PortableGrand™

DGX-203/DGX-205

SERVICE MANUAL



DGX-203



DGX-205

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PK 001717

YAMAHA
HAMAMATSU, JAPAN

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PDF- K666 '04.05

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



Be sure to perform it

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
- 76 standard-size keys (E0 – G6), with Touch Response.

Display
- Large multi-function LCD display (backlit)

Setup
- STANDBY/ON
- MASTER VOLUME: MIN - MAX

Panel Controls
- SONG, VOICE, STYLE, EASY SONG ARRANGER, PERFORMANCE ASSISTANT, PC, LESSON L/R, LESSON MODE, LESSON REPEAT & LEARN, METRONOME, PORTABLE GRAND, DEMO, FUNCTION, TOUCH, HARMONY, DUAL, SPLIT, TEMPO/TAP, [0] – [9], [+], [–], CATEGORY, Dial, ACMP ON/OFF, SYNC STOP, SYNC START, START/STOP, INTRO/ENDING/rit., MAIN/AUTO FILL, REGIST. MEMORY ([●] (MEMORY/BANK), [1], [2]), SONG MEMORY (REC, [1] – [5], [A])

Realtime Control
- Pitch Bend Wheel

Voice
- 114 panel voices + 12 drum kits + 359 XGlite voices + 2 XGlite optional voices
- Polyphony: 32
- DUAL
- SPLIT

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

Education Feature
- Dictionary
- Lesson 1-3, Lesson Repeat & Learn

Registration Memory
- 8 banks x 2 types

Function
- VOLUME: Style Volume, Song Volume
- OVERALL: Tuning, Transpose, Split Point, Touch Sensi-tivity, Pitch Bend Range
- MAIN VOICE: Volume, Octave, Pan, Reverb Send Level, Chorus Send Level
- DUAL VOICE: Voice, Volume, Octave, Pan, Reverb Send Level, Chorus Send Level
- SPLIT VOICE: Voice, Volume, Octave, Pan, Reverb Send Level, Chorus Send Level
- EFFECT: Reverb Type, Chorus Type, Panel Sustain
- HARMONY: Harmony Type, Harmony Volume
- PC: PC1/PC2/Off
- MIDI: Local On/Off, External Clock, Initial Setup Send, Keyboard Out, Style Out, Song Out, Bulk Send
- METRONOME: Time Signature, Metronome Volume
- LESSON: Lesson Track (R), Lesson Track (L)
- UTILITY: Grade, Demo Cancel

Effects
- Reverb: 9 types
- Chorus: 4 types
- Harmony: 26 types

Song
- 30 Preset Songs + 5 User Songs + Accessory CD-ROM Songs (70)
- Song Clear, Track Clear
- Song Volume

Performance assistant technology

Recording
- Song
  User Song: 5 Songs
  Recording Tracks: 1, 2, 3, 4, 5, STYLE

MIDI
- Local On/Off
- Initial Setup Send
- External Clock
- Keyboard Out
- Style Out
- Song Out
- Bulk Send

Auxiliary jacks
- PHONES/OUTPUT, DC IN 12V, USB, SUSTAIN

Amplifier
- 6W + 6W

Speakers
- 12cm x 2 + 3cm x 2

Power Consumption
- 20W (When using PA-5D power adaptor)

Power Supply
- Adaptor: Yamaha PA-5D AC power adaptor
- Batteries: Six “D” size, R20P (LR20) or equivalent batteries

Dimensions (W x D x H)
- 1,178 x 412 x 150 mm (46-3/8" x 16-1/4" x 5-7/8")

