PORTATONE

PSR-A300

SERVICE MANUAL



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PK 001738

YAMAHA
HAMAMATSU, JAPAN

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PDF-K556 '05.07

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 belived 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: CHEMICAL CONTENT NOTICE!

The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and/or plastic (Where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects or other reproductive harm.

DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHAT SO EVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

■ 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

The panel settings and some other types of data will be lost if the power is turned off before they are saved.

Be sure to save data you want to keep to the internal Flash Memory before turning off the power.

Saved data may be lost due to malfunction or incorrect operation. Save the important data to your computer.

SPECIFICATIONS

Keyboards

• 61 standard-size keys (C1-C6), with Touch Response

Display

• LCD display (backlit)

Setup

• STANDBY/ON
• MASTER VOLUME: MIN-MAX

Panel Controls

• [L]/[REC TRACK 2], [R]/[REC TRACK 1], [LISTEN & LEARN], [TIMING], [WAITING], [A-B REPEAT]/[ACMP ON/OFF], [REW]/[INTRO/ENDING/rit.], [FF]/[MAIN/AUTO FILL], [TEMPO/TAP], [REC], [PAUSE]/[SYNC START], [START/STOP], [SONG], [STYLE], [VOICE], [FUNCTION], [PORTABLE GRAND], [SOUND EFFECT KIT], [REVERB ON/OFF], [DEMO], [METRONOME ON/OFF], [SPLIT ON/OFF], [DUAL ON/OFF], [HARMONY ON/OFF], [TOUCH ON/OFF], number buttons [0]-[9], [+/ YES], [–/ NO], [ORIENTAL SCALE SETTING] C-B, [MEMORY], [PITCH BEND]

Voice

• 108 panel voices + 12 drum kits + 1 sound effect kit + 359 XGlite voices + 2 XGlite optional voices + 35 Oriental Voices + 6 Oriental Percussion Kits
• Polyphony: 32
• DUAL
• SPLIT

Style

• 135 preset Styles
• 1 flash Style
• Style Control:
ACMP ON/OFF, SYNC START, START/STOP, INTRO/ENDING/rit., MAIN/AUTO FILL
• Fingering: Multi fingering
• Style Volume

Education Feature

• Chord Dictionary
• Lesson 1-3

Function

• Style Volume, Song Volume, Transpose, Tuning, Pitch Bend Range, Split Point, Touch Sensitivity, Accompaniment Tuning, Oriental Scales, Main voice (Volume, Octave, Chorus Send Level), Dual voice (Voice, Volume, Octave, Chorus Send Level), Split voice (Voice, Volume, Octave, Chorus Send Level), Reverb Type, Reverb level, Chorus Type, Panel Sustain, Harmony Type, Harmony Volume, Style Registration, PC mode (PC1/PC2/Off), Local On/Off, External Clock, Initial Setup Send, Time Signature, Metronome Volume, Lesson Track (R), Lesson Track (L), Demo Cancel

Effects

• Reverb: 9 types
• Chorus: 4 types
• Harmony: 26 types

Song

• 35 Preset Songs + 5 User Songs + Flash Memory
• Song Clear
• Song Volume

Recording

• Song
User Song: 5 Songs
Recording Tracks: 1, 2

Oriental Scale

• Setting: C-B
• Memory: 1-4

Pitch Bend Wheel

• Range: ±1 octave

MIDI

• Local On/Off
• Initial Setup Send
• External Clock
• PC mode

Auxiliary jacks

• PHONES/OUTPUT, DC IN 12V, MIDI IN/OUT, SUSTAIN

Amplifier

• 2.5W + 2.5W

Speakers

• 12cm x 2

Power Consumption

• 10W (When using PA-3C power adaptor)

Power Supply

• Adaptor: Yamaha PA-3B/3C AC power adaptor
• Batteries: Six “AA” size, LR6 or equivalent batteries

Dimensions (W x D x H)

• 945 x 370 x 128 mm
(37-1/4" x 14-5/8" x 5-1/16")

Weight

• 5.1kg (11 lbs. 4 oz.) (not including batteries)

Supplied Accessories

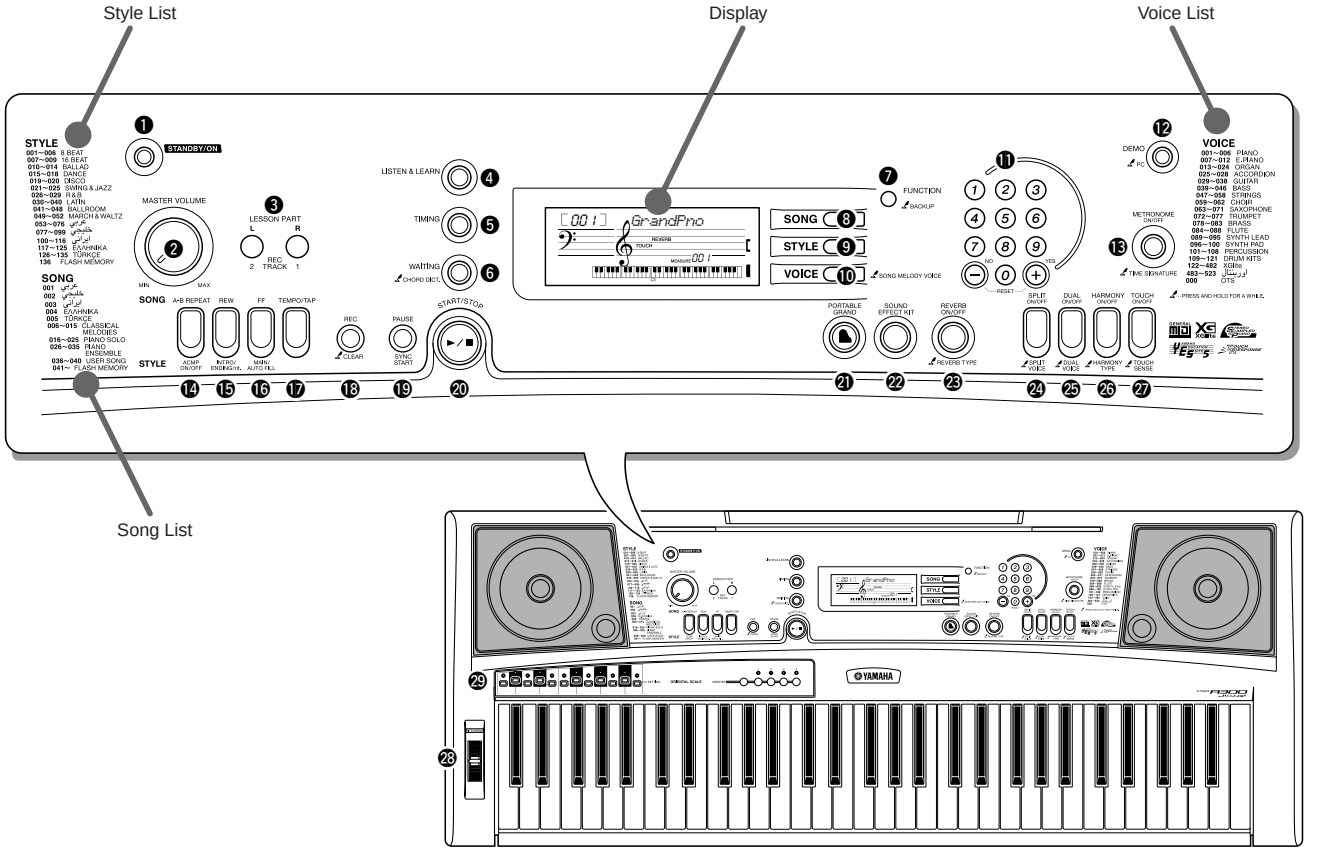
• Music Rest
• Owner’s Manual

Optional Accessories

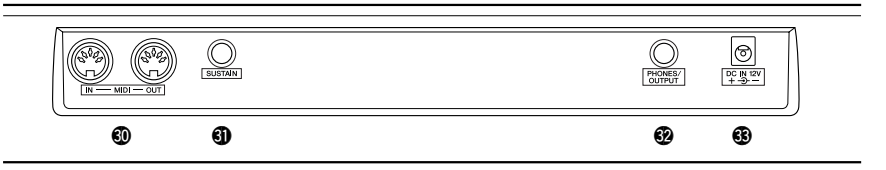
• AC Power Adaptor: PA-3B/PA-3C
• USB-MIDI Interface: UX16
• Footswitch: FC4/FC5
• Keyboard Stand: L-2C/L-2L
• Headphones: HPE-150

PANEL LAYOUT

● **Front Panel**



● **Rear Panel**



Front Panel

❶ [STANDBY/ON] switch
❷ [MASTER VOLUME] control

When the lesson mode

❸ LESSON PART
[L] button
[R] button

When the recording mode

❸ [REC TRACK 2] button
[REC TRACK 1] button

---

❹ [LISTEN & LEARN] button
❺ [TIMING] button
❻ [WAITING] button
❼ [FUNCTION] button
❽ [SONG] button
❾ [STYLE] button
❿ [VOICE] button
⓫ Number buttons [0]-[9], [+/YES], [–/NO]
⓬ [DEMO] button
⓭ [METRONOME ON/OFF] button

When the Song mode

⓮ [A-B REPEAT] button
⓯ [REW] button
⓰ [FF] button
⓳ [PAUSE] button

When the Style mode

⓮ [ACMP ON/OFF] button
⓯ [INTRO/ENDING/rit.] button
⓰ [MAIN/AUTO FILL] button
⓳ [SYNC START] button

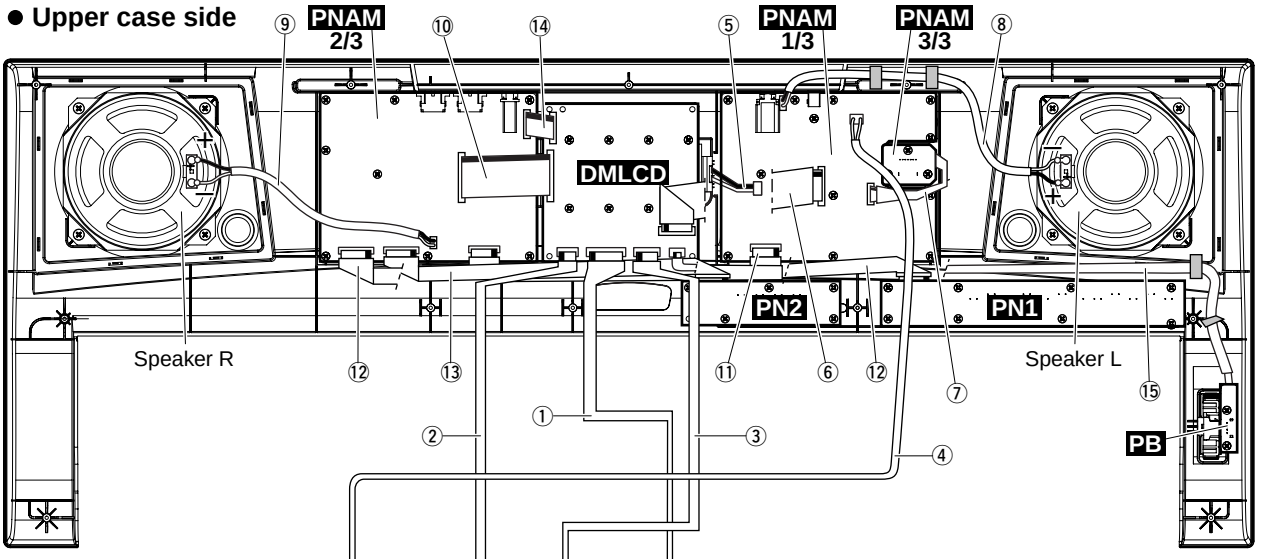
⓱ [TEMPO/TAP] button
⓲ [REC] button
⓴ [START/STOP] button
㉑ [PORTABLE GRAND] button
㉒ [SOUND EFFECT KIT] button
㉓ [REVERB ON/OFF] button
㉔ [SPLIT ON/OFF] button
㉕ [DUAL ON/OFF] button
㉖ [HARMONY ON/OFF] button
㉗ [TOUCH ON/OFF] button
㉘ [PITCH BEND] wheel
㉙ [ORIENTAL SCALE] buttons

Rear Panel

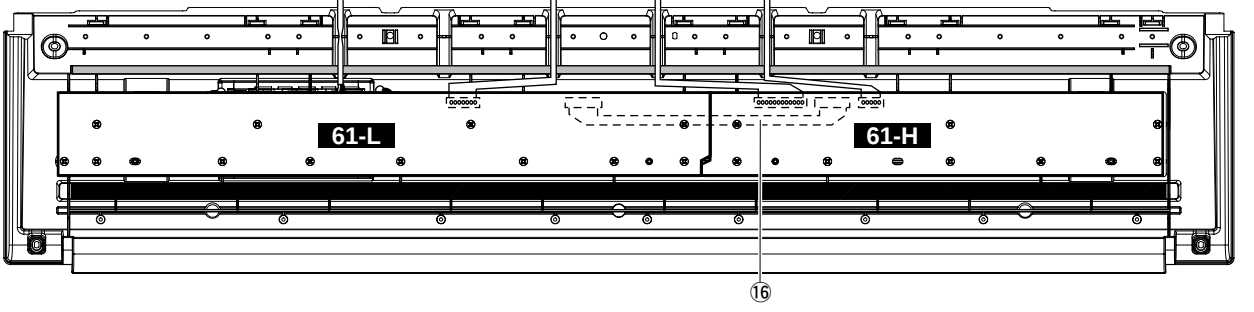
㉚ MIDI IN/OUT terminals
㉛ SUSTAIN jack
㉜ PHONES/OUTPUT jack
㉝ DC IN 12V jack

CIRCUIT BOARD LAYOUT & WIRING

● **Upper case side**



● **Lower case side**

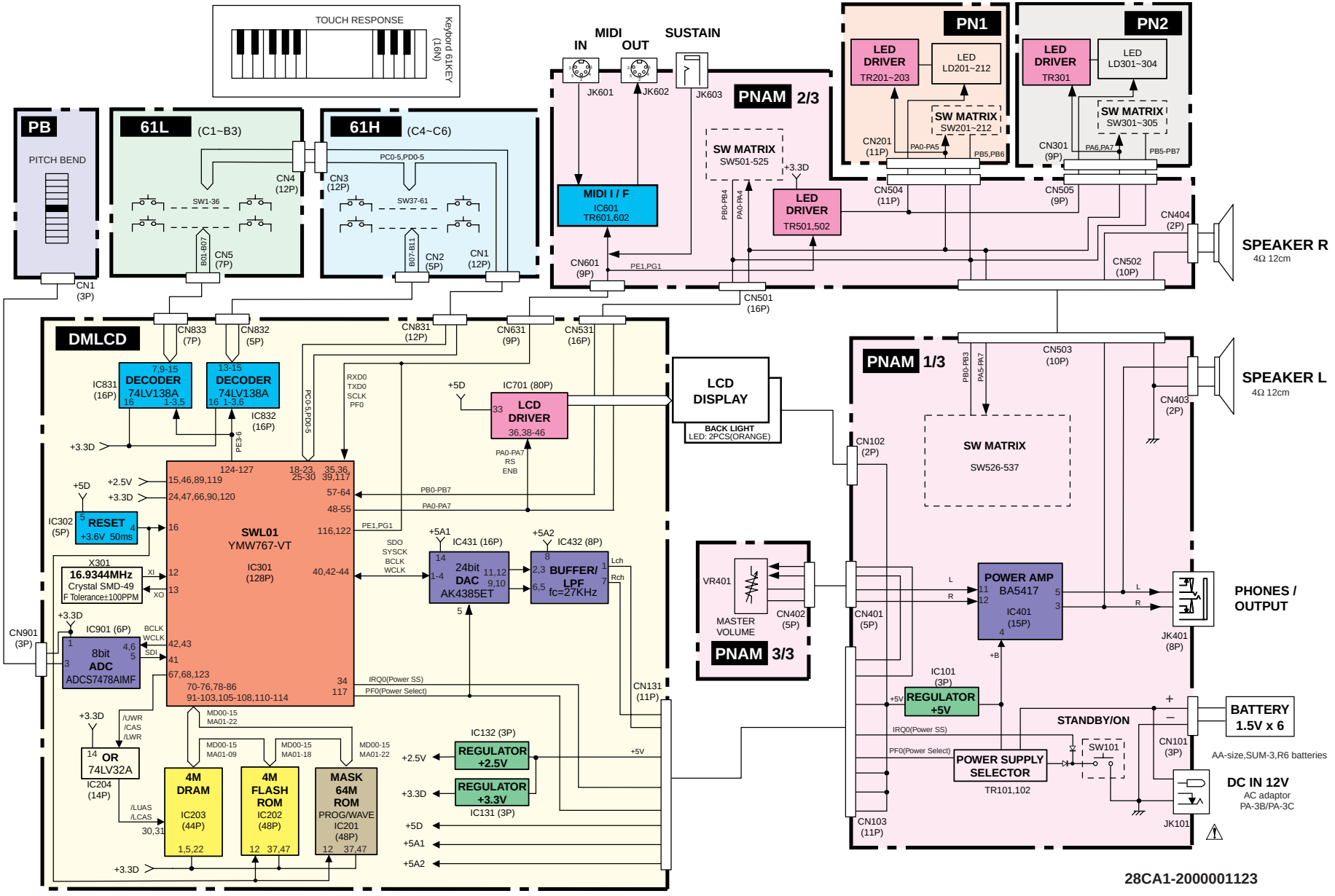


No.	Location	Parts No.	Connector Assembly	Destination						Remarks
①	30	WE138500	MK1	61H-CN1	*1	*4	DMLCD-CN831	*1	*4	12P
②	40	WE138700	MK2	61H-CN2	*1	*4	DMLCD-CN832	*1	*4	5P
③	50	WE138800	MK3	61L-CN5	*1	*4	DMLCD-CN833	*1	*4	3P
④	120	(WE15140)	BATT	Battery terminal A	*2	*7	PNAM1/3-CN101	*1	*6	3P
				Battery terminal B	*2	*7				
⑤	230	(WE14140)	BL	Back light assembly ±	*2	*5	PNAM1/3-CN102	*1	*4	2P
⑥	WA103	(WE13910)	AM	PNAM1/3-CN103	*3	*4	DMLCD-CN131	*1	*4	11P L=170
⑦	WA401	(WE13900)	VOL	PNAM1/3-CN401	*3	*4	PNAM3/3-CN402	*3	*4	5P L=120
⑧	WA403	(WE14120)	SPL	PNAM1/3-CN403	*3	*5	Speaker-L ±	*2	*5	2P L=280
⑨	WA404	(WE14130)	SPR	PNAM2/3-CN404	*3	*5	Speaker-R ±	*2	*5	2P L=220
⑩	WA501	(WE14080)	PN1	PNAM2/3-CN501	*3	*4	DMLCD-CN531	*1	*4	16P L=100
⑪	WA502	(WE13970)	PN2	PNAM1/3-CN503	*3	*4	PNAM2/3-CN502	*3	*4	10P L=340
⑫	WA504	(WE16450)	ORIPN1	PN1-CN201	*3	*4	PNAM2/3-CN504	*1	*4	11P L=500
⑬	WA505	(WE16460)	ORIPN2	PN2-CN301	*3	*4	PNAM2/3-CN505	*1	*4	9P L=300
⑭	WA601	(WE14060)	JACK	PNAM2/3-CN601	*3	*4	DMLCD-CN631	*1	*4	9P L=70
⑮	WH001	(WE35540)	PB	PB-CN1	*3	*6	DMLCD-CN901	*1	*6	3P L=540
⑯	150c	V8696200		61H-CN3	*1	*4	61L-CN4	*1	*4	12P L=210

*The parts with "( )" in "**Part No.**" are not available as spare parts.
*1: Installation
*2: Manual soldering
*3: Dip soldering
*4: Edge mark is adjusted to Pin 1 mark (△ mark).
*5: Edge mark is adjusted to + mark (+ mark).
*6: Red wire is adjusted to Pin 1 mark (△ mark).
*7: Battery terminal A (Black wire), Battery terminal B (Red wire)

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

BLOCK DIAGRAM



28CA1-2000001123

DISASSEMBLY PROCEDURE

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

1. Lower Case Assembly

(Time required: About 1 minute)

1-1 Remove the five (5) screws marked [240A], two (2) screws marked [270A], and two (2) screws marked [410]. The lower case assembly can then be removed. (Fig. 1)

2. DMLCD Circuit Board

(Time required: About 3 minutes)

2-1 Remove the lower case assembly. (See procedure 1)

2-2 Remove the eight (8) screws marked [240B]. The DMLCD circuit board can then be removed. (Fig. 2)

* When installing the DMLCD circuit board, tighten the screws 1 through 8 in numerical order. (Fig. 2)
* If the DMLCD circuit board is replaced, execute the "Factory Set" in the test program.

