

Digital Keyboard PSR-E473

SERVICE MANUAL



PSR-E473

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IMPORTANT NOTICE

This manual has been provided for the use of authorized Yamaha Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically Yamaha Products, are already known and understood by the users, and have therefore not been restated.

WARNING : Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all Yamaha product owners that all service required should be performed by an authorized Yamaha Retailer or the appointed service representative.


IMPORTANT : This presentation or sale of this manual to any individual or firm does not constitute authorization certification, recognition of any applicable technical capabilities, or establish a principal-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research engineering, and service departments of Yamaha are continually striving to improve Yamaha products. Modifications are, therefore, inevitable and changes in specification are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING : Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground bus in the unit (heavy gauge black wires connect to this bus.)

IMPORTANT : Turn the unit **OFF** during disassembly and parts replacement. Recheck **all** work before you apply power to the unit.

■ WARNING

Components having special characteristics are marked  and must be replaced with parts having specification equal to those originally installed.

■ SAVING DATA



Saving and backing up your data

Some data items are automatically saved as backup data in the internal memory even if you turn the power off. Saved data may be lost due to malfunction or incorrect operation. Save important data to external device such as a computer.

Be sure to perform it

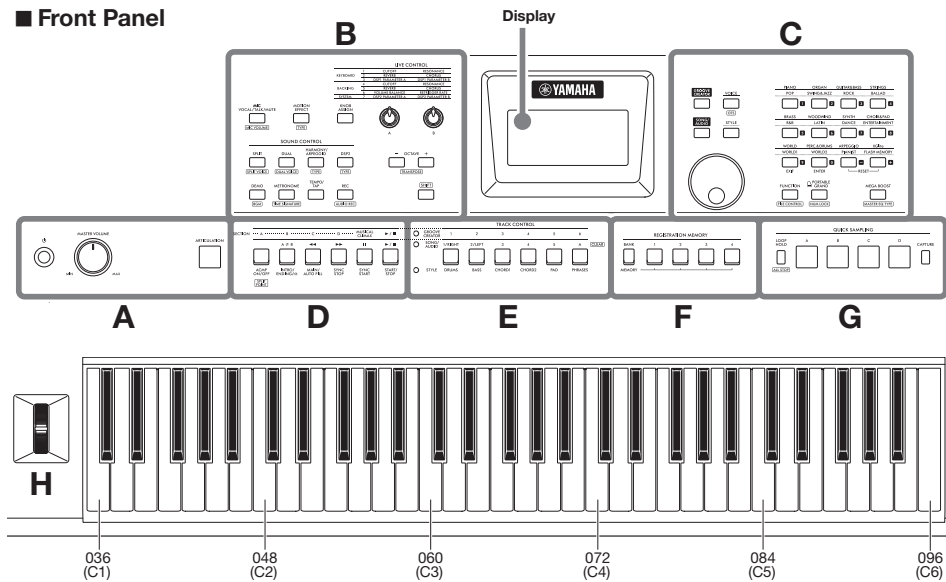
SPECIFICATIONS

Product Name		Digital Keyboard	
Size/Weight	Dimensions (W x D x H)		992 mm x 404 mm x 136 mm (39-1/16" x 15-7/8" x 5-3/8")
	Weight		7.0 kg (15 lbs., 7 oz.) (not including batteries)
Control Interface	Keyboard	Number of Keys	61
		Touch Response	Soft, Medium, Hard, Fixed
	Other Controllers	Pitch Bend Wheel	Yes
		Knobs	2
Panel	Language	English	
Voices	Tone Generation	Tone Generation Technology	AWM Stereo Sampling
	Polyphony (max.)		64
	Preset	Number of Voices	820 (294 Panel Voices + 28 Drum/SFX kits + 40 Arpeggio + 458 XGlite Voices)
	Compatibility		GM, XGlite
Effects	Types	Reverb	12
		Chorus	5
		Master EQ	4
		DSP	DSP1:41 DSP2:12
Accompaniment Styles	Preset	Number of Styles	290
		Fingering	Multi finger, Smart Chord
		Style Control	ACMP ON/OFF, SYNC START, SYNC STOP, START/STOP, INTRO/ENDING/rit., MAIN/AUTO FILL, TRACK ON/OFF
	External Styles		10
	Other Features (OTS)	One Touch Setting (OTS)	Yes
	Compatibility		Style File Format (SFF)
Groove Creator	Preset	Number of Grooves	35
		Number of Sections	5 (4 Sections + 1 Musical Climax/Ending)
Songs (MIDI)	Preset	Number of Preset Songs	30
		Number of Songs	10
	Recording	Number of Tracks	6 (5 Melody + 1 Style/Groove Creator)
		Data Capacity	Approx. 19,000 notes (when only "melody" tracks are recorded)
	Format	Playback	SMF (Formats 0 & 1)
Recording		Original File Format (SMF 0 conversion function)	
USB Audio Recorder	Recording Time (max.)		80 minutes (approx. 0.9 GB) per Song
	Format	Playback	WAV(44.1 kHz, 16 bit, stereo)
		Recording	WAV(44.1 kHz, 16 bit, stereo)
Quick Sampling	Sampling Type		Oneshot, Loop
	Samples (Preset/User)		4
	Sampling Time		Approx. 9.6 sec
	Sampling Sources		AUX IN, MIC INPUT, USB audio interface, WAV format files
	Sampling Format		Original File Format (16 bit, stereo)
	Sampling Rate		44.1 kHz
Functions	Voices	Dual	Yes
		Split	Yes
		Harmony	26
		Arpeggio	152
		Articulation	Yes


Functions	Registration Memory	Number of Buttons	4 (x 8 banks)
		Control	Freeze
	Overall Controls	Metronome	Yes
		Tempo Range	11 – 280
		Transpose	-12 to 0, 0 to +12
		Tuning	427.0 – 440.0 – 453.0 Hz (approx. 0.2Hz increments)
		Octave Button	Yes
		Scale Type	5 types
	Miscellaneous	PIANO Button	Yes
		Demo	Yes
		Melody Suppressor	Yes
		Crossfade	Yes
		USB audio interface	44.1 kHz, 16 bit, stereo
		Motion Effect	57
Mega Boost		2 steps (approx. +3 dB, and +6 dB)	
Storage and Connectivity	Storage	Internal Memory	Approx. 1.72 MB
		External Drives	USB flash drive
	Connectivity	DC IN	12 V
		Headphones	Standard stereo phone jack
		Microphone	Yes
		Sustain Pedal	Yes
		AUX IN	Stereo mini jack
		OUTPUT	Standard stereo phone jacks: L/L+R, R
		USB TO DEVICE	Yes
		USB TO HOST	Yes
Sound System	Amplifiers	6 W + 6 W	
	Speakers	12cm x 2	
Power Supply	AC Adaptor	PA-150 or an equivalent recommended by Yamaha (Output : DC 12V, 1.5 A)	
	Batteries	Six "AA" size alkaline(LR6), manganese (R6) or Ni-MH rechargeable (HR6) batteries	
	Power Consumption	9 W (When using PA-150 AC adaptor)	
	Auto Power Off	Yes	
Included Accessories		<ul style="list-style-type: none"> • Owner's Manual • AC adaptor* (PA-150 or an equivalent recommended by Yamaha) * May not be included depending on your area. Check with your Yamaha dealer. • Music Rest • Online Member Product Registration 	
Separately Sold Accessories (May not be available depending on your area.)		<ul style="list-style-type: none"> • AC adaptor: PA-150 or an equivalent recommended by Yamaha • Keyboard Stand: L-2C • Headphones: HPH-150/HPH-100/HPH-50 • Subwoofer: KS-SW100 • Footswitch: FC4A/FC5 • Wireless MIDI adaptor: UD-BT01 	

PANEL LAYOUT


■ Front Panel



As illustrated, each note of the keyboard has a specific note number and name (e.g., 036/C1), which is used in making various settings, such as Split Point.

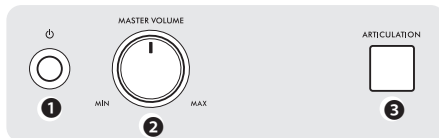
About the button names in  (SHIFT function)


While holding down the [SHIFT] button, press the button to call up the function name in the box. For example, while holding down the [SHIFT] button, press the [MIC VOCAL/TALK/MUTE] button to call up the [MIC VOLUME] display.



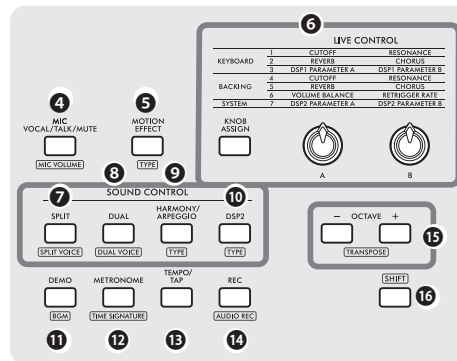
Press and hold

A



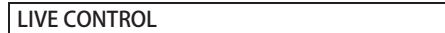
- ① [] (Standby/On) switch
- ② [MASTER VOLUME] control
- ③ [ARTICULATION] button

B

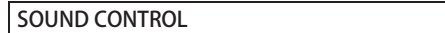


④ [MIC VOCAL/TALK/MUTE] button

⑤ [MOTION EFFECT] button



⑥ [KNOB ASSIGN] button, [A]/[B] knobs



⑦ [SPLIT] button

⑧ [DUAL] button

⑨ [HARMONY/ARPEGGIO] button

⑩ [DSP2] button

⑪ [DEMO] button

⑫ [METRONOME] button

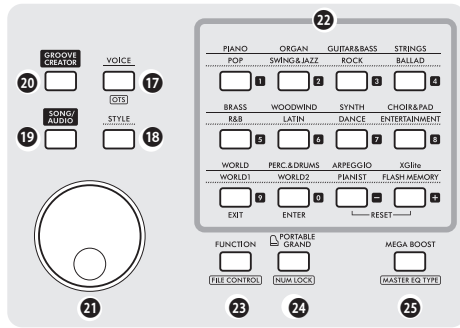
⑬ [TEMPO/TAP] button

⑭ [REC] button

⑮ OCTAVE [-]/[+] buttons

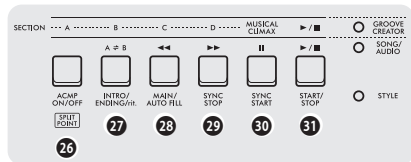
⑯ [SHIFT] button

C



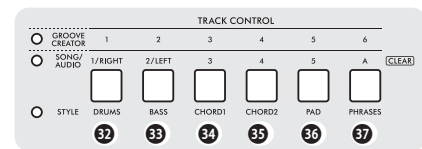
- 17 [VOICE] button
- 18 [STYLE] buttons
- 19 [SONG/AUDIO] buttons
- 20 [GROOVE CREATOR] buttons
- 21 Dial
- 22 Category/Number input buttons, [EXIT] button, [ENTER] button
- 23 [FUNCTION] button
- 24 [PORTABLE GRAND] button
- 25 [MEGA BOOST] button

D



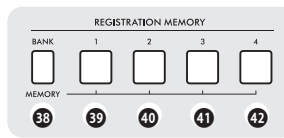
- 26~31 Playback control buttons

E



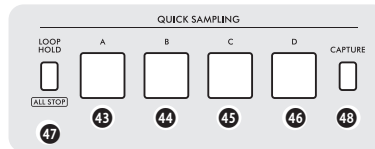
- 32~37 [TRACK CONTROL] buttons

F



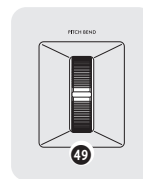
- 38~42 [REGISTRATION MEMORY] buttons

G



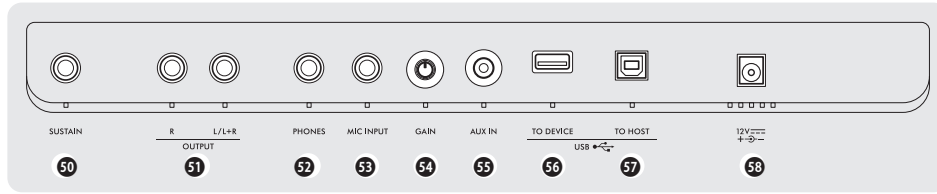
- 43~46 [A] – [D] pads
- 47 [LOOP HOLD] button
- 48 [CAPTURE] button

H



- 49 [PITCH BEND] wheel

■ Rear Panel



50 [SUSTAIN] jack

51 OUTPUT [L/L+R], [R] jacks

52 [PHONES] jack

53 [MIC INPUT] jack

54 [GAIN] knob

55 [AUX IN] jack

56 [USB TO DEVICE] terminal

57 [USB TO HOST] terminal

58 DC IN jack

DISASSEMBLY PROCEDURE

Caution:

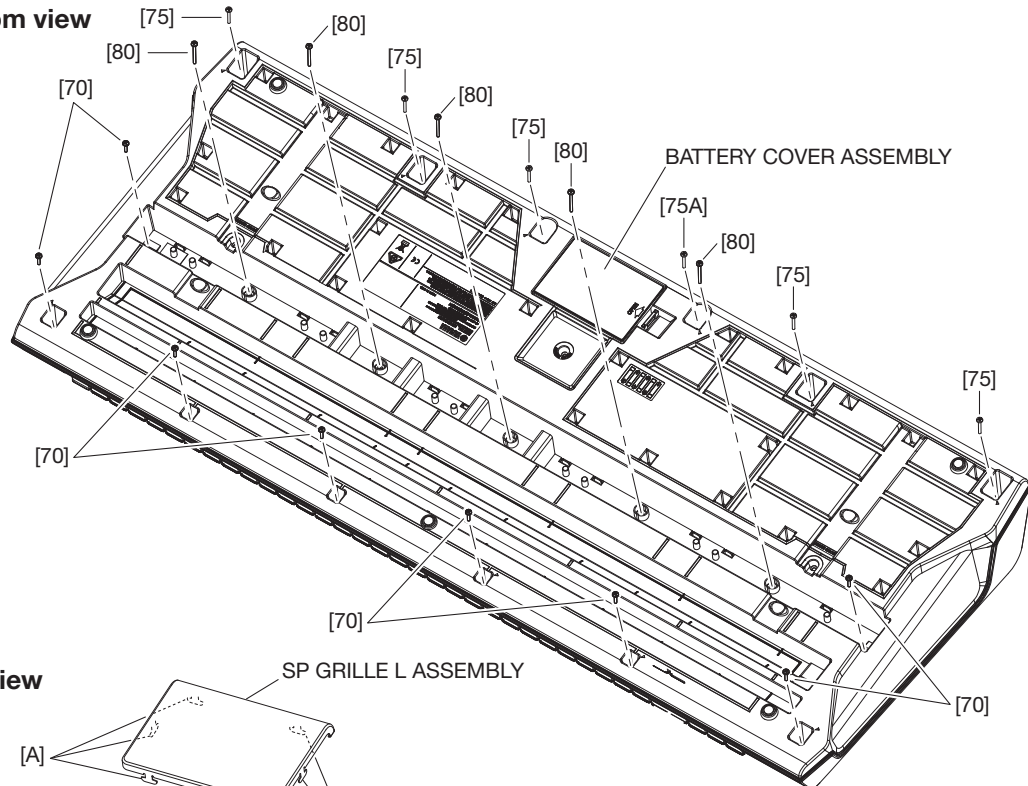
- Be sure to attach the removed filament tape just as it was before removal.

1. Lower Case Assembly (Time required: About 3 minutes)

1. Remove the 8 screws marked [70], the 6 screws marked [75] and the 5 screws marked [80]. The Lower Case Assembly can then be removed. (Fig.1)

* When installing the lower case assembly, first tighten the screw marked [75A] and then the remaining screws. (Fig.1)

● Bottom view



● Top view

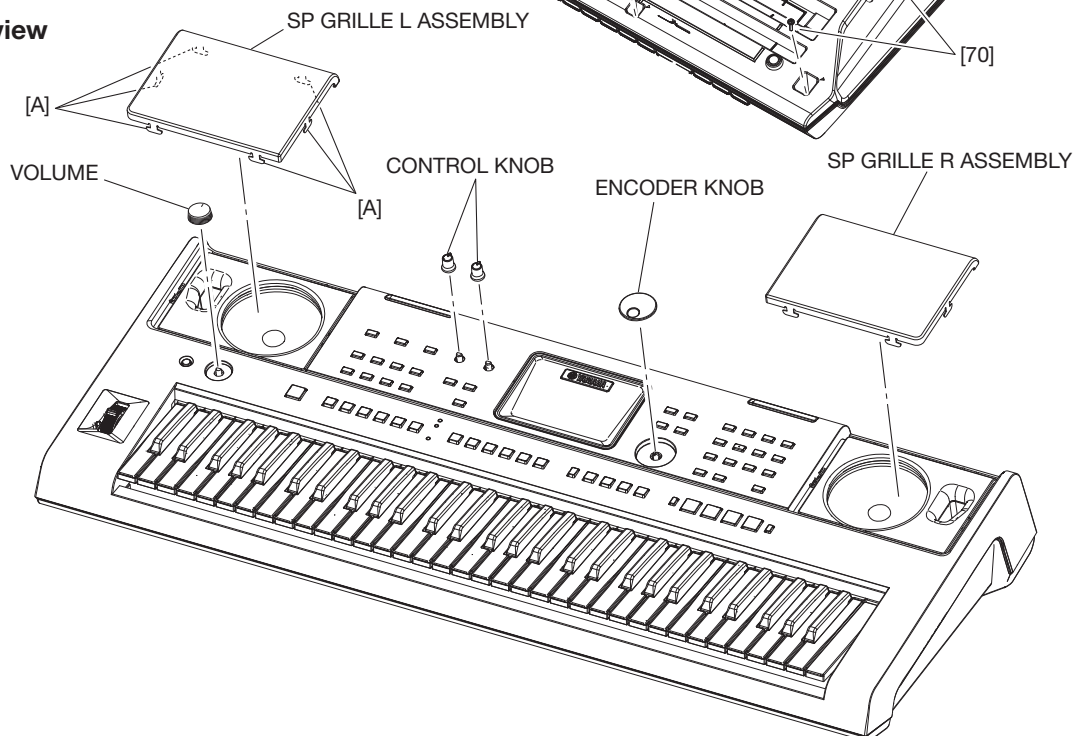


Fig.1

2. DMLCD Circuit Board (Time required: About 6 minutes)

1. Remove the lower case assembly. (See procedure 1)
 2. Remove the 13 screws [380A]. The DMLCD circuit board can then be removed. (Fig.2)
- * *After replacing the DMLCD circuit board, execute "Factory Reset" in the Test program.*

● **Bottom view**

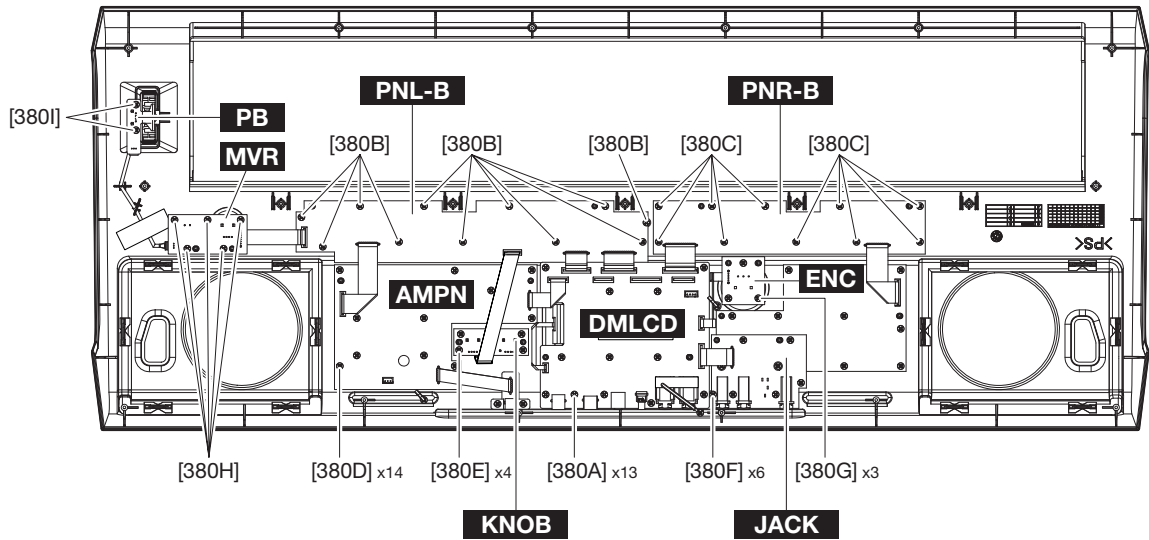


Fig.2

3. LCD (Time required: About 7 minutes)

1. Remove the lower case assembly. (See procedure 1)
 2. Remove the DMLCD circuit board. (See procedure 2)
 3. Remove the back light assembly. (Fig.3)
 4. Remove the rubber connector. (Fig.3)
 5. Remove the LCD display. (Fig.3)
- * *Avoid touching the conductive part of the rubber connector as much as possible. Should foreign matter or dirt adhere, remove such contamination using adhesive tape or the like. Do not wipe off using solvents such as benzene or alcohol. (Fig.3)*

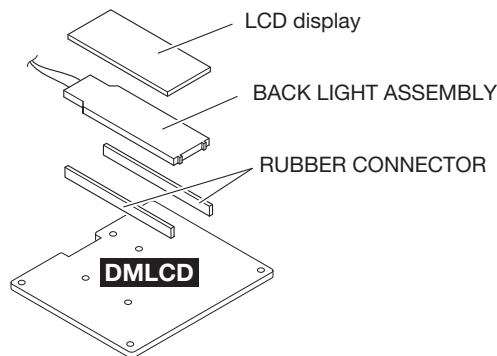


Fig.3

4. PNL-B, PNR-B, AMPN, KNOB, JACK and ENC Circuit Board

1. Remove the lower case assembly. (See procedure 1)
 - PNL-B Circuit Board (Time required: About 6 minutes)
 1. Remove the 11 screws [380B]. The PNL-B circuit board can then be removed. (Fig.2)
 - PNR-B Circuit Board (Time required: About 6 minutes)
 1. Remove the 10 screws [380C]. The PNR-B circuit board can then be removed. (Fig.2)
 - AMPN Circuit Board (Time required: About 7 minutes)
 1. Remove the 14 screws [380D]. The AMPN circuit board can then be removed. (Fig.2)
 - KNOB Circuit Board (Time required: About 5 minutes)
 1. Remove the 2 control knobs from the control panel surface. (Fig.1)
 2. Remove the 4 screws [380E]. The KNOB circuit board can then be removed. (Fig.2)
 - JACK Circuit Board (Time required: About 6 minutes)
 1. Remove the 6 screws [380F]. The JACK circuit board can then be removed. (Fig.2)
 - ENC Circuit Board
 1. Remove the encoder knob from the control panel surface. (Fig.1 and Fig.4)
 2. Remove the 3 screws [380G]. The ENC circuit board can then be removed. (Fig.2)

