Holding down the [DEC/-] button and pressing the [INC/+] button causes the contrast to change more rapidly.
   When the contrast is at the minimum level, the screen shown below appears.
   At this time, confirm that the "Agogo Lo" sound is played.

3. Press the [ENTER] button and confirm that the entire LCD is lit (the [ENTER] button flashes as a prompt).
   At this time, confirm that the "Shaker" sound is played.

4. Press the [ENTER] button and confirm that the entire LCD goes dark (the [ENTER] button flashes as a prompt).
   At this time, confirm that the "Maracas" sound is played.



* *Pressing the [ENTER] button cycles through the contrast check, all LCD on, and all LCD off tests.*

5. If all tests result in "OK," press the [>] button to advance to the subsequent test.
   The procedure does not advance unless all of the above tests are completed.

8. Trigger Test

8.Trigger Test

1. Using a Y cable, connect two pads to the TRIG IN jack.

MEMO

To disable the trigger while connecting or disconnecting the cable, hold down the [FUNC] button; the trigger is ignored while this button is pressed.

Hit "Softly"

123456789AB Soft

2. Sheet Sensor Check
   The test automatically checks whether or not the sheet sensor is turned on while the pad is not being touched.
   If no pad has a sheet sensor on, nothing appears in the display, and the procedure advances to the subsequent test.

NOTE

Do not touch the pads while the check is in progress.

   If there is a pad with its sheet sensor on, the pad's number is displayed, the pad LED flashes, and the test result is "NG."

oo3oo67oo Sheet

3. Check response to weak hits by striking a lightly and individually.
   Confirm that the corresponding number disappears and that the corresponding sound is played.
   The LED for each corresponding pad flashes and then goes off.

___456789AB Soft

NOTE

The test does not result "OK" when two or more pads are struck simultaneously.

   A minimum interval of 0.1 seconds is required between each stroke of the pads.

NOTE

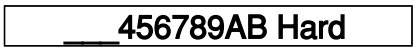
When a pad is struck hard, the corresponding number in LCD doesn't go off and no sound is played although the pad LED lights, and the test doesn't result "OK."

4. If all pads are "OK," the process automatically advances to the subsequent test.

Hit "Hard"!

123456789AB Hard

5. Check response to strong hits by striking a pad hard and individually.
Confirm that the corresponding number disappears and that the corresponding sound is played.
The LED for each corresponding pad flashes and then goes off.



NOTE

When a pad is struck lightly, the corresponding number in LCD doesn't go off and no sound is played although the pad LED lights, and the test doesn't result "OK."

MEMO

The weak and strong checks can be switched by pressing the [ENTER] button.

Correspondence Between the Pads and Sounds

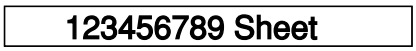
[1: Claves 2]	[2: CowbMmbo]	[3: Agogo Hi]
[4: Bongo Hi]	[5: Conga Hi]	[6: Xstick 3]
[7: 808Kik 1]	[8: eSnr]	[9: AcuHH cl]
[A(Trig1): 909Claps]	[B(Trig2): SpokTom1]	

6. If all pads are "OK," the process automatically advances to the subsequent test.

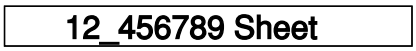
Advanced Test Mode

To enter Advanced Test mode, press the [ALLSOUNDOFF] button during the Trigger Test.
This mode, you may check the causes of failure in the above test.

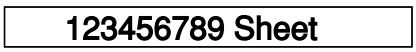
a. Sheet Sensor Check
If a pad's sheet sensor turns on when the pad is pressed with the hand, the corresponding number disappear, and the pad's LED goes off.
Release the pads to return them to their original state.



Hand-press [Pad3].

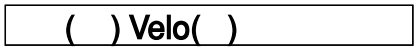


Release [Pad3].



Press the [ALLSOUNDOFF] button to advance to the Velocity Check.

b. Velocity Check
Strike each pad with a stick; when a pad is struck, the pad number and velocity value (1--127) is displayed, and the corresponding LED flashes and then goes off.



Strike [Pad5].

NOTE

When a pad has faulty sheet sensors that does not turn on, there is no response from the pad when it is struck.

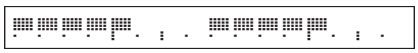
Press the [ALLSOUNDOFF] button to return to the Sheet Sensor Check.
Press the [EXIT] button to return to the beginning of the Trigger Test.

9. Audio Input Test

1. Set the [VOLUME] knob to minimum, and turn the [INPUT LEVEL] knob on the rear panel to the maximum setting.

2. Use two mono cables to connect the INPUT L/MONO and R to the OUTPUT L/MONO and R.

3. Press the [ENTER] button.



(Level Meter Display)

Above level meter is displayed, and a 100-Hz signal is output at -50 dBu.
The [START/STOP] button flashes.

4. Set the [LINE/MIC] switch to "MIC" and turn up [VOLUME] knob.
If the signal level is correct when [VOLUME] knob is turned right fully, the process automatically advances to the subsequent test.
The level meter is displayed in the LCD.

(Level Meter Display)

5. The LCD shows following display, then it returns to the level meter.

A 100-Hz signal is output at -10 dBu.
[START/STOP] button lights, and [SAMPLE] button flashes.

6. Set [LINE/MIC] to "LINE."
   If the signal level is correct, the signal automatically switches to 10 kHz, and the same test runs.
   The [START/STOP] and [SAMPLE] buttons light, and the [RESAMPLE] button flashes.
   If the tests result is "OK," the process automatically advances to the subsequent test.

NOTE
In this test, signal status is normal when six squares are displayed for both the left and right channels in the LCD.

At this time, the [WAVE] button lights.

10. Sound Test

```
10.Sound Test
```

1. Confirm that no sound is being played ([ENTER] LED flashes as a prompt).

```
SOUND
```

2. Press [ENTER] button, and confirm that a sine wave is output from both the left and right channels of OUTPUT and PHONES (the [EDIT] button lights).

```
<<L SOUND R>>
```

3. Press the [EDIT] button, and confirm that the output is muted (the mute circuits activate).

NOTE
At this time, the sound is output at a very low level; this does not indicate any malfunction (the [ENTER] LED lights as a prompt).

```
<<L MUTE R>>
```

4. Press [ENTER] button, and confirm that a sine wave is output only from the left channel of OUTPUT and PHONES (the [ENTER] LED lights as a prompt).

```
<<L SOUND
```

5. Press [ENTER] button, and confirm that a sine wave is output only from the right channel of OUTPUT and PHONES (the [ENTER] LED lights as a prompt).

```
SOUND R>>
```

6. Press [ENTER] button, and confirm that no sound is being output (the [ENTER] LED lights as a prompt).

```
SOUND
```

* *Press [ENTER] button to cycle through Steps 3--6.*

7. If the tests result "OK," press [>].

11. Completing Test Mode

1. If all of the tests in Test mode result in "OK", shutdown for the card is executed.

```
shutdown..
```

```
shutdown.. OK!
```

When the following is displayed, turn off the power to the unit.

```
Test Completed!
```

2. If any of the tests fails, the following is displayed.

```
Not All Passed
```

INITIALIZATION PROCEDURE

Resets the SPD-S's settings to initial values, or delete all the data stored in the SPD-S.

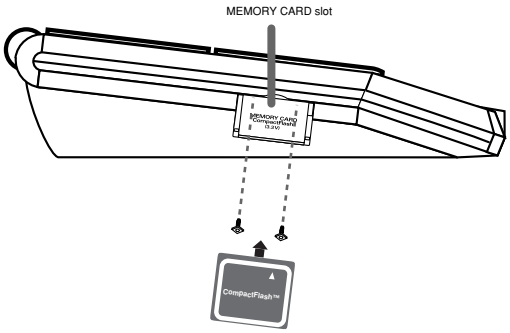
NOTE
If you execute INIT/DELETE to delete patches and waves from the internal memory, the SPD-S will produce no sound.

1. Set the SPD-S to the patch mode or to the wave mode.
2. Press [SETUP] button to access Setup Edit.
3. Press the PAGE buttons to select "INIT/DELETE," then press [ENTER] button.
4. Press [+] button to select "ALL."
5. Press [>] button to display "delete all, sure?"
6. Press [ENTER] button to start initialization or deletion.
7. During execution, "now processing?" is indicated.
   After the execution, a "complete!" indication appears, and the SPD-S returns to the patch mode.

NOTE
Do not power the SPD-S off during execution.

FORMATTING A COMPACTFLASH CARD

1. To insert a CompactFlash card, carefully open the card slot cover (left-hand side of the SPD-S).



2. Select patch mode or wave mode.

3. Press [SHIFT] and [SETUP] buttons (CARD UTIL).

NOTE

If no CompactFlash card has been inserted, "no card!" is indicated and the SPD-S returns to the original mode.

