PORTATONE

PSR-E203 / YPT-200

SERVICE MANUAL



PSR-E203



YPT-200

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PK 001733

YAMAHA
HAMAMATSU, JAPAN

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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 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.

SPECIFICATIONS

Keyboards
- 61 standard-size keys (C1-C6)

Display
- LCD display

Setup
- STANDBY/ON
- MASTER VOLUME: [+], [-] buttons

Panel Controls
- [L], [R], [LISTEN & LEARN], [TIMING], [WAITING], [A-B REPEAT]/[ACMP ON/OFF], [REW]/[INTRO/ENDING/rit.], [FF]/[[MAIN/AUTO FILL], [TEMPO/TAP], [PAUSE]/[SYNC START], [START/STOP], [SONG], [STYLE], [VOICE], [FUNCTION], [PORTABLE GRAND], [SOUND EFFECT KIT], [REVERB ON/OFF], [DEMO], [METRONOME ON/OFF], number buttons [0]-[9], [+], [-]

Voice
- 129 panel voices + 4drum kits + 1 sound effect kit
- Polyphony: 32

Style
- 100 preset Styles
- 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, Tuning, Transpose, Split Point, Main voice (Volume, Octave), Reverb Type, Reverb level, Panel Sustain, Local On/Off, External Clock, Initial Setup Send, Time Signature, Metronome Volume, Demo Cancel

Effects
- Reverb: 9 types

Song
- 102 Preset Songs
- Song Volume

MIDI
- Local On/Off
- Initial Setup Send
- External Clock

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 348 x 110 mm
  (37-1/4" x 13-2/3" x 4-1/3")

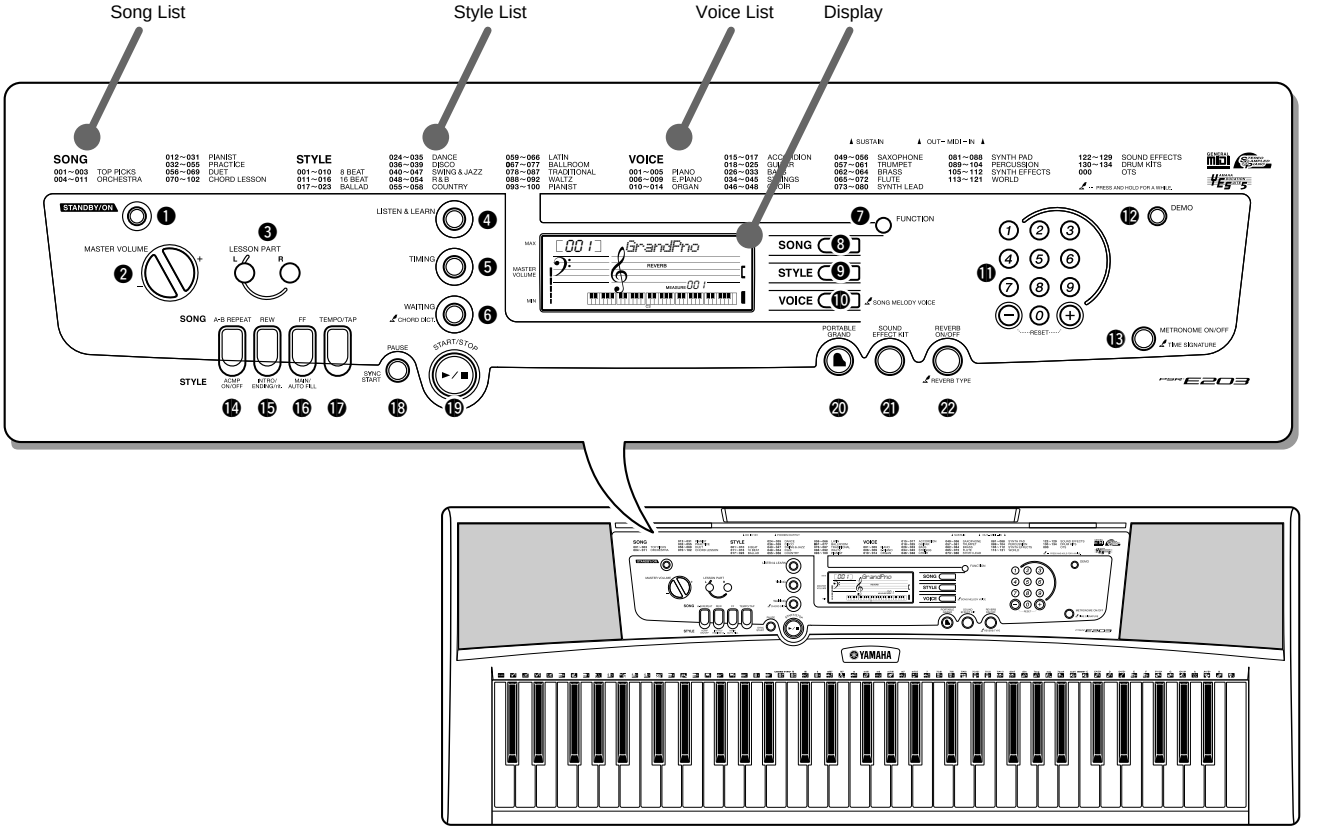
Weight
- 4.4kg (9 lbs. 11 oz.) (not including batteries)

Supplied Accessories
- Music Rest
- Owner's Manual

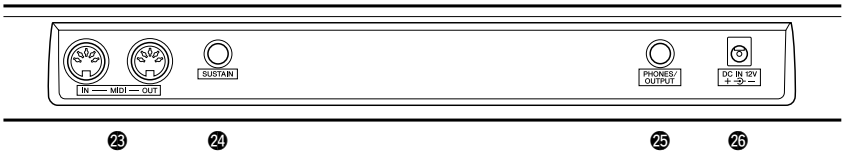
Optional Accessories
- AC Power Adaptor: PA-3B/PA-3C
- USB-MIDI Interface: UX16
- Footswitch: FC4/FC5
- Keyboard Stand: L-2C/L-2L
- Headphones: HPE-150/HPE-30

PANEL LAYOUT

• Front Panel



• Rear Panel



Front Panel

❶ [STANDBY/ON] switch
❷ MASTER VOLUME
  [+] button
  [–] button
❸ LESSON PART
  [L] button
  [R] 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], [+], [–]
⓬ [DEMO] button
⓭ [METRONOME ON/OFF] button

When the Song mode

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

When the Style mode

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

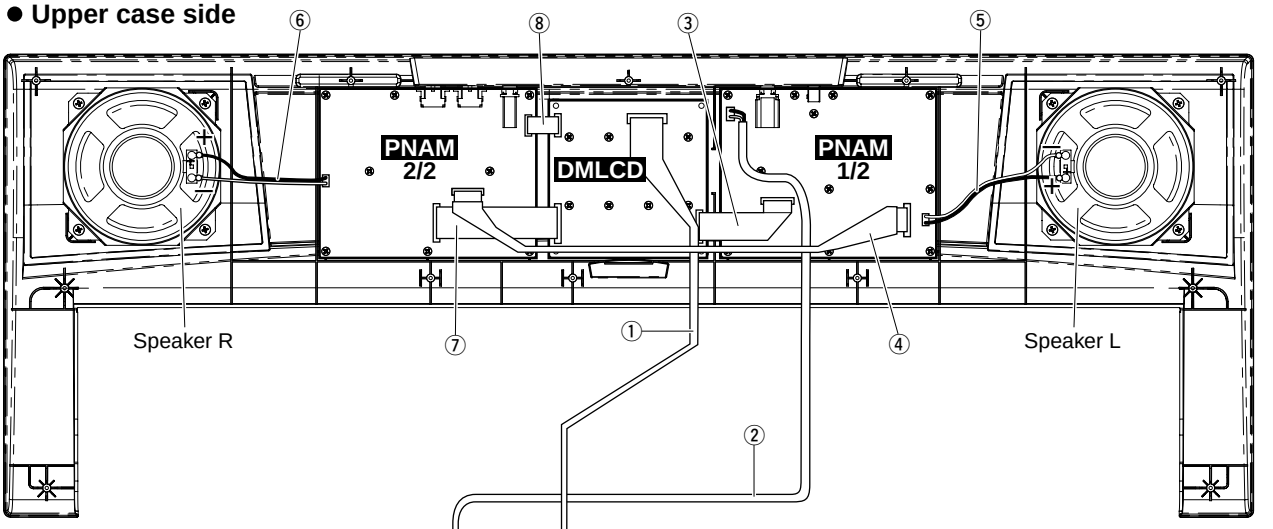
⓱ [TEMPO/TAP] button
⓳ [START/STOP] button
⓴ [PORTABLE GRAND] button
㉑ [SOUND EFFECT KIT] button
㉒ [REVERB ON/OFF] button

Rear Panel

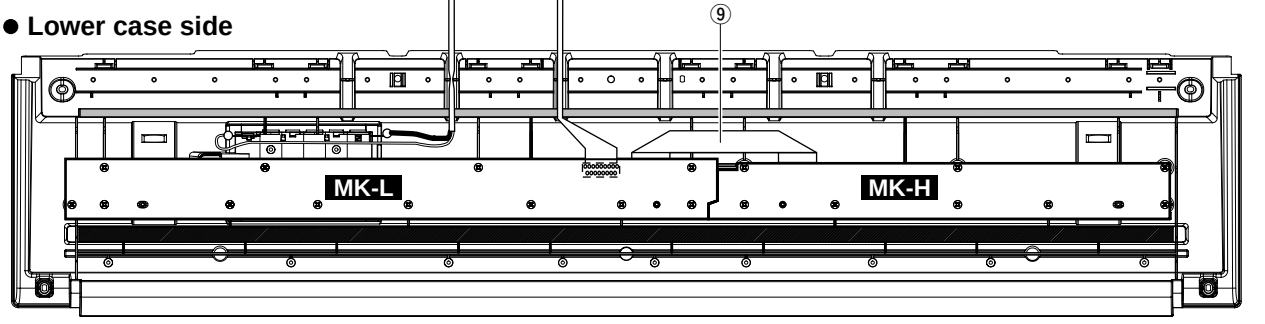
㉓ MIDI IN/OUT terminals
㉔ SUSTAIN jack
㉕ PHONES/OUTPUT jack
㉖ DC IN 12V jack