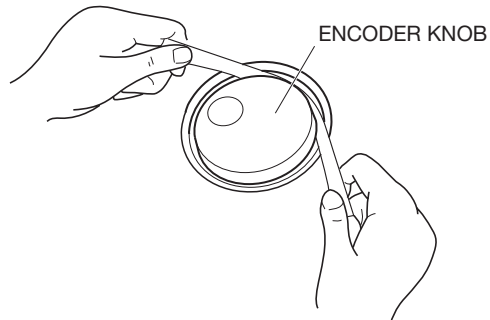


Fig.4

5. MVR Circuit Board, PB Circuit Board, Wheel Assembly

1. Remove the lower case assembly. (See procedure 1)
- MVR Circuit Board (Time required: About 3 minutes)
 1. Remove the volume knob from the control panel surface. (Fig.1 and Fig.5)
 2. Remove the 5 screws [380H]. The MVR circuit board can then be removed. (Fig.2)
- PB Circuit Board, Wheel assembly (Time required: About 5 minutes)
 1. Remove the 2 screws [380I]. The PB circuit board can then be removed. (Fig.2)
 2. Pull out and remove the wheel assembly from the PB circuit board. (Fig.6)

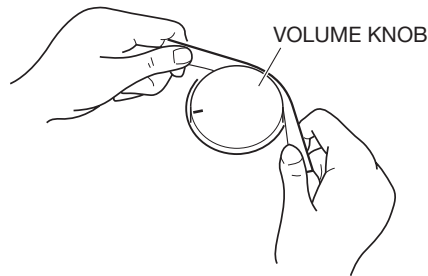


Fig.5

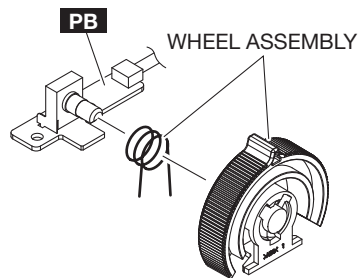


Fig.6

6. PNR-T Circuit Board (Time required: About 6 minutes)

1. Remove the lower case assembly. (See procedure 1)
2. Remove the JACK circuit board. (See procedure 4)
3. Remove the 11 screws [380J]. The PNR-T circuit board can then be removed. (Fig.7)

● Bottom view

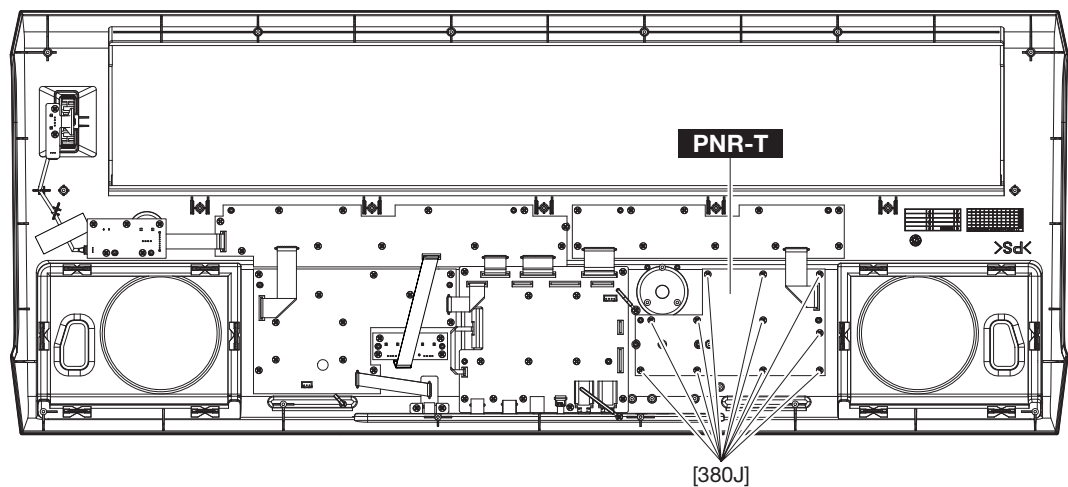


Fig.7

7. Speaker (Time required: About 4 minutes each)

1. Remove the lower case assembly. (See procedure 1)
 2. Remove the 4 screws marked [70]. The speaker can then be removed. (Fig.8)
- * *Remove the right and left speakers in the same way.*

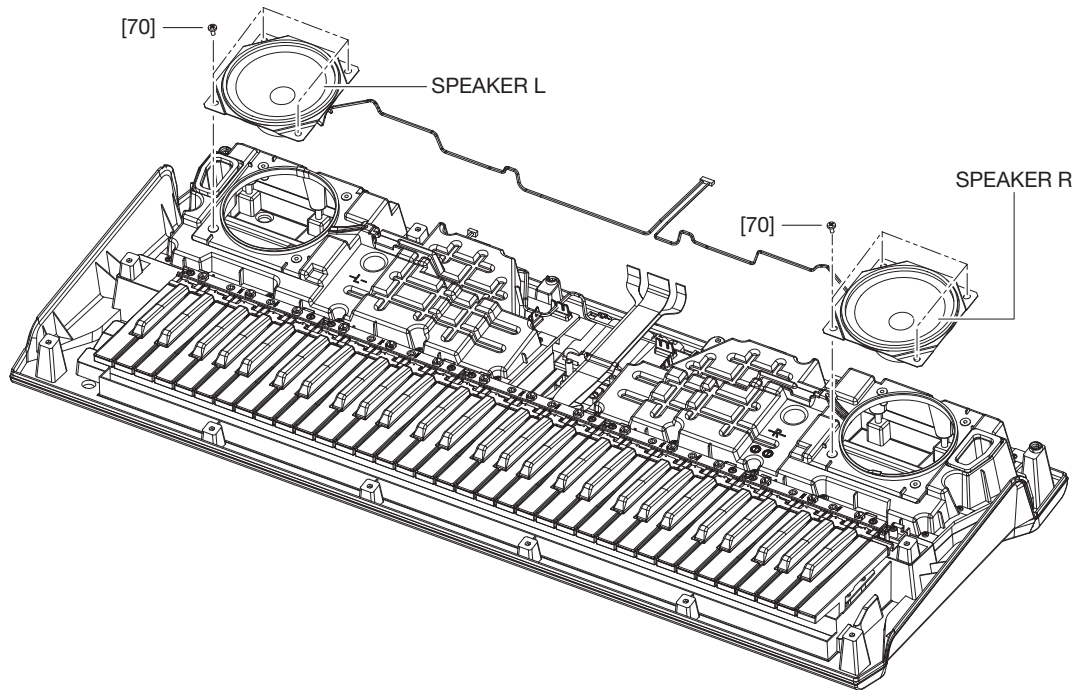


Fig.8

8. Speaker Grille (Time required: About 4 minutes each)

1. Remove the lower case assembly. (See procedure 1)
 2. Release the 6 claws marked [A] of the SP grille. The SP grille can then be removed. (Fig.1)
- * *The right and left SP grilles can be removed in the same manner.*

9. Removing the Spring Terminals

- Spring terminal A and spring terminal B (Time required: About 8 minutes)
 1. Remove the lower case assembly. (See procedure 1)
 2. Remove the BATT ribbon cable soldered to spring terminals A and B. (Fig.9)
 3. Flip over the lower case assembly, and remove the battery cover assembly. (Fig.1)
 4. Spring terminal A is removed by slowly lifting upward and then sliding to the top right. (Fig.9)
 5. To remove spring terminal B, release the hook, and pull it out from the inside. (Fig.9)
- Spring terminal C and spring terminal D (Time required: About 1 minute each)
 1. Remove the battery cover assembly. (See "●Spring terminal A and spring terminal B" in procedure 9)
 2. Release the hooks, and pull out spring terminals C and D. (Fig.9)

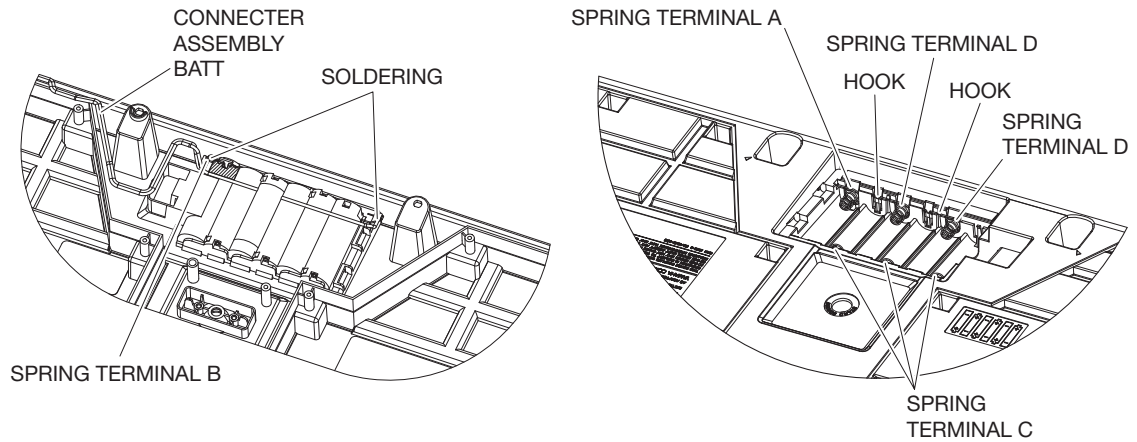


Fig.9

■ Disassembling the keyboard (time required: About 13 minutes)

1. Remove the lower case assembly. (See procedure 1)

- White keys and black keys

1. The white and black keys are grouped in single octave sets starting from the left side and consist of a total of five sets. Only the C6 white key, unlike the other keys, is not included in a set. (Fig.1)

2. To remove a set, remove the 2 each screws marked [120A]. The white and black keys in the set can then be removed. (Fig.1)

When removing, unfasten the 2 hooks at the back of the black keys upward, and lift the white and black keys while pulling them toward you a little. (Photo1)

3. To remove the white key C6, remove the screw marked [120B], unhook as described in previous procedure, and pull out toward you. (Fig.1)

* *To reassemble after all white and black keys have been removed, first, mount by aligning the C3 to B3 white and black keys with the boss, and then mount the remaining white and black keys. (Fig.1)*

- Rubber contacts

1. Remove the white and black keys corresponding to the rubber contacts to be removed. (See Fig.1 and "●White keys and black keys")

2. Remove the respective rubber contacts. (Fig.1)

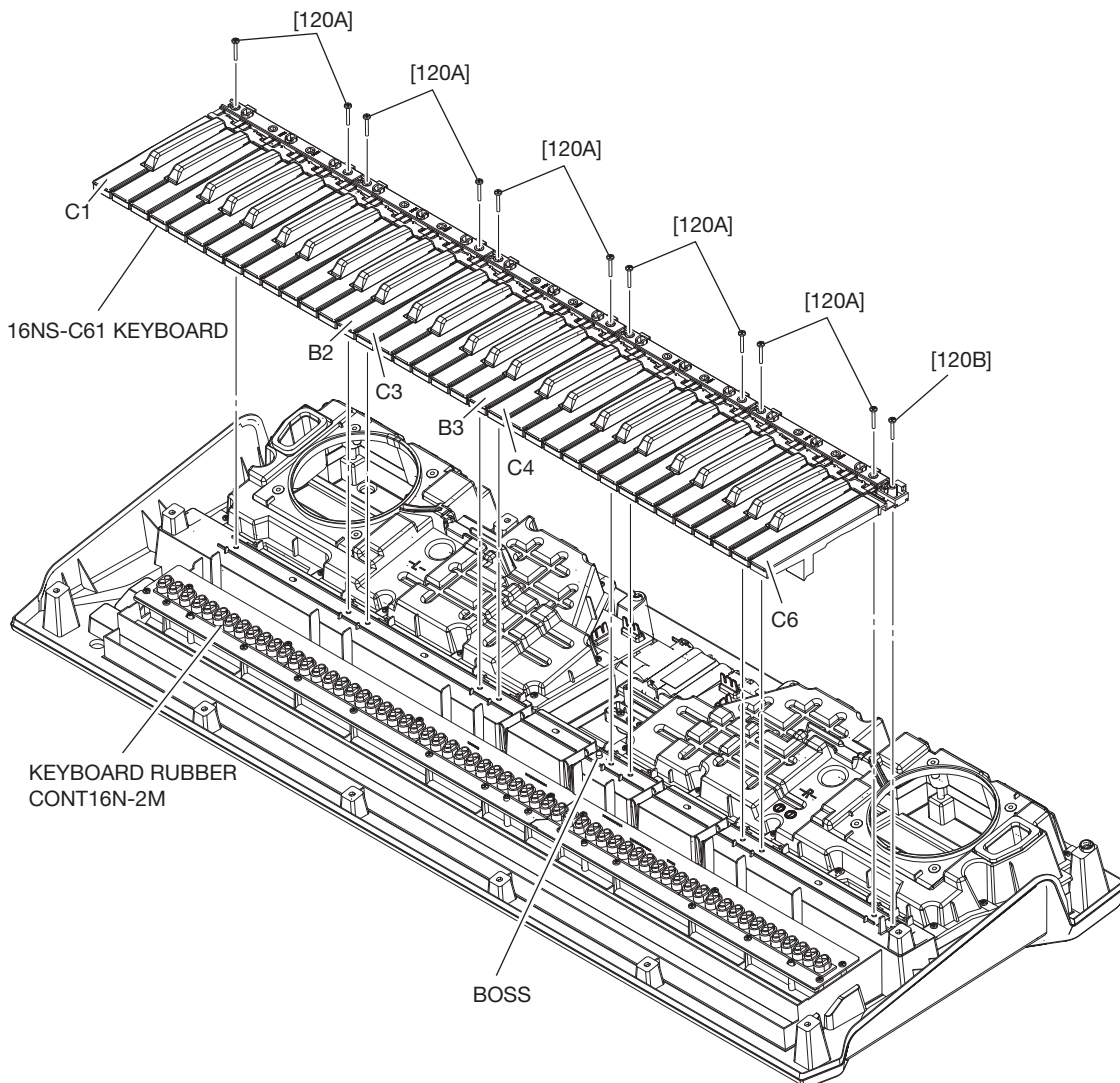


Fig.1

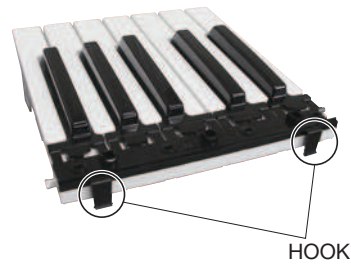


Photo1

- Circuit Board 61L-MK

1. Remove the C1 to B3 white and black keys. (See Fig.1 and "●White keys and black keys")
2. Remove the 4 screws marked [100C] and 8 screws marked [100A]. The circuit board 61L-MK can then be removed. (Fig.2)

* *When installing the circuit board 61L-MK, tighten the screws from No. 1 to 12 in the numerical order as shown in the figure "61L-MK" in Fig.3. (Fig.3)*

- Circuit Board 61H-MK

1. Remove the C4 to C6 white and black keys. (See Fig.1 and "●White keys and black keys")
2. Remove the 3 screws marked [100D] and 5 screws marked [100B]. The circuit board 61H-MK can then be removed. (Fig.2)

* *When installing the circuit board 61H-MK, tighten the screws from No. 1 to 8 in the numerical order as shown in the figure "61H-MK" in Fig.3. (Fig.3)*

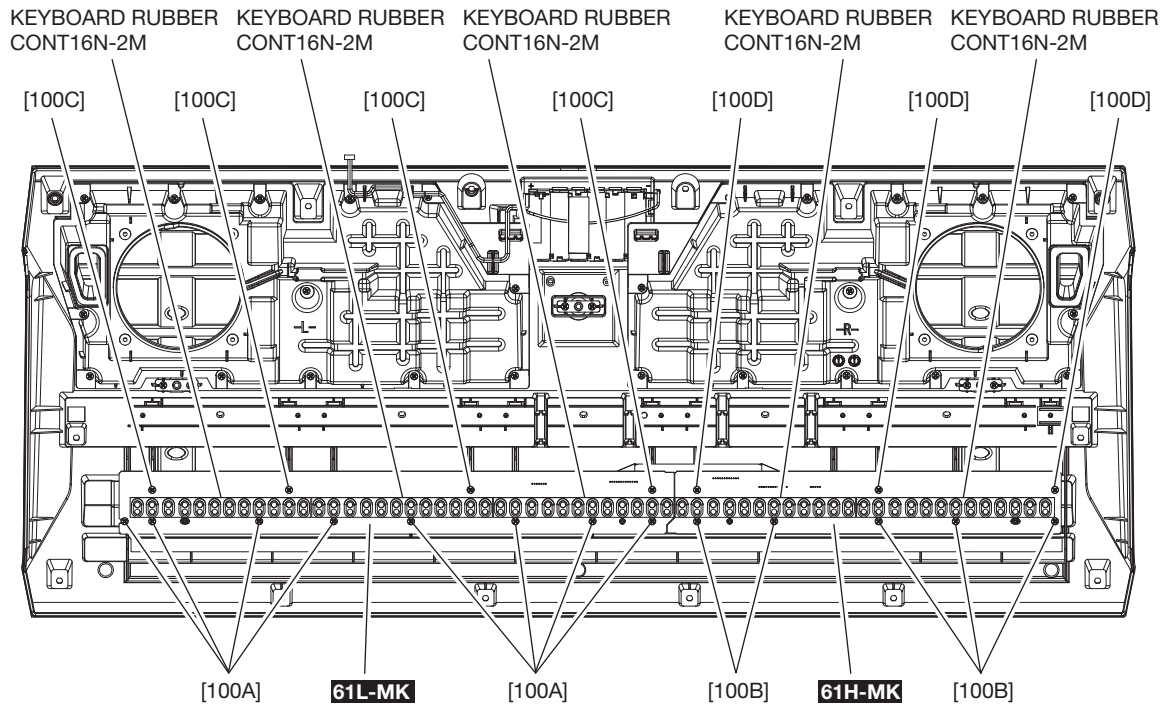


Fig.2

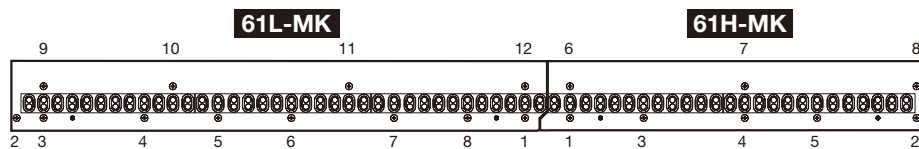


Fig.3

■ BACKUP

Backup Parameters

The following Backup parameters will be maintained even if the power is turned off.

Backup parameters (each time)

- User Songs
- Styles loaded from outside (Style Number 291 to 300)
- Samples saved to Quick Sampling pads

Backup parameters when turning off the power

- Registration Memory
 - FUNCTION Settings
- Settings with a check mark in the “Backup” column in the Function List are backed up.

In addition to the Backup Parameters above, all style data (including data that has not been loaded) transferred from a computer and all song data will be maintained and saved within the instrument even if you turn off the power.

NOTICE

Backups are executed automatically when the power is turned off. However, please note that backups are not executed and the settings will be lost if the power is turned off in the following situations.


- When the AC adaptor is unplugged with the power on (even if batteries are installed):
- When the power is turned off due to accidents such as electric power failure:
- Low or no battery power

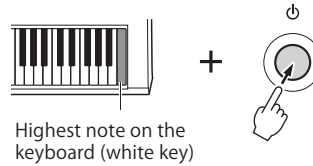
INITIALIZATION

You can erase the backup parameter settings described above, and then restore all the default factory settings. The instrument can be initialized with the following two methods.


● Backup Clear

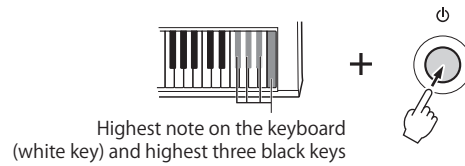
This operation initializes the backup parameters.

While holding down the highest white key, press the  (Standby/On) switch to turn the power on.



● Flash Clear

This operation deletes all the songs and styles that have been transferred from a computer. However, data that has been loaded into Styles 291 to 300 will not be deleted. While simultaneously holding the highest white key and the three highest black keys, press the  (Standby/On) switch to turn the power on.



CAUTION

- Keep in mind that this operation also deletes any data you have purchased and loaded. Be sure to save important data to a computer.

INSPECTIONS

1. TEST PROGRAM

Caution:

- If "Factory Reset" of Test Item No. 66 is executed, the setting data and user data will be erased.
Be sure to save the backup data in advance.

2. Measurement conditions

2-1. Environment

Perform tests under following conditions.

- Ordinary temperature (5 - 40 degrees Celsius)
- Ordinary humidity (20 - 90 %)

If the test results deviate from the test standard range, however, re-test under such conditions as the ordinary temperature (5 - 40 degrees Celsius) and ordinary humidity (30 - 90 % relative humidity).

2-2. Power supply

Use PA-150U or PA-150B for the AC adaptor.

The provided power supply should be within $\pm 10\%$ of the rated voltage of the adapter being used, and 50 Hz or 60 Hz.

2-3. Measuring instruments

- Frequency counter (capable of measuring to three or more decimal places) (for pitch measurement)
- Level meter (for output level measurement)
- Oscilloscope (for measuring popping noise)

* Use measuring instruments with an input impedance of 1 M Ω or more.

2-4. Test jigs

- Foot switch (FC-4A or FC5) (for inspecting [SUSTAIN] jack)
- USB cable (A-B type) (for inspecting [USB TO HOST] jack)
- USB Flash Drive (for inspecting [USB TO DEVICE] jack)
- Oscillator (for input of sinusoidal waveform to [AUX IN] jack)
- Stereo mini-plug cable (for inspecting [AUX IN] jack)
- Monaural plug cable (for inspecting [MIC INPUT] jack)

2-5. Jack connection state

- [PHONES] jack: Connect a measuring instrument (L and R channels: 33 Ω load)
- [OUTPUT] jack: Connect a measuring instrument (L/L+R and R channels: 10 k Ω load)
- [SUSTAIN] jack: Before turning the power on, plug the foot switch.

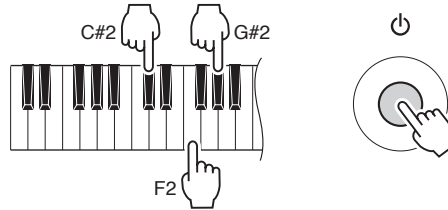
2-6. Control condition

- PEDAL: OFF
- The position of the Master Volume is according to each inspection item.
For inspection items that do not specify, it should be as follows.
 - Center standard
(Optional: in order to be able to properly evaluate each inspection item)
- Other: The default value when powered ON.

