

CASIO®

Service Manual

(without price)

CDP-100

AUG. 2005



CDP-100

ELECTRONIC KEYBOARD

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SPECIFICATIONS

GENERAL

Keyboard:	88 piano keys (with touch response)
Polyphony:	32 notes, maximum
Tones:	5; with layer
Digital Effects:	Reverb (4 types), Chorus (4 types)
Built-in Tunes:	5
Pedal:	Damper
Other Functions:	<ul style="list-style-type: none">• Touch: 3 types, off• Transpose: 1 octave (F# to C to F)• Tuning: A4 = 440.0Hz ± 50 cents (adjustable)
MIDI:	16 multi-timbre receive
Input/Output:	<ul style="list-style-type: none">• Headphones: Stereo mini jack Output Impedance: 170 Output Voltage: 4.8V (RMS) MAX• Pedal : Standard jack• Power : 12V DC• MIDI (OUT) (IN)
Speakers:	(12cm x 6cm) x 2 (Output: 8.0W + 8.0W)
Power Supply:	AC Adaptor: AD-12
Power Consumption:	12V $\overline{=}$ 18W
Dimensions:	132.3 x 27.8 x 13.2 cm (52 ² / ₁₆ x 10 ¹⁵ / ₁₆ x 5 ³ / ₁₆ inch)
Weight:	Approximately 11.2 kg (24.7 lbs)

- Design and specifications are subject to change without notice.

ELECTRICAL

Load condition

Current drain with 12 V DC:

Speaker: 6 Real Load

Volume: maximum

Tone: STRINGS (Reverb:ON, Chorus:OFF)

Keys: A0 - D5, 32poly (Velocity:maximum)

Consumption Current

1500 mA ± 30 %

Consumption Current at idle

175 mA ± 20 %

Speaker output level (V_{rms} with 6 load each channel):

Tone: STRINGS

Velocity: maximum

L ch(Key=B0): 2500 mV ± 20 %

R ch(Key=B2): 2370 mV ± 20 %

Phone output level (V_{rms} with 32 load each channel):

Tone: STRINGS

Velocity: maximum

L ch(Key=B3): 170 mV ± 20 %

R ch(Key=B2): 165 mV ± 20 %

Output level (V_{rms} with 47K load each channel):

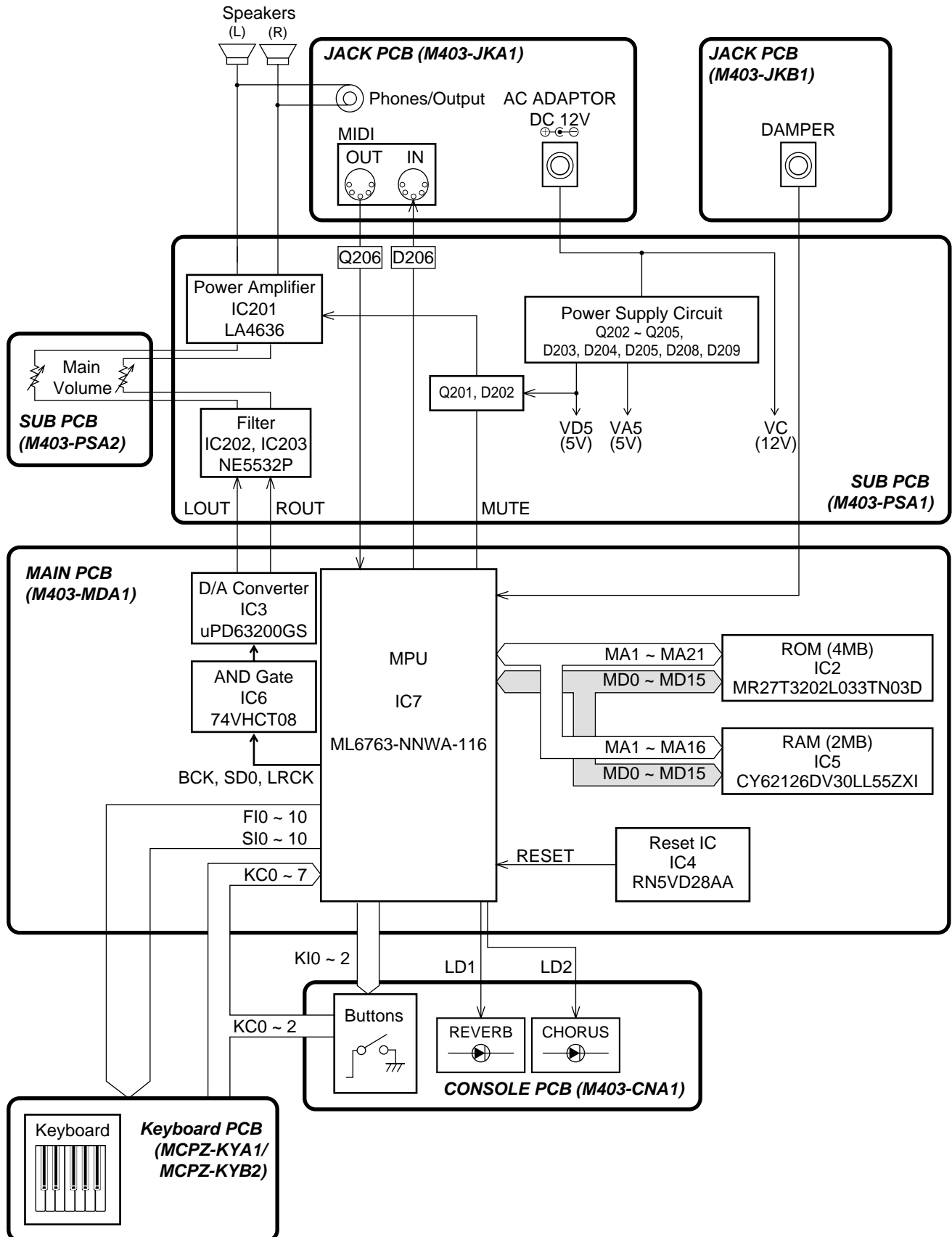
Tone: STRINGS

Velocity: maximum

L ch(Key=B3): 1050 mV ± 20 %

R ch(Key=B2): 1050 mV ± 20 %

BLOCK DIAGRAM

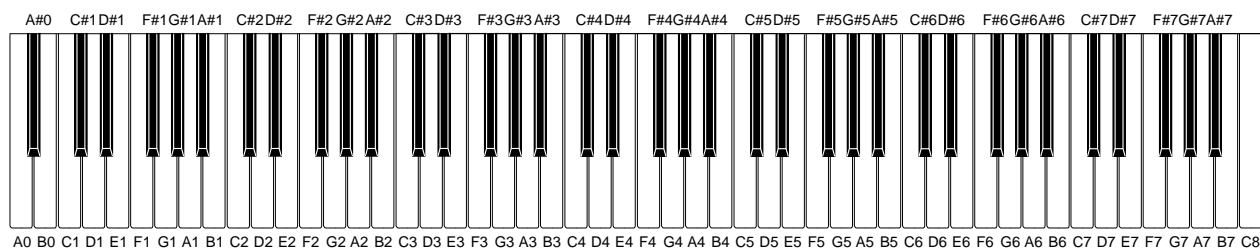


CIRCUIT DESCRIPTION

KEY MATRIX

	KC0	KC1	KC2	KC3	KC4	KC5	KC6	KC7
FI0	A0①	A0#①	B0①	C1①	C1#①	D1①	D1#①	E1①
SI0	A0②	A0#②	B0②	C1②	C1#②	D1②	D1#②	E1②
FI1	F1①	F1#①	G1①	G1#①	A1①	A1#①	B1①	C2①
SI1	F1②	F1#②	G1②	G1#②	A1②	A1#②	B1②	C2②
FI2	C2#①	D2①	D2#①	E2①	F2①	F2#①	G2①	G2#①
SI2	C2#②	D2②	D2#②	E2②	F2②	F2#②	G2②	G2#②
FI3	A2①	A2#①	B2①	C3①	C3#①	D3①	D3#①	E3①
SI3	A2②	A2#②	B2②	C3②	C3#②	D3②	D3#②	E3②
FI4	F3①	F3#①	G3①	G3#①	A3①	A3#①	B3①	C4①
SI4	F3②	F3#②	G3②	G3#②	A3②	A3#②	B3②	C4②
FI5	C4#①	D4①	D4#①	E4①	F4①	F4#①	G4①	G4#①
SI5	C4#②	D4②	D4#②	E4②	F4②	F4#②	G4②	G4#②
FI6	A4①	A4#①	B4①	C5①	C5#①	D5①	D5#①	E5①
SI6	A4②	A4#②	B4②	C5②	C5#②	D5②	D5#②	E5②
FI7	F5①	F5#①	G5①	G5#①	A5①	A5#①	B5①	C6①
SI7	F5②	F5#②	G5②	G5#②	A5②	A5#②	B5②	C6②
FI8	C6#①	D6①	D6#①	E6①	F6①	F6#①	G6①	G6#①
SI8	C6#②	D6②	D6#②	E6②	F6②	F6#②	G6②	G6#②
FI9	A6①	A6#①	B6①	C7①	C7#①	D7①	D7#①	E7①
SI9	A6②	A6#②	B6②	C7②	C7#②	D7②	D7#②	E7②
FI10	F7①	F7#①	G7①	G7#①	A7①	A7#①	B7①	C8①
SI10	F7②	F7#②	G7②	G7#②	A7②	A7#②	B7②	C8②

