CASIO®

SERVICE MANUAL
& PARTS LIST (without price)

PX-830BP

OCT. 2009

PX-830BP

ELECTRONIC KEYBOARD

Ver. 4 : Mar. 2010

CONTENTS

SPECIFICATIONS

Keyboard	88-key piano keyboard, with Touch Response
Maximum Polyphony	128 notes
Tones	16
	Layer (excluding bass tones)
	Split (Low-range bass tones only)
Effects	Brilliance (–3 to 0 to 3), Reverb (4 types), Chorus (4 types), DSP, Acoustic Resonance
Metronome	Beats: 0, 2, 3, 4, 5, 6
	Tempo Range: 20 to 255
Duet	Adjustable tone range (–1 to 2 octaves)
Music Library	Number of Songs: 60, User Songs: 1 (memory capacity; up to 65 KB)*
	* Based on 1 KB = 1024 bytes, 1 MB = 1024^2 bytes
	Song volume: Adjustable
	Part On/Off: L, R
Recorder	Functions: Real-time recording, playback
	Number of Song: 1
	Number of Tracks: 2
	Capacity: Approximately 5,000 notes total
	Recorded Data Protection: Built-in flash memory
Pedals	Damper (with half-pedal operation), Soft, Sostenuto
Other Functions	Touch Select: 3 types, Off
	Transpose: 2 octaves (–12 to 0 to 12)
	Tuning: A4 = 440.0 Hz ± 99 cents (variable)
	Temperament
	Octave shift
	Operation Lock
MIDI	16-channel multi-timbre receive
SD Memory Card	SD memory card slot
	Supported SD Memory Cards: Up to 2 GB
	Functions: SMF playback, file storage, file recall, card format
Inputs/Outputs	PHONES jacks: Stereo standard jacks × 2
	Power: 24V DC (Max.)
	LINE OUT R, L/MONO jacks: Standard jacks × 2
	Output impedance: 2.3 KΩ
	Output voltage: 1.1 V (RMS) MAX
	USB port: TYPE B
	Pedal connector
Speakers	φ 12 cm × 2 (Output 20 W + 20 W)
Power Requirements	AC Adaptor: AD-E24250LW
Power Consumption	24 V ⎓ 60 W
Dimensions	Digital Piano and Stand*:
	137.1 (W) × 27.5 (D) × 76.2 (H) cm (54 × 10 $^{13}/_{16}$ × 30 inch)
	* Keyboard cover closed.
Weight	Digital Piano and Stand: Approximately 35.2 kg (77.6 lbs)

• Specifications and designs are subject to change without notice.

BLOCK AND WIRING DIAGRAM

KEYBORAD PCB (MACP-KYB2)
CN803 (14 pin)

KEYBORAD PCB (MACP-KYA1)
CN601 (14 pin)

KEYBORAD PCB (MACP-KYC1)
CN601 (12 pin)

KEYBORAD PCB (MACP-KYC2)
CN602 (12 pin)

KEYBORAD PCB (MACP-KYA2)
CN602 (14 pin)
CN603 (20 pin)

CN801 (12 pin)
CN802 (20 pin)

CN803 (12 pin)
KEYBORAD PCB (MACP-KYD1)

CN802 (14 pin)
KEYBORAD PCB (MACP-KYB1)
CN801 (20 pin)
CN804 (30 pin)

KI0-KI10, KO0-KO-7, NC
CN2 (20 pin)

PEDAL

MAIN PCB (M900-MDA1)
FI0-FI10, SI0-SI10, KC0-KC7
CN1 (30 pin)

KEY CONTROLLER IC14

SD CARD PCB (M810-SDA1)
SD CARD SLOT

SDD0-SD015
SDA0-SDA12, SDBA0, SDBA1

CN5 (5 pin)
CN7 (8 pin)
CN751 (8 pin)

SDRAM (256 Mbit) IC2

MPU IC5

A1-A24
NOR FLASH MEMORY (256 Mbit) IC6
D0-D15

A1-A21
FCRAM (32 Mbit) IC7
D0-D15

USB (CN10)
USB

POWER SUPPLY CIRCUIT Q7, C107-C113
VD5

DAC IC13

CN4 (12 pin)

CN601 (12 pin)   BUTTONS

VD3 VA3

CN12 (9 pin)

CONSOLE PCB (M900-CNA1)

CARD / INTERNAL   SONG ▶/■   RECORDER   METRONOME   GRAND PIANO   MODERN   CLASSIC   ELEC PIANO
FUNCTION   DEMO   L   R — FORMAT —   REVERB — LOAD —   CHORUS — SAVE —   DUET — DELETE —

SUB PCB (M903-PSA1)
CN16 (9 pin)
VD5   VA12

VD5   VA12   VA5

CN14 (5 pin)
CN603 (5 pin)
VOLUME   MIN   MAX

FILTER IC5
ROUT
LOUT

VOLUME PCB (M900-CNA2)

POWER SUPPLY CIRCUIT IC1, IC3, C23, C31, C33, C35, C37, C48, C55, D4, D9, D10

VC   VCM

23 V DC IN (J1)

CN3

CN4 (2 pin)

HEADPHONE AMPLIFIER IC4

POWER AMPLIFIER IC2

CN12
CN5
R
L

SPEAKERS

CN17 (3 pin)
CN13 (4 pin)

JACK PCB (M902-HPA1)

CN701 (4 pin)

POWER
ON/OFF

POWER SWITCH

CN702 (2 pin)

POWER LAMP PCB (M902-HPA2)

CN502 (3 pin)

LINE OUT L/MONO (J503) R (J504)

JACK PCB (M901-JKA1)

PHONES (J701, J702)

– 2 –

PCB LAYOUT

PCBs		Components
Main PCB	M900-MDA1	MPU, Reset IC, SDRAM (256 Mbit), Flash Memory (256 Mbit), FCRAM (32 Mbit), Power Supply Circuit, Key Controller, USB Port
Sub PCB	M903-PSA1	DC 24 V Terminal, Power Supply Circuit, Filter, Power Amplifer, Headphones Amplifer
Console PCB	M900-CNA1	Buttons
Volume PCB	M900-CNA2	Main Volume
Jack PCBs	M902-HPA1	Phones Jacks
	M901-JKA1	LINE OUT (R, L/MONO) jacks
SD Card PCB	M810-SDA1	SD Card Slot
Power Lamp PCB	M902-HPA2	Power Lamp
Keyboard PCBs	MACP-KYA1	MACP-KYC1	Keyboard
	MACP-KYA2	MACP-KYC2	
	MACP-KYB1	MACP-KYD1	
	MACP-KYB2		

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

	KO0	KO1	KO2	KO3	KO4	KO5	KO6	KO7
KI0	A0③	A0#③	B0③	C1③	C1#③	D1③	D1#③	E1③
KI1	F1③	F1#③	G1③	G1#③	A1③	A1#③	B1③	C2③
KI2	C2#③	D2③	D2#③	E2③	F2③	F2#③	G2③	G2#③
KI3	A2③	A2#③	B2③	C3③	C3#③	D3③	D3#③	E3③
KI4	F3③	F3#③	G3③	G3#③	A3③	A3#③	B3③	C4③
KI5	C4#③	D4③	D4#③	E4③	F4③	F4#③	G4③	G4#③
KI6	A4③	A4#③	B4③	C5③	C5#③	D5③	D5#③	E5③
KI7	F5③	F5#③	G5③	G5#③	A5③	A5#③	B5③	C6③
KI8	C6#③	D6③	D6#③	E6③	F6③	F6#③	G6③	G6#③
KI9	A6③	A6#③	B6③	C7③	C7#③	D7③	D7#③	E7③
KI10	F7③	F7#③	G7③	G7#③	A7③	A7#③	B7③	C8③

NOMENCLATURE OF KEYS
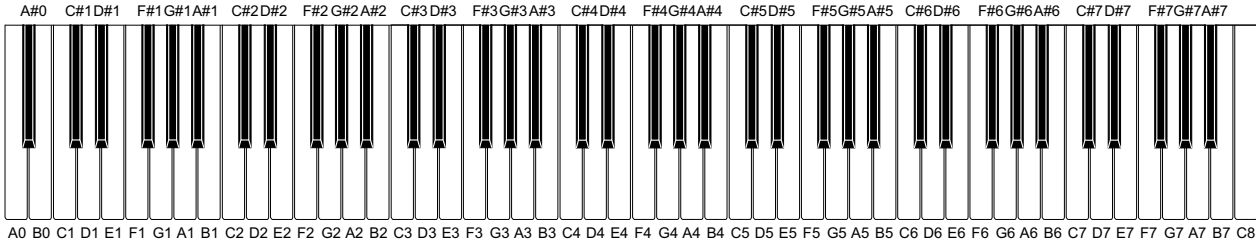
BUTTON MATRIX

	SO0	SO1	SO2
SI0	FUNCTION	METRONOME	ELEC PIANO
SI1	—	SONG ▶/■	MODERN
SI2	—	CLASSIC	RECORDER

PRINTED CIRCUIT BOARDS
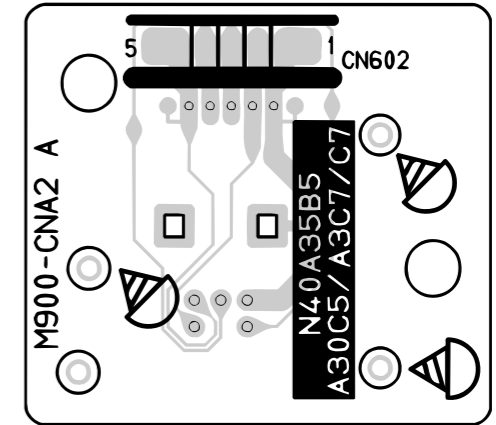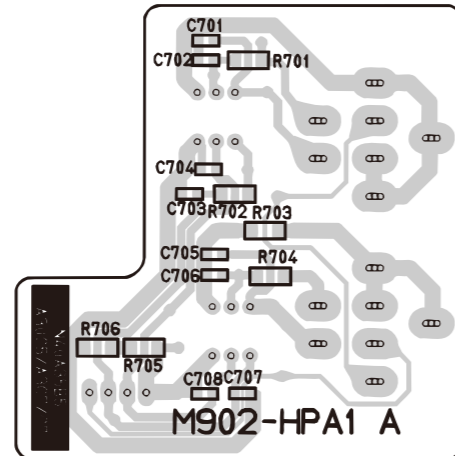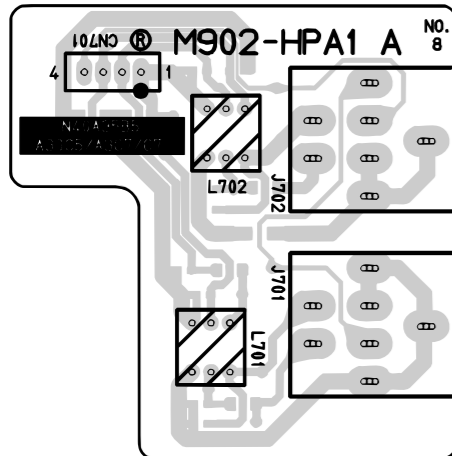
Main PCB M900-MDA1
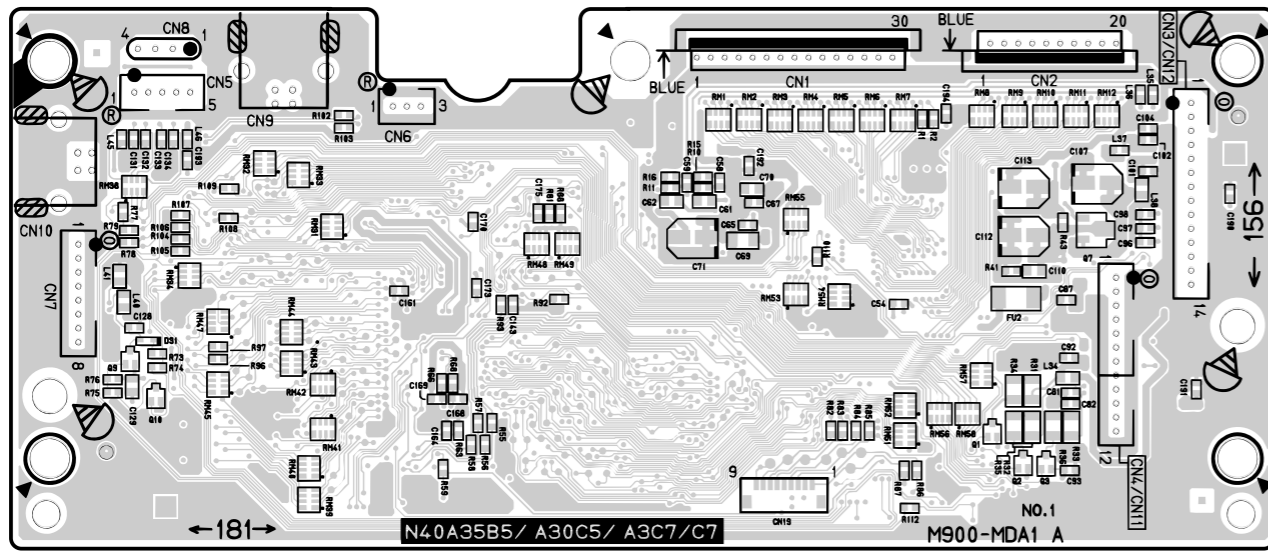
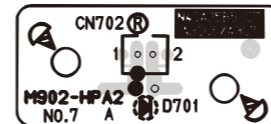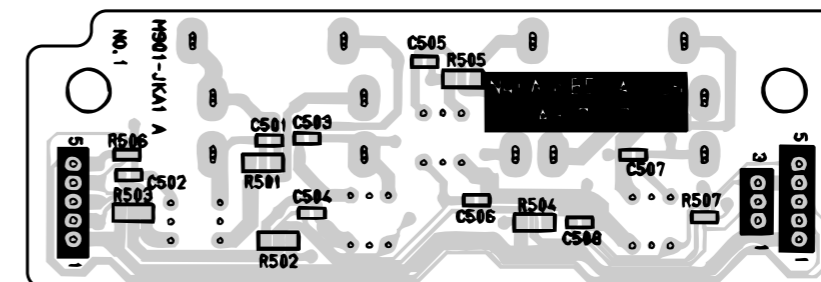## Sub PCB M903-PSA1
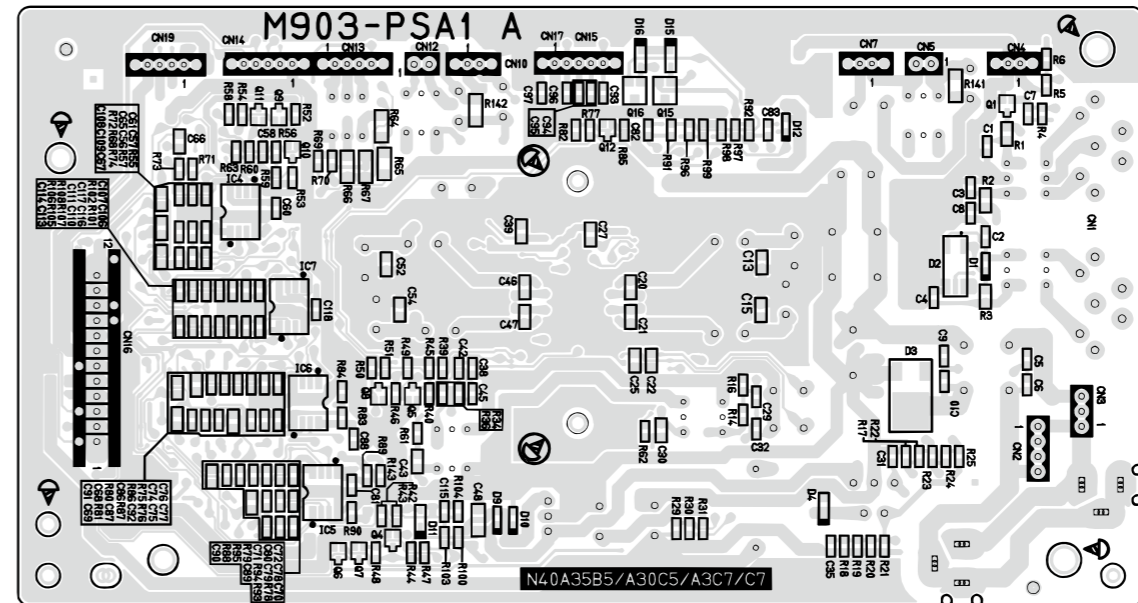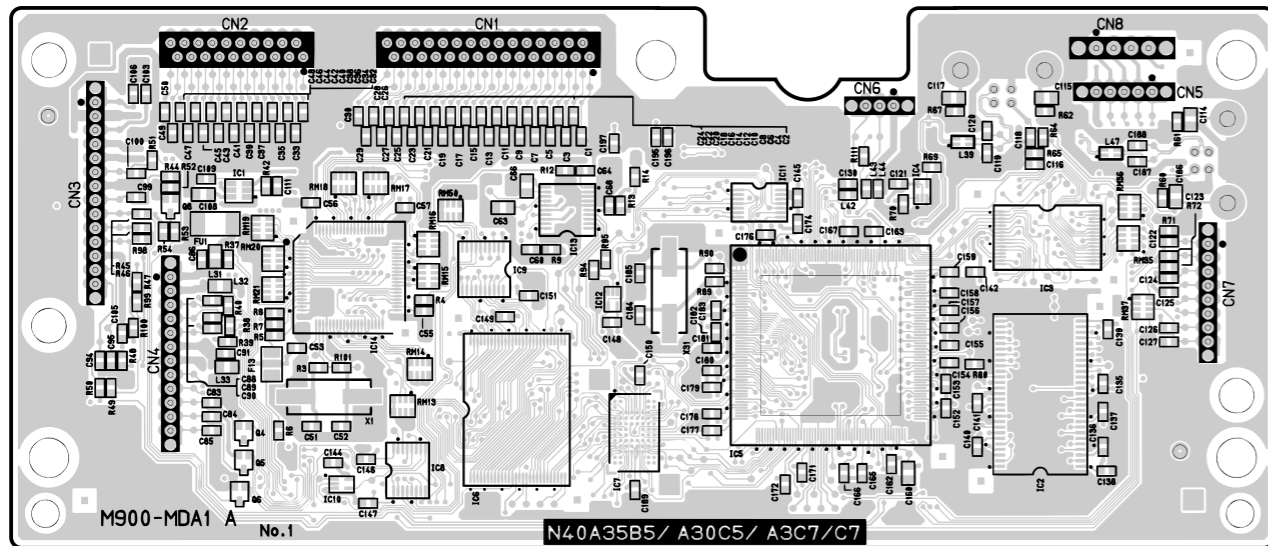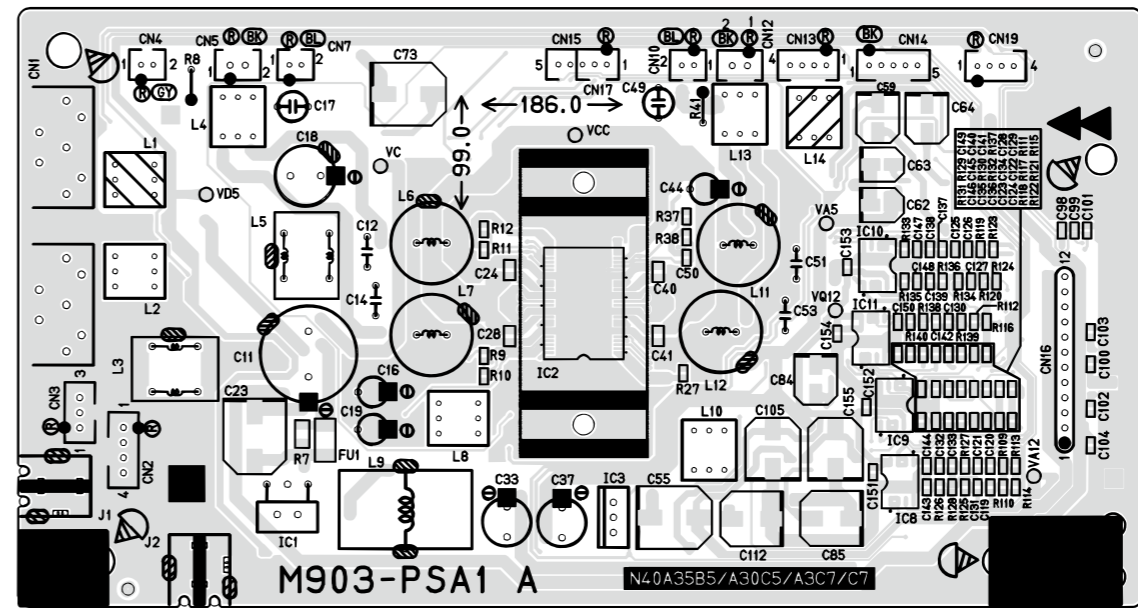
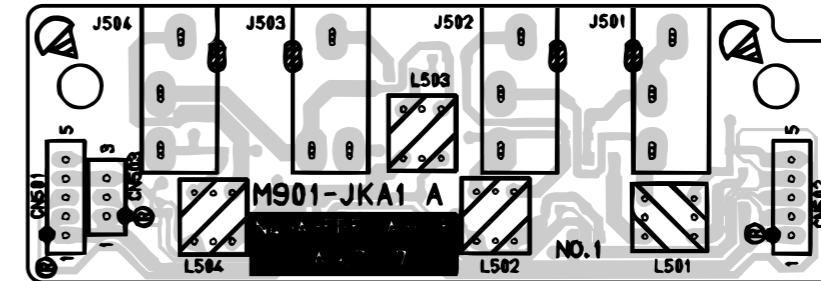**Console PCB M900-CNA1**
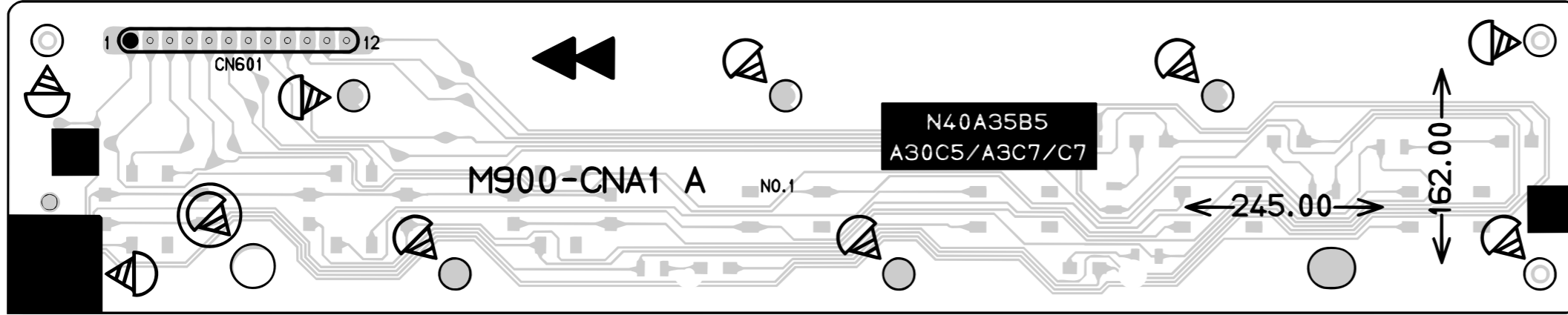
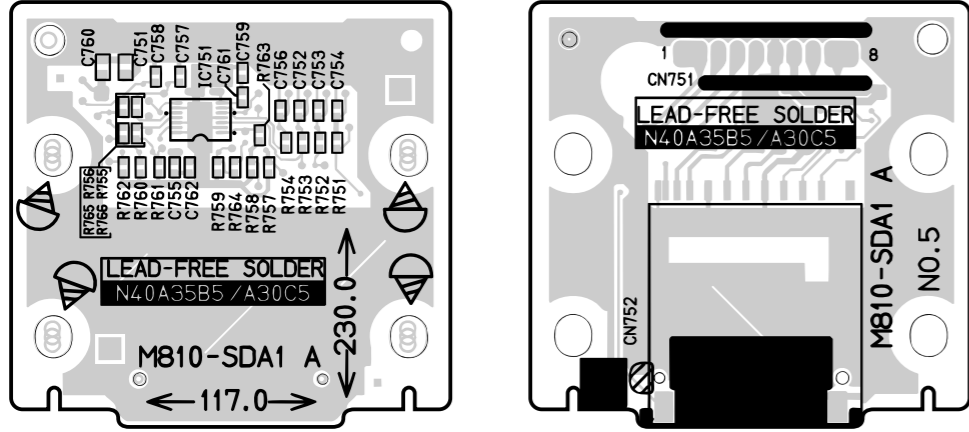**Volume PCB M900-CNA2**
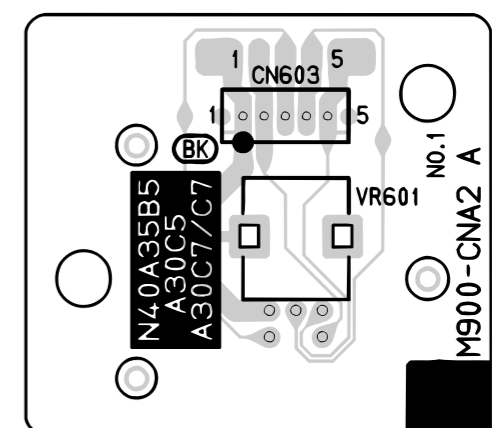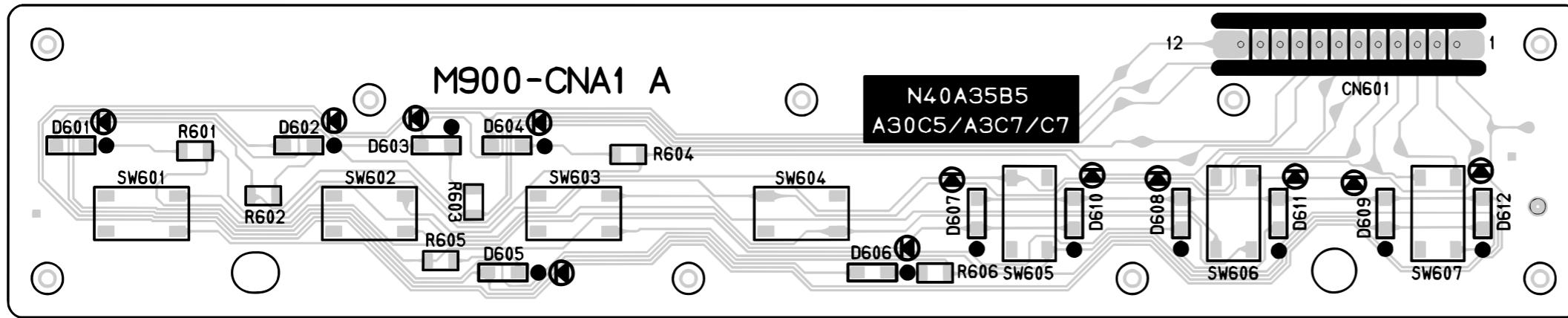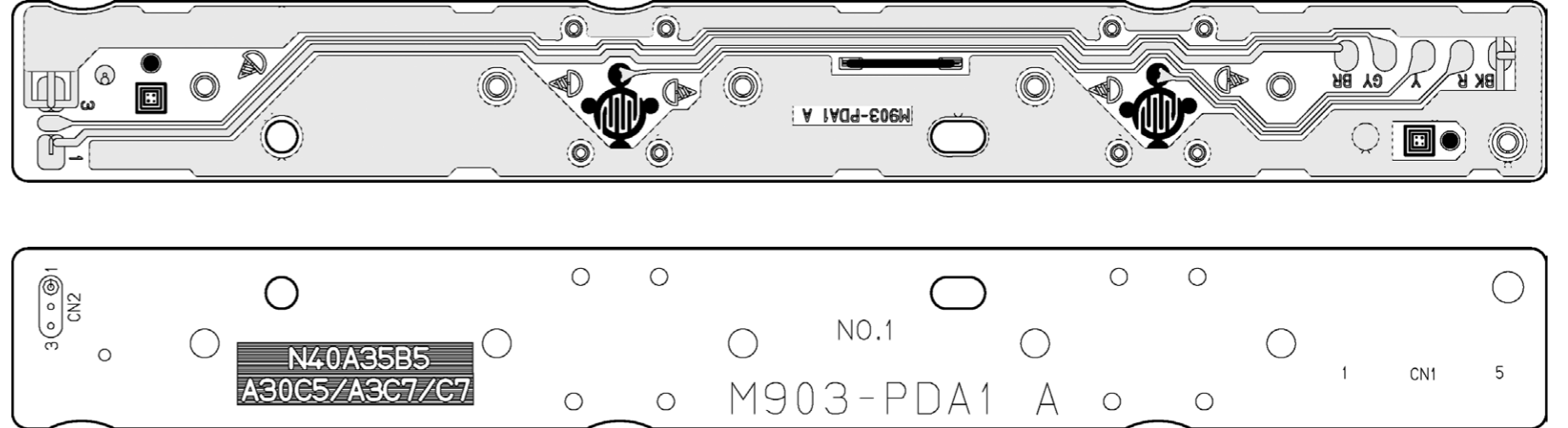
Jack PCB M902-HPA1
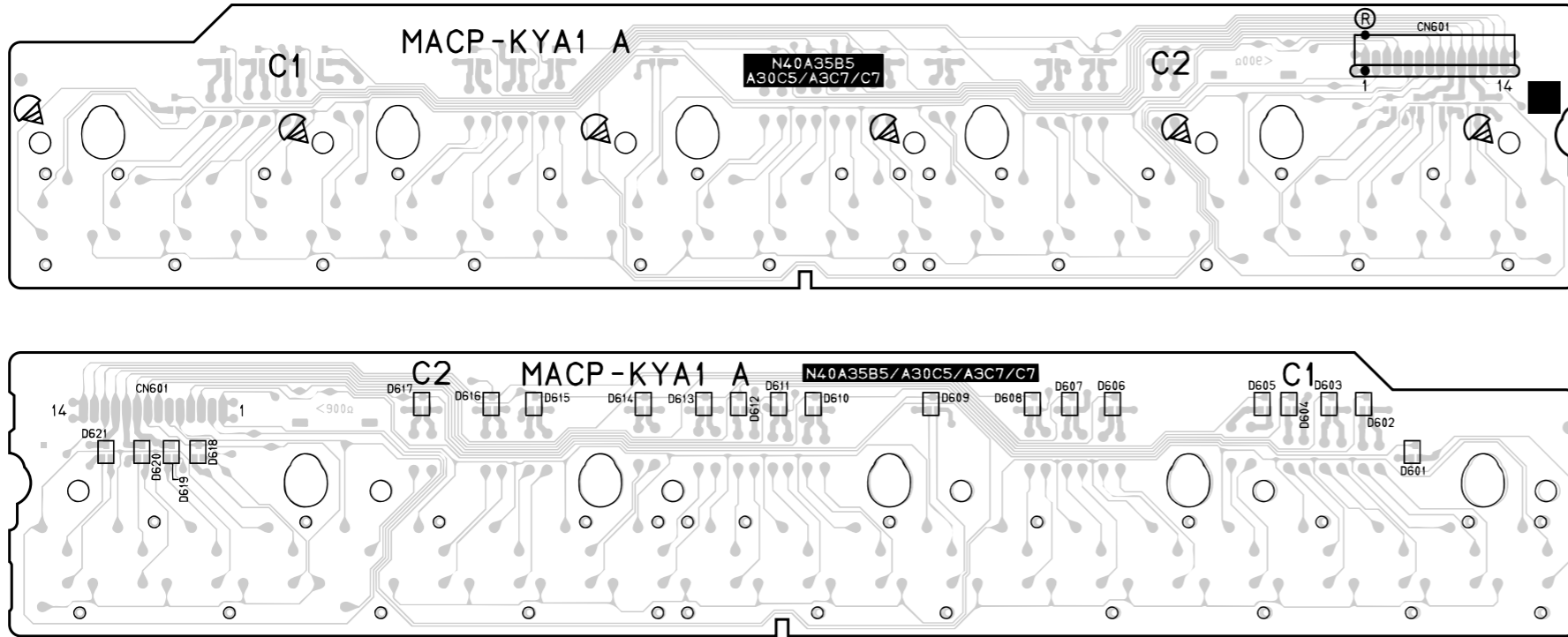
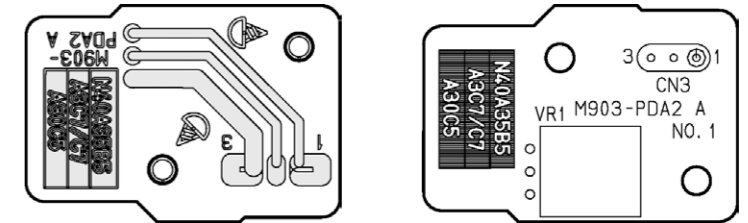**Power Lamp PCB M902-HPA1**