3. LCD (Time required: About 3 minutes)

3-1 Remove the lower case assembly. (See procedure 1)

3-2 Remove the DMLCD circuit board. (See procedure 2)

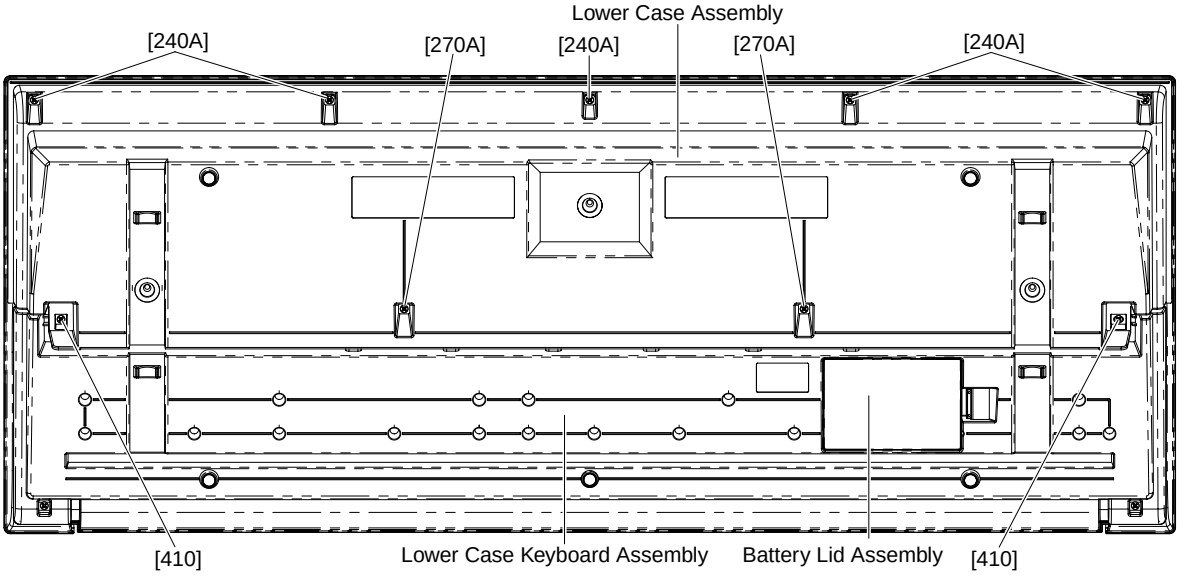
3-3 Remove the LCD holder and rubber connector.

3-4 Remove the back light assembly. (Fig. 4)

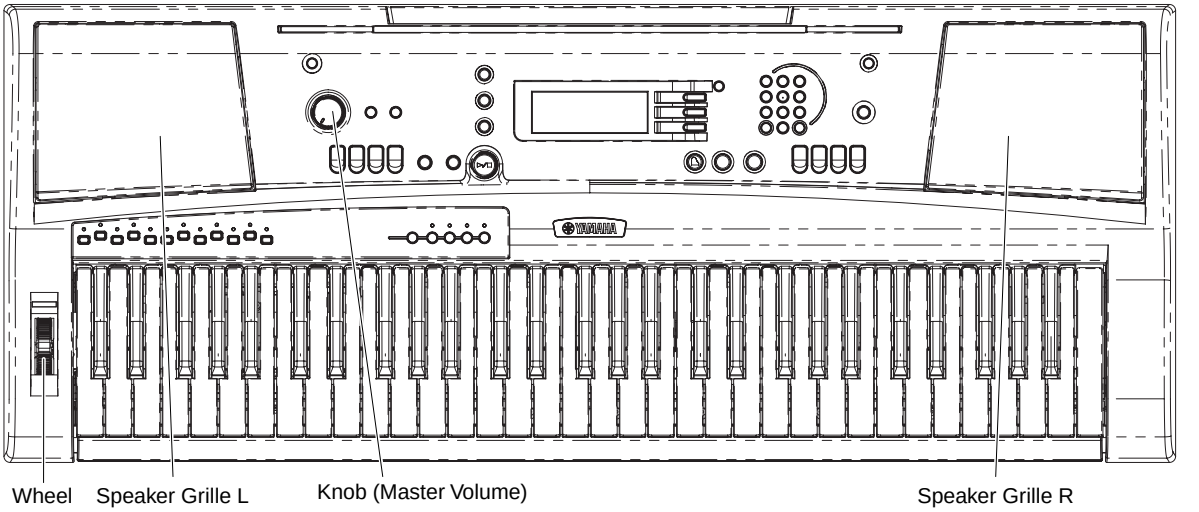
3-5 Remove the LCD. (Fig. 4)

* When attaching the rubber connector, set the conductive part to face inside. (Fig. 4)

● **Bottom view**



● **Top view**



[240]: Bind Head Tapping Screw-B 3.0X12 MFZN2W3 (WE987400)
[270]: Bind Head Tapping Screw-B 3.0X30 MFZN2W3 (WF491000)
[410]: Bind Head Tapping Screw-B 3.0X20 MFZN2W3 (WF489300)

(Fig.1)

4. PNAM Circuit Board (1/3, 2/3, 3/3)

4-1 Remove the lower case assembly. (See procedure 1)

4-2 PNAM Circuit Board 3/3
(Time required: About 2 minutes)

4-2-1 Remove the volume knob from the control panel surface. (Fig. 1, 3)

4-2-2 Remove the three (3) screws marked [150A]. The PNAM circuit board 3/3 can then be removed. (Fig. 2)

4-3 PNAM Circuit Board 1/3
(Time required: About 3 minutes)

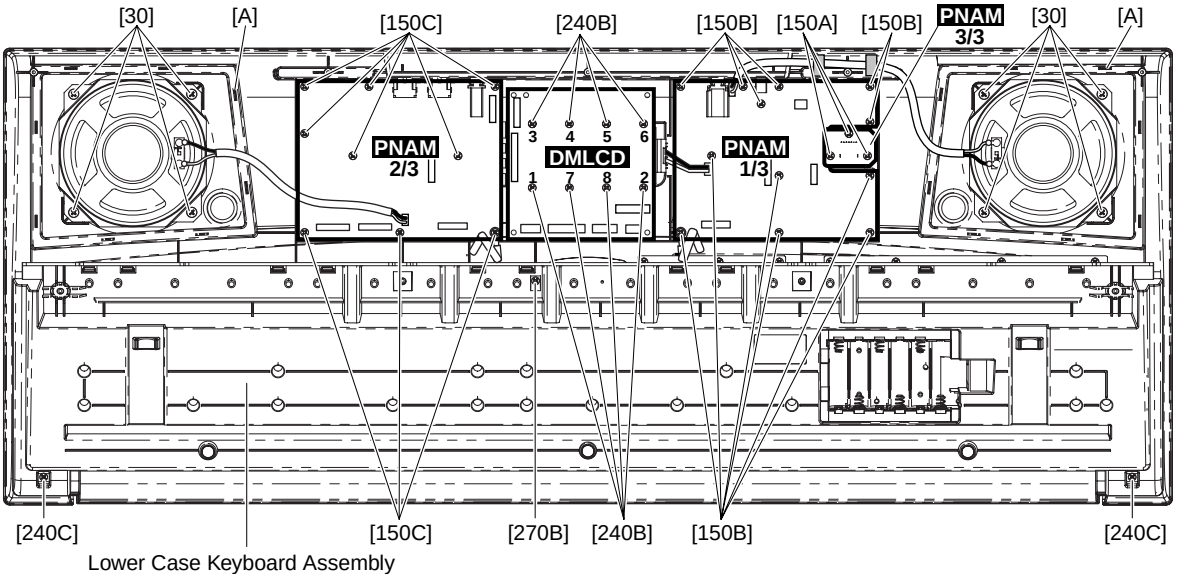
4-3-1 Remove the PNAM circuit board 3/3. (See procedure 4-2)

4-3-2 Remove the twelve (12) screws marked [150B]. The PNAM circuit board 1/3 can then be removed. (Fig. 2)

4-4 PNAM circuit board (2/3)
(Time required: About 3 minutes)

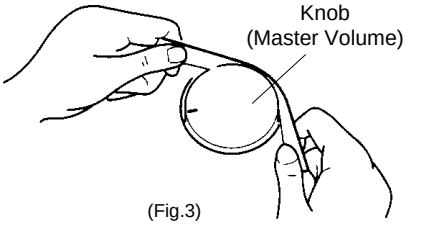
4-4-1 Remove the nine (9) screws marked [150C]. The PNAM circuit board 2/3 can then be removed. (Fig. 2)

● **Bottom view**

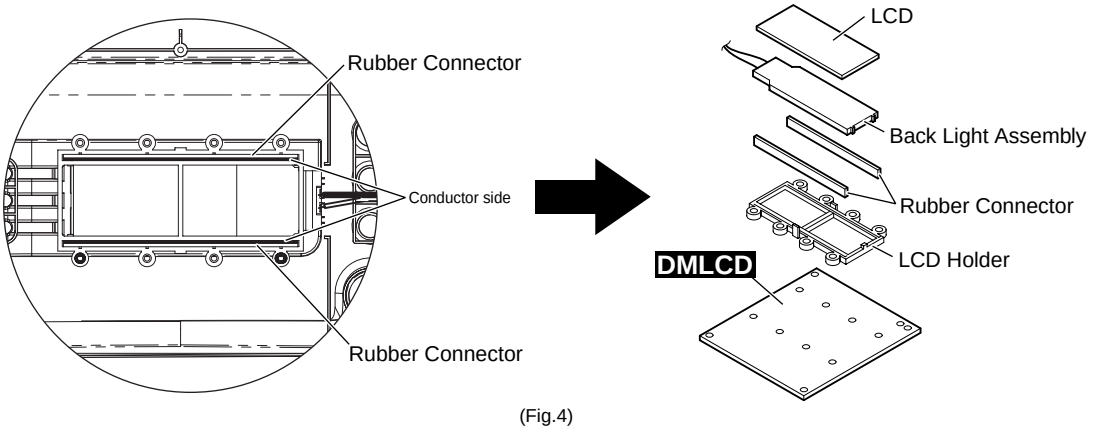


[30]: Bind Head Tapping Screw-B 4.0X8 MFZN2W3 (WE974600)
[150]: Bind Head Tapping Screw-B 3.0X8 MFZN2W3 (WE774300)
[240]: Bind Head Tapping Screw-B 3.0X12 MFZN2W3 (WE987400)
[270]: Bind Head Tapping Screw-B 3.0X30 MFZN2W3 (WF491000)

(Fig.2)



(Fig.3)



(Fig.4)

5. Speaker (Time required: About 3 minutes)

5-1 Remove the lower case assembly. (See procedure 1)

5-2 Remove the four (4) screws marked [30]. The speaker can then be removed. (Fig. 2)

* The right and left speakers can be removed in the same way.

6. SP Grille (Time required: About 3 minutes)

6-1 Remove the lower case assembly. (See procedure 1)

6-2 Set the four (8) [A]s parallel to the groove in the upper case assembly and remove the SP grille. (Fig. 2)

* The right and left SP grilles can be removed in the same way.

7. Lower Case Keyboard Assembly

(Time required: About 2 minutes)

7-1 Remove the lower case assembly. (See procedure 1)

7-2 Remove the two (2) screws marked [240C] and screw marked [270B]. The lower case keyboard assembly can then be removed. (Fig. 2)

8. PN1 Circuit Board, PN2 Circuit Board

(Time required: About 3 minutes each)

8-1 Remove the lower case keyboard assembly. (See procedure 7)

8-2 PN1 Circuit Board

8-2-1 Remove the eight (8) screws marked [150D]. The PN1 circuit board can then be removed. (Fig. 5)

8-3 PN2 Circuit Board

8-3-1 Remove the five (5) screws marked [150E]. The PN2 circuit board can then be removed. (Fig. 5)

9. PB Circuit Board

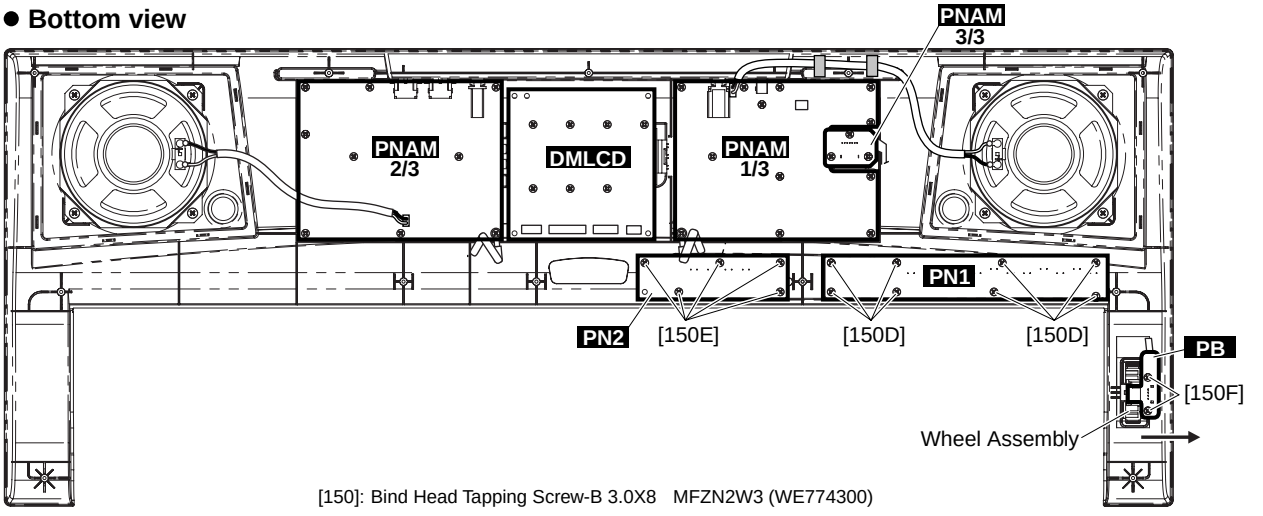
(Time required: About 3 minutes)

9-1 Remove the lower case keyboard assembly. (See procedure 7)

9-2 Remove the two (2) screws marked [150F]. Then, while sliding outward the wheel assembly connected to the PB circuit board, pull the PB circuit board upward. (Fig. 5)

* The wheel assembly is not part of the PB circuit board. When replacing the PB circuit board, remove the wheel assembly and install it to the new circuit board.

● **Bottom view**



[150]: Bind Head Tapping Screw-B 3.0X8 MFZN2W3 (WE774300)

(Fig.5)

10. Keyboard Assembly

10-1 Remove the lower case keyboard assembly. (See procedure 7)

10-2 White and black keys for one octave unit are integrated as a set. There are five sets in total. Remove the four (4) screws marked [200A]. The keyboard can then be removed. (Fig. 6) There are two (2) hooks at the back of the black keys. (Photo.1) Press the hook for the black key and lift a little, and pull forward to remove the hook for the black key to lift it.

10-3 To remove the white key C6, remove the screw marked [200B], press the hook at the back to lift a little, and pull forward to remove the hook to lift it. (Fig. 6)

11. Rubber Contact

11-1 Remove the lower case keyboard assembly. (See procedure 7)

11-2 Remove the keyboard corresponding to the rubber contacts to be removed. (See procedure 10)

11-3 Remove the rubber contacts. (Photo. 2)

12. Circuit Board 61L, Circuit Board 61H

12-1 Remove the lower case keyboard assembly. (See procedure 7)

12-2 Circuit Board 61L
(Time required: About 6 minutes)

12-2-1 Remove the keyboards from C1 to B3. (See procedure 10)

12-2-2 Remove the four (4) screws marked [180A], and eight (8) screws marked [190A]. The circuit board 61L can then be removed. (Fig. 7-1)

* When installing the circuit board 61L, tighten the screws 1 through 12 in numerical order. (Fig. 7-2)

12-3 Circuit Board 61H
(Time required: About 5 minutes)

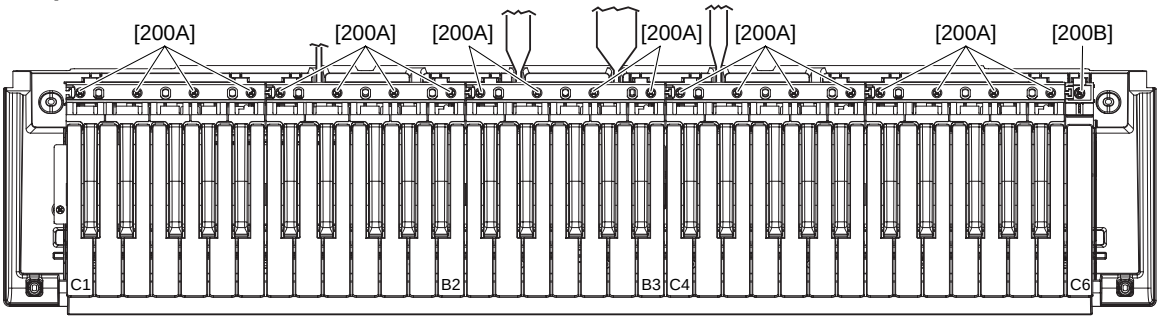
12-3-1 Remove the keyboards from C4 to C6. (See procedure 10)

12-3-2 Remove the three (3) screws marked [180B], and five (5) screws marked [190B]. The circuit board 61H can then be removed. (Fig. 7-1)

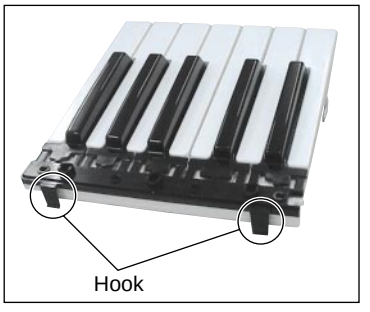
* When installing the circuit board 61H, tighten the screws 1 through 8 in numerical order. (Fig. 7-2)

<Lower case keyboard assembly>

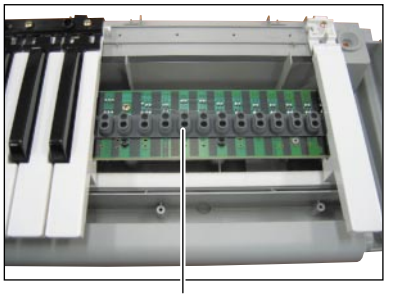
● **Top view**



[200]: Bind Head Tapping Screw-P 3.0X20 MFZN2Y (EP600680)
(Fig.6)

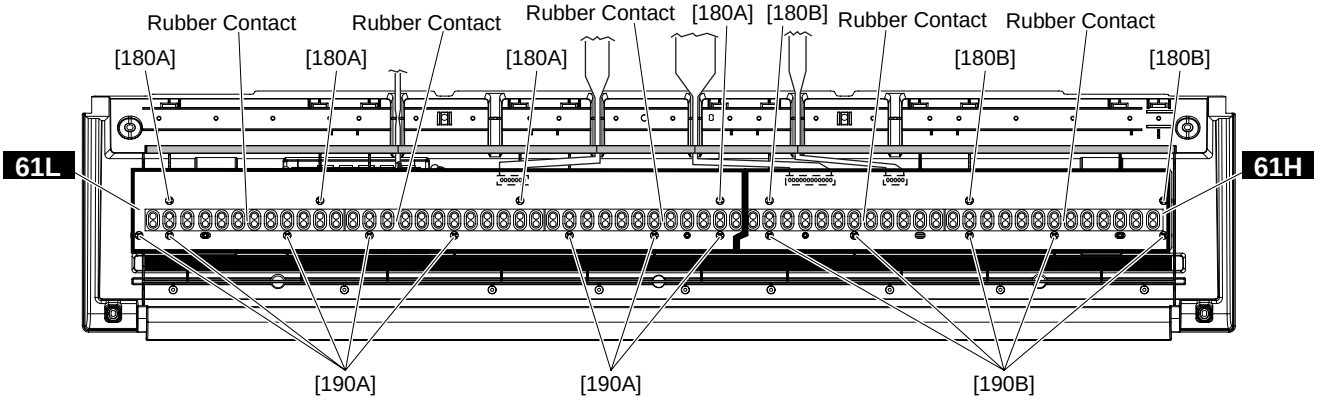


(Photo.1)