NOMENCLATURE OF KEYS

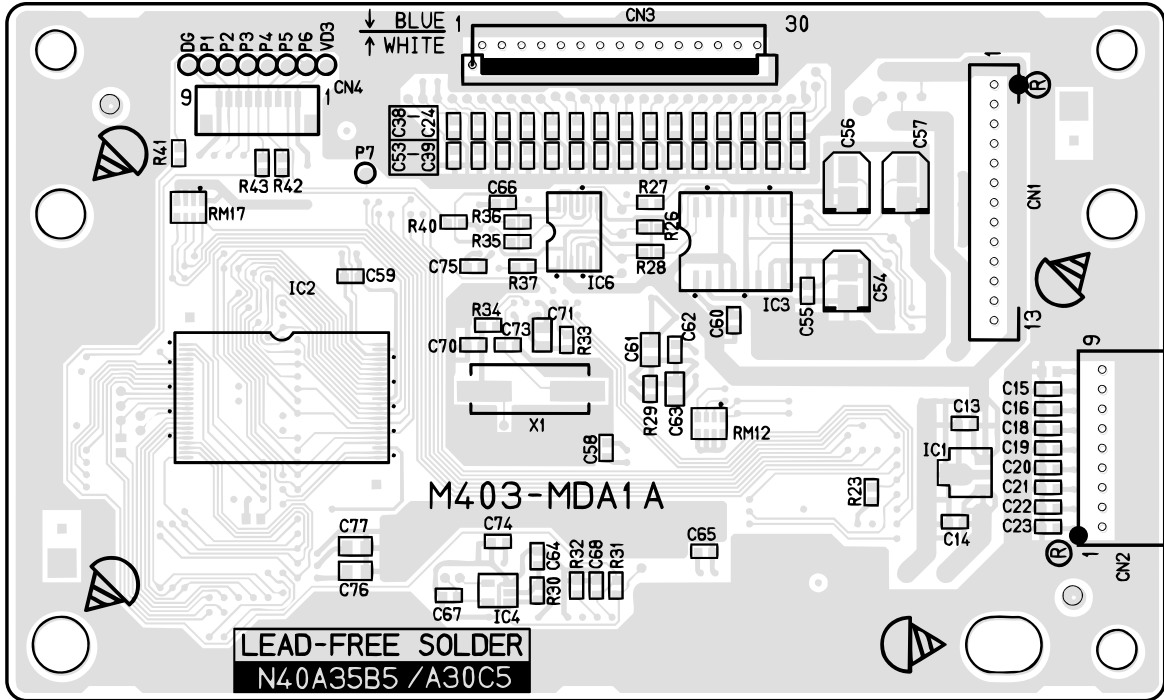


BUTTON MATRIX

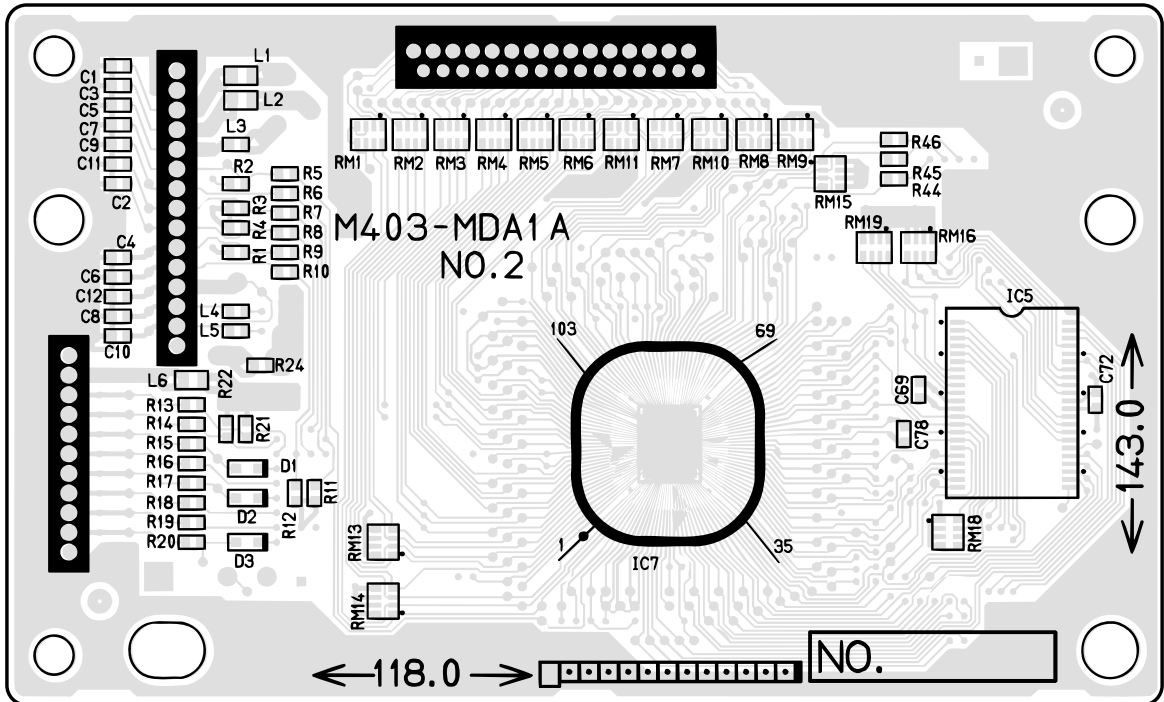
	KC0	KC1	KC2
KI0	FUNCTION	G.PIANO 1	STRINGS
KI1	DEMO	E.PIANO	HAPPSI- CHORD
KI2		G.PIANO 2	REVERB/ CHORUS