Jack PCB M901-JKA1

SD Card PCB M810-SDA1

LEAD-FREE SOLDER
N40A35B5/A30C5

M810-SDA1 A

←117.0→

←230.0→

NO.5

CN751
1   8

LEAD-FREE SOLDER
N40A35B5/A30C5

M810-SDA1 A

CN752

Pedal PCB M903-PDA1

M903-PDA1 A

BK R Y GY BR

CN2
3 1

N40A35B5
A30C5/A3C7/C7

NO.1

M903-PDA1 A

CN1
1   5

Keyboard PCB MACP-KYA1

MACP-KYA1 A

N40A35B5
A30C5/A3C7/C7

C1   C2

CN601
1   14

C2   MACP-KYA1 A   N40A35B5/A30C5/A3C7/C7   C1

CN601
14   1

D621 D620 D619 D618   D617 D616 D615 D614 D613 D612 D611 D610 D609 D608 D607 D606   D605 D604 D603 D602 D601

Pedal PCB M903-PDA2

M903-PDA2 A

CN3
3 1
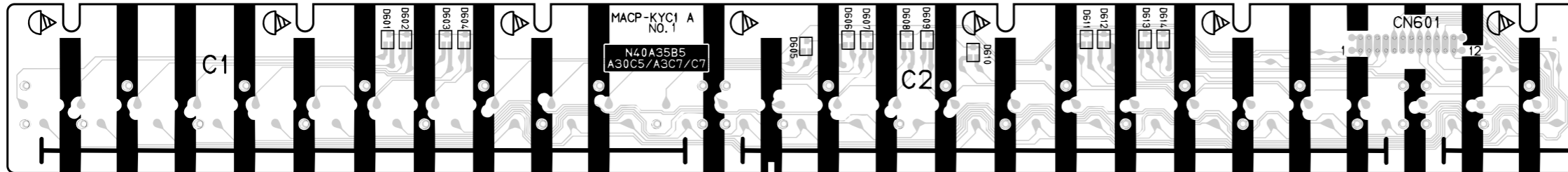
VR1 M903-PDA2 A
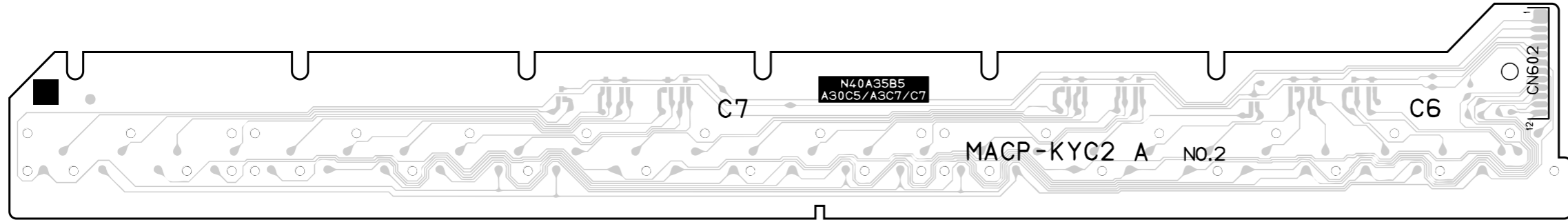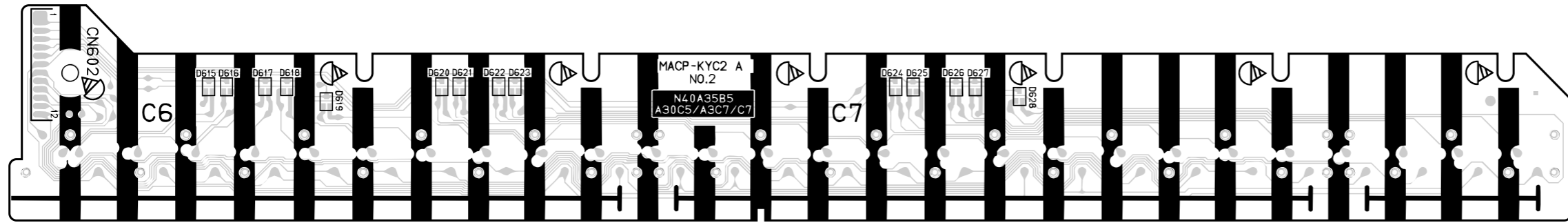NO.1

N40A35B5
A30C5/A3C7/C7
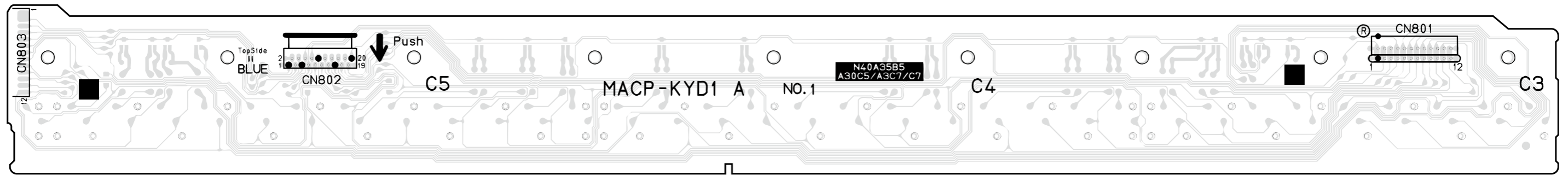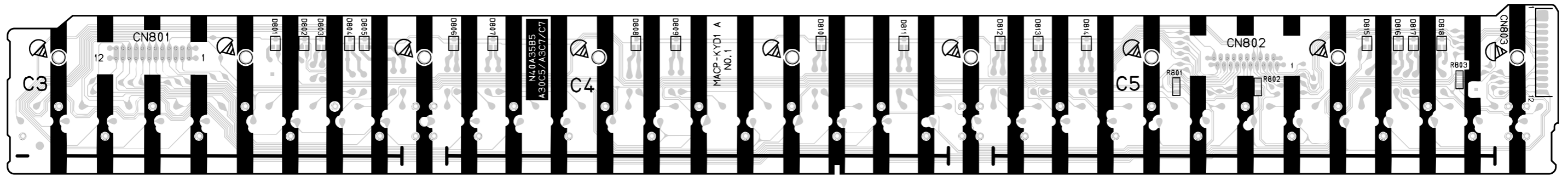
Keyboard PCB MACP-KYA2
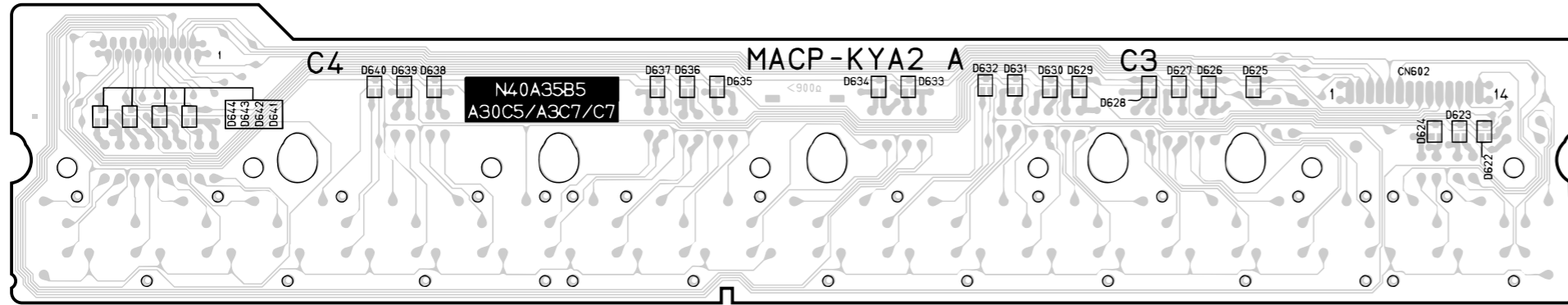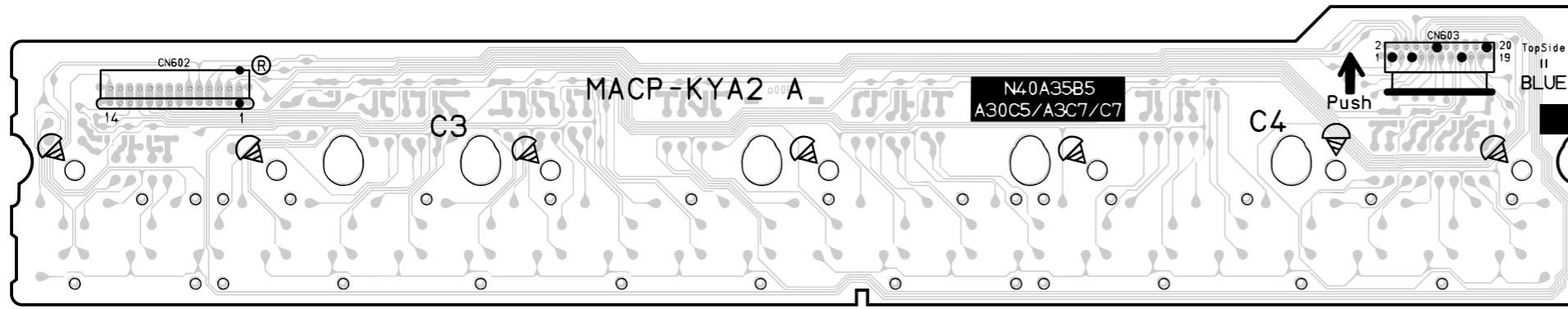
Keyboard PCB MACP-KYB1

Keyboard PCB MACP-KYB2

MACP-KYB2 A

C7　　　　　　　　　　　　　　　　　　　　C8

C8　　MACP-KYB2 A

N40A35B5/
A30C5/A3C7/C7

Keyboard PCB MACP-KYC1

MACP-KYC1 A
NO.1

N40A35B5
A30C5/A3C7/C7

C1　　　　　　　　　　　　　　　C2

CN601

N40A35B5
A30C5/A3C7/C7

C2　　　　　　　　　　　　　　　C1

MACP-KYC1 A　　NO.1
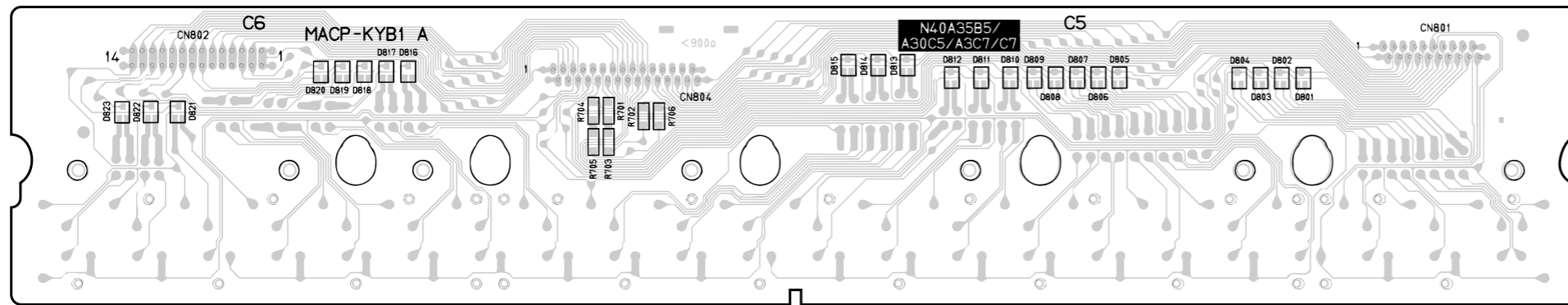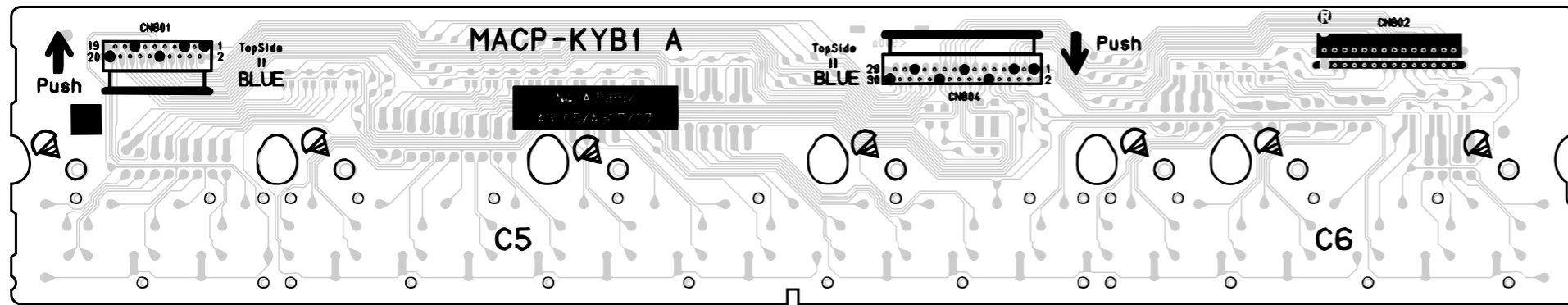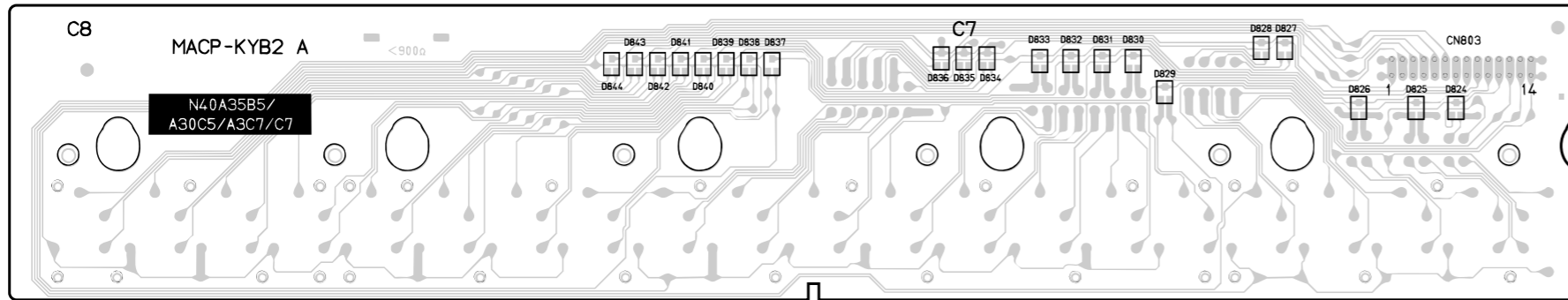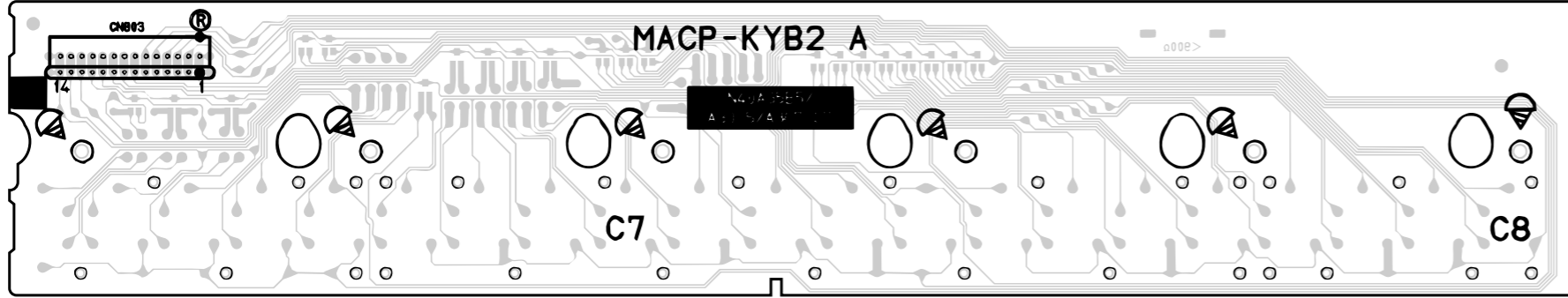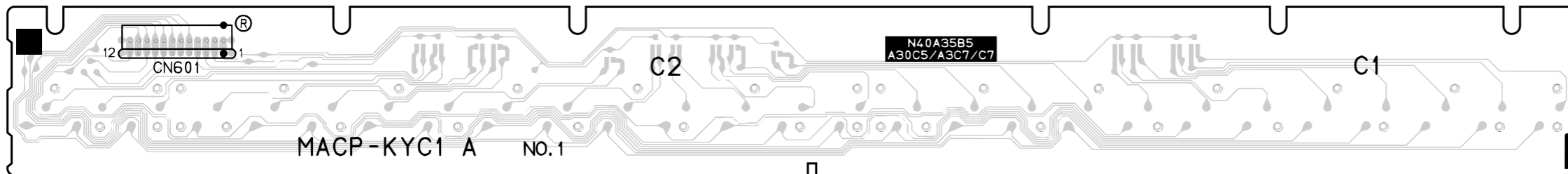
Keyboard PCB MACP-KYC2

Keyboard PCB MACP-KYD1

DISASSEMBLY

■ **CAUTION**

- The photos show a prototype. The appearance of the instrument, such as color, may differ from the actual model.

- To avoid damages to the instrument and the floor, lay the instrument on a mattress or blanket before starting disassembling.

- Some screws are attached with a screw cap.
  Be sure to reattach the screw cap when reassembling.

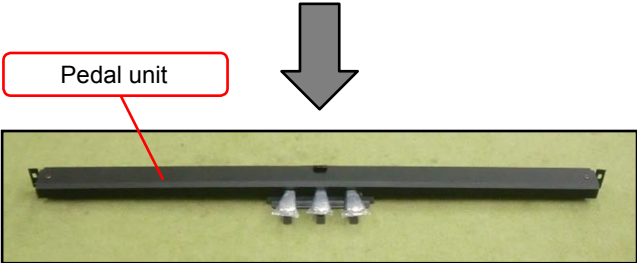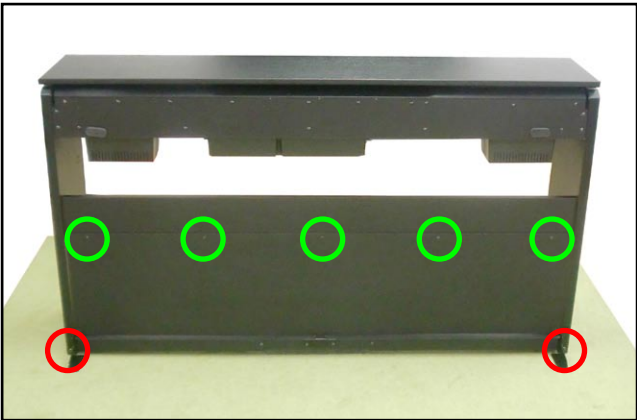■ **Before Starting Repair or Servicing**

- Remove the AC adaptor or the AC cord.

- Remove accessories such as the music stand.

- Remove the pedal unit plug from the pedal connector.
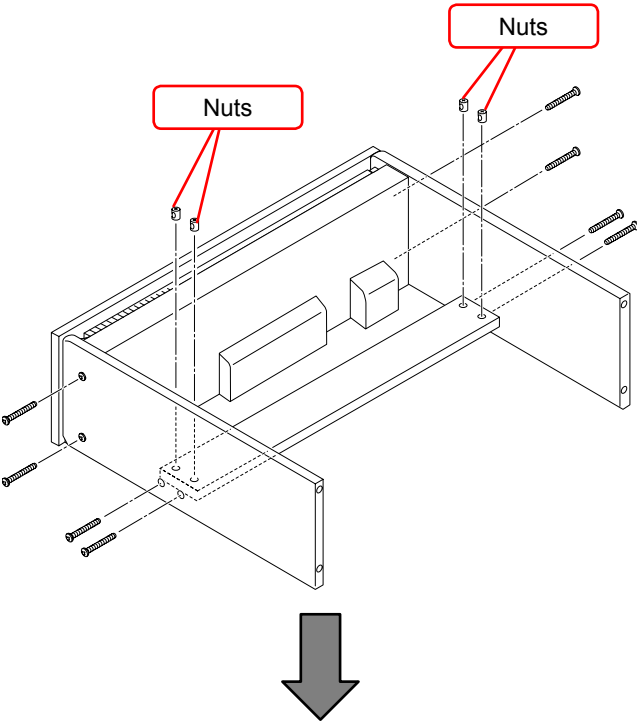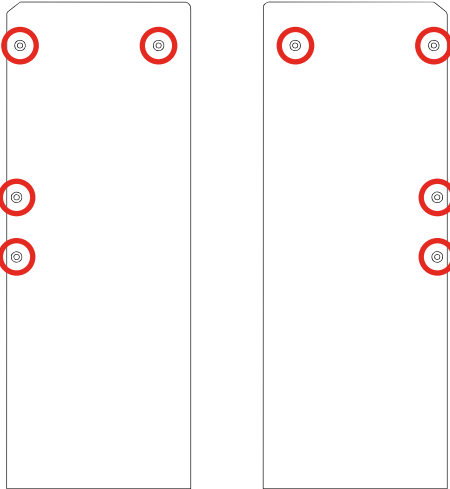
■ Removing the pedal unit

1. Undo two screws.
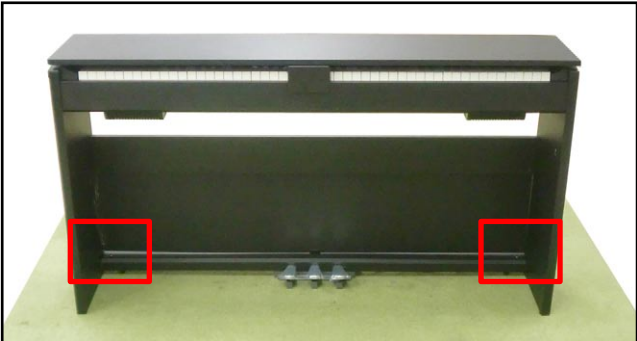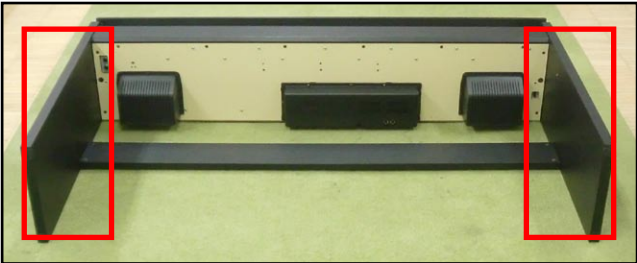

2. Undo seven screws and then remove the pedal unit.

Pedal unit

■ Removing the stand

1. Lay down the main unit on the floor.
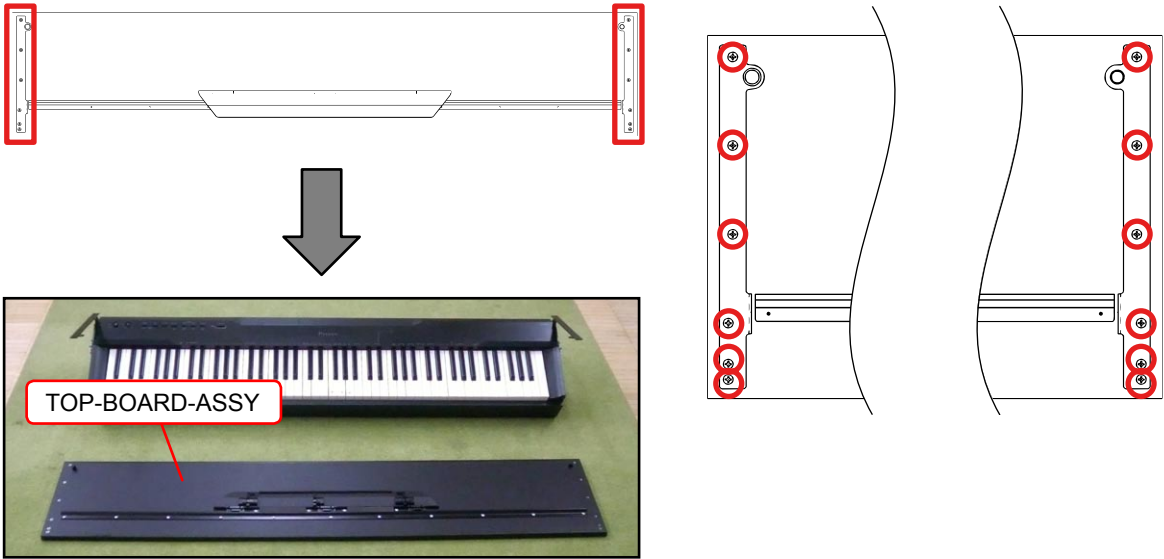2. Undo eight screws.
   NOTE: When you remove the stand, nuts come loose. Do not misplace them.

Nuts

Nuts

■ Removing the TOP-BOARD-ASSY

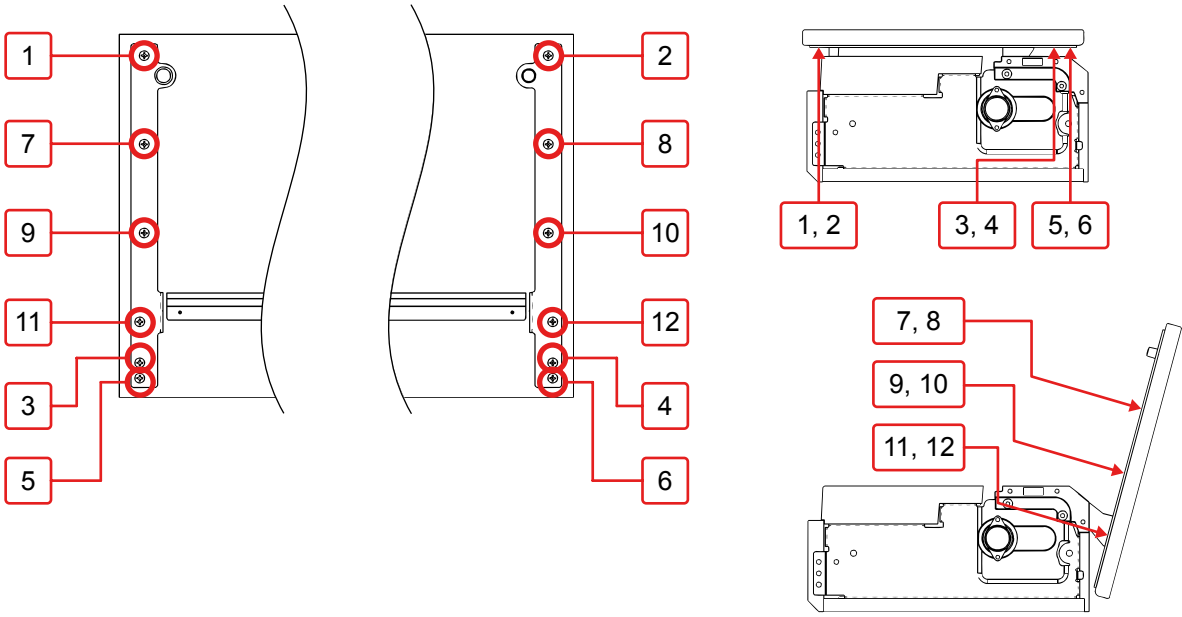1. Undo 12 screws and then remove the TOP-BOARD-ASSY.