CIRCUIT BOARD LAYOUT & WIRING

● **Upper case side**



● **Lower case side**

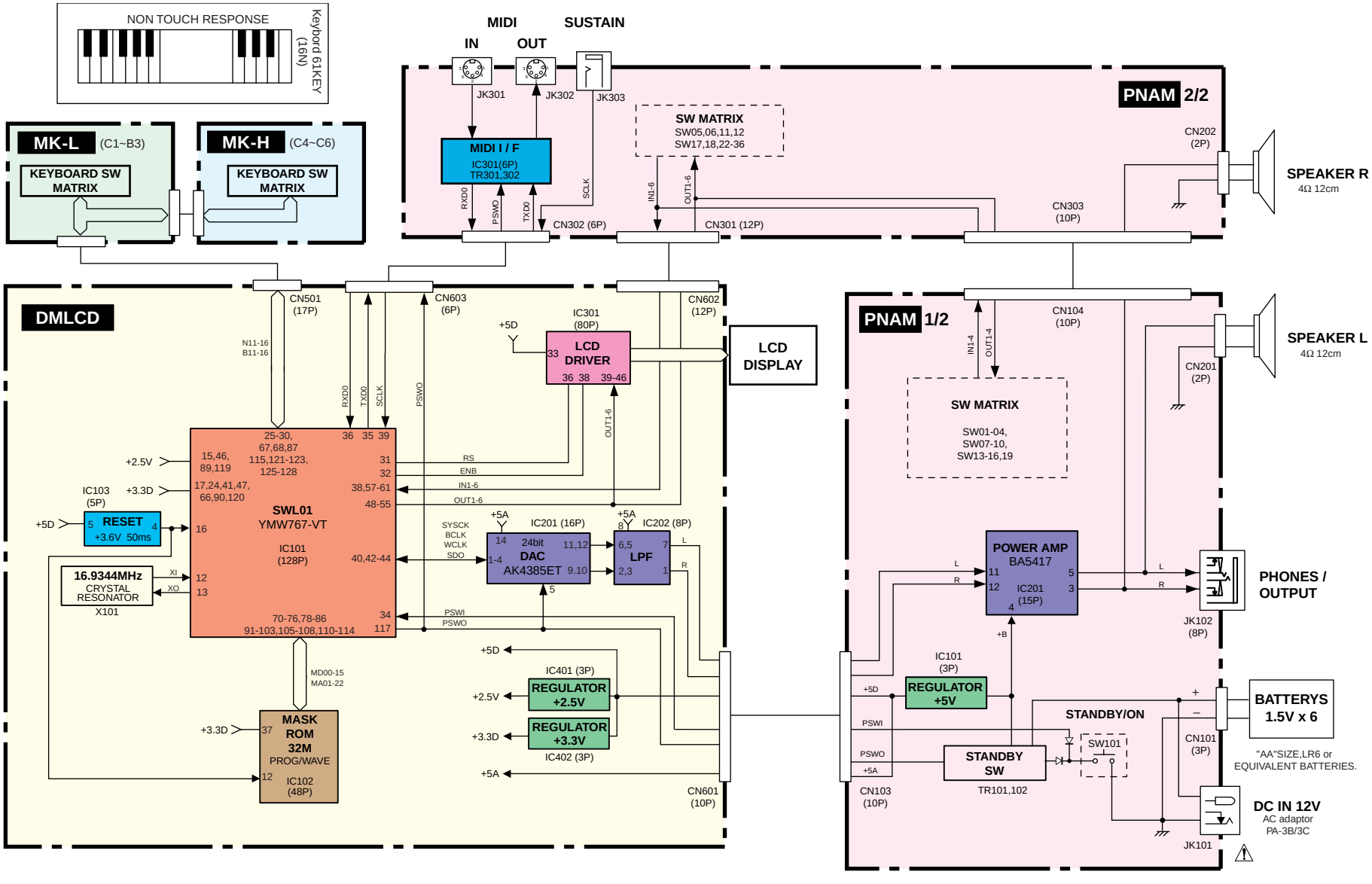


No.	Location	Parts No.	Connector Assembly	Destination						Remarks
①	30	WE156400	MK	MK-L	*1	*4	DMLCD-CN501	*1	*4	17P
②	120	(WE15510)	BATTERY	PNAM1/2-CN101	*1	*5	Battery terminal A	*2	*7	3P
							Battery terminal B	*2	*7	
③	WH103	(WE15580)	PN3	PNAM1/2-CN103	*3	*4	DMLCD-CN601	*1	*4	10P
④	WH104	(WE15550)	PN	PNAM1/2-CN104	*3	*4	PNAM2/2-CN303	*3	*4	10P
⑤	WH201	(WE67670)	SP	PNAM1/2-CN201	*3	*5	Speaker-L	*2	*6	2P
⑥	WH202	(WE67670)	SP	PNAM2/2-CN202	*3	*5	Speaker-R	*2	*6	2P
⑦	WH301	(WE15600)	PN4	PNAM2/2-CN301	*3	*4	DMLCD-CN602	*1	*4	12P
⑧	WH302	(WE15560)	PN1	PNAM2/2-CN302	*3	*4	DMLCD-CN603	*1	*4	6P
⑨	120c	(V719030)	MK	MK-L	*1	*4	MK-H	*1	*4	11P

*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: Red wire is adjusted to Pin 1 mark (△ mark).
*6: Speaker (Red wire is connected to + terminal.)
*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



28CA1-8834618

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 [250A], two (2) screws marked [260A], and two (2) screws marked [300]. The lower case assembly can then be removed. (Fig. 1)

2. DMLCD Circuit Board, LCD Display

(Time required: About 3 minutes each)

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

2-2 DMLCD Circuit Board

2-2-1 Remove the eight (8) screws marked [160A]. The DMLCD circuit board can then be removed. (Fig. 3)

* When attaching the Mk wire (DMLCD circuit board: CN501), insert or pull the Mk wire while pressing the both side portions of the connector downward. (Fig. 2)

* When installing the DMLCD circuit board, tighten the screws 1 through 8 in numerical order. (Fig. 3)

2-3 LCD Display

2-3-1 Remove the DMLCD circuit board. (See procedure 2-2)

2-3-2 Remove the rubber connector and LCD holder A. The LCD display can then be removed. (Fig. 4)

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

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

(Time required: About 3 minutes each)

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

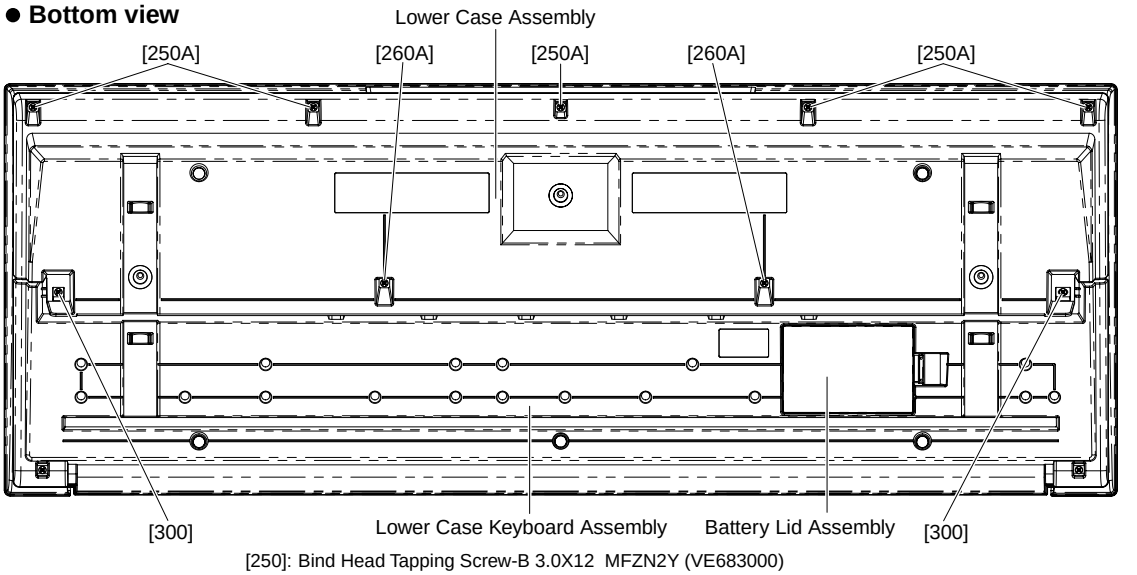
3-2 PNAM Circuit Board 1/2

3-2-1 Remove the eleven (11) screws marked [160B]. The PNAM circuit board 1/2 can then be removed. (Fig. 3)

3-3 PNAM Circuit Board 2/2

3-3-1 Remove the eight (8) screws marked [160C]. The PNAM circuit board 2/2 can then be removed. (Fig. 3)

● **Bottom view**

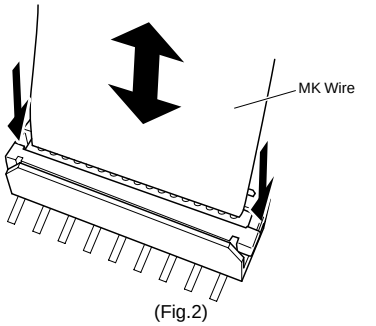


[250]: Bind Head Tapping Screw-B 3.0X12 MFZN2Y (VE683000)
[260]: Bind Head Tapping Screw-B 3.0X30 MFZN2Y (V7213700)
[300]: Bind Head Tapping Screw-B 3.0X20 MFZN2Y (VI064600)

(Fig.1)

Attaching and Removing the Mk Wire

DMLCD Circuit Board: CN501



(Fig.2)

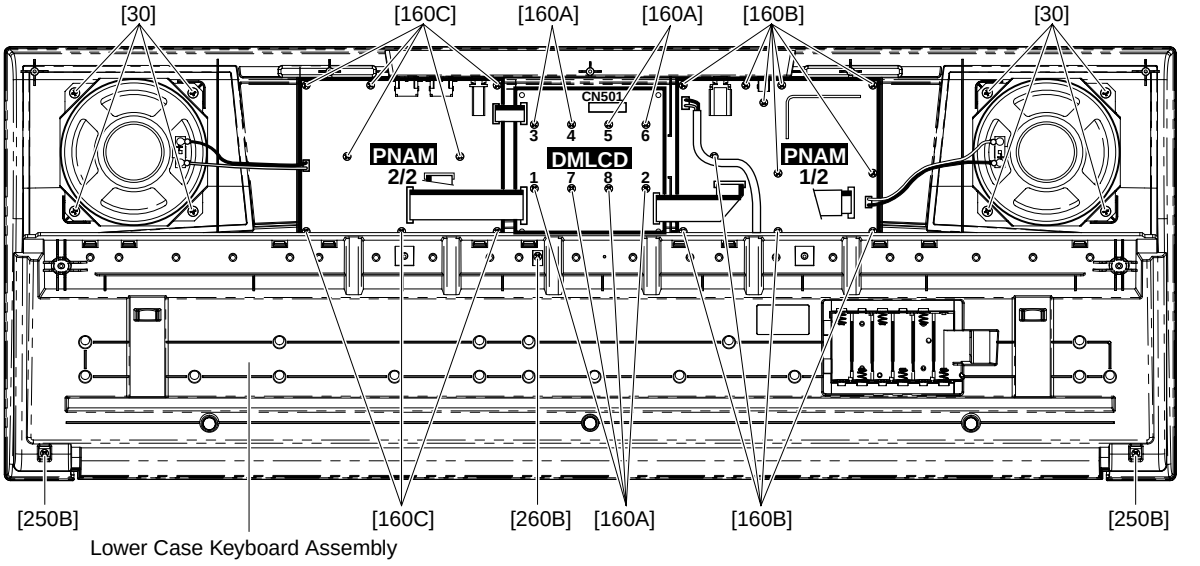
4. Speaker (Time required: About 2 minutes)

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

4-2 Remove the four (4) screws marked [30]. The speaker can then be removed. (Fig. 3)

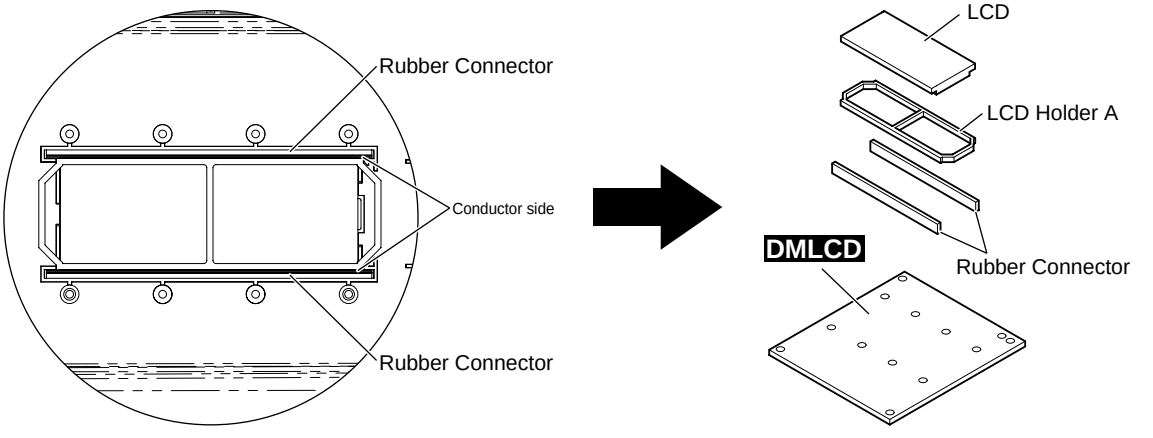
* The right and left speakers can be removed in the same way.

● **Bottom view**



[30]: Bind Head Tapping Screw-B 4.0X8 MFZN2Y (EP640410)
[160]: Bind Head Tapping Screw-B 3.0X8 MFZN2Y (EP600250)
[250]: Bind Head Tapping Screw-B 3.0X12 MFZN2Y (VE683000)
[260]: Bind Head Tapping Screw-B 3.0X30 MFZN2Y (V7213700)

(Fig.3)



(Fig.4)

5. Lower Case Keyboard Assembly

(Time required: About 3 minutes)

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

5-2 Remove the two (2) screws marked [250B] and screw marked [260B]. The lower case keyboard assembly can then be removed. (Fig. 3)

* When attaching the Mk wire (DMLCD circuit board: CN501), insert or pull the Mk wire while pressing the both side portions of the connector downward. (Fig. 2)

6. Keyboard Assembly

6-1 Remove the lower case keyboard assembly. (See procedure 5)

6-2 White and black keys for one octave unit are combined as a set. There are five sets in total. Remove the four (4) screws marked [110A]. The keyboard can then be removed. (Fig. 5) 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.

6-3 To remove the white key C6, remove the screw marked [110B], press the hook at the back to lift a little, and pull it forward to remove the hook to lift it.