PRINTED CIRCUIT BOARDS

MAIN PCB M403-MDA1

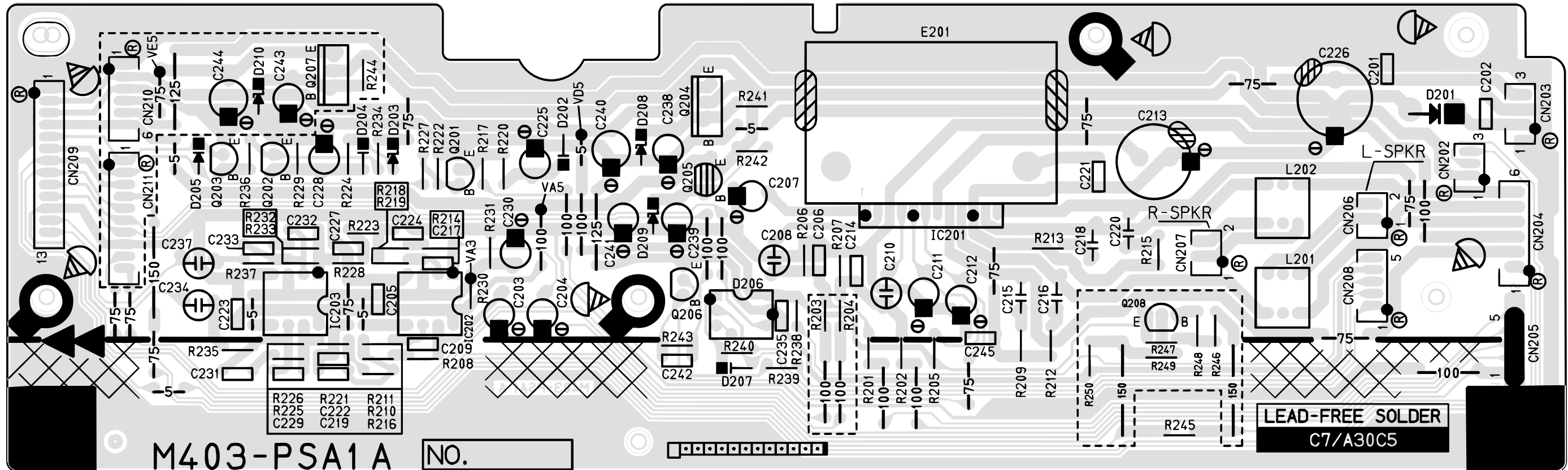


Top View



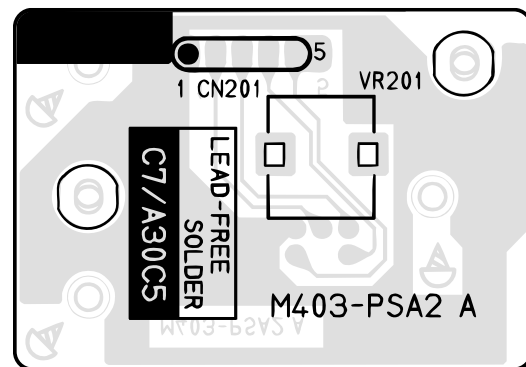
Bottom View

SUB PCB M403-PSA1



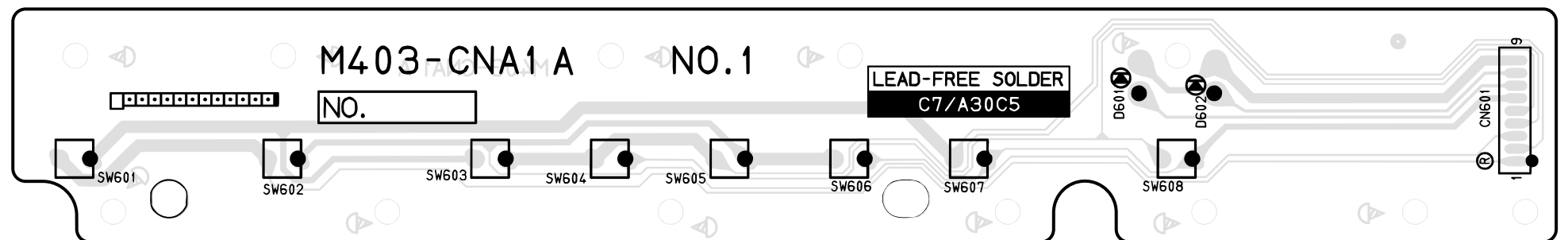
Top View

SUB PCB M403-PSA2



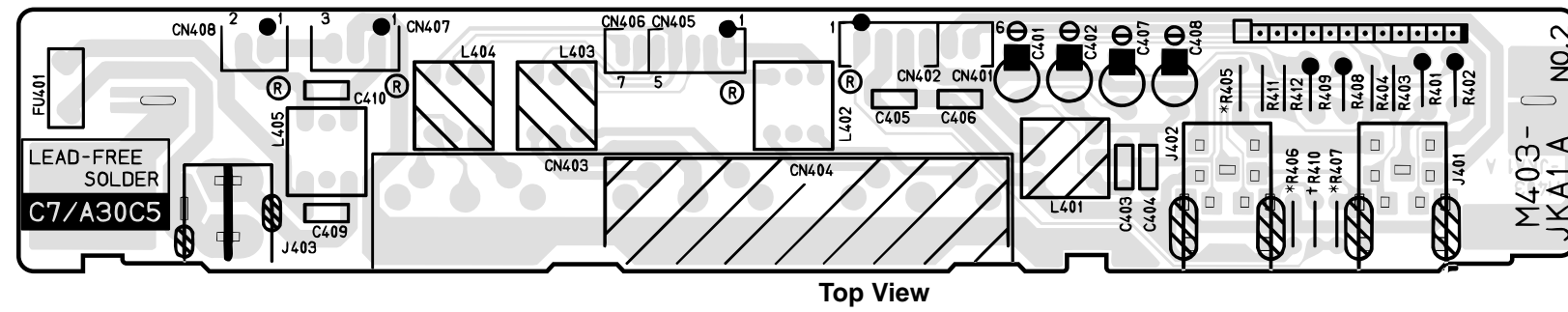
Top View

CONSOLE PCB M403-CNA1

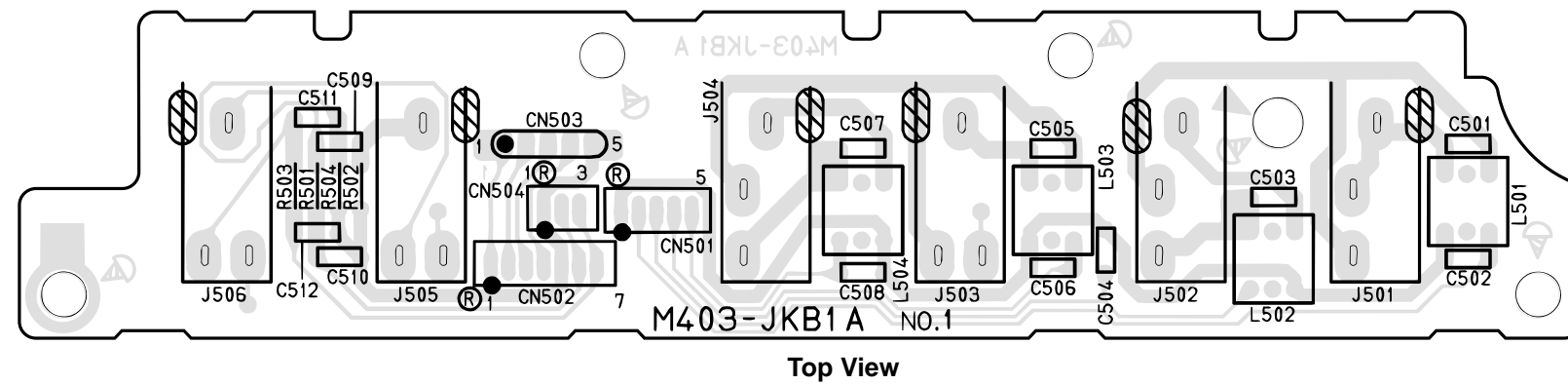


Top View

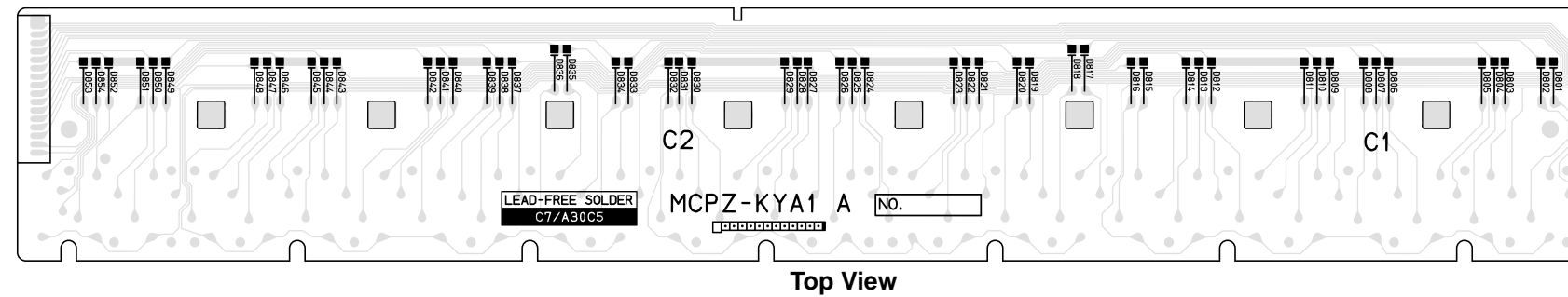
JACK PCB M403-JKA1



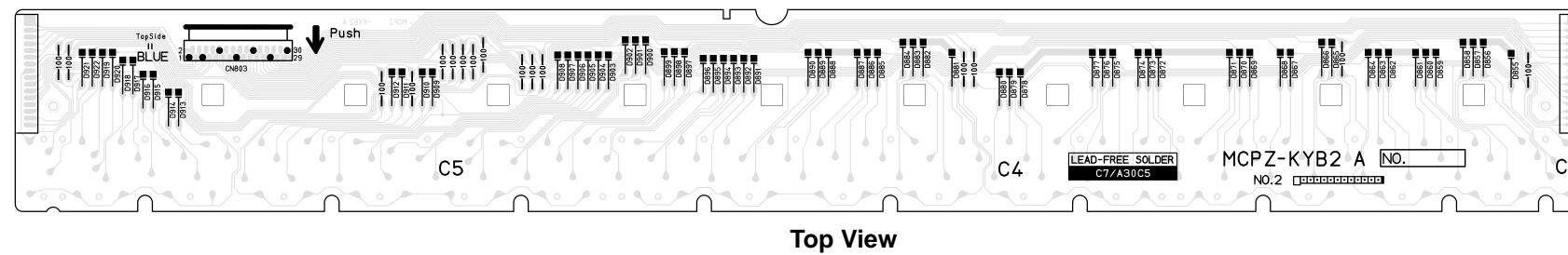
JACK PCB M403-JKB1



KEYBOARD PCB MCPZ-KYA1

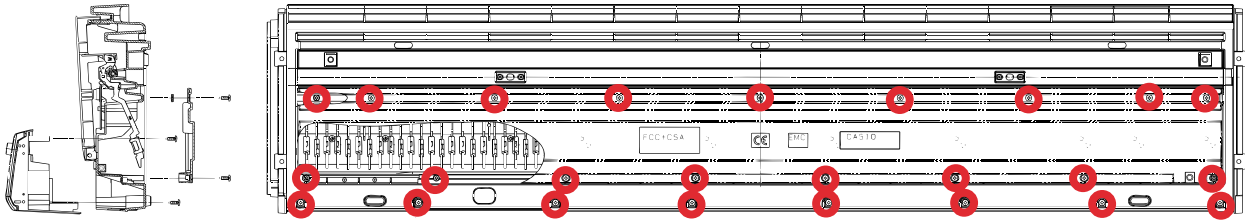


KEYBOARD PCB MCPZ-KYB2

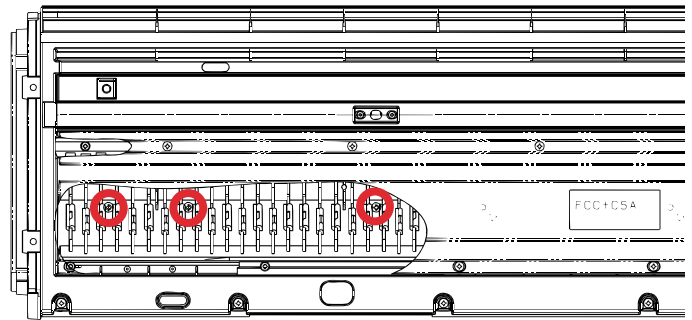


DISASSEMBLY

1. Remove 25 screws on the bottom.

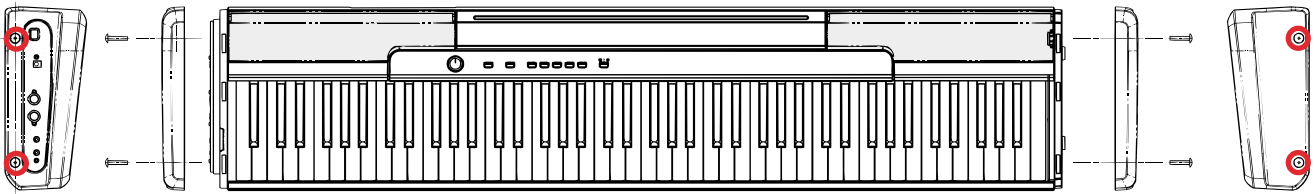


2. Remove the lower panel and then 10 screws.

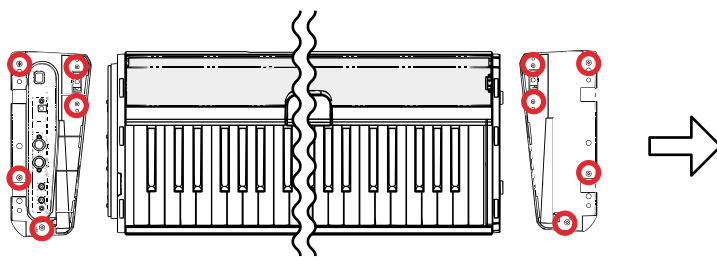


3. Position the main unit, so the main unit faces upward.

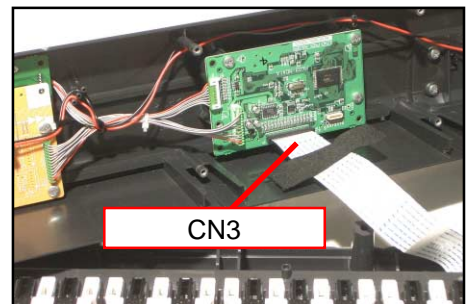
4. Remove 2 screws on the right side and 2 screws on the left side of the unit, and then remove side covers on both sides.



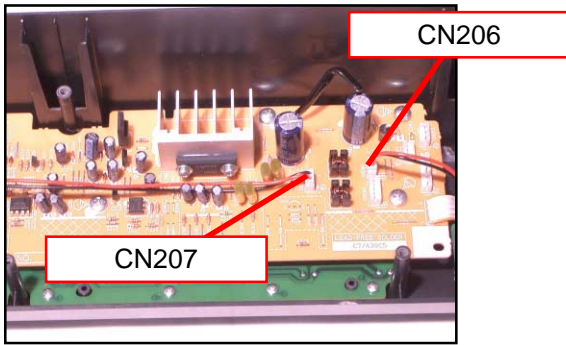
5. Remove 10 screws on both sides, and then lift the front panel up.



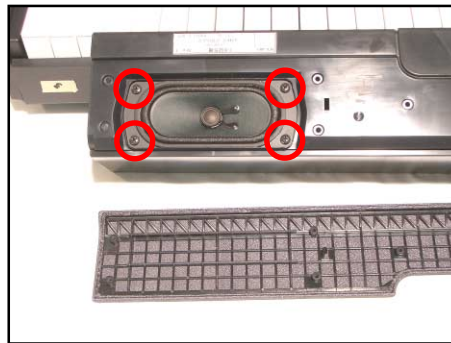
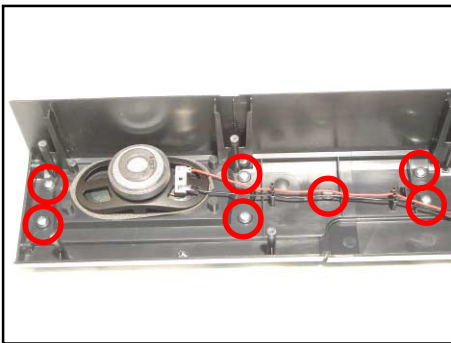
6. Remove the connector then the front panel.