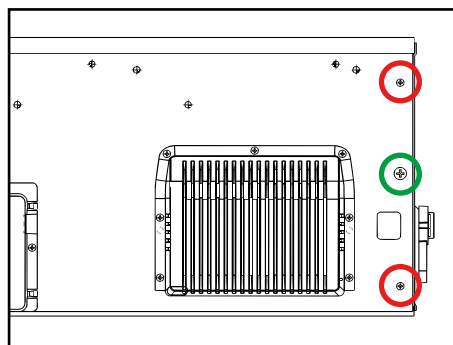TOP-BOARD-ASSY

<Cautions for Assembling>

When assembling the TOP-BOARD-ASSY, fasten the screws in the order shown in the illustration below.

NOTE: Screws No.1 through 6 must be fastened while the TOP-BOARD-ASSY is closed.
Screws No.7 through 12 must be fastened while the TOP-BOARD-ASSY is open.

1, 2 3, 4 5, 6

7, 8 9, 10 11, 12

■ Removing the panel unit

1. Undo six screws on the bottom surface of the unit.
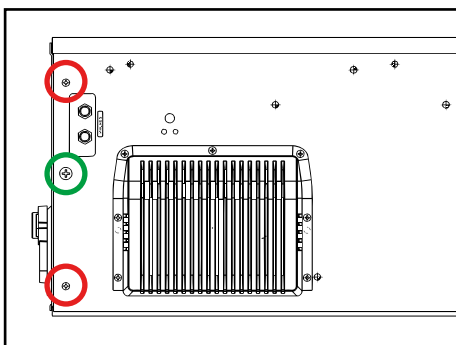
2. Undo two screws on both sides of the unit.

3. Undo five screws on the back surface of the unit and then remove the panel unit.
   NOTE: The panel unit is connected with FFCs and lead wires.
   Do not pull hard or forcibly remove the unit.
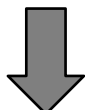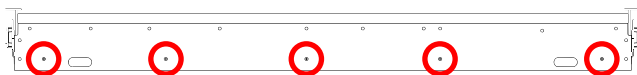
Panel unit

■ Wiring of the panel unit
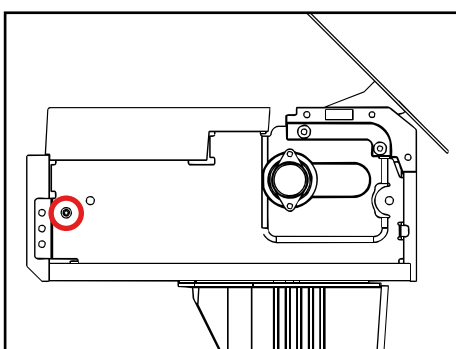
When replacing components, you may have to remove securing bands, cable ties, and wire clips.
If you remove these bands and clips, be sure to secure cables back to the original conditions when reassembling.

<Where to secure cables>

◯ : Cable tie   ◯ : Wire clip

Power switch,
M900-CNA2

Power switch,
M900-CNA1, M900-CNA2

Power switch, M900-CNA1,
M900-CNA2, M810-SDA1
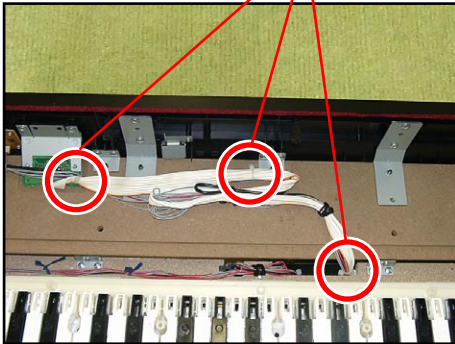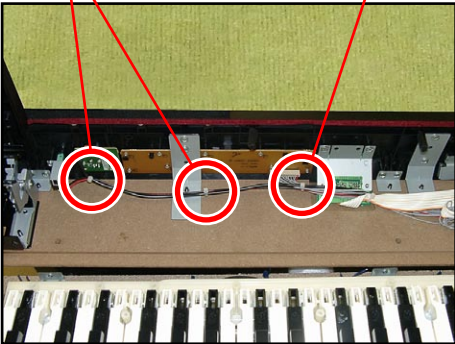
Power switch, M900-CNA1,
M900-CNA2, M810-SDA1
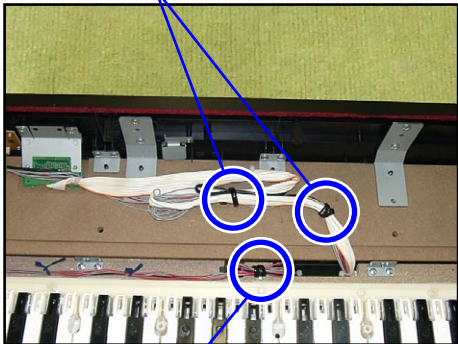
M902-HPA1, M902-HPA2,
Left speaker

■ Removing the PCB box

1. Undo four screws.
2. While disengaging two hooks, slide the PCB box in the direction of the arrow to remove it.

Hooks
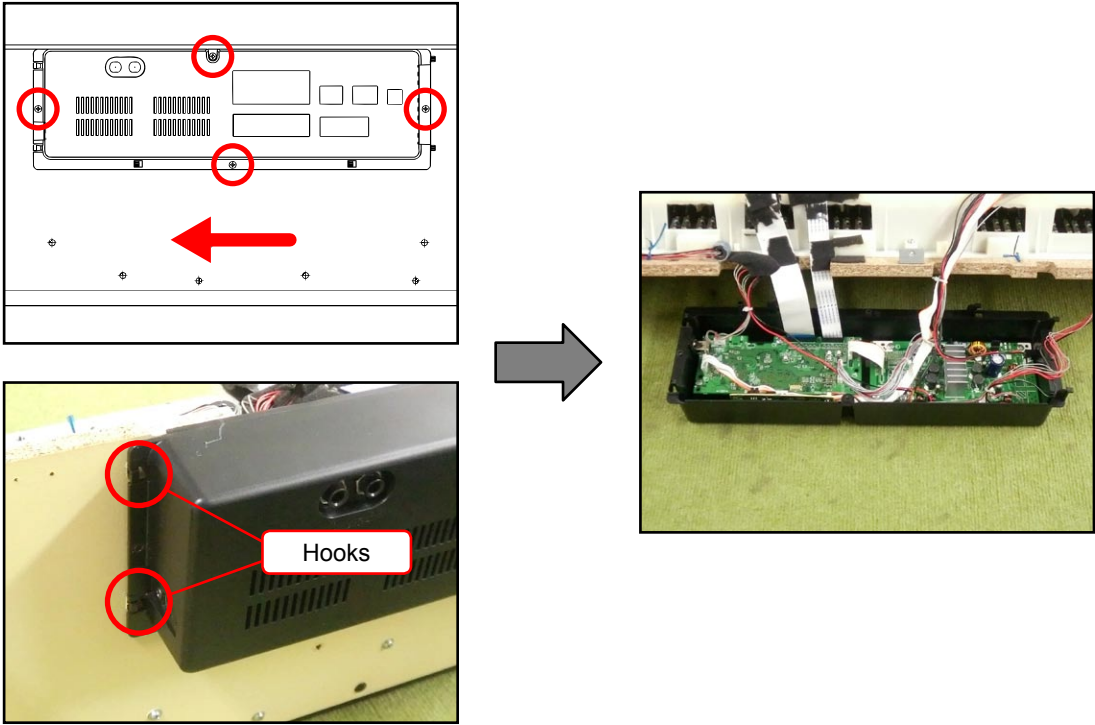
■ Wiring of the PCB box

When replacing components, you may have to remove securing bands, cable ties, and wire clips. If you remove these bands and clips, be sure to secure cables back to the original conditions when reassembling.

<Where to secure cables>

◯ : Cable tie   ◯ : Wire clip

Pedal connector, Right speaker   M903-PSA1 PCB   M900-PSA1 PCB   M902-HPA1, M902-HPA2, Left speaker

M810-SDA1, Pedal connector   M900-CNA1, M810-SDA1, M901-JKA1, Right speaker   Power switch, M900-CNA1, M900-CNA2, M810-SDA1

<Cautions for Assembling>
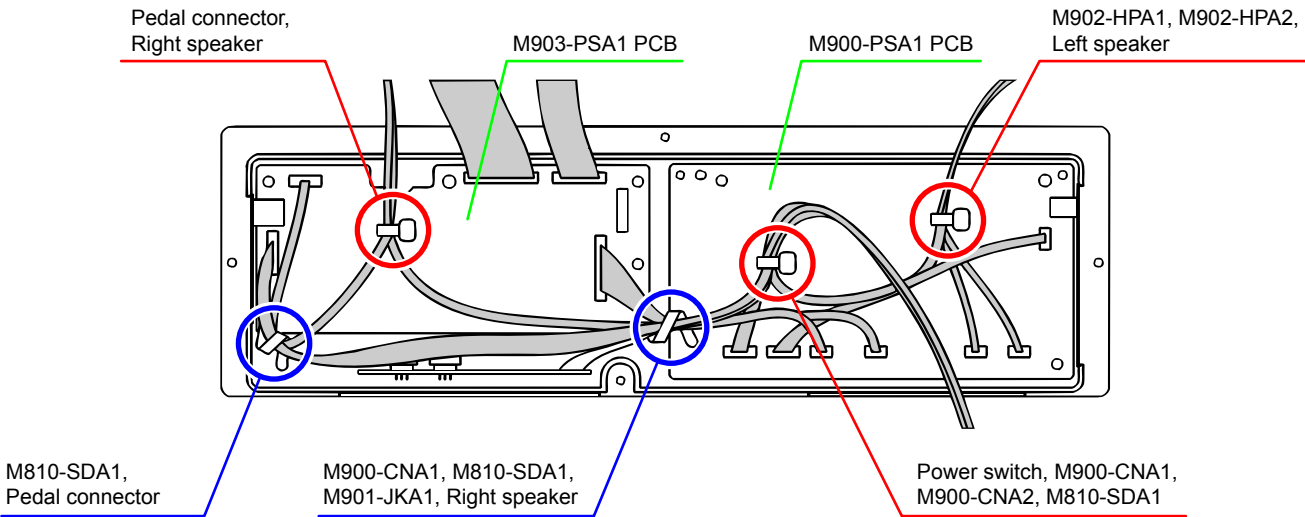
After assembling the PCB box, pull the lead wires and FFCs hanging outside the box so that there is not too much sagging inside the box.
NOTE: Do not pull hard.

<After replacing the FFCs for the keyboard PCB>

After replacing the FFCs for the keyboard PCBs, you must assemble the PCB box first and then fold the FFCs in shape.

1. Pull the FFCs in the direction of the arrow so that the there is not too much sagging.
    NOTE: Do not pull hard.
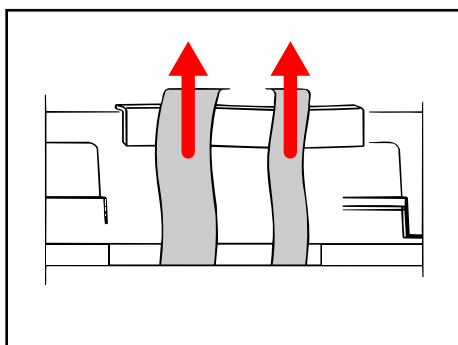
2. Fold the FFCs into shape as shown in the illustration below.
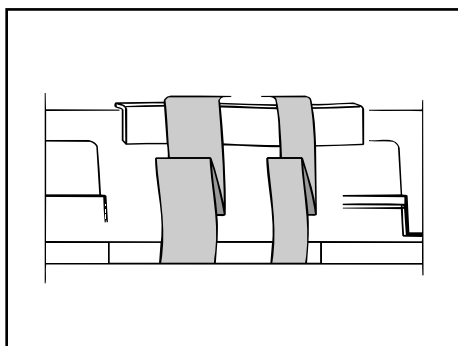
3. Wrap the formed part of the FFCs with sponge.
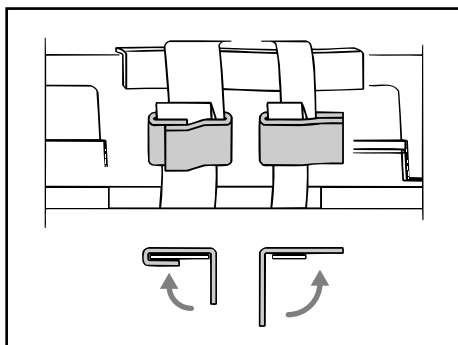
■ Removing the main PCB (M900-MDA1)

1. Release the locks and remove the two FFCs.
2. Remove four connectors.

M900-MDA1 PCB

FFC (MACP-KYB1)

FFC (MACP-KYD1)

Connector
(Pedal connector)

Connector
(M810-SDA1)

Connector
(M900-CNA1)

Connector
(M903-PSA1)
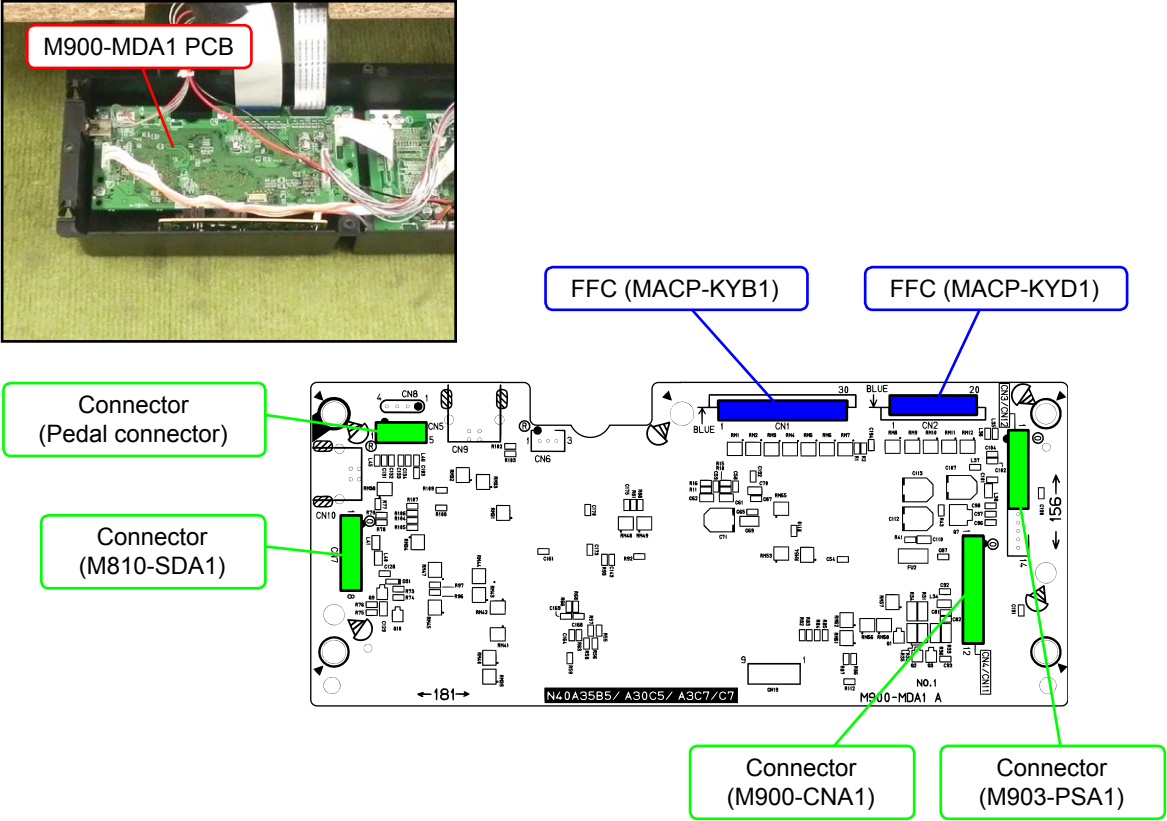
3. Undo six screws and then remove the M900-MDA1 PCB.
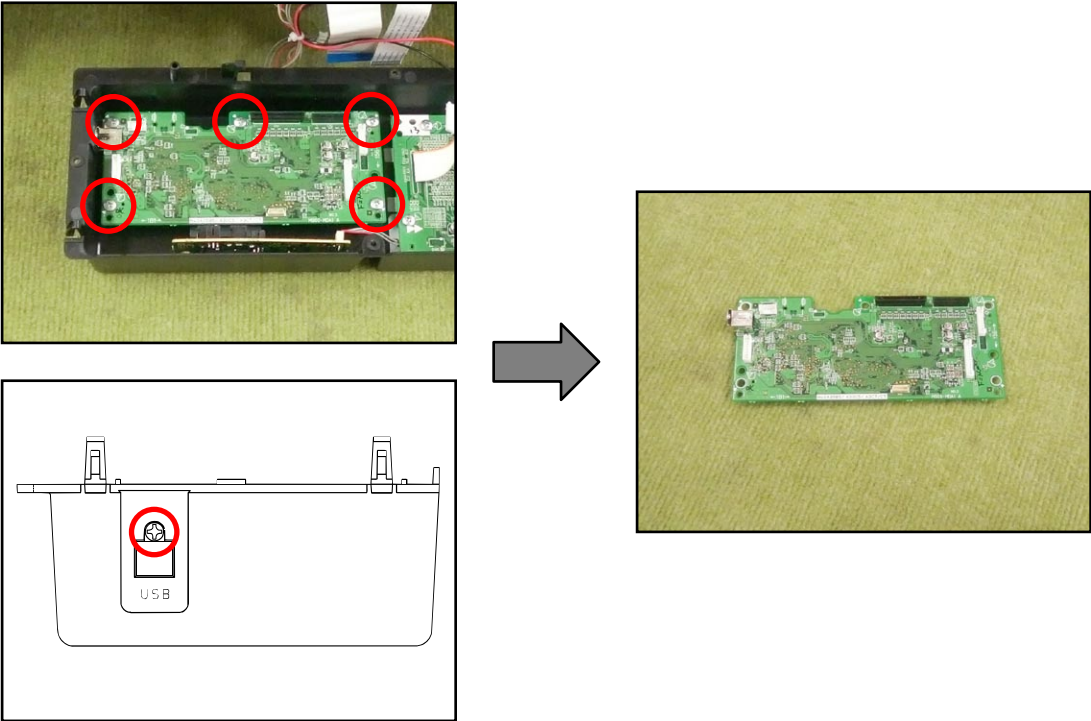
■ Removing the sub PCB (M903-PSA1)

1. Remove seven connectors.

Connector
(Power switch)

Connector
(M902-HPA1)

Connector
(M900-CNA2)

Connector
(Left speaker)

Connector
(M901-JKA1)

Connector
(Right speaker)

Connector
(M902-HPA2)
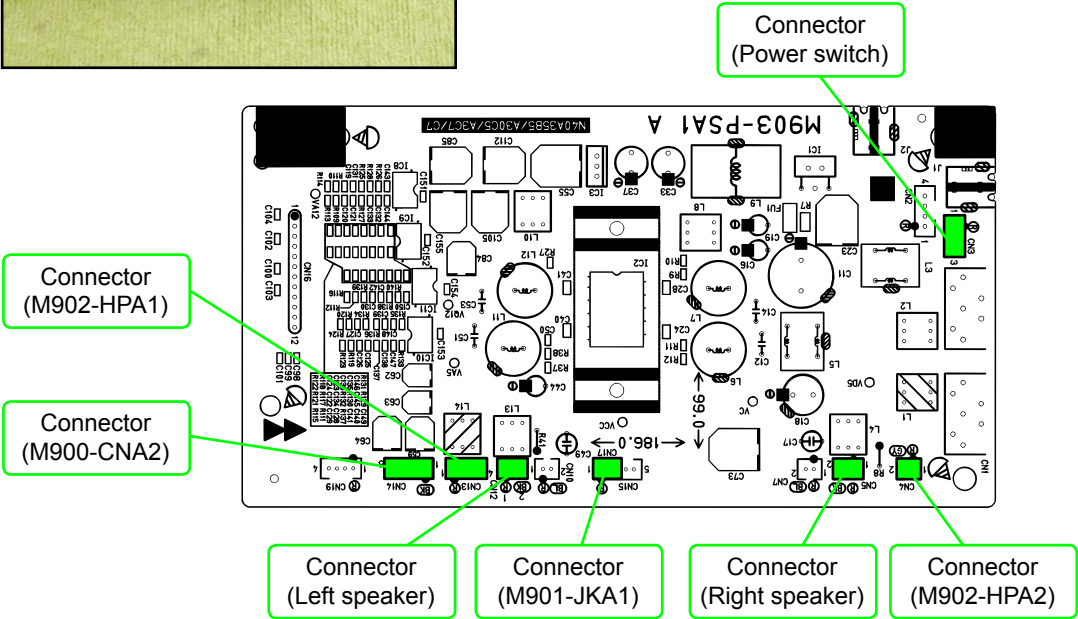
2. Undo four screws and then remove the M903-PSA1 PCB.
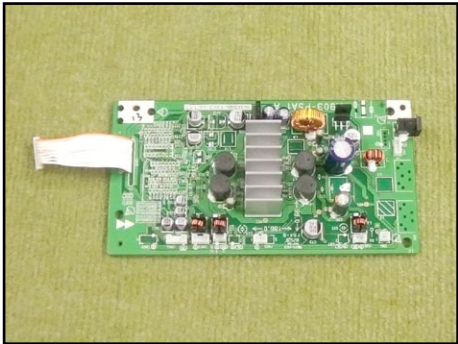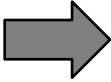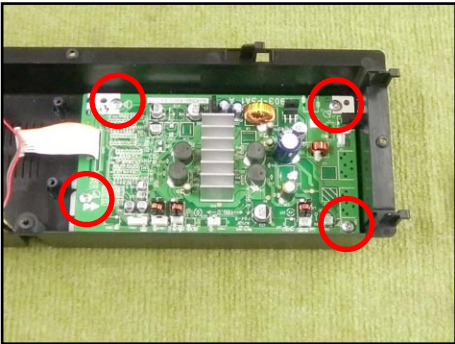
■ Removing the jack PCB (M901-JKA1)

1. Undo two nuts and then remove the M901-JKA1 PCB.
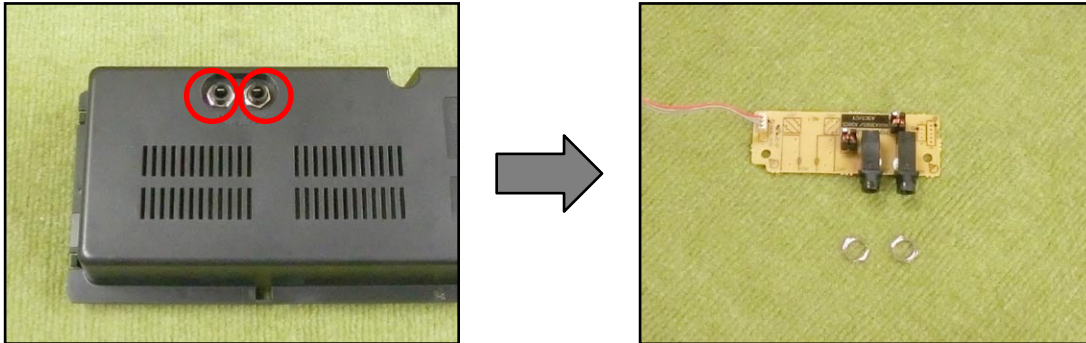
■ Removing the pedal connector

1. Peel the tape off.
   NOTE: The lead wires for the pedal connector are secured in place with securing bands under the tape.
2. Undo two screws on the pedal connector bracket.
   NOTE: The lead wires for the pedal connector run through the ferrite core. When reassembling, be sure to run the lead wire through the ferrite core.
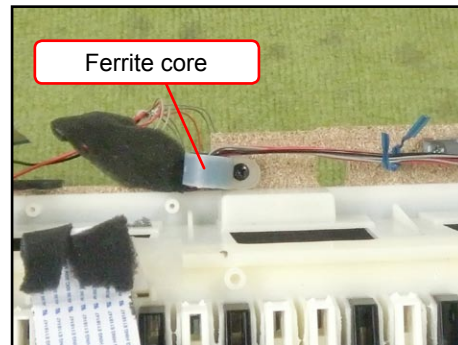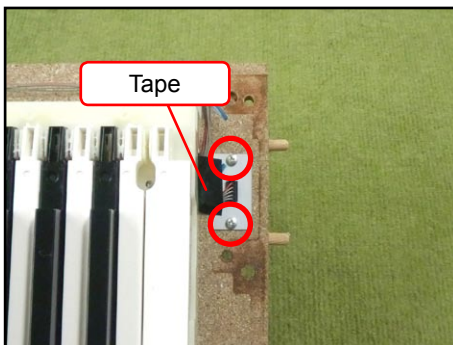
3. Remove the pedal connector from the bracket.
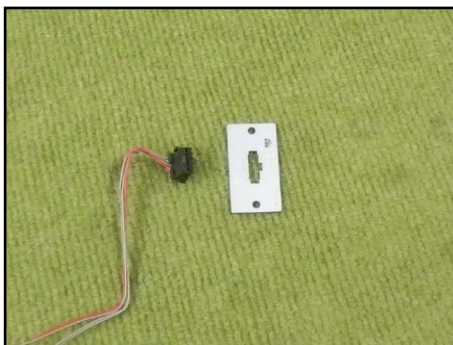
■ Removing the SIDE-BRACKET-ASSY

1. Undo four screws on the back surface of the unit.
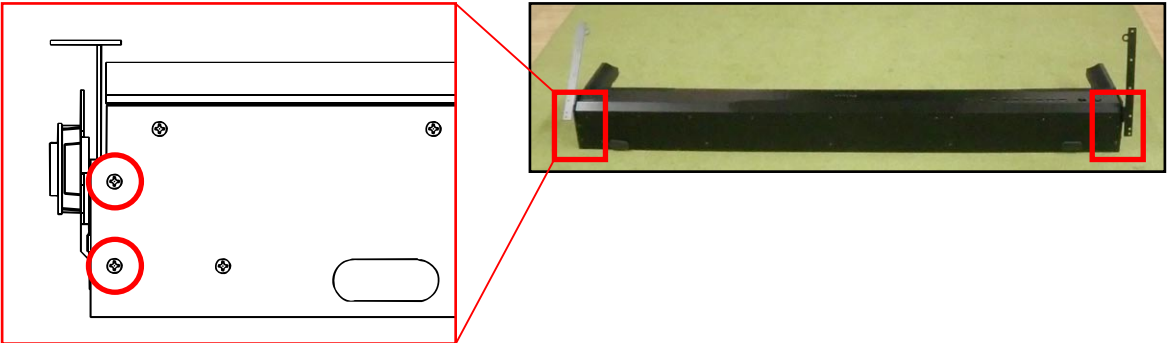
2. Undo two screws and then remove the SIDE-BRACKET-ASSY.
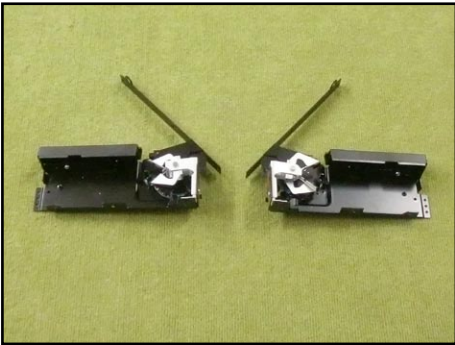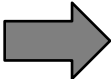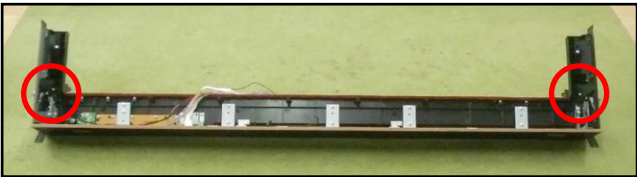
■ Removing the power switch

1. Undo two screws and then remove the power switch.
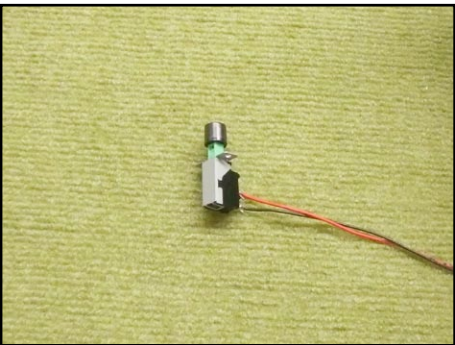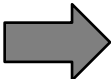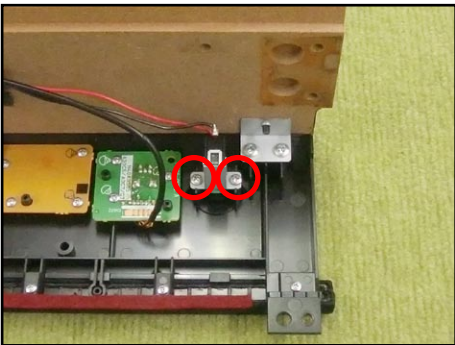
■ Removing the volume PCB (M900-CNA2)

1. Remove the volume knob.

2. Undo three screws and then remove the M900-CNA2 PCB.
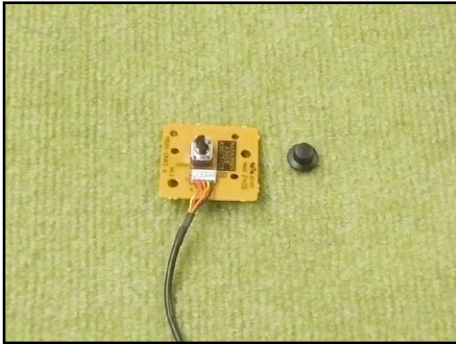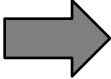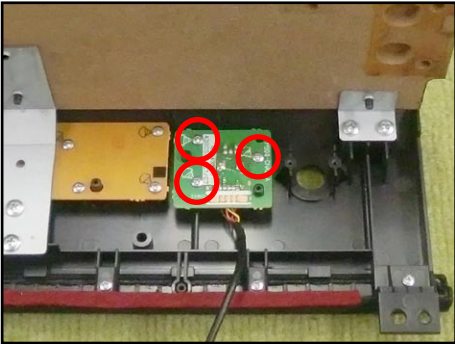
■ Removing the console PCB (M900-CNA1)