7. Rubber Contact

7-1 Remove the lower case keyboard assembly. (See procedure 5)

7-2 Remove the keyboard corresponding to the rubber contacts to be removed. (See procedure 6)

7-3 Remove the rubber contacts. (Photo. 2)

8. MK-L Circuit Board, MK-H Circuit Board

(Time required: About 6 minutes each)

8-1 Remove the lower case keyboard assembly. (See procedure 5)

8-2 MK-L Circuit Board

8-2-1 Remove the keyboards from C1 to B3. (See procedure 6)

8-2-2 Remove the four (4) screws marked [90A], and eight (8) screws marked [100A]. The MK-L circuit board can then be removed. (Fig. 6)

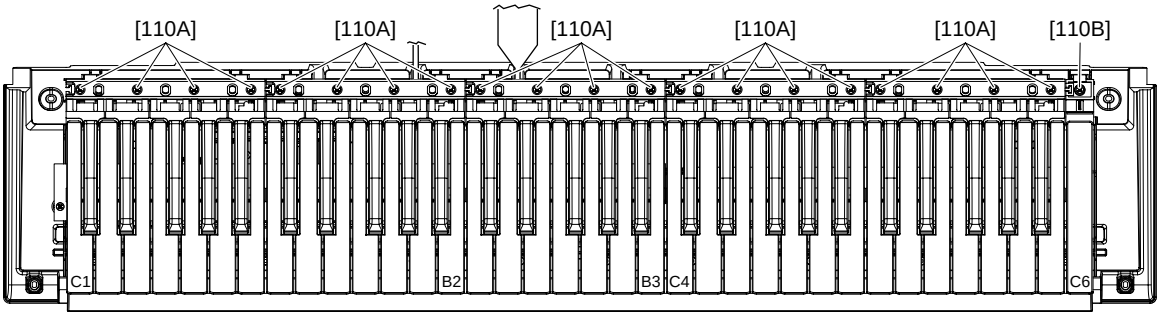
8-3 MK-H Circuit Board

8-3-1 Remove the keyboards from C4 to C6. (See procedure 6)

8-3-2 Remove the three (3) screws marked [90B], and five (5) screws marked [100B]. The MK-H circuit board can then be removed. (Fig. 6)

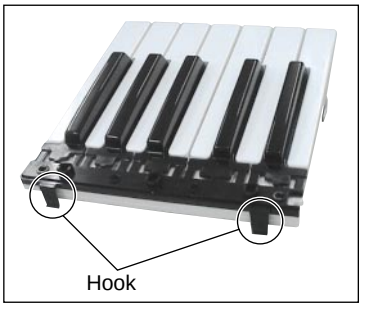
<Lower case keyboard assembly>

● **Top view**

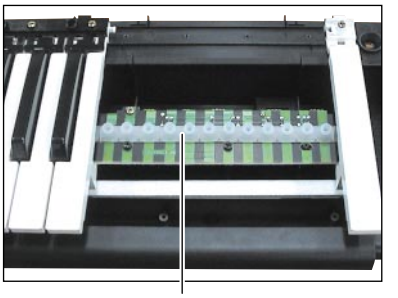


[110]: Bind Head Tapping Screw-B 3.0X20 MFZN2Y (EP600680)

(Fig.5)

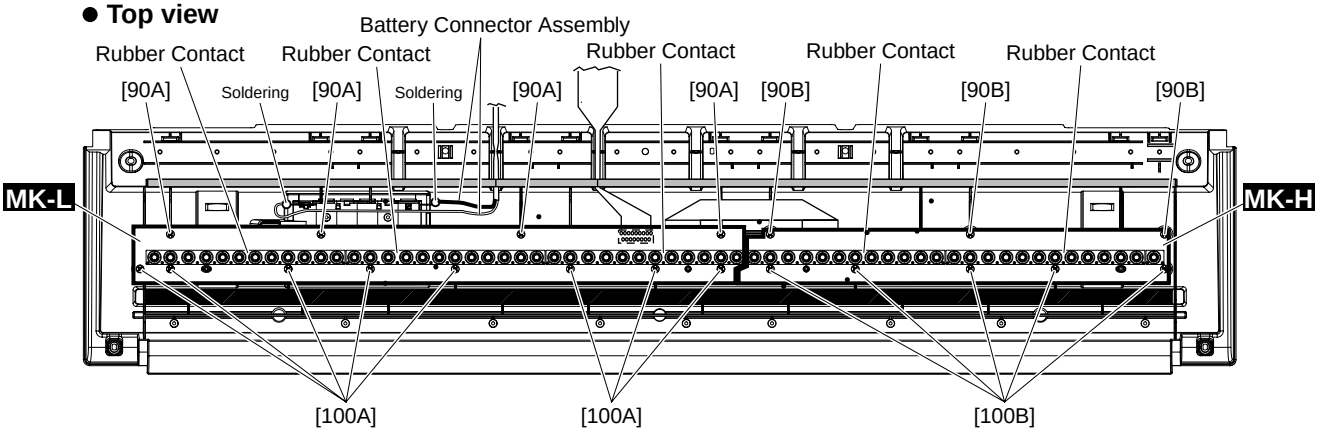


(Photo.1)



(Photo.2)

● **Top view**



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

(Fig.6)

9. How to Remove Spring Terminals.

A Spring Terminal A, Spring Terminal B

9-1 Remove the lower case keyboard assembly. (See procedure 5)

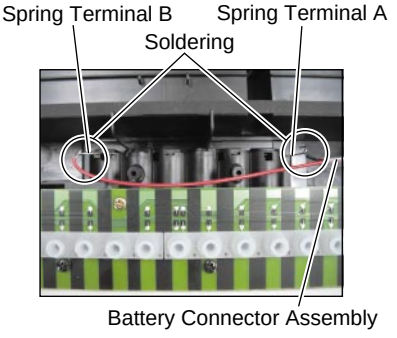
9-2 Remove the keyboards from C1 to B2. (See procedure 6)

9-3 Remove the battery connector assembly soldered to the spring terminal A and spring terminal B. (Fig. 6, Photo. 3)

9-4 Reverse the lower case keyboard assembly and remove the battery lid assembly. (Fig. 1)

9-5 Lift the spring terminal A a little and slide it rightward to remove it. (Fig. 7)

9-6 Remove the hook for the spring terminal B to pull it out from inside. (Fig. 7)

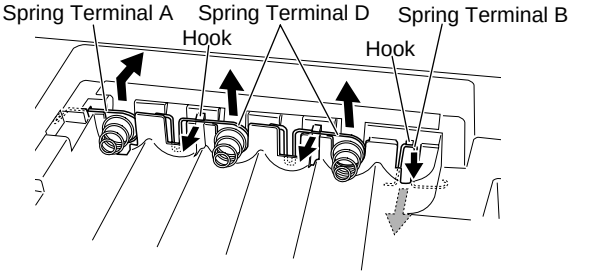


(Photo.3)

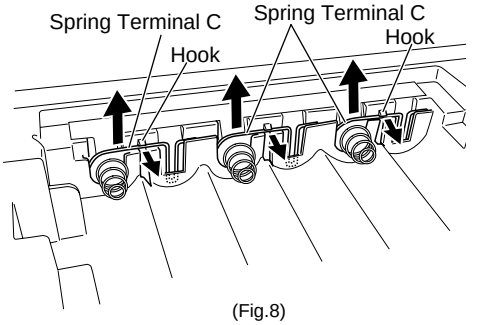
B Spring Terminal C, Spring Terminal D

9-1 Remove the battery lid assembly at the bottom side of the lower case keyboard assembly. (Fig. 1)

9-2 Remove the hooks to pull out the spring terminal C and spring terminal D. (Fig. 7, 8)



(Fig.7)



(Fig.8)

■ LSI PIN DESCRIPTION

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

DMLCD: IC101

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		85	MD07	I/O	
22	EA1/PD1	I	Address bus	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		92	MA16	O	
29	ED4/PC4	I/O	Data bus /	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		115	MA23/PF3	O	Memory address bus
52	PA4	I/O	Parallel port A	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 /

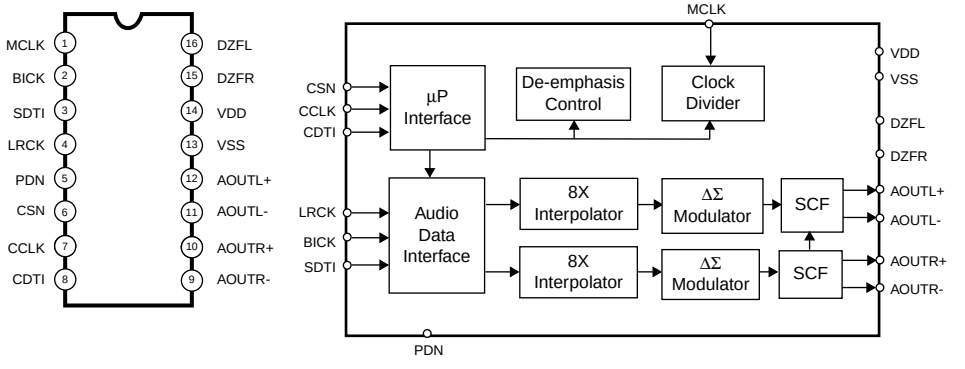
- **NT3881DF-01** (X3148A00) **LCD DRIVER**
- **ML9040A-B01GAZ03A** (XZ987A00) **LCD DRIVER**
- **NT3881EFG-01** (X6247A00) **LCD DRIVER**

DMLCD: IC301

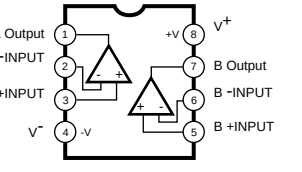
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	S22	O	Segment signal output for LCD driving	41	DB2	I/O	Data interface
2	S21	O		42	DB3	I/O	
3	S20	O		43	DB4	I/O	
4	S19	O		44	DB5	I/O	
5	S18	O		45	DB6	I/O	
6	S17	O		46	DB7	I/O	
7	S16	O		47	C1	O	Common signal output for LCD driving
8	S15	O		48	C2	O	
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