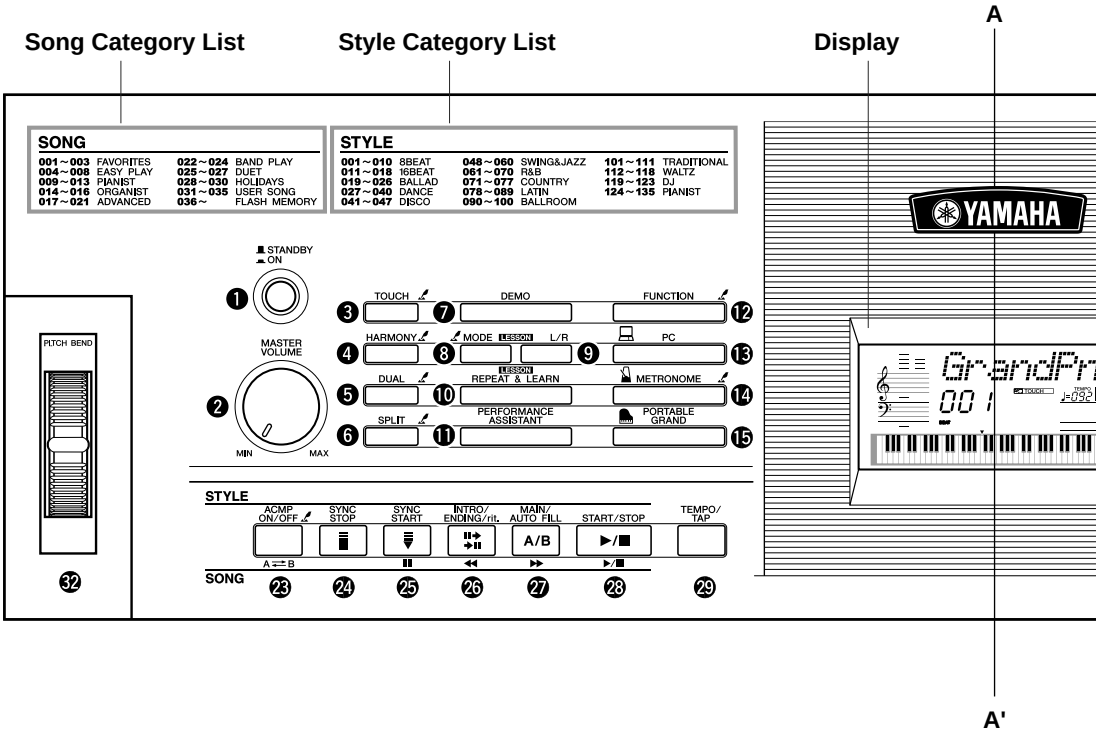
Weight
- 8.8kg (19 lbs. 6 oz.) (not including batteries)

Supplied Accessories
- Music Rest
- Accessory CD-ROM
- Owner’s Manual
- Song Book

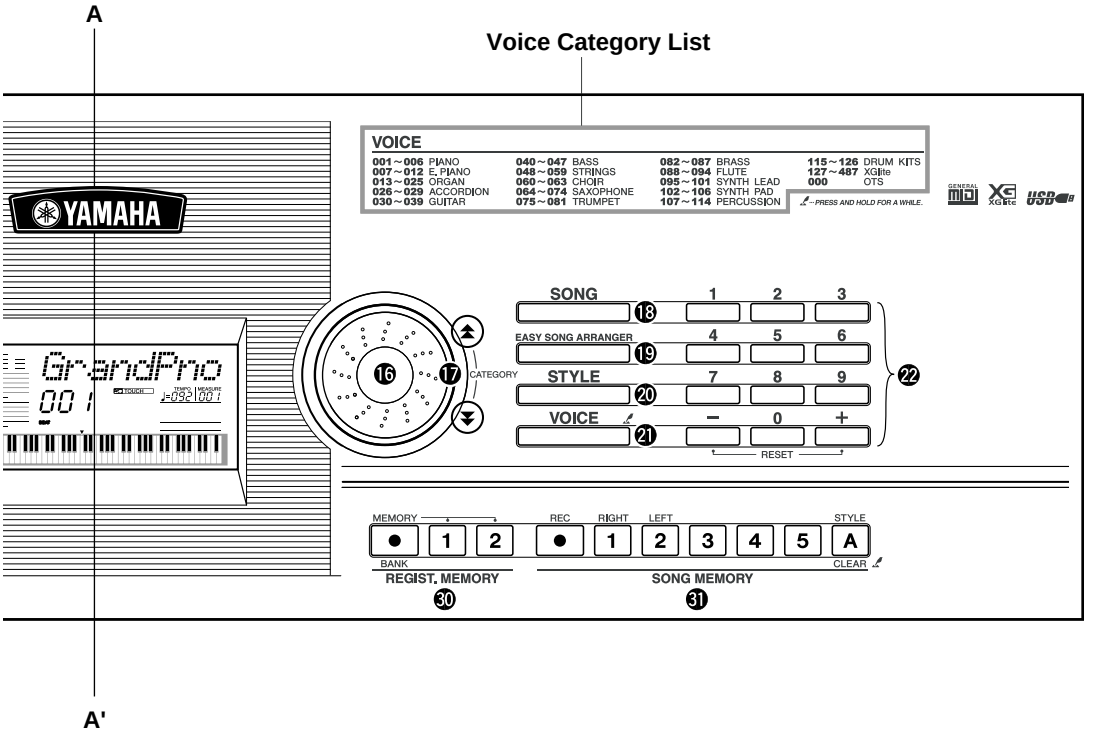
Optional Accessories
- AC Power Adaptor: PA-5D/PA-5C
- Footswitch: FC4/FC5
- Keyboard Stand: LW-15/LW-16