4. Press the PAGE buttons to select "CARD FORMAT," then press [ENTER] button.

NOTE

When the CompactFlash card is unformatted, only "CARD FORMAT" is displayed.

5. A "[>] to format." indication appears. Press [>] button.

6. A "format, sure?" indication is displayed. Press [ENTER] button to start formatting.
While formatting is in progress, "now processing.." is displayed. Then, the SPD-S returns to the original mode.

RESTORING THE FACTORY SETTINGS

The accompanying CD contains audio signals for sampling on the SPD-S and digital data for restoring the SPD-S to its factory settings.
Restoring Patches and Waves to the Factory Settings

NOTE

Once you execute this operation, you will lose all the patches and waves stored in the internal memory.
Back up such data beforehand if needed.

Required items

- A computer with a CD-ROM drive
- A card reader that supports CompactFlash cards
- The accompanying CD-ROM (P/No.03129723)
- CompactFlash (Formatted using the SPD-S)

Procedure

1. Connect the card reader to the computer to ensure that it can be used.

NOTE

For connecting the card reader to the computer and using them, see their respective operation manuals.

2. Load the accompanying CD into the CD-ROM drive.

3. Insert the CompactFlash card into the card reader.

4. Copy the "FCTRY" folder on the accompanying CD to the "ROLAND" folder on the CompactFlash card.
If the "ROLAND" folder on the CompactFlash card already has a "FCTRY" folder, delete the "FCTRY" folder before copying.

5. Eject the CompactFlash card to which the copying was done in Step 4 from the card reader.
Then, make sure that the SPD-S is powered off and insert it into the card slot of the SPD-S.

6. While holding down [PATCH], [WAVE], and [CARD] button ON the SPD-S.

NOTE

After powering it on, hold down the three buttons until "[ENTER] to Load" appears.

7. "[ENTER] to Load" appears. Release the three buttons. Next, press [ENTER].
Data transfer from the CompactFlash card to the SPD-S begins.
It takes a few minutes until it is complete.

NOTE

During the data transfer, do not eject the CompactFlash card from the card slot and do not switch off power to the SPD-S. Doing so could not only destroy the data, but also cause problems for the SPD-S.

8. "Load Completed!" appears, and the data transfer is complete.
Now, eject the CompactFlash card, power the SPD-S off, then power it on again.

PROCEDURE FOR UPDATING THE SYSTEM SOFTWARE

The system can be updated using CompactFlash or MIDI.

Instructions for Updating Using CompactFlash

Required items

- A computer with a CD-ROM drive
- A card reader that supports CompactFlash cards
- UPDATE CD-ROM for CF Card (P/No.17041324)
- CompactFlash (Formatted using the SPD-S)

1. Preparation

Prepares a CompactFlash card containing the updated system file.

1. Insert the CompactFlash in a card reader connected to a computer.

NOTE

For instructions on connecting the computer and card reader, refer to the service notes for formatting a CompactFlash.

2. Place the updated program in the CompactFlash's root (the top level).
This completes preparation of the updater CompactFlash.

2. Update Procedure

1. Hold down the [EFFECTS] and [ENTER] buttons and turn on the power to the unit.

2. The [PATCH] and [PHRASEMAKER] buttons flash.

Card Updater

* *To cancel the update at this point, turn off the power to the SPD-S.*

3. Press the [PATCH] and [PHRASEMAKER] buttons simultaneously.

4. The update begins.
The process is divided into sixteen steps, and in each step, the

[START/STOP] -> [SAMPLE] -> [RESAMPLE]

LEDs light in sequence.

Update: **/16

* *The "**" indicates the step number currently being processed (01--16).*

5. When the update is completed normally, the [START/STOP], [SAMPLE], and [RESAMPLE] LEDs light up.

Update Complate

If an error occurs during the procedure, all of the LEDs light up, and an error message is displayed.

Update ERROR 15

6. Turn off the power to end the procedure.

Updating Using MIDI

Required items

- A MIDI sequencer that can play back SMF data
- UPDATE CD-ROM for SMF (#17041324)
- MIDI Cable

1. Preparation

The following sixteen files are required for the updater SMF; confirmed that they are present.

p00001.mid, p00002.mid, p00003.mid, p00004.mid
p00005.mid, p00006.mid, p00007.mid, p00008.mid
p00009.mid, p00010.mid, p00011.mid, p00012.mid
p00013.mid, p00014.mid, p00015.mid, p00016.mid

2. Update Procedure

1. Use a MIDI cable to connect the MIDI OUT connector of a sequencer capable of playing back SMFs and the MIDI IN connector on the SPD-S.

2. Hold down the [WAVE] and [ENTER] buttons and turn on the power to the unit.

3. The [SETUP] and [EDIT] buttons flash.

MIDI Updater

* *To cancel the update at this point, turn off the power to the SPD-S*

4. Press the [SETUP] and [EDIT] buttons simultaneously.

Please Send

5. Play back p00001.mid through p00016.mid in sequence.

6. The update begins, and with each file, the

[START/STOP] -> [SAMPLE] -> [RESAMPLE]

LEDs light in sequence.

Update: **/16

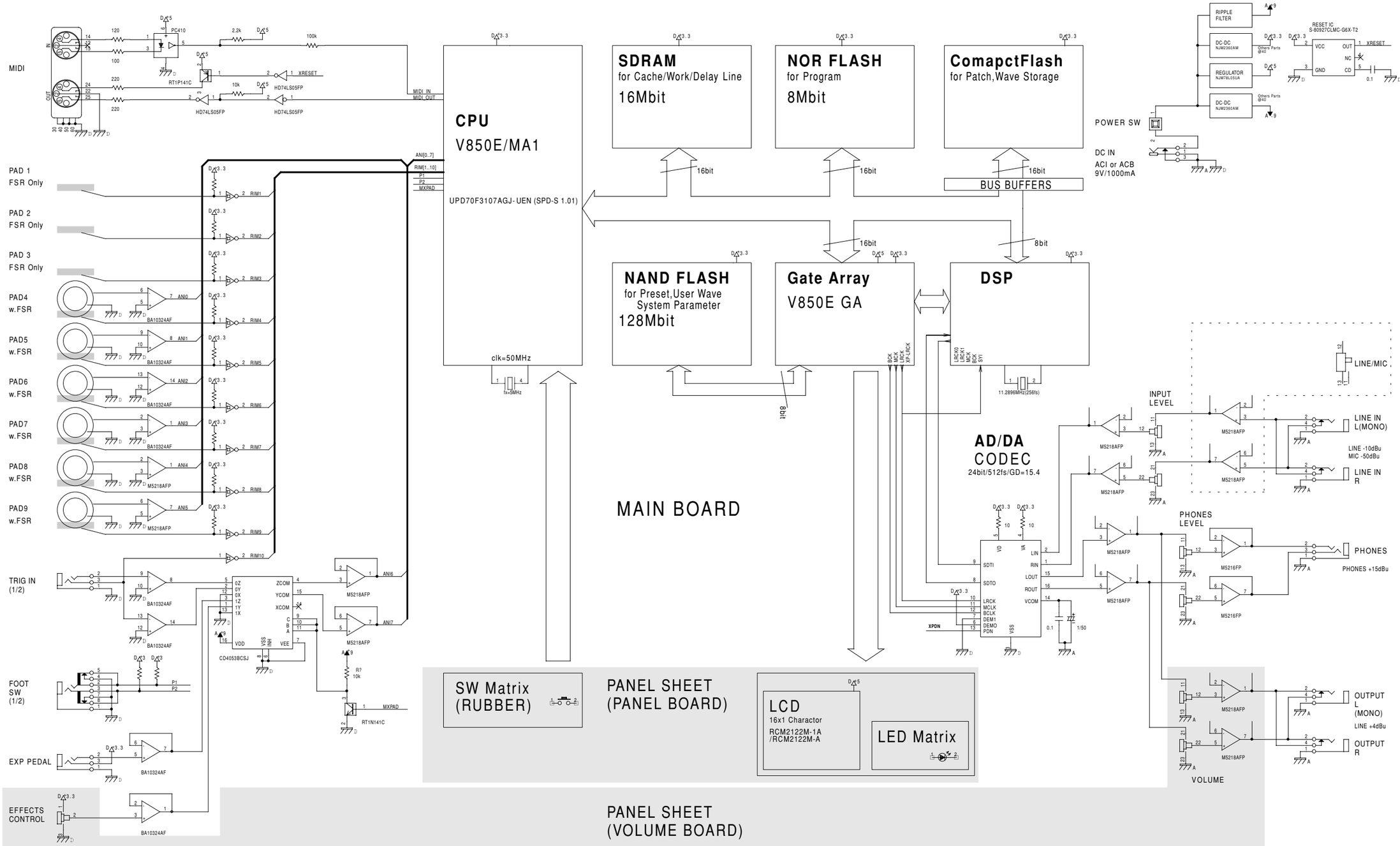
* *The "**" indicates the file currently being executed (01--16).*