- **AK4385ET** (X6040A00)
  D/A Converter
  DMLCD: IC201

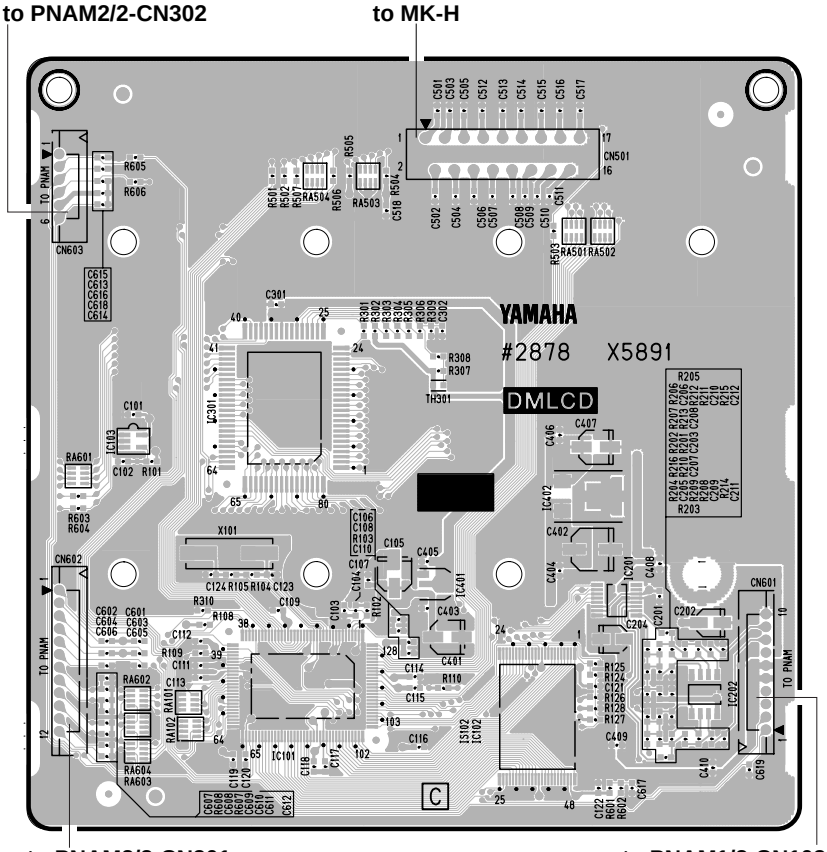


- **NJM4580E** (X2331A00)
  Dual Operational Amplifier
  DMLCD: IC202

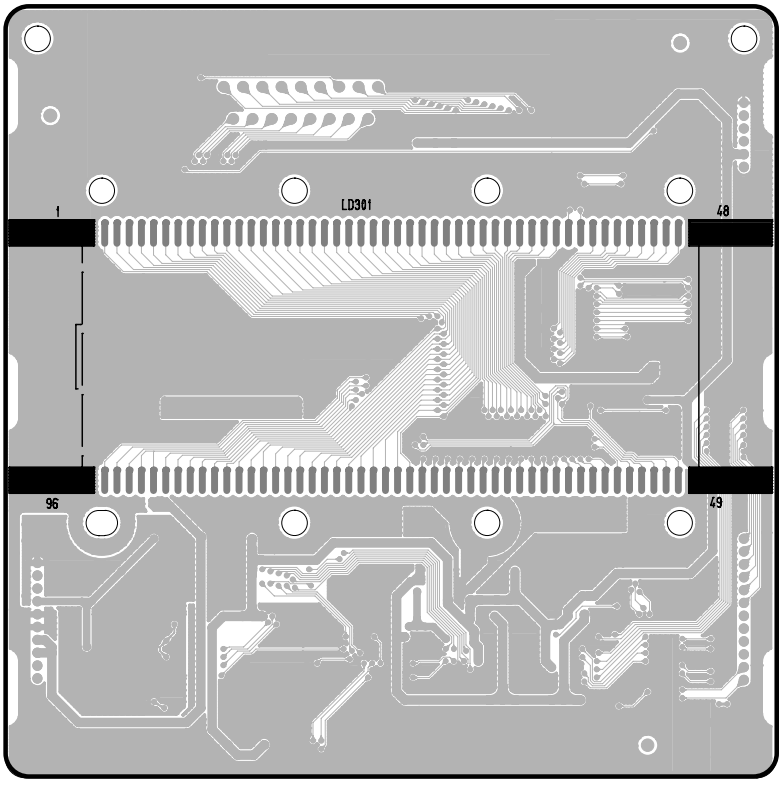


■ CIRCUIT BOARDS

• DMLCD Circuit Board

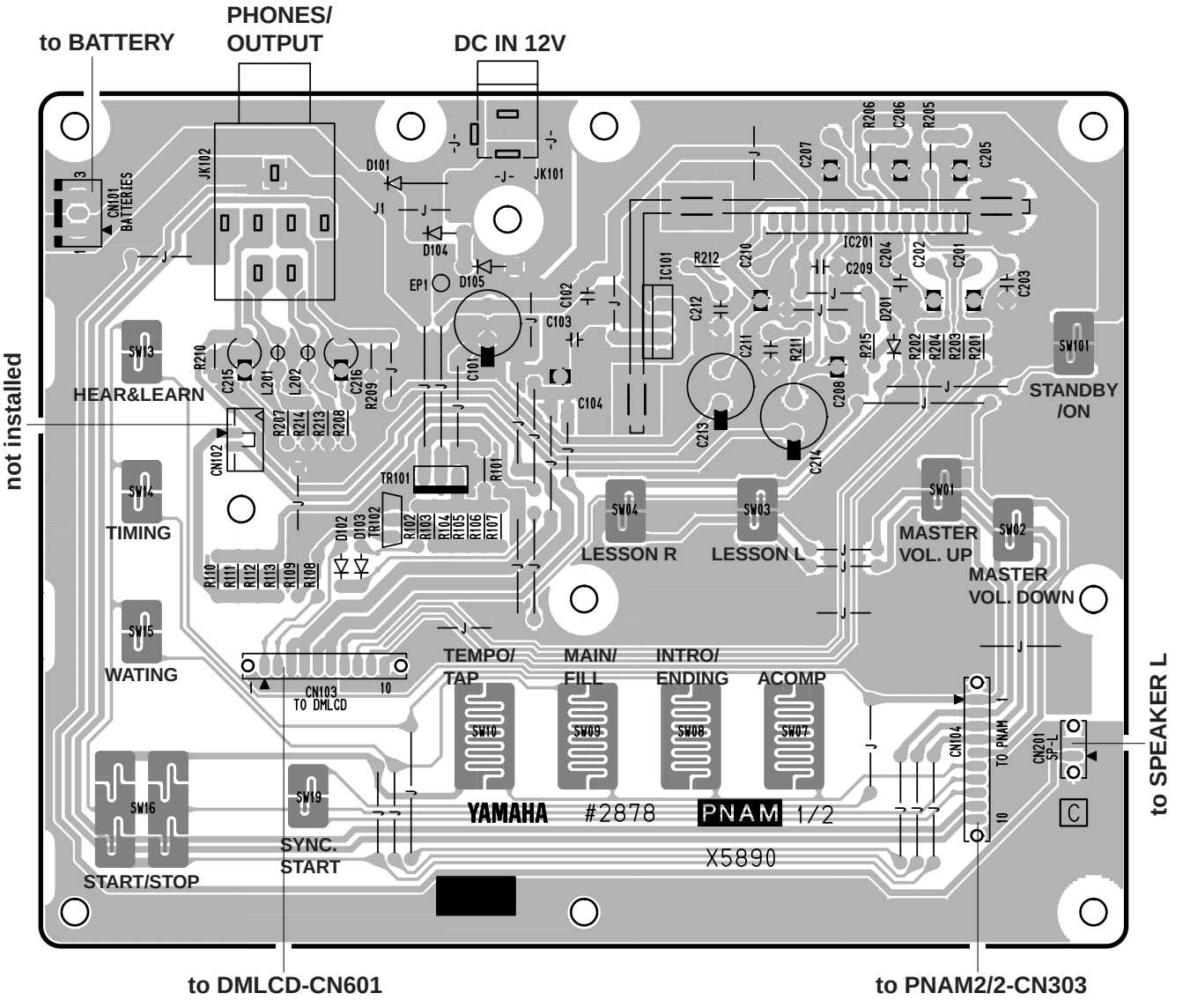


Component side



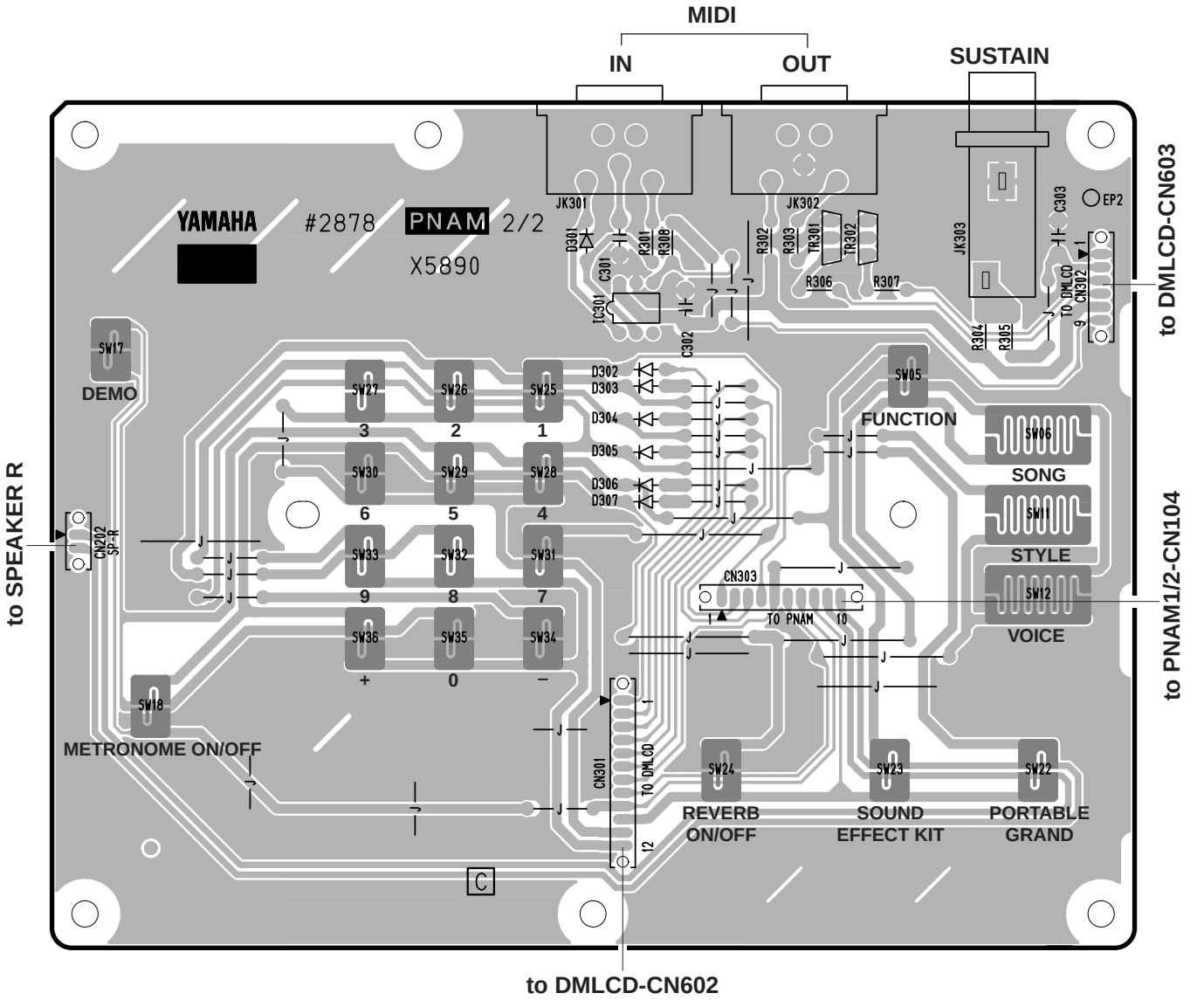
Pattern side

• PNAM1/2 Circuit Board



Component side

• PNAM2/2 Circuit Board



Component side

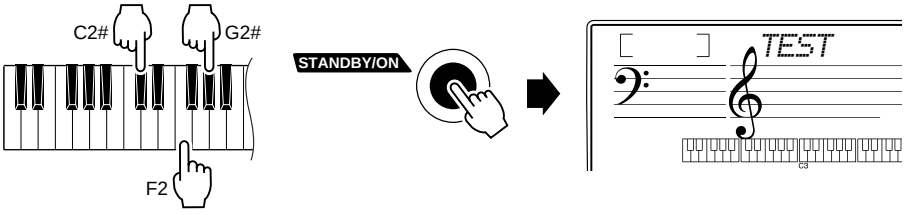
TEST PROGRAM

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 of 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 the 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	**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)
4	**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.
5	**014 : Output R**	Connect the level meter (with JIS-C filter) to the L/R terminals of the [PHONES/OUTPUT]. (33Ω of load) • PHONES L: –45.0dBu or less • PHONES R: –2.0dBu±2dB
6	**015 : Output L**	Connect the level meter (with JIS-C filter) to the L/R terminals of the [PHONES/OUTPUT]. (33Ω of load) • PHONES L: –2.0dBu±2dB • PHONES R: –45.0dBu or less
	019 : Noise	This item progresses to the next without inspecting.
7	**020 : SW Chk**	Checks switches on the panel. Press the switches as shown in the LCD. When the switch is pressed, a sound is played at the prescribed pitch. (Refer to the Switch test item list.) Make sure that "**SW OK**" is displayed on the LCD when all the switches are pressed. To cancel the operation halfway, use the [lowest key on the keyboard] to return to the selection display.