PANEL LAYOUT

• Front Panel



❶ [STANDBY/ON] switch
❷ [MASTER VOLUME] control
❸ [TOUCH] button
❹ [HARMONY] button
❺ [DUAL] button
❻ [SPLIT] button
❼ [DEMO] button
❽ [LESSON MODE] button
❾ [LESSON L/R] button
❿ [LESSON REPEAT & LEARN] button
⓫ [PERFORMANCE ASSISTANT] button
⓬ [FUNCTION] button
⓭ [PC] button
⓮ [METRONOME] button
⓯ [PORTABLE GRAND] button
⓰ Dial
⓱ CATEGORY buttons [▲], [▼]
⓲ [SONG] button
⓳ [EASY SONG ARRANGER] button
⓴ [STYLE] button
㉑ [VOICE] button
㉒ Number buttons [0] – [9], [+] and [-] buttons
㉓ [ACMP ON/OFF] / [A ⇄ B] button
㉔ [SYNC STOP] button
㉕ [SYNC START] / [❚❚] button
㉖ [INTRO/ENDING/rit.] / [◀◀] button
㉗ [MAIN/AUTO FILL] / [▶▶] button
㉘ [START/STOP] / [▶ / ■] button
㉙ [TEMPO/TAP] button
㉚ REGIST. MEMORY [●] (MEMORY/BANK), [1], [2] buttons
㉛ SONG MEMORY [REC], [1] – [5], [A] buttons
㉜ PITCH BEND wheel