- Removing the speaker
 7. Remove 2 connectors.

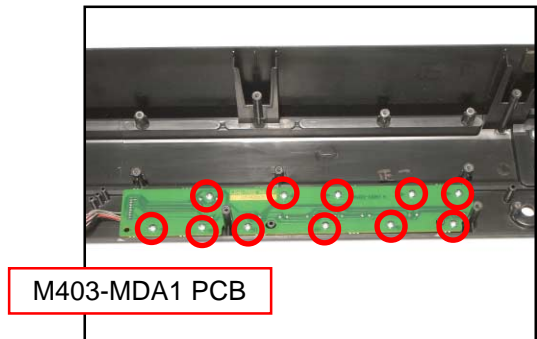
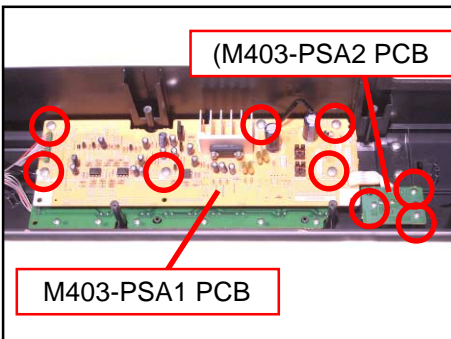
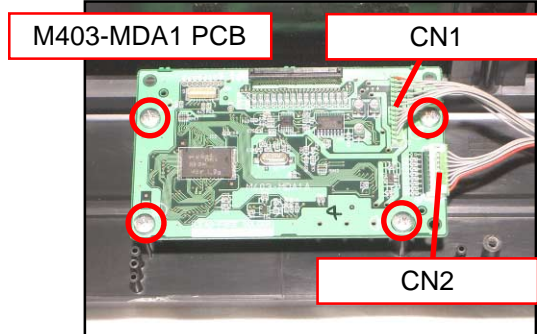


8. Remove 7 screws then the speaker cover.
 - * Take the same procedure for the speaker on the right side.
9. Remove 4 screws then the speaker.
 - * Take the same procedure for the speaker on the right side.



- Removing the PCBs (M403-MDA1, M403-PSA1, M403-PSA2, and M403-CNA1).

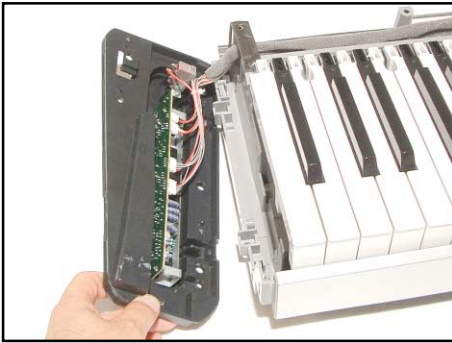
10. Remove the volume knob.
11. Remove 2 connector and 4 screws then the PCB (M403-MDA1).
12. Remove 6 screws and then the PCB (M403-PSA1).
12. Remove 3 screws and then the PCB (M403-PSA2).
13. Remove 11 screws and then the PCB (M403-CNA1).



■ Removing the side case, the PCB (M403-JKA1) and the power switch.

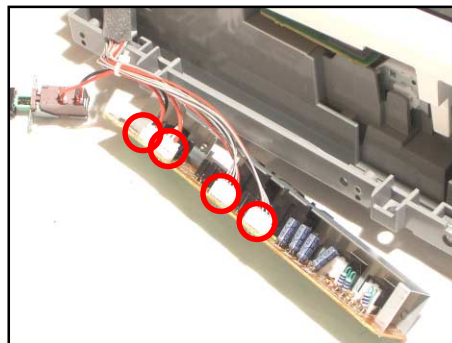
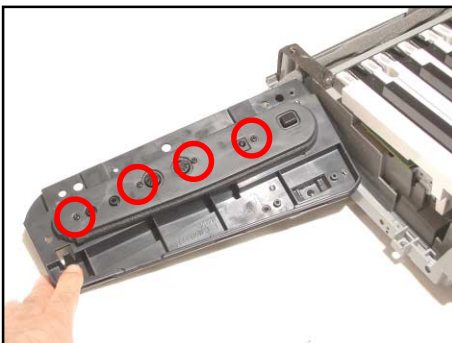
14. Remove the side case on the right.

15. Remove the side case on the left.

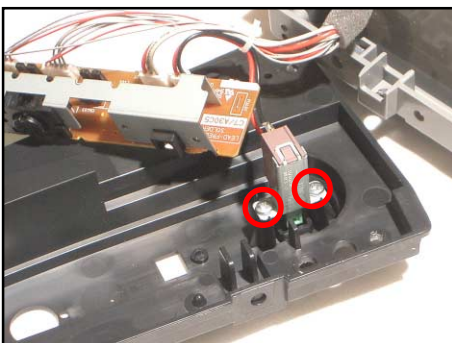


16. Remove 4 screws.

17. Remove 4 connectors and then the PCB (M403-JKA1).

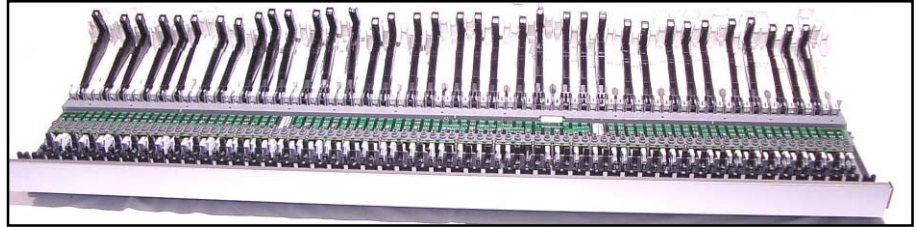


18. Remove 2 screws and then the power switch.



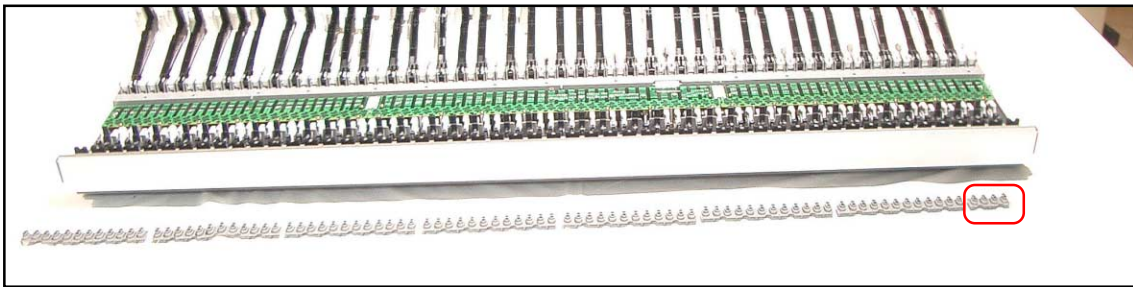
■ Removing the key board.