1. Undo three screws and then remove the bracket
   NOTE: You must remove some screws from the back surface of the panel unit.
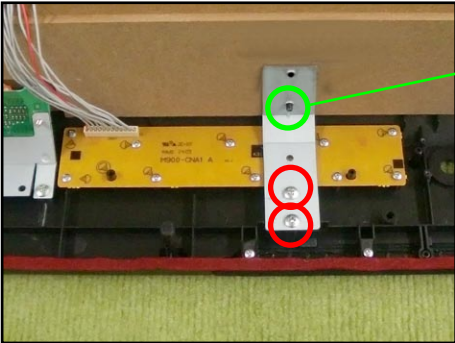
Screws in the back surface of the panel unit

2. Undo 10 screws and then remove the M900-CNA1 PCB.
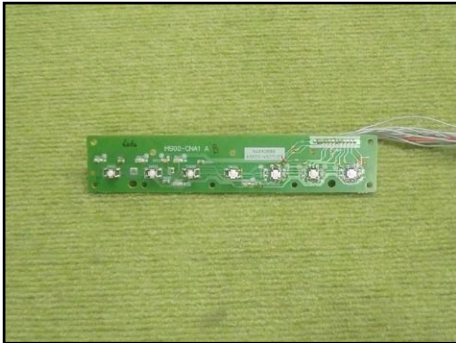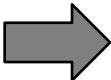
■ Removing the buttons

Once the M900-CNA1 is removed, you may disassemble the buttons, the LED cover, the LED spacer, and the nonwoven band.
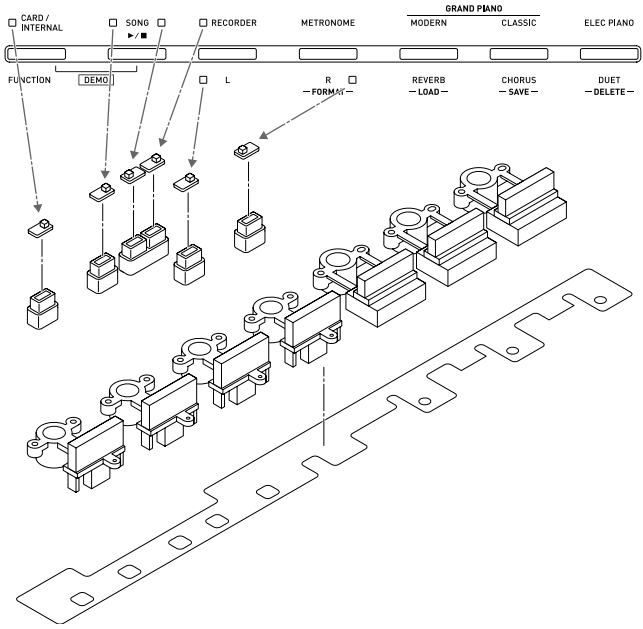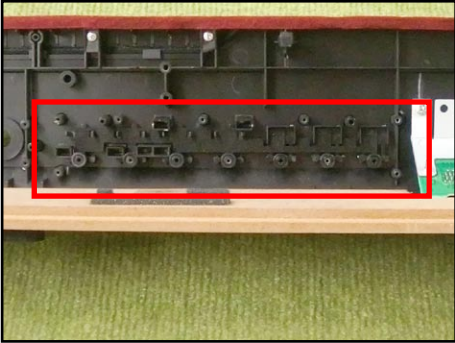
■ Removing the SD card PCB (M810-SDA1)
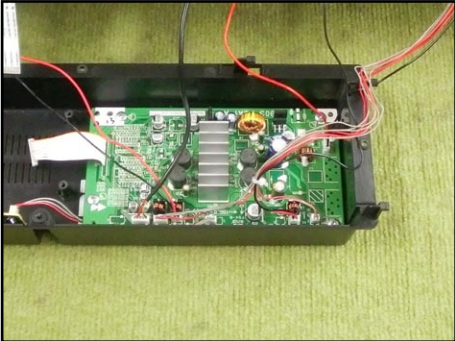
1. Undo two screws on the M810-SDA1 PCB bracket.
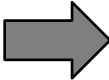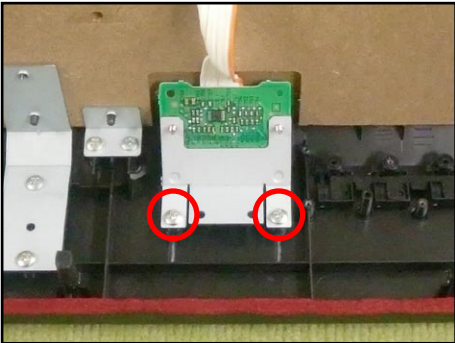
2. Undo two screws and then remove the M810-SDA1 PCB.
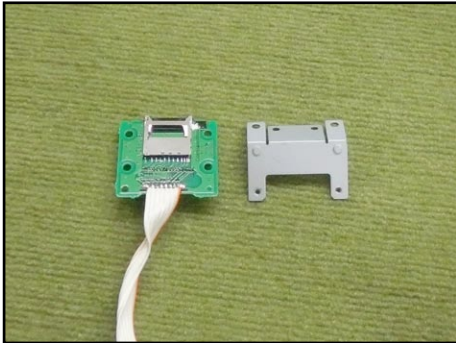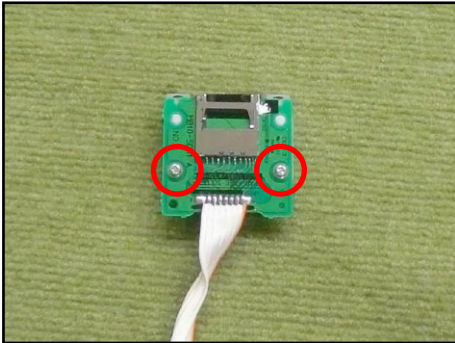
■ **Removing the jack PCB (M902-HPA1)**

1. Peel the tape off.

   NOTE: This tape secures the lead wires for the M902-HPA1 and M902-HPA2 PCBs and two securing bands. When assembling, similarly secure the lead wires with securing bands and then tape them in place.

2. Undo two screws and then remove the M902-HPA1 PCB.
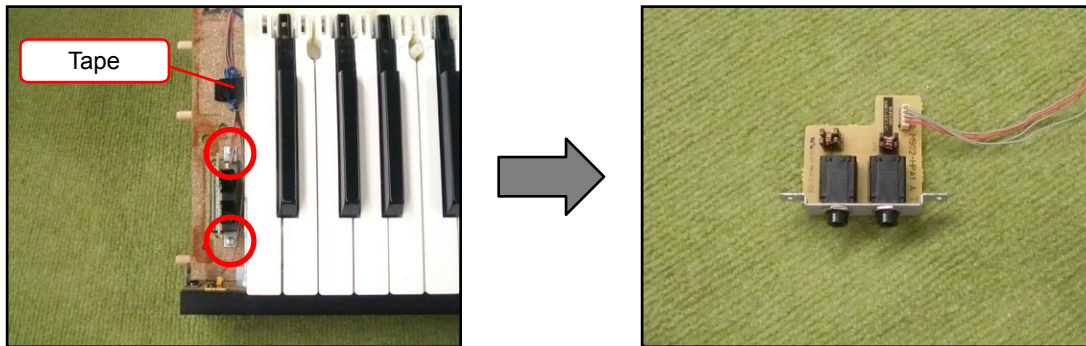
■ **Removing the power lamp PCB (M902-HPA2)**

1. Undo six screws and then remove the FRONT-BOARD-ASSY.
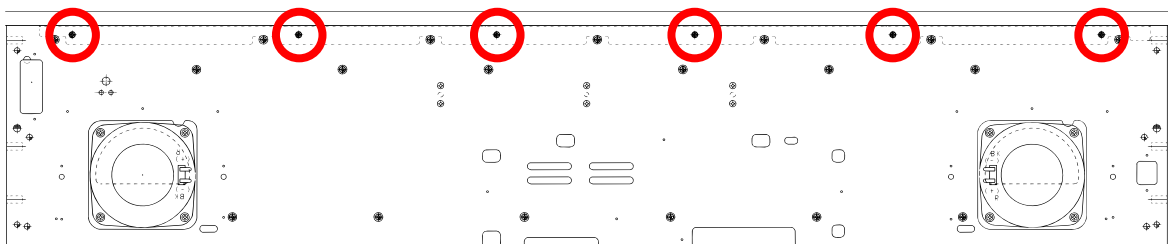
2. Undo two screws and then remove the M902-HPA2 PCB.
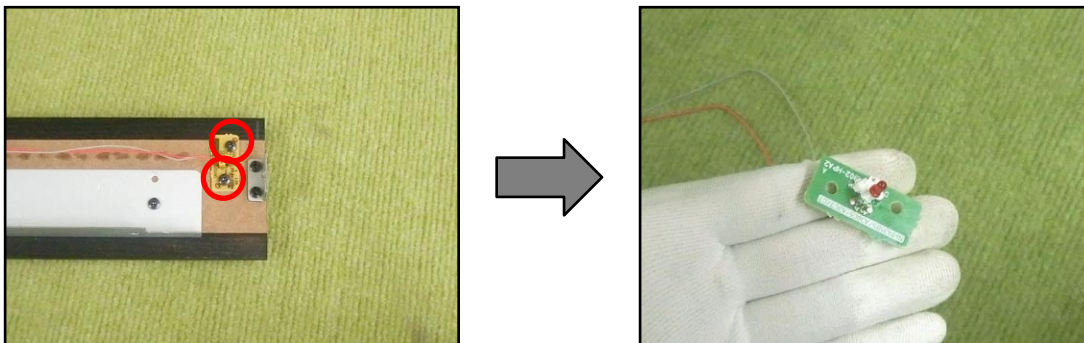
■ **Removing the speaker**

1. Undo seven screws and then remove the speaker box.
2. Undo four screws and then remove the speaker.
3. Similarly remove the other speaker.
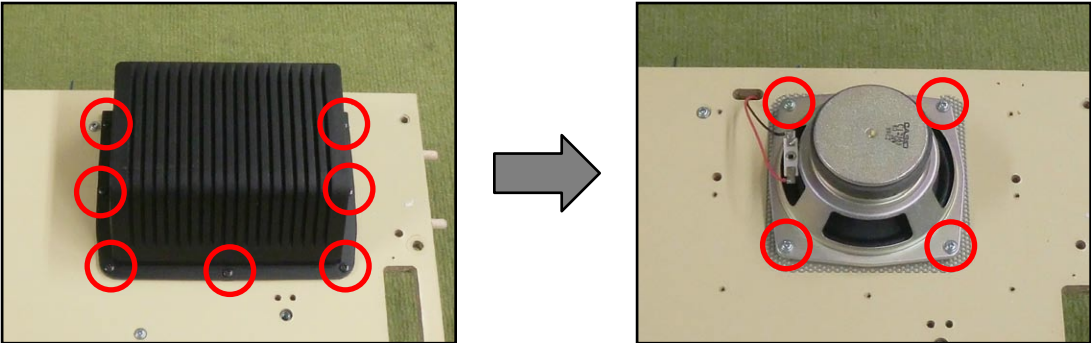
■ **Removing the KY-ASSY**

1. Undo 25 screws.
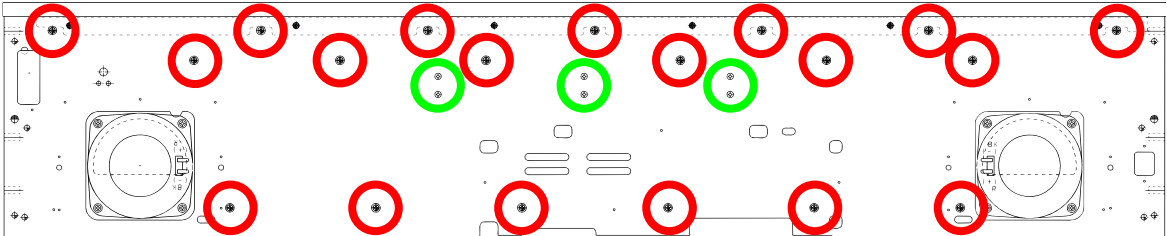
2. Undo three screws and then remove the KY-ASSY.

KY-ASSY
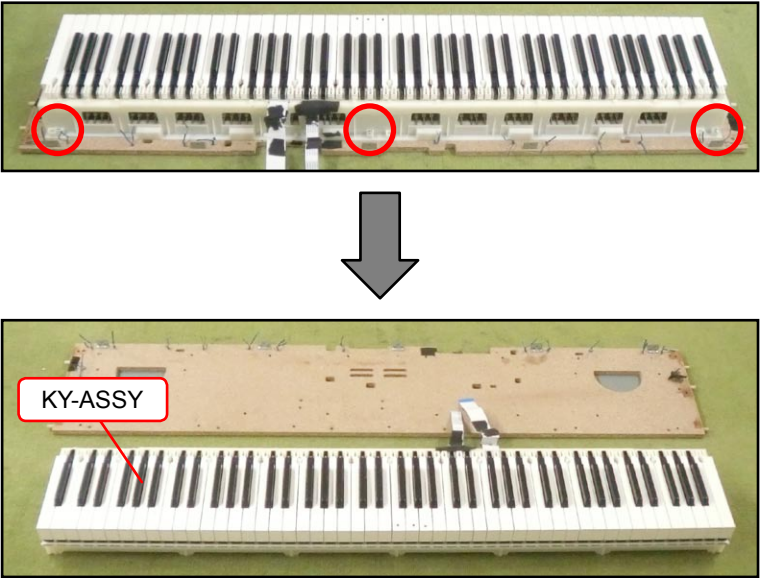
■ **Removing the keys**

<Removing the keys>

To remove the keys, you will need two of the tools described below.
Before removing a black key, you must first remove both white keys on either side of the black key.
White keys may be removed with the same procedures as removing black keys.

<Tool>

The tool used in the photos in this section was converted from a gardening ID tag. The size and shape of an ID tag accord to the dimensions below.

<Note on shaping an ID tag>

The thickness of the tool must be within 1.2~1.3 mm.
If the tool is too thin, removing keys become difficult.
If the tool is too thick, it may damage the rib of the chassis.

<Tool dimensions>

Width:
15~20 mm

R=2.75 mm

7 mm

Thickness:
within 1.2~1.3 mm

Use this part to
remove the key.
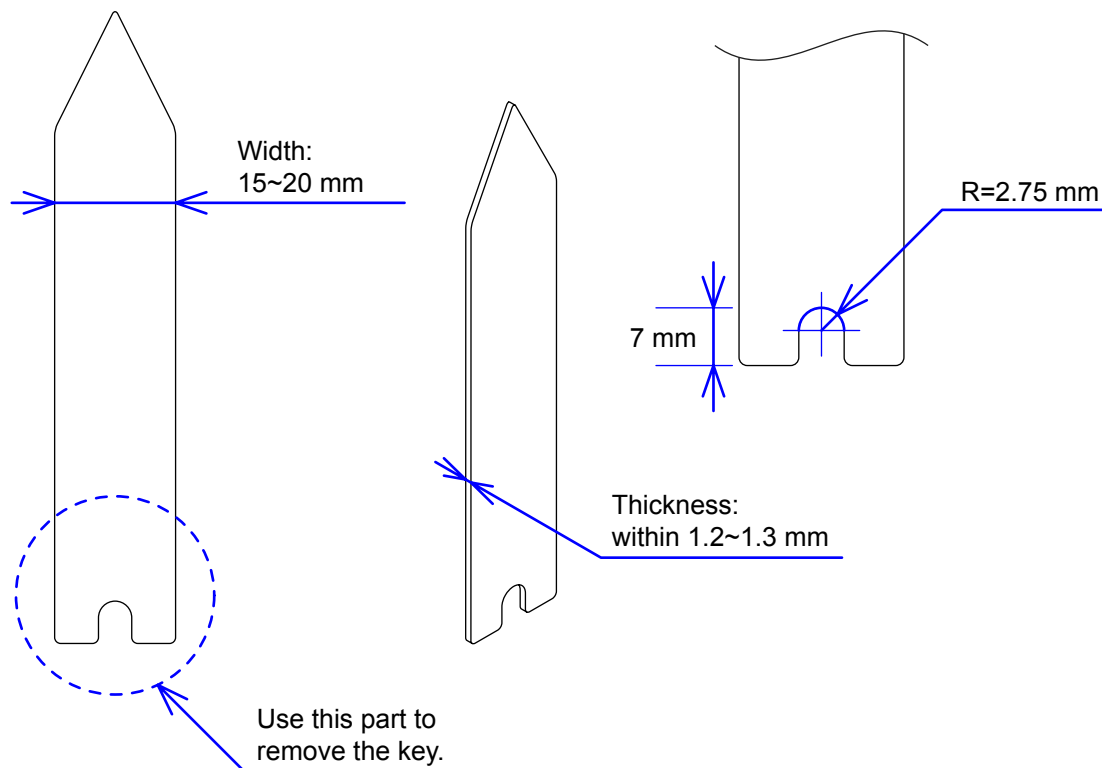
1. Insert the two tools between the rib of the chassis and a key.
2. When the tools are inserted to a certain depth, the key begins to be lifted and can then be removed.

<Cross-section image>

Tool

Rib of the chassis

Key

Tools

Chassis

<Installing the keys>
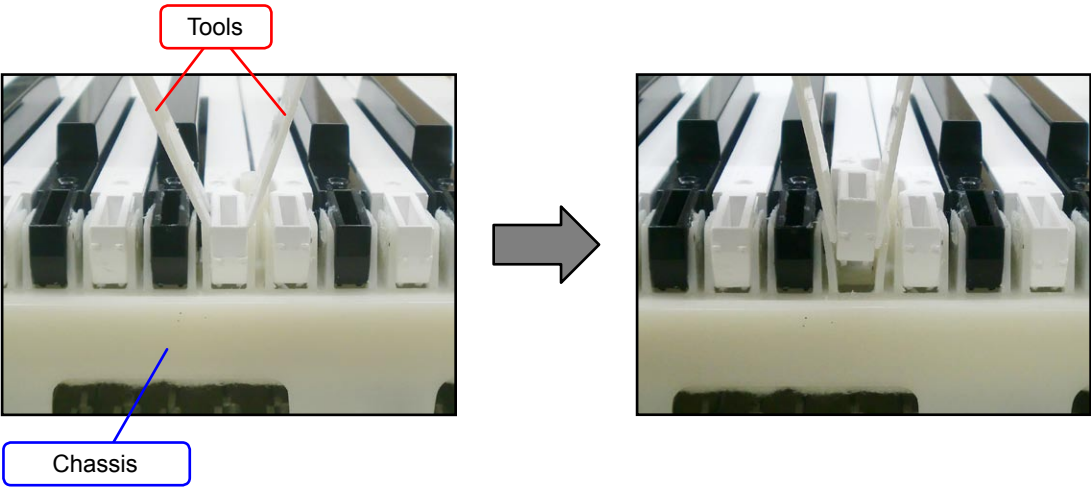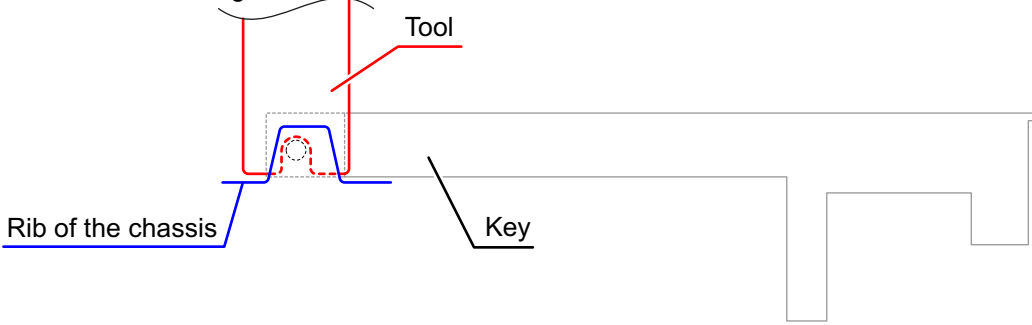
Refer to the illustration below for the location of each white key.

Be sure to install each key at its designated location.

All black keys are the same. A black key may be installed at any correct black-key location.

A code is indicated at the foot of each key.

SA	C	E	G	B	D	F	A	C	E	G	B	D	F	A	C	E	G	B	D	F	A	C	E	G	B
	B	D	F	A	C	E	G	B	D	F	A	C	E	G	B	D	F	A	C	E	G	B	D	F	A	SC
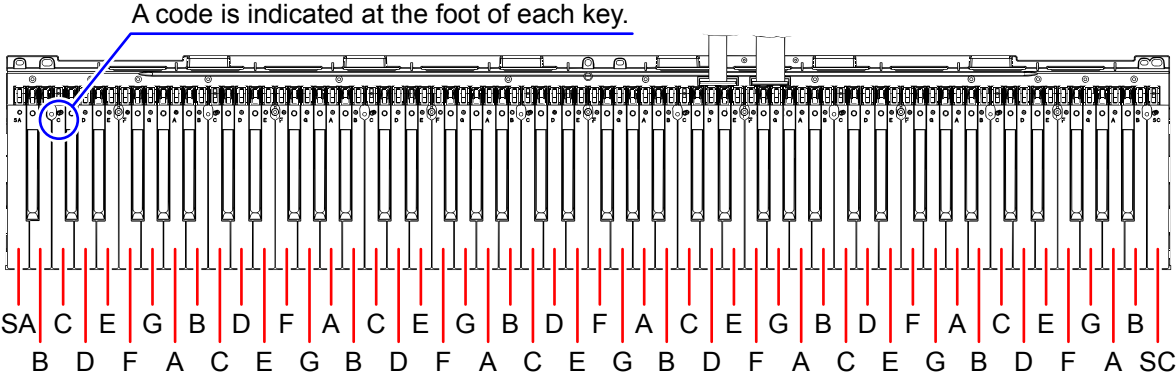
Install a black key before installing the white keys on either of its sides.

Follow the same procedures below to install a black or white key.

1. Assemble a key to a hammer.
2. Press the protrusion of the chassis firmly into the keyhole.
3. Press the key to see if it moves properly.

Set securely into the chassis.

Assemble a key to a hammer.

– 30 –
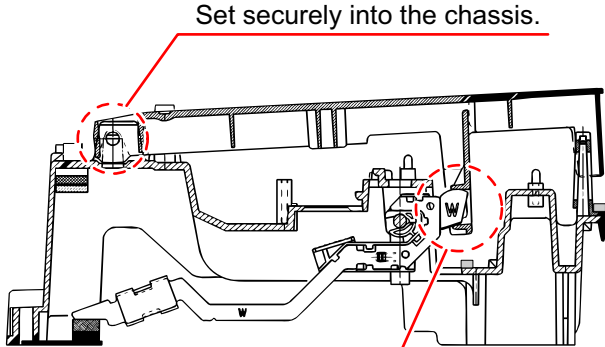
■ Removing the hammers

1. Place the chassis upside down so that the hammers are visible.
2. Press the chassis with the tip of tweezers.
3. While catching a hammer with tweezers, set the tweezers against the resin part of the chassis.
4. Using the chassis-tweezer contact as a fulcrum point, press down against the resin part in the direction of the red arrow in the illustration below, and then disengage the hammer.
   NOTE: You must press the resin part of the hammer.
   NOTE: Pressing on the metal part of the hammer may damage the area connected to the resin.

Fulcrum point

Press down the resin part.

Tweezers

<About the hammers>
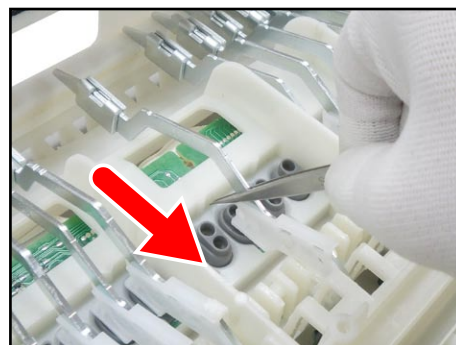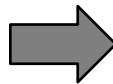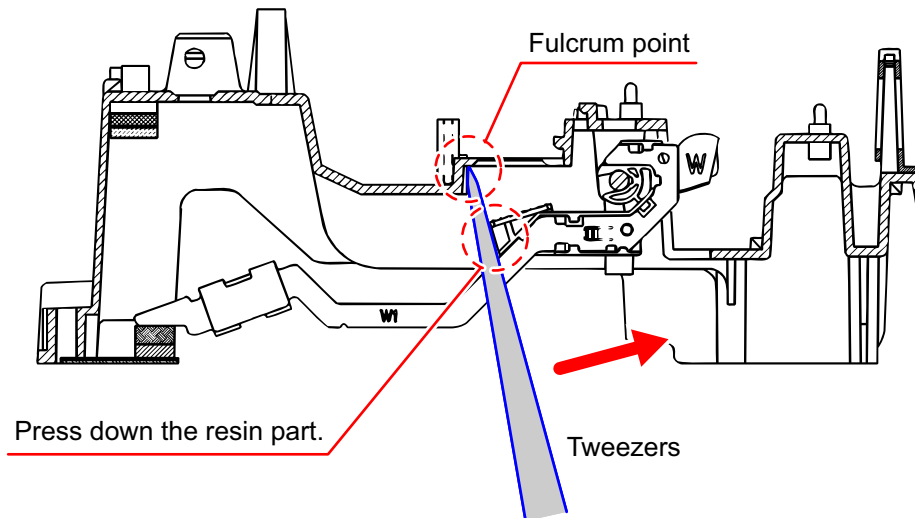
There are several kinds of hammers.

The type of a hammer may be identified by the code engraved on it.

Type of Hammer (for a white key)

Hammer Code (for a white key)

Type of Hammer (for a black key)

Hammer Code (for a black key)
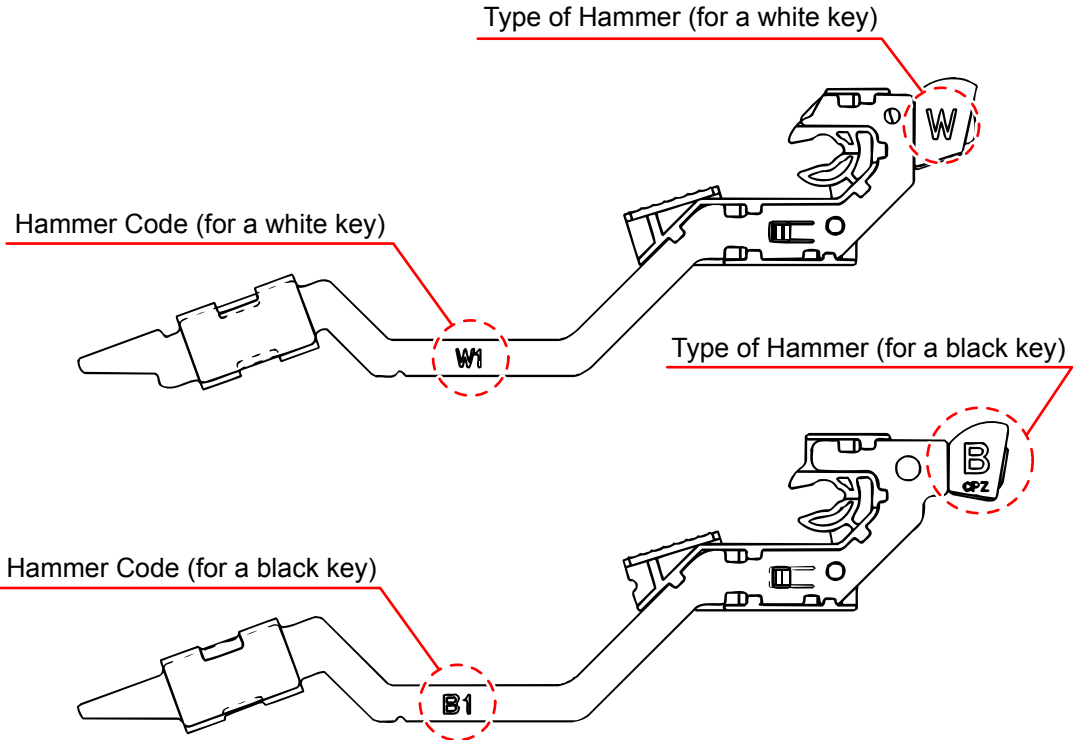
Type of Hammer: "W" for a white key, "B" for a black key.

Hammer Code: The hammers for white keys are coded W1, W2, W3, and W4.

The hammers for black keys are coded B1, B2, B3, and W4.

<Location to install the hammer>

A hammer must be installed at the correct location according to its type.

The combination of hammers and keys are shown below.

<Hammers for black keys>

B1 (9 keys)   B2 (9 keys)   B3 (9 keys)   B4 (9 keys)

W1 (13 keys)   W2 (13 keys)   W3 (13 keys)   W4 (13 keys)

<Hammers for white keys>

\<Installing the hammers\>
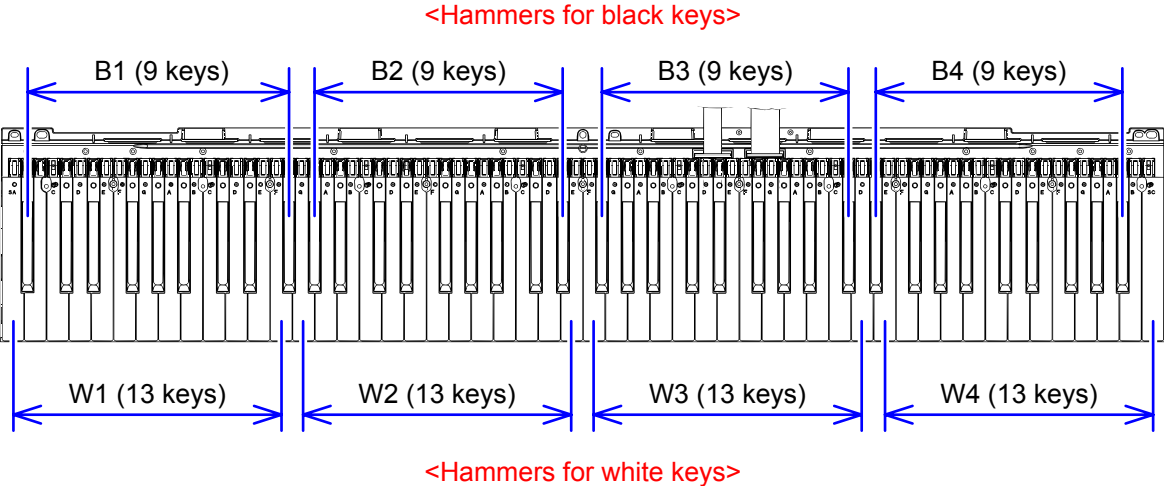
Be sure to install each hammer at its designated location. If a hammer does not move smoothly, check if it is installed at the correct location.