Test No.	LCD display	Test descriptions, judging conditions, etc.
8	**028 : LCD On**	Make sure that all the segments are lit on the LCD.
9	**029 : LCD Off**	Make sure that all the segments are turned off on the LCD.
10	**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.
11	**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.
12	**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 5 seconds for the check.
13	**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	Turn	SW Name	LCD Display	Note Number
1	M.VOLUME DOWN	Volume –	C2	18	TENKEY 7	Tenkey 7	F3
2	M.VOLUME UP	Volume +	C#2	19	TENKEY 8	Tenkey 8	F#3
3	LEFT	Left	D2	20	TENKEY 9	Tenkey 9	G3
4	RIGHT	Right	D#2	21	TENKEY –	Tenkey –	G#3
5	LISTEN & LEARN	Listen	E2	22	TENKEY 0	Tenkey 0	A3
6	TIMING	Timing	F2	23	TENKEY +	Tenkey +	A#3
7	WAITING	Waiting	F#2	24	DEMO	Demo	B3
8	FUNCTION	Function	G2	25	METRONOME	Metro	C4
9	SONG	Song	G#2	26	A-B REPEAT	AB Rep	C#4
10	STYLE	Style	A2	27	REW	Rew	D4
11	VOICE	Voice	A#2	28	FF	FF	D#4
12	TENKEY 1	Tenkey 1	B2	29	TEMPO/TAP	Temp/TAP	E4
13	TENKEY 2	Tenkey 2	C3	30	PAUSE	Pause	F4
14	TENKEY 3	Tenkey 3	C#3	31	START/STOP	StartStp	F#4
15	TENKEY 4	Tenkey 4	D3	32	PORTABLE GRAND	GP	G4
16	TENKEY 5	Tenkey 5	D#3	33	SOUND EFFECT	SoundEff	G#4
17	TENKEY 6	Tenkey 6	E3	34	REVERB ON/OFF	Reverb	A4

YAMAHA [PORTATONE] Date:15-Nov-2004
Model YPT-200/PSR-E203 MIDI Implementation Chart Version:1.0

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default	1 - 16	1 - 16	
	Changed	x	x	
Mode	Default	3	3	
	Messages	x	x	
	Altered	**********	x	
Note Number :	True voice	0 - 127 **********	0 - 127 0 - 127	
Velocity	Note ON	o 9nH,v=1-127 *2	o 9nH,v=1-127	
	Note OFF	x	x	
After Touch	Key's	x	x	
	Ch's	x	x	
Pitch Bend		x	o	
Control Change	0,32	o	o	Bank Select
	1	x *1	o	Modulation wheel
	6	x *1	o	Data Entry(MSB)
	38	x *1	x	Data Entry(LSB)
	7,10	o	o	
	11	x *1	o	Expression
	64	o	o	Sustain
	71,73,74	x *1	o	
	72	x	o	Release Time
	84	x *1	o	Portamento Cntrl
	91	o	o	Effect 1 Depth
	96,97	x	o	RPN Inc,Dec
	100,101	x	o	RPN LSB,MSB
Prog Change :	True #	o 0 - 127 **********	o 0 - 127	
System Exclusive		o	o	
Common	: Song Pos.	x	x	
	: Song Sel.	x	x	
	: Tune	x	x	
System Real Time	: Clock	o	o	
	: Commands	o	o	
Aux Mes- sages	: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)	
	:Active Sense	o	o	
	:Reset	x	x	

*1 Refer to #2 on page 19.
*2 Refer to #6 on page 19.

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.*

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

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 (page 60) 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.

6 Since this keyboard does not have touch response, the level of the sound does not change in response to your playing strength. As a result, when you play the keyboard, the velocity value transmitted via MIDI is fixed (set to the most suitable value for each Voice).
However, the velocity of the accompaniment and song playback does change in response to performance data received via MIDI.

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								

PORTATONE

PSR-E203 / YPT-200

PARTS LIST

CONTENTS

OVERALL ASSEMBLY 2-3
LOWER CASE KEYBOARD ASSEMBLY 4
KEYBOARD ASSEMBLY 5
ELECTRICAL PARTS 6-9

Notes : DESTINATION ABBREVIATIONS

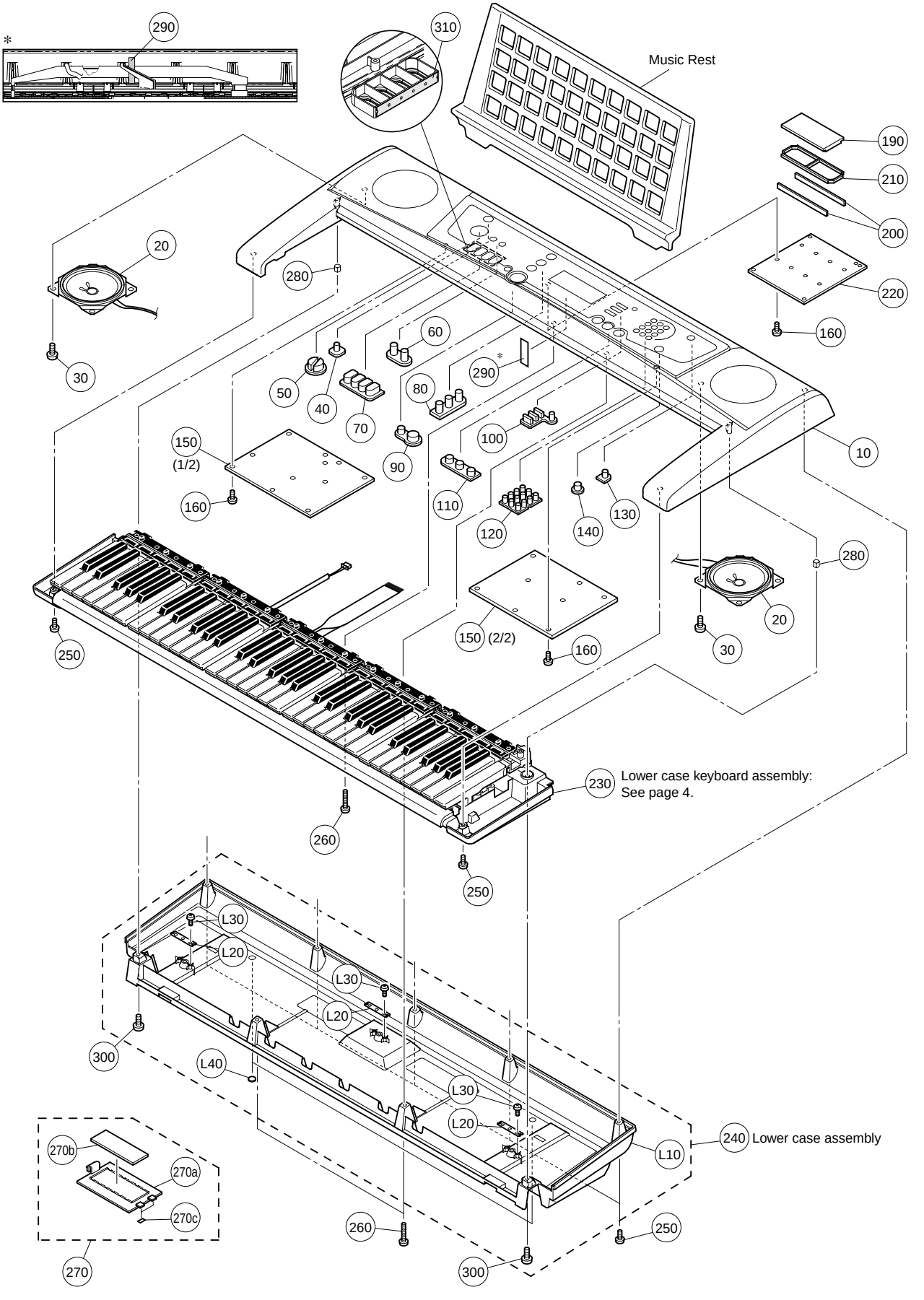
A : Australian model	M : South African model
B : British model	O : Chinese model
C : Canadian model	Q : South-east Asia model
D : German model	T : Taiwan model
E : European model	U : U.S.A. model
F : French model	V : General export model (110V)
H : North European model	W: General export model (220V)
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

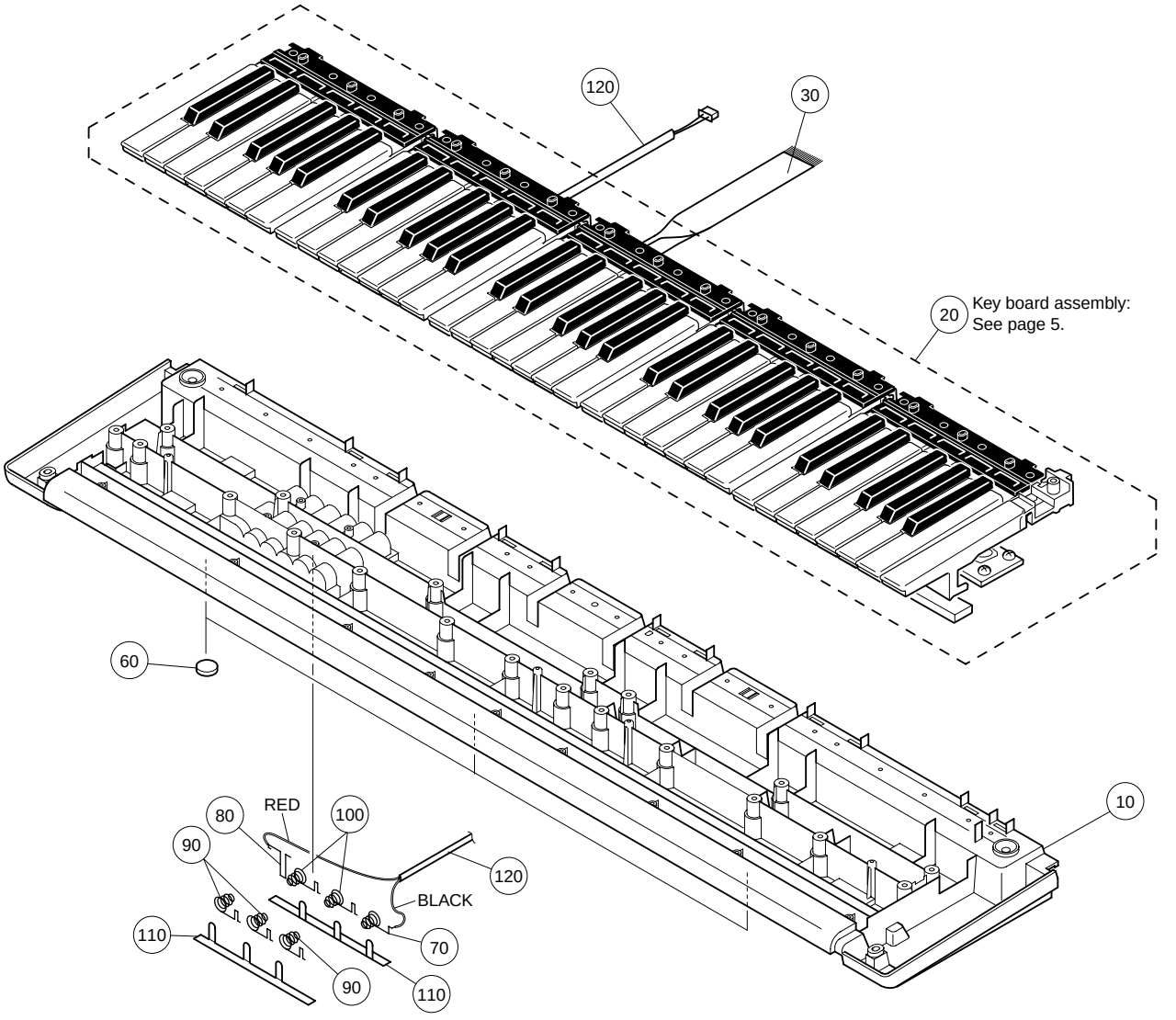


	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
			OVERALL ASSEMBLY			PSR-E203/YPT-200		
		--	Overall Assembly	FE		PSR-E203 (WD54850)		
		--	Overall Assembly	FE		YPT-200 (WD54840)		
*	10	WD549100	Upper Case			PSR-E203		
*	10	WD549000	Upper Case			YPT-200		
	20	X3804A00	Speaker	12.0cm 4ohm 3W			2	04
	30	EP640410	Bind Head Tapping Screw-B	4.0X8 MFZN2Y			8	01
*	40	WD893400	Panel Switch	x1		STANDBY/ON		
*	50	WD893500	Panel Switch	x2		MASTER VOLUME –,+		
*	60	WD893600	Panel Switch	x2		LESSON PART L,R		
*	70	WD893700	Panel Switch	x4		SONG/STYLE A-B REPEAT,.., TEMPO/TAP		
*	80	WD893800	Panel Switch	x3		LISTEN&LEARN,...,WAITING		
*	90	WD893900	Panel Switch	x2		PAUSE,START/STOP		
*	100	WD894000	Panel Switch	x4		SONG,STYLE,VOICE,FUNCTION		
*	110	WD894100	Panel Switch	x3		PORTABLE GRAND,...,REVERB ON/OFF		
*	120	WD894200	Panel Switch	x12		1-9,–,+		
*	130	WD894400	Panel Switch	x1		DEMO		
*	140	WD894500	Panel Switch	x1		METRONOME ON/OFF		
*	150	WE004900	Circuit Board	PNAM		1/2, 2/2		
	160	EP600250	Bind Head Tapping Screw-B	3.0X8 MFZN2Y			27	01
*	190	WD570700	LCD	TTR TYPE-05A				
	200	V3755900	Rubber Connector	SS-105L		}	2	01
	200	V5415400	Rubber Connector	SS-105L		}	2	
	210	V7172200	LCD Holder	A				01
*	220	WE005000	Circuit Board	DMLCD				
	230	--	Lower Case Keyboard Assembly			(WD88040)		
*	240	WD880300	Lower Case Assembly					
	250	VE683000	Bind Head Tapping Screw-B	3.0X12 MFZN2Y			7	01
	260	V7213700	Bind Head Tapping Screw-B	3.0X30 MFZN2Y			3	01
*	270	WD896000	Battery Lid Assembly					
	270a	--	Battery Cover			(WD87980)		
	270b	--	Battery Cushion	WHITE		(WD87990)		
	270c	--	Nonwoven Fabric Cloth	10X4		(WD88000)	2	
	280	--	Nonwoven Fabric Cloth	22X8		(WF25440)	2	
	290	--	Pet Tape			(WB79380)		
	300	VI064600	Bind Head Tapping Screw-B	3.0X20 MFZN2Y			2	01
	310	--	Nonworen Fabric Cloth			(WF25430)		
*		WD880300	Lower Case Assembly					
	L10	--	Lower Case	R		(WD83960)		
	L20	VI104400	Holder				3	
	L30	EP600250	Bind Head Tapping Screw-B	3.0X8 MFZN2Y			6	01
	L40	CB043750	Foot	T1.6			2	01
			ACCESSORIES					
		V2115000	Music Rest					06
⚠		V2693500	AC Adaptor			O		
*		WD567900	Chinese Guide Sheet			PSR-E203 O		
*		WD567800	Chinese Guide Sheet			YPT-200 O		