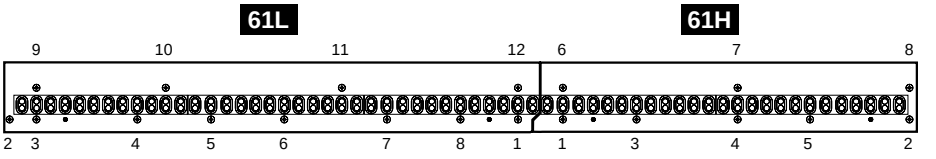
Rubber Contact
(Photo.2)

● **Top view**



[180]: Bind Head Tapping Screw-B 3.0X8 MFZN2Y (EP600250)
[190]: Bind Head Tapping Screw-P SP 3.0X12 MFZNBL (VZ313100)

(Fig.7-1)



(Fig.7-2)

13. How to Remove Spring Terminals

A Spring Terminal A, Spring Terminal B

13-1 Remove the lower case keyboard assembly. (See procedure 7)

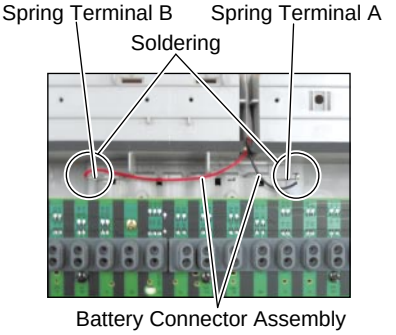
13-2 Remove the keyboards from C1 to B2. (See procedure 10)

13-3 Remove the battery connector assembly soldered to the spring terminal A and spring terminal B. (Photo. 3)

13-4 Reverse the lower case keyboard assembly and remove the battery lid assembly. (Fig. 1)

13-5 Lift the spring terminal A a little and slide it in the upper right direction to remove it. (Fig. 8)

13-6 Remove the hook for the spring terminal B to pull it out from inside. (Fig. 8)

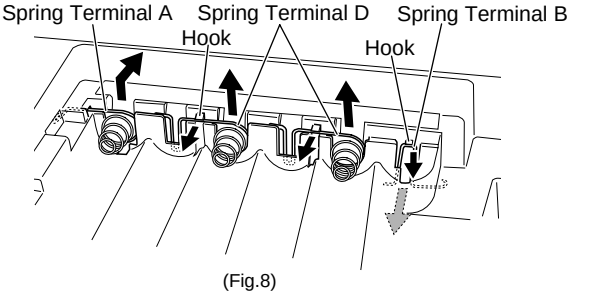


(Photo.3)

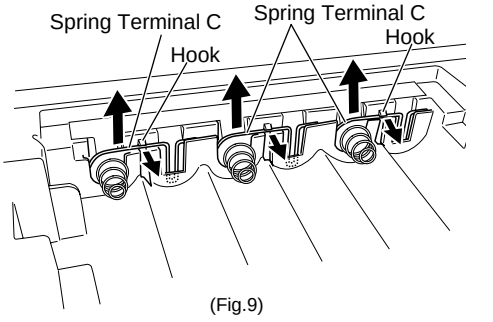
B Spring Terminal C, Spring Terminal D

13-1 Remove the battery lid assembly at the bottom side of the lower case keyboard assembly. (Fig. 1)

13-2 Remove the hooks to pull out the spring terminal C and spring terminal D. (Fig. 8, 9)



(Fig.8)



(Fig.9)

■ LSI PIN DESCRIPTION

● **YMW767-VTZ** (X6055A00) **CPU** (Central Processing Unit)

DMLCD: IC301

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	V_{SS}		Ground	65	V_{SS}		Ground
2	TESTN (SCMD)	I	TEST Pin	66	IOV_{DD}		Power supply
3	PLLBPN	I	PLL bypass	67	LBN/LWRN/PF6	O	Low byte enable
4	$PLLV_{DD}$		Power supply	68	UBN/UWRN/PF7	O	Upper byte enable
5	CIN		Condenser connect	69	RDN/PF4	O	Read enable
6	$PLLV_{SS}$		Ground	70	MD00	I/O	
7	TRSTN	I		71	MD08	I/O	
8	TMS	I		72	MD01	I/O	
9	TCK	I	JTAG	73	MD09	I/O	Memory data bus
10	TDI	I		74	MD02	I/O	
11	TDO	O		75	MD10	I/O	
12	XI	I		76	MD03	I/O	
13	XO	O	Crystal oscillator	77	V_{SS}		Ground
14	V_{SS}		Ground	78	MD11	I/O	
15	V_{DD}		Power supply	79	MD04	I/O	
16	ICN	I	Initial clear	80	MD12	I/O	
17	ECSN	I	Chip select	81	MD05	I/O	
18	EWRN/PD5	I	Write enable	82	MD13	I/O	Memory data bus
19	ERDN/PD4	I	Read enable	83	MD06	I/O	
20	EA3/PD3	I		84	MD14	I/O	
21	EA2/PD2	I	Address bus	85	MD07	I/O	
22	EA1/PD1	I		86	MD15	I/O	
23	EA0/PD0	I		87	WRN/PF5	O	
24	IOV_{DD}		Power supply	88	V_{SS}		Ground
25	ED0/PC0	I/O		89	V_{DD}		Power supply
26	ED1/PC1	I/O		90	IOV_{DD}		Power supply
27	ED2/PC2	I/O		91	MA17	O	
28	ED3/PC3	I/O	Data bus /	92	MA16	O	
29	ED4/PC4	I/O		93	MA15	O	
30	ED5/PC5	I/O		94	MA14	O	
31	ED6/PC6	I/O		95	MA13	O	
32	ED7/PC7	I/O		96	MA12	O	
33	V_{SS}		Ground	97	MA11	O	Memory address bus
34	IRQ0N/PH0	I	Interrupt request	98	MA10	O	
35	TxD0	O	Serial port 0	99	MA09	O	
36	RxD0	I		100	MA08	O	
37	TxD1/PG2	O	Serial port 1 /	101	MA07	O	
38	RxD1/PH1	I		102	MA06	O	
39	SCLK1/PH2	I	EXT Clock /	103	MA05	O	
40	SDO	O	Serial data	104	V_{SS}		Ground
41	SDI/PH3	I	Serial data /	105	MA04	O	
42	BCLK	O	Bit clock	106	MA03	O	Memory address bus
43	WCLK/SYO	O	Word clock	107	MA02	O	
44	SYSCLK/PG3	O	System clock	108	MA01	O	
45	V_{SS}		Ground	109	CS0N/PG0	O	Chip select /
46	V_{DD}		Power supply	110	MA18	O	Memory address bus
47	IOV_{DD}			111	MA19	O	
48	PA0	I/O		112	MA21/PF1	O	Memory address bus
49	PA1	I/O		113	MA22/PF2	O	
50	PA2	I/O		114	MA20	O	Memory address bus
51	PA3	I/O	Parallel port A	115	MA23/PF3	O	Memory address bus
52	PA4	I/O		116	CSIN/PG1	O	Chip select /
53	PA5	I/O		117	MA00/PF0	O	Memory address bus
54	PA6	I/O		118	V_{SS}		Ground
55	PA7	I/O		119	V_{DD}		Power supply
56	V_{SS}		Ground	120	IOV_{DD}		Power supply
57	PB0	I/O		121	CS2N/PE0	O	Chip select /
58	PB1	I/O		122	CS3N/PE1	O	Chip select /
59	PB2	I/O		123	CS4N/CASN/PE2	O	Chip select /
60	PB3	I/O	Parallel port B	124	CS5N/PE3	O	Chip select /
61	PB4	I/O		125	CS50RDN/PE4	O	Chip select /
62	PB5	I/O		126	CS51WRN/PE5	O	Chip select /
63	PB6	I/O		127	CS52WRN/PE6	O	Chip select /
64	PB7/SYI	I/O	Parallel port B /	128	CS53WRN/RASN/PE7	O	Chip select /

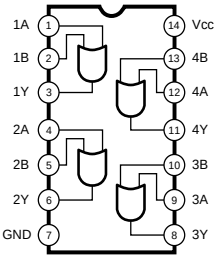
- **NT3881DF-01** (X3148A00) **LCD DRIVER**
- **ML9040A-B01GAZ03A** (XZ987A00) **LCD DRIVER**
- **NT3881EFG-01** (X6247A00) **LCD DRIVER**

DMLCD: IC701

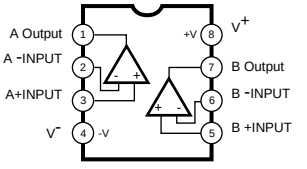
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	S22	O	Segment signal output for LCD driving	41	DB2	I/O	Data interface
2	S21	O		42	DB3	I/O	
3	S20	O		43	DB4	I/O	
4	S19	O		44	DB5	I/O	
5	S18	O		45	DB6	I/O	
6	S17	O		46	DB7	I/O	
7	S16	O		47	C1	O	Common signal output for LCD driving
8	S15	O		48	C2	O	
9	S14	O		49	C3	O	
10	S13	O		50	C4	O	
11	S12	O		51	C5	O	
12	S11	O		52	C6	O	
13	S10	O		53	C7	O	
14	S9	O		54	C8	O	
15	S8	O		55	C9	O	
16	S7	O		56	C10	O	
17	S6	O		57	C11	O	
18	S5	O		58	C12	O	
19	S4	O		59	C13	O	
20	S3	O		60	C14	O	
21	S2	O		61	C15	O	
22	S1	O		62	C16	O	
23	Vss		Ground	63	S40	O	Segment signal output for LCD driving
24	OSC1	I	Oscillator	64	S39	O	
25	OSC2	O	Oscillator	65	S38	O	
26	V1		Power supply	66	S37	O	
27	V2			67	S36	O	
28	V3			68	S35	O	
29	V4			69	S34	O	
30	V5			70	S33	O	
31	CLK1	O	Data latch clock	71	S32	O	
32	CLK2	O	Data shift clock	72	S31	O	
33	Vdd		Power supply (+5 V)	73	S30	O	
34	M	O	Altamated signal for LCD driver outout	74	S29	O	
35	D	O	Display data interface	75	S28	O	
36	RS	I		76	S27	O	
37	R/W	I	Read/write	77	S26	O	
38	E	I	Enable	78	S25	O	
39	DB0	I/O	Data interface	79	S24	O	
40	DB1	I/O	Data interface	80	S23	O	

■ IC BLOCK DIAGRAM

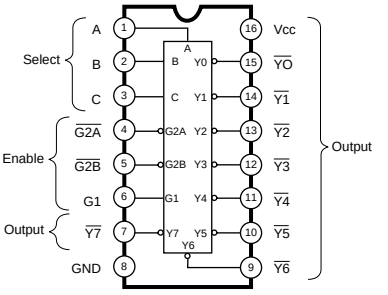
- **HD74LV32AFPEL** (IS003200)
  Quad 2 Input OR
  DMLCD: IC204



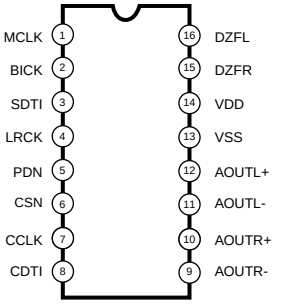
- **NJM4580E** (X2331A00)
  Dual Operational Amplifier
  DMLCD: IC432

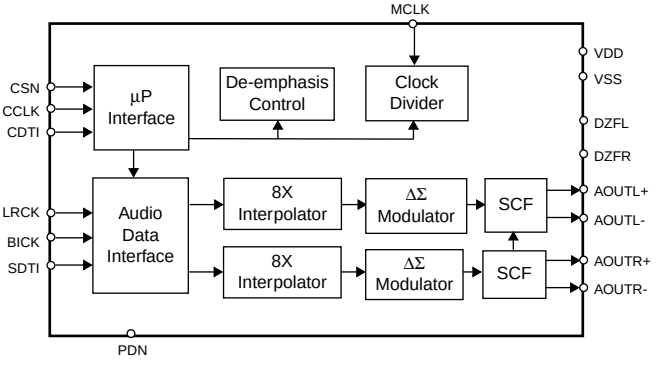


- **SN74LV138ANSR** (ISO013810)
  DECODER
  DMLCD: IC831,832

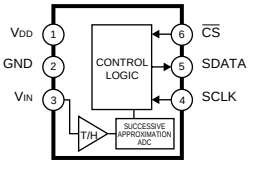


- **AK4385ET** (X6040A00)
  D/A Converter
  DMLCD: IC431





- **ADCS7478AIMF** (X5892A00)
  A/D Converter
  DMLCD: IC901

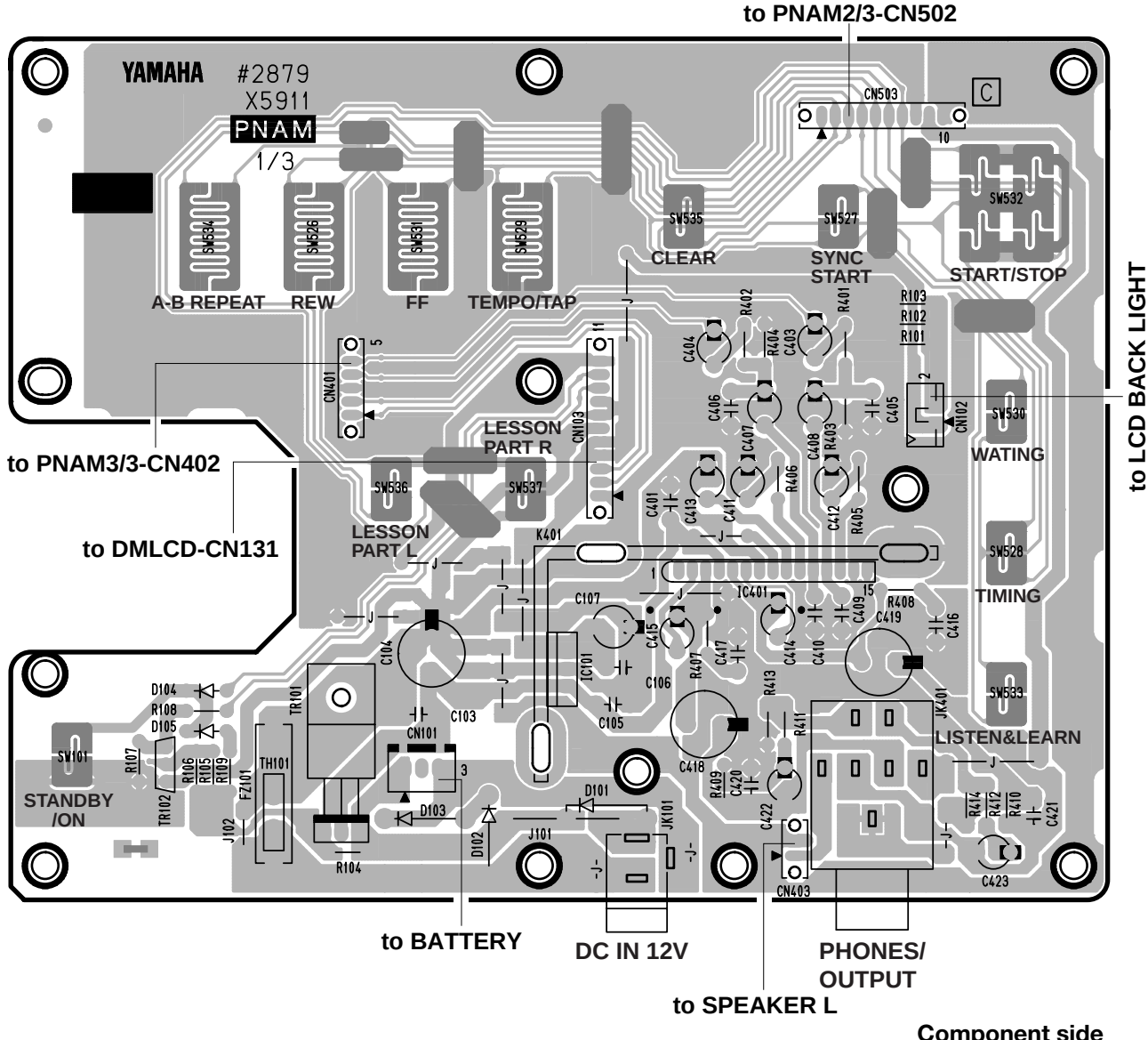


■ CIRCUIT BOARDS

DMLCD Circuit Board (X5910C0) **17**
PB Circuit Board (X5067A0) **20**
PN1 Circuit Board (X6095A0) **19**
PN2 Circuit Board (X6095A0) **20**
PNAM 1/3 Circuit Board (X5911C0) **15**
PNAM 2/3 Circuit Board (X5911C0) **16**
PNAM 3/3 Circuit Board (X5911C0) **16**
61H Circuit Board (X2335C0) **18**
61L Circuit Board (X2336B0) **18**

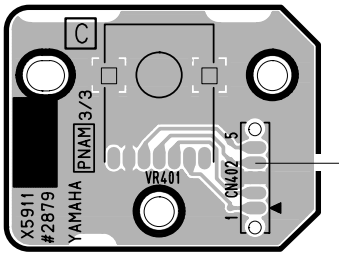
Note: See parts list for details of circuit board component parts.