3. Test Mode

3-1. Starting Test mode

- 1) While holding down the [C#2], [F2], and [G#2] keys simultaneously, press the [⏻] (Standby/On) switch.



- 2) When Test mode is started, "TEST" is shown on the LCD screen.

3-2. Selection and execution of test items

- 1) Press the [+] or [-] buttons in the Number buttons area to select the test item.
- 2) Press the [START/STOP] button to start the test. Refer to the Test Program Item List regarding how to operate each test item.
- 3) Check the completed test.

Check that the cursor (▬) is displayed below the first character of the test item name. The "▬" is displayed for items where the test results were OK.

Exiting a test item

Perform the procedure below depending on whether "OK" or "NG" is displayed.

3-3. When the test result shows OK

Press the [START/STOP] or [DEMO] button, or the lowest key ([C1] white key), to return to the selection of test items.

3-4. When the test result is FAIL

Press the [DEMO] button or the lowest key ([C1] white key) to return to the selection of test items.

* If the result was FAIL, pressing the [START/STOP] button does not return to the selection of the test items.

3-5. Test Program Item List

No.	Inspection items	Procedures for selection and execution of test items
001	ROM version	This shows the ROM version. 1) Press the [START/STOP] button. 2) The version number of the main program is displayed. "*** Main" (where *** is the version number) 3) Press the [START/STOP] button to return to the test item selection screen.
002	Memory Check 1 All	Executes a simplified check of all the memories (004- 006) at one time. 1) Press the [START/STOP] button. 2) Check the test result. If no problem is found, "Mem1 OK" is shown on the LCD. If any problem is found, "Mem1 NG" is shown on the LCD. 3) Press the [START/STOP] button to return to the test item selection screen.
004	RAM Check1	Executes the simplified check of the RAM connected to the CPU bus. 1) Press the [START/STOP] button. 2) Check the test result. If no problem is found, "Ram OK" is shown on the LCD. If any problem is found, "Ram NG" is shown on the LCD. 3) Press the [START/STOP] button to return to the test item selection screen.
006	Wave ROM Check1	Executes a simplified check of the Wave ROM connected to the CPU bus. 1) Press the [START/STOP] button. 2) Check the test result. If no problem is found, "WRom OK" is shown on the LCD. If any problem is found, "WRom NG" is shown on the LCD. 3) Press the [START/STOP] button to return to the test item selection screen.
009	Pitch Check	Checks whether the correct pitch is output from this instrument. 1) Before starting the test, connect the Frequency Counter to the [PHONES] jack on the rear panel. (Either L or R ch) 2) Press the [START/STOP] button. The A3 sound is produced. 3) Check the Frequency counter indication. Specifications range: 441.00 ± 0.2 Hz 4) Press the [START/STOP] button to stop the A3 sound and return to the test item selection screen.

No.	Inspection items	Procedures for selection and execution of test items
011	Output level R Check	<p>This measures whether the output level of the R channel of the Output jack is proper.</p> <ol style="list-style-type: none"> 1) Before starting the test, connect the level meter to the Output jack on the rear panel. 2) Set the MASTER VOLUME to the maximum position. 3) Press the [START/STOP] button. A 1kHz sine wave is produced from the R channel. 4) Check the output levels of L and R ch indicated on the Level meter. No problem if the following conditions are satisfied. [PHONES] (33 Ω load) <ul style="list-style-type: none"> • R: -21.5 dBu ± 2 dBu • L: -79.0 dBu or less [OUTPUT] (10 kΩ load) <ul style="list-style-type: none"> • R: -17.5 dBu ± 2 dBu • L/L+R: -77.0 dBu or less 5) Press the [START/STOP] button to stop the 1 kHz sine wave sound and return to the test item selection screen.
012	Output level L Check	<p>This measures whether the output level of the L channel of the Output jack is proper.</p> <ol style="list-style-type: none"> 1) Before starting the test, connect the level meter to the Output jack on the rear panel. 2) Set the MASTER VOLUME to the maximum position. 3) Press the [START/STOP] button. A 1 kHz sine wave is produced from the L channel. 4) Check the output levels of L and R ch indicated on the Level meter. No problem if the following conditions are satisfied. [PHONES] (33 Ω load) <ul style="list-style-type: none"> • R: -79.0 dBu or less • L: -21.5 dBu ± 2 dBu [OUTPUT] (10 kΩ load) <ul style="list-style-type: none"> • R: -77.0 dBu or less • L/L+R: -17.5 dBu ± 2 dBu 5) Press the [START/STOP] button to stop the 1 kHz sine wave sound and return to the test item selection screen.
018	SP MUTE Check	<p>Checks whether the Speaker Mute function works properly.</p> <ol style="list-style-type: none"> 1) Press the [START/STOP] button. “SP OK” is shown on the LCD. If any problem is found, “SP NG” is shown on the LCD. 2) Press the [START/STOP] button to return to the test item selection screen. <p>* For this test, do not connect anything to the [PHONES] jack.</p>

No.	Inspection items	Procedures for selection and execution of test items
019	MUTE Check	<p>Checks whether the Mute function works properly.</p> <ol style="list-style-type: none"> 1) Press the [START/STOP] button. "MUTE Off" is shown on the LCD and the C5 sound is produced. 2) Press the [+] button, and the muting circuit is activated. The LCD screen switches to "MUTE On". 3) Confirm that the speakers and the output of the [PHONES] jack and the [OUTPUT] jack are muted. 4) Press the [-] button, and the muting circuit is deactivated. The LCD screen switches to "MUTE Off". 5) Confirm that the muting is deactivated for the speakers and the output of the [PHONES] jack and the [OUTPUT] jack. 6) Press the [START/STOP] button to stop the C5 sound and return to the test item selection screen. <p>* When checking the output of the speakers, do not connect anything to the [PHONES] jack.</p>
021	HP Insertion and Extraction Check	<p>Checks whether headphones insertion and extraction work properly.</p> <ol style="list-style-type: none"> 1) Press the [START/STOP] button. "HP In" is shown on the LCD. 2) Connect headphones to the [PHONES] jack. "HP Out" is shown on the LCD. 3) Remove the headphones from the [PHONES] jack. If there are no problems, "HP OK" is shown on the LCD. 4) Press the [START/STOP] button to return to the test item selection screen. <p>* If insertion/extraction of headphones is not detected within 60 seconds after the start of the test, it times out and "HP NG" is shown on the LCD.</p>
022	AUX Check	<p>Checks whether signal input to the [AUX IN] jack functions properly.</p> <ol style="list-style-type: none"> 1) Press the [START/STOP] button, and check whether "AUX In" is shown on the LCD when nothing is connected to the [AUX-IN] jack. 2) Connect an oscillator to the [AUX IN] jack on the rear panel. When the stereo mini-plug of the connection cable is plugged in to the [AUX IN] jack, confirm that the LCD display changes to "AUX Out". 3) Connect the level meter to the [PHONES] jack on the rear panel. (Both L and R channels, 33 Ω load) 4) Input a sine wave (-6.0 dBu, 1 kHz) to the R channel of the [AUX IN] jack. 5) Check the output levels of L and R ch indicated on the Level meter. No problem if the following conditions are satisfied. [PHONES] (33 Ω load) <ul style="list-style-type: none"> • R (input side): -7.5 dBu ± 2 dBu • L (nothing side): -72.0 dBu or less 6) For the L channel, perform the same operations as in Steps 4 and 5. 7) Unplug the stereo mini cable from the [AUX IN] jack. If no problem is found, "AUX End" is shown on the LCD.

No.	Inspection items	Procedures for selection and execution of test items
023	MIC Check	<p>Checks whether signal input to the [MIC INPUT] jack functions properly.</p> <ol style="list-style-type: none"> 1) Press the [START/STOP] button, and check whether “MIC In” is shown on the LCD when nothing is connected to the [MIC-INPUT] jack. 2) Connect an oscillator to the [MIC INPUT] jack on the rear panel. When the monaural plug of the connection cable is plugged in to the [MIC INPUT] jack, confirm that the LCD display changes to “MIC Out”. 3) Connect the level meter to the [PHONES] jack on the rear panel. (Both L and R channels, 33 Ω load) 4) Input a sine wave (-30.0 dBu, 1 kHz) to of the [MIC INPUT] jack. 5) Check the output levels of L and R ch indicated on the Level meter. No problem if the following conditions are satisfied. [PHONES] (33 Ω load) <ul style="list-style-type: none"> • GAIN: MAX L, R: 3.0 dBu ± 2 dBu • GAIN: MIN L, R: -75.0 dBu or less 6) Unplug the monaural plug cable from the [MIC INPUT] jack. If no problem is found, “MIC End” is shown on the LCD. 7) Press the [START/STOP] button to return to the test item selection screen.
025	SW/LED Check	<p>Checks whether each panel button works properly.</p> <ol style="list-style-type: none"> 1) Press the [START/STOP] button. “Dial Up” is shown on the LCD. 2) Turn the dial in the Up direction (to the right). When the Up direction is detected, “Dial Dwn” is shown on the LCD. 3) Turn the dial in the Down direction (to the left). When the Down direction is detected, “Mic” is shown on the LCD. 4) After that, press the buttons specified on the LCD one by one. The sound of the note assigned to the pressed button will be produced. (Regarding what note is assigned, refer to “Switch test item list”) 5) Press the [START/STOP] button to return to the test item selection screen. <p>* You can exit the test at any time by pressing the the lowest key ([C1] white key). * If two or more buttons are pressed simultaneously, “Over Two” is shown on the LCD.</p>
026	All LED On	<p>Checks whether all of the LEDs turn on.</p> <ol style="list-style-type: none"> 1) Press the [START/STOP] button. 2) Check that all of the LEDs are turned on. 3) Press the [START/STOP] button to turn off the LEDs and return to the test item selection screen.
033	All LCD On	<p>Checks whether all of the dots on the LCD screen turn on.</p> <ol style="list-style-type: none"> 1) Press the [START/STOP] button. 2) Check that all the LCD dots are turned on. 3) Press the [START/STOP] button to return to the test item selection screen.
034	All LCD Off	<p>Checks whether all the LCD dots are turned off properly.</p> <ol style="list-style-type: none"> 1) Press the [START/STOP] button. 2) Check that all the LCD dots are turned off. 3) Press the [START/STOP] button to return to the test item selection screen.

No.	Inspection items	Procedures for selection and execution of test items
036	Main Volume Check	<p>Checks whether the minimum value and maximum value of the [MASTER VOLUME] control are detected properly.</p> <ol style="list-style-type: none"> 1) Press the [START/STOP] button. “MVol Min” is shown on the LCD. 2) Set the [MAIN VOLUME] to the minimum. “MVol Max” is shown on the LCD. 3) Set the [MAIN VOLUME] to the maximum. If no problem is found “MVol OK” is shown on the LCD. 4) Press the [START/STOP] button to return to the test item selection screen.
037	Fail-Safe Check	<p>Checks whether the Fail-Safe Circuit for digital volume control works properly.</p> <ol style="list-style-type: none"> 1) Press the [START/STOP] button. “FS OK” is shown on the LCD. If any problem is found, “FS NG” is shown on the LCD. 2) Press the [START/STOP] button to return to the test item selection screen.
038	Pedal1 Check	<p>Checks whether the foot switch plugged into the [SUSTAIN] jack works properly.</p> <ol style="list-style-type: none"> 1) Press the [START/STOP] button. The C3 sound is produced, and “PD1 On” is shown on the LCD. 2) Press the Foot switch to produce the C4 sound. 3) Release the Foot switch to stop the C4 sound. If no problem is found, “PD1 OK” is shown on the LCD. 4) Press the [START/STOP] button to return to the test item selection screen. <p>* Connect a foot switch to the [SUSTAIN] jack before turning the power ON.</p>
042	Pitch Bend Check	<p>Checks whether the maximum value, minimum value, and center value of the [PITCH BEND] wheel are detected properly.</p> <ol style="list-style-type: none"> 1) Press the [START/STOP] button. “PB UP” is shown on the LCD. 2) Turn the [PITCH BEND] wheel to the maximum position. When the maximum value is detected, confirm that “PB DW” is shown on the LCD and that the G3 sound is produced. 3) Turn the [PITCH BEND] wheel to the minimum position. When the minimum value is detected, confirm that “PB C” is shown on the LCD, and that the C3 sound is also produced. 4) Return the [PITCH BEND] wheel to the center position. When the center value is detected, confirm that “PB OK” is shown on the LCD, and that the C4 sound is also produced. 5) Press the [START/STOP] button to stop the C4 sound and return to the test program selection screen. <p>* If the wheel is turned as directed, but the test does not advance to the next step, it is judged as “NG”.</p>

No.	Inspection items	Procedures for selection and execution of test items
043	Knob Check	<p>Checks whether the minimum value, maximum value, and center value of the [LIVE CONTROL A, B] knobs are detected correctly.</p> <ol style="list-style-type: none"> 1) Press the [START/STOP] button. “Knob1 Lo” is shown on the LCD. 2) Turn the [LIVE CONTROL A] knob to the minimum position. When the minimum value is detected, the C3 sound is produced, and “Knob1 Hi” is shown on the LCD. 3) Turn the [LIVE CONTROL A] knob to the maximum position. When the maximum value is detected, the C4 sound is produced, and “Knob1 C” is shown on the LCD. 4) Turn the [LIVE CONTROL A] knob to the center position. When the center value is detected, the C4 sound stops, and “Knob2 Lo” is shown on the LCD. 5) Turn the [LIVE CONTROL B] knob to the minimum position. When the minimum value is detected, the C3 sound is produced, and “Knob2 Hi” is shown on the LCD. 6) Turn the [LIVE CONTROL B] knob to the maximum position. When the maximum value is detected, the C4 sound is produced, and “Knob2 C” is shown on the LCD. 7) Return the [LIVE CONTROL B] knob to the center position. When the center value is detected, confirm that the C4 sound stops, and that “Knob OK” is shown on the LCD. 8) Press the [START/STOP] button to return to the test item selection screen.
046	USB Connection Check	<p>Checks whether both the [USB TO DEVICE] and [USB TO HOST] jacks work properly.</p> <ol style="list-style-type: none"> 1) Press the [START/STOP] button. “Conn --” is shown on the LCD. 2) Connect the USB cable between the [USB TO DEVICE] jack and the [USB TO HOST] jack. 3) Confirm that “Conn OK” is shown on the LCD, and that the C4 sound is produced. 4) Press the [START/STOP] button to stop the C4 sound and return to the test program selection screen. 5) Disconnect the USB cable. <p>* If a connection is not detected within 60 seconds after the start of the test, it times out and “Conn NG” is shown on the LCD.</p>
047	USB Storage Check	<p>Checks whether the USB Storage device works properly.</p> <ol style="list-style-type: none"> 1) Insert a USB memory device in the [USB TO DEVICE] jack. 2) Press the [START/STOP] button. “Strg OK” is shown on the LCD. 3) Press the [START/STOP] button to return to the test item selection screen. 4) Remove the USB memory device. <p>* During the check, “Strg --” is shown on the LCD. * If no media is inserted, “Strg no” will be shown on the LCD. * If the media is protected, “Strg Prt” will be shown on the LCD. * If reading/writing fails, “Strg NG” will be shown on the LCD.</p>

No.	Inspection items	Procedures for selection and execution of test items
053	Ping Pong Mode Check	<p>Checks whether the 2 contacts of each key work properly.</p> <ol style="list-style-type: none"> 1) Press the [START/STOP] button. "Press" is shown on the LCD. 2) Slowly press the key that you want to check. 3) When Contact No. 1 turns ON, "Make 1" is shown on the LCD, and the sound of the pressed key is produced. 4) When Contact No. 2 turns ON, "Make 1 2" is shown on the LCD, and the sound of the pressed key +4 is produced. 5) Release the key. When Contact No. 2 turns OFF, the sounds stops, and when Contact No. 1 turns OFF, "Press" is shown on the LCD. 6) Continue by repeating the operations of 2) to 5) for each of the keys to be checked. 7) Press the [START/STOP] button to return to the test item selection screen. <p>* During this test item, it is not possible to return to the test item selection screen by pressing the lowest key.</p>
060	ROM Check2	<p>Executes the check of the ROM connected to the CPU bus (Full address).</p> <ol style="list-style-type: none"> 1) Check the test result. (It will take about 10 seconds for the check.) If no problem is found, "Rom OK" is shown on the LCD. If any problem is found, "Rom NG" is shown on the LCD. 2) Press the [START/STOP] button to return to the test item selection screen.
061	RAM Check2	<p>Executes the check of the RAM connected to the CPU bus (Full address).</p> <ol style="list-style-type: none"> 1) Check the test result. If no problem is found, "Ram OK" is shown on the LCD. If any problem is found, "Ram NG" is shown on the LCD. 2) Press the [START/STOP] button to return to the test item selection screen.
062	Flash ROM Check2	<p>Executes the check of the flash ROM connected to the CPU bus (Full address).</p> <ol style="list-style-type: none"> 1) Check the test result. (It will take about 3 minutes for the check.) If no problem is found, "FRom OK" is shown on the LCD. If any problem is found, "FRom NG" is shown on the LCD. 2) Press the [START/STOP] button to return to the test item selection screen.
063	Wave ROM Check2	<p>Executes a full-address check of the Wave ROM connected to the CPU bus.</p> <ol style="list-style-type: none"> 1) Press the [START/STOP] button. 2) Check the test result. (It will take about 50 seconds for the check.) If no problem is found, "WRom OK" is shown on the LCD. If any problem is found, "WRom NG" is shown on the LCD. 3) Press the [START/STOP] button to return to the test item selection screen.
065	Keyboard Check	<p>Checks whether each key works properly.</p> <ol style="list-style-type: none"> 1) Check that the LCD shows you the should-be-pressed key. 2) Press the key specified on the LCD one by one. According to the key being inspected, the sounds between C3 and B4 are produced repeatedly. If no problem is found, "KB OK" is shown on the LCD. <p>* You can exit from this test by pressing the [DEMO] button. * If the wrong key is pressed, nothing happens. * If two or more keys are pressed simultaneously, "Over Two" is shown on the LCD. * If the velocity of pressing the key is not suitable, "Too Slow" or "Too Fast" is shown on the LCD.</p>

No.	Inspection items	Procedures for selection and execution of test items
066	Factory Reset	Reset all the backup region of the memories to the initial factory status. 1) Press the [START/STOP] button. 2) Do not turn off the power while “Fact --” is shown on the LCD. When initialization is complete, “Fact End” is shown on the LCD. 3) Press the [START/STOP] button to return to the test item selection screen.
067	Test Exit	Lets you exit from the Test mode to the normal mode. 1) Press the [START/STOP] button. The Test Program mode will end, then the instrument will be restarted in normal mode. * Never turn off the power until the Main display appears. Doing so may cause a malfunction.

4. Other Test Items (Check in normal mode)

No.	Inspection items	Procedure
-	Popping Noise Level Check	Check that the popping noise level is proper when turning the power on and off. 1) Connect an Oscilloscope to the [PHONES] jack. 2) Set the MASTER VOLUME to the maximum position. 3) Press the [⏻] (STANDBY/ON) switch to check the noise level indicated on the Oscilloscope when turning the power of the instrument on and off. No problem if the following conditions are satisfied. [PHONES] (33 Ω load) • L, R: 1.0 V peak to peak or less
-	Noise Level Check	Check that the noise level is proper. 1) Connect the level meter (using JIS-C filter) to the Output jack on the rear panel. 2) Set the MASTER VOLUME to the maximum position. 3) Check the output levels of L and R ch indicated on the Level meter. No problem if the following conditions are satisfied. [PHONES] (33 Ω load) • L, R: -78.0 dBu [OUTPUT] (10 kΩ load) • L/L+R, R: -76.0 dBu * Do not connect anything to the [AUX IN] jack.
-	No charging the batteries Check	Checks whether the voltage is supplied to batteries. 1) Connect the AC adapter to the [DC IN] jack. 2) Measure the voltage between Battery terminal A and B, and confirm that it is 0.2V or less.
-	Vibration Noise Check	Checks whether vibration noise occurs on the instrument. 1) Select Voice No.001 (L!CGrPno). 2) Set the Main Voice volume in the Function to the default value. 3) Set the MASTER VOLUME to the maximum position. 4) Perform scaling to check that no vibration noise occurs.

5. Switch Test Item List

Turn	SW Name	LCD Display	Note Number
1	DIAL UP	<i>Dial Up</i>	C3
2	DIAL DOWN	<i>Dial Dwn</i>	C#3
3	MIC SETTING	<i>Mic</i>	D3
4	MOTION EFFECT	<i>M.Effect</i>	D#3
5	KNOB ASSIGN	<i>Assign</i>	E3
6	SPLIT	<i>Split</i>	F3
7	DUAL	<i>Dual</i>	F#3
8	HARMONY	<i>Harmony</i>	G3
9	DSP2	<i>DSP2</i>	G#3
10	OCTAVE -	<i>Octave -</i>	A3
11	OCTAVE +	<i>Octave +</i>	A#3
12	DEMO	<i>Demo</i>	B3
13	METRONOME	<i>Metro</i>	C4
14	TAP	<i>Tap</i>	C#4
15	REC	<i>Rec</i>	D4
16	SHIFT	<i>Shift</i>	D#4
17	GROOVE	<i>Groove</i>	E4
18	VOICE	<i>Voice</i>	F4
19	SONG	<i>Song</i>	F#4
20	STYLE	<i>Style</i>	G4
21	Tenkey 1	<i>Tenkey 1</i>	G#4
22	Tenkey 2	<i>Tenkey 2</i>	A4
23	Tenkey 3	<i>Tenkey 3</i>	A#4
24	Tenkey 4	<i>Tenkey 4</i>	B4
25	Tenkey 5	<i>Tenkey 5</i>	C3
26	Tenkey 6	<i>Tenkey 6</i>	C#3
27	Tenkey 7	<i>Tenkey 7</i>	D3
28	Tenkey 8	<i>Tenkey 8</i>	D#3
29	Tenkey 9	<i>Tenkey 9</i>	E3
30	Tenkey 0	<i>Tenkey 0</i>	F3
31	Tenkey -	<i>Tenkey -</i>	F#3
32	Tenkey +	<i>Tenkey +</i>	G3
33	FUNCTION	<i>Function</i>	G#3
34	PIANO	<i>Piano</i>	A3
35	MEGA BOOST	<i>M.Boost</i>	A#3
36	ARTICURATION	<i>Art.</i>	B3
37	ACMP	<i>Acmp</i>	C4
38	INTRO/ENDING	<i>Intro</i>	C#4
39	MAIN/AUTO FIL	<i>Main/Fil</i>	D4
40	SYNC STOP	<i>S.Stop</i>	D#4
41	SYNC START	<i>S.Start</i>	E4
42	START/STOP	<i>Str/Stp</i>	F4
43	SONG 1	<i>Song 1</i>	F#4
44	SONG 2	<i>Song 2</i>	G4
45	SONG 3	<i>Song 3</i>	G#4
46	SONG 4	<i>Song 4</i>	A4
47	SONG 5	<i>Song 5</i>	A#4
48	SONG A	<i>Song A</i>	B4
49	MEMORY	<i>Memory</i>	C3
50	REGIST 1	<i>Regist 1</i>	C#3
51	REGIST 2	<i>Regist 2</i>	D3
52	REGIST 3	<i>Regist 3</i>	D#3
53	REGIST 4	<i>Regist 4</i>	E3
54	LOOP HOLD	<i>Loop Hld</i>	F3
55	SAMPLING A (LED)	<i>Sampl A</i>	F#3
56	SAMPLING B (LED)	<i>Sampl B</i>	G3
57	SAMPLING C (LED)	<i>Sampl C</i>	G#3
58	SAMPLING D (LED)	<i>Sampl D</i>	A3
59	CAPTURE	<i>Capture</i>	A#3

APPENDIX

1. DMLCD Circuit Board Check Method

The DMLCD circuit board is provided with test points for service check purposes.