19. Remove the keys from the hammers.

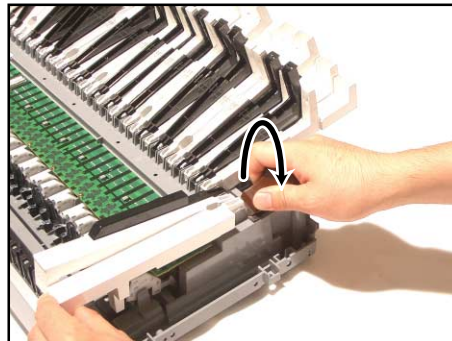
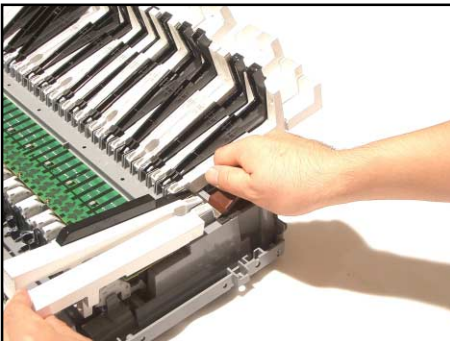


20. Remove the rubber keys.

* One of the keys has the different length from others. Be careful while reassembling.



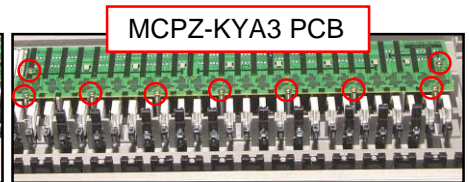
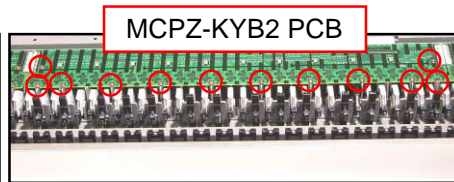
21. Remove the keys.



22. Remove 9 screws then the PCB (MCPZ-KYA1).

23. Remove 12 screws then the PCB (MCPZ-KYB2).

24. Remove 9 screws then the PCB (MCPZ-KYA3).



DIAGNOSTIC PROGRAM

■ Initial Setup

1. Connect an AC adaptor.
2. Connect a Damper pedal.
3. "Main" volume: MAX.

NOTE: If there is no pedal or MIDI cable, pedal or MIDI check can be skipped.

■ How to start diagnostic program

1. Press the "POWER" button while pressing the "REVERB/CHORUS KEY" buttons.
2. Release the "POWER" button first while still pressing the "REVERB/CHORUS KEY" buttons.
All the LEDs light and the test mode boots.

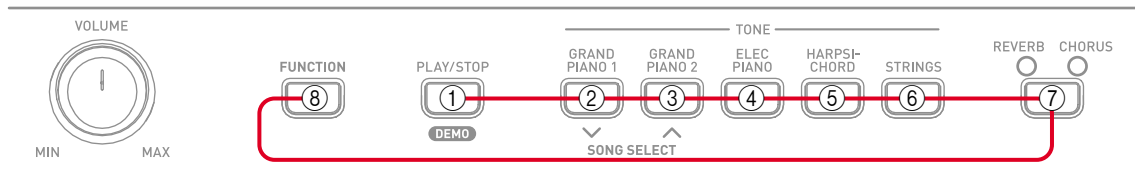
■ Diagnostic program

1. Automatic Test

- ① RAM CHECK
* When an error is found in RAM, "REVERB" LED lights.
- ② ROM CHECK
* When an error is found in ROM, "CHORUS" LED lights.
- ③ LED CHECK
* "REVERB" LED and "CHORUS" LED light alternately.

2. BUTTON check

- ① Press "FUNCTION" button.
*The confirmation chords of C4, E4 and G4 sound.
- ② Press the buttons in the following order.
* The confirmation tone of C6 sounds.
* NG tone sounds when an error is found in the buttons or when the buttons are pressed in a wrong order.
* This check cannot be aborted.



3. Pedal check (If there is no Pedal, press FUNCTION button to skip to the headphone check)

- ① Press "FUNCTION" button.
*The confirmation chords of C4, E4 and G4 sound.
- ② Press the "DAMPER" pedal.
* The confirmation tone of C4 sounds and "REVERB" LED lights.

4. Headphone check

- ① Press "FUNCTION" button.
*The confirmation chord of C4, E4 and G4 sounds.
- ② Connect the headphone.
* "CHORUS" LED lights.
- ③ Remove the headphone.
* "CHORUS" LED is unlit.
- ④ Connect the tuning meter to the Headphone jack.
* "CHORUS" LED lights.
- ⑤ Press A4 key.
* Make sure that the tuning meter is set at 440 ± 2 cents.
- ⑥ Remove the tuning meter from the Headphone jack.
* "CHORUS" LED is unlit.

5. MIDI IN/OUT check (If there is no MIDI cable, press FUNCTION button to skip to ROM version check)

- ① Press "FUNCTION" button.
*The confirmation chords of C4, E4 and G4 sound.
- ② Connect MIDI IN and MIDI OUT terminals with a MIDI cable.
- ③ Press "A4 KEY" button.
*The confirmation chords of C4, E4 and G4 sound.

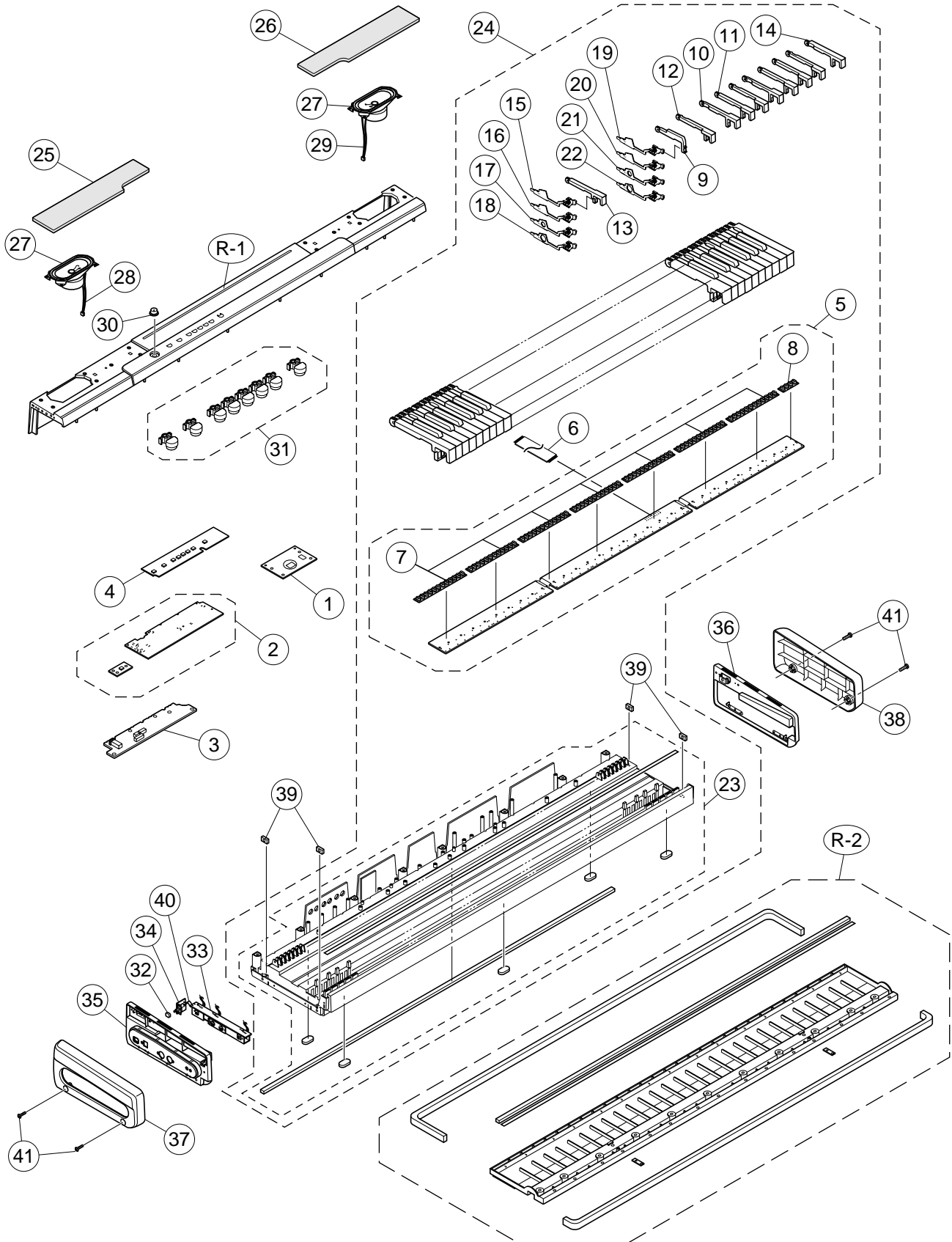
6. ROM version check

- ① ROM Version is indicated by "REVERB" and "CHORUS" LEDs.
ROM Version: 1 = REVERB: OFF / CHORUS: ON
ROM Version: 2 = REVERB: OFF / CHORUS: FLASH
ROM Version: 3 = REVERB: ON / CHORUS: OFF
ROM Version: 4 = REVERB: ON / CHORUS: ON
ROM Version: 5 = REVERB: ON / CHORUS: FLASH
ROM Version: 6 = REVERB: FLASH / CHORUS: OFF
ROM Version: 7 = REVERB: FLASH / CHORUS: ON
ROM Version: 8 = REVERB: FLASH / CHORUS: FLASH

7. The diagnostic program ends.

- ① Press "FUNCTION" button.
*The confirmation chords of C4, E4 and G4 sound twice.
* "REVERB" LED lights.