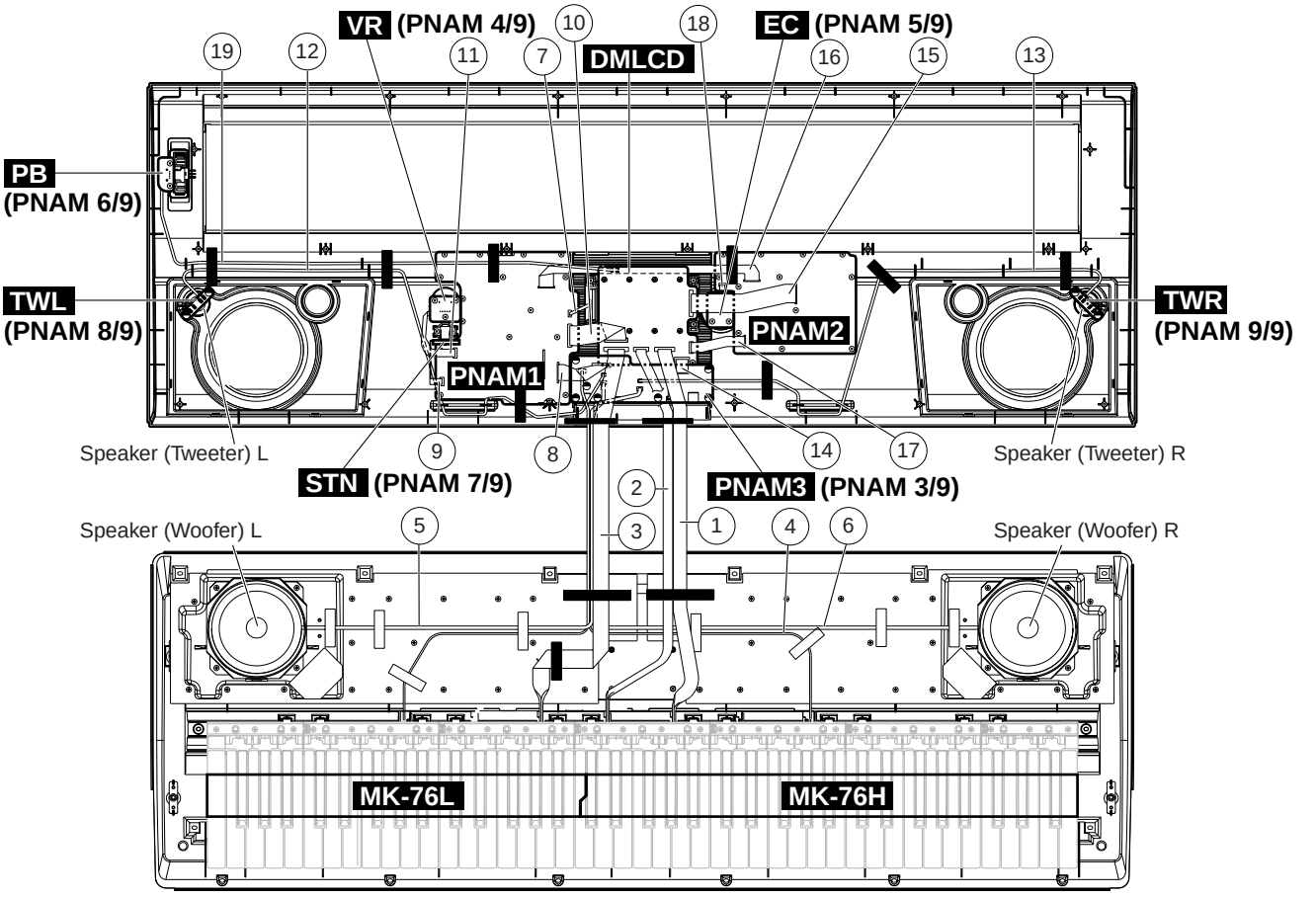


• Rear Panel



㉝ **USB terminal**
㉞ **SUSTAIN jack**
㉟ **PHONES/OUTPUT jack**
㊱ **DC IN 12V jack**