Check the test points on the DMLCD Circuit Board if the following symptoms appear.

Symptoms and check items

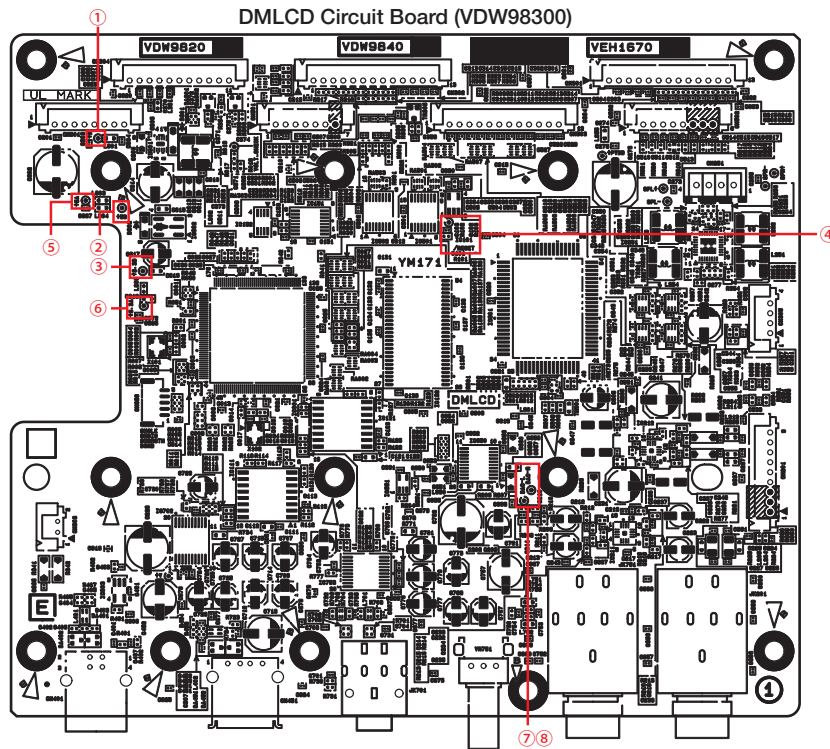
- No power indicator with LCD. --> Check the test points from No.1 to 4 sequentially
- No sound or distorted sound --> Check the test points from No.5 to 8 sequentially.

Table Point List

NO.	Test Point	Circuit	Judgment criteria	Measured by	Parts with possible defects
①	+B	Power supply for DMLCD circuit board	More than 10.0V	Multimeter	TR001orFZ001 (On AMPN Circuit Board)
②	+5D	5V power for digital circuit	4.95V~5.05V	Multimeter	IC801
③	+3.3D	3.3V power for digital circuit	3.27V~3.33V	Multimeter	IC802
④	RESET	CPU & memory reset signal	3.3V±0.5V	Multimeter	IC101
⑤	+5A	5V power for analog circuit	4.95V~5.05V	Multimeter	IC801
⑥	+3.3A	3.3V power for analog circuit	3.27V~3.33V	Multimeter	IC802
⑦	DAC-L	DAC output L channel	There shall be audio output without distortion.	Signal Checker	IC650
⑧	DAC-R	DAC output R channel	There shall be audio output without distortion.	Signal Checker	IC650

Caution:

- Use the standard AC adapter PA-150U or PA-150B for check operation.



Component Side

2. SYSTEM BOOTING FLOW CHART

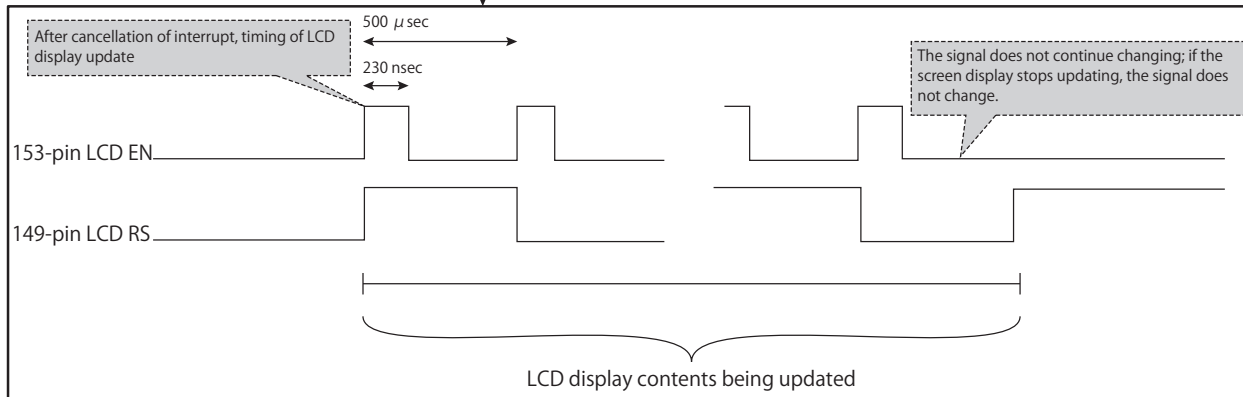
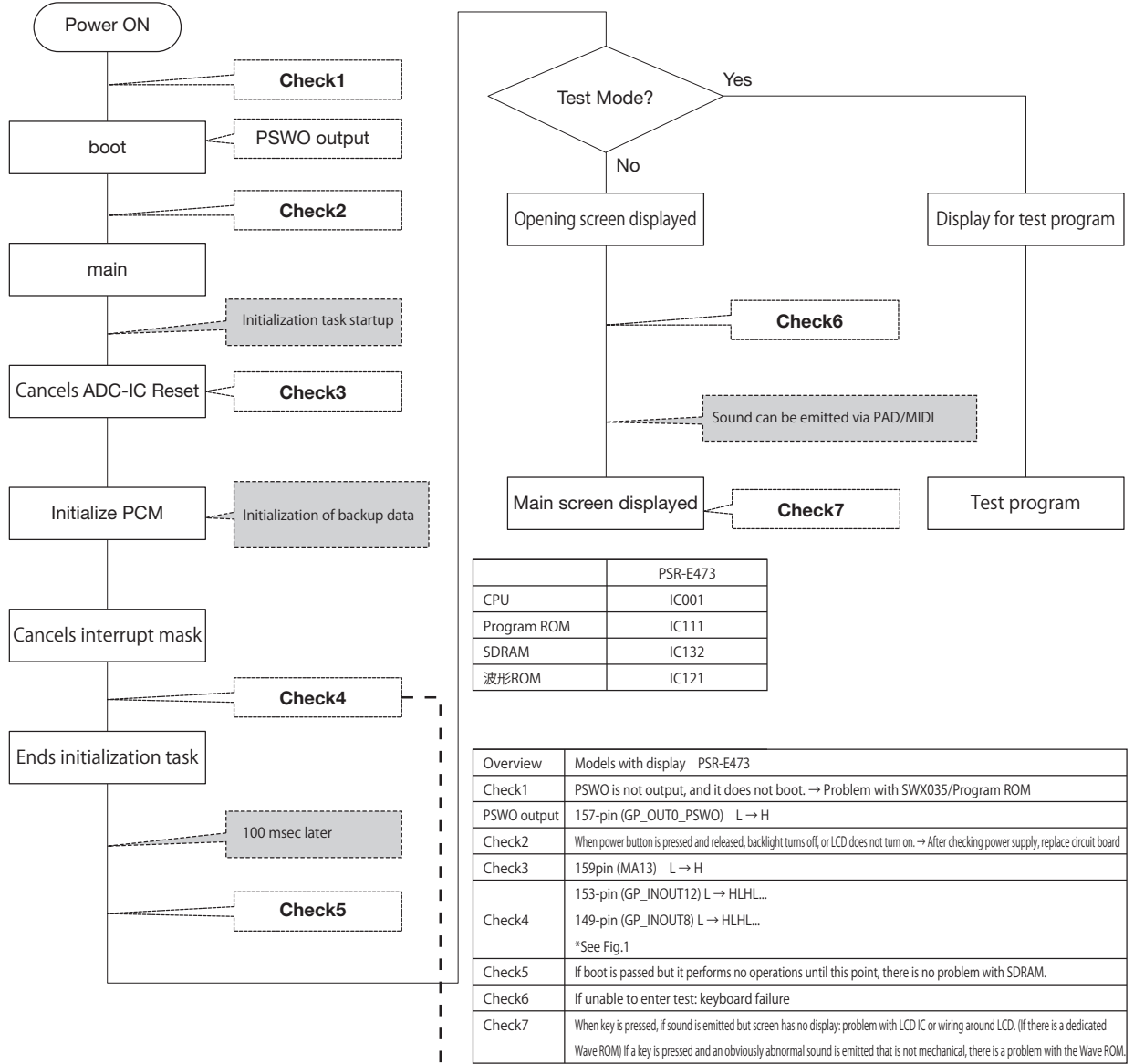


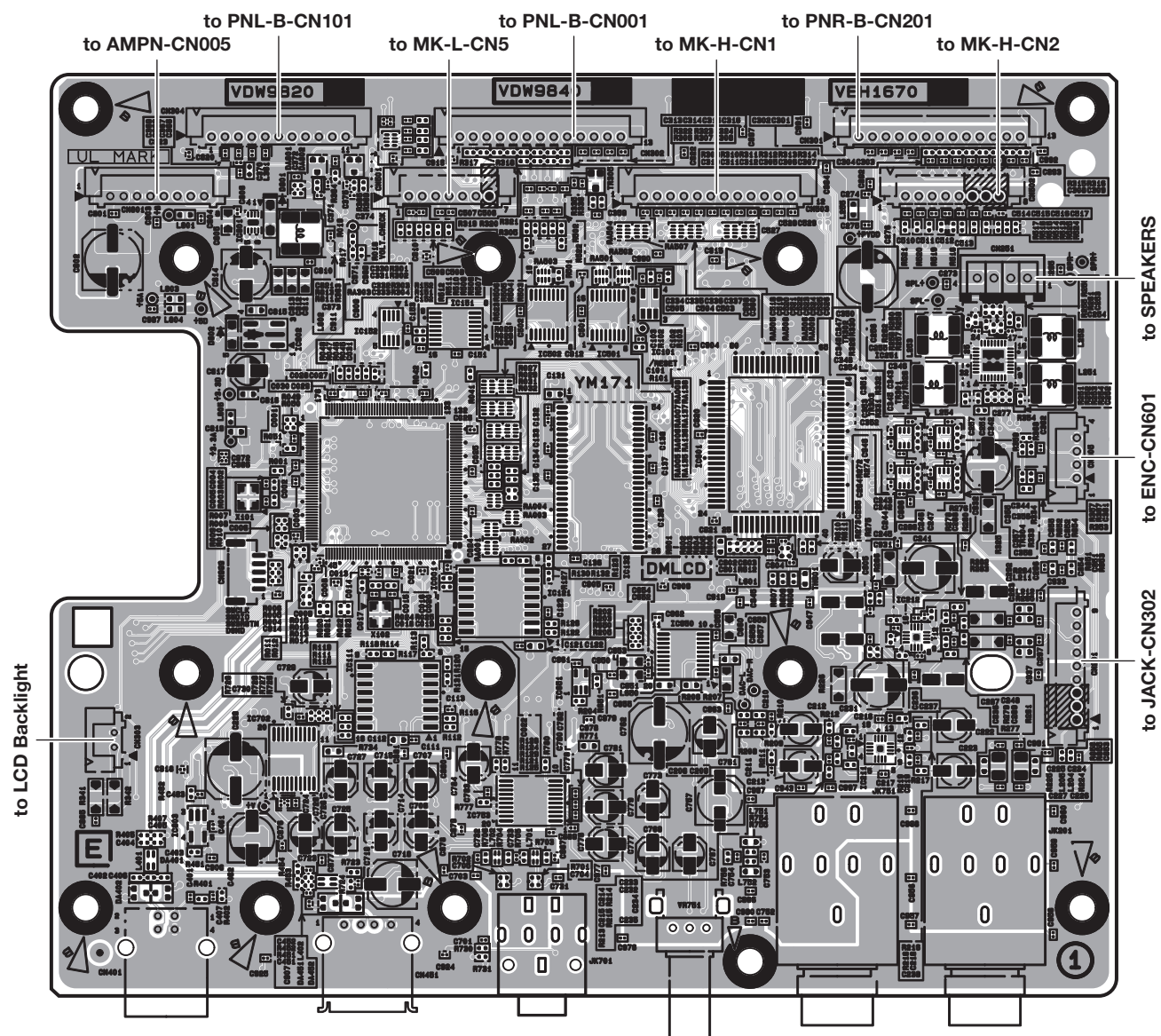
Fig.1

■ CIRCUIT BOARDS

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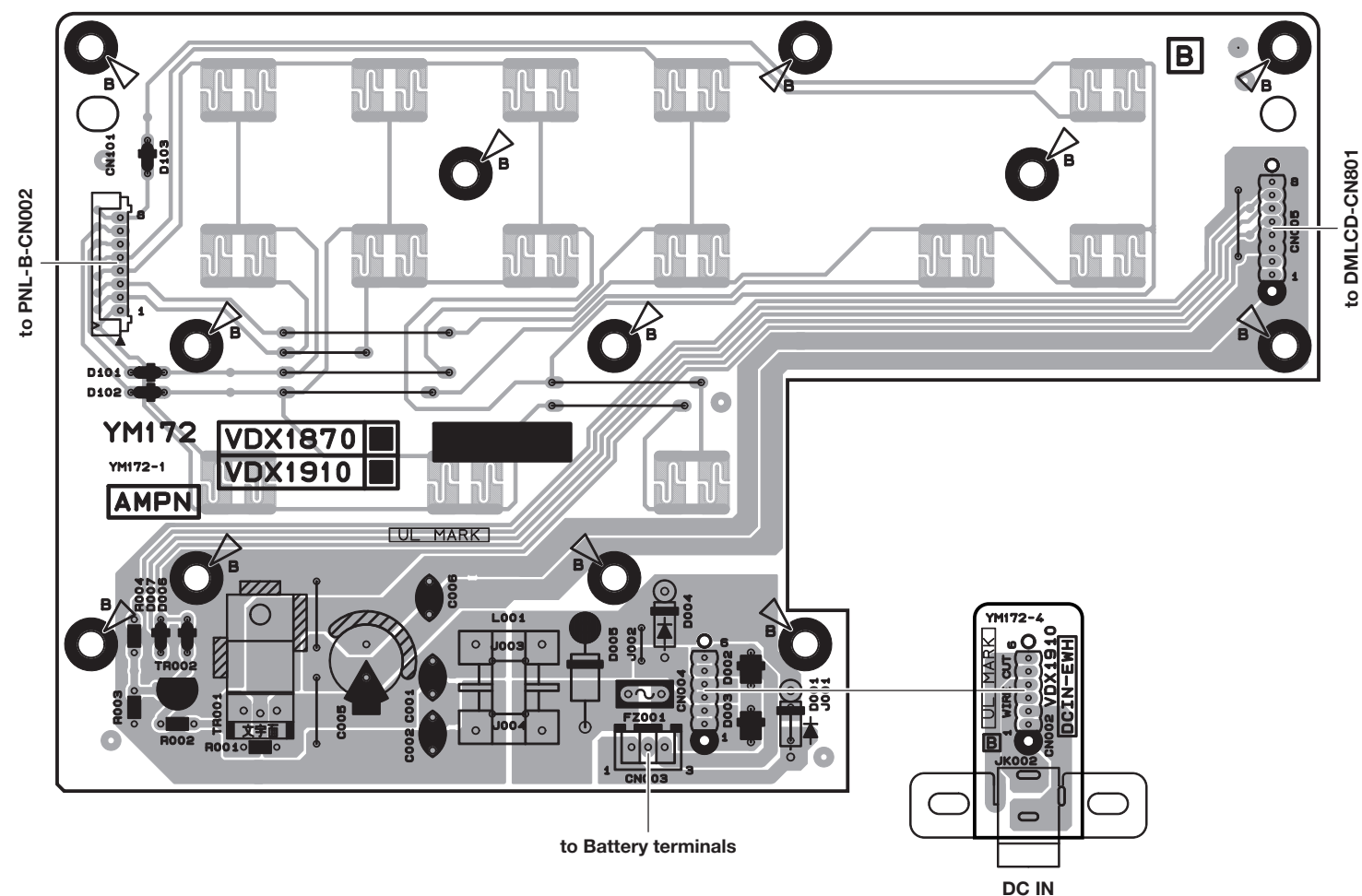
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MK-L Circuit Board (VAX3210).....	35

● DMLCD Circuit Board (YM171E0)



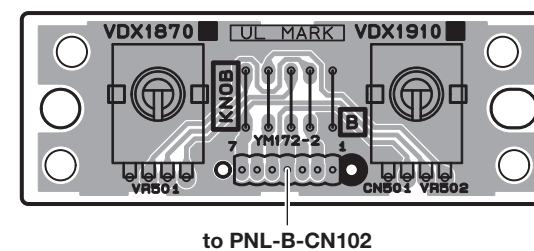
Component Side
22NA0-VDW9820

● AMPN Circuit Board (YM172B0)



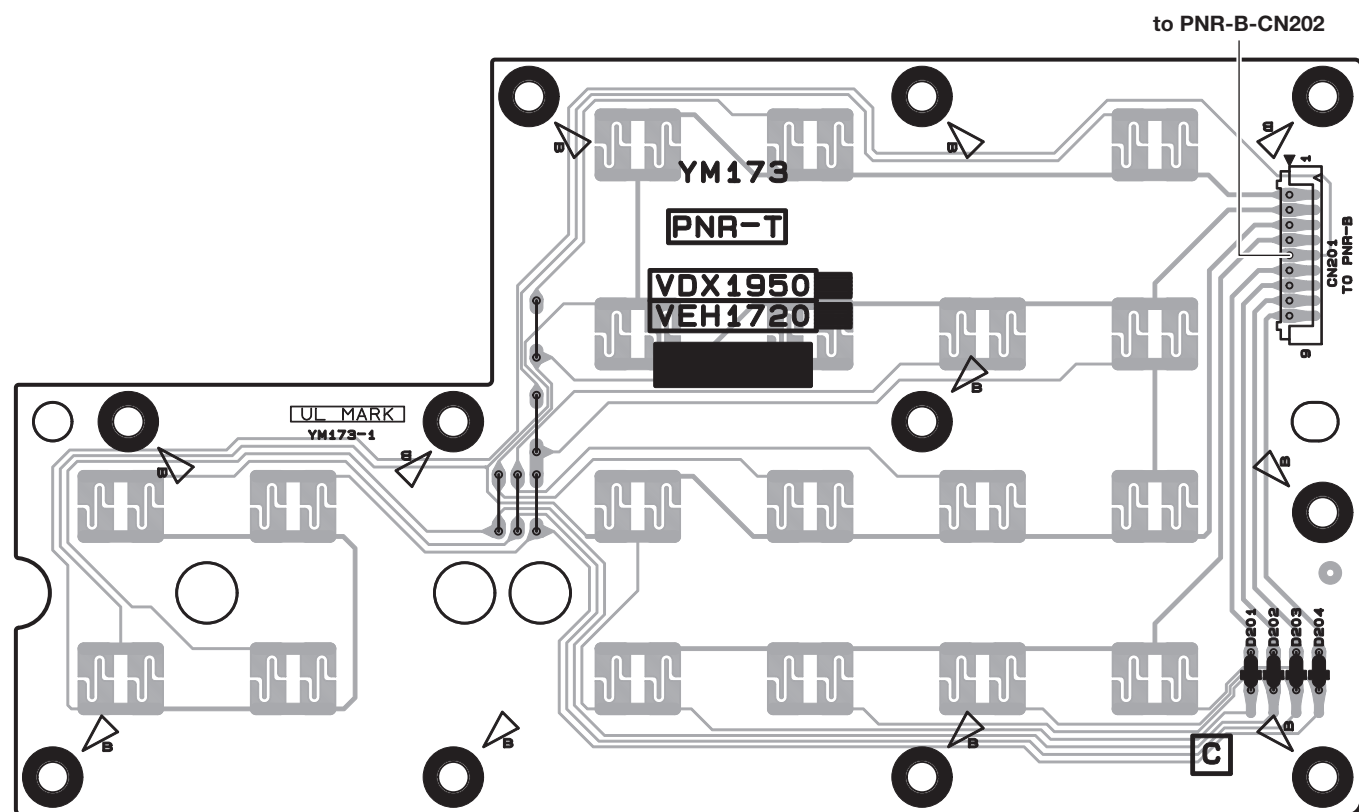
Component Side
22NA0-VDX1870

● KNOB Circuit Board (YM172B0)



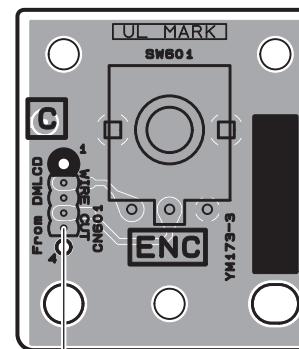
Component Side
22NA0-VDX1870

● PNR-T Circuit Board (YM173C0)