*: New Parts

RANK: Japan only

LOWER CASE KEYBOARD ASSEMBLY

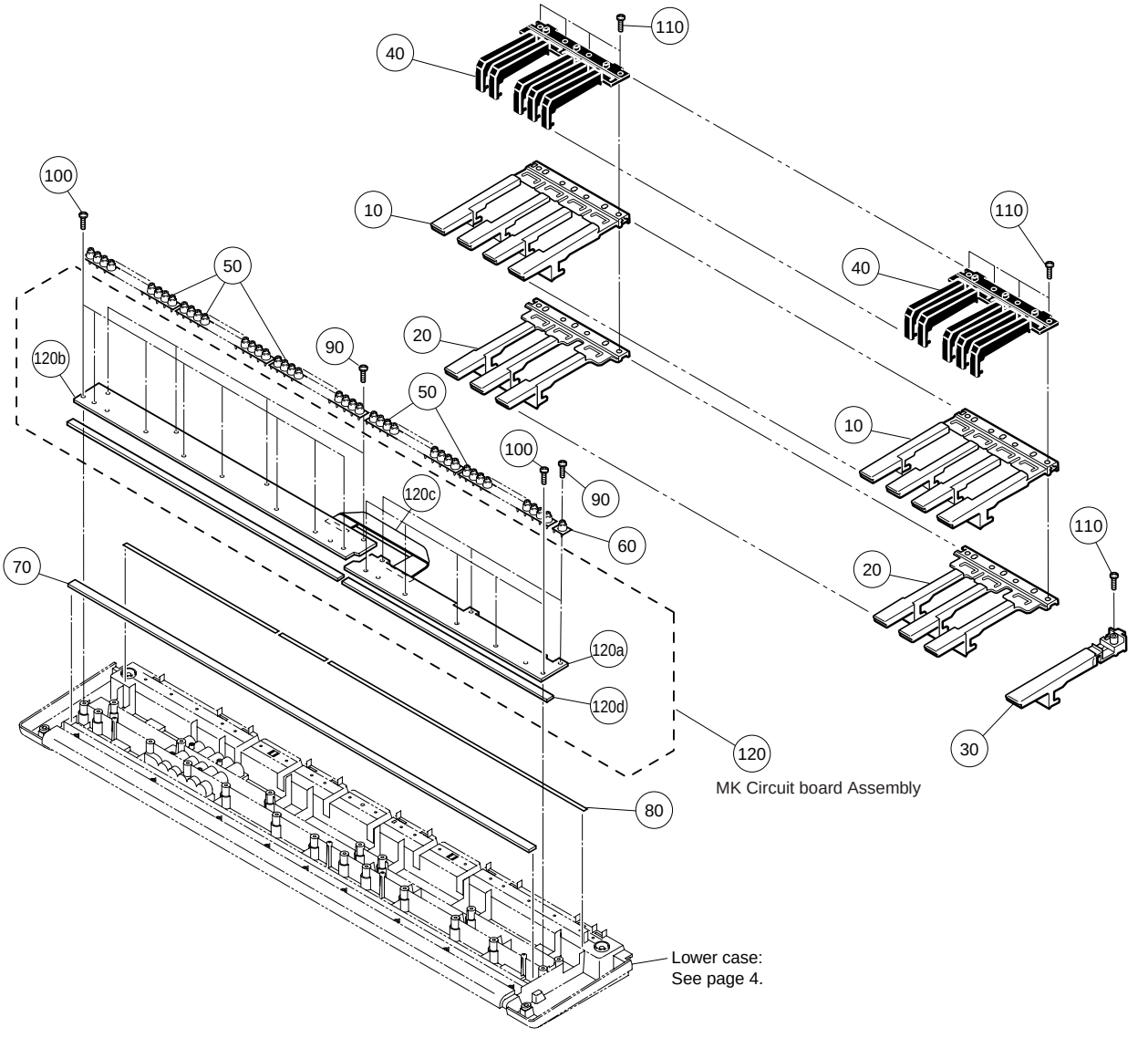


	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
		--	LOWER CASE KEYBOARD ASSEMBLY			PSR-E203/YPT-200 (WD88040)		
*	10	**WD839500**	Lower Case	F				
	20	--	Keyboard Assembly	16N C61 P1M		(WE12680)		
*	30	**WE156400**	Connector Assembly	MK				
	60	**CB043750**	Foot	T1.6			3	01
*	70	**WD879200**	Spring 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	BATTERY		(WE15510)		

*: New Parts

RANK: Japan only

KEYBOARD ASSEMBLY



REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	--	KEYBOARD ASSEMBLY	16N C61 P1M		PSR-E203/YPT-200 (WE12680)		
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	**WE152500**	Rubber Contact	16N-1M OCT LIM			5	
60	**VZ271900**	Rubber Contact	16N C 1M		C6		04
70	**VZ303000**	Felt L					02
80	**VH181400**	Rubber Sheet					01
90	**EP600250**	Bind Head Tapping Screw-B	3.0X8 MFZN2Y			7	01
100	**VZ313100**	Bind Head Tapping Screw-P	SP 3.0X12 MFZNBL			13	01
110	**EP600680**	Bind Head Tapping Screw-P	3.0X20 MFZN2Y			21	01
120	--	MK Circuit Board Assembly	16N1M C61 P1		(V718920)		
120a	**VZ272400**	Circuit Board	MK-H				09
120b	**V7189900**	Circuit Board	MK-L 16N-1M C61 P1				14
120c	--	Connector Assembly	MK 16N-1M-C61		(V719030)		
120d	**VZ302900**	Felt U					02

*: New Parts

RANK: Japan only

■ ELECTRICAL PARTS

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
			ELECTRICAL PARTS			PSR-E203/YPT-200		
*		**WE005000**	Circuit Board	DMLCD		(WE00510)(X5891C0)		
		VZ272400	Circuit Board	MK-H		(VZ27220)(XT701A0)		09
		V7189900	Circuit Board	MK-L 16N-1M C61 P1		(V719100)(XZ850A0)		14
*		**WE004900**	Circuit Board	PNAM		1/2, 2/2 (X5890C0)		
*		**WE005000**	Circuit Board	DMLCD		(WE00510)(X5891C0)		
	C0101	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0102	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	C0103	**US062220**	Ceramic Capacitor-SL(chip)	220P 50V J RECT.				01
	C0104	**US063470**	Ceramic Capacitor-B (chip)	4700P 50V K RECT.				01
	C0105	**UF017470**	Electrolytic Cap. (chip)	47 6.3V				01
	C0106	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	-0122	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0123	**US061220**	Ceramic Capacitor-CH(chip)	22P 50V J RECT.				01
	C0124	**US061220**	Ceramic Capacitor-CH(chip)	22P 50V J RECT.				01
	C0201	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0202	**UF037100**	Electrolytic Cap. (chip)	10 16V				01
	C0203	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0204	**UF037100**	Electrolytic Cap. (chip)	10 16V				01
	C0205	**US064100**	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.				01
	C0206	**US064100**	Ceramic Capacitor-B (chip)	0.0100 50V K RECT.				01
	C0207	**US063270**	Ceramic Capacitor-B (chip)	2700P 50V K RECT.				01
	-0210	**US063270**	Ceramic Capacitor-B (chip)	2700P 50V K RECT.				01
	C0211	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	C0212	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	C0301	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0302	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0401	**UF017470**	Electrolytic Cap. (chip)	47 6.3V				01
	C0402	**UF018100**	Electrolytic Cap. (chip)	100 6.3V				01
	C0403	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	-0406	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0407	**UF017470**	Electrolytic Cap. (chip)	47 6.3V				01
	C0408	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	-0410	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0501	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	-0517	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	C0518	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0601	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	-0615	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J RECT.				01
	C0616	**US061470**	Ceramic Capacitor-CH(chip)	47P 50V J RECT.				01
	C0617	**US063100**	Ceramic Capacitor-B (chip)	1000P 50V K RECT.				01
	C0618	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.				01
	C0619	**US061470**	Ceramic Capacitor-CH(chip)	47P 50V J RECT.				01
	CN501	**WE202600**	Wire Trap	52004-1710 17P TE				
	CN601	**VF728200**	Wire Trap	52147 10P TE				01
	CN602	**VK025600**	Wire Trap	52147 12P TE				01
	CN603	**VF728300**	Wire Trap	52147 6P TE				01
*	IC101	**X6055A00**	IC	YMW767-VTZ		CPU		
*	IC102	**X6053200**	IC	MX23L3213TC-90G		MASK ROM 32M PROG./WAVE		
	IC103	**X4374A00**	IC	S-80136ANMC-JCV-T2		RESET		
*	IC103	**X5888A00**	IC	BD45365G				
*	IC201	**X6040A00**	IC	AK4385ET		DAC		
	IC202	**X2331A00**	IC	NJM4580E TE2		OP AMP		01
	IC301	**X3148A00**	IC	NT3881DF-01				05
*	IC301	**X6247A00**	IC	NT3881EFG-01		LCD DRIVER		
	IC301	**XZ987A00**	IC	ML9040A-B01GAZ03A				05
	IC401	**X3679A00**	IC	RH5RZ25CA-T1		REGULATOR +2.5V		03
*	IC402	**X5889A00**	IC	BA33BC0FP		REGULATOR +3.3V		
	R0101	**RD357100**	Carbon Resistor (chip)	10.0K 63M J RECT.				01
	R0102	**RD356100**	Carbon Resistor (chip)	1.0K 63M J RECT.				01
	R0103	**RD350000**	Carbon Resistor (chip)	0 63M J RECT.				01
	R0104	**RD359100**	Carbon Resistor (chip)	1.0M 63M J RECT.				01
	R0105	**RD355470**	Carbon Resistor (chip)	470.0 63M J RECT.				01
	R0108	**RD357470**	Carbon Resistor (chip)	47.0K 63M J RECT.				01
	R0109	**RD355100**	Carbon Resistor (chip)	100.0 63M J RECT.				01
	R0110	**RD355100**	Carbon Resistor (chip)	100.0 63M J RECT.				01
	R0124	**RD350000**	Carbon Resistor (chip)	0 63M J RECT.				01
	R0128	**RD357100**	Carbon Resistor (chip)	10.0K 63M J RECT.				01
	R0201	**RD356120**	Carbon Resistor (chip)	1.2K 63M J RECT.				01