• PNAM1/3 Circuit Board



Component side

• PNAM3/3 Circuit Board

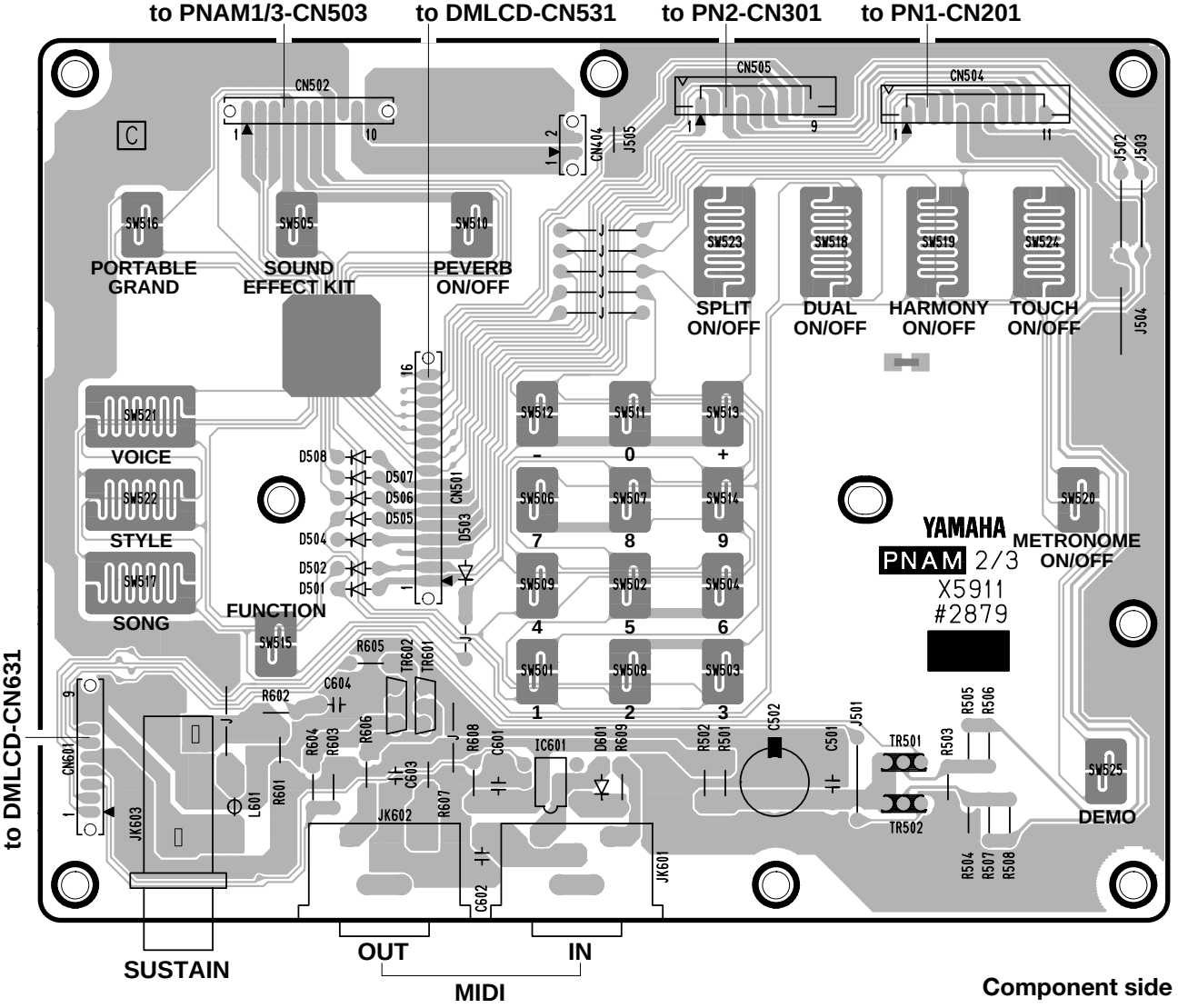


to PNAM1/3-CN401

MASTER VOLUME

Component side

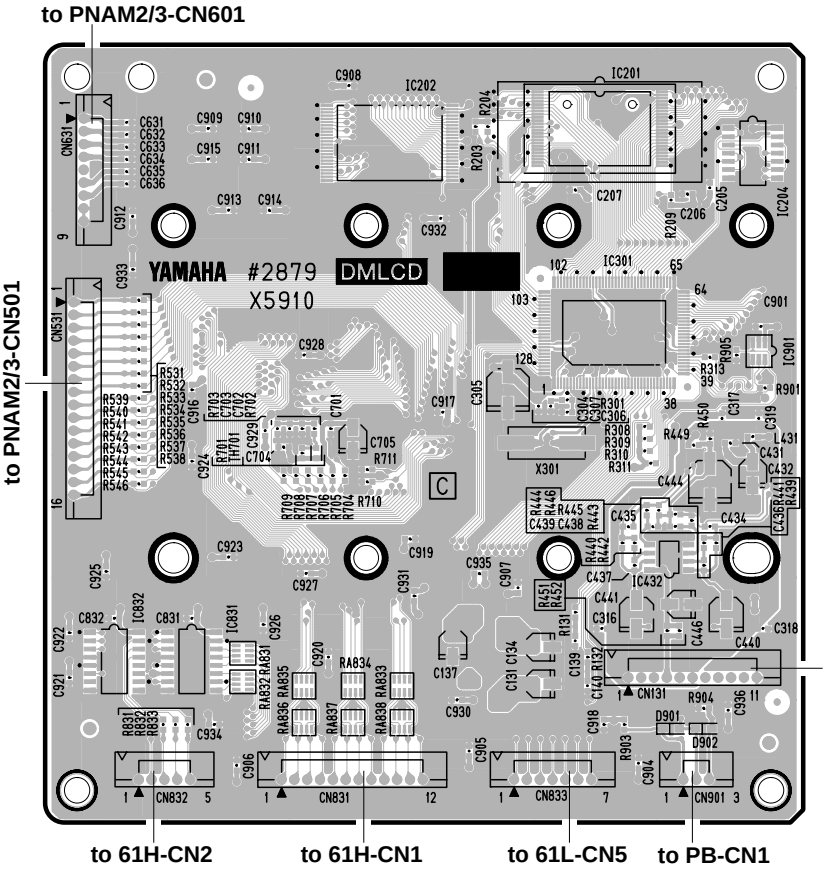
• PNAM2/3 Circuit Board



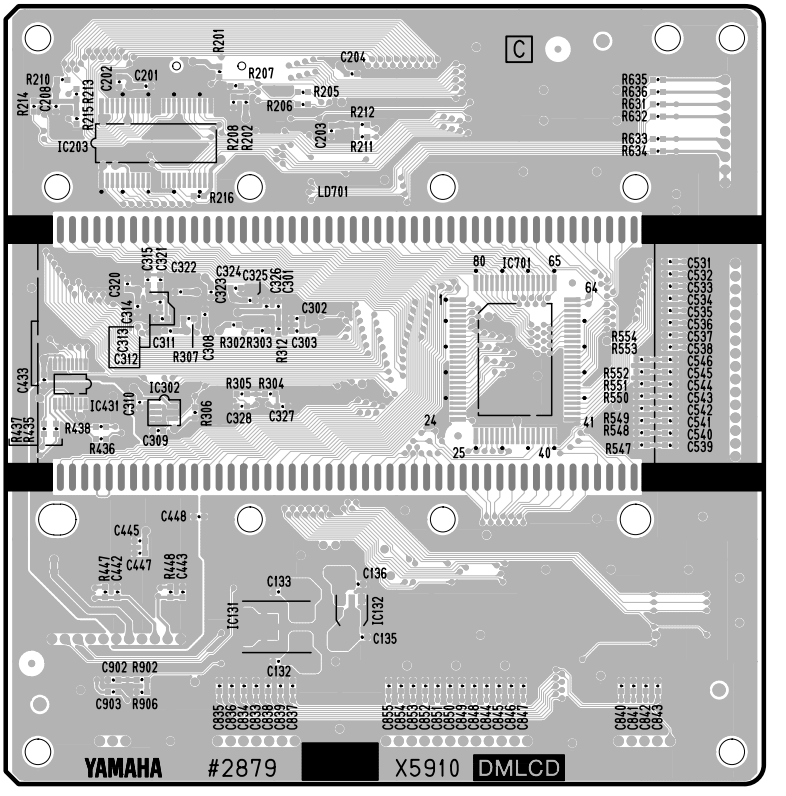
Component side

PNAM2/3: 2NA-WE00540 ⚠2
PNAM3/3: 2NA-WE00540 ⚠2

• DMLCD Circuit Board

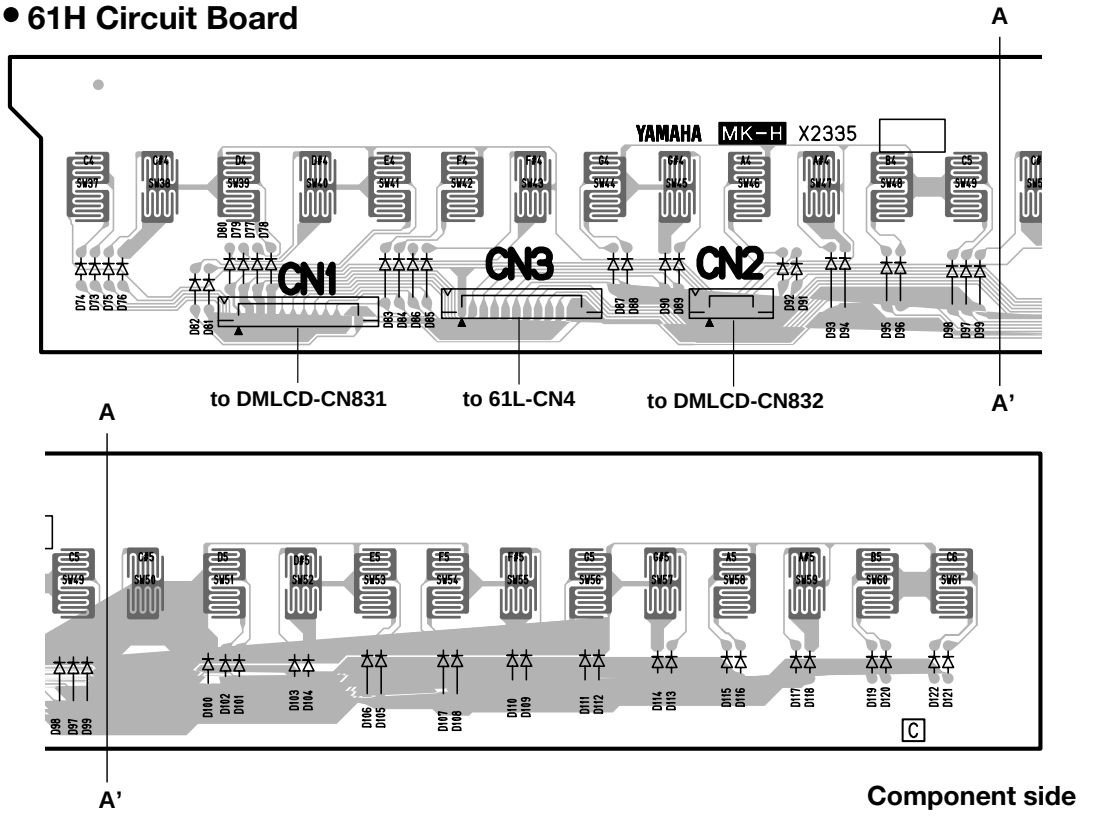


Component side



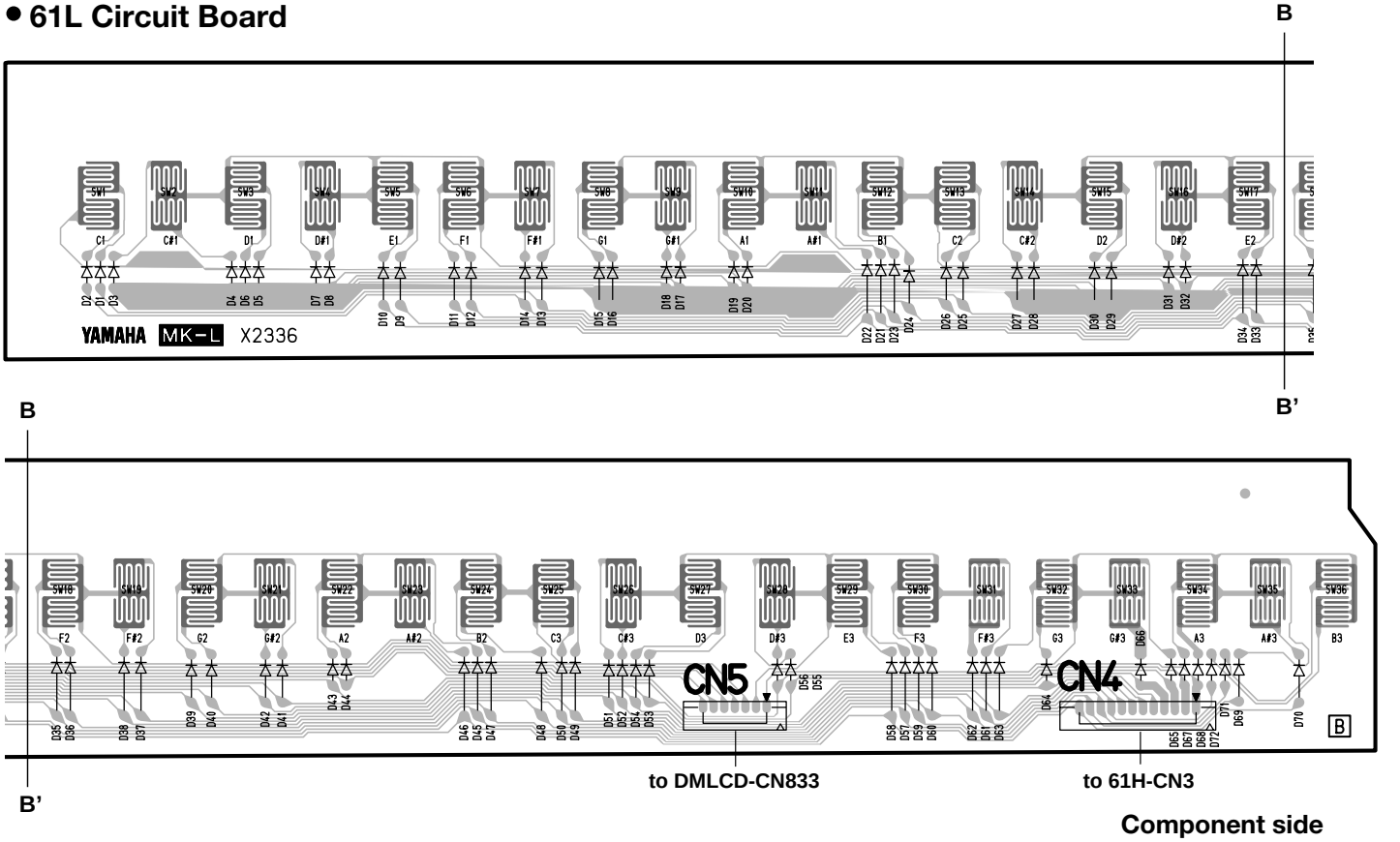
Pattern side

• 61H Circuit Board



Component side

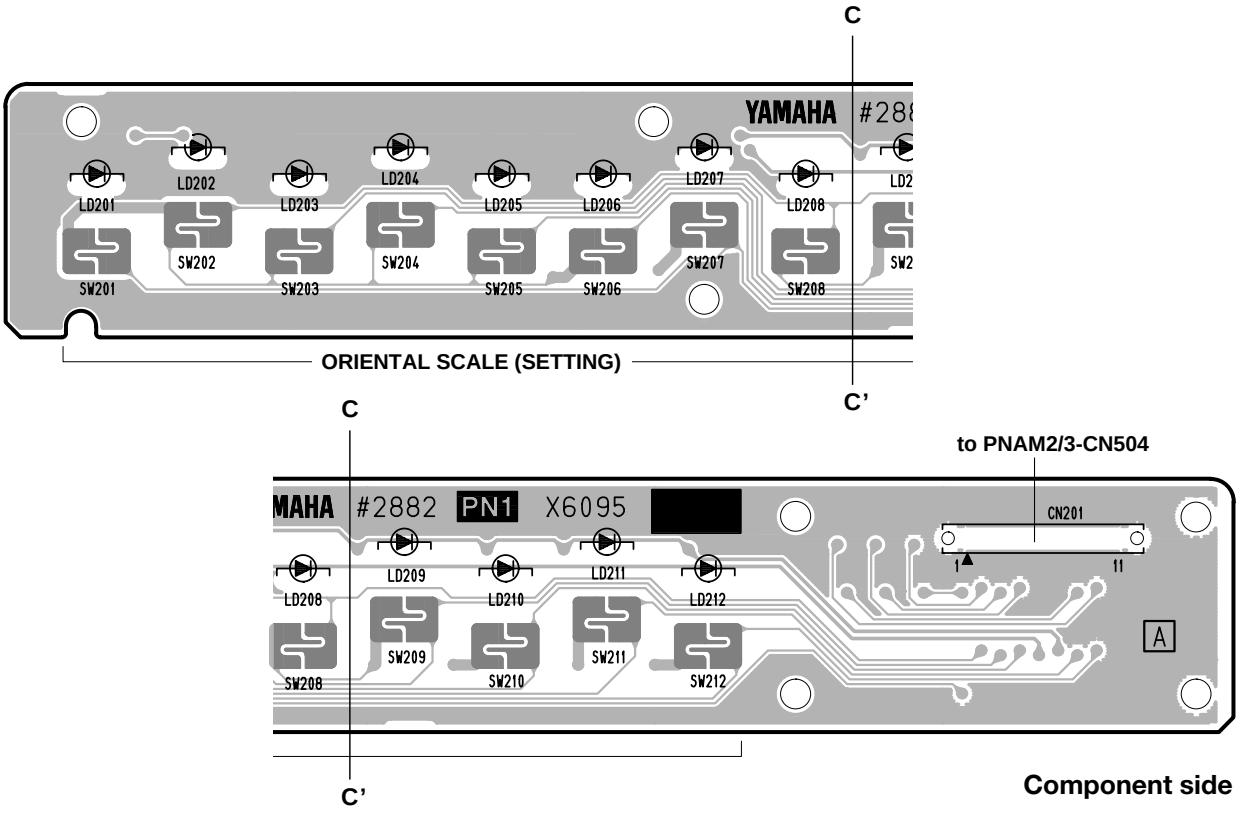
• 61L Circuit Board

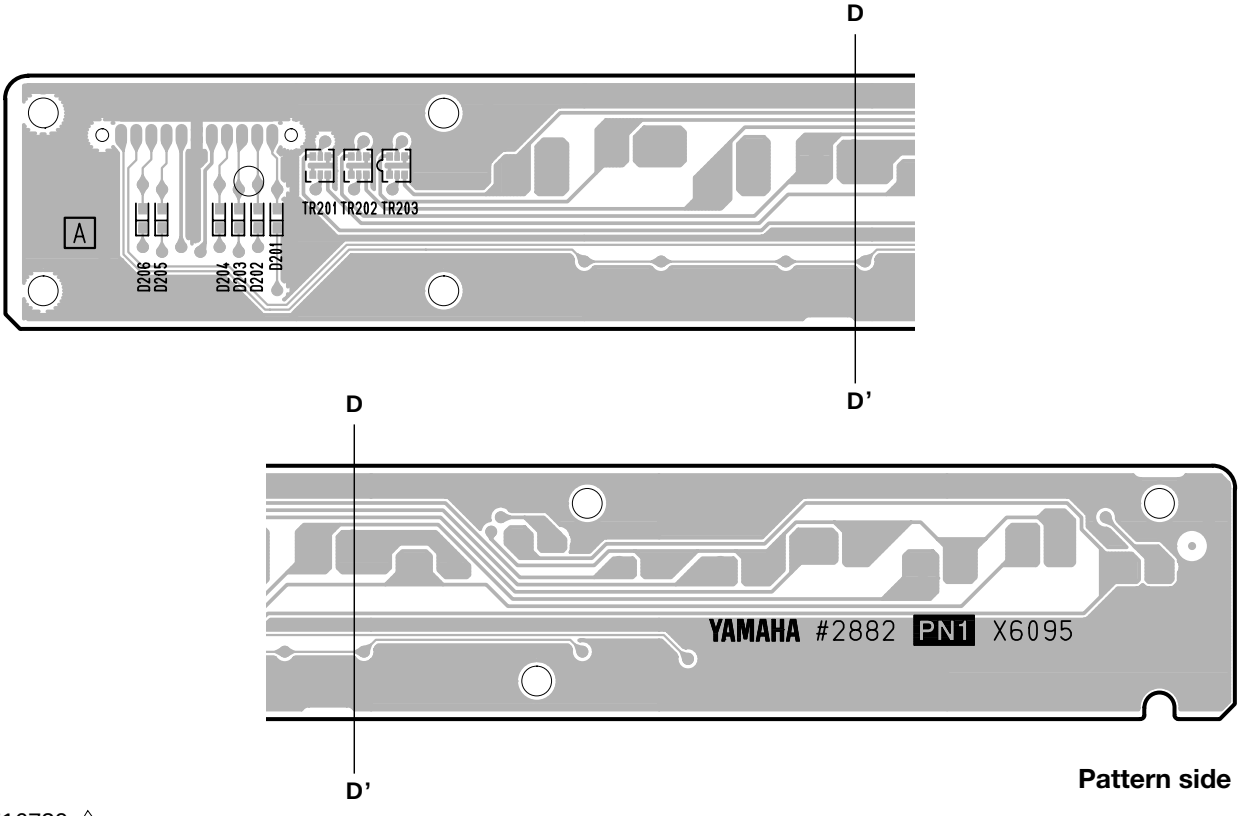


Component side

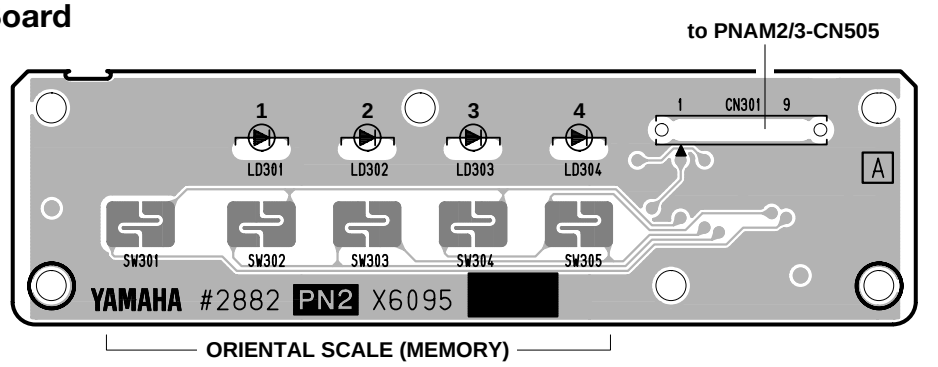
61H: 2NAKB-V869540
61L: 2NAKB-V869520

• PN1 Circuit Board

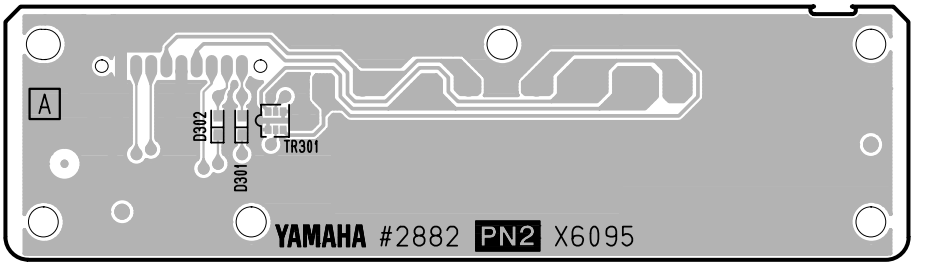




• PN2 Circuit Board

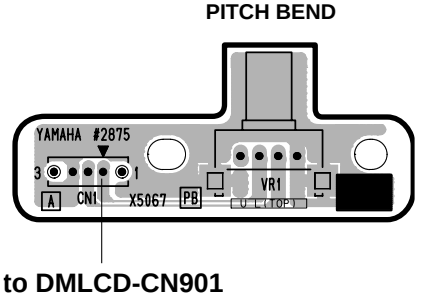


Component side



Pattern side

• PB Circuit Board



Component side

PN2: 2NA-WE16730 ⚠1
PB: 2NA-WC36570 ⚠1

TEST PROGRAM

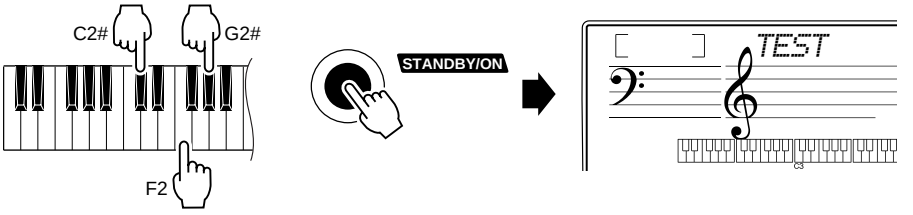
∗ If the test number 47 "Factory Set" is executed, the data already set will be lost.