7. When the update is completed normally, the [START/STOP], [SAMPLE], and [RESAMPLE] LEDs light up.

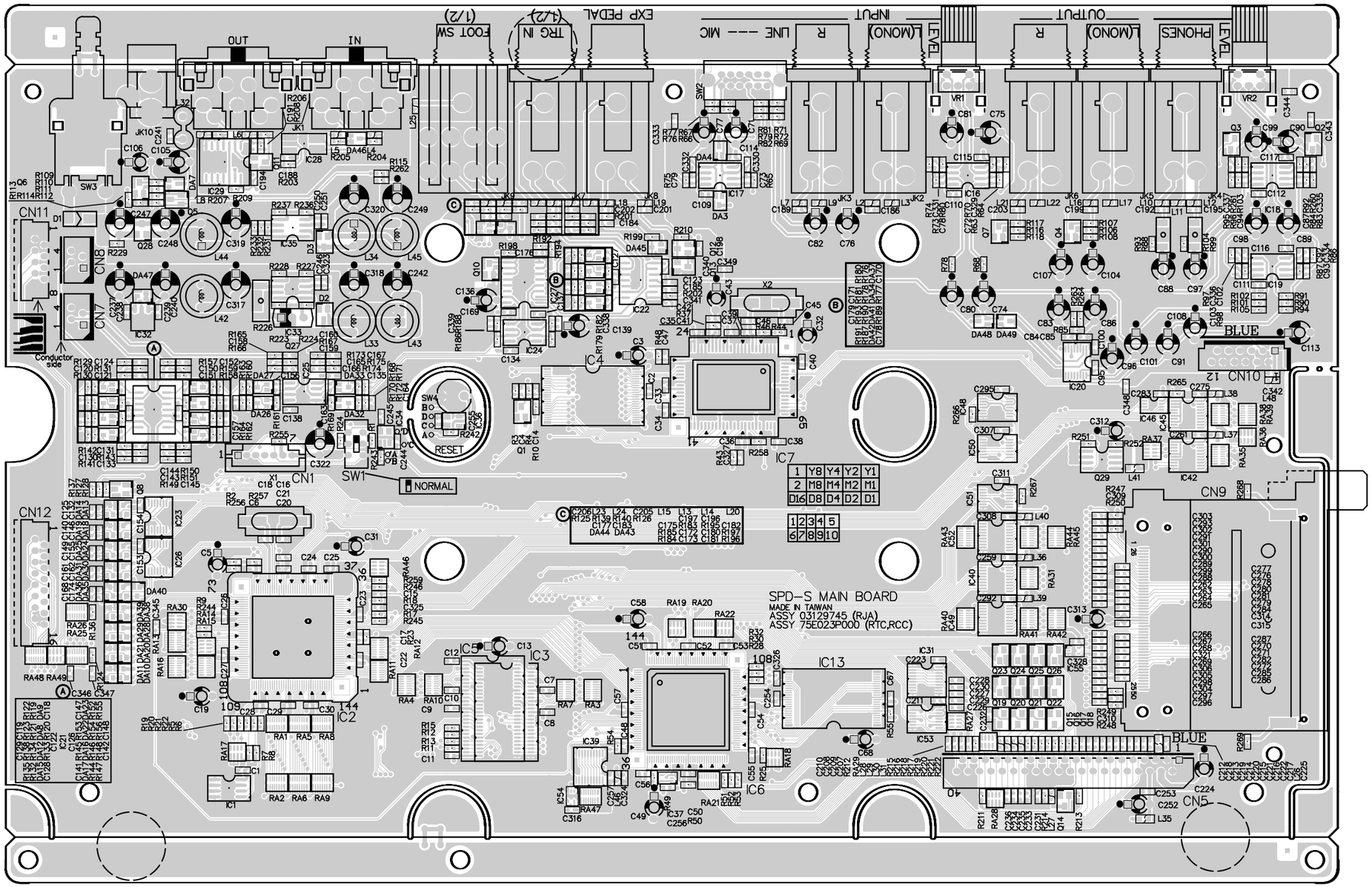
If an error occurs during the procedure, all of the LEDs light up, and an error message is displayed.

8. Turn off the power to end the procedure.

BLOCK DIAGRAM

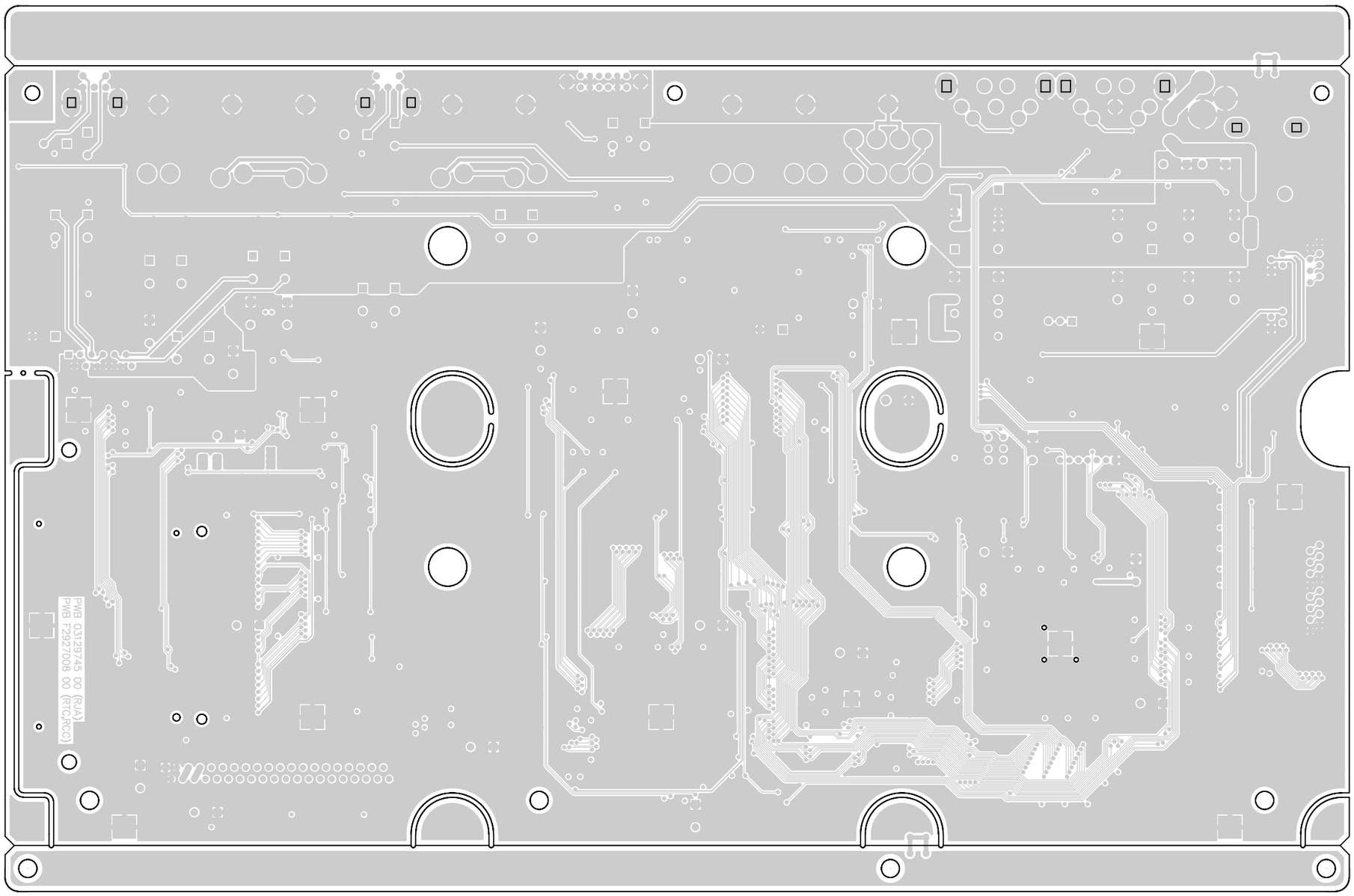


CIRCUIT BOARD (MAIN)