Component Side
22NA0-VDX1950

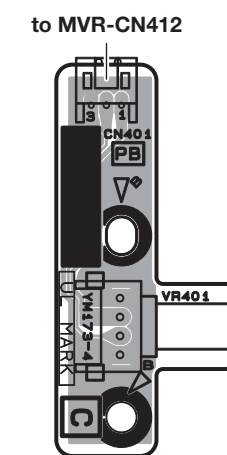
● ENC Circuit Board (YM173C0)



to DMLCD-CN305

Component Side
22NA0-VDX1950

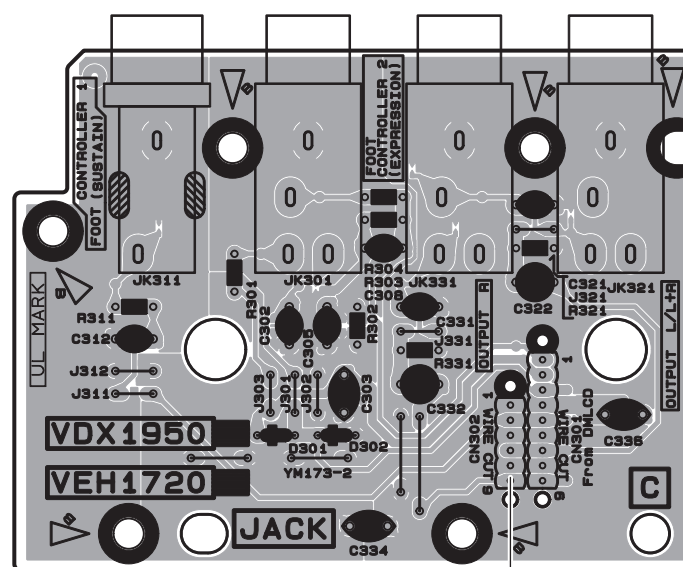
● PB Circuit Board (YM173C0)



to MVR-CN412

Component Side
22NA0-VDX1950

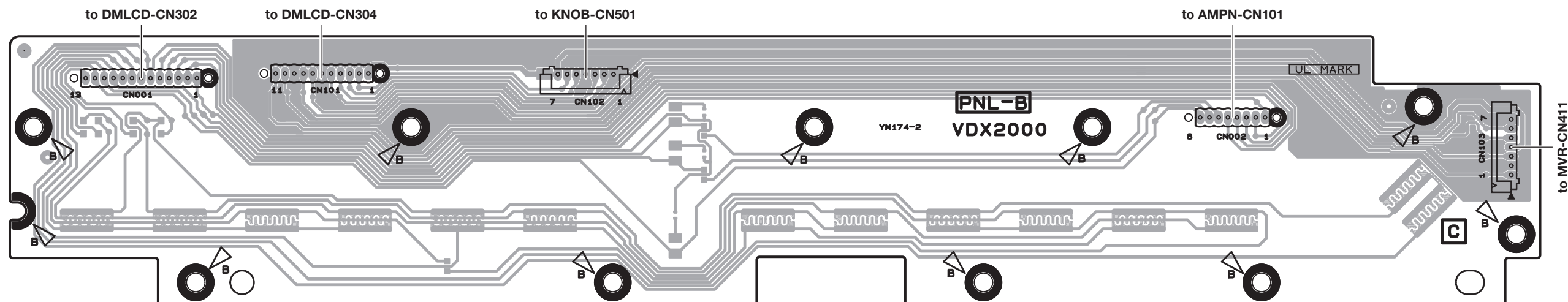
● JACK Circuit Board (YM173C0)



to DMLCD-CN201

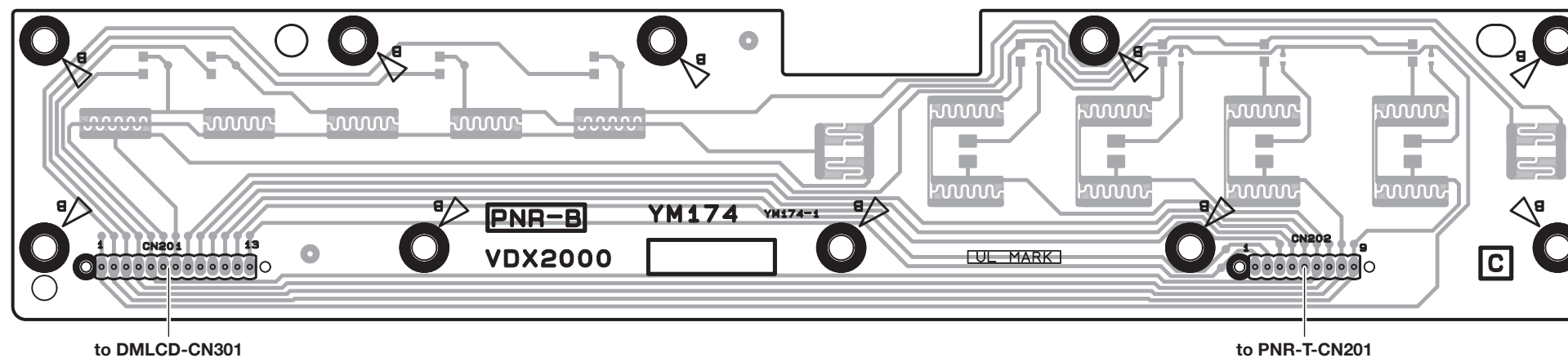
Component Side
22NA0-VDX1950

● PNL-B Circuit Board (YM174C0)



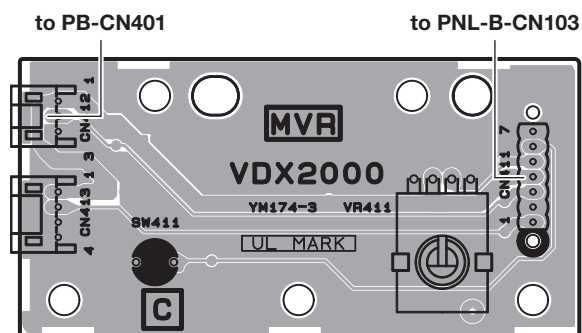
Component Side
22NA0-VDX2000

● PNR-B Circuit Board (YM174C0)



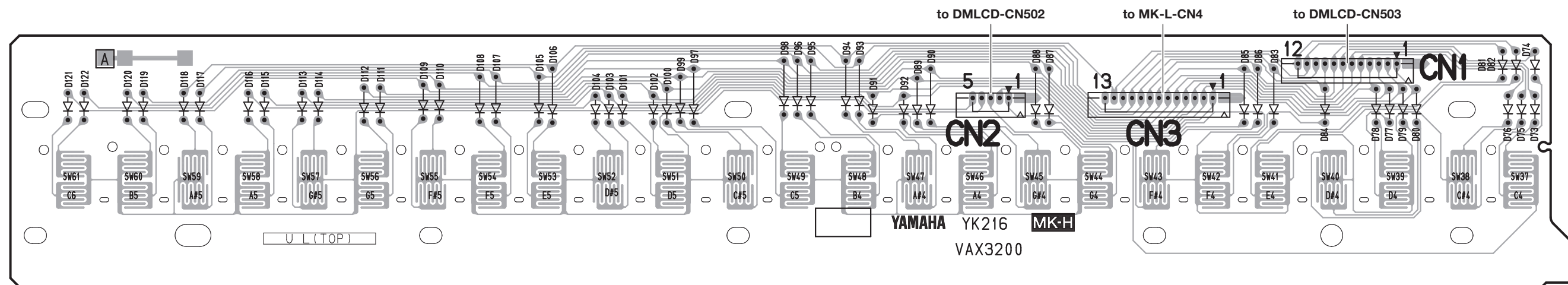
Component Side
22NA0-VDX2000

● MVR Circuit Board (YM174C0)



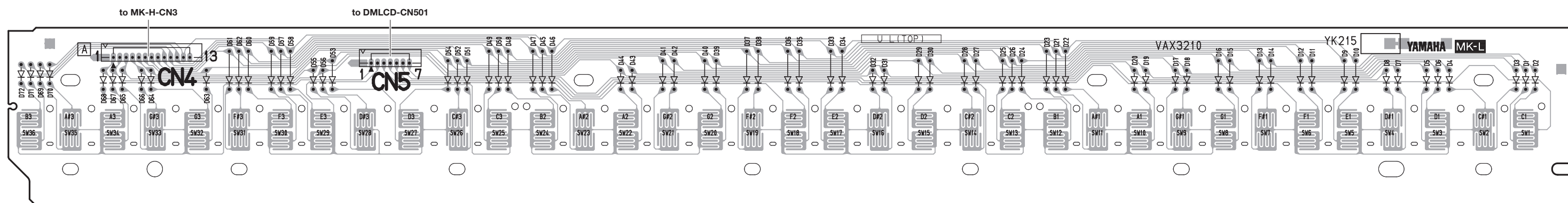
Component Side
22NA0-VDX2000

● MK-H Circuit Board (YK216A0)



Component Side
22NA0-VAX3200

● MK-L Circuit Board (VAX3210)



Component Side
22NA0-VAX3210

Digital Keyboard PSR-E473

CIRCUIT DIAGRAM

■ CONTENTS	
BLOCK DIAGRAM	2
CIRCUIT BOARD LAYOUT WIRING	3
OVERALL CIRCUIT DIAGRAM	
DMLCD	4
AMPN, KNOB, DCIN-EH, DCIN-EWH	5
PNR-T, JACK, ENC, PB, MOD	6
PNL-B, PNR-B, MVR	7
MK-L, MK-H	8