1 Preparation

1) Use an AC adaptor PA-3C or PA-32.
2) Measuring device: Frequency counter, which can detect thousandth digit, Level meter (with JIS-C filter)
   Note: Connect a load resistor of 33Ω to the terminal [PHONES/OUTPUT]. Input impedance of the measuring device should be 1MΩ or more.
3) Jig: Foot switch (FC-4 or FC-5), MIDI cable

2 Start-up the Test Program

Holding down the keys [C2#], [F2], [G2#] simultaneously, press the [STANDBY / ON] switch.



3 Test Procedure

1) When the test program is started, "**TEST**" will be displayed on the LCD.
2) Press the [–] or [+] button of the number buttons to select a test program item.
3) Press the [START/STOP] button to execute the test.

If the result is OK or test item is completed, press the [START/STOP] button again to return to the item selection display.
Press the [–] or [+] button of the number buttons to select the next test item.
A cursor ("__") is shown below the first character of the item for which the test results are OK.
If the results are NG, press the lowest key in the keyboard (white key C1) to return to the item selection display.

4 Test program list

(dBu=dBm)

Test No.	LCD display	Test descriptions, judging conditions, etc.
1	**001 : Version**	Displays version of the ROM. "[∗∗∗] **Prog**" is displayed on the LCD. [∗∗∗] : Version
2	**002 : Rom Chk1**	ROM connected to the bus of the CPU is checked. Make sure that "**Rom OK**" is displayed on the LCD.
3	**003 : Ram Chk1**	RAM connected to the bus of the CPU is checked. Make sure that "**Ram OK**" is displayed on the LCD.
4	**006 : FRomChk1**	FROM connected to the bus of the CPU is checked. Make sure that "**FRom OK**" is displayed on the LCD.
5	**011 : TG1 Chk**	Plays each key automatically in the order of scale (auto-scaling). (32 notes from C2 to G4 will be played.) Check that there is no abnormal sounds or noise. When the auto-scaling is finished, "**TG1 End**" will be shown. Press a key to play a sound. (Single note, the key pressed first will be played)
6	**013 : Pit Chk**	Connect the frequency counter to the [PHONES/OUTPUT] terminal. (Either L or R) Checks pitch. (440.14Hz±0.22Hz) Check that the correct signal is output.
7	**014 : Output R**	Connect the level meter (with JIS-C filter) to the L/R terminals of the [PHONES/OUTPUT]. (33Ω of load) Set the [MASTER VOLUME] to the maximum level and check the output level. • PHONES L: –45.0dBu or less • PHONES R: –1.5dBu±2dB
8	**015 : Output L**	Connect the level meter (with JIS-C filter) to the L/R terminals of the [PHONES/OUTPUT]. (33Ω of load) Set the [MASTER VOLUME] to the maximum level and check the output level. • PHONES L: –1.5dBu±2dB • PHONES R: –45.0dBu or less

Test No.	LCD display	Test descriptions, judging conditions, etc.
9	**019 : Noise**	Connect the level meter (with JIS-C filter) to the L/R terminals of the [PHONES/OUTPUT]. (33Ω of load) Set the [MASTER VOLUME] to the maximum level and check the noise. • PHONES L, R: –73.0dBu or less
10	**020 : SW Chk**	Checks switches on the panel. Press the switches as shown in the LCD. When a switch is pressed, a sound is played at the prescribed pitch. (Refer to the Switch test item list.) Check that the LED for the relevant switch is lit then. Make sure that "**SW OK**" is displayed on the LCD when all the switches are pressed. To cancel the operation halfway, use the lowest (leftmost) key on the keyboard to return to the selection display.
11	**021 : A. Led On**	Make sure that all the LEDs are lit.
12	**028 : LCD On**	Make sure that the entire LCD is lit .
13	**029 : LCD Off**	Make sure that all the dots are turned off on the LCD.
14	**031 : PD1 Chk**	Connect a footswitch (FC-4 or FC-5) to the [SUSTAIN] terminal. Make sure that C3 is played when the [START/STOP] button is pressed and C4 is played when the pedal is depressed. The sound will stop when the pedal is released. Make sure that "**PD1 OK**" is displayed on the LCD when finished.
15	**033 : PB Chk**	Checks the wheel. Press the [START/STOP] button and the center of the wheel is detected. Make sure that C3 is played when the wheel is turned from the center to the minimum position, and that C4 is played when the wheel is turned to the maximum position. Make sure that "**PB OK**" is displayed on the LCD.
16	**037 : MIDI Chk**	Connect the [MIDI IN] jack and [MIDI OUT] jack with a MIDI cable and then execute the test. Make sure that C4 is played and "**MIDI OK**" is displayed on the LCD.
17	**041 : Rom Chk2**	Checks the ROM connected to the CPU bus. Make sure that "**Rom OK**" is displayed on the LCD. It will take about 10 seconds for the check.
18	**042 : Ram Chk2**	Checks the RAM connected to the CPU bus. Make sure that "**Ram OK**" is displayed on the LCD.
19	**045 : FRomChk2**	Checks the FROM connected to the CPU bus. Make sure that "**FRom OK**" is displayed on the LCD. It will take about 30 seconds for the check.
20	**047 : Factory Set**	Initializes the entire backup area to reset to the factory default. "**Fact**" is displayed on the LCD during the test. "**Fact End**" is displayed on the LCD when the test is finished.
21	**048 : TEST Exit**	Execute this to leave the test program and change to the play mode.

Switch test item list

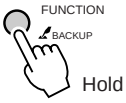
Turn	SW Name	LCD Display	Note Number
1	LEFT	Left	C1
2	RIGHT	Right	C#1
3	LISTEN & LEARN	Listen	D1
4	TIMING	Timing	D#1
5	WAITING	Waiting	E1
6	FUNCTION	Function	F1
7	SONG	Song	F#1
8	STYLE	Style	G1
9	VOICE	Voice	G#1
10	TENKEY 1	Tenkey 1	A1
11	TENKEY 2	Tenkey 2	A#1
12	TENKEY 3	Tenkey 3	B1
13	TENKEY 4	Tenkey 4	C2
14	TENKEY 5	Tenkey 5	C#2
15	TENKEY 6	Tenkey 6	D2
16	TENKEY 7	Tenkey 7	D#2
17	TENKEY 8	Tenkey 8	E2
18	TENKEY 9	Tenkey 9	F2
19	TENKEY –	Tenkey –	F#2
20	TENKEY 0	Tenkey 0	G2
21	TENKEY +	Tenkey +	G#2
22	DEMO	Demo	A2
23	METRONOME	Metro	A#2
24	A-B REPEAT	AB Rep	B2
25	REW	Rew	C3
26	FF	FF	C#3
27	TEMPO/TAP	Temp/TAP	D3

Turn	SW Name	LCD Display	Note Number
28	REC	Record	D#3
29	PAUSE	Pause	E3
30	START/STOP	StartStp	F3
31	PORTABLE GRAND	GP	F#3
32	SOUND EFFECT	SoundEff	G3
33	REVERB ON/OFF	Reverb	G#3
34	SPLIT ON/OFF	Split	A3
35	DUAL ON/OFF	Dual	A#3
36	HARMONY ON/OFF	Harmony	B3
37	TOUCH ON/OFF	Touch	C4
38	SCALE TUNE C	SclTunC	C#4
39	SCALE TUNE C#	SclTunC#	D4
40	SCALE TUNE D	SclTunD	D#4
41	SCALE TUNE D#	SclTunD#	E4
42	SCALE TUNE E	SclTunE	F4
43	SCALE TUNE F	SclTunF	F#4
44	SCALE TUNE F#	SclTunF#	G4
45	SCALE TUNE G	SclTunG	G#4
46	SCALE TUNE G#	SclTunG#	A4
47	SCALE TUNE A	SclTunA	A#4
48	SCALE TUNE A#	SclTunA#	B4
49	SCALE TUNE B	SclTunB	C5
50	SCALE TUNE MEM	SclMem	C#5
51	SCALE TUNE MEM1	SclMem1	D5
52	SCALE TUNE MEM2	SclMem2	D#5
53	SCALE TUNE MEM3	SclMem3	E5
54	SCALE TUNE MEM4	SclMem4	F5

BACKUP & INITIALIZATION

● Backup

Some internal parameters will revert to their default values if not saved before the power is turned off. In order to backup these parameters press and hold the [FUNCTION] button for longer than a second.



Hold for longer than a second.

● Parameters that are saved in backup:

- User Songs*
- Touch Response on/off setting
- The following Function settings:
  Tuning, Scale Tune, Accompaniment Tuning ON/OFF, Pitch Bend Range, Split Point, Touch Sensitivity, Style Volume, Song Volume, Metronome Volume, Demo Cancel, Panel Sustain
- Loaded Styles*
- Scale Memory

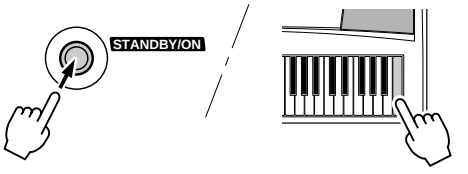
* The User Songs and loaded Styles are automatically backed up when recording is completed, ensuring that the data is not deleted even when you fail to backup.

● Initialization

This function erases all backup data in the instrument's flash memory and restores the initial default settings. The following initialization procedures are provided.

<Backup Clear>

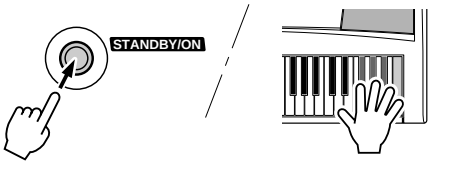
To clear data backed up to the internal flash memory (described above), turn the power on by pressing the [STANDBY/ON] switch while holding the highest white key on the keyboard. The backed up data will be erased and the default values restored.



⚠ • When you execute the Backup Clear operation, backup parameters will be cleared. You can save the backup parameters (containing the five User Songs) by using Musicsoft Downloader to transfer them to a computer.

<Flash Clear>

To clear Song data and Style data that has been transferred to the internal flash memory from a computer, simultaneously hold down the highest white key and the three highest black keys on the keyboard and turn the power on by pressing the [STANDBY/ON] switch.



⚠ • When you execute the Flash Clear operation, Song data you have purchased and downloaded will also be cleared. Make sure to save your important data by transferring to a computer using Musicsoft Downloader.

TRANSFERRING DATA BETWEEN THE PSR-A300 and a COMPUTER

The PSR-A300 includes 35 preset Songs and 135 Styles, but you can load other Songs and Styles from your computer and use them in the same way as the preset Songs as long as the loaded Song is SMF format 0* or SFF (Style File Format).
Loaded Song data will be stored in Song numbers beginning with 041 and one of the loaded style/s can be registered as the 136th style.
In order to perform the operations described in this section you will need to use a computer connected to the Internet to download the free Musicsoft Downloader application from the URL listed below.

* The SMF (Standard MIDI File) format is one of the most common and widely compatible sequence formats used for storing sequence data. Most commercially available MIDI sequence data is provided in SMF Format 0.

Installing Musicsoft Downloader

You can download the “Musicsoft Downloader” application from the following website. Make sure that your computer has an Internet connection.

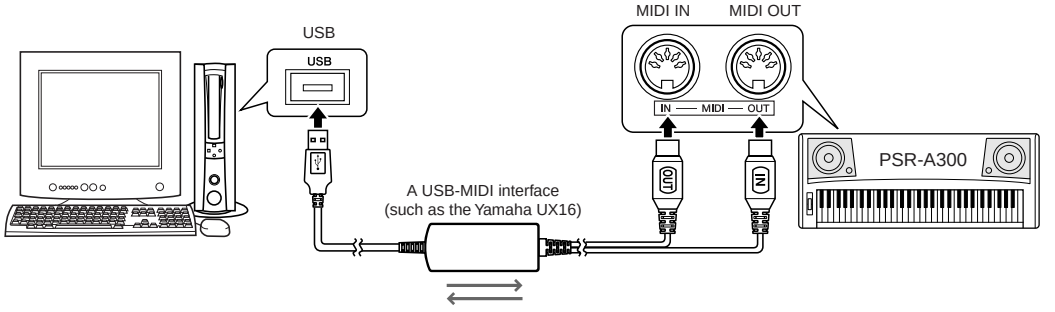
http://music.yamaha.com/download/

- **The minimum computer requirements for Musicsoft Downloader operation are as follows:**
  - OS : Windows 98SE/Me/2000/XP Home Edition/XP Professional
  - CPU : 233 MHz or higher; Intel® Pentium®/Celeron® processor family (500 MHz or more is recommended)
  - Memory : 64 MB or more (256 MB or more is recommended)
  - Hard Disk : at least 128 MB of free space (at least 512 MB of free space is recommended)
  - Display : 800 x 600 HighColor (16-bit)
  - Other : Microsoft® Internet Explorer®5.5 or higher

NOTE: Visit the Yamaha website for more information on the latest version of Musicsoft Downloader (version 5.2.0 or higher) and how to install it.

Connecting a personal computer

After installing the Musicsoft Downloader application on your computer, connect the PSR-A300 as described below. A Yamaha UX16 or similar USB-MIDI interface (sold separately) will be necessary for MIDI connection between the PSR-A300 and a USB-equipped computer.
Make sure to purchase a Yamaha UX16 or a quality USB-MIDI interface at a musical instrument store, computer store or electrical appliance store.
If you use the UX16 interface, install the driver supplied with the interface on your computer.



Transferring data from a computer

You can transmit Song or Style File Format (SFF) files from your computer to your PSR-A300's Flash Memory.
For details about how to transmit the data using the Musicsoft Downloader application, refer to the Online help topic "Transferring Data Between the Computer and Instrument (for unprotected data)" of the Musicsoft Downloader.

● Data that can be loaded to the PSR-A300 from a computer

- Songs : 99 Songs max (Song numbers 041-)
- Styles : Style number 136
- Data : 373 kilobytes
- Song data Format : SMF Format 0
- Style data Format : SFF
- File : 05PK.USR (user file)
  ***.MID (MIDI Song)
  ***.STY (Style file)

NOTE: The Musicsoft Downloader application may not be able to access the instrument in the followingcases:
- During Demo playbaack
- During Style playback
- During Song playback
- During recording

⚠
- Use the power adaptor when transferring data. The data can be corrupted if the batteries fail during the transfer.
- Never turn the power off and never plug/unplug the AC power adaptor during data transmission. Not only will the data fail to be transferred and saved, but operation of the flash memory may become unstable and its contents may disappear completely when the power is turned on or off.

NOTE: Close the window to exit from the Musicsoft Downloader and re-enable control of the instrument.

Transferring a user file from the PSR-A300 to a computer

You can transfer backup data, including the five User Songs stored to the instrument, to a computer as a "user file" by using Musicsoft Downloader. For details about how to transmit Song data using the Musicsoft Downloader application, refer to the Online help topic "Transferring Data Between the Computer and Instrument (for unprotected data)" in the application.

● Data that can be transferred to a computer from the PSR-A300

- User file (05PK.USR: backup data containing five User Songs)
- Songs transferred from a computer
- Styles transferred from a computer

NOTE:
- Preset Song data cannot be transmitted from the PSR-A300.
- Do not rename the user file on the computer. If you do so, it will not be recognized when transferred to the instrument.

⚠
- The backup data, including the five User Songs is transmitted/received as a single file. As a result, all backup data (including the five Songs) will be overwritten every time you transmit or receive. Keep this in mind when transferring data.

MIDI IMPLEMENTATION CHART

YAMAHA [PORTATONE] Date:15-Nov-2004
Model PSR-A300 MIDI Implementation Chart Version:1.0

Function...	Transmitted	Recognized	Remarks
Basic Default	1 - 16	1 - 16	
Channel Changed	x	x	
Default	3	3	
Mode Messages	x	x	
Altered	**********	x	
Note	0 - 127	0 - 127	
Number : True voice	**********	0 - 127	
Velocity Note ON	o 9nH,v=1-127	o 9nH,v=1-127	
Note OFF	x	x	
After Key's	x	x	
Touch Ch's	x	x	
Pitch Bend	o	o	
0,32	o	o	Bank Select
1	x *1	o	Modulation wheel
6	o	o	Data Entry(MSB)
38	o	x	Data Entry(LSB)
7,10	o	o	
Control 11	x *1	o	Expression
64	o	o	Sustain
Change 71,73,74	x *1	o	
72	o	o	Release Time
84	x *1	o	Portamento Cntrl
91,93	o	o	Effect 1,3 Depth
96,97	x	o	RPN Inc,Dec
100,101	o	o	RPN LSB,MSB
Prog Change : True #	o 0 - 127 **********	o 0 - 127	
System Exclusive	o	o	
: Song Pos.	x	x	
Common : Song Sel.	x	x	
: Tune	x	x	
System :Clock	o	o	
Real Time:Commands	o	o	
Aux :All Sound OFF	x	o(120,126,127)	
:Reset All Cntrls	x	o(121)	
:Local ON/OFF	x	o(122)	
:All Notes OFF	x	o(123-125)	
Mes- :Active Sense	o	o	
sages:Reset	x	x	

*1 Refer to #2 on page 28.

Mode 1 : OMNI ON , POLY Mode 2 : OMNI ON ,MONO o : Yes
Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF,MONO x : No

MIDI DATA FORMAT

NOTE:

1 By default (factory settings) the instrument ordinarily functions as a 16-channel multi-timbral tone generator, and incoming data does not affect the panel voices or panel settings. However, the MIDI messages listed below do affect the panel voices, auto accompaniment, and songs.
- *MIDI Master Tuning*
- *System exclusive messages for changing the Reverb Type and Chorus Type.*

2 Messages for these control change numbers cannot be transmitted from the instrument itself. However, they may be transmitted when playing the accompaniment, song or using the Harmony effect.