■ CIRCUIT BOARD LAYOUT & WIRING

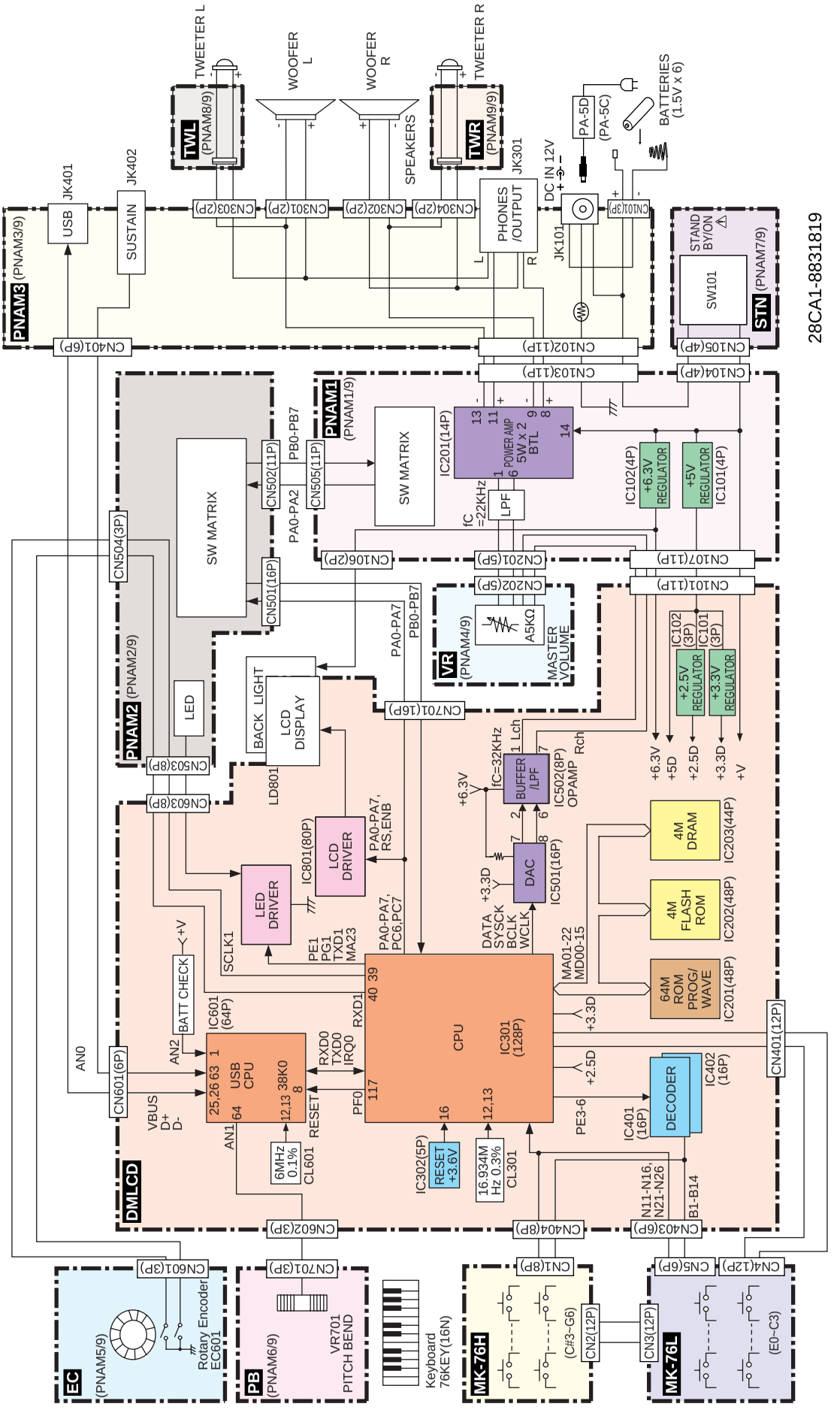


No.	Location	Part No.	Connector Assembly	Destination						Remarks	
①	30	- -	MK5	MK-76H-CN1	*1	*4	DMLCD-CN404	*1	*4	8P	L=550 (WC60150)
②	40	- -	MK4	MK-76L-CN5	*1	*4	DMLCD-CN403	*1	*4	6P	L=600 (WC60140)
③	50	- -	MK1	MK-76L-CN4	*1	*4	DMLCD-CN401	*1	*4	12P	L=600 (WC60100)
④	130	- -	BAT	Battery	*3	*5	PNAM3-CN101	*1	*6	3P	(W873560)
⑤	220	- -	SP-L	Speaker-L (Wo)	*3	*7	PNAM3-CN301	*1	*8	2P	(V901490)
⑥	230	- -	SP-R	Speaker-R (Wo)	*3	*9	PNAM3-CN302	*1	*6	2P	(V901510)
⑦	L70	- -	BL	Back light assembly	*3	*10	PNAM1-CN106	*1	*4	2P	L=70 (WC60260)
⑧	WA102	- -	AM	PNAM1-CN103	*2	*4	PNAM3-CN102	*1	*4	11P	L=130 (WC60180)
⑨	WA105	- -	STAN	STN-CN105	*2	*4	PNAM1-CN104	*1	*4	4P	L=130 (WC60170)
⑩	WA107	- -	AM	PNAM1-CN107	*2	*4	DMLCD-CN101	*1	*4	11P	L=130 (WC60180)
⑪	WA202	- -	VOL	VR-CN202	*2	*4	PNAM1-CN201	*1	*4	5P	L=160 (WC60160)
⑫	WA303	- -	TW7	PNAM3-CN303	*2	*4	TWL	*3	*10	2P	L=760 (WC60280)
⑬	WA304	- -	TW7	PNAM3-CN304	*2	*4	TWR	*3	*10	2P	L=760 (WC60280)
⑭	WA401	- -	JACK	PNAM3-CN401	*2	*4	DMLCD-CN601	*1	*4	6P	L=70 (WC60190)
⑮	WA501	- -	PN1	PNAM2-CN501	*2	*4	DMLCD-CN701	*1	*4	16P	L=200 (WC60230)
⑯	WA502	- -	PN3	PNAM2-CN502	*2	*4	PNAM1-CN505	*2	*4	11P	L=350 (WC60250)
⑰	WA503	- -	PN2	PNAM2-CN503	*2	*4	DMLCD-CN603	*1	*4	8P	L=110 (WC60240)
⑱	WA504	- -	ENC	EC-CN601	*2	*4	PNAM2-CN504	*1	*4	3P	L=70 (WC60210)
⑲	WA701	- -	PB	PB-CN701	*2	*4	DMLCD-CN602	*1	*4	3P	L=720 (WC60220)