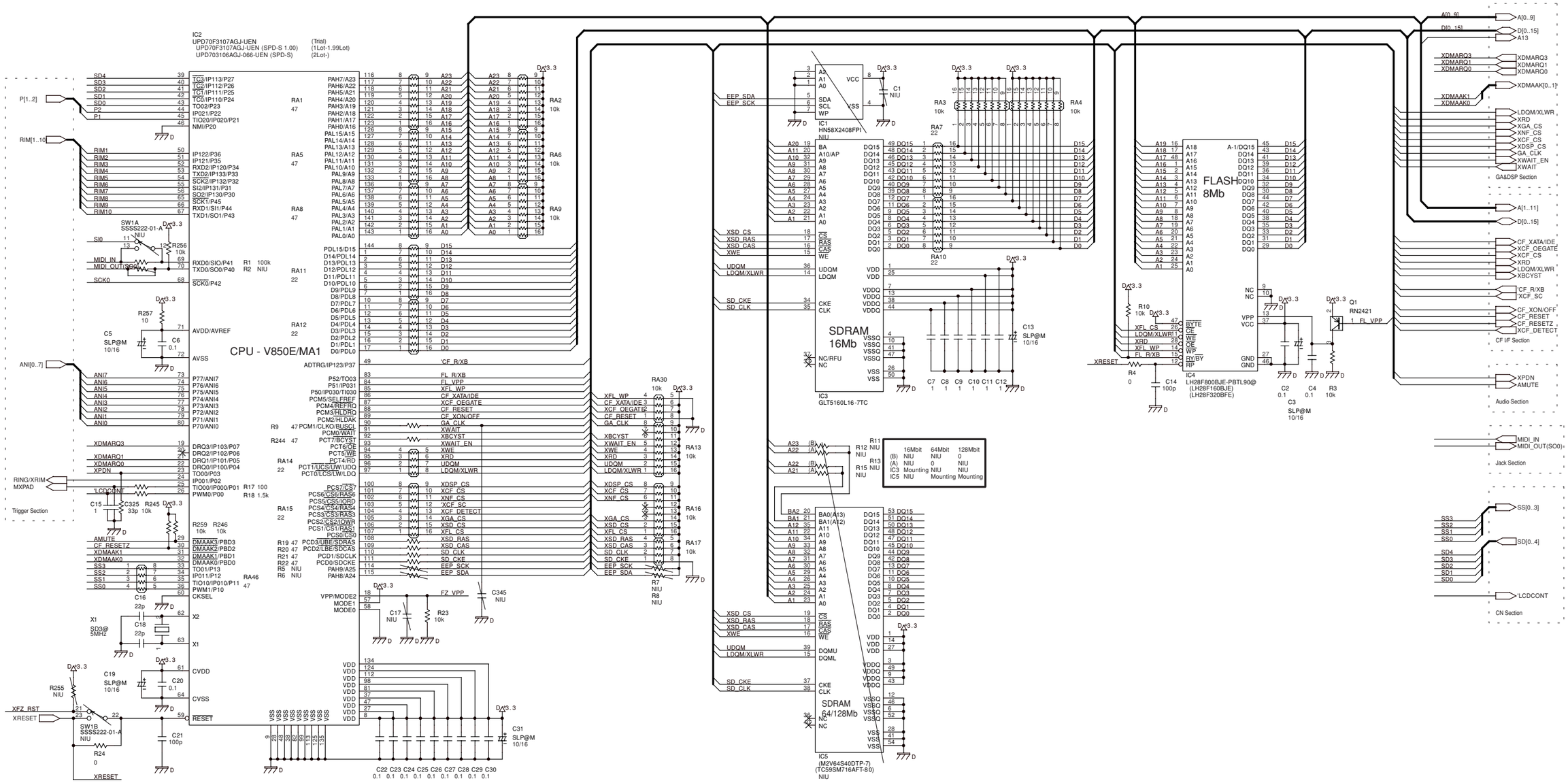
View from components side

CIRCUIT BOARD (MAIN)