3 Exclusive
<GM System ON> F0H, 7EH, 7FH, 09H, 01H, F7H
- *This message automatically restores all default settings for the instrument, with the exception of MIDI Master Tuning.*

<MIDI Master Volume> F0H, 7FH, 7FH, 04H, 01H, ll, mm, F7H
- *This message allows the volume of all channels to be changed simultaneously (Universal System Exclusive).*
- *The values of "mm" is used for MIDI Master Volume. (Values for "ll" are ignored.)*

<MIDI Master Tuning> F0H, 43H, 1nH, 27H, 30H, 00H, 00H, mm, ll, cc, F7H
- *This message simultaneously changes the tuning value of all channels.*
- *The values of "mm" and "ll" are used for MIDI Master Tuning.*
- *The default value of "mm" and "ll" are 08H and 00H, respectively. Any values can be used for "n" and "cc."*

<Reverb Type> F0H, 43H, 1nH, 4CH, 02H, 01H, 00H, mmH, llH, F7H
- *mm : Reverb Type MSB*
- *ll : Reverb Type LSB*

Refer to the Effect Map for details.

<Chorus Type> F0H, 43H, 1nH, 4CH, 02H, 01H, 20H, mmH, llH, F7H
- *mm : Chorus Type MSB*
- *ll : Chorus Type LSB*

Refer to the Effect Map for details.

4 When the accompaniment is started, an FAH message is transmitted. When accompaniment is stopped, an FCH message is transmitted.When the clock is set to External, both FAH (accompaniment start) and FCH (accompaniment stop) are recognized.

5 Local ON/OFF
<Local ON> Bn, 7A, 7F
<Local OFF> Bn, 7A, 00
Value for "n" is ignored.

Effect map

* When a Type LSB value is received that corresponds to no effect type, a value corresponding to the effect type (coming the closest to the specified value) is automatically set.
* The numbers in parentheses in front of the Effect Type names correspond to the number indicated in the display.

• REVERB

TYPE MSB	TYPE LSB								
	0	1	2	8	16	17	18	19	20
0	No Effect								
1	(01)Hall1				(02)Hall2	(03)Hall3			
2	Room					(04)Room1		(05)Room2	
3	Stage				(06)Stage1	(07)Stage2			
4	Plate				(08)Plate1	(09)Plate2			
5...127	No Effect								

• CHORUS

TYPE MSB	TYPE LSB								
	0	1	2	8	16	17	18	19	20
0...63	No Effect								
64	Thru								
65	Chorus		(2)Chorus2						
66	Celeste					(1)Chorus1			
67	Flanger			(3)Flanger1		(4)Flanger2			
68...127	No Effect								

PORTATONE

PSR-A300

PARTS LIST

CONTENTS

OVERALL ASSEMBLY 2-3
LOWER CASE KEYBOARD ASSEMBLY 4
KEYBOARD ASSEMBLY 5
ELECTRICAL PARTS 6-11

Notes : DESTINATION ABBREVIATIONS

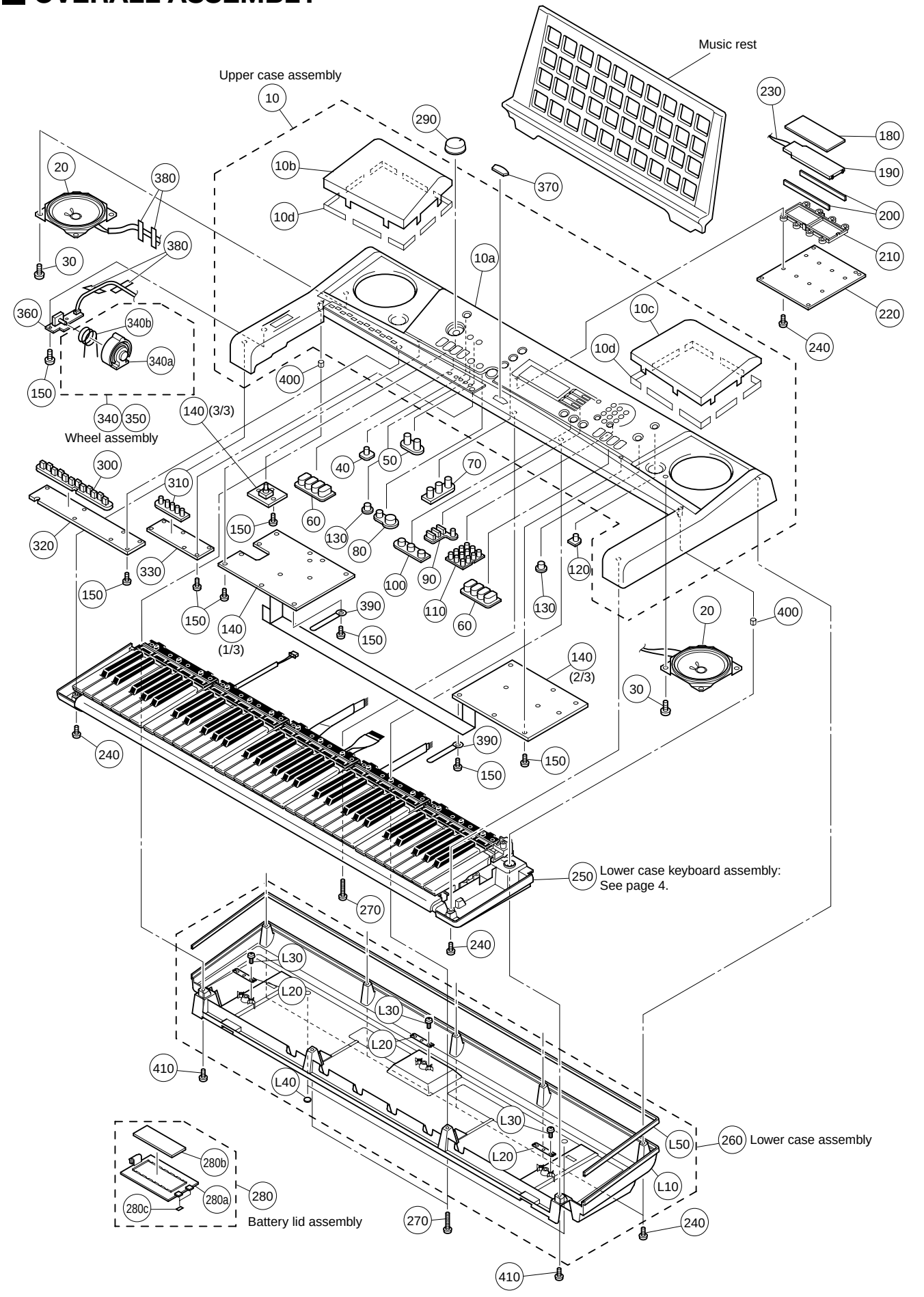
A : Australian model	M : South African model
B : British model	O : Chinese model
C : Canadian model	Q : South-east Asia model
D : German model	T : Taiwan model
E : European model	U : U.S.A. model
F : French model	V : General export model (110V)
H : North European model	W: General export model (220V)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

WARNING

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

- The numbers “QTY” show quantities for each unit.
- The parts with “--” in “PART NO.” are not available as spare parts.
- This mark “ } ” in the REMARKS column means these parts are interchangeable.
- The second letter of the shaded ( ) part number is O, not zero.
- The second letter of the shaded ( ) part number is I, not one.

OVERALL ASSEMBLY

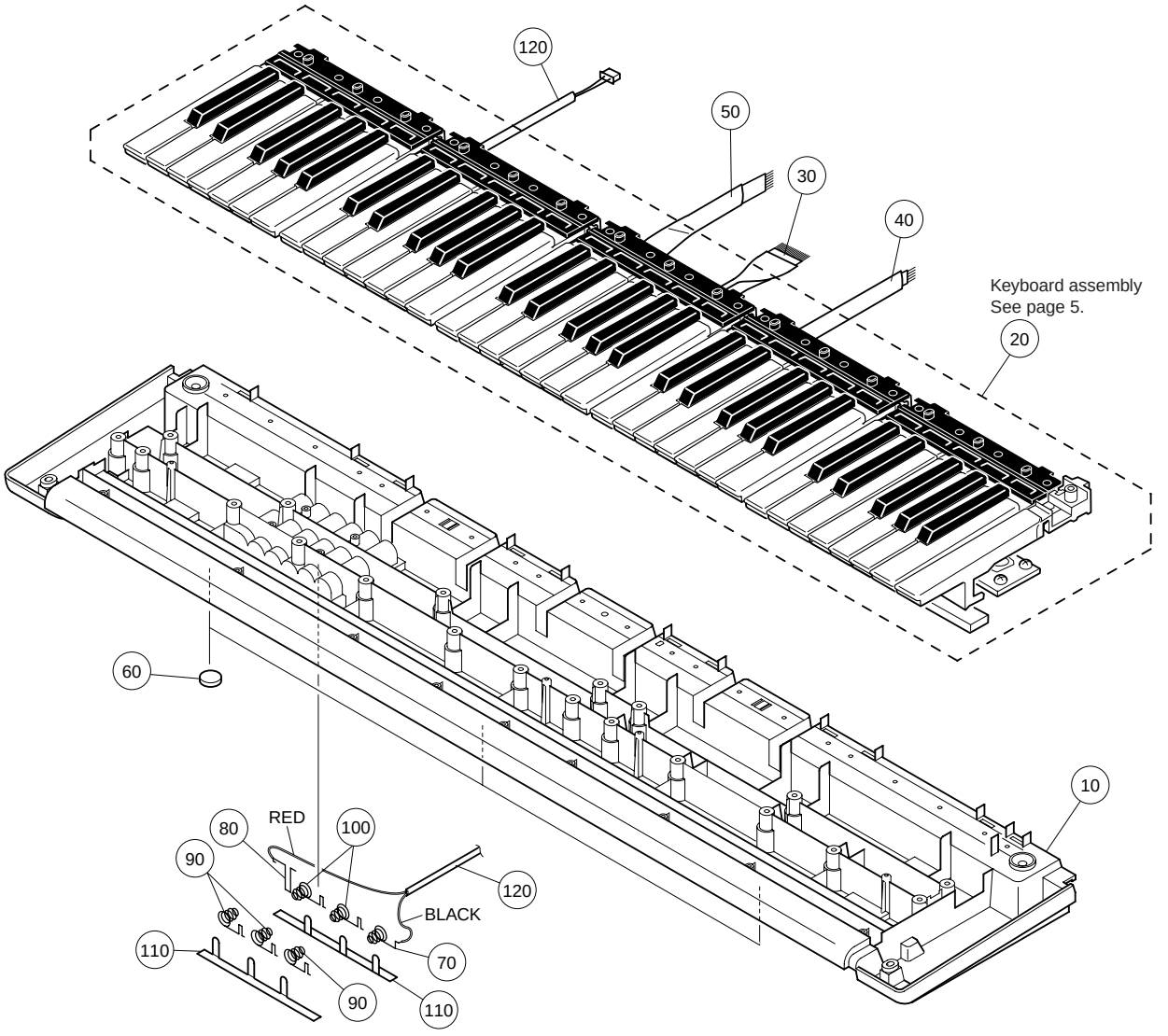


	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
			OVERALL ASSEMBLY			PSR-A300		
		--	Overall Assembly	FE		(WD90290)		
*	10	WD903100	Upper Case Assembly					
	10a	--	Upper Case			(WD83780)		
	10b	WD550200	Speaker Grille L	LEFT				
	10c	WD550300	Speaker Grille R	RIGHT				
	10d	--	Nonwoven Fabric Cloth			(WF25430)	16	
	20	X6553A00	Speaker	12.0cm 4ohm 3W			2	04
	30	WE974600	Bind Head Tapping Screw-B	4.0X8 MFZN2W3			8	01
	40	WD893400	Panel Switch	x1		STANDBY/ON		
	50	WD893600	Panel Switch	x2		LESSON PART L,R		
	60	WD893700	Panel Switch	x4		A-B REPEAT,...,TEMPO/TAP SPLIT ON/OFF,...,TOUCH ON/OFF	2	
	70	WD893800	Panel Switch	x3		LISTEN&LEARN,...,WAITING		
	80	WD893900	Panel Switch	x2		PAUSE,START/STOP		
	90	WD894000	Panel Switch	x4		SONG,STYLE,VOICE,FUNCTION		
	100	WD894100	Panel Switch	x3		PORTABLE GRAND,...,REVERB ON/OFF		
	110	WD894200	Panel Switch	x12		0-9,-,+		
	120	WD894400	Panel Switch	x1		DEMO		
	130	WD894500	Panel Switch	x1		METRONOME ON/OFF,REC	2	
*	140	WE200100	Circuit Board	PNAM (1/3-3/3)				
	150	WE774300	Bind Head Tapping Screw-B	3.0X8 MFZN2W3			39	01
	180	WD570800	LCD	TTR TYPE-05B				
*	180	WF025500	LCD	98-43081-B02				
	190	WE200200	Back Light Assembly					
	200	V7838000	Rubber Connector	105X10.7)-0.35WZ			2	03
	200	V8917500	Rubber Connector				2	
	210	V7172300	LCD Holder	BL				01
*	220	WE200000	Circuit Board	DMLCD				
	230	--	Connector Assembly	BL 2P L=70		(WE14140)		
*	240	WE987400	Bind Head Tapping Screw-B	3.0X12 MFZN2W3			15	
	250	--	Lower Case Keyboard Ass'y			(WD89530)		
	260	WD895200	Lower Case Assembly					
*	270	WF491000	Bind Head Tapping Screw-B	3.0X30 MFZN2W3			3	
	280	WD896000	Battery Lid Assembly					
	280a	--	Battery Cover			(WD87980)		
	280b	--	Battery Cushion	WHITE		(WD87990)		
	280c	--	Nonwoven Fabric Cloth			(WD88000)	2	
	290	V8361300	Knob	V		MASTER VOLUME		01
*	300	WD899200	Panel Switch	x12		SETTING		
*	310	WD899300	Panel Switch	x5		MEMORY 1-4		
*	320	WE167400	Circuit Board	PN1				
*	330	WE167500	Circuit Board	PN2				
	340	VY793100	Wheel Assembly			PITCH BEND		04
	340a	VY750800	Wheel					03
	340b	VT440100	Wheel Spring					03
	350	TX920280	Grease	G-31KA 50g		(VE96850)		10
*	360	WE355400	Circuit Board	PB				
*	370	WE803200	Emblem			YAMAHA		
	380	VA126100	Adhesive Tape	12X50			4	03
	380	--	Adhesive Tape	MY7# 12X50		(WB79380)	4	
	390	CB817510	Cord Binder	S-14B			2	03
	400	--	Nonwoven Fabric Cloth	22X8		(WF25440)	2	
*	410	WF489300	Bind Head Tapping Screw-B	3.0X20 MFZN2W3			2	
		WD895200	Lower Case Assembly					
	L10	--	Lower Case R	REAR		(WD83970)		
	L20	VI104400	Holder				3	
	L30	WE774300	Bind Head Tapping Screw-B	3.0X8 MFZN2W3			6	01
	L40	CB043750	Foot	T1.6			2	01
	L50	--	Cushion	650X15X1		(WE45790)	2	
			ACCESSORY					
		WA649300	Music Rest					04

*: New Parts

RANK: Japan only

LOWER CASE KEYBOARD ASSEMBLY

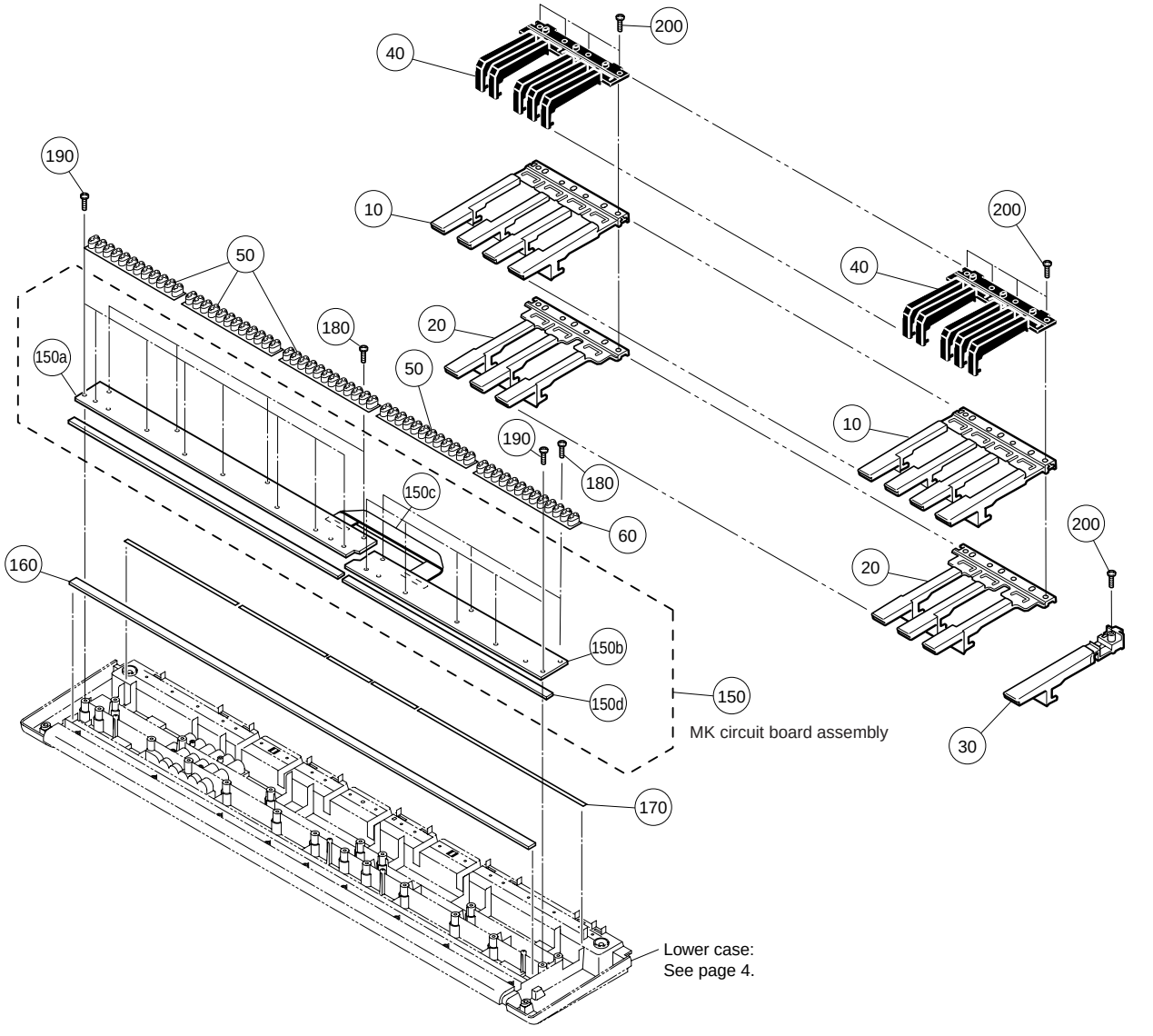


REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	--	LOWER CASE KEYBOARD ASSEMBLY			PSR-A300 (WD89530)		
10	**WD843300**	Lower Case					
20	--	Keyboard Assembly	16N C61 P2M		(WE12670)		
30	**WE138500**	Connector Assembly	MK1 12P L=220				
40	**WE138700**	Connector Assembly	MK2 5P L=250				
50	**WE138800**	Connector Assembly	MK3 7P L=190				
60	**CB043750**	Foot	T1.6			3	01
70	**WD879200**	Spring Terminal A					
80	**WD879300**	Spring Terminal B					
90	**WD879400**	Spring Terminal C				3	
100	**WD879700**	Spring Terminal D				2	
110	--	Nonwoven Fabric Cloth			(WD89680)	2	
120	--	Connector Assembly	BATT		(WE15140)		