EXPLODED VIEW



PARTS LIST

CDP-100

Notes: This parts list does not include the cosmetic parts, which parts are marked with item No. "R-X" in the exploded view.

Contact our spare parts department if you need these parts for refurbish.

1. Prices and specifications are subject to change without prior notice.
2. As for spare parts order and supply, refer to the "GUIDEBOOK for Spare parts Supply", published seperately.
3. The numbers in item column correspond to the same numbers in drawing.

N	Item	Parts code	Parts name	Specification	QTY	Price Code	R	Remarks
Main PCB								
N	1	10208255	PCB ASSY/MAIN	TK-RJM506084*001	1	CX	A	
	D1,2,3	23901820	DIODE	1SS355TE-17	3	AA	C	
	IC4	10159723	IC	RN5VD28AA-TR-FA	1	AC	X	
	IC6	10197802	IC	TC74VHCT08AFT(EL.K	1	AE	X	
	IC3	10195928	IC	UPD63200GS-E1-A	1	AX	X	
	IC5	10199777	MEMORY	CY62126DV30LL55ZXI	1	AV	X	
	IC2	10209499	MEMORY	MR27T3202L033TN03D	1	AZ	X	
N	X1	10211946	RESONATOR	SSM1200000F17F5FZ8	1	AC	C	
Sub PCB PS1								
N	2	10208256	PCB ASSY/PSA	TK-RJM506086*001	1	CC	C	
	D201	10209003	DIODE	1N5822-F100	1	AB	X	
	D206	10201501	PHOTO COUPLER	PC900V0NSZXF	1	AG	X	
	IC201	10203081	IC	LA4636-E	1	AV	X	
	IC202,203	10117559	IC	NE5532P	2	AE	X	
	D205	10209014	DIODE	1S4(26MM)	1	AA	X	
	D202,204,207	10079928	DIODE	1SS133TA	3	AA	X	
	D208.209	10085189	DIODE	DZ5.6BSBTA	2	AA	X	
	D203	10132124	DIODE	DZ8.2BSBTA	1	AA	X	
	Q202	10025042	TRANSISTOR	2SD1468STPR	1	AA	X	
N	Q204	10206676	TRANSISTOR	KTC2026-Y-U/P	1	AB	X	
N	Q205	10209015	TRANSISTOR	KTD863-GR-AT/P	1	AA	X	
	Q201,202,203,206	10206673	TRANSISTOR	KTC3199-GR-AT/P	4	AA	X	
	VR201	10122556	VARIABLE R	RK09K12C0D1A	1	AL		
Jack PCB								
N	3	10208301	PCB ASSY/JKB	TK-RJM506092*001	1	AL	C	
N	J506	10206815	JACK	JY-6314*01-030	1	AA	X	
Console PCB								
N	4	10208257	PCB ASSY/CAN	TK-RJM506088*001	1	AT	C	
N		10208431	HARNESS	DA-9P-14-M403	1	AE	X	
	D601,602	10171338	LED	LT2P71-81-M1-S06	2	AA	X	
	SW601-608	10096077	SWITCH/TACT	SKQNADD010	8	AA	X	
Key board assy								
N	5	10208264	PCB ASSY/KEY	TK-RJM506061*001	1	CF	C	
N	6	37195442	CABLE	N30315B1B05-UL2896	1	AO	C	
	7	10133656	RUBBER/CONTACT	RJM502920-001V01	7	AK	B	
	8	10133635	RUBBER/CONTACT	RJM502921-001V01	1	AG	B	
	9	10135317	BLACK KEY	RJM502797-001V01	36	AC	C	
	10	10135426	WHITE KEY/CEGB	RJM502862-001V01	7	AT	C	
	11	10135427	WHITE KEY/DFA	RJM502863-001V01	7	AQ	C	
	12	10135428	WHITE KEY/B	RJM502794-001V01	1	AG	C	
	13	10135429	WHITE KEY/SA	RJM502795-001V01	1	AJ	C	
	14	10135430	WHITE KEY/SC	RJM502796-001V01	1	AJ	C	
N	15	10208265	HAMMER ASSY/W1	TK-RJM506035*001	13	AF	C	
N	16	10208266	HAMMER ASSY/W2	TK-RJM506036*001	13	AF	C	
N	17	10208267	HAMMER ASSY/W3	TK-RJM506037*001	13	AF	C	
N	18	10208269	HAMMER ASSY/W4	TK-RJM506038*001	13	AF	C	
N	19	10208275	HAMMER ASSY/B1	TK-RJM506039*001	9	AE	C	
N	20	10208281	HAMMER ASSY/B2	TK-RJM506040*001	9	AE	C	