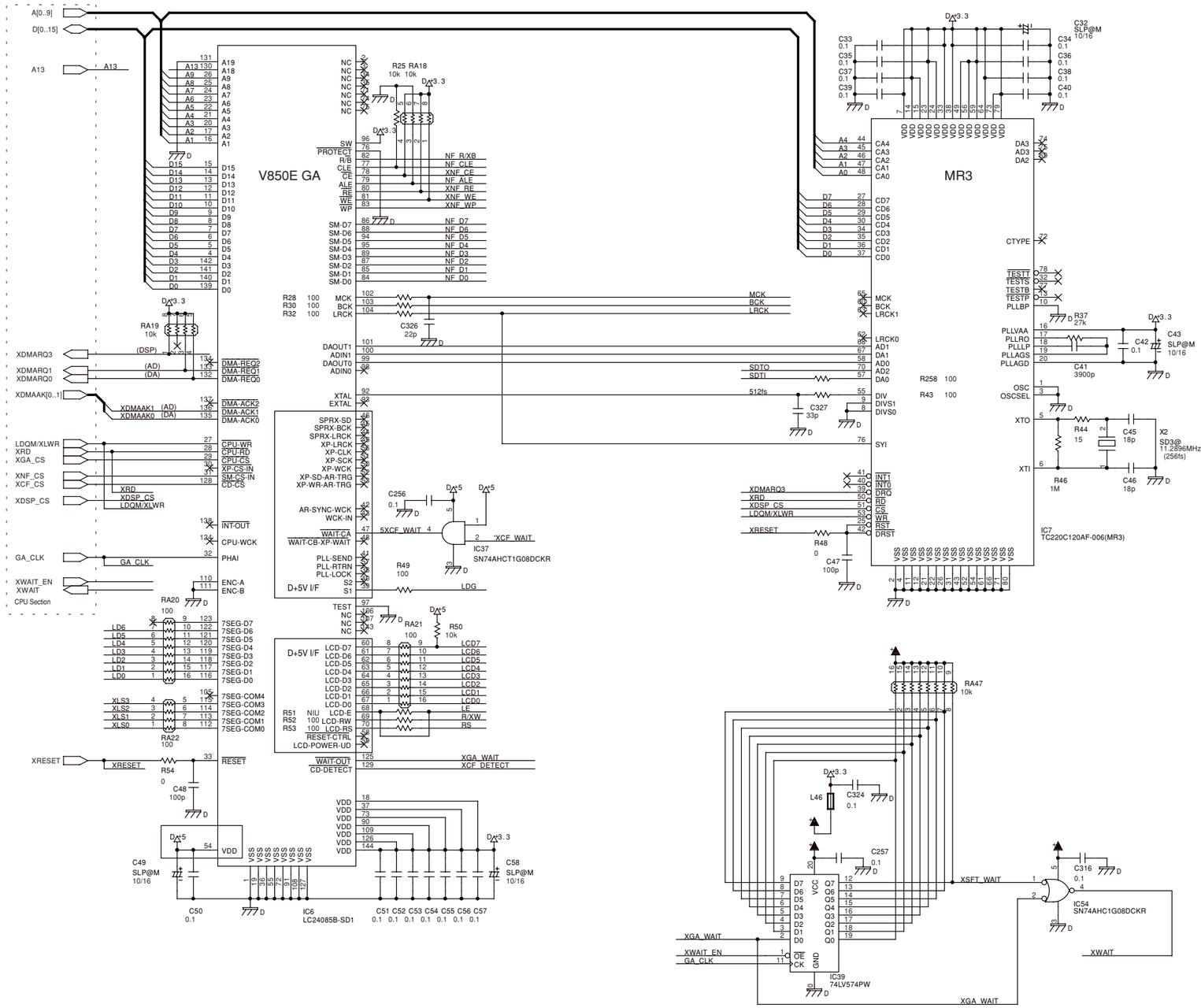


View from foil side

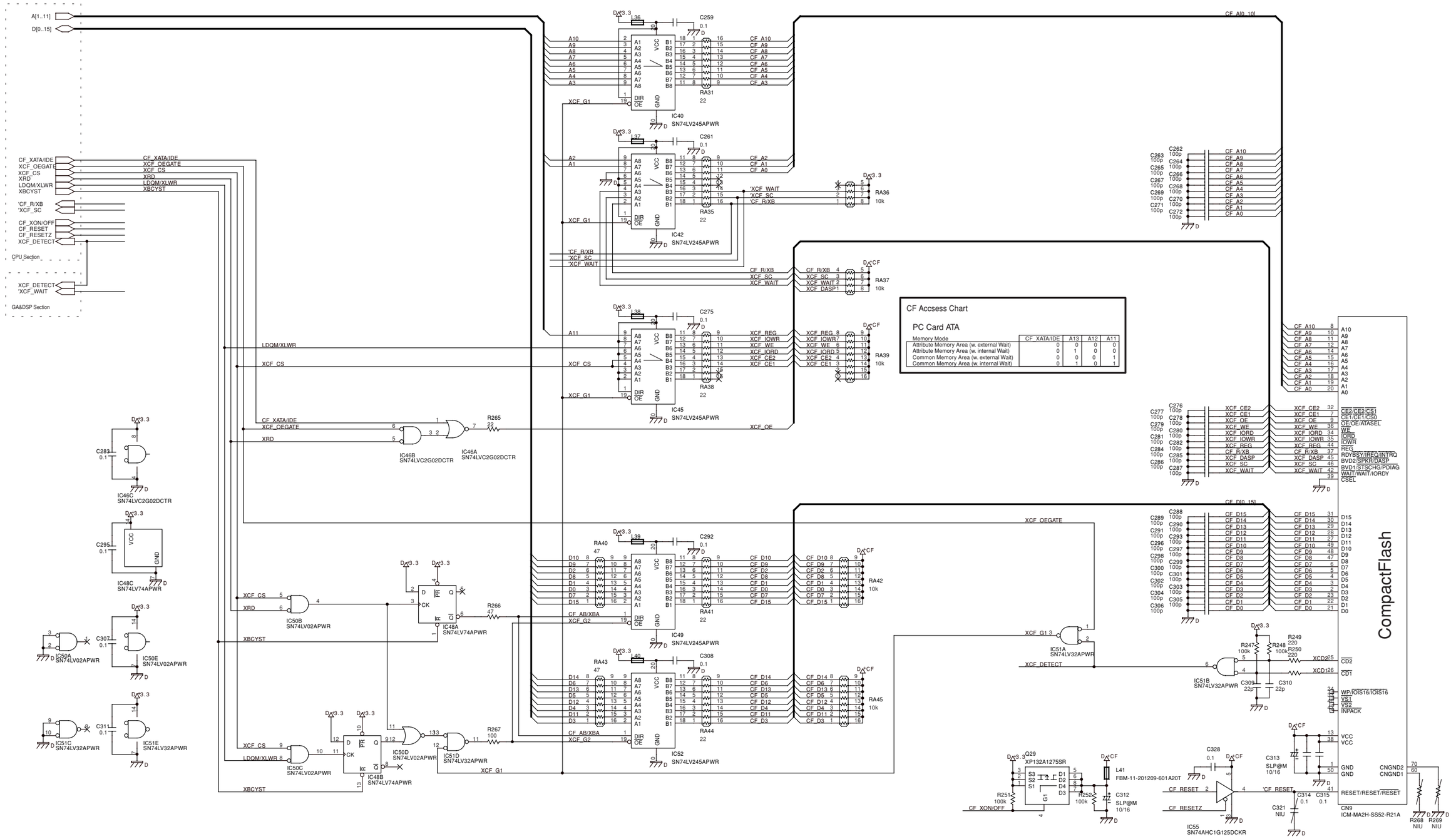
CIRCUIT DIAGRAM (MAIN 1/8)



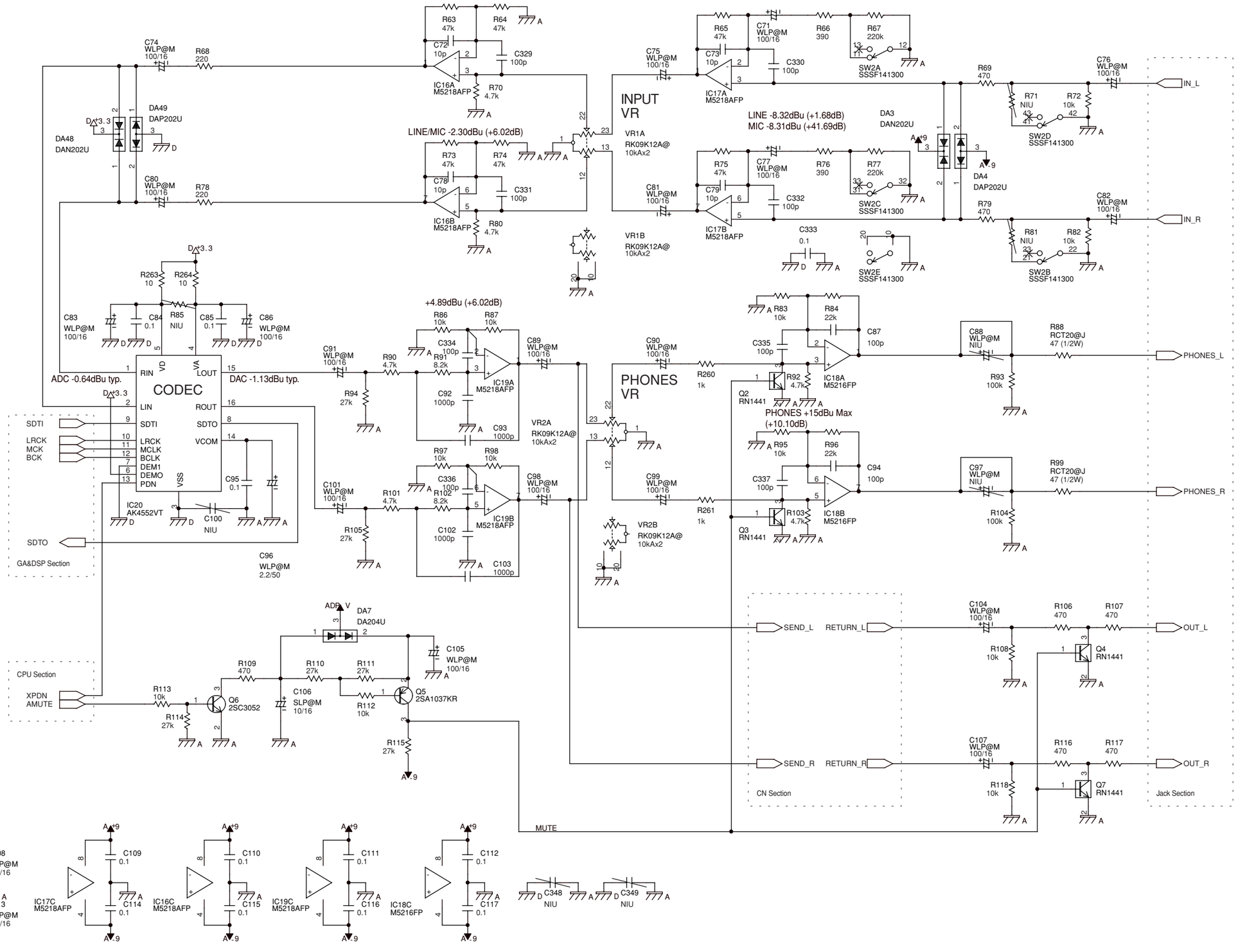
CIRCUIT DIAGRAM (MAIN 2/8)