*: New Parts

RANK: Japan only

KEYBOARD ASSEMBLY



REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	--	KEYBOARD ASSEMBLY	16N C61 P2M		PSR-A300 (WE12670)		
10	**WB125200**	White Key	CEGB			5	02
20	**WB125300**	White Key	DFA			5	02
30	**V4760300**	White Key	C		C6		02
40	**VZ271700**	Black Key	16N			5	06
50	**V3413600**	Rubber Contact	16N-2M OCT 2M			4	04
60	**V7477400**	Rubber Contact	M 13K 2M		C5-C6		04
150	--	MK Circuit Board Assembly	16N2M C61 P2		(V869560)		
150a	**V8695300**	Circuit Board	61L 16N2M C61 P2				04
150b	**V8695500**	Circuit Board	61H 16N2M C61 P2				04
150c	**V8696200**	Connector Assembly	16N-2M-C61 L=210				01
150d	**VZ302900**	Felt U					02
160	**VZ303000**	Felt L					02
170	**VH181400**	Rubber Sheet					01
180	**EP600250**	Bind Head Tapping Screw-B	3.0X8 MFZN2Y			7	01
190	**VZ313100**	Bind Head Tapping Screw-P	SP 3.0X12 MFZNBL			13	01
200	**EP600680**	Bind Head Tapping Screw-P	3.0X20 MFZN2Y			21	01

✻: New Parts

RANK: Japan only

■ ELECTRICAL PARTS

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
			ELECTRICAL PARTS			PSR-A300		
*		**WE200000**	Circuit Board	DMLCD		(WE19990)(X5910C0)		
*		**WE355400**	Circuit Board	PB		(WE35530)(X5067A0)		
*		**WE167400**	Circuit Board	PN1		(WE16730)(X6095A0)		
*		**WE167500**	Circuit Board	PN2		(WE16730)(X6095A0)		
*		**WE200100**	Circuit Board	PNAM (1/3-3/3)		(X5911C0)		
		V8695500	Circuit Board	61H 16N2M C61 P2		(V869540)(X2335C0)		04
		V8695300	Circuit Board	61L 16N2M C61 P2		(V869520)(X2336B0)		04
*		**WE200000**	Circuit Board	DMLCD		(WE19990)(X5910C0)		
	C0131	**UF037100**	Electrolytic Cap. (chip)	10 16V				01
	C0132	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0133	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0134	**UF037100**	Electrolytic Cap. (chip)	10 16V				01
	C0135	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0136	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0137	**UF037100**	Electrolytic Cap. (chip)	10 16V				01
	C0139	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	C0140	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	C0201	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	-0208	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0301	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	-0304	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0305	**UF028100**	Electrolytic Cap. (chip)	100 10V				01
	C0306	**US062220**	Ceramic Capacitor-SL(chip)	220P 50V J RECT.				01
	C0307	**US063470**	Ceramic Capacitor-B (chip)	4700P 50V K RECT.				01
	C0308	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0309	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	C0310	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	-0315	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0317	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0319	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	-0326	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0327	**US061220**	Ceramic Capacitor-CH(chip)	22P 50V J RECT.				01
	C0328	**US061220**	Ceramic Capacitor-CH(chip)	22P 50V J RECT.				01
	C0431	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0432	**WF621600**	Electrolytic Cap. (chip)	10 16V EEEFK1C100R				01
	C0433	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0434	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	C0435	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	C0436	**US062680**	Ceramic Capacitor-SL(chip)	680P 50V J RECT.				01
	-0439	**US062680**	Ceramic Capacitor-SL(chip)	680P 50V J RECT.				01
	C0440	**UF066470**	Electrolytic Cap. (chip)	4.7 50V UWX1H4				01
	C0441	**UF066470**	Electrolytic Cap. (chip)	4.7 50V UWX1H4				01
	C0442	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	C0443	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	C0444	**UF028100**	Electrolytic Cap. (chip)	100 10V				01
	C0445	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0446	**UF037100**	Electrolytic Cap. (chip)	10 16V				01
	C0447	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0531	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	-0546	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	C0631	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	-0636	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	C0701	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	-0704	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0705	**UF037100**	Electrolytic Cap. (chip)	10 16V				01
	C0831	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0832	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0833	**US061470**	Ceramic Capacitor-CH(chip)	47P 50V J RECT.				01
	-0843	**US061470**	Ceramic Capacitor-CH(chip)	47P 50V J RECT.				01
	C0901	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0902	**US061220**	Ceramic Capacitor-CH(chip)	22P 50V J RECT.				01
	C0903	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	-0908	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0912	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0916	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	-0936	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	CN131	**VK025500**	Wire Trap	52147 11P TE				01
	CN531	**VJ861600**	Wire Trap	52147 16P TE				01

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	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	CN631	**VK025300**	Wire Trap	52147 9P TE				01
	CN831	**VK025600**	Wire Trap	52147 12P TE				01
	CN832	**VK024900**	Wire Trap	52147 5P TE				01
	CN833	**VK025100**	Wire Trap	52147 7P TE				01
	CN901	**VK024700**	Wire Trap	52147 3P TE				01
	IC131	**X5889A00**	IC	BA33BC0FP		REGULATOR +3.3V		
	IC132	**X3679A00**	IC	RH5RZ25CA-T1		REGULATOR +2.5V		03
*	IC201	**X6100200**	IC	MX23L6415TC-90G		MASK ROM 64M PROG./WAVE		
	IC202	**X2310A00**	IC	MX29LV400BTC-70		FLASH ROM 4M		06
	IC202	**X4490A00**	IC	MBM29LV400BC-70PFT		FLASH ROM 4M		08
	IC203	**X2726A00**	IC	GLT440L16-40TC		DRAM 4M		05
	IC203	**X6504A00**	IC	M11L416256SA-35TG		DRAM 4M		05
	IC204	**IS003200**	IC	HD74LV32AFPEL-E		OR		01
	IC301	**X6055A00**	IC	YMW767-VTZ		CPU		
	IC302	**X4374A00**	IC	S-80136ANMC-JCV-T2		RESET		
	IC302	**X5888A00**	IC	BD45365G		RESET		
	IC431	**X6040A00**	IC	AK4385ET		DAC		
	IC432	**X2331A00**	IC	NJM4580E(TE2)		OP AMP		01
	IC701	**X3148A00**	IC	NT3881DFG-01		LCD DRIVER		05
	IC701	**X6247A00**	IC	NT3881EFG-01		LCD DRIVER		
	IC701	**XZ987A00**	IC	ML9040A-B01GAZ03A		LCD DRIVER		05
	IC831	**IS013810**	IC	SN74LV138ANSR		DECODER		01
	IC832	**IS013810**	IC	SN74LV138ANSR		DECODER		01
*	IC901	**X5892A00**	IC	ADCS7478AIMF		ADC		
	L0431	**VY657200**	Chip Inductance	600 BK1608HM601				01
	R0131	**RD356100**	Carbon Resistor (chip)	1.0K 63M J RECT.				01
	R0132	**RD356100**	Carbon Resistor (chip)	1.0K 63M J RECT.				01
	R0201	**RD357470**	Carbon Resistor (chip)	47.0K 63M J RECT.				01
	R0204	**RD350000**	Carbon Resistor (chip)	0 63M J RECT.				01
	R0206	**RD350000**	Carbon Resistor (chip)	0 63M J RECT.				01
	R0207	**RD357100**	Carbon Resistor (chip)	10.0K 63M J RECT.				01
	R0208	**RD357100**	Carbon Resistor (chip)	10.0K 63M J RECT.				01
	R0209	**RD357470**	Carbon Resistor (chip)	47.0K 63M J RECT.				01
	-0215	**RD357470**	Carbon Resistor (chip)	47.0K 63M J RECT.				01
	R0301	**RD356100**	Carbon Resistor (chip)	1.0K 63M J RECT.				01
	R0302	**RD350000**	Carbon Resistor (chip)	0 63M J RECT.				01
	R0304	**RD359100**	Carbon Resistor (chip)	1.0M 63M J RECT.				01
	R0305	**RD355470**	Carbon Resistor (chip)	470.0 63M J RECT.				01
	R0306	**RD357100**	Carbon Resistor (chip)	10.0K 63M J RECT.				01
	R0307	**RD357470**	Carbon Resistor (chip)	47.0K 63M J RECT.				01
	R0308	**RD357470**	Carbon Resistor (chip)	47.0K 63M J RECT.				01
	R0310	**RD357470**	Carbon Resistor (chip)	47.0K 63M J RECT.				01
	R0311	**RD358470**	Carbon Resistor (chip)	470.0K 63M J RECT.				01
	R0312	**RD358470**	Carbon Resistor (chip)	470.0K 63M J RECT.				01
	R0313	**RD354470**	Carbon Resistor (chip)	47.0 63M J RECT.				01
	R0435	**RD356820**	Carbon Resistor (chip)	8.2K 63M J RECT.				01
	-0438	**RD356820**	Carbon Resistor (chip)	8.2K 63M J RECT.				01
	R0439	**RD356390**	Carbon Resistor (chip)	3.9K 63M J RECT.				01
	-0446	**RD356390**	Carbon Resistor (chip)	3.9K 63M J RECT.				01
	R0447	**RD355100**	Carbon Resistor (chip)	100.0 63M J RECT.				01
	R0448	**RD355100**	Carbon Resistor (chip)	100.0 63M J RECT.				01
	R0449	**RD356120**	Carbon Resistor (chip)	1.2K 63M J RECT.				01
	R0450	**RD356150**	Carbon Resistor (chip)	1.5K 63M J RECT.				01
	R0451	**RD350000**	Carbon Resistor (chip)	0 63M J RECT.				01
	R0531	**RD355100**	Carbon Resistor (chip)	100.0 63M J RECT.				01
	-0538	**RD355100**	Carbon Resistor (chip)	100.0 63M J RECT.				01
	R0539	**RD356100**	Carbon Resistor (chip)	1.0K 63M J RECT.				01
	-0546	**RD356100**	Carbon Resistor (chip)	1.0K 63M J RECT.				01
	R0547	**RD357330**	Carbon Resistor (chip)	33.0K 63M J RECT.				01
	-0554	**RD357330**	Carbon Resistor (chip)	33.0K 63M J RECT.				01
	R0631	**RD356100**	Carbon Resistor (chip)	1.0K 63M J RECT.				01
	-0636	**RD356100**	Carbon Resistor (chip)	1.0K 63M J RECT.				01
	R0701	**RD356150**	Carbon Resistor (chip)	1.5K 63M J RECT.				01
	R0702	**RD355220**	Carbon Resistor (chip)	220.0 63M J RECT.				01
	R0703	**RD354680**	Carbon Resistor (chip)	68.0 63M J RECT.				01
	R0704	**RF457910**	Carbon Resistor (chip)	91.0K D RECT.				
	R0705	**RD356220**	Carbon Resistor (chip)	2.2K 63M J RECT.				01
	-0709	**RD356220**	Carbon Resistor (chip)	2.2K 63M J RECT.				01
	R0710	**RD357100**	Carbon Resistor (chip)	10.0K 63M J RECT.				01
	R0711	**RD357470**	Carbon Resistor (chip)	47.0K 63M J RECT.				01

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	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	R0831	**RD355100**	Carbon Resistor (chip)	100.0 63M J RECT.				01
	-0833	**RD355100**	Carbon Resistor (chip)	100.0 63M J RECT.				01
	R0901	**RD357470**	Carbon Resistor (chip)	47.0K 63M J RECT.				01
	R0902	**RD355100**	Carbon Resistor (chip)	100.0 63M J RECT.				01
	R0903	**RD350000**	Carbon Resistor (chip)	0 63M J RECT.				01
	R0904	**RD350000**	Carbon Resistor (chip)	0 63M J RECT.				01
	RA831	**RE045100**	Resistor Array	100X4				01
	RA832	**RE045100**	Resistor Array	100X4				01
	RA833	**RE046100**	Resistor Array	1KX4				01
	-835	**RE046100**	Resistor Array	1KX4				01
	RA836	**RE047100**	Resistor Array	10KX4				01
	-838	**RE047100**	Resistor Array	10KX4				01
	TH701	**V9140600**	Thermistor (chip)	ERTJ1VT152J 1.5K				
	X0301	**WE194400**	Quartz Crystal Unit	16.9344M HC-49S-SM				
*		**WE355400**	Circuit Board	PB		(WE35530)(X5067A0)		
	CN001	**VI878100**	Cable Holder	51048 3P TE				01
*	CN001	**VZ341600**	Cable Holder	51048 3P TE				
	VR001	**VZ486300**	Rotary Variable Resistor	B10K EVJ05DF20B14		PITCH BEND		03
	WH001	**--**	Connector Assembly	PB 3P		(WE35500)		
*		**WE167400**	Circuit Board	PN1		(WE16730)(X6095A0)		
	CN201	**VI878900**	Cable Holder	51048 11P TE				01
	CN201	**VY668800**	Cable Holder	51048 11P TE				
*	D0201	**VR496500**	Diode	MA111 FLAT TP				
*	-0206	**VR496500**	Diode	MA111 FLAT TP				
	D0201	**VT332900**	Diode	1SS355 TE-17 TP				01
	-0206	**VT332900**	Diode	1SS355 TE-17 TP				01
*	LD201	**WF204300**	LED Red	TL-20346D-R-F		SETTING		
*	LD202	**WF204300**	LED Red	TL-20346D-R-F		SETTING		
*	LD203	**WF204300**	LED Red	TL-20346D-R-F		SETTING		
*	LD204	**WF204300**	LED Red	TL-20346D-R-F		SETTING		
*	LD205	**WF204300**	LED Red	TL-20346D-R-F		SETTING		
*	LD206	**WF204300**	LED Red	TL-20346D-R-F		SETTING		
*	LD207	**WF204300**	LED Red	TL-20346D-R-F		SETTING		
*	LD208	**WF204300**	LED Red	TL-20346D-R-F		SETTING		
*	LD209	**WF204300**	LED Red	TL-20346D-R-F		SETTING		
*	LD210	**WF204300**	LED Red	TL-20346D-R-F		SETTING		
*	LD211	**WF204300**	LED Red	TL-20346D-R-F		SETTING		
*	LD212	**WF204300**	LED Red	TL-20346D-R-F		SETTING		
	TR201	**WB107300**	Transistor Array	IMH10A T110				05
	-203	**WB107300**	Transistor Array	IMH10A T110				05
	WA504	**--**	Connector Assembly	ORIPN1 11P		(WE16450)		
*		**WE167500**	Circuit Board	PN2		(WE16730)(X6095A0)		
	CN301	**VI878700**	Cable Holder	51048 9P TE				01
	CN301	**VZ341900**	Cable Holder	51048 9P TE				
*	D0301	**VR496500**	Diode	MA111 FLAT TP				
	D0301	**VT332900**	Diode	1SS355 TE-17 TP				01
*	D0302	**VR496500**	Diode	MA111 FLAT TP				
	D0302	**VT332900**	Diode	1SS355 TE-17 TP				01
*	LD301	**WF204300**	LED Red	TL-20346D-R-F		1		
*	LD302	**WF204300**	LED Red	TL-20346D-R-F		2		
*	LD303	**WF204300**	LED Red	TL-20346D-R-F		3		
*	LD304	**WF204300**	LED Red	TL-20346D-R-F		4		
	TR301	**WB107300**	Transistor Array	IMH10A T110				05
	WA505	**--**	Connector Assembly	ORIPN2 9P		(WE16460)		
*		**WE200100**	Circuit Board	PNAM (1/3-3/3)		(X5911C0)		
		EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			3	01
		--	Jumper Wire	0.55 TIN		(VA07890)		
	10	**--**	Silicon Grease	G-746		(0412125)		
	10	**--**	Silicon Grease	X-113A G746		(VA79810)		
	C0103	**VM902400**	Semiconductive Cera. Cap.	0.1000 25V Z FORM.				01
	C0103	**VC694800**	Semiconductive Cera. Cap.	0.1000 25V Z RX TP				01
	C0104	**V3510100**	Electrolytic Cap.	1000.0 25.0V TP				
	C0104	**UR849100**	Electrolytic Cap.	1000 25.0V RX TP				01
	C0105	**VM902400**	Semiconductive Cera. Cap.	0.1000 25V Z FORM.				01
	C0105	**VC694800**	Semiconductive Cera. Cap.	0.1000 25V Z RX TP				01
	C0106	**VM902400**	Semiconductive Cera. Cap.	0.1000 25V Z FORM.				01

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REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
C0106	**VC694800**	Semiconductive Cera. Cap.	0.1000 25V Z RX TP				01
C0107	**WF405000**	Electrolytic Cap.	100.00 10.0V TATET				
C0401	**VM902400**	Semiconductive Cera. Cap.	0.1000 25V Z FORM.				01
C0401	**VC694800**	Semiconductive Cera. Cap.	0.1000 25V Z RX TP				01
C0403	**UR866100**	Electrolytic Cap.	1.00 50.0V RX TP				01
C0403	**V3511900**	Electrolytic Cap.	1.00 50.0V TP				
C0404	**UR866100**	Electrolytic Cap.	1.00 50.0V RX TP				01
C0404	**V3511900**	Electrolytic Cap.	1.00 50.0V TP				
C0407	**UR866100**	Electrolytic Cap.	1.00 50.0V RX TP				01
C0407	**V3511900**	Electrolytic Cap.	1.00 50.0V TP				
C0408	**UR866100**	Electrolytic Cap.	1.00 50.0V RX TP				01
C0408	**V3511900**	Electrolytic Cap.	1.00 50.0V TP				
C0409	**VR025800**	Ceramic Capacitor-2B	470P 63V K FORMING				
C0409	**FG612470**	Ceramic Capacitor	470P 50V K RX TP				01
C0410	**VR025800**	Ceramic Capacitor-2B	470P 63V K FORMING				
C0410	**FG612470**	Ceramic Capacitor	470P 50V K RX TP				01
C0411	**UR837470**	Electrolytic Cap.	47.00 16.0V RX TP				01
-0413	**UR837470**	Electrolytic Cap.	47.00 16.0V RX TP				01
C0411	**V3508400**	Electrolytic Cap.	47.00 16.0V TP				
-0413	**V3508400**	Electrolytic Cap.	47.00 16.0V TP				
C0414	**UR838100**	Electrolytic Cap.	100.00 16.0V RX TP				01
C0414	**V3508500**	Electrolytic Cap.	100.00 16.0V TP				
C0415	**UR838100**	Electrolytic Cap.	100.00 16.0V RX TP				01
C0415	**V3508500**	Electrolytic Cap.	100.00 16.0V TP				
C0416	**UA355150**	Mylar Capacitor	0.1500 50V J RX TP				
C0416	**V5515600**	Mylar Capacitor	0.1500 50V J				
C0416	**VR168500**	Monolithic Mylar Capacitor	ECQ-V1H154JL3				01
C0416	**UA655150**	Mylar Capacitor	0.1500 50V J RX TP				
C0417	**UA355150**	Mylar Capacitor	0.1500 50V J RX TP				
C0417	**V5515600**	Mylar Capacitor	0.1500 50V J				
C0417	**VR168500**	Monolithic Mylar Capacitor	ECQ-V1H154JL3				01
C0417	**UA655150**	Mylar Capacitor	0.1500 50V J RX TP				
C0418	**UR838470**	Electrolytic Cap.	470.00 16.0V RX TP				01
C0418	**V3508800**	Electrolytic Cap.	470.00 16.0V TP				
C0419	**UR838470**	Electrolytic Cap.	470.00 16.0V RX TP				01
C0419	**V3508800**	Electrolytic Cap.	470.00 16.0V TP				
C0422	**UR837470**	Electrolytic Cap.	47.00 16.0V RX TP				01
C0422	**V3508400**	Electrolytic Cap.	47.00 16.0V TP				
C0423	**UR837470**	Electrolytic Cap.	47.00 16.0V RX TP				01
C0423	**V3508400**	Electrolytic Cap.	47.00 16.0V TP				
C0501	**VM902400**	Semiconductive Cera. Cap.	0.1000 25V Z FORM.				01
C0501	**VC694800**	Semiconductive Cera. Cap.	0.1000 25V Z RX TP				01
* C0502	**V3507700**	Electrolytic Cap.	1000.0 10.0V TP				
C0502	**UR829100**	Electrolytic Cap.	1000 10.0V RX TP				01
C0601	**VM902400**	Semiconductive Cera. Cap.	0.1000 25V Z FORM.				01
C0601	**VC694800**	Semiconductive Cera. Cap.	0.1000 25V Z RX TP				01
C0602	**VQ175700**	Ceramic Capacitor	0.01 63V Z FORMING				
C0602	**FG644100**	Ceramic Capacitor	0.0100 50V Z RX TP				01
C0603	**VM902400**	Semiconductive Cera. Cap.	0.1000 25V Z FORM.				01
C0603	**VC694800**	Semiconductive Cera. Cap.	0.1000 25V Z RX TP				01
C0604	**VR025000**	Ceramic Capacitor-2B	100P 63V K FORMING				
C0604	**VR028200**	Ceramic Capacitor-SL	100P 63V J FORMING				
C0604	**FG612100**	Ceramic Capacitor	100P 50V K RX TP				01
CN101	**LB918030**	Base Post Connector	XH 3P TE				01
CN102	**VK024600**	Wire Trap	52147 2P TE				01
CN103	**VI878900**	Cable Holder	51048 11P TE				01
CN103	**VY668800**	Cable Holder	51048 11P TE				
CN401	**VI878300**	Cable Holder	51048 5P TE				01
CN401	**VZ341700**	Cable Holder	51048 5P TE				
CN402	**VI878300**	Cable Holder	51048 5P TE				01
CN402	**VZ341700**	Cable Holder	51048 5P TE				
CN403	**VI878000**	Cable Holder	51048 2P TE				01
CN403	**VY668300**	Cable Holder	51048 2P TE				
CN404	**VI878000**	Cable Holder	51048 2P TE				01
CN404	**VY668300**	Cable Holder	51048 2P TE				
CN501	**VI879400**	Cable Holder	51048 16P TE				01
CN501	**VY669100**	Cable Holder	51048 16P TE				
CN502	**VI878800**	Cable Holder	51048 10P TE				01
CN502	**VY668700**	Cable Holder	51048 10P TE				
CN503	**VI878800**	Cable Holder	51048 10P TE				01