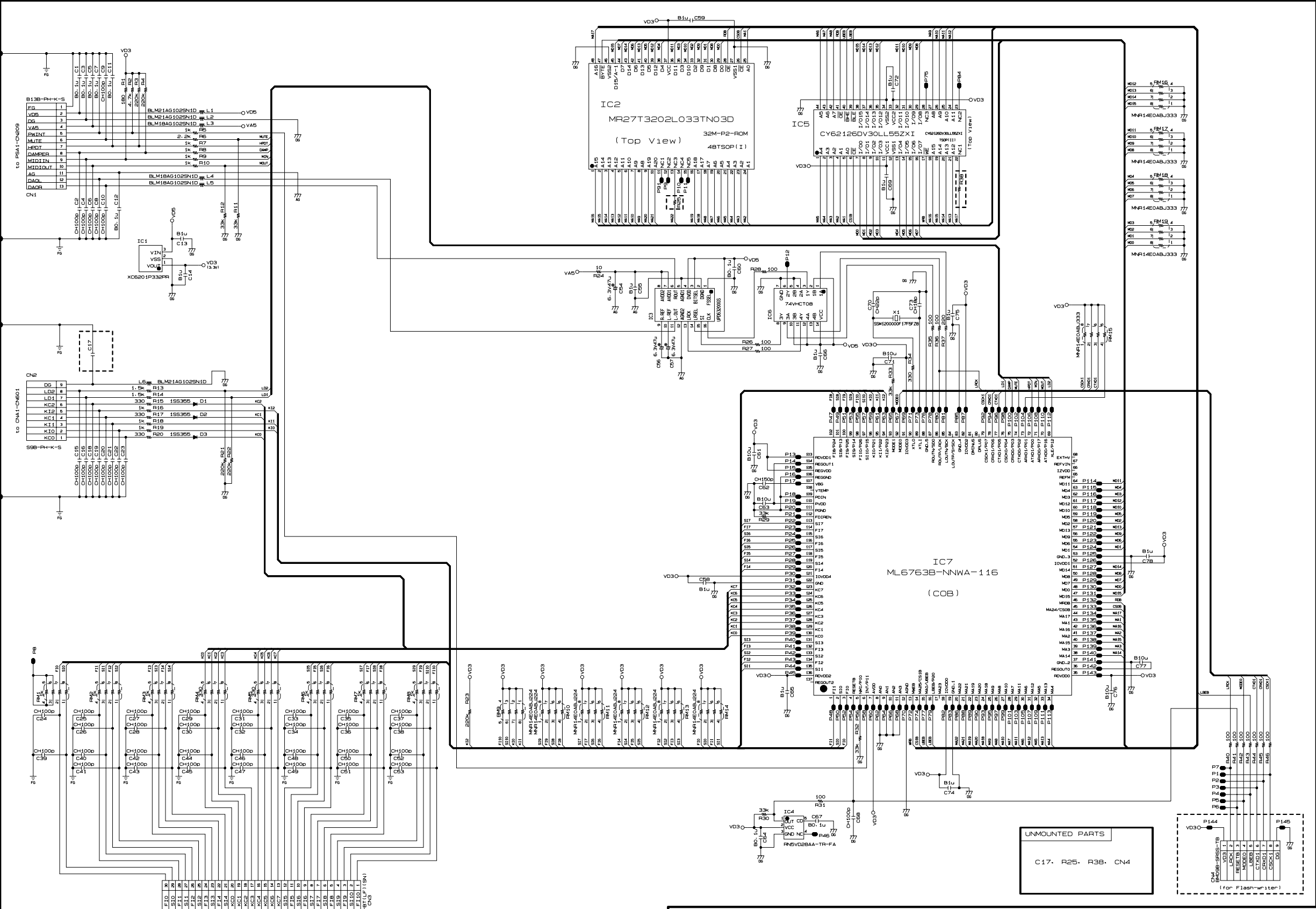
Notes : Q- Quantity per unit
R- Rank

N	Item	Parts code	Parts name	Specification	QTY	Price Code	R	Remarks
N	21	10208286	HAMMER ASSY/B3	TK-RJM506041*001	9	AE	C	
N	22	10208290	HAMMER ASSY/B4	TK-RJM506042*001	9	AE	C	
N	23	10208263	CASE ASSY/MIDDLE	TK-RJM506053*003	1	CY	C	
N	24	10208262	KEY ASSY	TK-RJM506029*003	1	DW	B	
	D801-854,855-922, 923-976	10079928	DIODE	1SS133TA	176	AA	X	
Case unit								
N	25	10208258	COVER/SPEAKER/L	TK-RJM506062*001	1	AV	C	
N	26	10208259	COVER/SPEAKER/R	TK-RJM506063*001	1	AV	C	
	27	10214565	SPEAKER	C0612J52	2	AU	B	
N	28	10208436	HARNESS	EH-2P-33-M403	1	AD	C	
N	29	10208437	HARNESS	EH-2P-77-M403	1	AA	C	
	30	10174514	KNOB/ROTARY	RJM502503-008V01	1	AA	C	
N	31	10203531	BUTTON/TACT	RJM505686-004V01	8	AA	C	
	32	69245260	BUTTON/PW	M340318-1	1	AA	C	
N	33	10208297	PCB ASSY/JKA	TK-RJM506090*001	1	BC	X	
	34	34121827	SWITCH	SDDL1-A2-D	1	AM	X	
	CN405	35016944	CONNECTOR	B5B-PH-K-S	1	AA	X	
N	CN404	10207671	CONNECTOR	HDC-052SP-02	1	AK	X	
N	J401	10208978	CONNECTOR	JY-3567*01-190	1	AD	X	
	J403	10208247	CONNECTOR	DJ-0702B*019	1	AA	X	
N	35	10203503	CASE/SIDE/IL	RJM505581-003V01	1	AO	C	
N	36	10203506	CASE/SIDE/IR	RJM505582-003V01	1	AN	C	
N	37	10203509	CASE/SIDE/L	RJM505583-003V01	1	AQ	C	
N	38	10203512	CASE/SIDE/R	RJM505584-003V01	1	AS	C	
	39	10129909	NUT/SUPPORT	RJM503163-001V01	4	AC	X	
	40	10176916	HARNESS	EH-2P-8-M419	1	AA	C	
	41	10203785	SCREW	S-TRMA-6X30B3	4		C	
REFURBISH								
N	R-1	10208989	PANEL	RJM505577-001V01	1	BW	C	
N	R-2	10208261	CASE ASSY/LOWER	TK-RJM505967*003	1	BX	C	
ACCESSORY								
	-	10133504	PEDAL ASSY	TK-RJM503195*001	1	BN	C	
	-	10128659	AC ADAPTOR	AD-12UL-TC2(D)	1	CE	C	120V
	-	10168517	AC ADAPTOR	AD-12FL-TC3(D)	1	CC	C	230V
N	-	10208988	STAND/MUSIC	RJM503703-003V01	1	AY	C	
	-	10100792	CORD SET	INQ.1258(1)	1	AP	C	Korea
	-	10045706	CORD SET	EC2NC-M001A	1	AM	C	Euro type
	-	10045707	CORD SET	BC2NC-M001A	1	BD	C	UK type
N	-	10212788	LABEL/RATING	RJM501679-026V02	1	AA	X	