■ BLOCK DIAGRAM

1

2

3

4

5

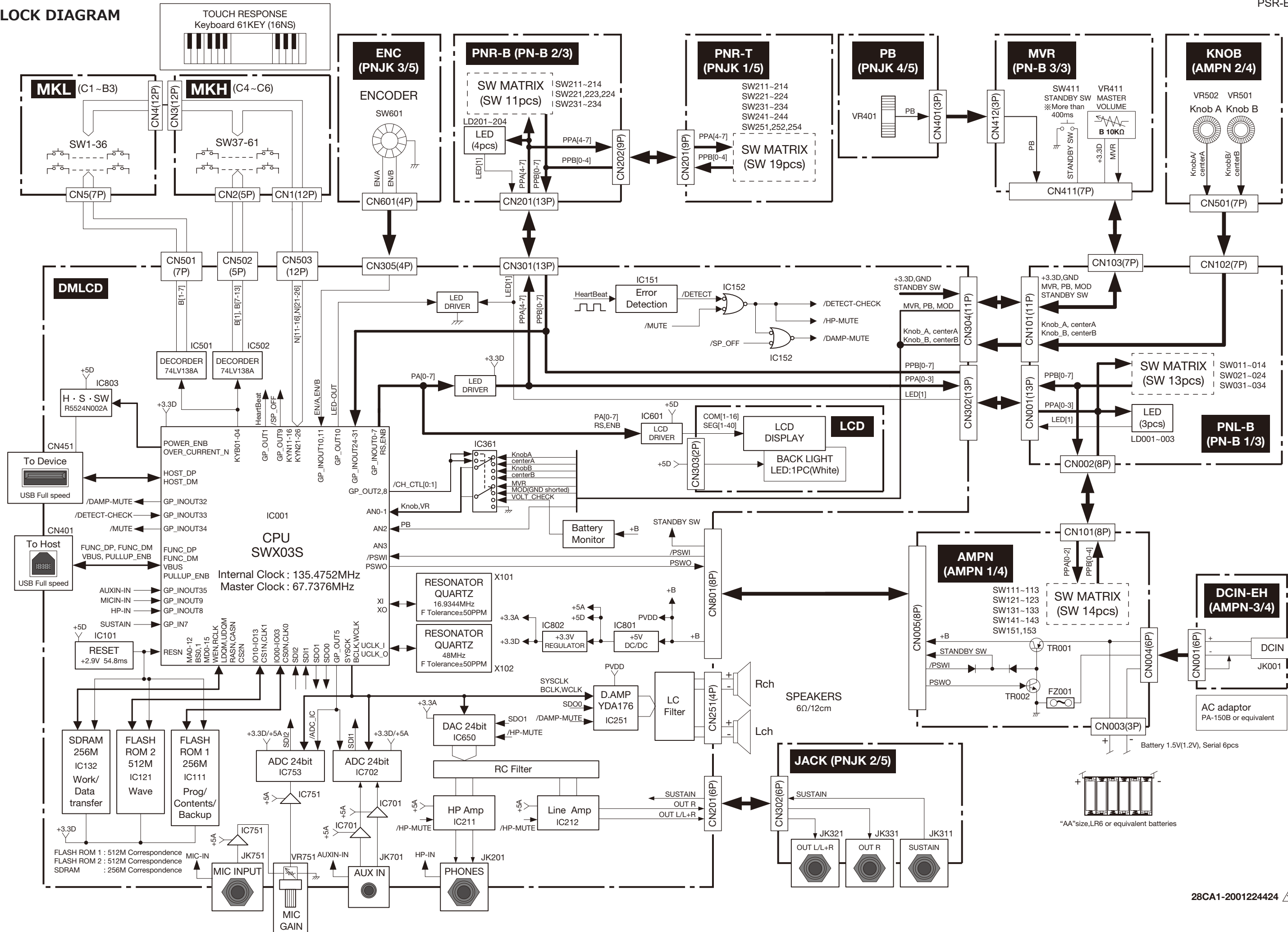
1

2

3

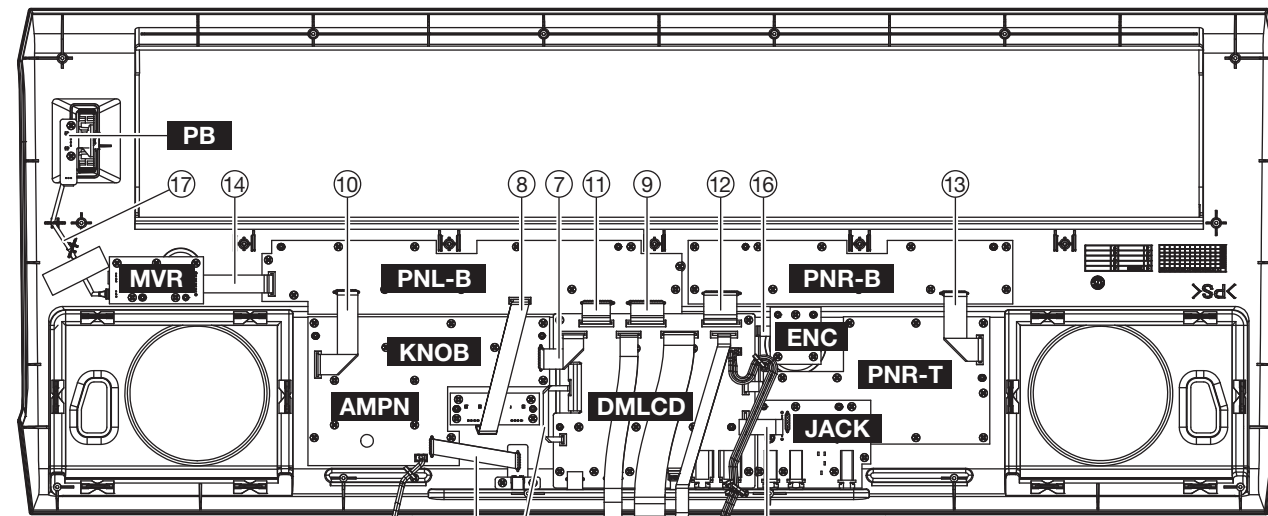
4

5

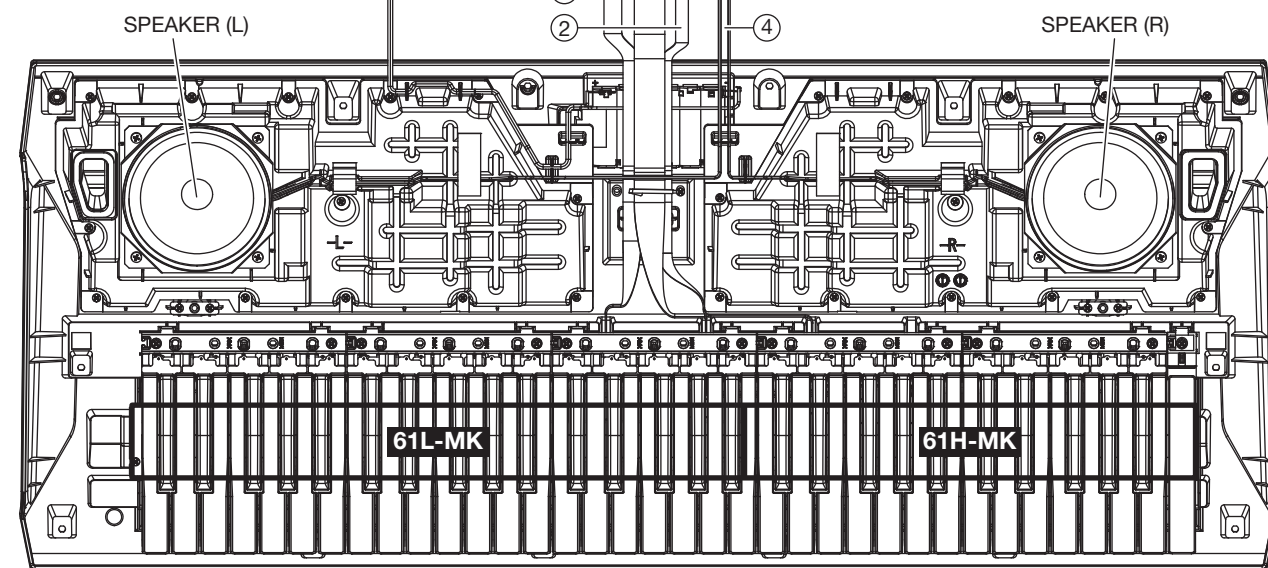


■ CIRCUIT BOARD LAYOUT WIRING

● UPPER CASE ASSEMBLY



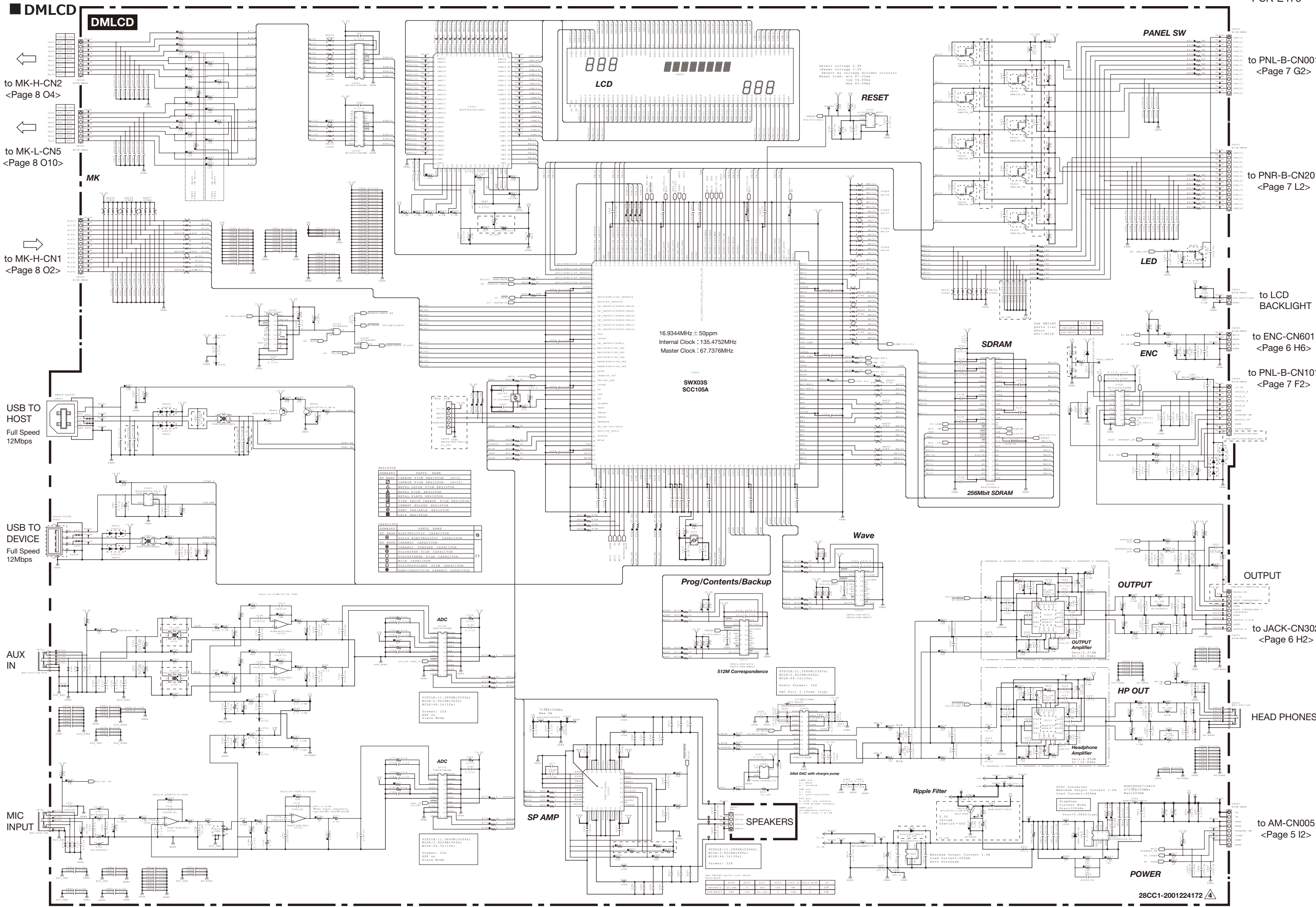
● LOWER CASE ASSEMBLY



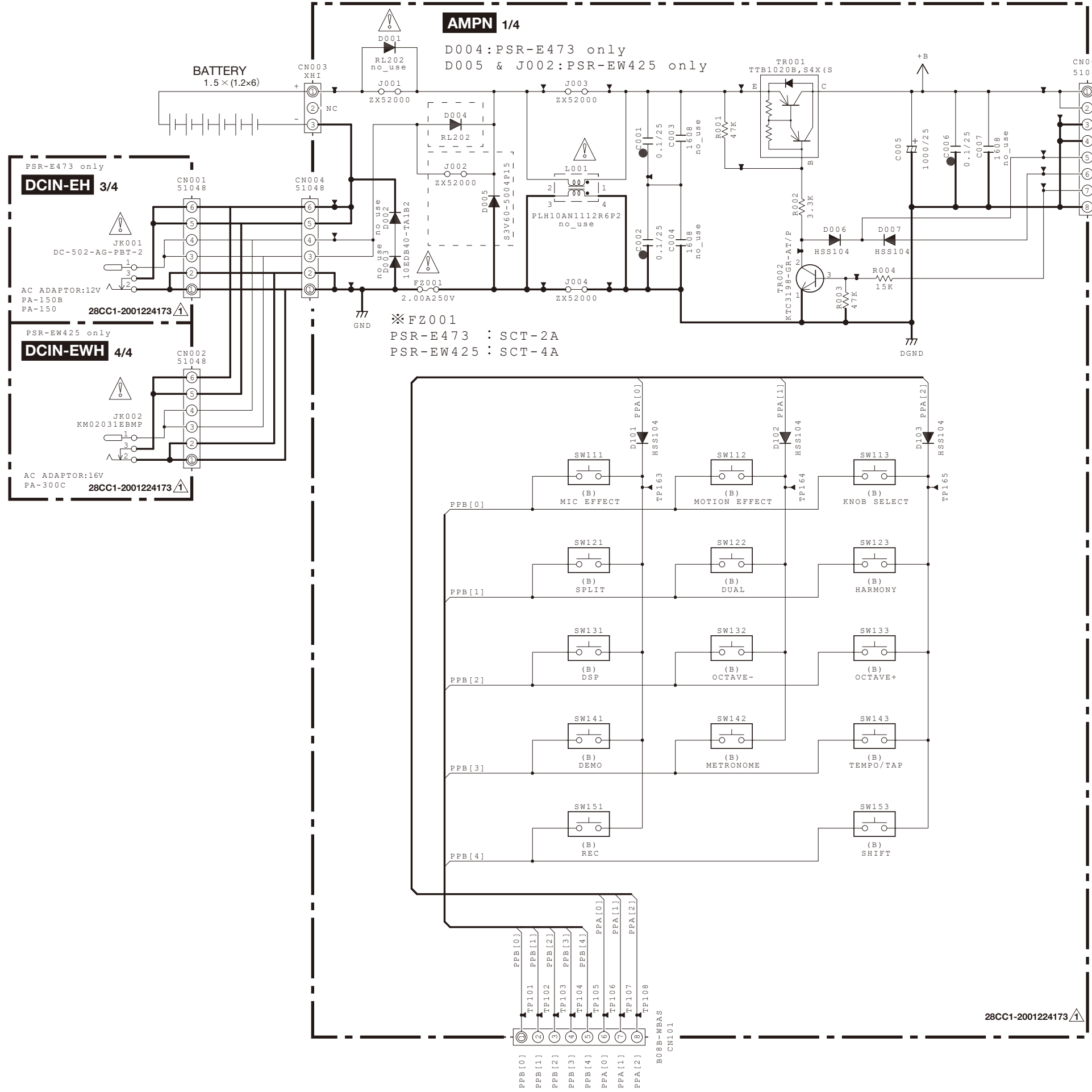
No.	Unit Name	Location	Parts No.	Connector Assembly	Destination	Pins	Notes
①	LOWER CASE ASSEMBLY	30	(VEJ5730)	FLAT CABLE C&C	MK-H - CN1	DMLCD - CN503	12Pin Note1
②		40	(VEJ5720)	FLAT CABLE C&C	MK-H - CN2	DMLCD - CN502	5Pin Note1
③		50	(VEJ5710)	FLAT CABLE C&C	MK-L - CN5	DMLCD - CN501	7Pin Note1
④		60	(YM478A0)	LOUD SPEAKER ASSEMBLY	LOUD SPEAKER	DMLCD - CN251	4Pin
⑤	LOWER CASE SUB ASSEMBLY	120	(VEF1370)	XH-SOLDER ASSEMBLY	BATTERY TERMINAL A2,B2	AMPN - CN003	3Pin
⑥	UPPER CASE ASSEMBLY	WH004	(MF80614)	FLAT CABLE 105	AMPN - CN004	AMPN (DCIN-EH) - CN001	6Pin
⑦		WH005	(MF80810)	FLAT CABLE 105	AMPN - CN005	DMLCD - CN801	8Pin Note1
⑧		WH501	(MF80716)	FLAT CABLE 105	KNOB - CN501	PNL-B - CN102	7Pin Note1
⑨		WH001	(MF81307)	FLAT CABLE 105	PNL-B - CN001	DMLCD - CN302	13Pin Note1
⑩		WH002	(MF80812)	FLAT CABLE 105	PNL-B - CN002	AMPN - CN101	8Pin Note1
⑪		WH101	(MF81107)	FLAT CABLE 105	PNL-B - CN101	DMLCD - CN304	11Pin Note1
⑫		WH201	(MF81307)	FLAT CABLE 105	PNR-B - CN201	DMLCD - CN301	13Pin Note1
⑬		WH202	(MF80910)	FLAT CABLE 105	PNR-B - CN202	PNR-T - CN201	9Pin Note1
⑭		WH411	(MF80710)	FLAT CABLE 105	MVR - CN411	PNL-B - CN103	7Pin Note1
⑮		WH302	(MF80607)	FLAT CABLE 105	JACK - CN302	DMLCD - CN201	6Pin Note1
⑯		WH601	(MF80410)	FLAT CABLE 105	ENC - CN601	DMLCD - CN305	4Pin Note1
⑰		540	(VEF0730)	PH-PH ASSEMBLY	MVR - CN412	PB - CN401	3Pin
⑱		—	(VEK6510)	—	BACK LIGHT ASSEMBLY	DMLCD - CN303	2Pin Pin 1 : Red wire

* The parts with "()" in "Part No." are not available as service parts.

Note1) Pin 1 mark (△ mark) of connector is adjusted to edge mark of flat cable.



■ AMPN, KNOB, DCIN-EH, DCIN-EWH



AMPN 1/4
 D004:PSR-E473 only
 D005 & J002:PSR-EW425 only

PSR-E473 only
DCIN-EH 3/4

PSR-EW425 only
DCIN-EWH 4/4

KNOB 2/4

to DMLCD-CN801
 <Page 4 AG22>

to PNL-B-CN102
 <Page 7 D2>

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
□	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
▨	FIRE PROOF CARBON FILM RESISTOR
▩	CEMENT MOLDED RESISTOR
⊙	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR

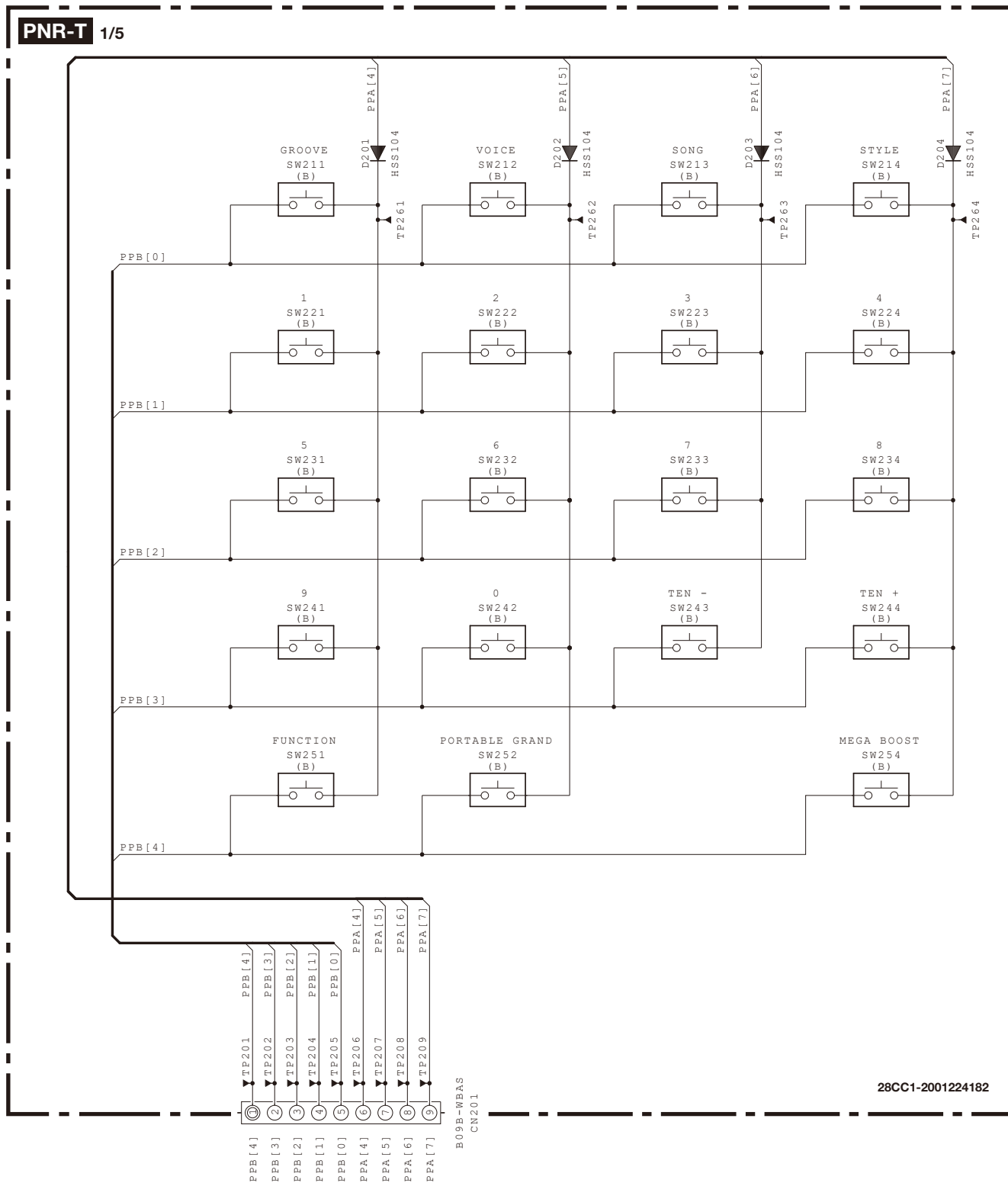
REMARKS	PARTS NAME	Symbol
NO MARK	ELECTROLYTIC CAPACITOR	⏏
⊗	SOLID ELECTROLYTIC CAPACITOR	⏏
NO MARK	CERAMIC CAPACITOR	⏏
●	CERAMIC TUBULAR CAPACITOR	
⊙	POLYESTER FILM CAPACITOR	
○	POLYSTYRENE FILM CAPACITOR	
⊖	MICA CAPACITOR	
⊕	POLYPROPYLENE FILM CAPACITOR	
⊗	SEMICONDUCTIVE CERAMIC CAPACITOR	⏏

to PNL-B-CN002
 <Page 7 B2>

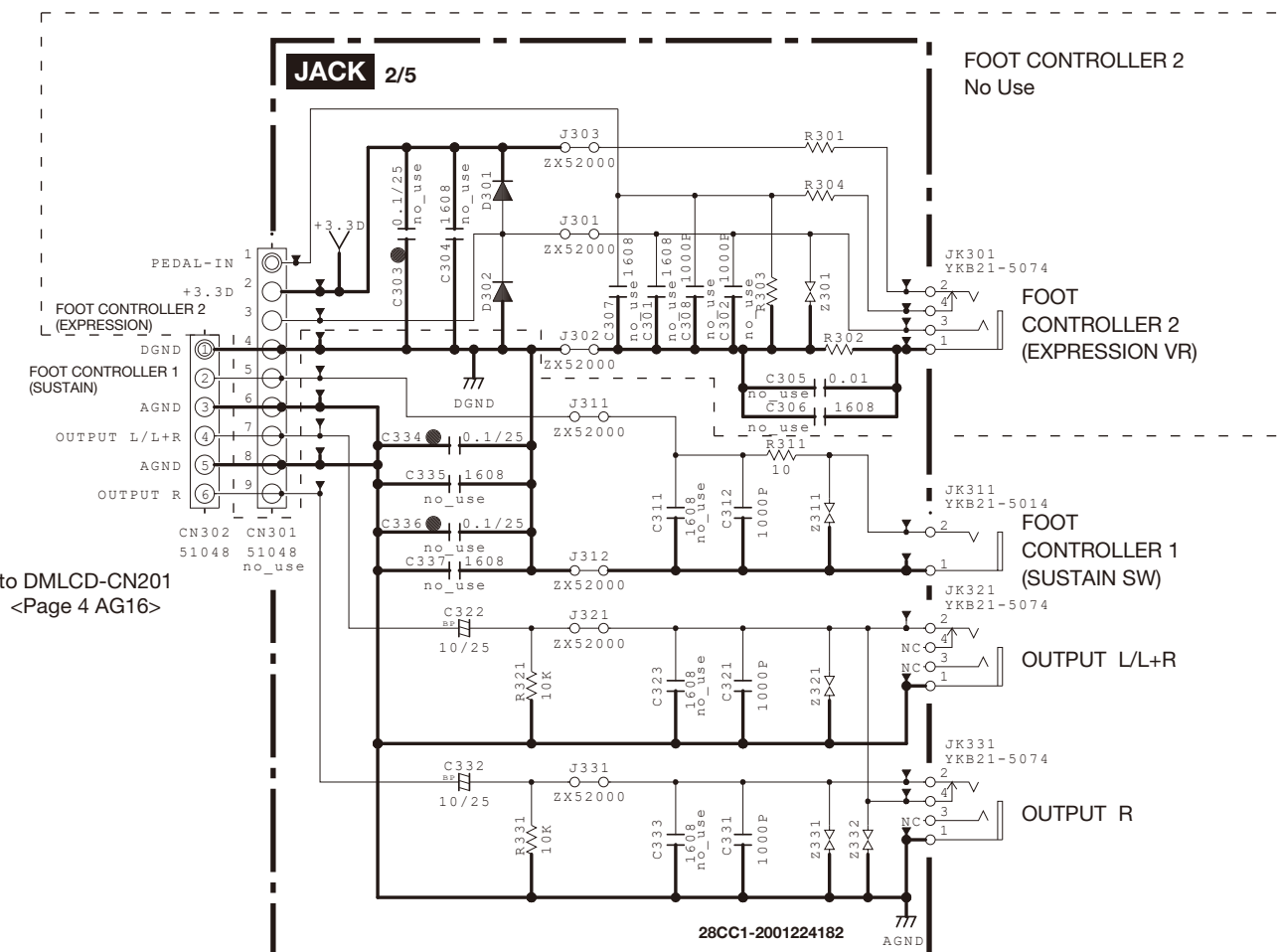
■ PNR-T, JACK, ENC, PB, MOD

RESISTOR	
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
□	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
▨	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR	
REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	SOLID ELECTROLYTIC CAPACITOR
NO MARK	CERAMIC CAPACITOR
●	CERAMIC TUBULAR CAPACITOR
◎	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
⊖	MICA CAPACITOR
Ⓢ	POLYPROPYLENE FILM CAPACITOR
⊕	SEMICONDUCTIVE CERAMIC CAPACITOR

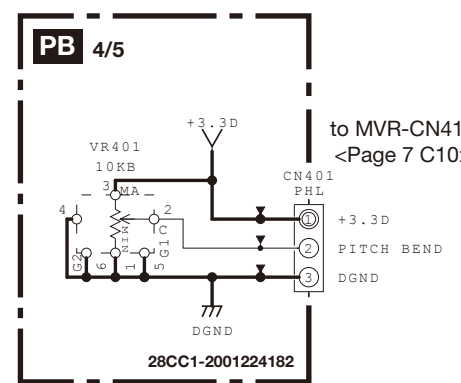
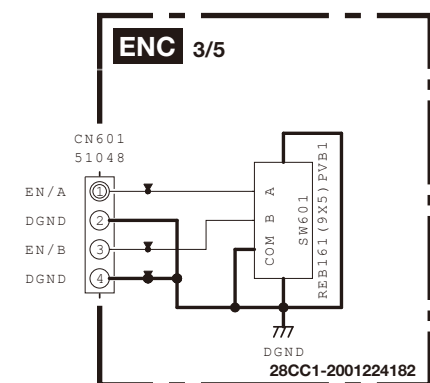