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	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	CN503	**VY668700**	Cable Holder	51048 10P TE				
	CN504	**VK025500**	Wire Trap	52147 11P TE				01
	CN505	**VK025300**	Wire Trap	52147 9P TE				01
	CN601	**VI878700**	Cable Holder	51048 9P TE				01
	CN601	**VZ341900**	Cable Holder	51048 9P TE				
	D0101	**V8603100**	Diode	2A02GM				
	D0101	**VV731400**	Diode	2A02M FORMING				01
	D0104	**VB941200**	Diode	1SS133,1SS176				01
	D0104	**VV437800**	Diode	1N4148(DO-34)				01
	D0105	**VB941200**	Diode	1SS133,1SS176				01
	D0105	**VV437800**	Diode	1N4148(DO-34)				01
	D0501	**VB941200**	Diode	1SS133,1SS176				01
	-0508	**VB941200**	Diode	1SS133,1SS176				01
	D0501	**VV437800**	Diode	1N4148(DO-34)				01
	-0508	**VV437800**	Diode	1N4148(DO-34)				01
	D0601	**VB941200**	Diode	1SS133,1SS176				01
	D0601	**VV437800**	Diode	1N4148(DO-34)				01
	IC101	**X5887A00**	IC	BA50BC0T		REGULATOR +5V		03
	IC401	**XV771A00**	IC	BA5417		POWER AMP 2.5Wx2		03
	IC601	**WA645200**	Photo Coupler	PC900V0NSZX				04
	J0102	**--**	Jumper Wire	0.55 TIN		(VA07890)		
	J0501	**--**	Jumper Wire	0.55 TIN		(VA07890)		
	J0502	**--**	Jumper Wire	0.55 TIN		(VA07890)		
	J0503	**--**	Jumper Wire	0.55 TIN		(VA07890)		
	J0504	**--**	Jumper Wire	0.55 TIN		(VA07890)		
	J0505	**--**	Jumper Wire	0.55 TIN		(VA07890)		
⚠	JK101	**LB302260**	Connector	HEC0470-01-630		DC IN 12V		02
⚠	JK101	**V6557600**	Connector	HTJ-020-05AZ				04
	JK401	**LB101870**	Phone Jack	JACK YKB21-5006		PHONES/OUTPUT		03
	JK401	**VV943300**	Phone Jack	HTJ064-04A				02
	JK601	**VJ107200**	DIN Connector	JACK5P YKF51-5050N		MIDI IN		01
	JK601	**VZ085800**	DIN Connector	5P HDC-052S-01				01
	JK602	**VJ107200**	DIN Connector	JACK5P YKF51-5050N		MIDI OUT		01
	JK602	**VZ085800**	DIN Connector	5P HDC-052S-01				01
	JK603	**VC687500**	Phone Jack Black	JACK YKB21-5014		SUSTAIN		01
	JK603	**WE245200**	Phone Jack Black	JY-6314-01-020				
	K0401	**--**	Heat Sink			(V561400)		
	L0601	**V7634400**	Coil 20uH	BD-FL20-03				
	L0601	**VB835000**	Coil 20uH	FL5R200QNT RX TP				01
	L0601	**VT279200**	Coil 20uH	FL5R200QN FORMING				
	R0101	**V2548300**	Carbon Resistor	180.0 1/6J 26TP				
	R0102	**V2548300**	Carbon Resistor	180.0 1/6J 26TP				
	R0104	**V2551200**	Carbon Resistor	47.0K 1/6J 26TP				
	R0105	**V2549800**	Carbon Resistor	3.3K 1/6 J 26TP				
	R0107	**V2550400**	Carbon Resistor	10.0K 1/6J 26TP				
	R0108	**V2550800**	Carbon Resistor	22.0K 1/6J 26TP				
	R0109	**V2550500**	Carbon Resistor	12.0K 1/6J 26TP				
	R0401	**V2550400**	Carbon Resistor	10.0K 1/6J 26TP				
	-0404	**V2550400**	Carbon Resistor	10.0K 1/6J 26TP				
	R0405	**V2548800**	Carbon Resistor	470.0 1/6J 26TP				
	R0406	**V2548800**	Carbon Resistor	470.0 1/6J 26TP				
	R0407	**WD556700**	Flame Proof C. Resistor	2.2 1/4 J				01
	R0408	**WD556700**	Flame Proof C. Resistor	2.2 1/4 J				01
	R0409	**V2548600**	Carbon Resistor	330.0 1/6J 26TP				
	R0410	**V2548600**	Carbon Resistor	330.0 1/6J 26TP				
	R0411	**V2548000**	Carbon Resistor	100.0 1/6J 26TP				
	R0412	**V2548000**	Carbon Resistor	100.0 1/6J 26TP				
*	R0501	**V2547200**	Carbon Resistor	22.0 1/6J 26TP				
*	R0502	**V2547200**	Carbon Resistor	22.0 1/6J 26TP				
*	R0503	**V2551600**	Carbon Resistor	100.0K 1/6J 26TP				
*	R0504	**V2551600**	Carbon Resistor	100.0K 1/6J 26TP				
	R0505	**V2547600**	Carbon Resistor	47.0 1/6J 26TP				
	-0508	**V2547600**	Carbon Resistor	47.0 1/6J 26TP				
	R0601	**V2551200**	Carbon Resistor	47.0K 1/6J 26TP				
	R0602	**V2549200**	Carbon Resistor	1.0K 1/6 J 26TP				
	R0603	**V2550400**	Carbon Resistor	10.0K 1/6J 26TP				
	R0604	**V2550600**	Carbon Resistor	15.0K 1/6J 26TP				
	R0605	**V2550000**	Carbon Resistor	4.7K 1/6 J 26TP				
	R0606	**V2547600**	Carbon Resistor	47.0 1/6J 26TP				
	R0607	**V2547600**	Carbon Resistor	47.0 1/6J 26TP				

*: New Parts

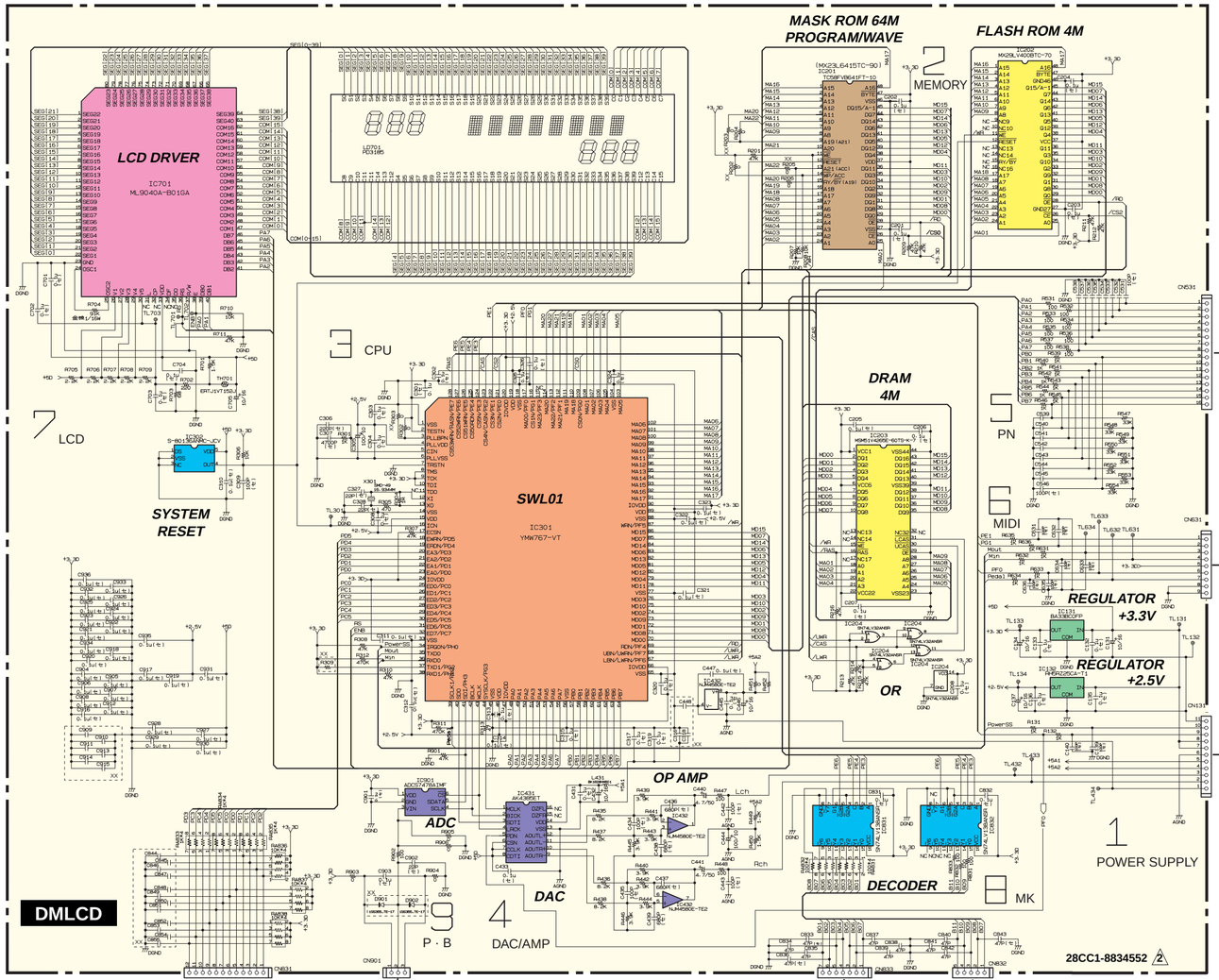
RANK: Japan only

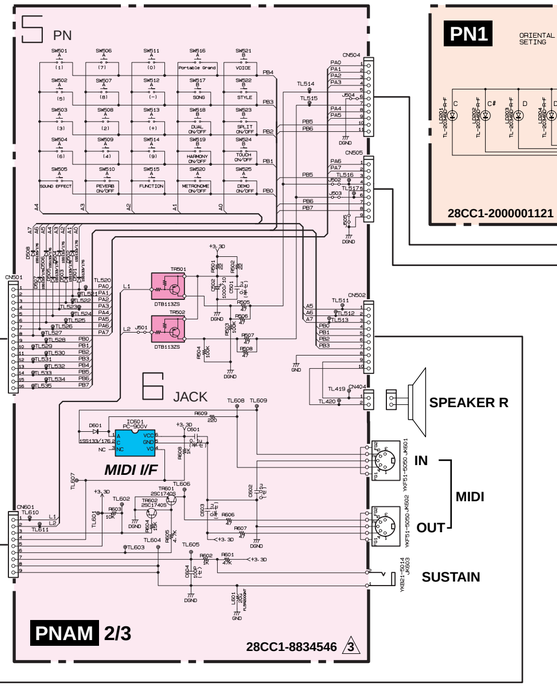
REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
R0608	**V2549200**	Carbon Resistor	1.0K 1/6 J 26TP				
R0609	**V2548400**	Carbon Resistor	220.0 1/6J 26TP				
TR101	**WD926900**	Transistor	2SB1342				
TR102	**IC174070**	Transistor	2SC1740S R,S				01
TR501	**VT817300**	Digital Transistor	DTB113ZS TP				01
TR502	**VT817300**	Digital Transistor	DTB113ZS TP				01
TR601	**IC174070**	Transistor	2SC1740S R,S				01
TR602	**IC174070**	Transistor	2SC1740S R,S				01
VR401	**WC709800**	Rotary Variable Resistor	A 5.0K XV014111YG		MASTER VOLUME		02
WA103	**--**	Connector Assembly	AM 11P L=170		(WE13910)		
WA401	**--**	Connector Assembly	VOL 5P L=120		(WE13900)		
WA403	**--**	Connector Assembly	SPL 2P L=280		(WE14120)		
WA404	**--**	Connector Assembly	SPR 2P L=220		(WE14130)		
WA501	**--**	Connector Assembly	PN1 16P L=100		(WE14080)		
WA502	**--**	Connector Assembly	PN2 10P L=340		(WE13970)		
WA601	**--**	Connector Assembly	JACK 9P L=70		(WE14060)		
	V8695500	Circuit Board	61H 16N2M C61 P2		(V869540)(X2335C0)		04
CN01	**VK025600**	Wire Trap	52147 12P TE				01
CN02	**VK024900**	Wire Trap	52147 5P TE				01
CN03	**VK025600**	Wire Trap	52147 12P TE				01
D073	**VV437800**	Diode	1N4148(DO-34)				01
-122	**VV437800**	Diode	1N4148(DO-34)				01
	V8695300	Circuit Board	61L 16N2M C61 P2		(V869520)(X2336B0)		04
CN04	**VK025600**	Wire Trap	52147 12P TE				01
CN05	**VK025100**	Wire Trap	52147 7P TE				01
D001	**VV437800**	Diode	1N4148(DO-34)				01
-072	**VV437800**	Diode	1N4148(DO-34)				01
	X6553A00	Speaker	12.0cm 4ohm 3W			2	04
	WD570800	LCD	TTR TYPE-05B		}		
*	**WF025500**	LCD	98-43081-B02		}		

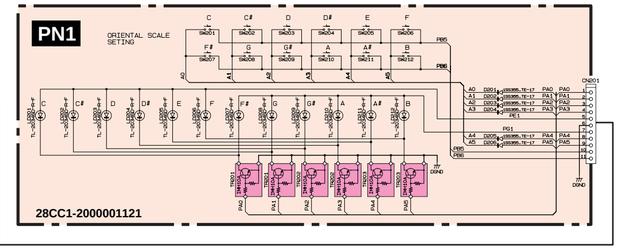
✻: New Parts

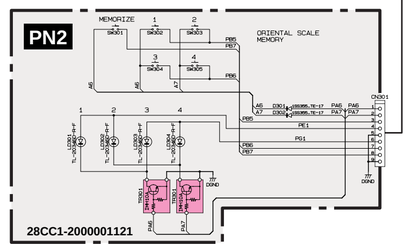
RANK: Japan only

■ PSR-A300 OVERALL CIRCUIT DIAGRAM







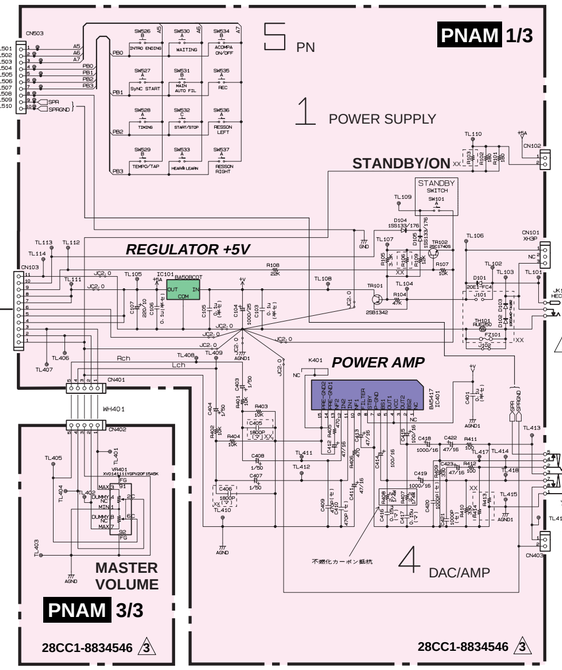


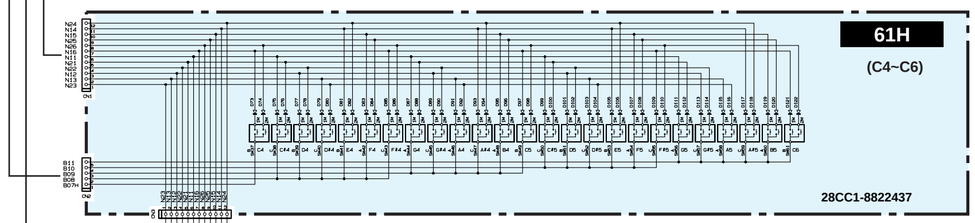
SW MATRIX

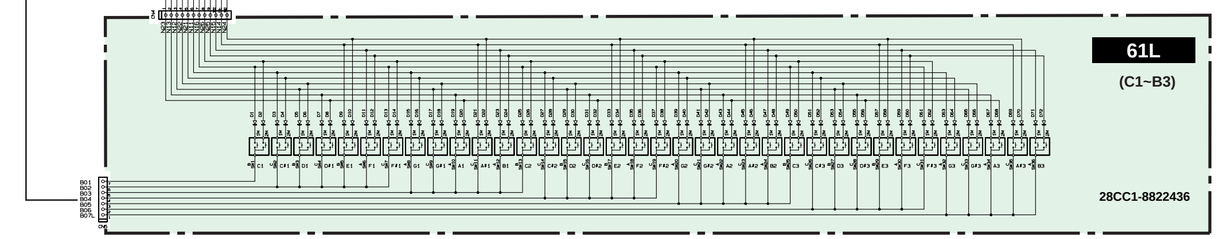
	PA0	PA1	PA2	PA3	PA4	PA5	PA6	PA7
PB5	C	C#	D	D#	E	F	1	2
PB6	F#	G	G#	A	A#	B	3	4
PB7							HEAD PHONE	

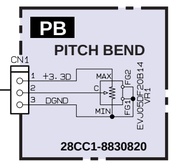
LED MATRIX

	PA0	PA1	PA2	PA3	PA4	PA5	PA6	PA7
PE1	C	C#	D	D#	E	F	1	2
PG1	F#	G	G#	A	A#	B	3	4

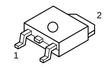






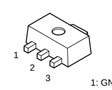


• BA33BC0FP (X5889A00)
REGULATOR +3.3V
DMLCD: IC131



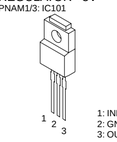
1: INPUT
2: GND
3: OUTPUT

• RH5RZ25CA (X3679A00)
REGULATOR +2.5V
DMLCD: IC132



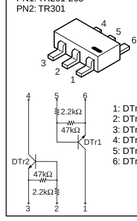
1: GND
2: INPUT
3: OUTPUT

• BA50BC0T (X5887A00)
REGULATOR +5V
PNAM1/3: IC101



1: INPUT
2: GND
3: OUTPUT

• IMH10A T110 (WB107300)
TRANSISTOR ARRAY
PN1: TR201-203
PN2: TR301



（セ）: Ceramic Capacitor　（半セ）: Semiconductive Ceramic Capacitor
（マ）: Mylar Capacitor　金被 : Metal Film Resistor
不燃化カーボン抵抗: Flame Proof C.Resistor
XX: Not installed
Note : See parts list for details of circuit board component parts.

■ **WARNING**
Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equel to those originally installed.