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	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	R0202	**RD356150**	Carbon Resistor (chip)	1.5K 63M J RECT.				01
	R0203	**RD356470**	Carbon Resistor (chip)	4.7K 63M J RECT.				01
	-0206	**RD356470**	Carbon Resistor (chip)	4.7K 63M J RECT.				01
	R0207	**RD356220**	Carbon Resistor (chip)	2.2K 63M J RECT.				01
	R0208	**RD356220**	Carbon Resistor (chip)	2.2K 63M J RECT.				01
	R0209	**RD355180**	Carbon Resistor (chip)	180.0 63M J RECT.				01
	R0210	**RD355180**	Carbon Resistor (chip)	180.0 63M J RECT.				01
	R0211	**RD356220**	Carbon Resistor (chip)	2.2K 63M J RECT.				01
	R0212	**RD355180**	Carbon Resistor (chip)	180.0 63M J RECT.				01
	R0213	**RD355180**	Carbon Resistor (chip)	180.0 63M J RECT.				01
	R0214	**RD355100**	Carbon Resistor (chip)	100.0 63M J RECT.				01
	R0215	**RD355100**	Carbon Resistor (chip)	100.0 63M J RECT.				01
	R0216	**RD356220**	Carbon Resistor (chip)	2.2K 63M J RECT.				01
	R0301	**RF457910**	Carbon Resistor (chip)	91.0K D RECT.				
	R0302	**RD356220**	Carbon Resistor (chip)	2.2K 63M J RECT.				01
	-0306	**RD356220**	Carbon Resistor (chip)	2.2K 63M J RECT.				01
	R0309	**RD355820**	Carbon Resistor (chip)	820.0 63M J RECT.				01
	R0310	**RD357470**	Carbon Resistor (chip)	47.0K 63M J RECT.				01
	R0501	**RD355100**	Carbon Resistor (chip)	100.0 63M J RECT.				01
	-0503	**RD355100**	Carbon Resistor (chip)	100.0 63M J RECT.				01
	R0504	**RD357100**	Carbon Resistor (chip)	10.0K 63M J RECT.				01
	R0505	**RD357100**	Carbon Resistor (chip)	10.0K 63M J RECT.				01
	R0506	**RD356100**	Carbon Resistor (chip)	1.0K 63M J RECT.				01
	R0507	**RD356100**	Carbon Resistor (chip)	1.0K 63M J RECT.				01
	R0601	**RD357470**	Carbon Resistor (chip)	47.0K 63M J RECT.				01
	R0602	**RD356100**	Carbon Resistor (chip)	1.0K 63M J RECT.				01
	R0603	**RD355100**	Carbon Resistor (chip)	100.0 63M J RECT.				01
	R0604	**RD355100**	Carbon Resistor (chip)	100.0 63M J RECT.				01
	R0605	**RD356100**	Carbon Resistor (chip)	1.0K 63M J RECT.				01
	R0606	**RD355100**	Carbon Resistor (chip)	100.0 63M J RECT.				01
	R0607	**RD357470**	Carbon Resistor (chip)	47.0K 63M J RECT.				01
	R0608	**RD357470**	Carbon Resistor (chip)	47.0K 63M J RECT.				01
	RA101	**RE047470**	Resistor Array	47KX4				01
	RA102	**RE047470**	Resistor Array	47KX4				01
	RA501	**RE045100**	Resistor Array	100X4				01
	RA502	**RE045100**	Resistor Array	100X4				01
	RA503	**RE047100**	Resistor Array	10KX4				01
	RA504	**RE046100**	Resistor Array	1KX4				01
	RA601	**RE045100**	Resistor Array	100X4				01
	RA602	**RE046100**	Resistor Array	1KX4				01
	RA603	**RE046100**	Resistor Array	1KX4				01
	RA604	**RE047470**	Resistor Array	47KX4				01
*	X0101	**WE194400**	Quartz Crystal Unit	16.9344MHz HC-49S-SM				
		VZ272400	Circuit Board	MK-H		(VZ27220)(XT701A0)		09
	2	**VB941200**	Diode	1SS133,1SS176				01
	3	**VK025500**	Wire Trap	52147 11P TE				01
		V7189900	Circuit Board	MK-L 16N-1M C61 P1		(V719100)(XZ850A0)		14
	2	**VB941200**	Diode	1SS133,1SS176				01
	2	**VV437800**	Diode	1N4148(DO-34)				01
	3	**VK025500**	Wire Trap	52147 11P TE				01
	4	**WE202600**	Wire Trap	52004-1710 17P TE				
*		**WE004900**	Circuit Board	PNAM		1/2, 2/2 (X5890C0)		
		--	Jumper Wire	0.55 TIN		(VA07890)		
	10	**EP600190**	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			2	01
	20	**--**	Silicon Grease	G-746		(0412125)		
	20	**--**	Silicon Grease	X-113A G746		(VA79810)		
	C0101	**UR848470**	Electrolytic Cap.	470.00 25.0V RX TP				01
*	C0101	**V3510000**	Electrolytic Cap.	470.00 25.0V TP				
	C0102	**VM902400**	Semiconductor Ceramic Cap.	0.1000 25V Z FORM.				01
	C0103	**VM902400**	Semiconductor Ceramic Cap.	0.1000 25V Z FORM.				01
*	C0104	**WF405000**	Electrolytic Cap.	100.00 10.0V TATET				
	C0201	**UR866100**	Electrolytic Cap.	1.00 50.0V RX TP				01
*	C0201	**V3511900**	Electrolytic Cap.	1.00 50.0V TP				
	C0202	**UR866100**	Electrolytic Cap.	1.00 50.0V RX TP				01
*	C0202	**V3511900**	Electrolytic Cap.	1.00 50.0V TP				
	C0203	**FG612470**	Ceramic Capacitor-B	470P 50V K RX TP				01
*	C0203	**VR025800**	Ceramic Capacitor-2B	470P 63V K FORMING				

✻: New Parts

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	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	C0204	**FG612470**	Ceramic Capacitor-B	470P 50V K RX TP				01
✻	C0204	**VR025800**	Ceramic Capacitor-2B	470P 63V K FORMING				
	C0205	**UR837470**	Electrolytic Cap.	47.00 16.0V RX TP				01
	-0207	**UR837470**	Electrolytic Cap.	47.00 16.0V RX TP				01
✻	C0205	**V3508400**	Electrolytic Cap.	47.00 16.0V TP				
✻	-0207	**V3508400**	Electrolytic Cap.	47.00 16.0V TP				
	C0208	**UR838100**	Electrolytic Cap.	100.00 16.0V RX TP				01
✻	C0208	**V3508500**	Electrolytic Cap.	100.00 16.0V TP				
	C0209	**VM902400**	Semiconductor Ceramic Cap.	0.1000 25V Z FORM.				01
	C0210	**UR838100**	Electrolytic Cap.	100.00 16.0V RX TP				01
✻	C0210	**V3508500**	Electrolytic Cap.	100.00 16.0V TP				
✻	C0211	**V5515600**	Mylar Capacitor	0.1500 50V J				
	C0211	**VR168500**	Monolithic Mylar Capacitor	ECQ-V1H154JL3				01
✻	C0212	**V5515600**	Mylar Capacitor	0.1500 50V J				
	C0212	**VR168500**	Monolithic Mylar Capacitor	ECQ-V1H154JL3				01
	C0213	**UR838470**	Electrolytic Cap.	470.00 16.0V RX TP				01
✻	C0213	**V3508800**	Electrolytic Cap.	470.00 16.0V TP				
	C0214	**UR838470**	Electrolytic Cap.	470.00 16.0V RX TP				01
✻	C0214	**V3508800**	Electrolytic Cap.	470.00 16.0V TP				
	C0215	**UR837470**	Electrolytic Cap.	47.00 16.0V RX TP				01
✻	C0215	**V3508400**	Electrolytic Cap.	47.00 16.0V TP				
	C0216	**UR837470**	Electrolytic Cap.	47.00 16.0V RX TP				01
✻	C0216	**V3508400**	Electrolytic Cap.	47.00 16.0V TP				
	C0301	**FG644100**	Ceramic Capacitor-F	0.0100 50V Z RX TP				01
✻	C0301	**VQ175700**	Ceramic Capacitor-2	0.01 63V Z FORMING				
	C0302	**VM902400**	Semiconductor Ceramic Cap.	0.1000 25V Z FORM.				01
	C0303	**FG613100**	Ceramic Capacitor-B	1000P 50V K RX TP				01
✻	C0303	**VR026200**	Ceramic Capacitor-2B	1000P 63V K FORM.				
	CN101	**LB918030**	Base Post Connector	XH 3P TE				01
	CN103	**VI878800**	Cable Holder	51048 10P TE				01
✻	CN103	**VY668700**	Cable Holder	51048 10P TE				
	CN104	**VI878800**	Cable Holder	51048 10P TE				01
✻	CN104	**VY668700**	Cable Holder	51048 10P TE				
	CN201	**VI878000**	Cable Holder	51048 2P TE				01
✻	CN201	**VY668300**	Cable Holder	51048 2P TE				
	CN202	**VI878000**	Cable Holder	51048 2P TE				01
✻	CN202	**VY668300**	Cable Holder	51048 2P TE				
	CN301	**VI879000**	Cable Holder	51048 12P TE				01
✻	CN301	**VY668900**	Cable Holder	51048 12P TE				
	CN302	**VI878400**	Cable Holder	51048 6P TE				01
✻	CN302	**VY668500**	Cable Holder	51048 6P TE				
	CN303	**VI878800**	Cable Holder	51048 10P TE				01
✻	CN303	**VY668700**	Cable Holder	51048 10P TE				
	D0101	**VV731400**	Diode	2A02M FORMING				
	D0101	**V8603100**	Diode	2A02GM				
	D0102	**VB941200**	Diode	1SS133,1SS176				01
	D0102	**VD631600**	Diode	1SS133,176,HSS104				01
	D0102	**VV437800**	Diode	1N4148(DO-34)				01
	D0103	**VB941200**	Diode	1SS133,1SS176				01
	D0103	**VD631600**	Diode	1SS133,176,HSS104				01
	D0103	**VV437800**	Diode	1N4148(DO-34)				01
	D0201	**VB941200**	Diode	1SS133,1SS176				01
	D0201	**VD631600**	Diode	1SS133,176,HSS104				01
	D0201	**VV437800**	Diode	1N4148(DO-34)				01
	D0301	**VB941200**	Diode	1SS133,1SS176				01
	-0307	**VB941200**	Diode	1SS133,1SS176				01
	D0301	**VD631600**	Diode	1SS133,176,HSS104				01
	-0307	**VD631600**	Diode	1SS133,176,HSS104				01
	D0301	**VV437800**	Diode	1N4148(DO-34)				01
	-0307	**VV437800**	Diode	1N4148(DO-34)				01
	HS001	**--**	Heat Sink			(V561400)		
✻	IC101	**X5887A00**	IC	BA50BC0T		REGULATOR +5V		
	IC201	**XV771A00**	IC	BA5417		POWER AMP 2.5Wx2		03
	IC301	**WA645200**	Photo Coupler	PC900V0NSZX				04
	JK101	**LB302260**	Connector	HEC0470-01-630		DC IN 12V		02
⚠	JK101	**V6557600**	Connector	HTJ-020-05AZ				04
⚠	JK102	**LB101870**	Phone Jack	JACK YKB21-5006		PHONES/OUTPUT		03
	JK102	**VV943300**	Phone Jack	HTJ064-04A				02
	JK301	**VJ107200**	DIN Connector	JACK5P YKF51-5050N		MIDI IN		01
	JK301	**VZ085800**	DIN Connector	5P HDC-052S-01				01