* The parts with "–" in "Part No." are not available as spare parts.
* 1 : Installation
* 2 : Dip soldering
* 3 : Manual soldering
* 4 : Edge mark is adjusted to Pin 1 mark (△mark).
* 5 : Red wire is connected to (+) terminal. Black wire is connected to (-) terminal.
* 6 : Red wire is adjusted to Pin 1 mark (△mark).
* 7 : Brown wire is connected to (+) terminal.
* 8 : Brown wire is adjusted to Pin 1 mark (△mark).
* 9 : Red wire is connected to (+) terminal.
* 10 : Edge mark is adjusted to + mark (+ mark).

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

BLOCK DIAGRAM

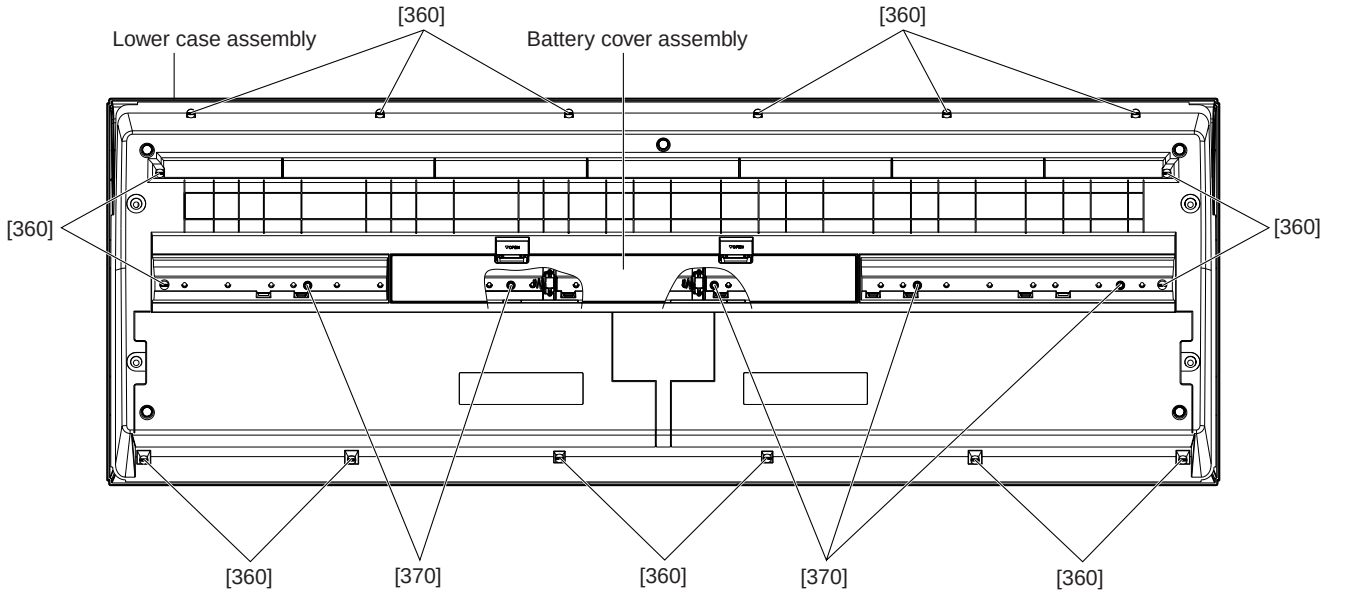


■ DISASSEMBLY PROCEDURE

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

1-1. Remove the battery cover assembly. (Fig. 1)

1-2. Remove the sixteen (16) screws marked [360] and the five (5) screws marked [370]. The lower case assembly can then be removed. (Fig. 1)