to PNR-B-CN202
<Page 7 N2>



to DMLCD-CN201
<Page 4 AG16>

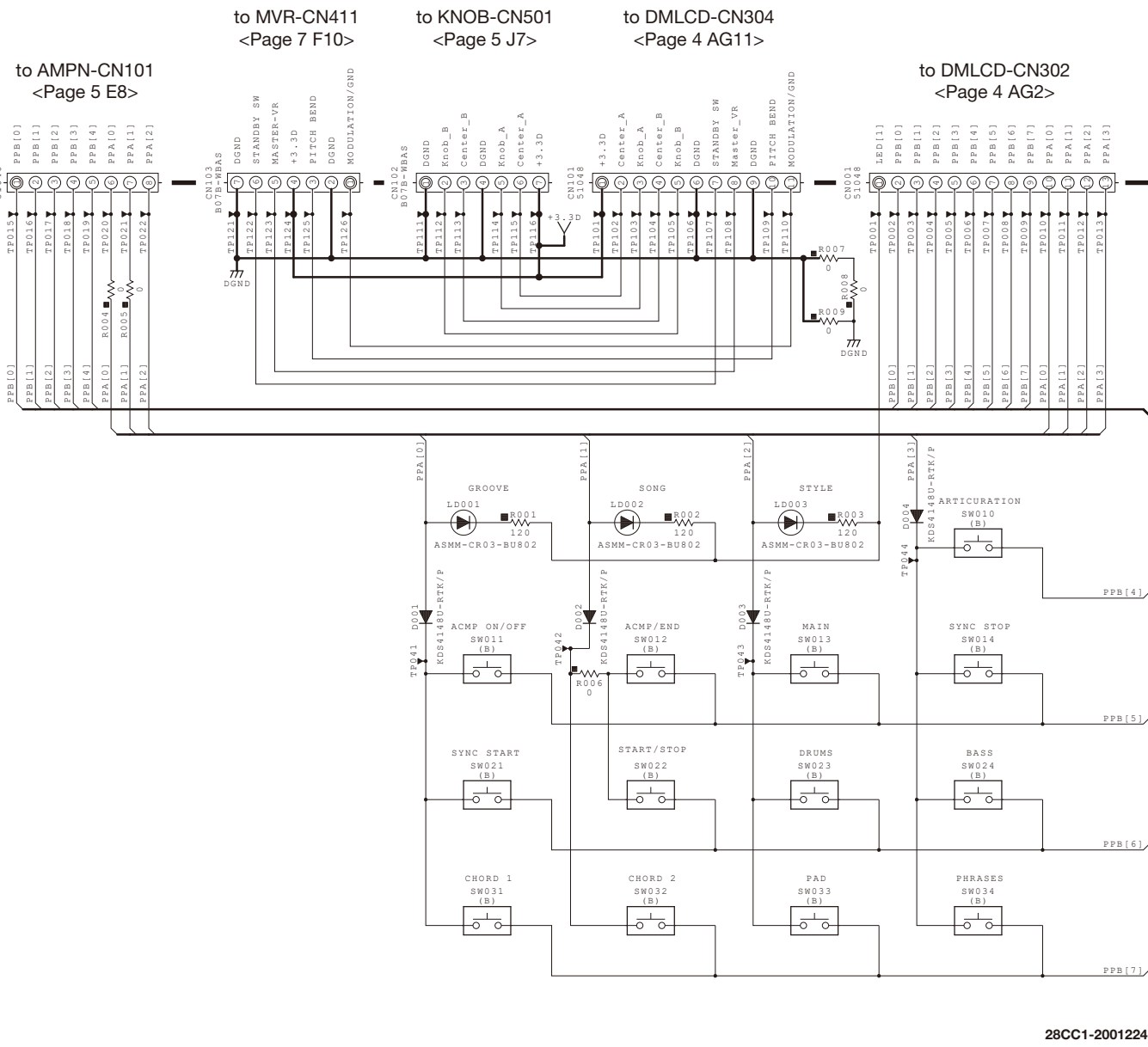
to DMLCD-CN305
<Page 4 AG9>



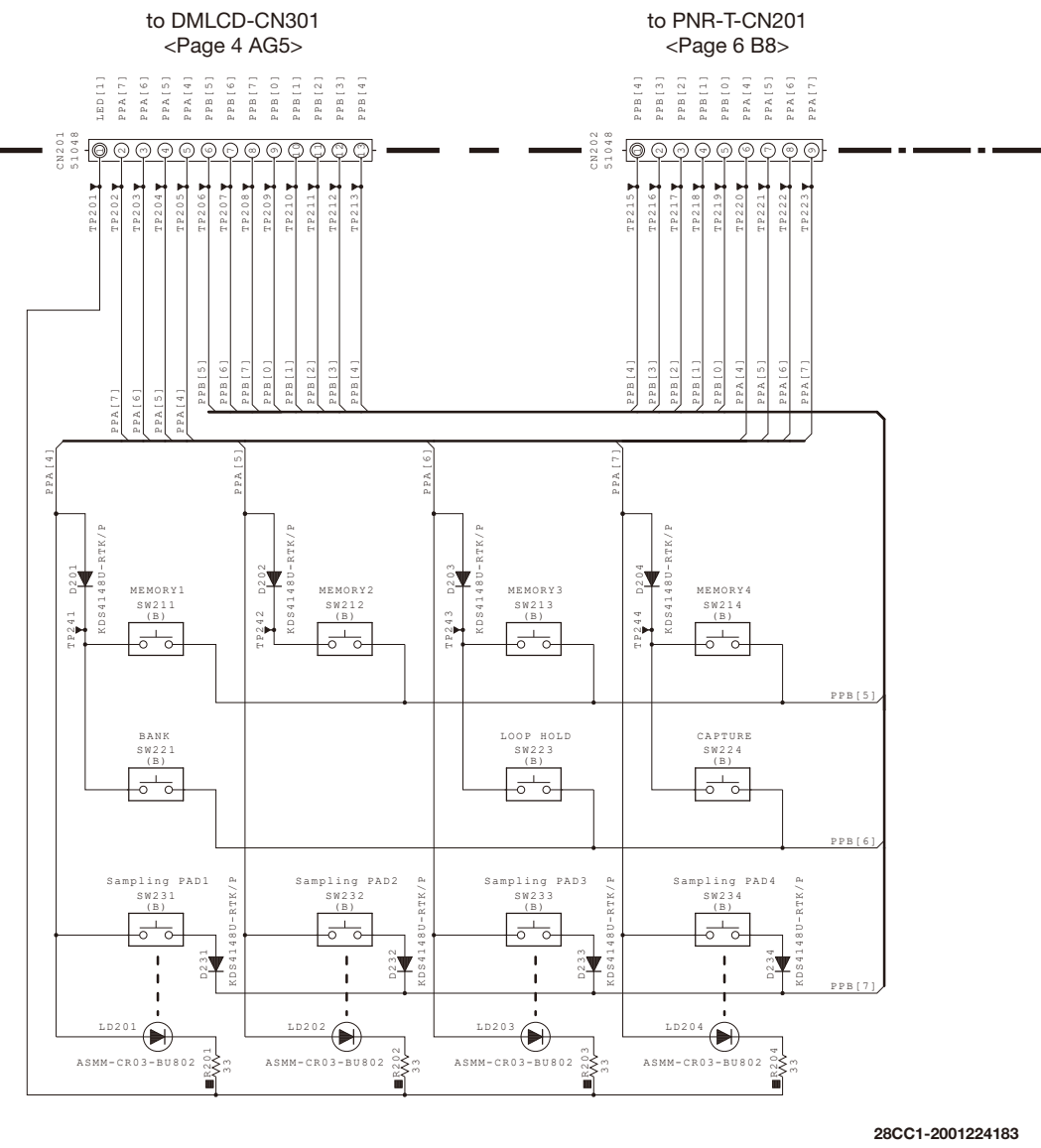
to MVR-CN412
<Page 7 C10>

PNL-B, PNR-B, MVR

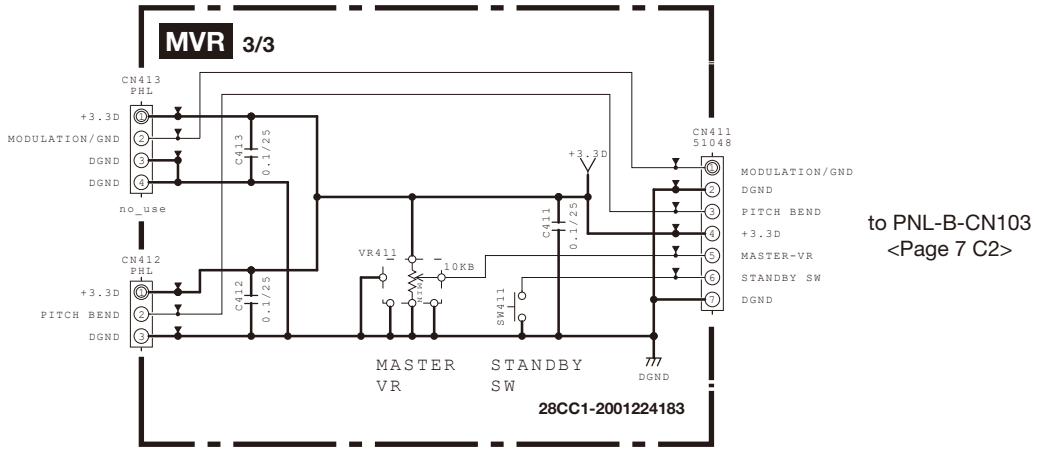
PNL-B 1/3



PNR-B 2/3



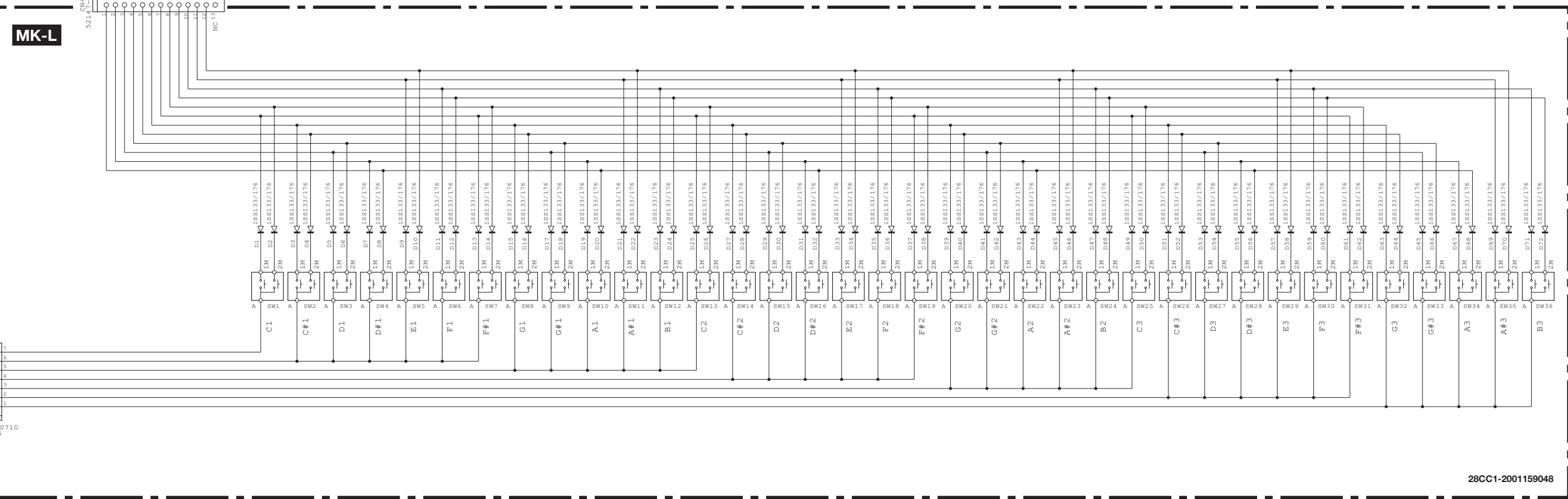
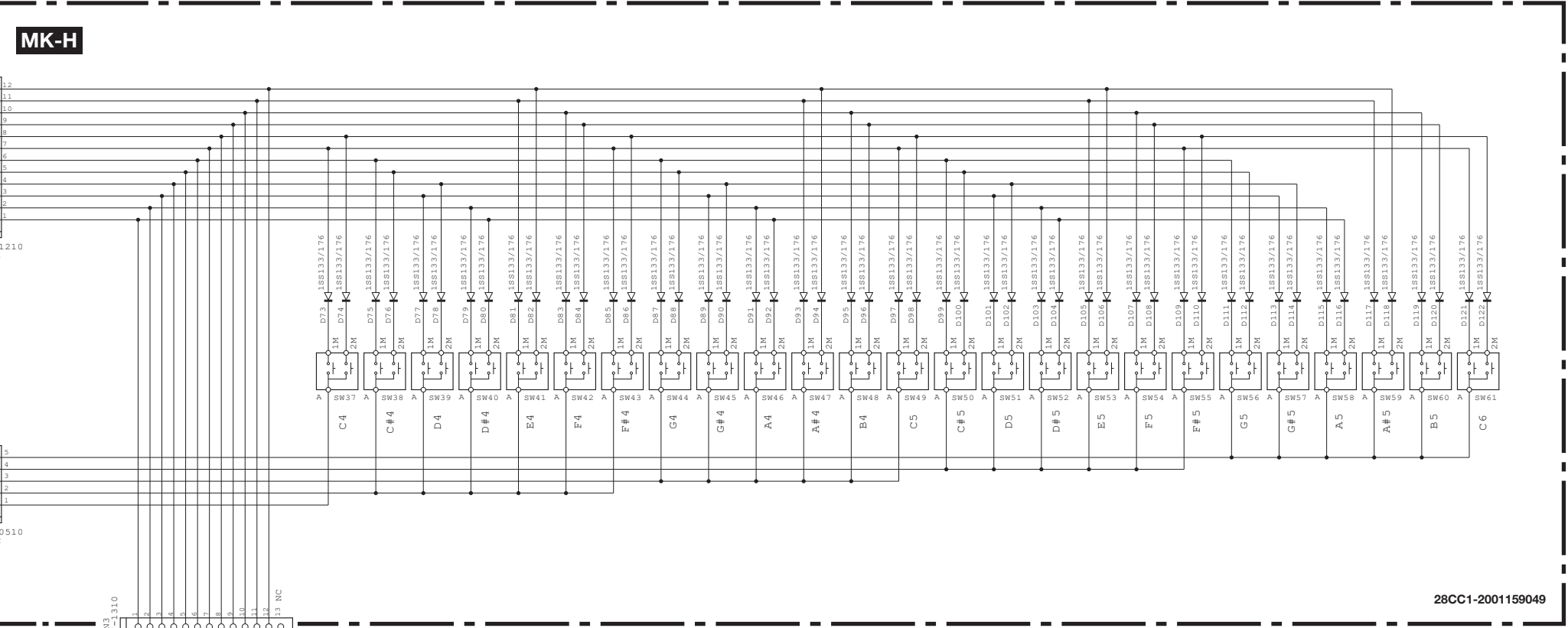
MVR 3/3



RESISTOR	
REMARKS	PARTS NAME
■	CHIP RESISTOR

CAPACITOR	
REMARKS	PARTS NAME
NO MARK	CERAMIC CAPACITOR

■ MK-L, MK-H



Digital Keyboard

PSR-E473

PARTS LIST


■ CONTENTS

OVERALL ASSEMBLY	2
UPPER CASE ASSEMBLY	4
LOWER CASE ASSEMBLY	6
LOWER CASE SUB ASSEMBLY	7
KEYBOARD ASSEMBLY	8
ELECTORICAL PARTS	10

* DESTINATION ABBREVIATIONS

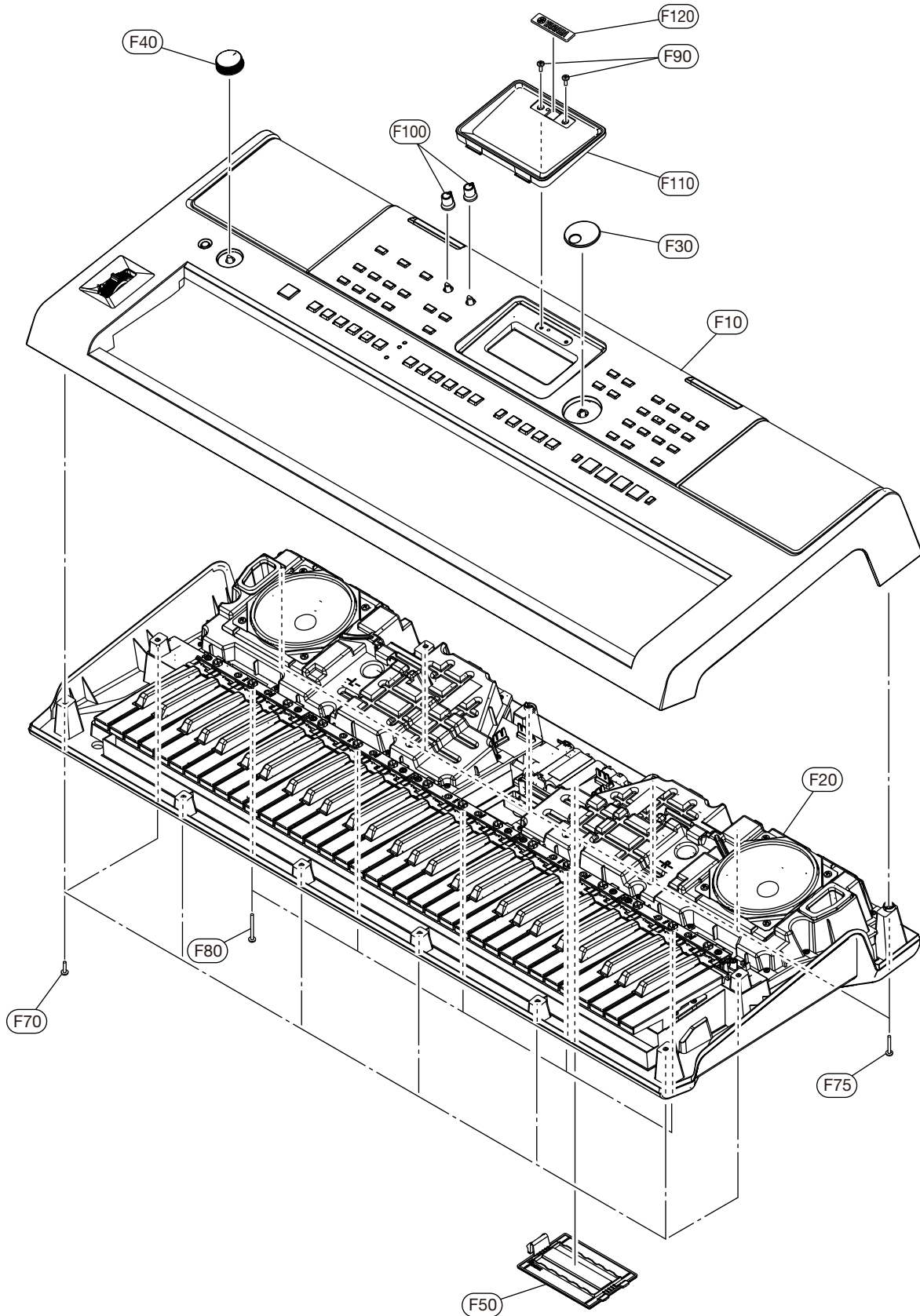
A:	Australian model	Q:	South-east Asia model
B:	British model	T:	Taiwan model
C:	Canadian model	U:	U.S.A. model
D:	German model	V:	General export model (110V)
E:	European model	W:	General export model (220V)
F:	French model	N,X:	General export model
H:	North European model	Y:	Export model
I:	Indonesian model	K:	Korean model
J:	Japanese model	P:	Brazilian model
M:	South African model	Z:	India model
O:	Chinese model		

■ WARNING

Parts with the  symbol are essential parts for maintaining safety. When replacing them, be sure to use the specified parts for safety.

- The number listed in the QTY column is the number used per unit.
- Parts with "--" in "PART NO." are not available as spare parts.
- Parts with the "}" symbol in the REMARKS column are parts for use together.
- The 2nd character of "PART NO." which is shaded is the letter "O", not the number "zero".
- The 2nd character of "PART NO." which is shaded is the letter "I", not the number "one".

OVERALL ASSEMBLY



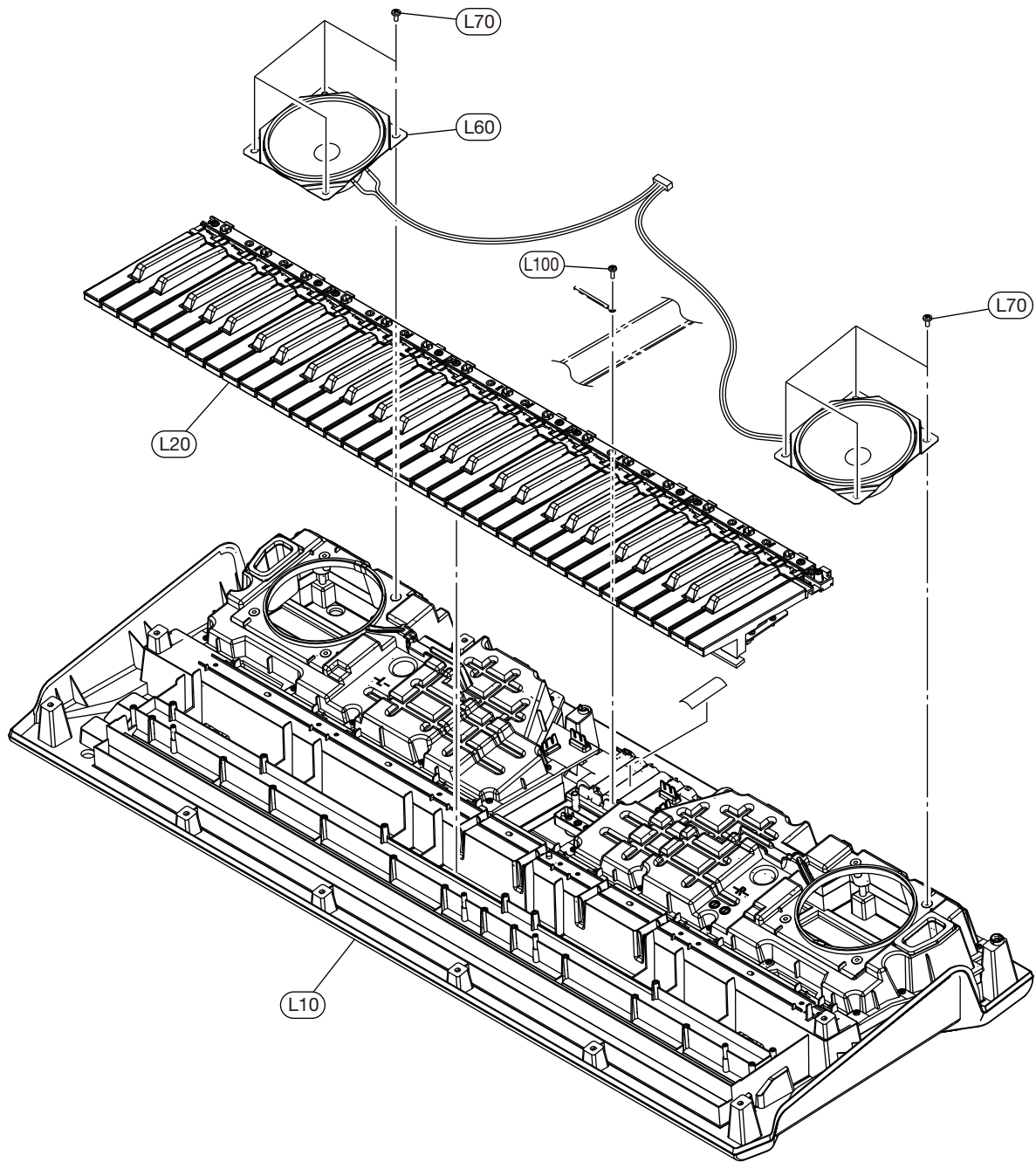
REF NO.	PART NO.	DESCRIPTION		部 品 名	REMARKS	QTY
	--	OVERALL ASSEMBLY		総 組 立	PSR-E473	
	--	FINAL ASSEMBLY		総 組 立	(VED5060)	
F10	--	UPPER CASE ASSEMBLY		上 ケ ー ス A s s ' y	(VED5040)	
F20	--	LOWER CASE ASSEMBLY		下 ケ ー ス A s s ' y	(VED5030)	
F30	ZS12640	ENCODER KNOB PSR-E453		エンコーダーツマミ		
F40	ZP031710	VOLUME		ボリュームツマミ		
F50	VAV95200	BATTERY COVER ASSEMBLY		電 池 蓋 A s s ' y		
F70	WE99810R	BIND HEAD TAPPING SCREW-B	3.0X12 MFZN2B3	B タ イ ト + B I N D		8
F75	WF49200R	BIND HEAD TAPPING SCREW-P	3.0X20 MFZN2W3	P タ イ ト + B I N D		6
F80	WF49100Z	BIND HEAD TAPPING SCREW-B	3.0X30 MFZN2W3	B タ イ ト + B I N D		5
F90	WE774300	BIND HEAD TAPPING SCREW-B	3.0X8 MFZN2W3	B タ イ ト + B I N D		2
* F100	VED50700	CONTROL KNOB		コ ン ト ロ ー ル ノ ブ		2
* F110	VED50800	LCD PANEL MOLDING		L C D パ ネ ル 成 形 品		
F120	ZS438400	EMBLEM PSR-E453		エ ン ブ レ ム		
ACCESSORIES						
A10	VAW44100	MUSIC STAND WITH BAG	BLACK	付 属 品 譜 面 台 袋 入 り		
A20	ZT018300	ADAPTER SET YMIN	PA-150B E YMIN	ア ダ プ タ ー セ ッ ト	E,I	
A20	ZT041400	ADAPTER SET YMIN	PA-150B B YMIN	ア ダ プ タ ー セ ッ ト	B	
A20	WK014701	AC ADAPTOR	PA-150U U	A C ア ダ プ タ ー	U,C	
A20	ZT041500	ADAPTER SET YMIN	PA-150B K YMIN	ア ダ プ タ ー セ ッ ト	K	
A20	ZT041600	ADAPTER SET YMIN	PA-150B BRA YMIN	ア ダ プ タ ー セ ッ ト	P	
A20	ZT041900	ADAPTER SET YMIN	PA-150B A YMIN	ア ダ プ タ ー セ ッ ト	A	
A20	ZU900500	ADAPTER SET YMIN	PA-150B IN YMIN	ア ダ プ タ ー セ ッ ト	Z	
A20	ZT041700	ADAPTER SET YMIN	PA-150B J YMIN	ア ダ プ タ ー セ ッ ト	J	
A20	ZT041800	ADAPTER SET YMIN	PA-150B CHN YMIN	ア ダ プ タ ー セ ッ ト	O	
* A30	VEF33800	JAPANESE SHEET SET		和 文 シ ー ト 袋 入 り	J	
* A30	VEF33900	CHINESE SHEET SET		中 文 シ ー ト 袋 入 り	O	

* : New Parts (新規部品)

REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	QTY
	--	UPPER CASE ASSEMBLY	上 ケ ー ス A s s ' y	(VED5040)	
* U10	VFJ40500	UPPER CASE SUB ASSEMBLY SP	上 ケ ー ス S U B A s s ' y S P		
U10a	--	UPPER CASE FINISHED	上 ケ ー ス 塗 装 印 刷 品	(VED2300)	
U10b	--	DUST PROOF CUSHION	防 塵 ク ッ シ ョ ン	(VED5460)	2
U10c	--	DUST PROOF CUSHION	防 塵 ク ッ シ ョ ン	(VAW4570)	
U10d	--	NONWOVEN CLOTH	不 織 布	(VAW4660)	10
* U20	VED23400	SP GRILLE R ASSEMBLY	S P グ リ ル R A s s ' y		
* U30	VED23500	SP GRILLE L ASSEMBLY	S P グ リ ル L A s s ' y		
* U50	VCS53800	PN SWITCH POWER	P N ス イ ッ チ パ ワ ー		
* U60	VED51300	PN SWITCH MOT	P N ス イ ッ チ M O T		
* U70	VED51400	PN SWITCH SOU	P N ス イ ッ チ S O U		
* U80	VED51500	PN SWITCH GRO	P N ス イ ッ チ G R O		
* U90	VED51600	PN SWITCH STY	P N ス イ ッ チ S T Y		
* U100	VED51700	PN SWITCH ART	P N ス イ ッ チ A R T		
* U110	VED51800	PN SWITCH SEC	P N ス イ ッ チ S E C		2
* U120	VED51900	PN SWITCH REG	P N ス イ ッ チ R E G		
* U130	VED52000	PN SWITCH LOP	P N ス イ ッ チ L O P		
* U200	VDW98300	CIRCUIT BOARD	P C B D M L C D		
* U210	VDX19700	CIRCUIT BOARD	P C B J A C K		
* U220	VDX18800	CIRCUIT BOARD	P C B A M P N		
* U230	VDX19600	CIRCUIT BOARD	P C B P N R - T		
* U240	VDX20100	CIRCUIT BOARD	P C B P N L - B		
* U250	VDX20200	CIRCUIT BOARD	P C B P N R - B		
* U260	VDX19800	CIRCUIT BOARD	P C B E N C		
* U270	VDX18900	CIRCUIT BOARD	P C B K N O B		
* U280	VDX20300	CIRCUIT BOARD	P C B M V R		
* U290	VDX19900	CIRCUIT BOARD	P C B P B		
* U302	VEK65100	BACK LIGHT ASSEMBLY	バ ッ ク ラ イ ト A s s ' y		
* U304	VEQ10600	LCD DISPLAY	液 晶 デ ィ ス プ レ イ		
U306	WZ963200	RUBBER CNNECTOR	ZEBRA		2
U310	VAV95300	WHEEL ASSEMBLY	PK 000121		
U330	TX920282	KEY GUIDE GREASE G-31KA(50G)	7ロイル 631KA(50Gイリ) ホリヨウキ		(VE96850)
U380	WE774300	BIND HEAD TAPPING SCREW-B	3.0X8 MFZN2W3		82
U460	--	CUSHION PE	115X13X1	#See below	(VAW4510)
U610	ZT315400	LIGHT GUIDE PSR-E453			3
* U900	VFE94800	CUSHION	L-24		
* U910	VFE94700	CUSHION	L-24		
U950	--	NONWOVEN CLOTH	10X6X0.7	#See below	(VFK0390)
# U460,U950	VDK61700	CUSHION SHEET T1	(A4)		Please cut to fit the size