✻: New Parts

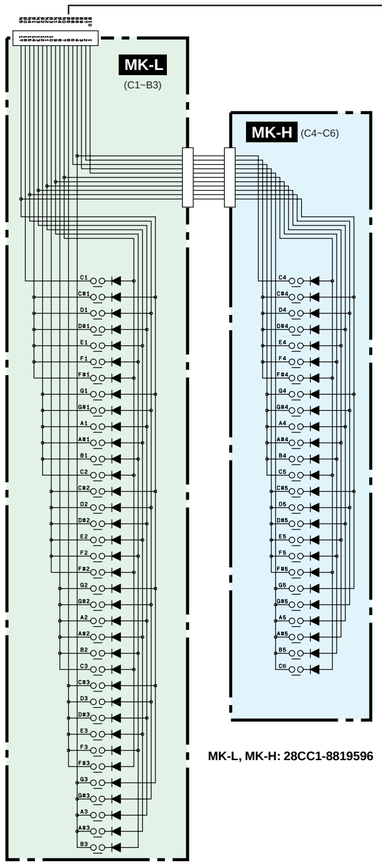
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	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	JK302	**VJ107200**	DIN Connector	JACK5P YKF51-5050N		MIDI OUT		01
	JK302	**VZ085800**	DIN Connector	5P HDC-052S-01				01
	JK303	**VC687500**	Phone Jack black	JACK YKB21-5014		SUSTAIN		01
*	JK303	**WE245200**	Phone Jack black	JY-6314-01-020				
	L0201	--	Jumper Wire	0.55 TIN		(VA07890)		
	L0202	--	Jumper Wire	0.55 TIN		(VA07890)		
*	R0101	**V2551200**	Carbon Resistor	47.0K 1/6J 26TP				
*	R0102	**V2550500**	Carbon Resistor	12.0K 1/6J 26TP				
*	R0103	**V2549800**	Carbon Resistor	3.3K 1/6 J 26TP				
*	R0108	**V2550700**	Carbon Resistor	18.0K 1/6J 26TP				
*	R0109	**V2551200**	Carbon Resistor	47.0K 1/6J 26TP				
*	R0201	**V2550100**	Carbon Resistor	5.6K 1/6 J 26TP				
*	R0202	**V2550100**	Carbon Resistor	5.6K 1/6 J 26TP				
*	R0203	**V2550000**	Carbon Resistor	4.7K 1/6 J 26TP				
*	R0204	**V2550000**	Carbon Resistor	4.7K 1/6 J 26TP				
*	R0205	**V2548800**	Carbon Resistor	470.0 1/6J 26TP				
*	R0206	**V2548800**	Carbon Resistor	470.0 1/6J 26TP				
*	R0207	**V2548000**	Carbon Resistor	100.0 1/6J 26TP				
*	R0208	**V2548000**	Carbon Resistor	100.0 1/6J 26TP				
	R0211	**WD556700**	Flame Proof C. Resistor	2.2 1/4 J				01
	R0212	**WD556700**	Flame Proof C. Resistor	2.2 1/4 J				01
*	R0213	**V2548600**	Carbon Resistor	330.0 1/6J 26TP				
*	R0214	**V2548600**	Carbon Resistor	330.0 1/6J 26TP				
*	R0215	**V2551200**	Carbon Resistor	47.0K 1/6J 26TP				
*	R0301	**V2548400**	Carbon Resistor	220.0 1/6J 26TP				
*	R0302	**V2547600**	Carbon Resistor	47.0 1/6J 26TP				
*	R0303	**V2547600**	Carbon Resistor	47.0 1/6J 26TP				
*	R0304	**V2551200**	Carbon Resistor	47.0K 1/6J 26TP				
*	R0305	**V2549200**	Carbon Resistor	1.0K 1/6 J 26TP				
*	R0306	**V2550800**	Carbon Resistor	22.0K 1/6J 26TP				
*	R0307	**V2550800**	Carbon Resistor	22.0K 1/6J 26TP				
*	R0308	**V2549200**	Carbon Resistor	1.0K 1/6 J 26TP				
*	TR101	**WD926900**	Transistor	2SB1342				
	TR102	**IC174070**	Transistor	2SC2SC1740S R,S				01
*	TR102	**WE435900**	Transistor	2SC5395-T112-E/F/G				
*	TR102	**WE436000**	Transistor	2SCKTC3199 GR,BL				
	TR301	**IC174070**	Transistor	2SC2SC1740S R,S				01
*	TR301	**WE435900**	Transistor	2SC5395-T112-E/F/G				
*	TR301	**WE436000**	Transistor	2SCKTC3199 GR,BL				
	TR302	**IC174070**	Transistor	2SC2SC1740S R,S				01
*	TR302	**WE435900**	Transistor	2SC5395-T112-E/F/G				
*	TR302	**WE436000**	Transistor	2SCKTC3199 GR,BL				
	WH103	--	Connector Assembly	PN3		(WE15580)		
	WH104	--	Connector Assembly	PN		(WE15550)		
	WH201	--	Connector Assembly	SP		(WE67670)		
	WH202	--	Connector Assembly	SP		(WE67670)		
	WH301	--	Connector Assembly	PN4		(WE15600)		
	WH302	--	Connector Assembly	PN1		(WE15560)		
		X3804A00	Speaker	12.0cm 4ohm 3W			2	04
*		**WD570700**	LCD	TTR TYPE-05A				

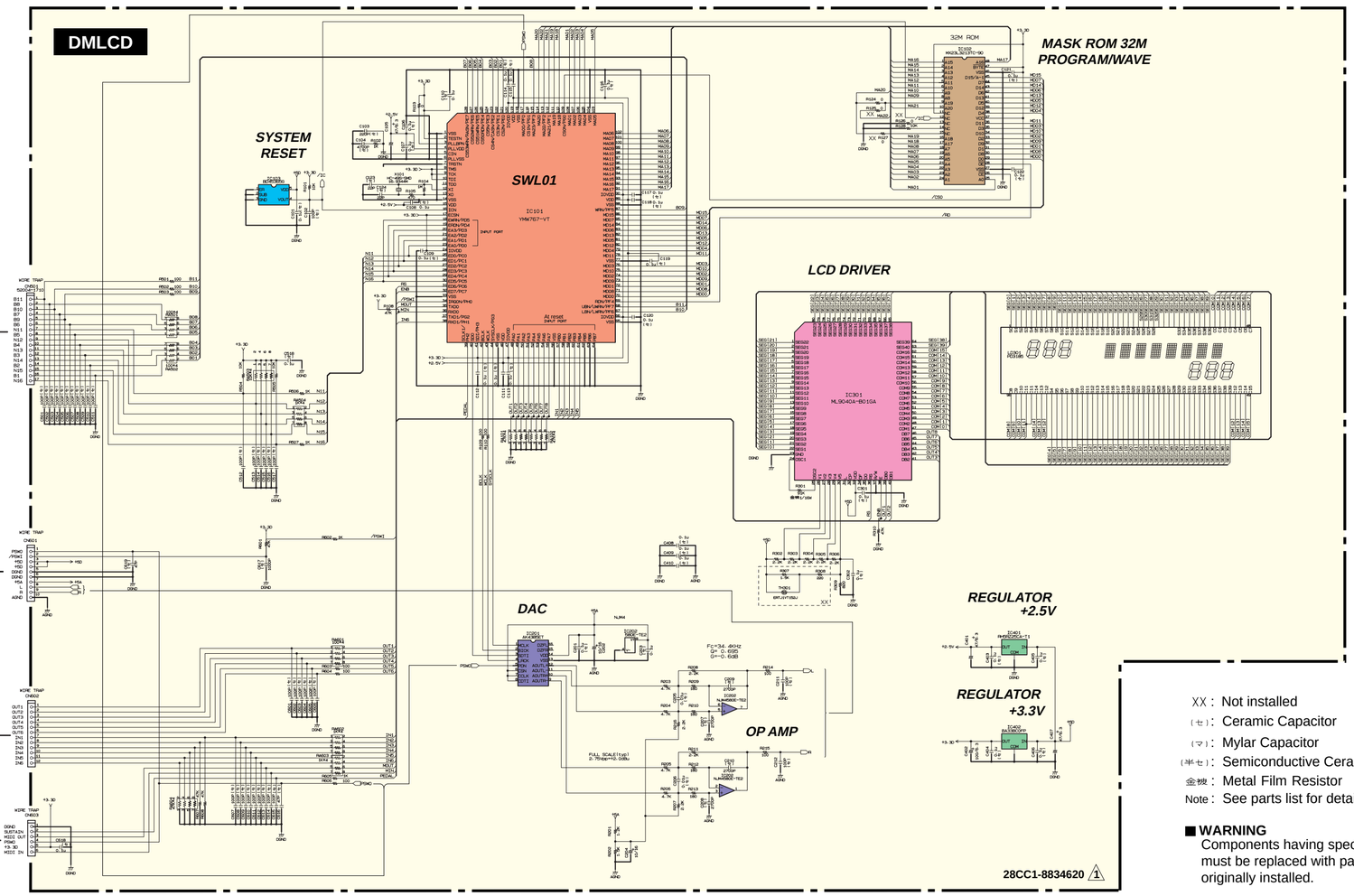
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■ PSR-E203/YPT-200 OVERALL CIRCUIT DIAGRAM

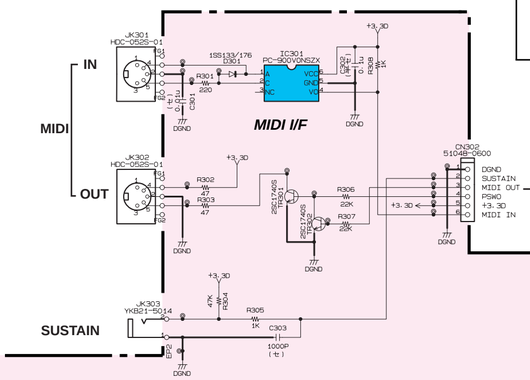


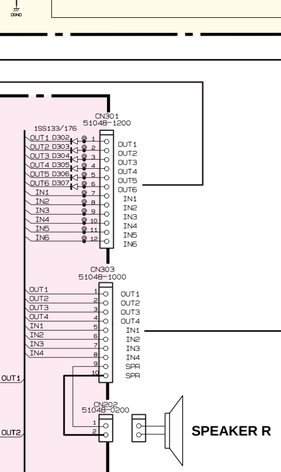
MK-L, MK-H: 28CC1-8819596



XX : Not installed
(セ) : Ceramic Capacitor
(マ) : Mylar Capacitor
(半セ) : Semiconductive Ceramic Capacitor
金被 : Metal Film Resistor
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.

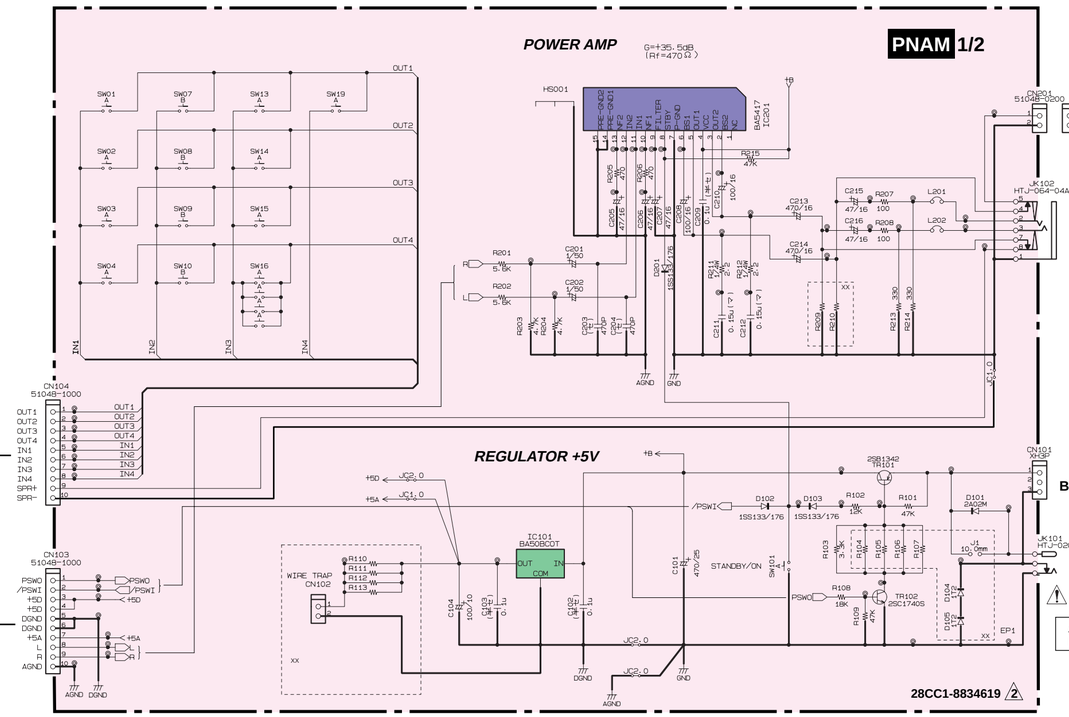




	IN1	IN2	IN3	IN4	IN5	IN6
OUT1	SW1 MASTER VOL. UP	SW7 ACOMP.	SW13 HEAR & LEARN	SW19 SYNC. START	SW25 TENKEY 1	SW31 TENKEY 7
OUT2	SW2 MASTER VOL. DOWN	SW8 INTRO/ ENDING	SW14 TIMING		SW26 TENKEY 2	SW32 TENKEY 8
OUT3	SW3 LESSON L	SW9 MAIN/ FILL	SW15 WAITING		SW27 TENKEY 3	SW33 TENKEY 9
OUT4	SW4 LESSON R	SW10 TEMPO/ TAP	SW16 START/ STOP	SW22 PORTABLE GRAND	SW28 TENKEY 4	SW34 TENKEY –
OUT3	SW5 FUNCTION	SW11 STYLE	SW17 DEMO	SW23 SOUND EFFECT	SW29 TENKEY 5	SW35 TENKEY 0
OUT4	SW6 SONG	SW12 VOICE	SW18 METRONOME	SW24 REVERB	SW30 TENKEY 6	SW36 TENKEY +

PNAM 2/2

28CC1-8834619 2



- RH5RZ25CA (X3679A00)
  REGULATOR +2.5V
  DMLCD: IC401
  1: GND
  2: INPUT
  3: OUTPUT
- BA33BC0FP (X5889A00)
  REGULATOR +3.3V
  DMLCD: IC402
  1: INPUT
  2: GND
  3: OUTPUT
- BA50BC0T (X5887A00)
  REGULATOR +5V
  PNAM1/2: IC101
  1: INPUT
  2: GND
  3: OUTPUT