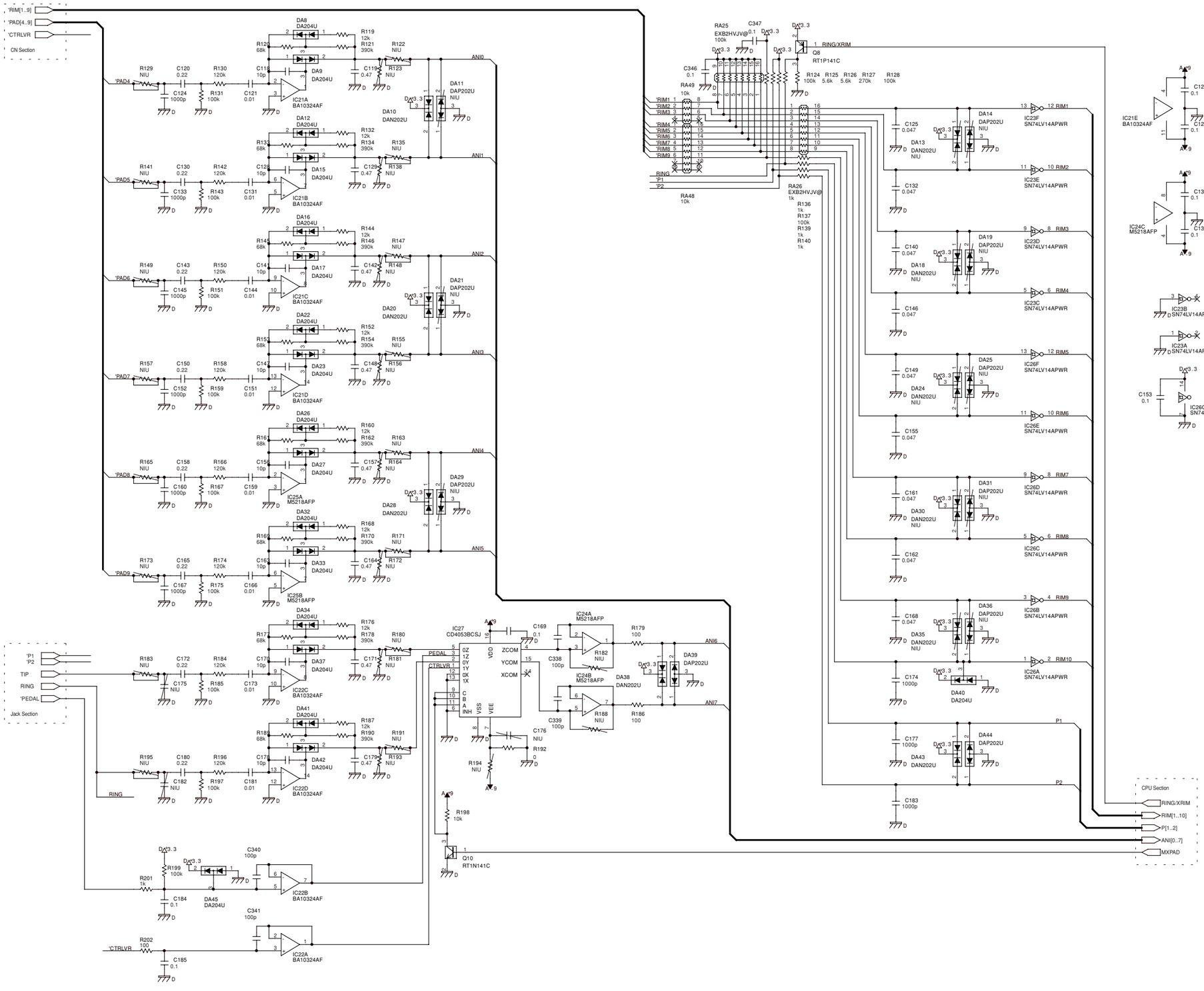
CIRCUIT DIAGRAM (MAIN 3/8)



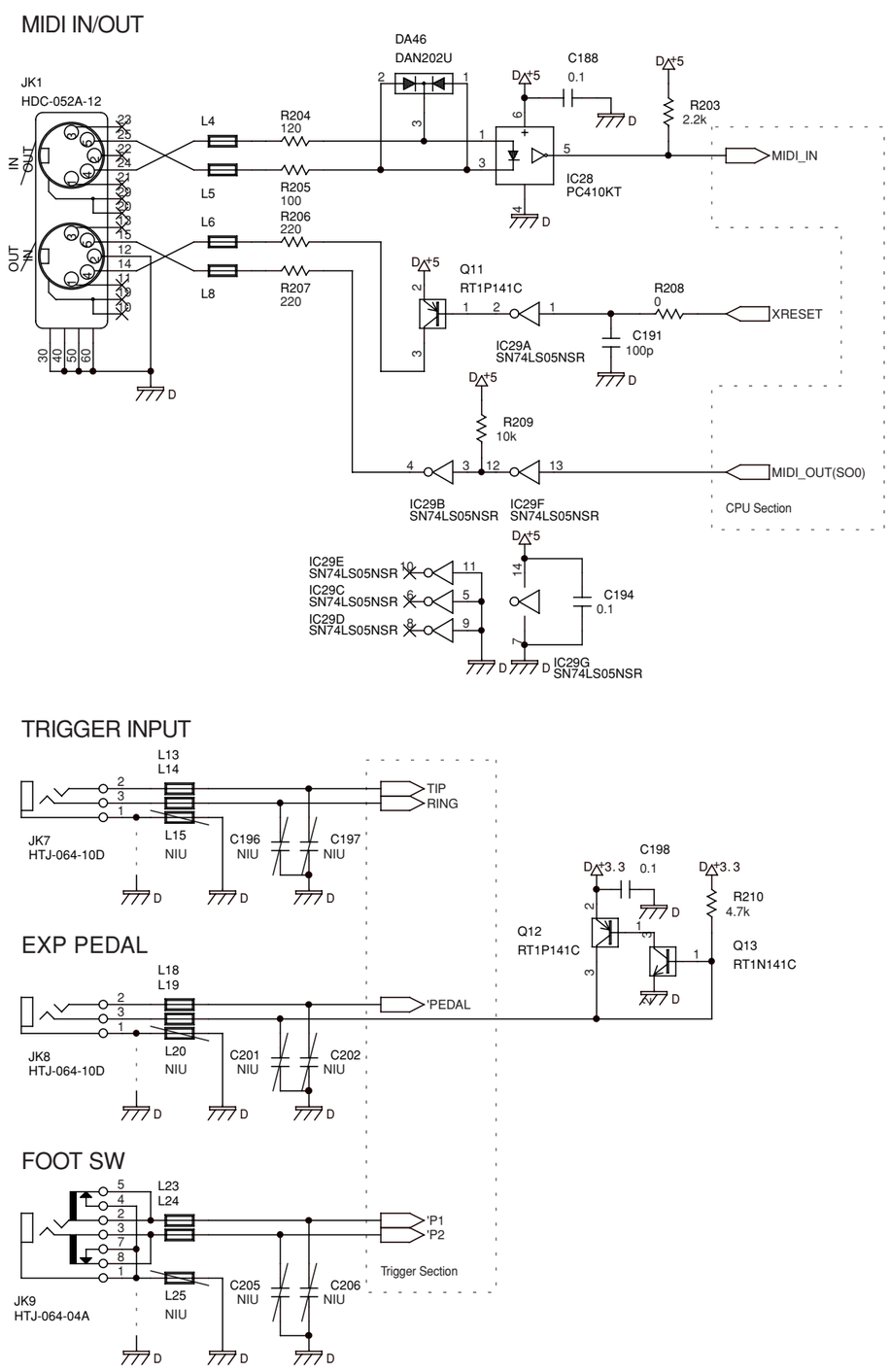
CIRCUIT DIAGRAM (MAIN 4/8)



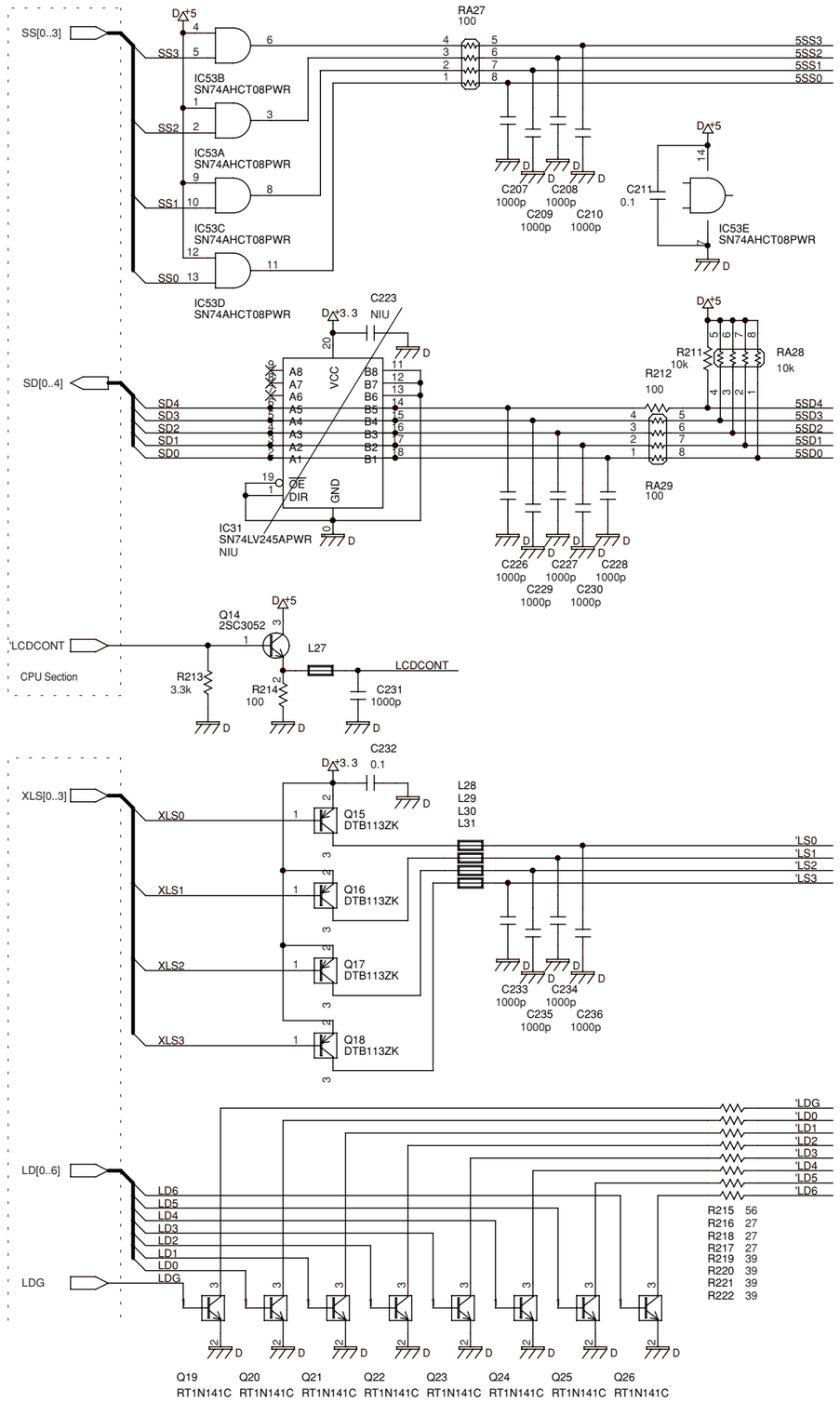
CIRCUIT DIAGRAM (MAIN 5/8)