Follow the same procedures shown below to install a hammer for both black and white keys.

1. Use the tweezers to set a hammer at its correct location.
2. Press the chassis with the tip of tweezers.
3. Using the chassis-tweezers contact as a fulcrum point, press down the metal part of the hammer in the direction of the red arrow in the illustration below, and then install the hammer.

Fulcrum point

Locked at this point

Press down against the metal part.

Tweezers
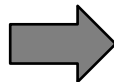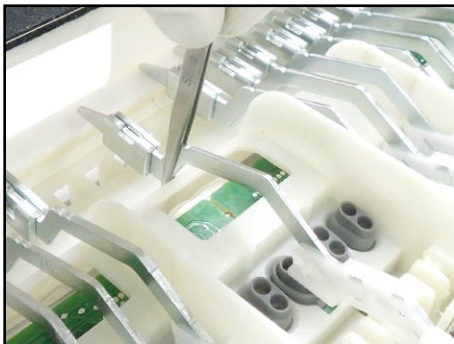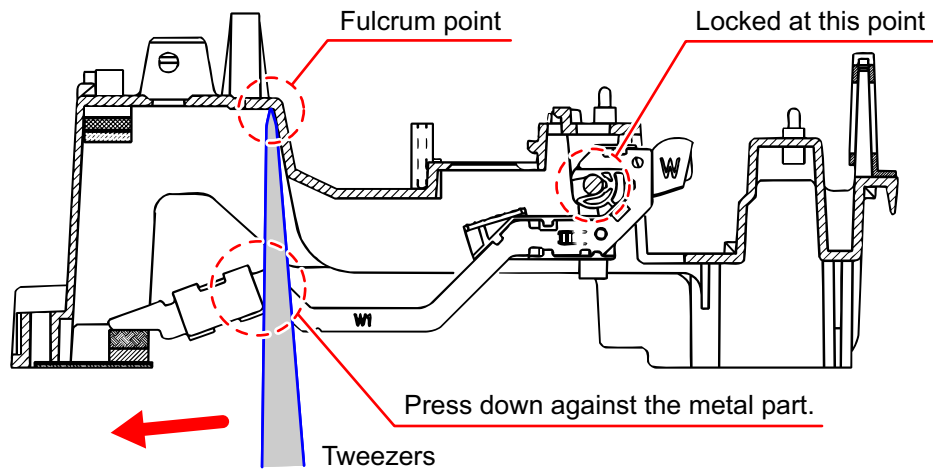
■ Removing the keyboard PCBs (MACP-KYC1/KYC2, KYD1)

1. Remove eight rubber keys.
   NOTE: One rubber key is shorter than the others.

Rubber keys

Short rubber key

Rubber keys

Short rubber key
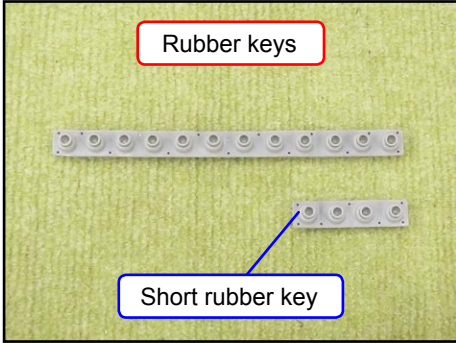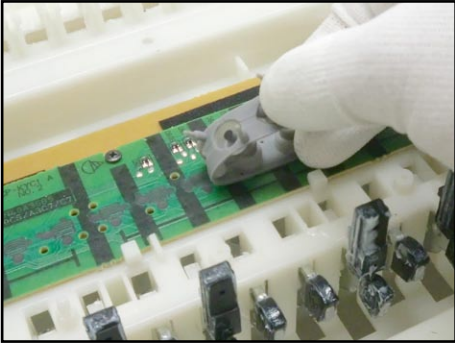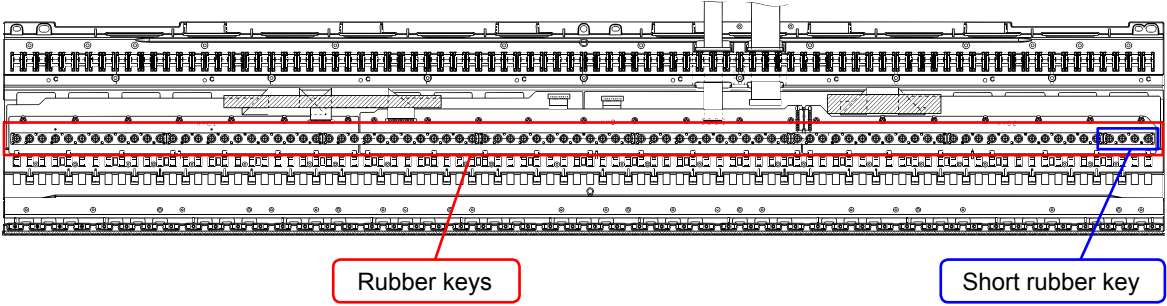
2. Remove the nonwoven tape.
3. Remove 23 screws.

Nonwoven tape

MACP-KYC1 PCB

MACP-KYD1 PCB
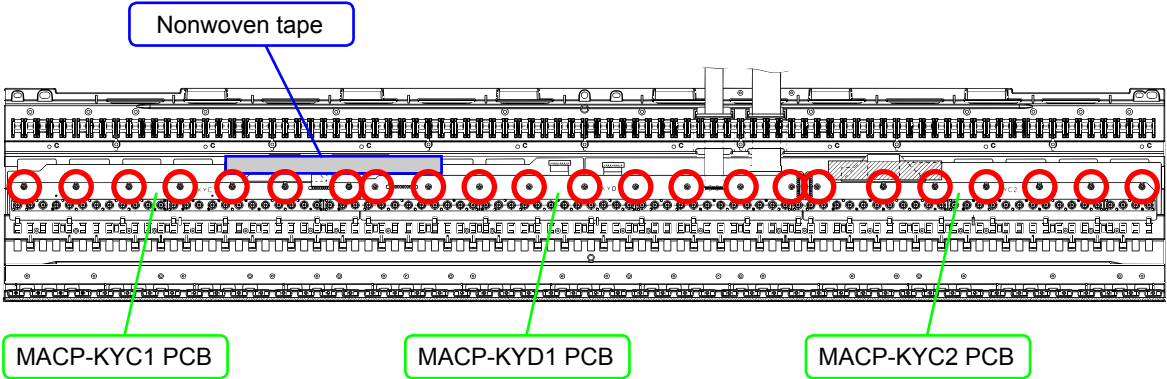
MACP-KYC2 PCB

4. Locate the FFC connected on the back of the MACP-KYD1 PCB. Unlock the connector to remove the FFC, and then disengage the MACP-KYC1 PCB, the KYC2 PCB, and the MACP-KYD1 PCB.

<Installing the keyboard PCBs (MACP-KYC1/KYC2, KYD1)>
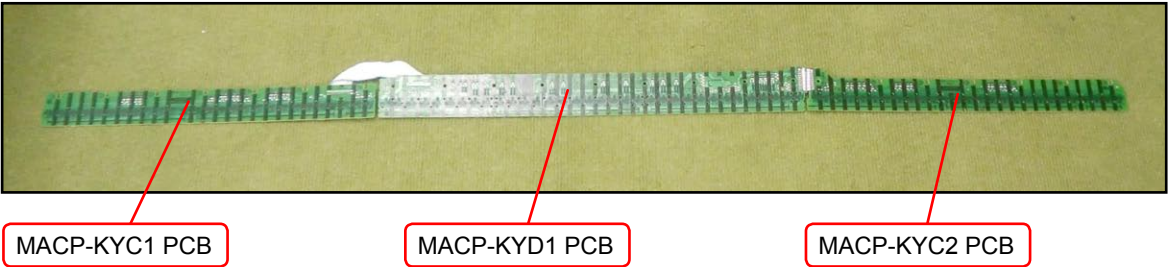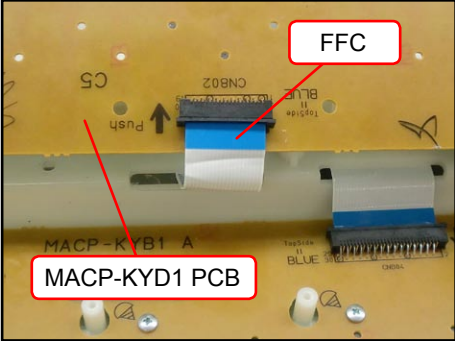
1. Connect the FFC to the MACP-KYD1 PCB and lock the connector.
    Be sure to connect it securely.
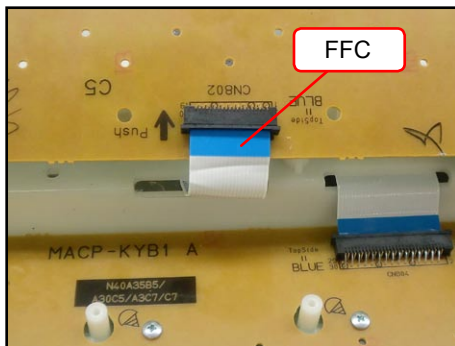
2. Install eight rubber keys.
    Be sure to install the short rubber key at the correct location.
    Lightly insert the tip of a rubber key into the PCB first, and then, press it in using the end of a paper clip. Do not press the rubber key forcefully to avoid damaging the rubber key.
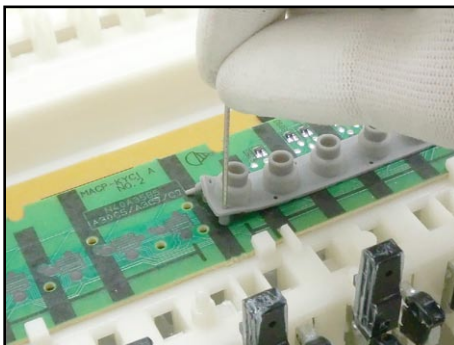
3. Secure the MACP-KYC1 PCB, the KYC2 PCB, and the MACP-KYD1 PCB with 23 screws.
    Press the PCBs lightly in the direction of the red arrow in the illustration below while tightening a screw.
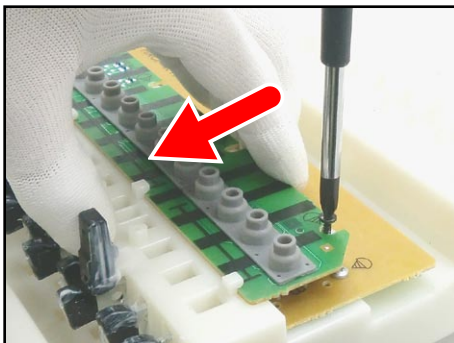
■ Removing the keyboard PCBs (MACP-KYA1/KYA2, KYB1/KYB2)

1. Remove the nonwoven tape. Unlock the connector and disengage the FFC connecting the MACP-KYA2 PCB and the MACP-KYB1.

Nonwoven tape   FFC

MACP-KYA1 PCB   MACP-KYA2 PCB   MACP-KYB1 PCB   MACP-KYB2 PCB
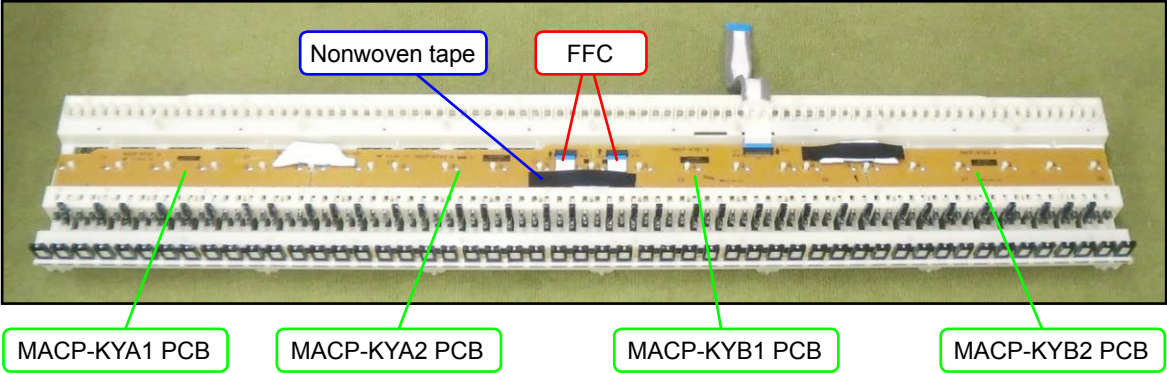
2. Remove 26 screws.
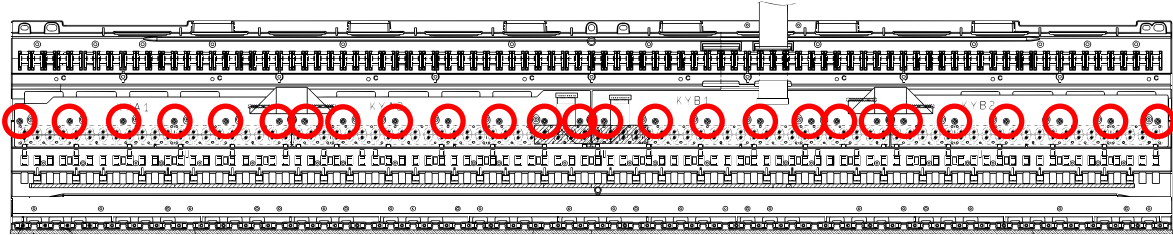
3. Unlock the connector and disengage the FFC connected to the MACP-KYB1 PCB.
    NOTE: When removing the FFC, be careful not to pull it too much in the direction of the red arrow in the illustration, or the PLATE on the back may come loose.

FFC

MACP-KYB1 PCB
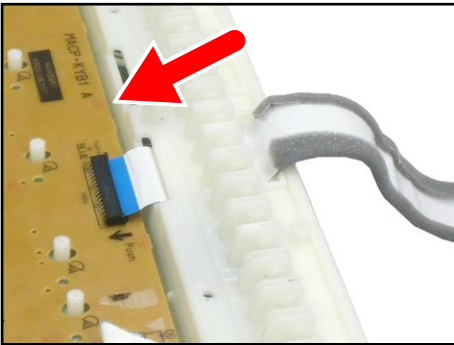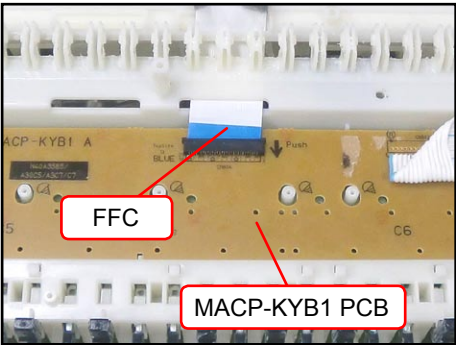
<If the PLATE comes off>
The PLATE is a transparent plastic plate. If the plate comes off, put it on the place where the FFC is, and insert its end into place where the blue line is shown in the image.
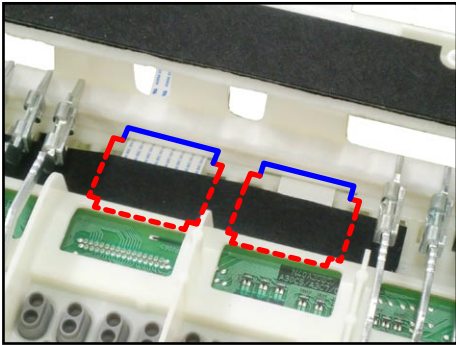
4. Remove the keyboard PCBs (MACP-KYA1/KYA2, KYB1/KYB2).

MACP-KYA2 PCB   MACP-KYA1 PCB

MACP-KYB2 PCB   MACP-KYB1 PCB

5. Remove eight rubber keys.
    NOTE: One rubber key is shorter than the others.

Rubber keys   Short rubber key

Rubber keys

Short rubber key

<Installing the keyboard PCBs (MACP-KYA1/KYA2, KYB1/KYB2)>
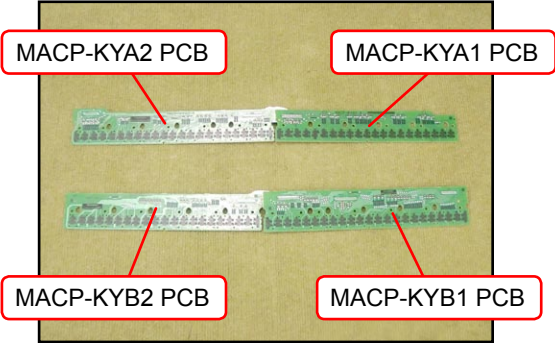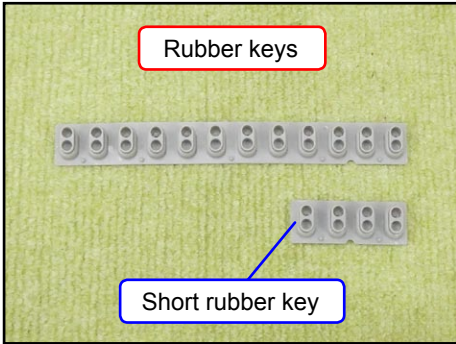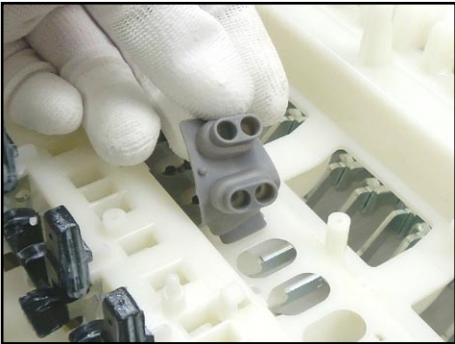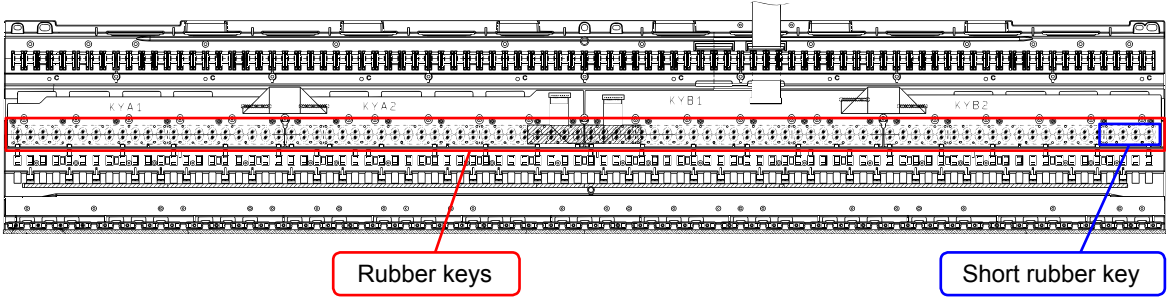
1. Place eight rubber keys on the chassis.
   Be sure to place the short rubber key in the correct location.
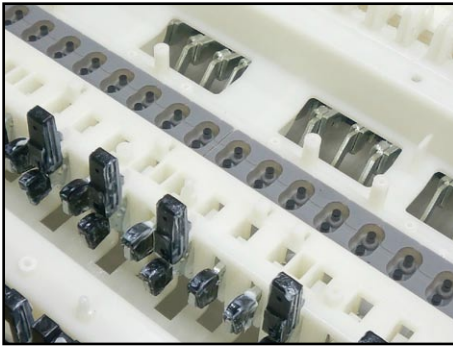
2. Connect the FFC to the MACP-KYB1 PCB and lock the connector.
   NOTE: When connecting the FFC, be careful not to pull it too much in the direction of the red arrow in the illustration, or the PLATE on the back may come loose.

FFC
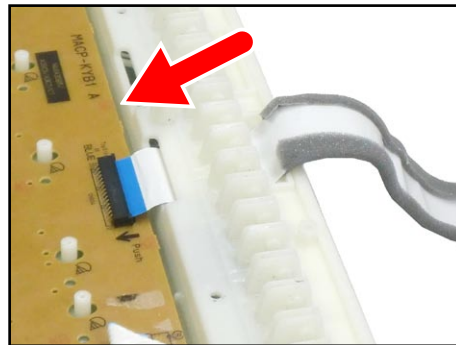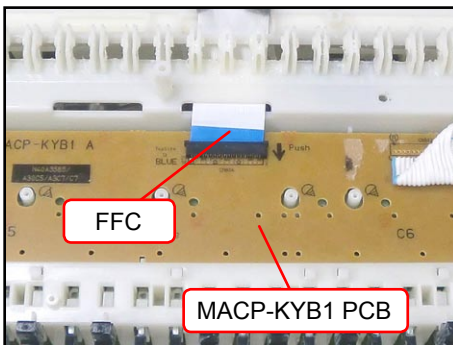
MACP-KYB1 PCB

<If the PLATE comes off>
The PLATE is a transparent plastic plate. If the plate comes off, put it on the place where the FFC is, and insert its end into place where the blue line is shown in the image.
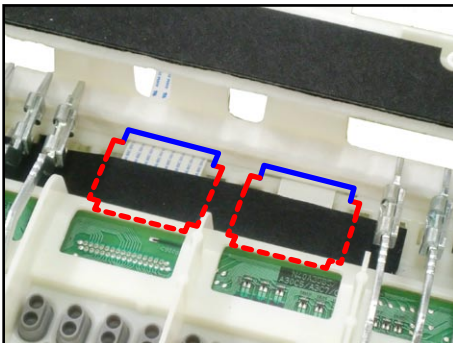
3. Insert the MACP-KYA1/KYA2 PCB and MACP-KYB1/KYB2 PCB at an angle against the chassis, and place them while paying attention not to misalign the rubber keys.
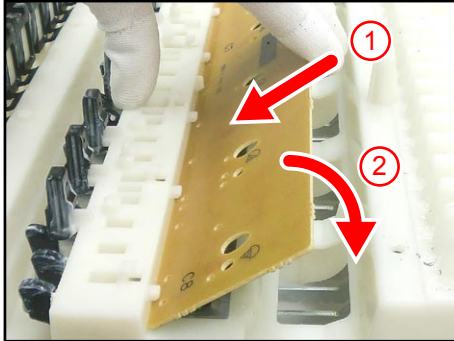
4. While placing the PCBs, the contact with the rubber keys may come out of alignment. Align them against the red dotted line in the illustration below, lift the PCB once in the direction of the red arrow, and then place them again.
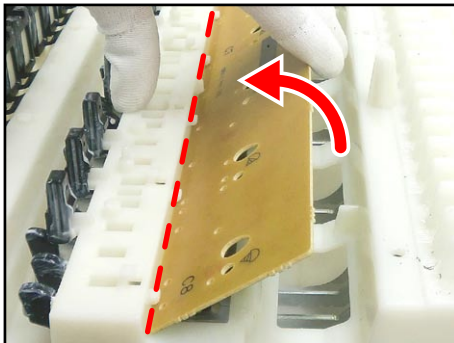
5. Secure the MACP-KYA1/KYA2 PCBs, and the MACP-KYB1/KYB2 PCBs with 26 screws. Press the PCBs lightly in the direction of the red arrow in the illustration below while tightening a screw.

DIAGNOSTIC PROGRAM

■ Initial Setting

1. Connect the AC adaptor.
2. Connect the pedal.
   Even if a pedal unit is unavailable for the test, all the tests except for the pedal check may be performed.
3. "Main" volume: MAX
4. Have a PC and a USB cable ready. (They will be used in the USB check.)
   Operating System: Windows® XP (SP2 or later) *1
   Windows Vista® *2
   Mac OS® X (10.3.9, 10.4.11 or later, 10.5.6 or later)
   *1: Windows XP Home Edition/Windows XP Professional (32 bit)
   *2: Windows Vista (32 bit)

■ How to start the diagnostic program

1. Hold down the "METRONOME", "RECORDER", and "SONG (▶/■)" buttons at the same time, to turn the power ON.
2. Release the "METRONOME", "RECORDER", and "SONG (▶/■)" buttons.
3. After the diagnostic program is launched, Automatic Test will start.
   Select Sequential Test or Single Test after Automatic Test is completed.

Be sure to turn off the power when the test is finished.

■ Test Items

This diagnostic program tests the following items.
Selecting the "2. Model check" will run Test 2 (Model check) through 9 (Key check) in sequence.
The "10. Flash Memory check" is a single test. (see page 47)

No.	Test Items	Note
1	Automatic Test	RAM, ROM, LED (Performed at the launch of the diagnostic program)
Sequential Test		
2	Model check	
3	ROM Version check	Internal, External
4	Button check	
5	Pedal check	Pedal
6	Headphones check	Headphones
7	USB check	PC, USB cable
8	SD Card check	SD Card
9	Key check	
Single Test		
10	Flash Memory check	

■ Diagnostic program

1. Automatic Test

Automatic Test is performed each time the diagnostic program is launched.

1. RAM check and ROM check are performed.
   If a test fails, the "SONG (▶/■)" LED or the "L/R" LED illuminates.
2. LED check is performed.
   The confirmation chords C4, E4, G4 sound, and the LEDs illuminate in the order indicated with the blue arrow as shown in the illustration below.
   The LEDs illuminate repeatedly until the "2. Model check" is performed.
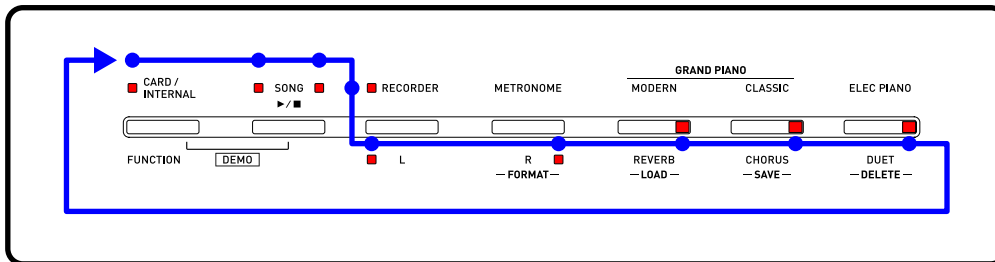
2. Model check

1. Press the "FUNCTION" button to perform the "MODEL check".
   The confirmation chords C4, E4, G4 sound.
   If the model is PX-830BP, the "MODERN" LED flashes.

3. ROM Version check (Internal/External)

The numbers necessary in the ROM version check are expressed by the combination of the illuminated LEDs.
<Combinations of LEDs>

0: All LEDs OFF	5: "ELEC PIANO" + "MODERN" LED
1: "ELEC PIANO" LED	6: "MODERN" + "CLASSIC" LED
2: "CLASSIC" LED	7: "MODERN" + "CLASSIC" + "ELEC PIANO" LED
3: "ELEC PIANO" + "CLASSIC" LED	8: "RECORDER" LED
4: "MODERN" LED	9: "ELEC PIANO" + "RECORDER" LED

1. Press "FUNCTION" button to perform the "ROM Version check (Internal)". The confirmation chords C4, E4, G4 sound.
    The "ELEC PIANO", "CLASSIC", "MODERN", "RECORDER" LEDs illuminate and the "L" LED flashes while on stand-by.
    NOTE: If you don't wish to perform the "ROM version check (Internal)", go on to the step (3).
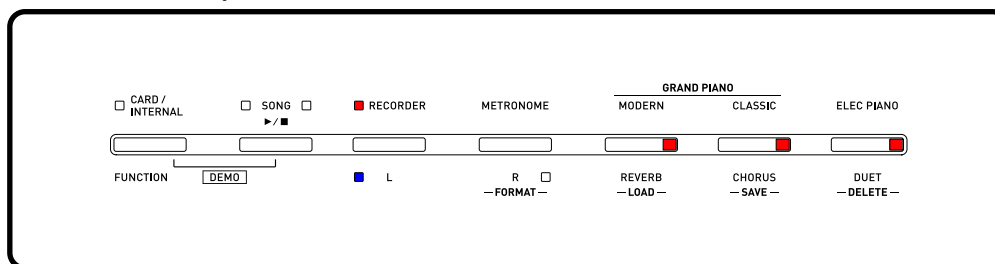
    <LEDs on stand-by>

2. Each time you press the "SONG (▶/■)" button, the status of the LEDs changes.
    Check to see if the LEDs illuminate in the order shown below.
    Internal ROM (0100): 0 → 1 → 0 → 0 → Stand-by mode

Sequence	Display	LED status
1	(0)	All LEDs OFF
2	(1)	"ELEC PIANO" LED
3	(0)	All LEDs OFF
4	(0)	All LEDs OFF
5	—	Stand-by status as in Step 1

    * While the internal ROM version is indicated, the "L" LED keeps flashing.

3. Press "FUNCTION" button to perform the "ROM Version check (External)". The confirmation chords C4, E4, G4 sound.
   The "ELEC PIANO", "CLASSIC", "MODERN", "RECORDER" LEDs illuminate and the "R" LED flashes while on stand-by.
   NOTE: If you don't wish to perform the "ROM version check (External)", go on to the step (1) of the "4. Button check".
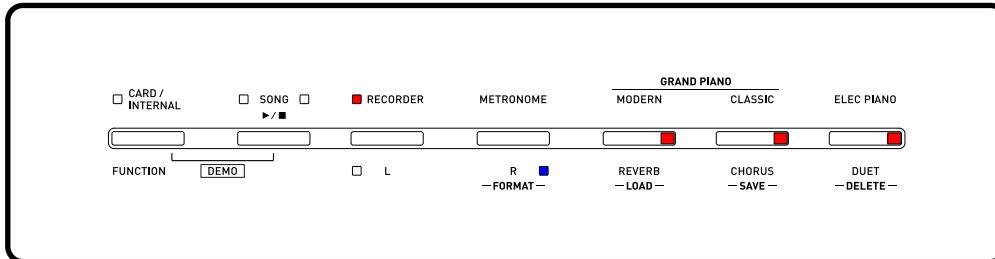
   <LEDs on stand-by>

4. Each time you press the "SONG (▶/■)" button, the status of the LEDs changes.
   Check to see if the LEDs illuminate in the order shown below.
   External ROM (0100): 0 → 1 → 0 → 0 → Stand-by mode

Sequence	Display	LED status
1	(0)	All LEDs OFF
2	(1)	"ELEC PIANO" LED
3	(0)	All LEDs OFF
4	(0)	All LEDs OFF
5	—	Stand-by status as in Step 3

   NOTE: While the external ROM version is indicated, the "R" LED keeps flashing.