* : New Parts (新規部品)

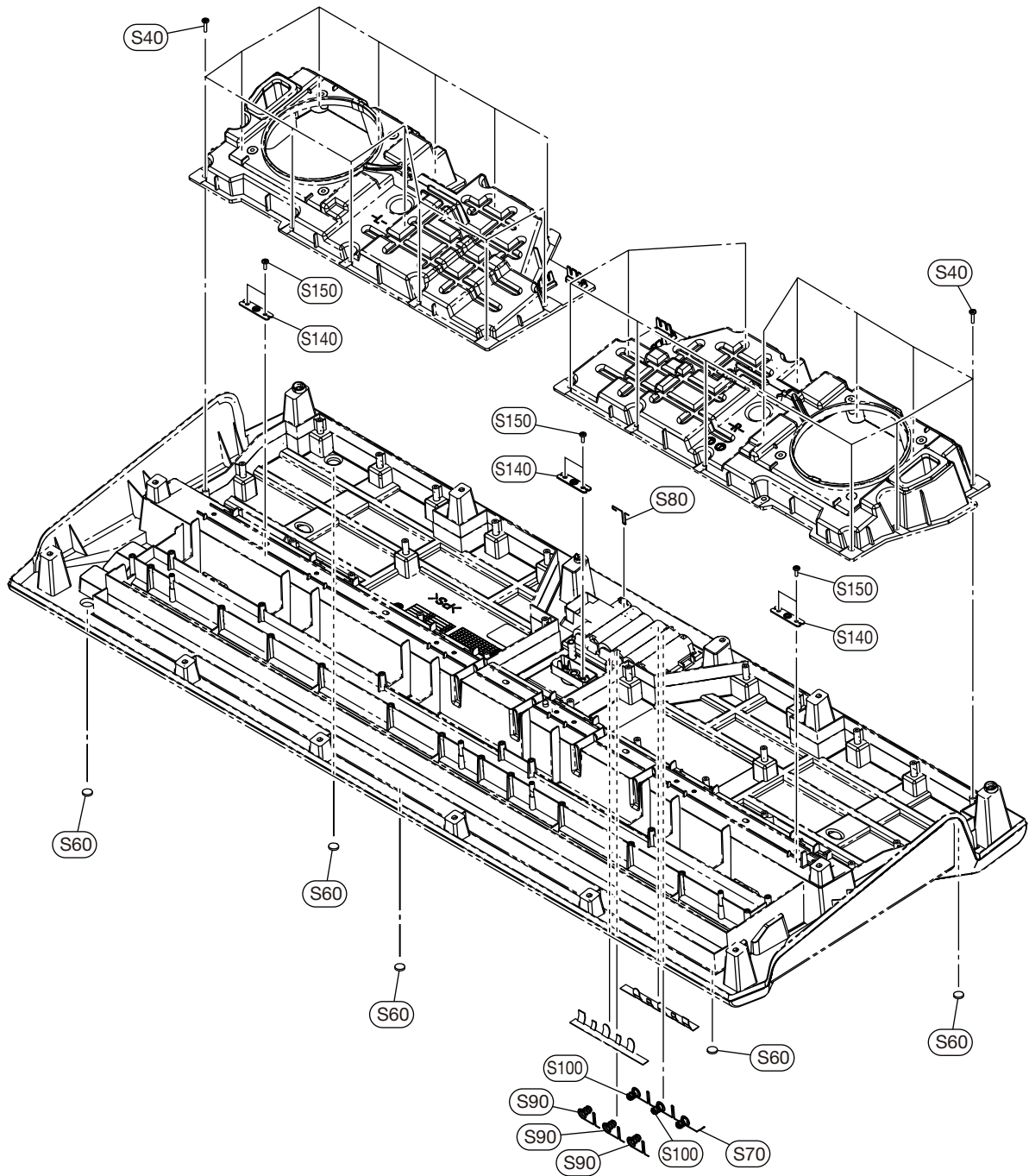
LOWER CASE ASSEMBLY



REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	QTY
	--	LOWER CASE ASSEMBLY	下 ケー ス A s s ' y	(VED5030)	
* L10	VED50200	LOWER CASE SUB ASSEMBLY	下 ケー ス サ ブ A s s ' y		
	--	16NS-C61 KEYBOARD	1 6 N S - C 6 1 鍵 盤	(VAX3100)	
* L20	YM478A00	LOUD SPEAKER ASSEMBLY	ス ピ ー カ ー A s s ' y		
* L60	WE97460R	BIND HEAD TAPPING SCREW-B	B タ イ ト + B I N D		8
L70	WE97460R	BIND HEAD TAPPING SCREW-B	B タ イ ト + B I N D		
L100	WE774300	BIND HEAD TAPPING SCREW-B	B タ イ ト + B I N D		

* : New Parts (新規部品)

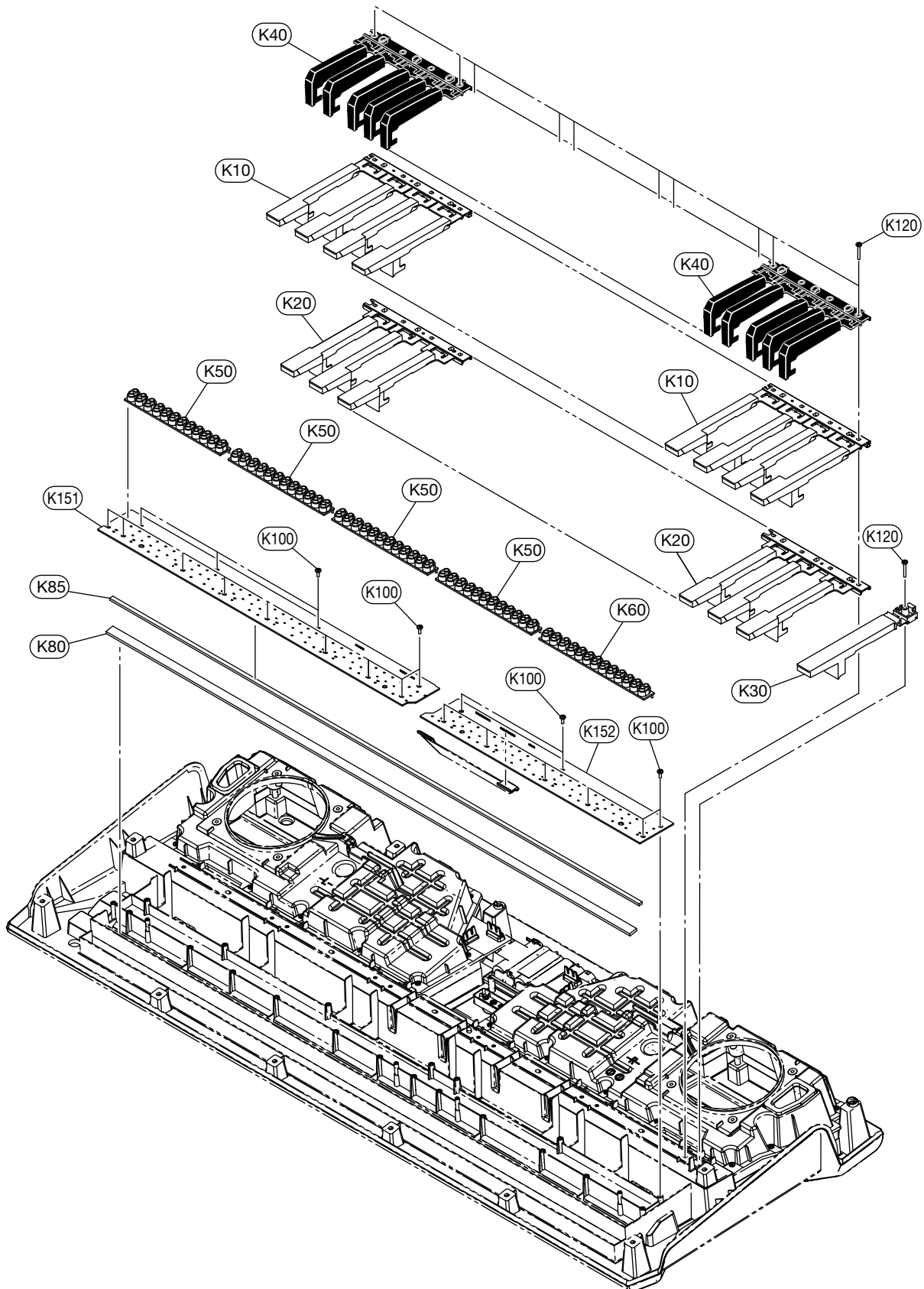
LOWER CASE SUB ASSEMBLY



REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	QTY
*	VED50200	LOWER CASE SUB ASSEMBLY	下ケースサブアッス'リ		
S40	WE98740R	BIND HEAD TAPPING SCREW-B 3.0X12 MFZN2W3	B タイト + B I N D		26
S60	WW693500	RUBBER FOOT	ゴ ム 脚		5
S70	VDT59500	BATTERY TERMINAL A2	接 点 バ ネ A 2 改		
S80	VDC80700	BATTERY TERMINAL B2	接 点 バ ネ B 2 改		
S90	VDT59600	BATTERY TERMINAL C2	接 点 バ ネ C 2 改		3
S100	VDT59700	BATTERY TERMINAL D2	接 点 バ ネ D 2 改		3
S140	ZP425300	STAND ANGLE	ス タ ン ド 金 具		2
S150	WE774300	BIND HEAD TAPPING SCREW-B 3.0X8 MFZN2W3	B タイト + B I N D		6

* : New Parts (新規部品)

KEYBOARD ASSEMBLY



ELECTORICAL PARTS

DMLCD

REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	QTY
*	VDW98300	CIRCUIT BOARD	DMLCD	(VDW9820)(YM171E0)	
*	VDX18800	CIRCUIT BOARD	AMPN	(VDX1870)(YM172B0)	
*	VDX18900	CIRCUIT BOARD	KNOB	(VDX1870)(YM172B0)	
*	VDX19600	CIRCUIT BOARD	PNR-T	(VDX1950)(YM173C0)	
*	VDX19700	CIRCUIT BOARD	JACK	(VDX1950)(YM173C0)	
*	VDX19800	CIRCUIT BOARD	ENC	(VDX1950)(YM173C0)	
*	VDX19900	CIRCUIT BOARD PB	PB	(VDX1950)(YM173C0)	
*	VDX20100	CIRCUIT BOARD	PNL-B	(VDX2000)(YM174C0)	
*	VDX20200	CIRCUIT BOARD	PLR-B	(VDX2000)(YM174C0)	
*	VDX20300	CIRCUIT BOARD MVR	MVR	(VDX2000)(YM174C0)	
*	VAX32400	CIRCUIT BOARD	16N 61 MK-H	(VAX3200)(YK216A0)	
*	VAX32300	CIRCUIT BOARD	16N 61 MK-L	(VAX3210)(VAX3210)	
*	VDW98300	CIRCUIT BOARD	DMLCD	(VDW9820)(YM171E0)	
CN401	V680260R	CONNECTOR	USB 4P SE	USB TO HOST	
CN451	WH382500	CONNECTOR	UAR27 4P SE	USB TO DEVICE	
CN451	WK450702	CONNECTOR	YKF45-0033N 4P SE		
JK201	LB10187R	CONNECTOR	JACK YKB21-5006	PHONES	
JK201	WJ306201	CONNECTOR	MSJ-064-15A B AG		
JK701	ZA590001	CONNECTOR	JACK MINI STEREO	AUX IN	
JK751	LB10187R	CONNECTOR	JACK YKB21-5006	MIC INPUT	
JK751	WJ306201	CONNECTOR	MSJ-064-15A B AG		
VR751	ZA774901	VR ROTARY	A 10.0K RK09K1110D		
C212	VEJ64800	CAPACITOR	10 10V RVB-10V100M		
C213	VEJ64800	CAPACITOR	10 10V RVB-10V100M		
C222	VEJ64800	CAPACITOR	10 10V RVB-10V100M		
C223	VEJ64800	CAPACITOR	10 10V RVB-10V100M		
C276	ZC041800	ELECTROLYTIC CAPACITOR	220.00 25.0V		
C462	UF038101	CAPACITOR	100 16V		
C605	UF037101	CAPACITOR	10 16V		
C706	UF037101	CAPACITOR	10 16V		
C707	UF037101	CAPACITOR	10 16V		
C714	UF037101	CAPACITOR	10 16V		
C715	UF037101	CAPACITOR	10 16V		
C718	UF038101	CAPACITOR	100 16V		
C723	UF037101	CAPACITOR	10 16V		
C725	UF037101	CAPACITOR	10 16V		
C727	UF037101	CAPACITOR	10 16V		
C729	UF037101	CAPACITOR	10 16V		
C757	VAH45400	CAPACITOR	4.7 50V MV		
C761	UF066102	CAPACITOR	1 50V		
C762	UF148101	CAPACITOR	100 25V		
C767	UF066102	CAPACITOR	1 50V		
C769	UF066102	CAPACITOR	1 50V		
C773	UF066102	CAPACITOR	1 50V		
C777	UF037101	CAPACITOR	10 16V		
C779	UF037101	CAPACITOR	10 16V		
C781	UF037101	CAPACITOR	10 16V		
C784	UF037101	CAPACITOR	10 16V		
C802	UF148101	CAPACITOR	100 25V		
C814	UF038101	CAPACITOR	100 16V		
C817	UF037101	CAPACITOR	10 16V		
R807	RD156471	CARBON RESISTOR (CHIP)	4.7K 1/4 J TP	抵抗	
R808	RD156471	CARBON RESISTOR (CHIP)	4.7K 1/4 J TP	抵抗	
R226	RD150001	CARBON RESISTOR (CHIP)	0.0 1/4 J TP	抵抗	
R282	RD155562	CARBON RESISTOR (CHIP)	560.0 1/4 J TP	抵抗	
R283	RD155562	CARBON RESISTOR (CHIP)	560.0 1/4 J TP	抵抗	
R286	RD150001	CARBON RESISTOR (CHIP)	0.0 1/4 J TP	抵抗	
R325	RD150001	CARBON RESISTOR (CHIP)	0.0 1/4 J TP	抵抗	
R341	RD155102	CARBON RESISTOR (CHIP)	100.0 1/4 J TP	抵抗	
R342	RD155102	CARBON RESISTOR (CHIP)	100.0 1/4 J TP	抵抗	
R222	RD154332	CARBON RESISTOR (CHIP)	33.0 1/4 J TP	抵抗	
R223	RD154332	CARBON RESISTOR (CHIP)	33.0 1/4 J TP	抵抗	
R242	RD150001	CARBON RESISTOR (CHIP)	0.0 1/4 J TP	抵抗	
R732	RD150001	CARBON RESISTOR (CHIP)	0.0 1/4 J TP	抵抗	
R733	RD150001	CARBON RESISTOR (CHIP)	0.0 1/4 J TP	抵抗	
R769	RD150001	CARBON RESISTOR (CHIP)	0.0 1/4 J TP	抵抗	
R770	RD150001	CARBON RESISTOR (CHIP)	0.0 1/4 J TP	抵抗	
IC001	YK611A00	IC	SCC105A	CPU 周辺 IC	
IC101	YK064A00	IC	S-1009N291-M5T1U	リセット IC	RESET

* : New Parts (新規部品)

DMLCD/AMPN/KNOB/PNR-T/JACK/ENC/PB/PNL-B/PLR-B/MVR MK-H and MK-L

REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	QTY
* IC111	YM361C00	IC	PROGRAM	書 込 済 R O M	PROGRAM ROM
* IC121	YM362B00	IC	WAVE	書 込 済 R O M	WAVE ROM
IC132	X4943E01	IC	W9825G6KH-6 SDRAM	メ モ リ ー	SDRAM 256Mbit
IC211	YG629A00	IC	MAX97220AETE+	ア ン プ リ ー	Headphone AMP
IC212	YG629A00	IC	MAX97220AETE+	ア ン プ リ ー	Output AMP
IC251	YF663B00	IC	YDA176-QZE2	イ	Speaker AMP
IC601	XZ987A03	IC	ML9040A-B01GAZ03A	C P U / 周 辺 I C	LCDC
IC650	YF393A00	IC	PCM5101APWR	I C D A C	DAC
IC701	YH100A00	IC	NJM8080G(TE2)	ア ン プ リ ー	OPAMP AUX IN
IC751	YK066A00	IC	NJM2740M(TE1) OPAM	ア ン プ リ ー	OPAMP MIC INPUT
IC801	YE332A00	IC	R1245K003A-TR	電 源	DC-DC CONVERTER +5V
IC802	YE357A00	IC	RP132H331D-T1-FE	電 源	Regulator +3.3V
IC803	YD235A00	IC	R5524N002A-TR-FE	電 源	High-side switch
* VDX18800		CIRCUIT BOARD	AMPN	P C B A M P N	(VDX1870)(YM172B0)
* VDX18900		CIRCUIT BOARD	KNOB	P C B K N O B	(VDX1870)(YM172B0)
D004	ZQ176200	DIODE	RL202 TE- 26	ダ イ オ ード	
JK001	WZ704401	CONNECTOR	DC-502-AG-PBT-2.0-	電 源 コ ネ ク タ	DC IN
TR001	ZW589300	TRANSISTOR	TTB1020B,S4X(S	ト ラ ン ジ ス タ ー	2 S B
VR501	VQ032500	ROTARY VR B10K	B 10.0K RK11K11300	ロ ー タ リ ー	V R KNOB B
VR502	VQ032500	ROTARY VR B10K	B 10.0K RK11K11300	ロ ー タ リ ー	V R KNOB A
C005	UR849100	ELECTROLYTIC CAPACITOR	1000 25.0V RX TP	ケ ミ コ ン	
FZ001	VCR66400	CURRENT CUTOFF FUSE	2.00A 250V	ヒ ュ ー	
TR002	WZ853300	TRANSISTOR	KTC3198-GR-AT/PB	ト ラ ン ジ ス タ ー	2 S C
D006	VD631601	DIODE	1SS133,176,HSS104	ダ イ オ ード	
D007	VD631601	DIODE	1SS133,176,HSS104	ダ イ オ ード	
D101	VD631601	DIODE	1SS133,176,HSS104	ダ イ オ ード	
-103	VD631601	DIODE	1SS133,176,HSS104	ダ イ オ ード	
R001	HF457471	CARBON RESISTOR	47.0K 1/4 J AX TP	カ ー ボ ン 抵 抗	
R002	HF456330	CARBON RESISTOR	3.3K 1/4 J AX TP	カ ー ボ ン 抵 抗	
R003	HF457471	CARBON RESISTOR	47.0K 1/4 J AX TP	カ ー ボ ン 抵 抗	
R004	HF457150	CARBON RESISTOR	15.0K 1/4 J AX TP	カ ー ボ ン 抵 抗	
* VDX19600		CIRCUIT BOARD	PNR-T	P C B P N R - T	(VDX1950)(YM173C0)
* VDX19700		CIRCUIT BOARD	JACK	P C B J A C K	(VDX1950)(YM173C0)
* VDX19800		CIRCUIT BOARD	ENC	P C B E N C	(VDX1950)(YM173C0)
* VDX19900		CIRCUIT BOARD PB	PB	P C B P B	(VDX1950)(YM173C0)
JK311	VC68750R	CONNECTOR	JACK YKB21-5014	ホ ー ン コ ネ ク タ (黒)	SUSTAIN
JK321	VM57600R	CONNECTOR	JACK YKB21-5074	ホ ー ン コ ネ ク タ (黒)	OUTPUT L/L+R
JK331	VM57600R	CONNECTOR	JACK YKB21-5074	ホ ー ン コ ネ ク タ (黒)	OUTPUT R
SW601	VU48130R	ENCODER REB161-PVB-15FH11NA	REB161(9X5)PVB15FH	1 6 形 エ ン コ ー ダ	Encoder dial
VR401	WZ510001	VR ROTARY	B 10.0K RK11K11100	ロ ー タ リ ー	V R Pitch bend wheel
C322	UN84710R	ELECTROLYTIC CAPACITOR BP	10.00 25.0V RX TP	B P ケ ミ コ ン	
C332	UN84710R	ELECTROLYTIC CAPACITOR BP	10.00 25.0V RX TP	B P ケ ミ コ ン	
D201	VD631601	DIODE	1SS133,176,HSS104	ダ イ オ ード	
-204	VD631601	DIODE	1SS133,176,HSS104	ダ イ オ ード	
R311	HF454100	CARBON RESISTOR	10.0 1/4 J AX TP	カ ー ボ ン 抵 抗	
R321	HF45710R	CARBON RESISTOR	10.0K 1/4 J AX TP	カ ー ボ ン 抵 抗	
R331	HF45710R	CARBON RESISTOR	10.0K 1/4 J AX TP	カ ー ボ ン 抵 抗	
* VDX20100		CIRCUIT BOARD	PNL-B	P C B P N L - B	(VDX2000)(YM174C0)
* VDX20200		CIRCUIT BOARD	PLR-B	P C B P N R - B	(VDX2000)(YM174C0)
* VDX20300		CIRCUIT BOARD MVR	MVR	P C B M V R	(VDX2000)(YM174C0)
SW411	WG31840R	TACT SWITCH	SKRGAMD010	タ ク ト ス W	Standby switch
VR411	VQ67050R	ROTARY POT. B10K	B 10K RK11K1130A0M	ロ ー タ リ ー	ボ リ ュ ム Master volume
* LD001	VEG19500	LED	ASMM-CR03-BU602 RE	チ ッ プ L E D	
* LD002	VEG19500	LED	ASMM-CR03-BU602 RE	チ ッ プ L E D	
* LD003	VEG19500	LED	ASMM-CR03-BU602 RE	チ ッ プ L E D	
* LD201	VEG19500	LED	ASMM-CR03-BU602 RE	チ ッ プ L E D	
* LD202	VEG19500	LED	ASMM-CR03-BU602 RE	チ ッ プ L E D	
* LD203	VEG19500	LED	ASMM-CR03-BU602 RE	チ ッ プ L E D	
* LD204	VEG19500	LED	ASMM-CR03-BU602 RE	チ ッ プ L E D	
D73	VAX32400	CIRCUIT BOARD	16N 61 MK-H	P C B M K - H	(VAX3200)(YK216A0)
D73	VB941201	DIODE	1SS133,1SS176 TE-5	ダ イ オ ード	
-122	VB941201	DIODE	1SS133,1SS176 TE-5	ダ イ オ ード	
-122	VD631601	DIODE	1SS133,176,HSS104	ダ イ オ ード	

* : New Parts (新規部品)