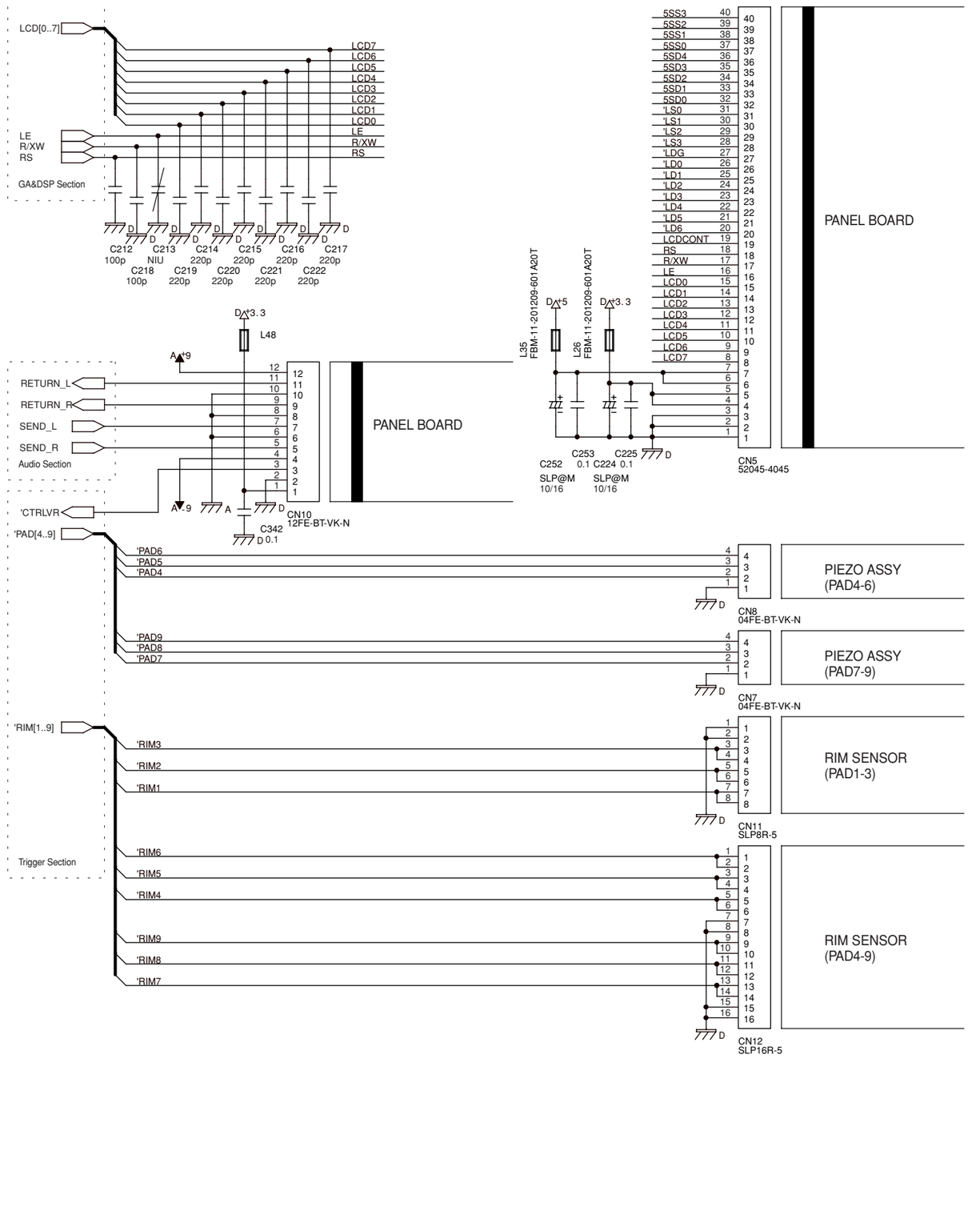


CIRCUIT DIAGRAM (MAIN 6/8)

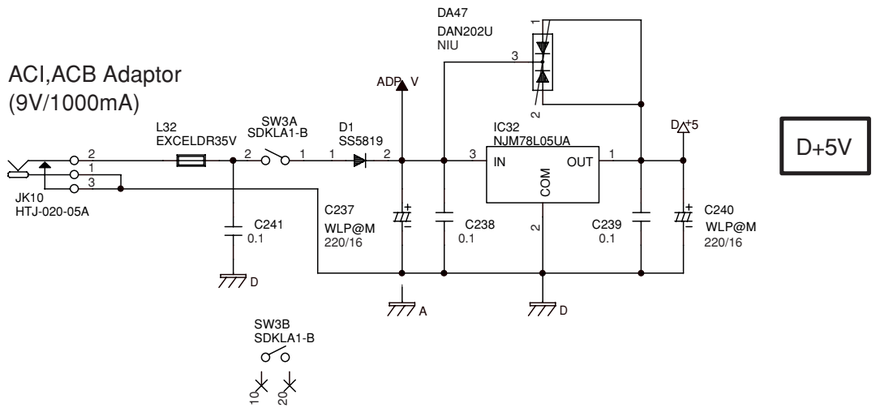


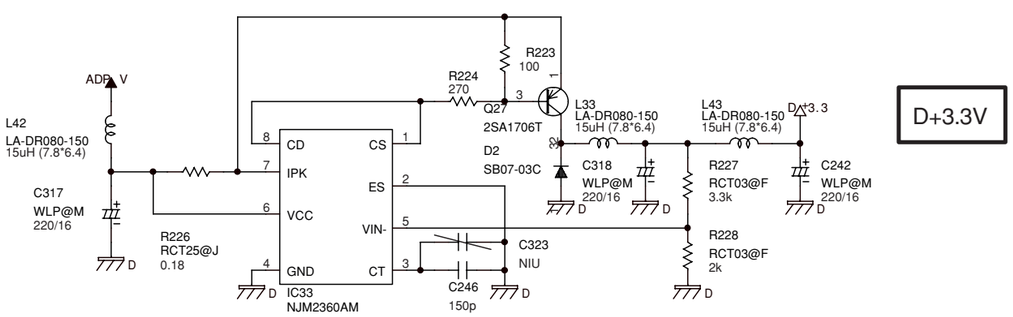
CIRCUIT DIAGRAM (MAIN 7/8)