4. Button check

1. Press the "FUNCTION" button to perform the "BUTTON check".
   The confirmation chords C4, E4, G4 sound, and all LEDs turn off.
2. Press the buttons in the order indicated in the illustration on the bottom.
   Each time the button is pressed, the confirmation chord C6 sounds.
   If a button is not operating properly or a button is pressed in a wrong order, an error tone (F2) sounds.
   NOTE: You cannot cancel this test procedure mid-way.
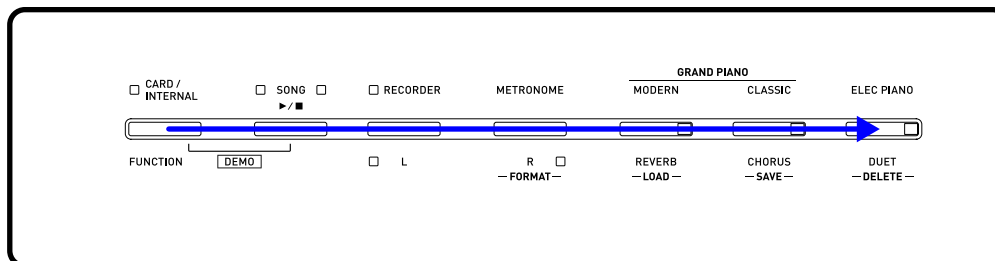
3. When the "ELEC PIANO" button is pressed at the end, the confirmation chords C4, E4, G4 sound and all LEDs turn off.

5. Pedal check

<About the pedal unit>
If there is no pedal unit for testing, go on to the "6. Headphones check".

1. Press the "SOFT" pedal.
   The confirmation chord E4 sounds and the "MODERN" LED lights.
2. Press the "SOSTENUTO" pedal.
   The confirmation chord G4 sounds and the "CLASSIC" LED lights.
3. Press the "DAMPER" pedal (ON HALF).
   The confirmation chord C4 sounds and the "ELEC PIANO" LED flashes.
4. Press the "DAMPER" pedal firmly (ON FULL).
   The confirmation chord C4 sounds and the "ELEC PIANO" LED lights.

6. Headphones check

1. Press "FUNCTION" button to perform the "Headphones check".
   The confirmation chords C4, E4, G4 sound and the "L" LED lights.
2. Connect the headphones to the jack in the front of the main unit.
   The "L" LED turns off and the "R" LED illuminates.
3. Check to see if you can hear test sound from the headphones by pressing the "A4" key.
4. Remove the headphones from the jack.
   The "R" LED turns off and the "L" LED illuminates.
5. Connect the headphones to the jack in the back of the main unit.
   The "L" LED turns off and the "R" LED illuminates.
6. Check to see if you can hear test sound from the headphones by pressing the "A4" key.
7. Remove the headphones from the jack.
   The "R" LED turns off and the "L" LED illuminates.

7. USB check

1. Press the "FUNCTION" button to perform the "USB check".
   The confirmation chords C4, E4, G4 sound.
2. Connect PX-830BP to the PC with a USB cable.
3. Press "MODERN" button.
   When the USB check completes, the "R" LED will light and the confirmation chord C6 sounds.
4. Disconnect the USB cable.

8. SD Card check

1. Press the "FUNCTION" button to perform the "SD Card check".
2. Insert an SD card into the SD card slot.
3. Press the "MODERN" button.
   When the SD Card check completes, the "R" LED will light and the confirmation chord C6 sounds.
4. Remove the SD card.

9. Key check

1. Press the "FUNCTION" button.
   The confirmation chords C4, E4, G4 sound.
2. Press the "FUNCTION" button.
   The confirmation chords C4, E4, G4 sound twice.
3. Press the "FUNCTION" button to perform the "Key check".
4. Confirm that a test tone (approx. 500 Hz) sounds from the left speaker while a key is pressed half way.
   Check all white and black keys.
5. Confirm that a test tone (approx. 500 Hz) sounds from the left speaker and a high-pitched test tone
   (approx. 2 kHz) sounds from the right speaker while a key is pressed completely.
   Check all white and black keys.
6. Press the "POWER" button to turn off the power.

10. Flash Memory check

1. Boot the diagnostic program.
2. Hold down the "ELEC PIANO" button for 2 seconds.
   The "ELEC PIANO" LED illuminates instantaneously, and the confirmation chords C4, E4, G4 sound.
3. Press the "POWER" button to turn off the power.

Operation after replacing the main PCB or the keyboard parts

Make sure to perform the following procedure after replacing the main PCB or the keyboard parts. Applicable parts number on the Parts List: No.1 for the main PCB, No. 53 to 85 for the KY-ASSY or the KY-ASSY component parts

Procedure
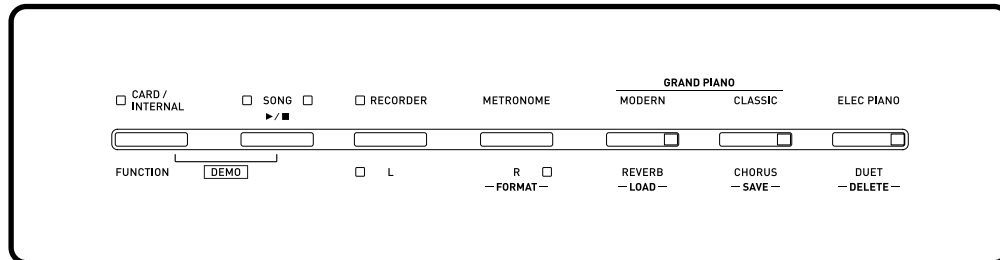
1. Hold down the "FUNCTION", "METRONOME", and "ELEC PIANO" buttons at the same time, to turn the power ON.
   All LEDs are lit.

2. Release the "FUNCTION", "METRONOME", and "ELEC PIANO" buttons.
   All the LEDs turn off except "L" and "R" LEDs.

3. Press the "METRONOME" button.
   The "R" and "MODERN" LEDs are lit.

4. Press the "MODERN" button.
   The "R" and "CLASSIC" LEDs are lit.

5. Press the "CLASSIC" button.
   The "R" and "ELEC PIANO" LEDs are lit.

6. Press the "ELEC PIANO" button.
   The LEDs on both side of the "SONG (▶/■)" mark, the "R" LED, and the "ELEC PIANO" LED are lit.

7. Press the "RECORDER" and "METRONOME" buttons at the same time.

8. Press the "POWER" button to turn off the power.

EXPLODED VIEW

The control panel labels visible in the diagram include:

CARD / INTERNAL
SONG
RECORDER METRONOME GRAND PIANO
MODERN CLASSIC ELEC PIANO
FUNCTION DEMO
L R REVERB CHORUS DUET
RPT/A-B —LOAD— —SAVE— —DELETE—

PriviA
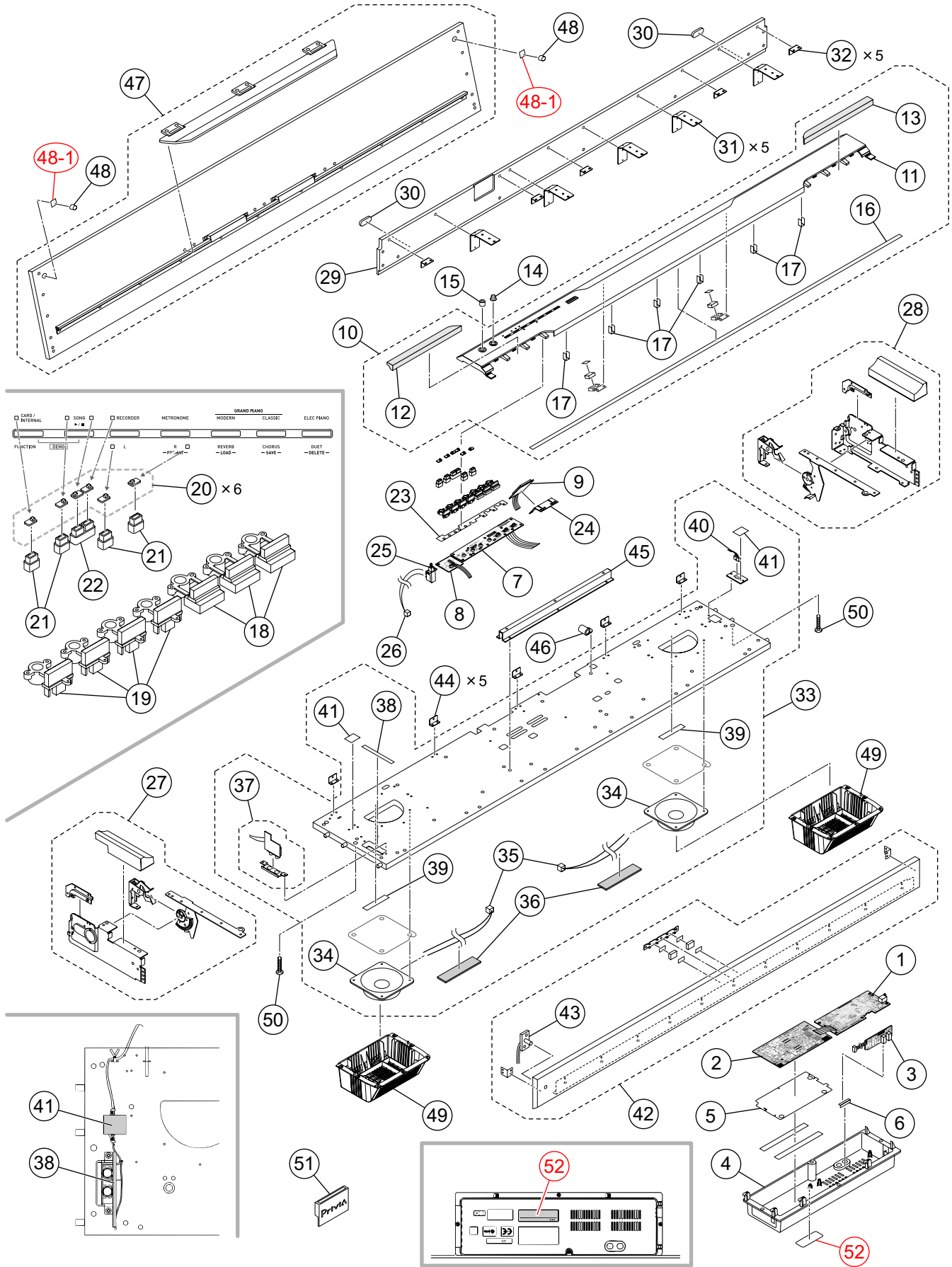
KEY ASSY
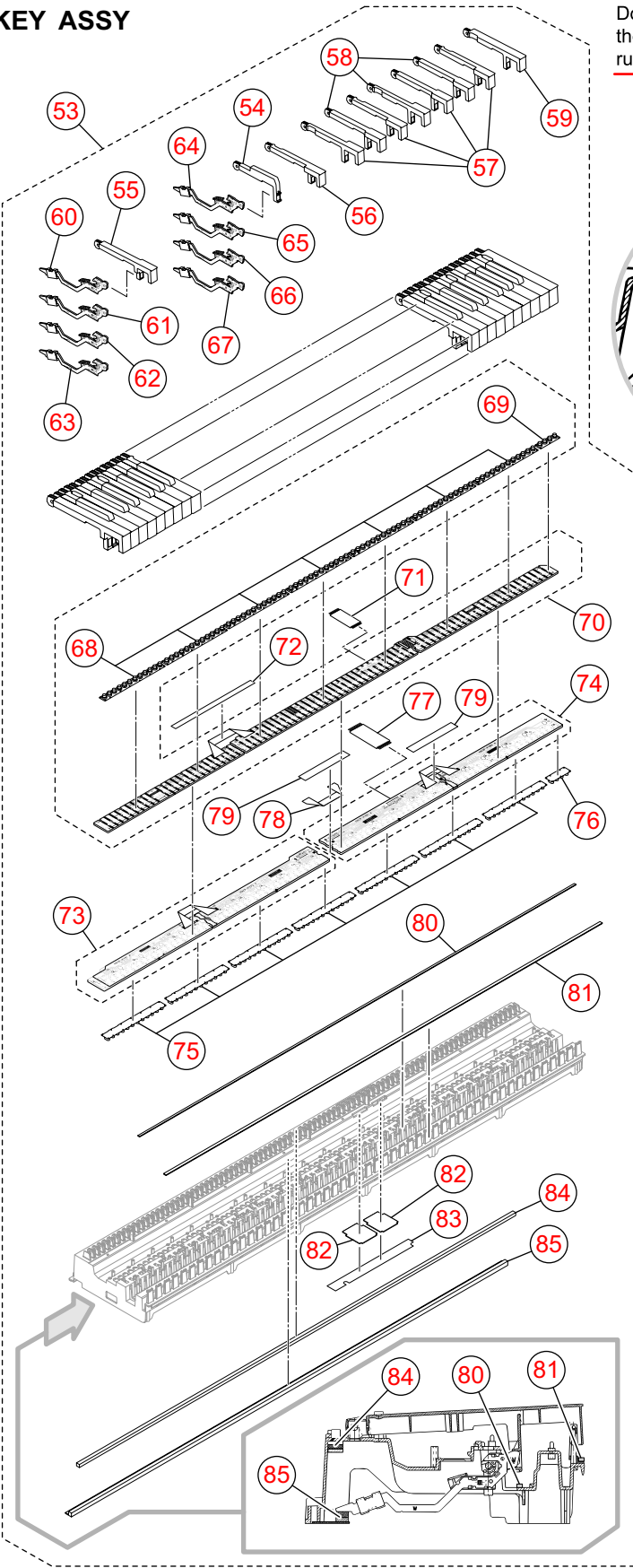
Do not allow the sponge to run off the edge.

BAD

GOOD
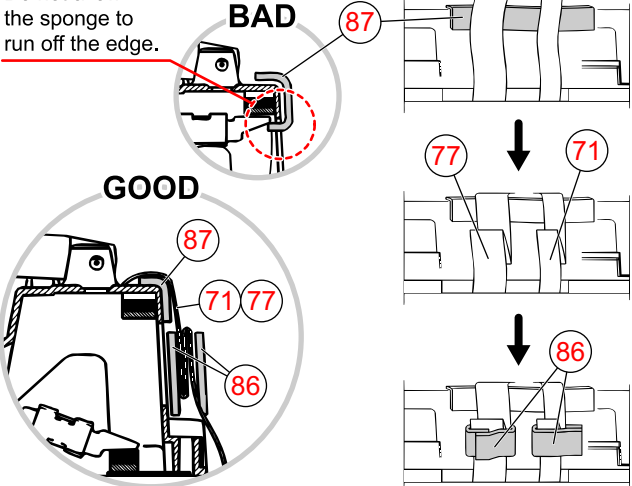
STAND
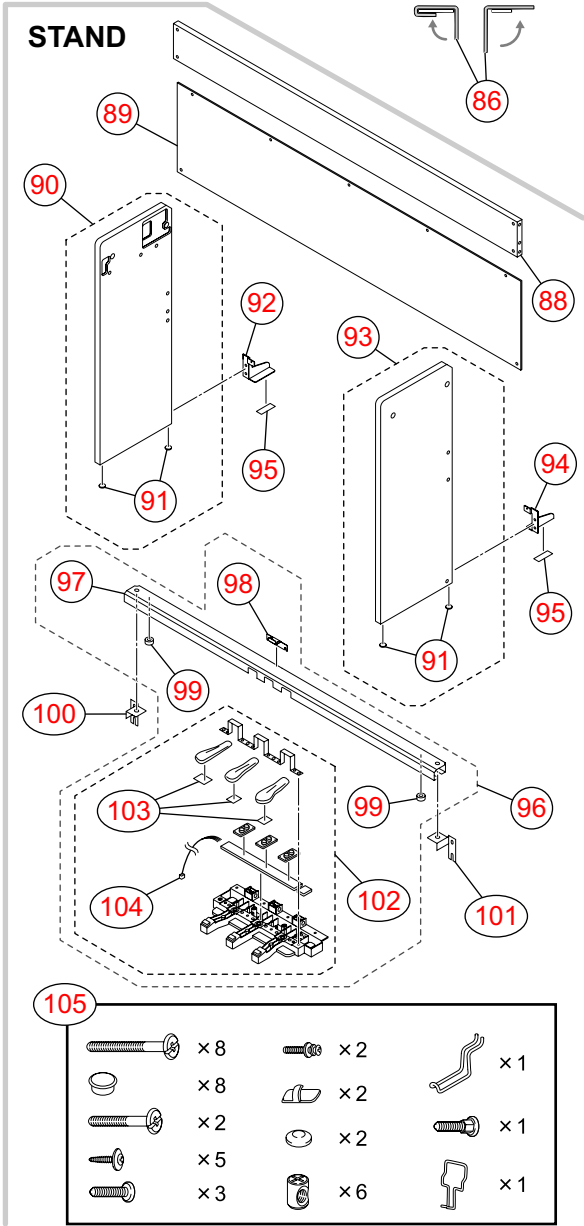
PARTS LIST

PX-830BP

Notes:

1. Prices and specifications are subject to change without prior notice.

2. Refer to the latest "Parts Price Code" at "PARTS FINDER" on the Casio Service WEB site (https://www.servicecasio.com).

3. As for spare parts order and supply, refer to the "GUIDEBOOK for Spare parts Supply", published separately.

4. The numbers in item column correspond to the same numbers in drawing.

1 PX-830_BLACKPOLISH_DI
2 PX-830_BLACKPOLISH_EU
3 PX-830_BLACKPOLISH_UK
4 PX-830_BLACKPOLISH_US

N	Item	Parts No.	Parts Name	Specification	1	2	3	4	Price Code	R	Remarks
			MAIN PCB								
	1	10348104	PCB ASSY / MDA1	TK-RJM509989*001	1	1	1	1		B	MAIN PCB
	CN10	10257512	CONNECTOR	UBR23-4K5G00	1	1	1	1		C	USB connector
	D31	10276977	DIODE	L1SS400T1G	1	1	1	1		X	
	IC13	10256338	IC	CS4351-CZZR	1	1	1	1		X	
	IC1	10241413	IC	R1151N001C-TR-F	1	1	1	1		X	
	IC12	10197808	IC	TC7SZ08FU(TE85L.F)	1	1	1	1		X	
	IC4	10197554	IC	TC7SZ126FU(TE85L.F	1	1	1	1		X	
	IC5	10255468	LSI	MB91F036PFF-GE1	1	1	1	1		C	
	IC14	10333782	LSI	UPD65943GK-F659EUA	1	1	1	1		C	
	IC2	10333111	MEMORY	MD56V82160-6TAZ03B	1	1	1	1		X	
	IC6	10333112	MEMORY	S29GL256P90TFCR20D	1	1	1	1		X	
	L47	10193074	COIL	DLW21HN181SQ2L	1	1	1	1		X	
	Q1-Q3,Q8,Q9	69409403	TRANSISTOR	2SA1576AT106R	5	5	5	5		X	
	Q7	22592764	TRANSISTOR	2SB1188T100Q	1	1	1	1		X	
	Q4-Q6,Q10	69300298	TRANSISTOR	2SC4081T106R	4	4	4	4		X	
	X1,X31	10334293	RESONATOR	9C12000163	2	2	2	2		X	
			SUB PCB								
	2	10348106	PCB ASSY / PSA1	TK-RJM509990*001	1	1	1	1		C	PSA1 PCB
	IC3	10257492	IC	NJM78M12FA	1	1	1	1		X	
	IC1	10201503	IC	PQ1CG21H2FZH	1	1	1	1		X	
	J1	10342138	CONNECTOR	LGP7031-0900FC	1	1	1	1		B	DC jack
	L3	10342135	COIL	02249-T556	1	1	1	1		X	
	L14	10231919	COIL	RB53-856396NP	1	1	1	1		X	
	L4,L13	10231920	COIL	RB53-856397NP	2	2	2	2		X	
	L9	10232457	COIL	RII7-860400NP	1	1	1	1		X	
	L6,L7,L11,L12	10342335	COIL	RP1315BNP-220M-T	4	4	4	4		X	
	D9,D10,D12	10276977	DIODE	L1SS400T1G	3	3	3	3		X	
	D15,D16	10308381	DIODE	LUDZS7.5BT1G	2	2	2	2		X	
	D3	10342143	DIODE	RB075B40STL	1	1	1	1		X	
	D4	10210387	DIODE	RSX101VA-30TR	1	1	1	1		X	
	IC5	10211950	IC	NJM2068M-D(TE1)	1	1	1	1		X	
	IC2	10335105	LSI	R2A15108SP-W00T	1	1	1	1		C	
	Q4-Q12	69300298	TRANSISTOR	2SC4081T106R	9	9	9	9		X	
	Q15,Q16	10305853	TRANSISTOR	KTD1304-RTK/P	2	2	2	2		X	
	D11	10334295	DIODE	LUDZS12BT1G	1	1	1	1		X	
	IC4	10343240	IC	BH3544F-E2	1	1	1	1		X	

1 PX-830_BLACKPOLISH_DI
2 PX-830_BLACKPOLISH_EU
3 PX-830_BLACKPOLISH_UK
4 PX-830_BLACKPOLISH_US

N	Item	Parts No.	Parts Name	Specification	Q'TY 1	2	3	4	Price Code	R	Remarks
			JACK PCB								
	3	10348107	PCB ASSY / JKA1	TK-RJM509991*001	1	1	1	1		C	JKA1 PCB
	J503	10206815	CONNECTOR	JY-6314*01-030	1	1	1	1		B	Line out L/MONO
	J504	10206816	CONNECTOR	JY-6314*01-130	1	1	1	1		B	Line out R
	L503,L504	10231920	COIL	RB53-856397NP	2	2	2	2		X	
			PCB BOX								
	4	10342241	BOX / PCB	RJM509521-001V01	1	1	1	1		X	Box for PCB
	5	10342275	METAL SHEET	RJM509570-001V01	1	1	1	1		X	
	6	10348220	V-0 SHEET	RJM509973-001V01	1	1	1	1		X	
			CONSOLE PCB								
	7	10348098	PCB ASSY / CNA1	TK-RJM509984*001	1	1	1	1		X	CNA1 PCB
	D601,D604,D605, D610-D612	10336974	LED	26-21/R1	6	6	6	6		X	
	D602	10336975	LED	26-21/Y1	1	1	1	1		X	
	SW601-SW607	10337110	SWITCH	TP-1138A-10-100GF	7	7	7	7		X	
	D603,D606	10209564	LED	KPTD-3216SURCK	2	2	2	2		X	
	8	10348099	PCB ASSY / CNA2	TK-RJM509987*001	1	1	1	1		C	CNA2 PCB
	VR601	69308726	VARIABLE RESISTOR	RK09K12C0D0W	1	1	1	1		B	Main volume
	9	10348100	PCB ASSY / SDA1	TK-RJM509980*001	1	1	1	1		X	SDA1 PCB
			PANEL UNIT								
	10	10348101	PANEL ASSY	TK-RJM509810*001	1	1	1	1		X	
	11	10342216	PANEL CASE	RJM509482-001V01	1	1	1	1		X	
	12	10348102	SPEAKER COVER / L	TK-RJM510006*001	1	1	1	1		X	
	13	10348103	SPEAKER COVER / R	TK-RJM510007*001	1	1	1	1		X	
	14	10342256	KNOB / ROTARY	M341402-001	1	1	1	1		C	
	15	10342240	BUTTON / POWER	RJM509558-001V01	1	1	1	1		C	
	16	10337938	KEY FELT	RJM509922-001	1	1	1	1		X	
	17	10053728	FABRIC TAPE -10-42	M440240-2	6	6	6	6		X	
	18	10342127	BUTTON / TACT / A	RJM509408-002V01	3	3	3	3		X	
	19	10337030	BUTTON / TACT / B	RJM509396-002	4	4	4	4		X	
	20	10342191	COVER / LED	RJM509559-001V01	6	6	6	6		X	
	21	10342192	SPACER / LED / C	RJM509413-002V01	4	4	4	4		X	
	22	10342193	SPACER / LED / C	RJM509413-003V01	1	1	1	1		X	
	23	10342176	FABRIC SHEET	RJM509959-001V01	1	1	1	1		X	
	24	10342272	BRACKET / SD	RJM509562-001V01	1	1	1	1		X	
	25	10334406	SWITCH	SDDLD1017U	1	1	1	1		X	Power switch
	26	10336251	HARNESS	TD-EH3P105M902	1	1	1	1		X	For power switch
	27	10348096	SIDE BRACKET ASSY / L	TK-RJM509814*001	1	1	1	1		X	
	28	10348097	SIDE BRACKET ASSY / R	TK-RJM509815*001	1	1	1	1		X	
	29	10342124	BACK BOARD	RJM509536-001V01	1	1	1	1		X	
	30	10349173	STOPPER	RJM510197-001	2	2	2	2		X	
	31	10342132	BRACKET / PANEL	RJM509561-001V01	5	5	5	5		X	
	32	10342310	BRACKET / PANEL	RJM509565-001V01	5	5	5	5		X	

1 **PX-830_BLACKPOLISH_DI**
2 **PX-830_BLACKPOLISH_EU**
3 **PX-830_BLACKPOLISH_UK**
4 **PX-830_BLACKPOLISH_US**

N	Item	Parts No.	Parts Name	Specification	Q'TY				Price Code	R	Remarks
					1	2	3	4			
			LOW CASE UNIT & TOP CASE UNIT								
	33	10348108	LOWER BOARD ASSY	TK-RJM509823*001	1	1	1	1		X	
	34	10337993	SPEAKER	C12J08	2	2	2	2		X	
	35	10345989	HARNESS / SPEAKER	EF-EH2P066M903	2	2	2	2		X	
	36	69261570	SPONGE -35-130	M440013-002	2	2	2	2		X	
	37	10348584	PCB ASSY / HPA1	TK-RJM509998*001	1	1	1	1		C	HPA1 PCB
	J701,J702	10171449	CONNECTOR	JY-6360*04-070	2	2	2	2		B	Headphones jack
	L701,L702	10231919	COIL	RB53-856396NP	2	2	2	2		X	
	38	10047599	FABRIC TAPE -10-100	M440710-001	1	1	1	1		X	
	39	10343859	DOUBLE-FACED TAPE	RJM510102-001	2	2	2	2		X	
	40	10345990	HARNESS	EF-SMP5P074M903	1	1	1	1		X	Pedal connector
	41	10337917	FABRIC TAPE -15-30	RJM509924-001	2	2	2	2		X	
N	42	10348913	F-BRD-ASSY	TK-RJM510152*001	1	1	1	1		X	
	43	10348585	PCB ASSY / HPA2	TK-RJM509999*001	1	1	1	1		X	HPA2 PCB
	D701	10203050	LED	231XHD	1	1	1	1		X	
	44	10218677	BRACKET	RJM505977-001V03	5	5	5	5		X	
	45	10348085	BRACKET	RJM510180-001V01	1	1	1	1		X	
	46	10208428	FERRITE CORE	CTRC-0813(B)	1	1	1	1		X	
N	47	10348912	T-BRD-ASSY	TK-RJM510153*001	1	1	1	1		X	
	48	10342257	RUBBER FOOT	RJM510070-001V01	2	2	2	2		X	
N	48-1	10346674	D-FACE-15-15	RJM510136-001V01	2	2	2	2		X	
	49	10334382	BOX / SPEAKER	RJM509334-001	2	2	2	2		X	
	50	10246603	BOLT	YD-0319303	2	2	2	2		X	
	51	10348094	FRONT SUPPORT	TK-RJM510075*001	1	1	1	1		X	
	52	10347096	RATING-ST-M908A	RJM504373-032V01	1	1	1	1		X	
			KEYBOARD UNIT								
	53	10348976	KEYBOARD ASSY	TK-RJM510156*005	1	1	1	1		C	
	54	10337877	BLACK KEY	RJM502797-003	36	36	36	36		B	
	55	10338014	WHITE KEY / SA	RJM502795-004	1	1	1	1		X	
	56	10338011	WHITE KEY / B	RJM502794-003	1	1	1	1		X	
	57	10338012	WHITE KEY / CEGB	RJM502862-003	7	7	7	7		B	
	58	10338013	WHITE KEY / DFA	RJM502863-003	7	7	7	7		B	
	59	10338015	WHITE KEY / SC	RJM502796-004	1	1	1	1		X	
	60	10341062	HAMMER ASSY / W1	TK-RJM509600*001	13	13	13	13		C	
	61	10341063	HAMMER ASSY / W2	TK-RJM509601*001	13	13	13	13		C	
	62	10341064	HAMMER ASSY / W3	TK-RJM509602*001	13	13	13	13		C	
	63	10341065	HAMMER ASSY / W4	TK-RJM509603*001	13	13	13	13		C	
	64	10341066	HAMMER ASSY / B1	TK-RJM509604*001	9	9	9	9		C	
	65	10341067	HAMMER ASSY / B2	TK-RJM509605*001	9	9	9	9		C	
	66	10341068	HAMMER ASSY / B3	TK-RJM509606*001	9	9	9	9		C	
	67	10341069	HAMMER ASSY / B4	TK-RJM509607*001	9	9	9	9		C	
	68	10334333	RUBBER CONTACT / AG1	RJM509219-001	7	7	7	7		A	
	69	10334334	RUBBER CONTACT / GC1	RJM509220-001	1	1	1	1		X	
	70	10340880	PCB ASSY / KYC KYD	TK-RJM509609*001	1	1	1	1		C	KYC,KYD PCB
	D601-D628	10301580	DIODE	LM1MA142WAT1G	28	28	28	28		X	
	D801-D818	10301580	DIODE	LM1MA142WAT1G	18	18	18	18		X	
	71	10336110	CABLE	UL2896-20-335-MACP	1	1	1	1		C	
	72	10334298	FABRIC TAPE -15X270	M411937-001V01	1	1	1	1		C	