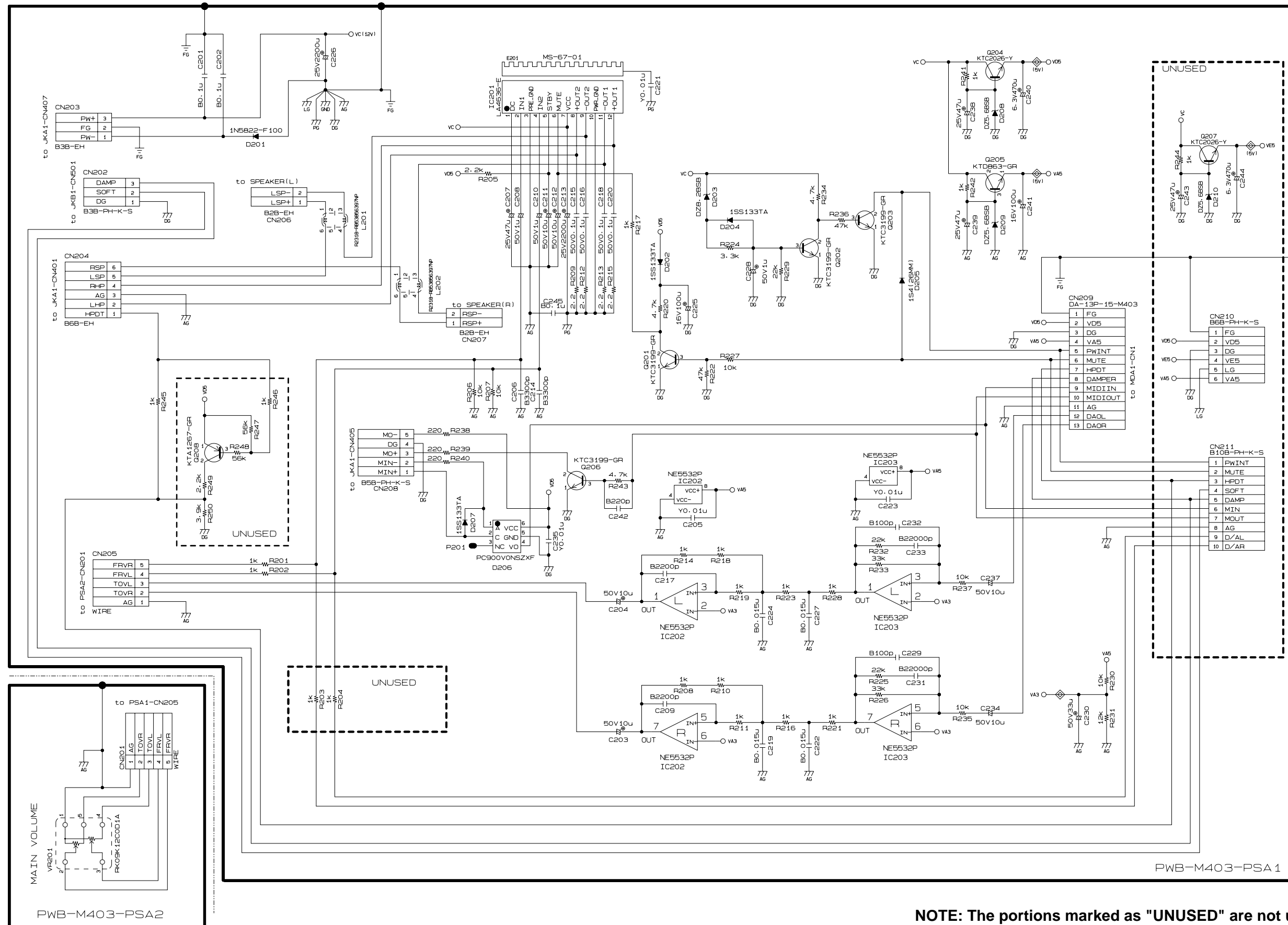
Notes : Q- Quantity per unit
R- Rank

SCHEMATIC DIAGRAMS

MAIN PCB M403-MDA1

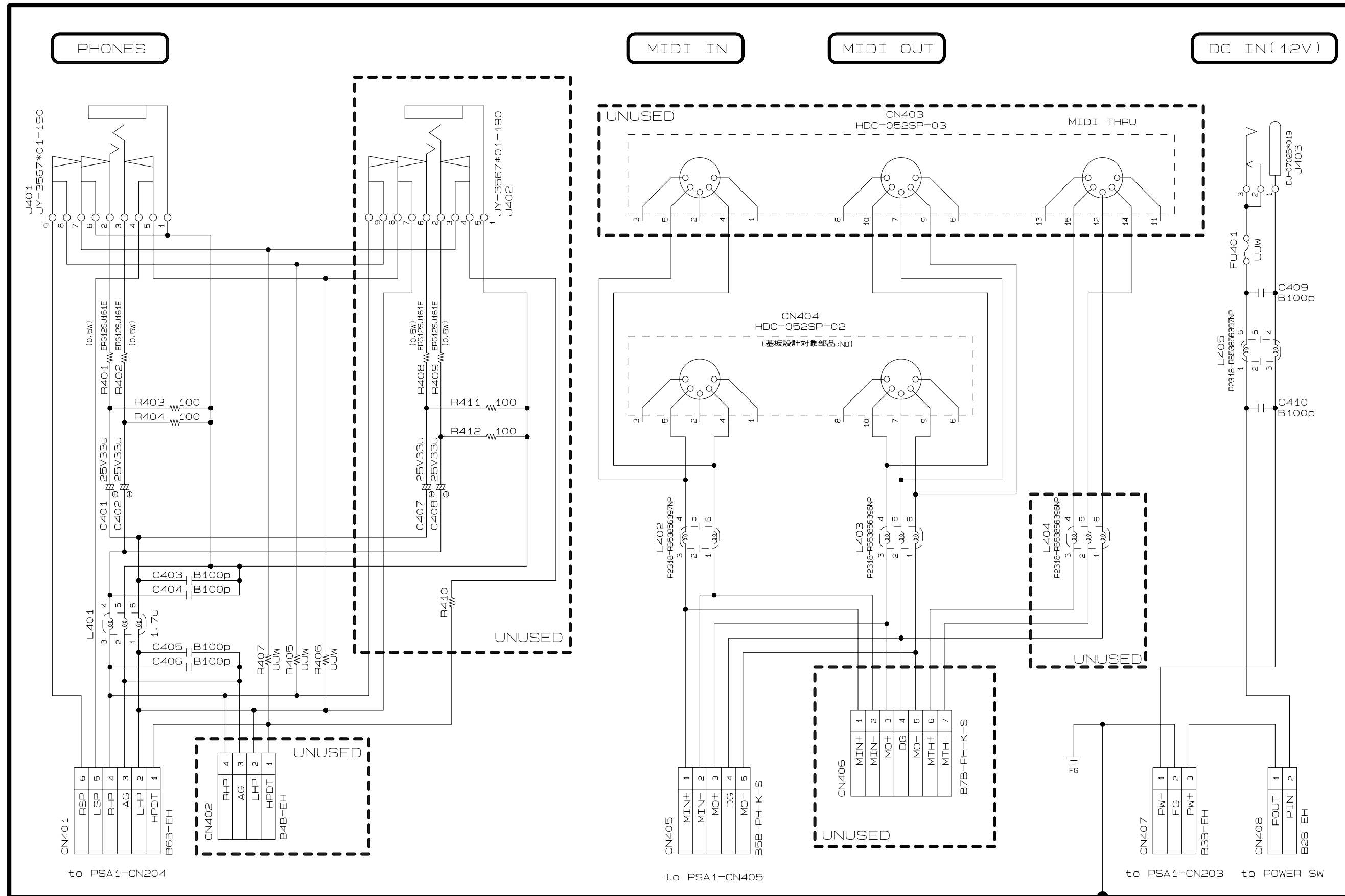


SUB PCBs M403-PSA1/PSA2



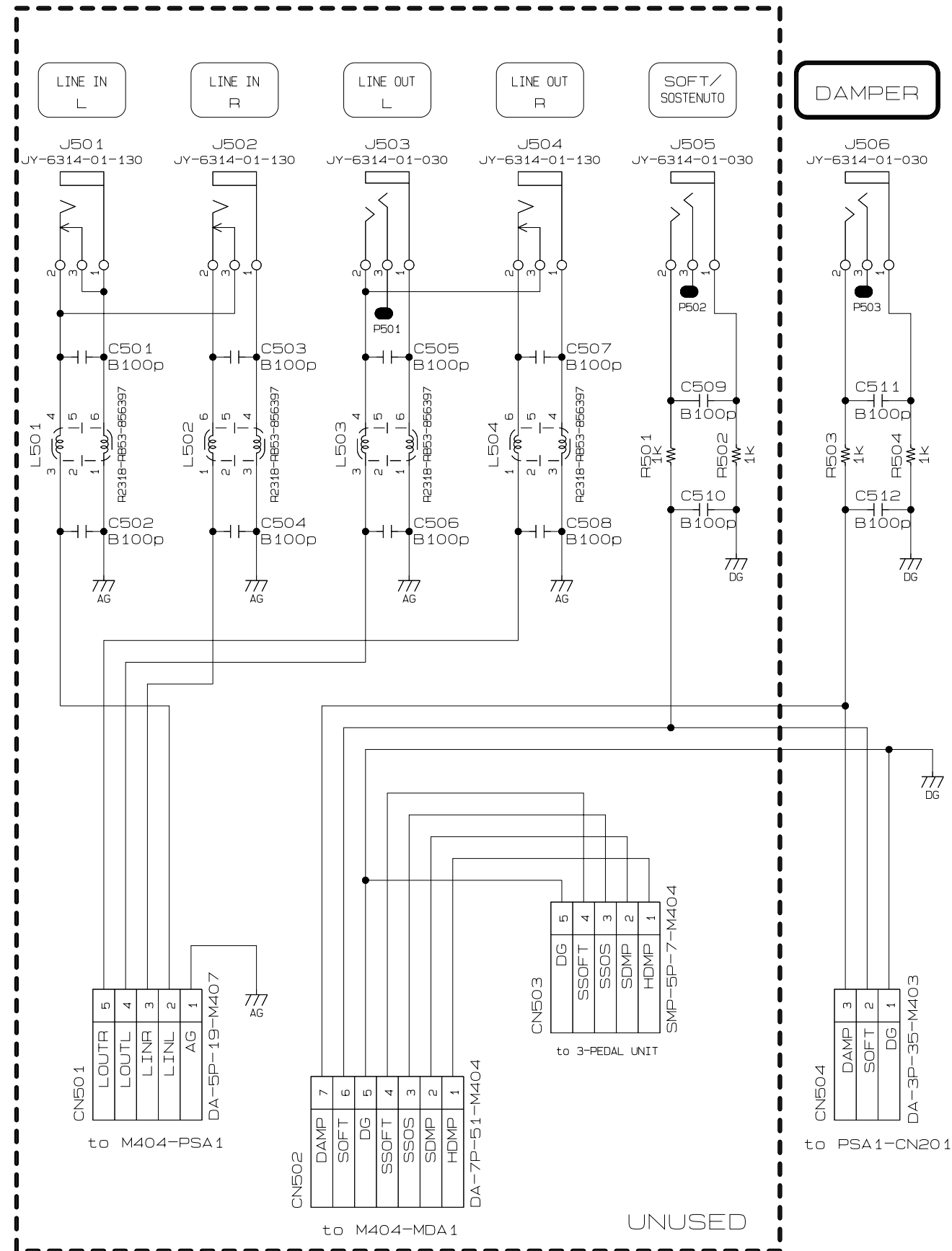
NOTE: The portions marked as "UNUSED" are not used on this model.

JACK PCB M403-JKA1

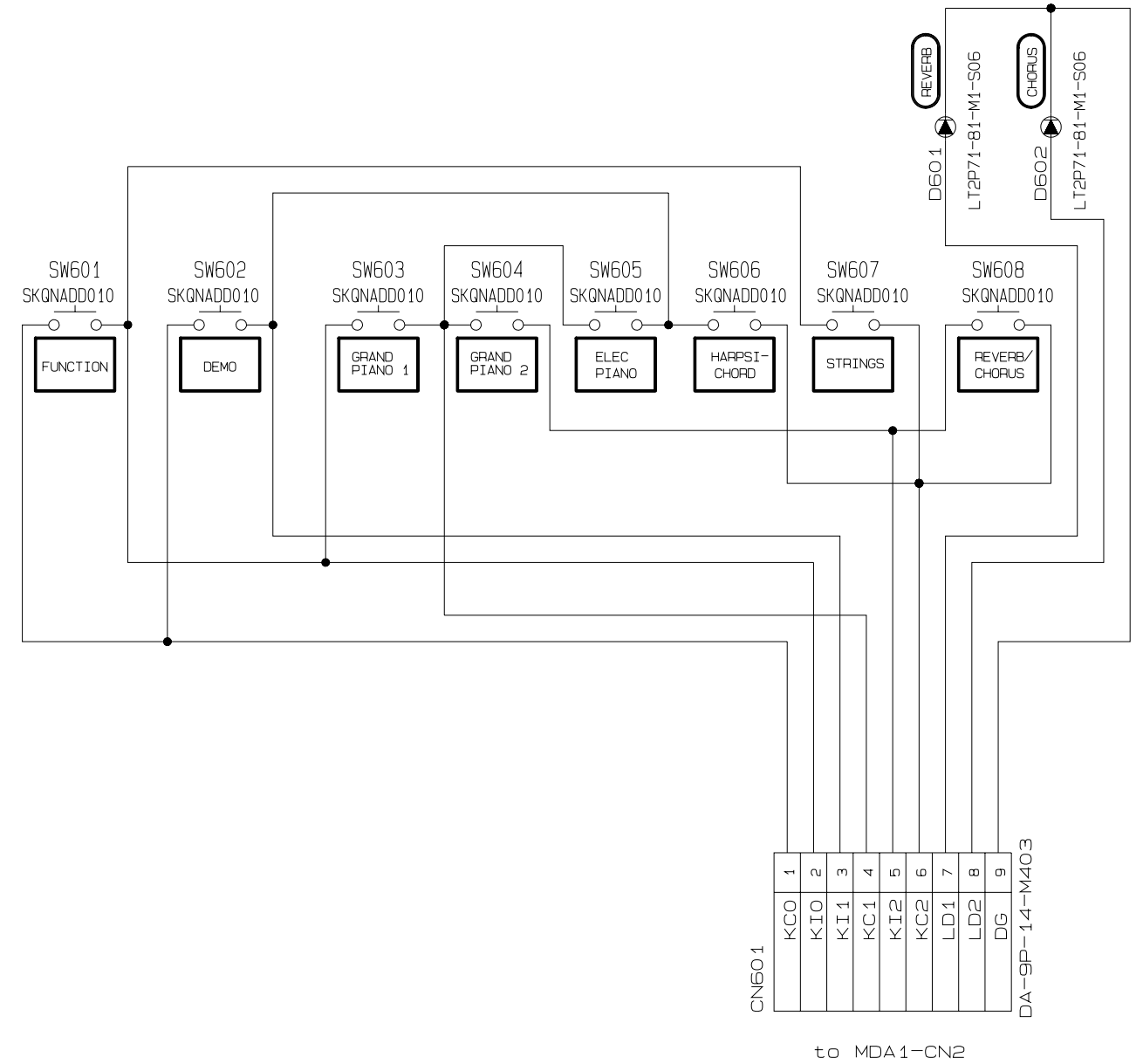


NOTE: The portions marked as "UNUSED" are not used on this model.

JACK PCB M403-JKB1



CONSOLE PCB M403-CNA1



NOTE: The portions marked as "UNUSED" are not used on this model.

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