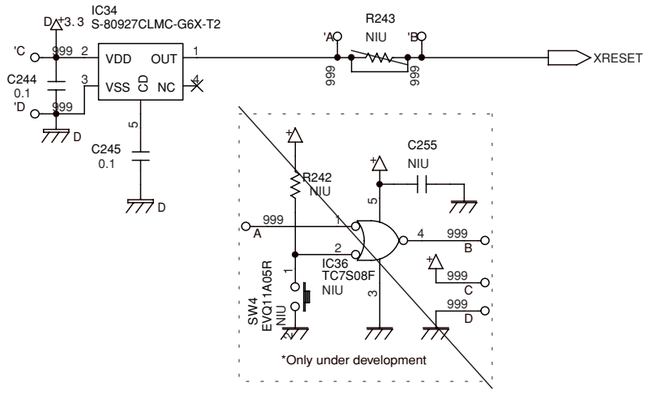


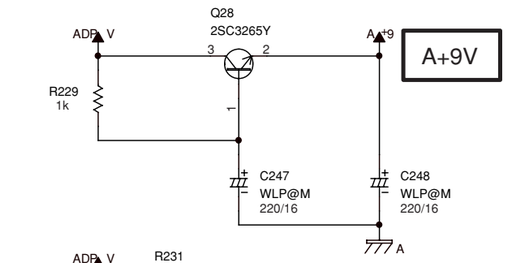


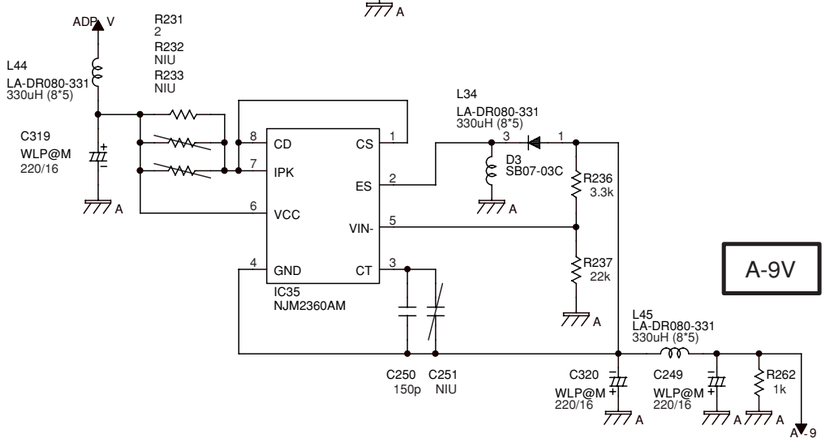
CIRCUIT DIAGRAM (MAIN 8/8)



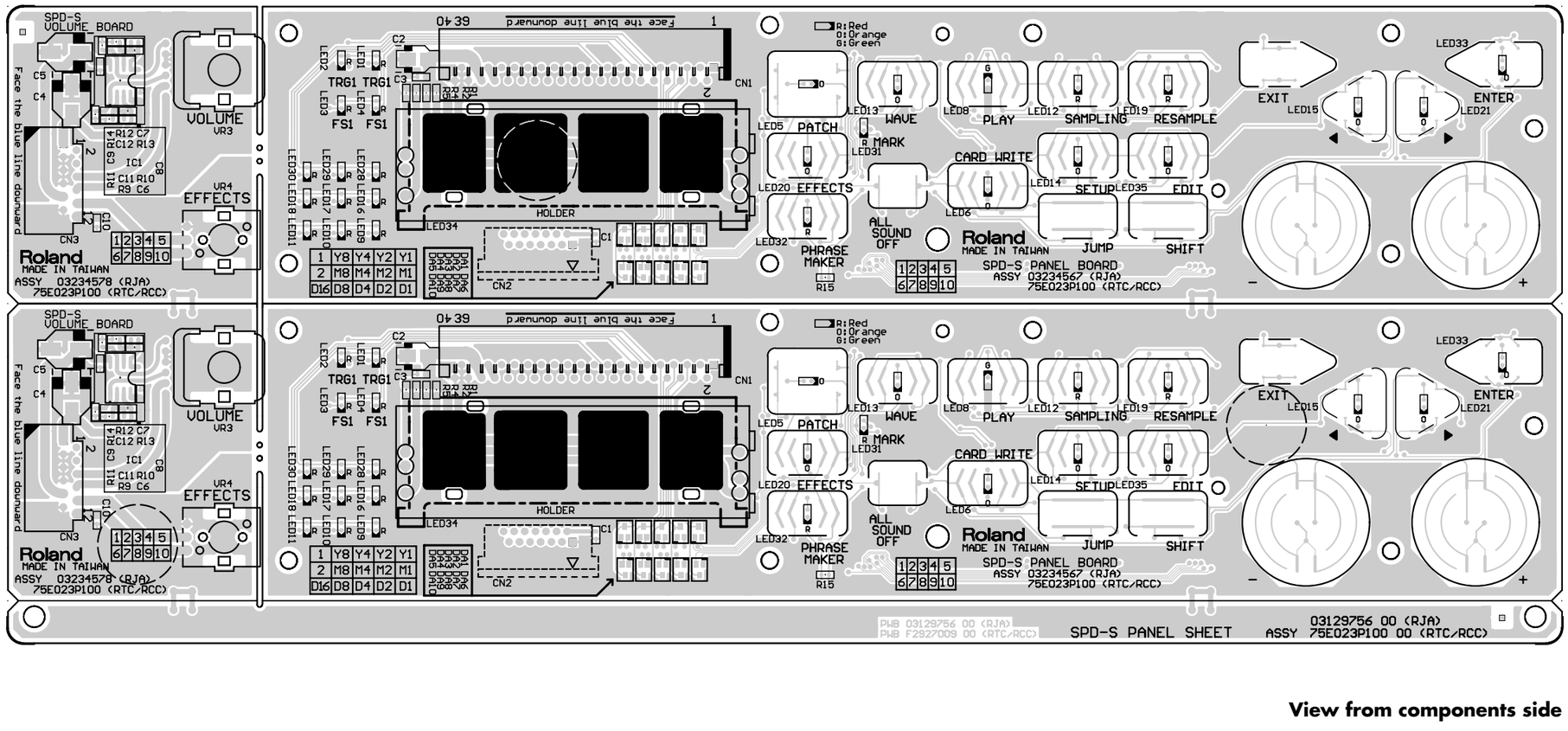






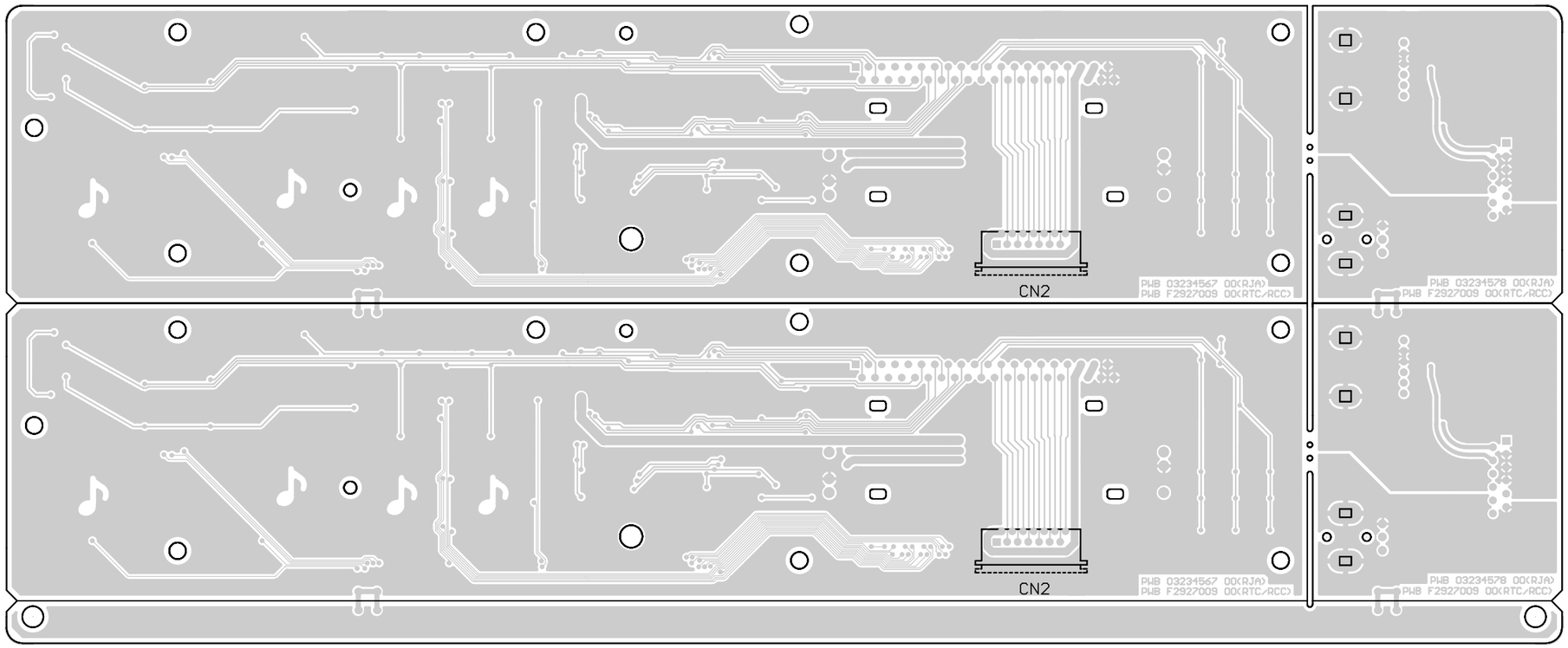


CIRCUIT BOARD (PANEL)



View from components side

CIRCUIT BOARD (PANEL)



View from foil side

CIRCUIT DIAGRAM (PANEL)