1 **PX-830_BLACKPOLISH_DI**
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N	Item	Parts No.	Parts Name	Specification	Q'TY 1	2	3	4	Price Code	R	Remarks
	73	10341198	PCB ASSY / KYA	TK-RJM509622*001	1	1	1	1		C	KYA PCB
	D601-D644	10294400	DIODE	LM1MA142WKT1G	44	44	44	44		X	
	74	10341199	PCB ASSY / KYB	TK-RJM509624*001	1	1	1	1		C	KYB PCB
	D801-D844	10294400	DIODE	LM1MA142WKT1G	44	44	44	44		X	
	75	10334331	RUBBER CONTACT / AG2	RJM509217-001	7	7	7	7		A	
	76	10334332	RUBBER CONTACT / GC2	RJM509218-001	1	1	1	1		X	
	77	37195442	CABLE	N30315B1B05-UL2896	1	1	1	1		C	
	78	10336111	CABLE	UL2896-20-120-MACP	1	1	1	1		C	
	79	10164446	FABRIC TAPE -20-120	RJM502073-002	2	2	2	2		X	
	80	10340855	FELT / KEY	RJM510067-001	1	1	1	1		X	
	81	10138691	FELT / KEY	RJM503562-001	1	1	1	1		X	
	82	10306460	PLATE	RJM505864-001	2	2	2	2		X	
	83	10343387	FABRIC TAPE	RJM510100-001	1	1	1	1		X	
	84	10334393	FELT / HAMMER	RJM509655-001	1	1	1	1		X	
	85	10294093	FELT / HAMMER	TK-RJM507910*001	1	1	1	1		X	
	86	10281936	SPONGE -35-80	M440930-001	2	2	2	2		X	
	87	69261570	SPONGE -35-130	M440013-2	1	1	1	1		X	
			STAND								
	88	10351123	STAND BOARD ASSY / B	TK-RJM510183*001	1	1	1	1		X	
	89	10342298	STAND BOARD / B	RJM509541-001V01	1	1	1	1		X	
N	90	10348908	ST-BRD-L-ASSY	TK-RJM510149*001		1	1			X	
N	90	10348910	ST-BRD-L-ASSY	TK-RJM510149*002	1			1		X	
	91	10134829	RUBBER FOOT -D23	RJM503203-001V01	4	4	4	4		X	
	92	10342295	STAND BRACKET / L	RJM509563-001V01	1	1	1	1		X	
N	93	10348909	ST-BRD-R-ASSY	TK-RJM510150*001		1	1			X	
N	93	10348911	ST-BRD-R-ASSY	TK-RJM510150*002	1			1		X	
	~~93~~	~~10134829~~	~~RUBBER FOOT -D23~~	~~RJM503203-001V01~~	~~2~~	~~2~~	~~2~~	~~2~~		~~X~~	
	94	10342296	STAND BRACKET / R	RJM509571-001V01	1	1	1	1		X	
	95	10343868	FOOT -23X53	RJM503236-001V02	2	2	2	2		X	
	96	10348092	PEDAL BOARD ASSY	TK-RJM509802*001			1	1		C	
	96	10351124	PEDAL BOARD ASSY	TK-RJM509802*002	1					C	
	96	10351125	PEDAL BOARD ASSY	TK-RJM509802*003		1				C	
	97	10346680	PEDAL BOARD	RJM510137-001V01	1	1	1	1		X	
	98	10342290	BRACKET / STAND	RJM509564-001	1	1	1	1		X	
	99	10308823	RUBBER FOOT -H20	RJM509026-001V01	2	2	2	2		X	
	100	10342232	PEDAL BRACKET / L	RJM509572-001V01	1	1	1	1		X	
	101	10342233	PEDAL BRACKET / R	RJM509573-001V01	1	1	1	1		X	
	102	10348093	PEDAL UNIT	TK-RJM510080*001	1	1	1	1		B	
	103	10287951	SPONGE	RJM508328-001V01	3	3	3	3		X	
	VR1	10257246	VARIABLE RESISTOR	XV09411N895Z5K1050	1	1	1	1		X	For pedal
	104	10339497	HARNESS	EF-SMR5P155MP5	1	1	1	1		X	For pedal
	105	10348088	SCREW SET	TK-RJM509797*001	1		1	1		X	
	105	10348091	SCREW SET	TK-RJM509797*002		1				X	
			ACCESSORIES								
	X-1	10347080	AC ADAPTOR	AD-E24250LW-P2	1	1	1	1		C	
	X-2	10337904	CORD SET	UC2LT-M003A	1			1		C	for US AC120V
	X-3	10318804	CORD	EC2LT-M001A	1	1				C	for EU AC230V
	X-4	10318806	CORD	BC2LT-M001A			1			C	for UK AC230V
	X-5	10318805	CORD	KC2LT-M001A	1					C	for Korea AC230V
	X-6	10347467	DUST COVER	RJM510167-001V01	1	1	1	1		X	

SCHEMATIC DIAGRAMS

Main PCB M900-MDA1 (1/2)
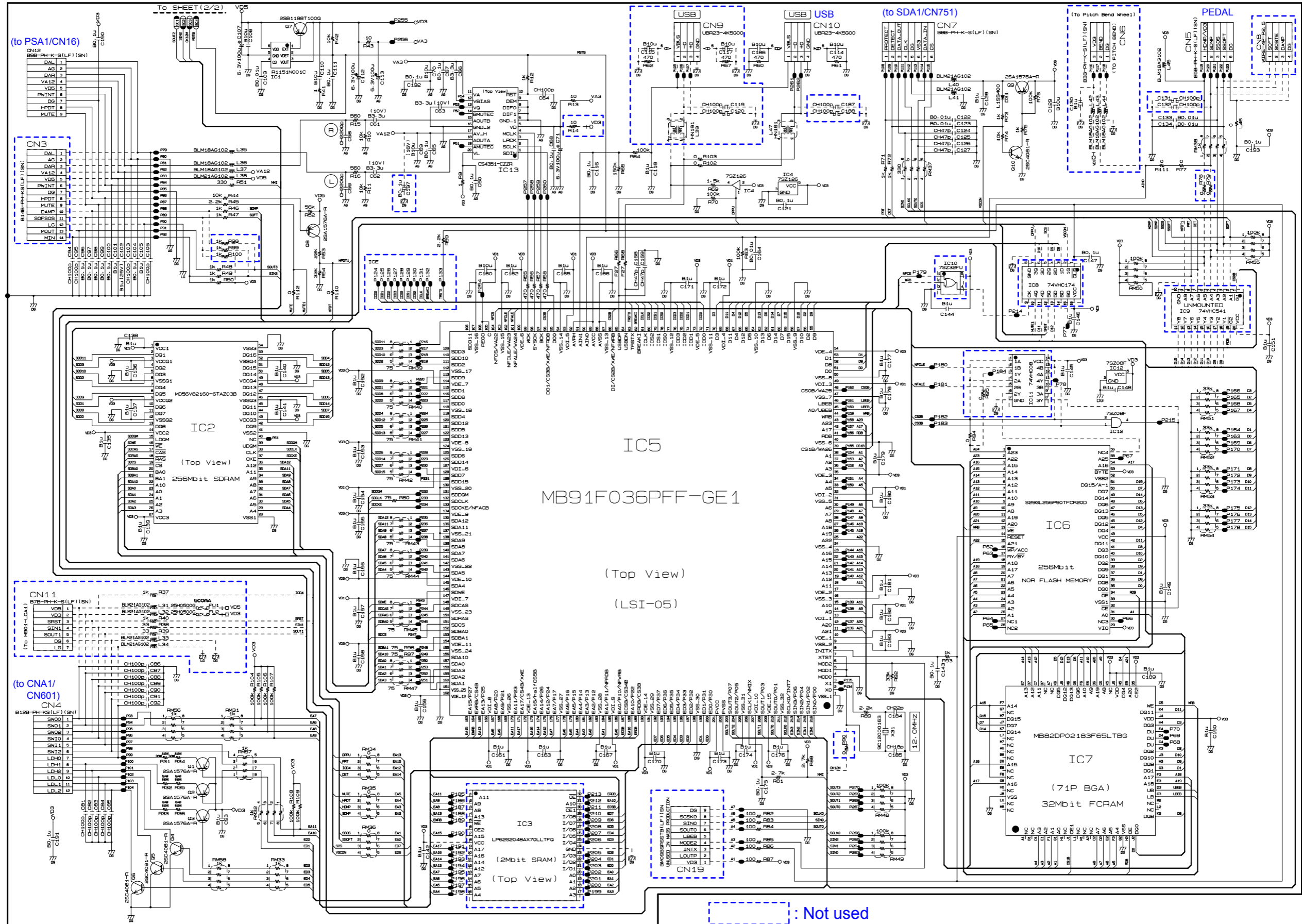
: Not used

Main PCB M900-MDA1 (2/2)

To SHEET(1/2)

UPD65943GK-F659EUA

GA-08

IC14

: Not used

CN2
20pin
(to KYD1/CN802)

CN1
30pin
(to KYB1/CN804)

Sub PCB M903-PSA1

Console PCB M900-CNA1

GRAND PIANO

MODERN | CLASSIC | ELEC PIANO

Not used

CARD/INITIAL | SONG | RECORDER | METRONOME

FUNCTION | DEMO | L | R | REVERB | CHORUS | DUET

(to MDA1/CN4)
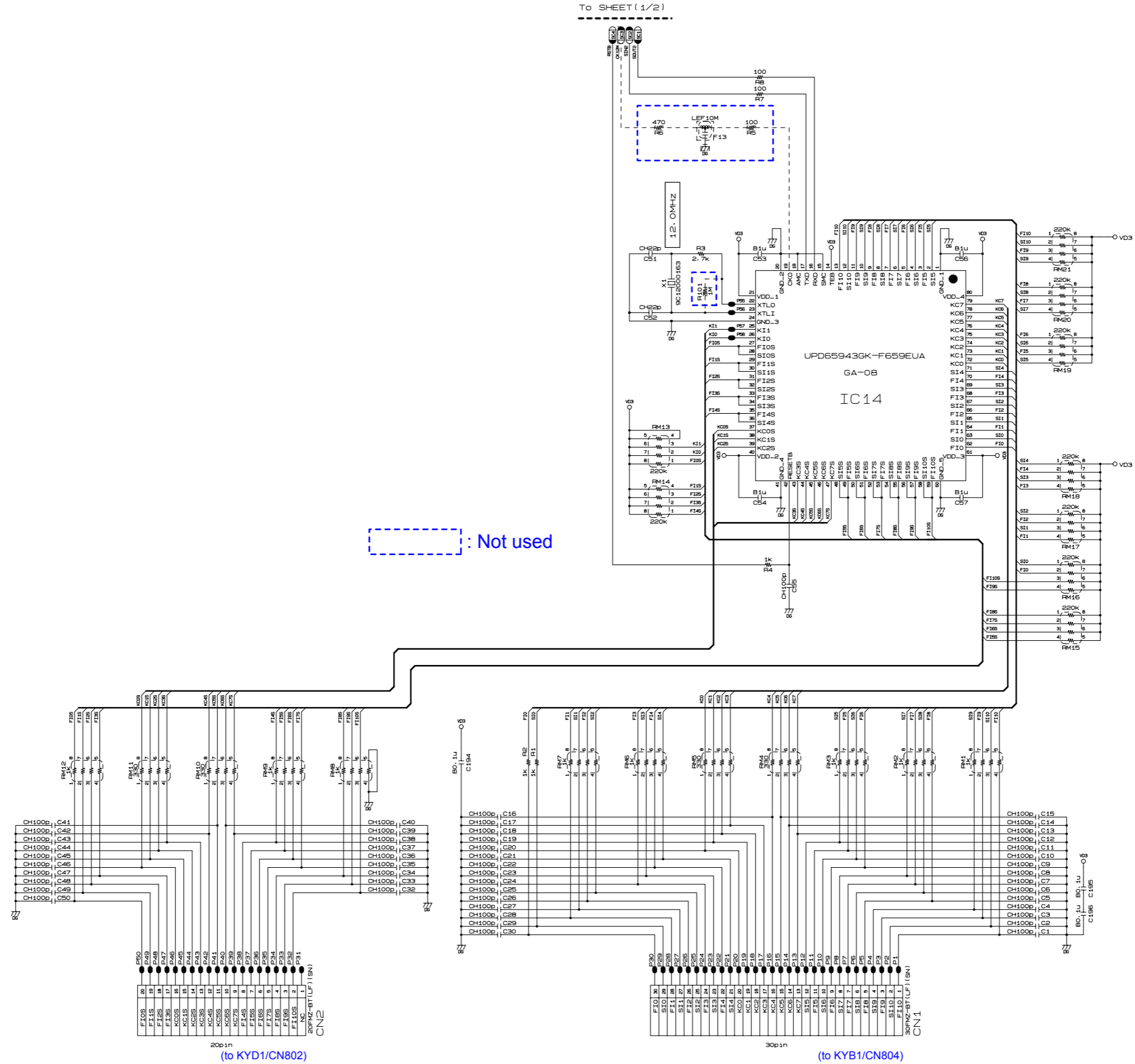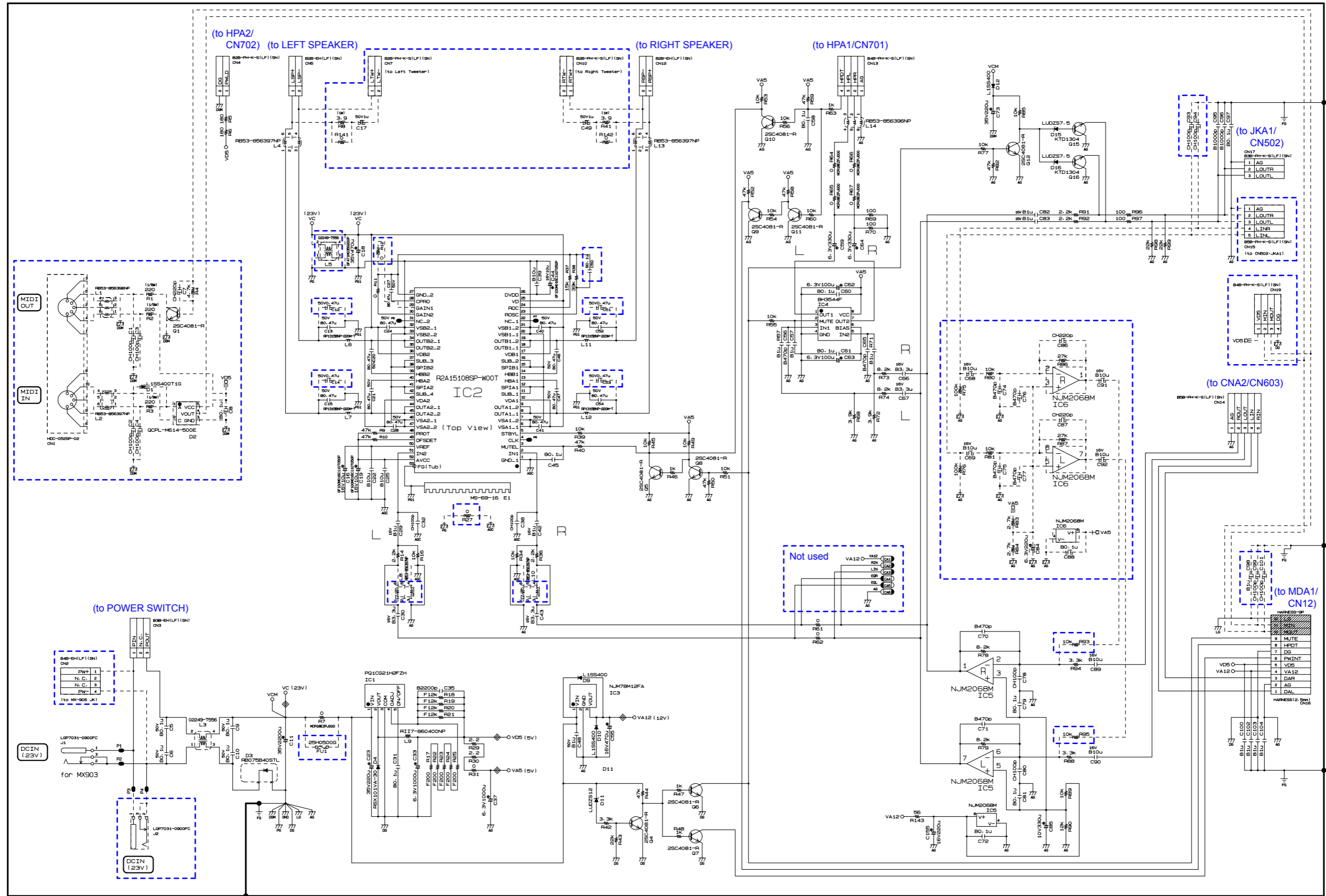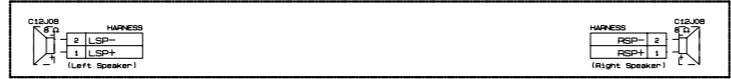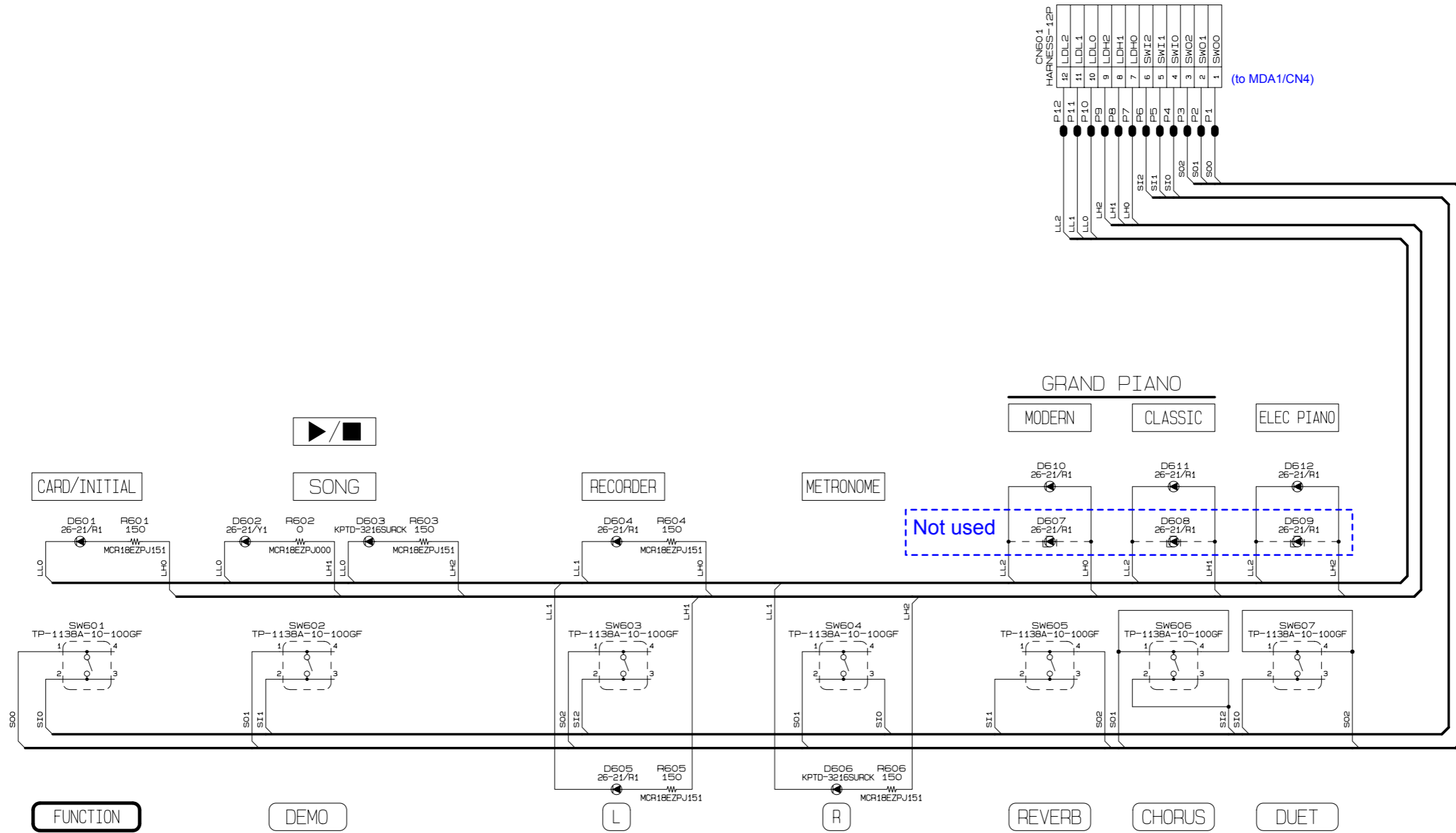
Volume PCB M900-CNA2
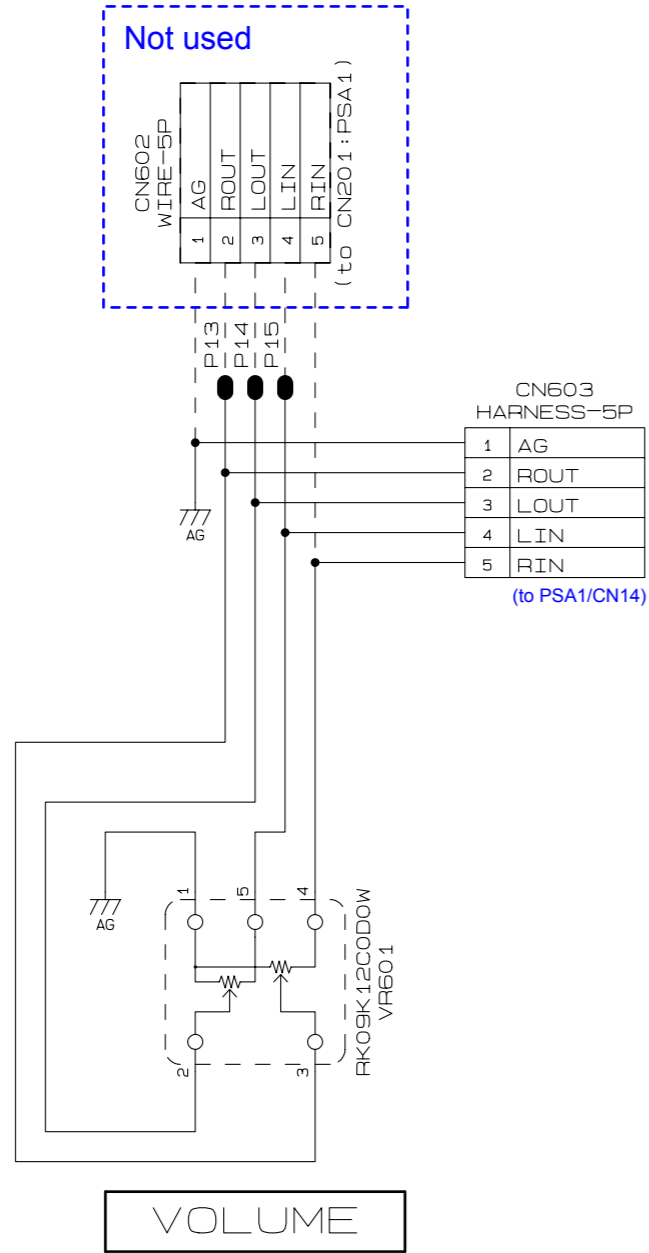
Jack PCB M901-JKA1

Jack PCB M902-HPA1

PHONES

J701
JY-6360*04-070

5 4 2 3 6 7 1

J702
JY-6360*04-070

5 4 2 3 6 7 1

P704

P708

P703

P705
P706
P707

P701
P702

C701 CH100p
C702 CH100p

C705 CH100p
C706 CH100p

RB53-B5639GNP
L701

1 6
2 5
3 4

RB53-B5639GNP
L702

1 6
2 5
3 4

C703 CH100p
C704 CH100p

C707 CH100p
C708 CH100p

CN701
HARNESS-4P

| 4 | 3 | 2 | 1 |
| HPDT | HPL | HPR | AG |
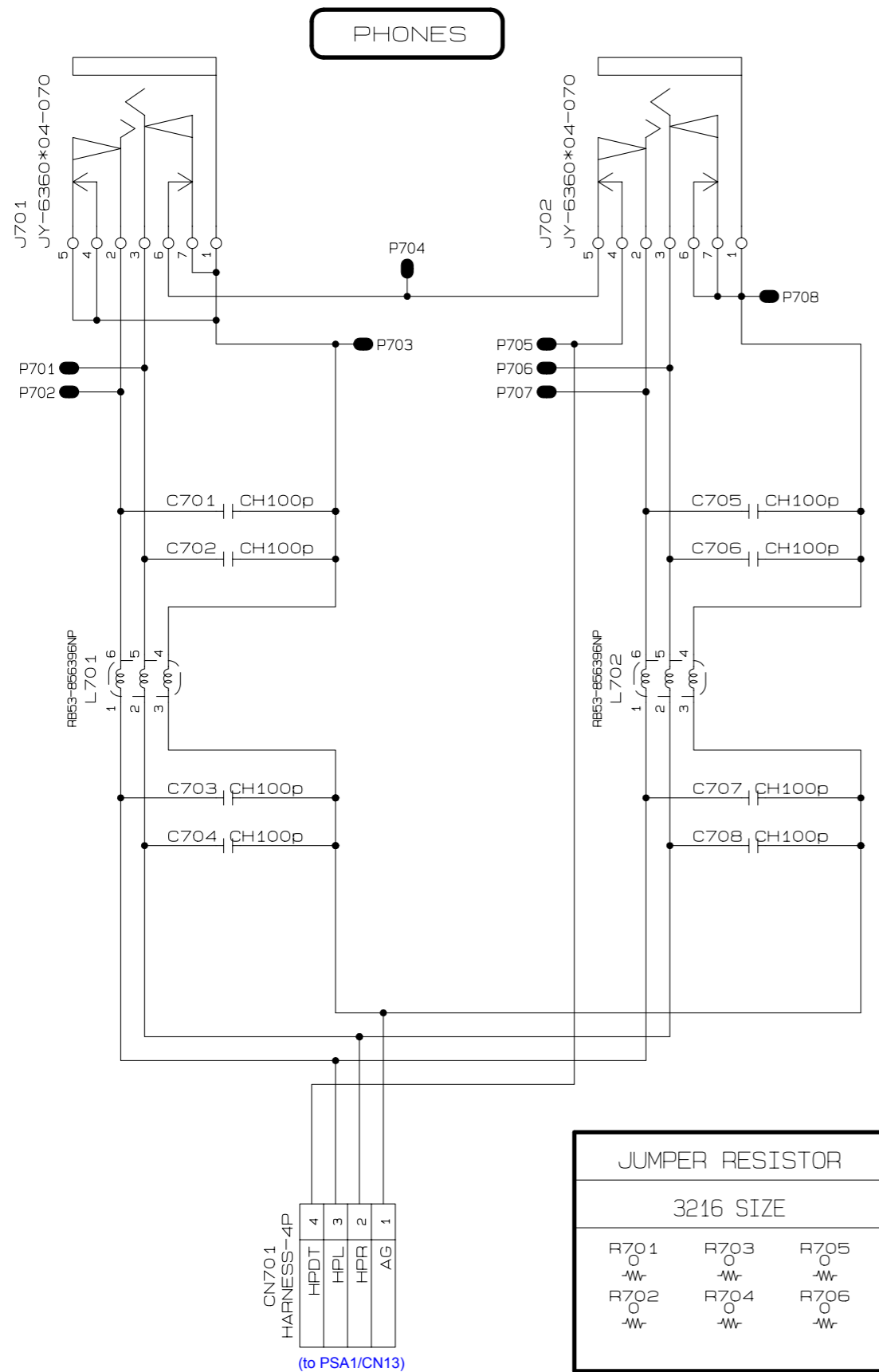
JUMPER RESISTOR
3216 SIZE

| R701 | R703 | R705 |
| R702 | R704 | R706 |

Power Lamp PCB M902-HPA2

HARNESS-2P
CN702

| 2 | 1 |
| LG | PWLD |

7mm pitch or 2mm pitch

231XHD

D701
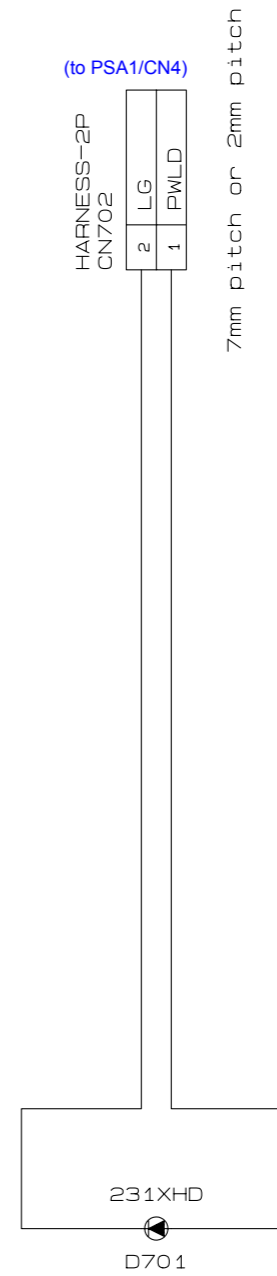
SD Card PCB M810-SDA1
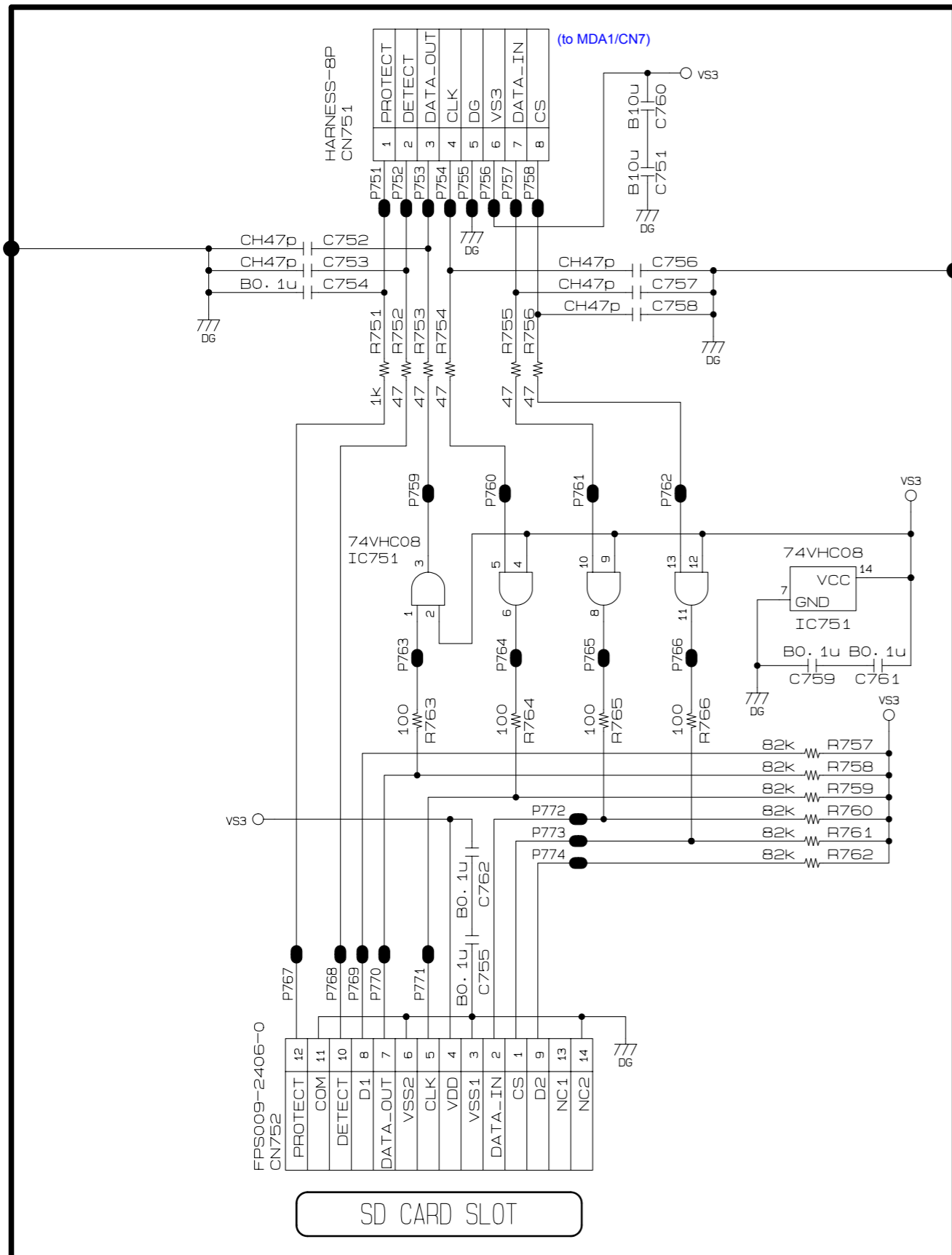
Pedal PCB M903-PDA1/M903-PDA2
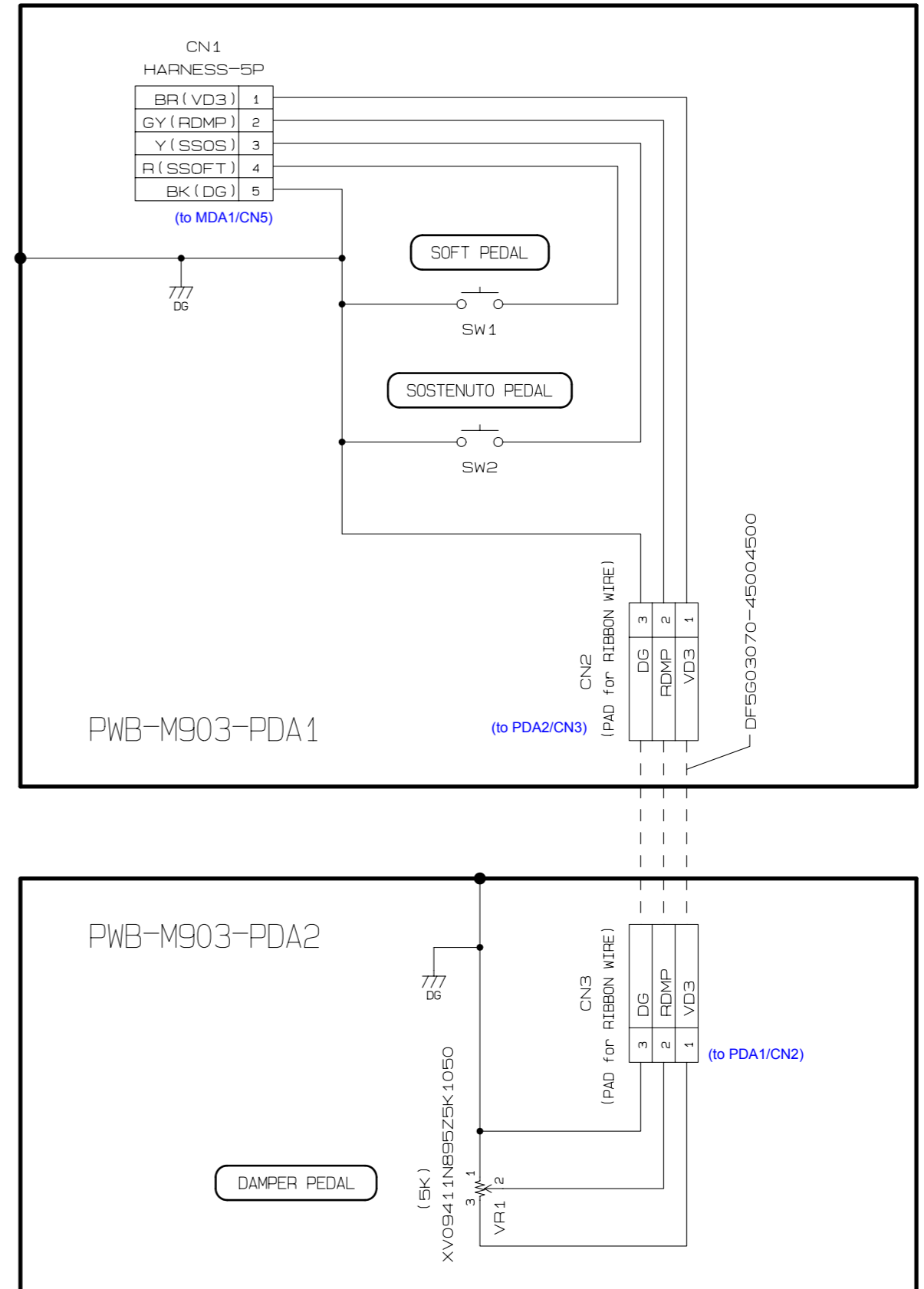
Keyboard PCB MACP-KYA1

PWB—MACP—KYA1
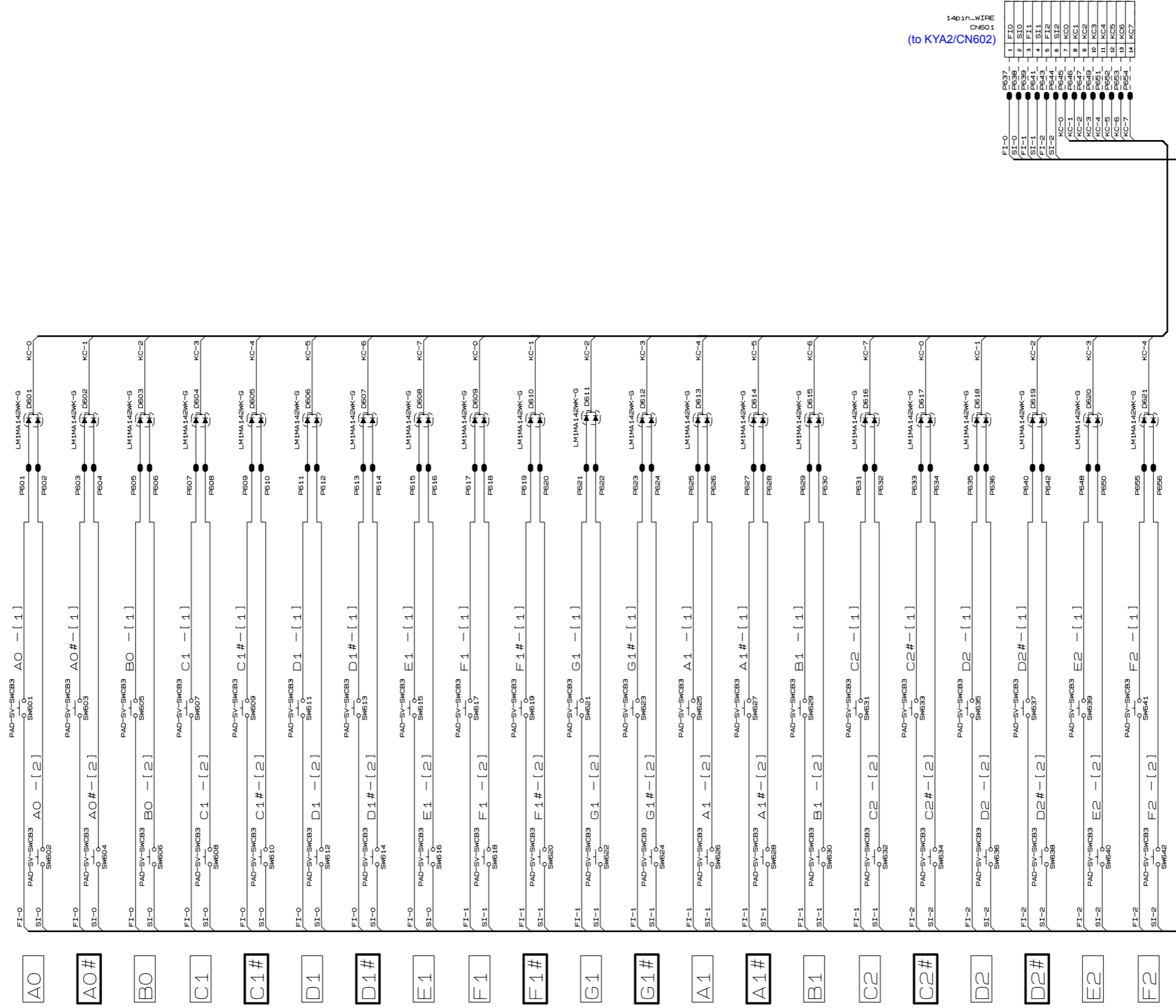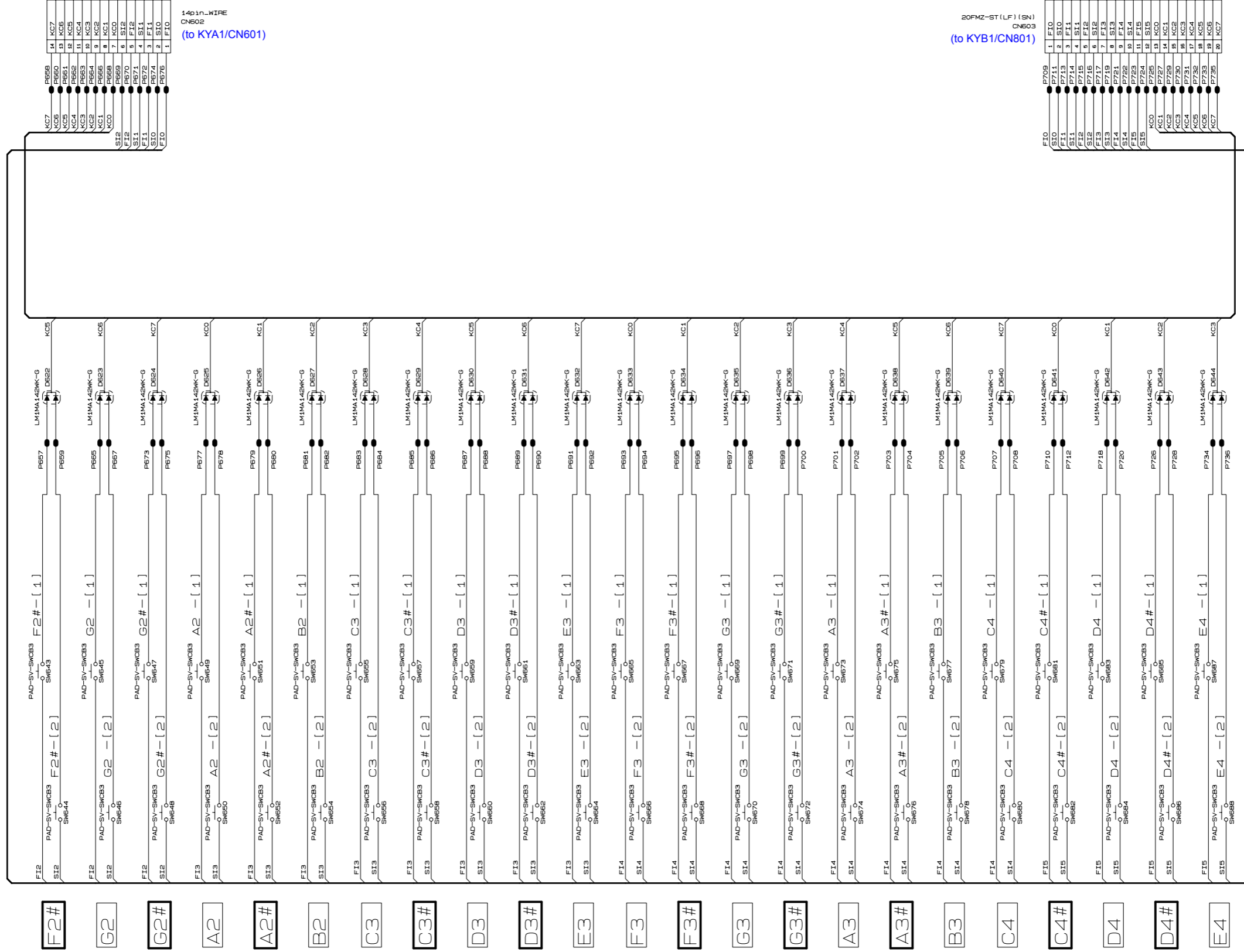
14pin_WIRE
CN601
(to KYA2/CN602)

Keyboard PCB MACP-KYA2

PWB—MACP—KYA2

14pin_WIRE
CN602
(to KYA1/CN601)

20FMZ-ST(LF)(SN)
CN603
(to KYB1/CN801)

F2# G2 G2# A2 A2# B2 C3 C3# D3 D3# E3 F3 F3# G3 G3# A3 A3# B3 C4 C4# D4 D4# E4

Keyboard PCB MACP-KYB1

PWB-MACP-KYB1

Keyboard PCB MACP-KYB2

PWB—MACP—KYB2

14pin_WIRE
CN803
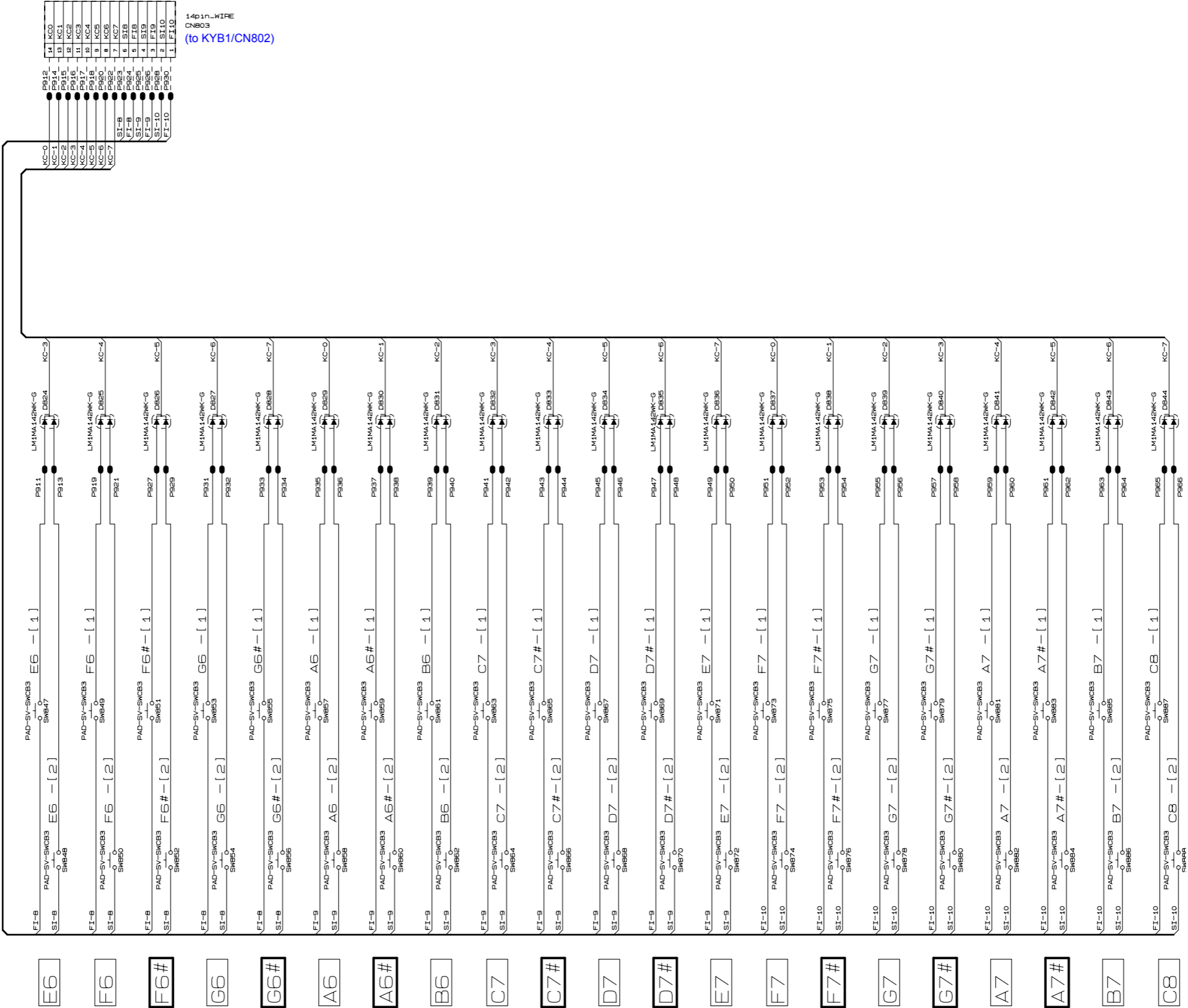
Keyboard PCB MACP-KYC1

PWB-MACP-KYC1

12pin_WIRE
CN501
(to KYD1/CN801)
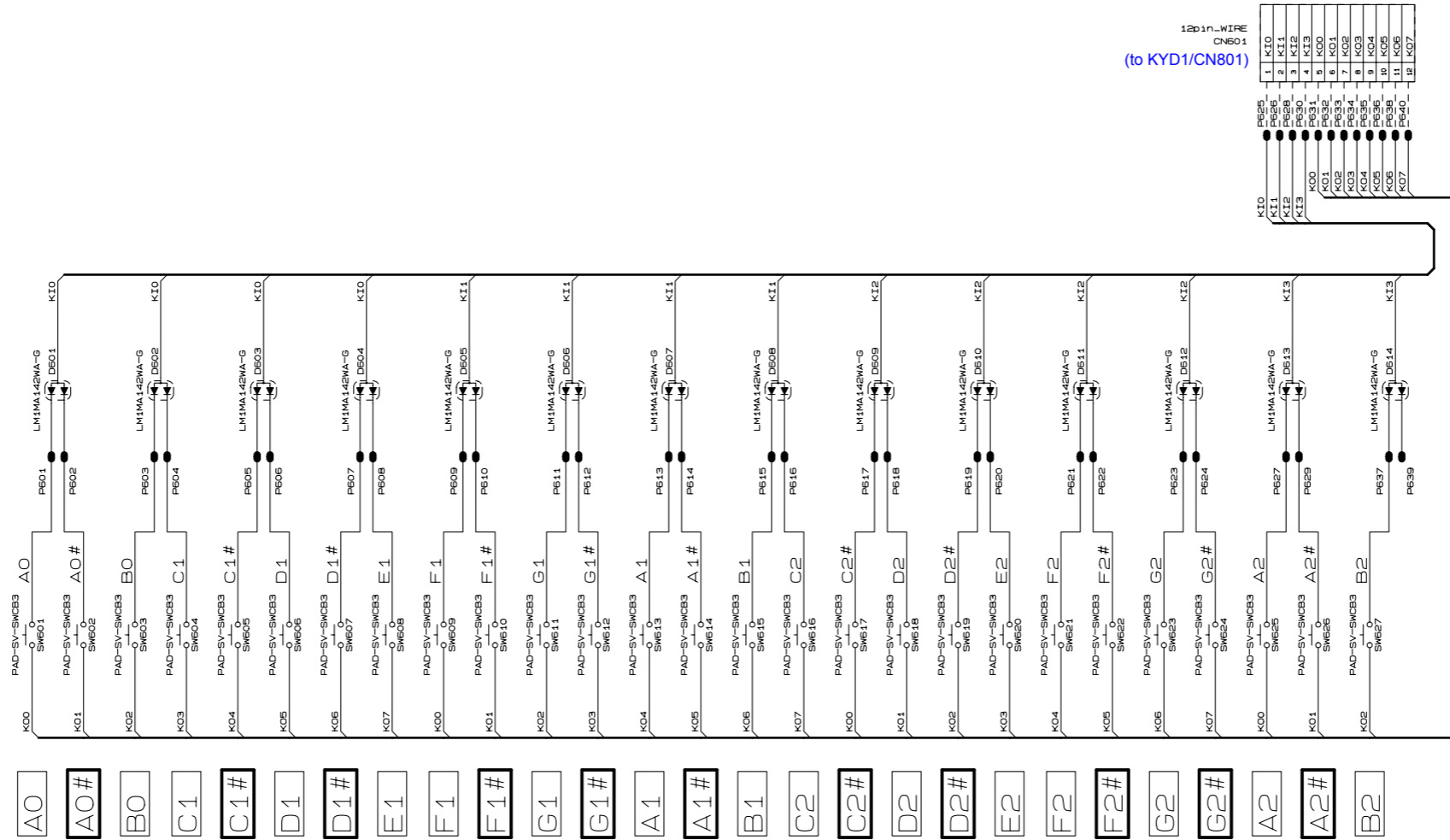
Keyboard PCB MACP-KYC2

PWB-MACP-KYC2

12pin_FFC
CN602

KI10	1
KI9	2
KI8	3
KI7	4
KO7	5
KO6	6
KO5	7
KO4	8
KO3	9
KO2	10
KO1	11
KO0	12

(to KYD1/CN803)
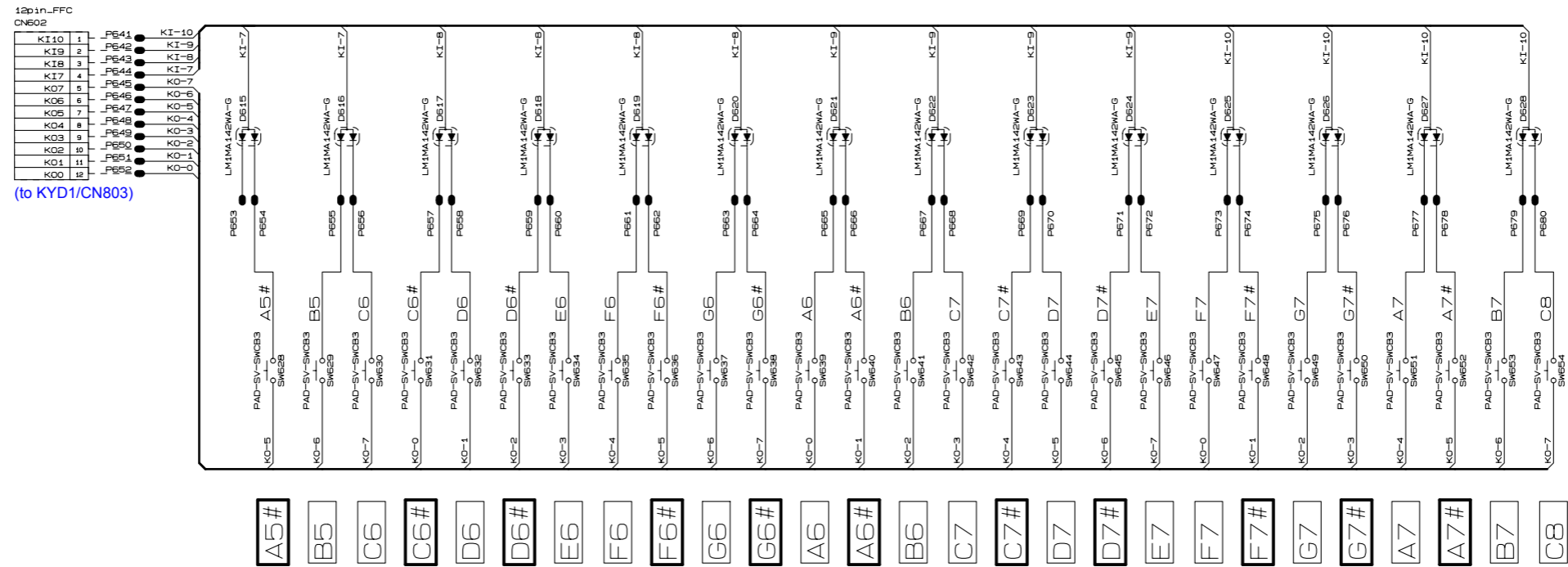
Keyboard PCB MACP-KYD1

PWB-MACP-KYD1

12pin_WIRE
CN801
(to KYC1/CN601)

20FMZ-ST(LF)(SN)
CN802
(to MDA1/CN2)

12pin_FFC
CN803

(to KYC2/CN602)

CHIP JUMPER (0 ohm)
3216type
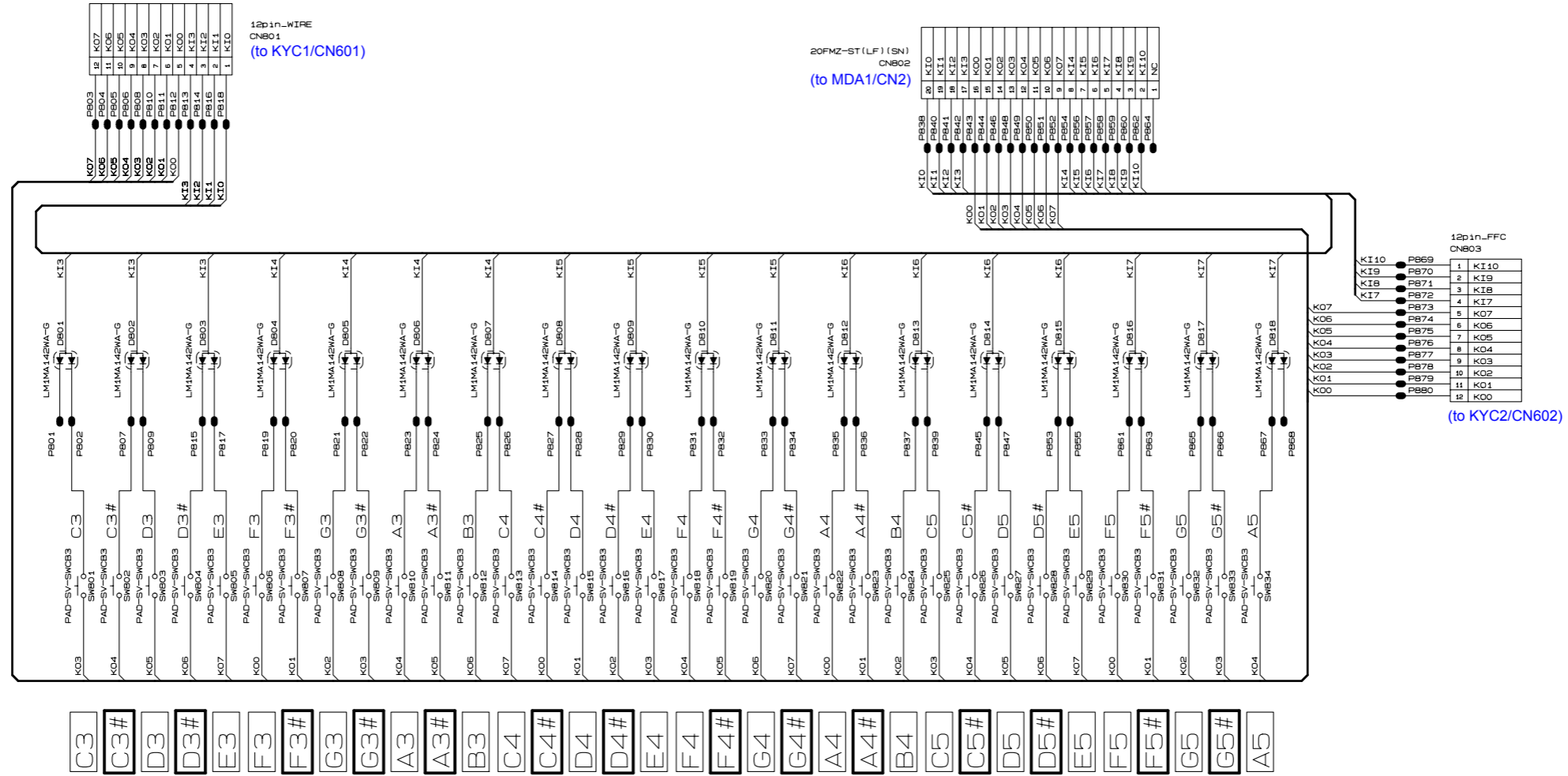
Ver. 1 :   Nov. 2009
　　　　　• Correction of the DISASSEMBLY (P32)

Ver. 2 :   Dec. 2009
　　　　　• Correction of the PARTS LIST (P55)

Ver. 3 :   Dec. 2009
　　　　　• Correction of the DIAGNOSTIC PROGRAM (P48)
　　　　　• Correction of the EXPLODED VIEW (P49 and P50)
　　　　　• Correction of the PARTS LIST (P54 and P55)

Ver. 4 :   Mar. 2010
　　　　　• Correction of the PARTS LIST (P52 to P55)

CASIO COMPUTER CO.,LTD.

Overseas Service Division

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