[360]: Bind Head Tapping Screw-B 3.0 x 12 MFZN2Y (VE683000)

[370]: Bind Head Tapping Screw-B 3.0 x 30 MFZN2Y (V7213700)

Fig.1

2. Spring Terminal

A. Spring Terminal (+) and (-)

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

2-2. Remove the battery harness soldered to the spring terminal (+) or (-).(Fig. 2)

2-3. Remove the hooks (two at each place) and pull out the spring terminal (+) or (-). (Fig. 3-1)(Fig. 3-2)

B. Spring Terminal

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

2-2. Remove spring terminal hooks (two at each place) and pull out the spring terminal. (Fig. 3-2).

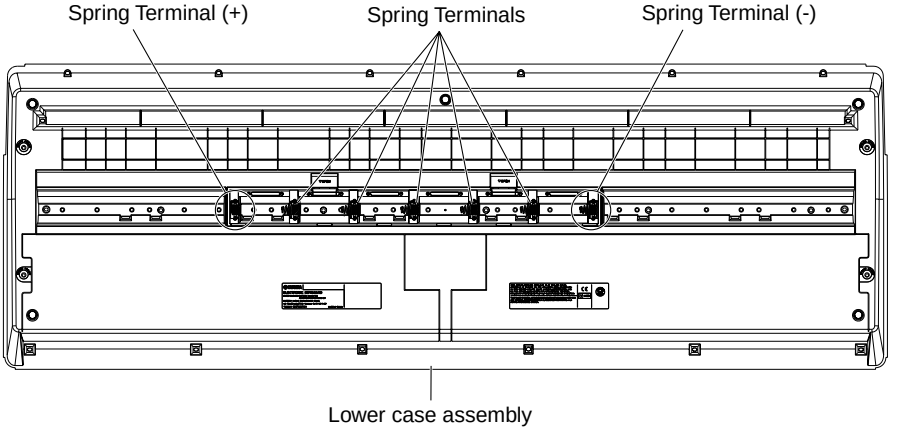


Fig.2

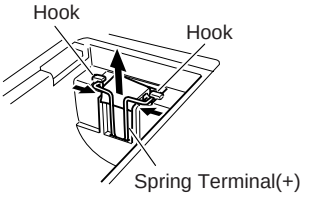


Fig.3-1

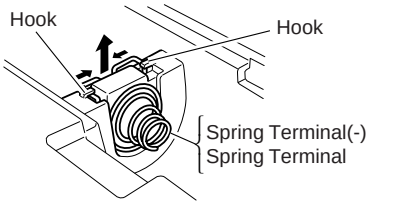


Fig.3-2

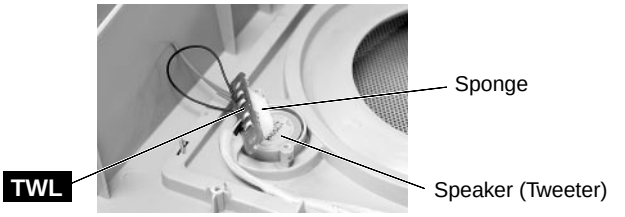
3. TWL Circuit Board, TWR Circuit Board, Speaker (Tweeter)

(Time required: About 4 minutes for each)

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

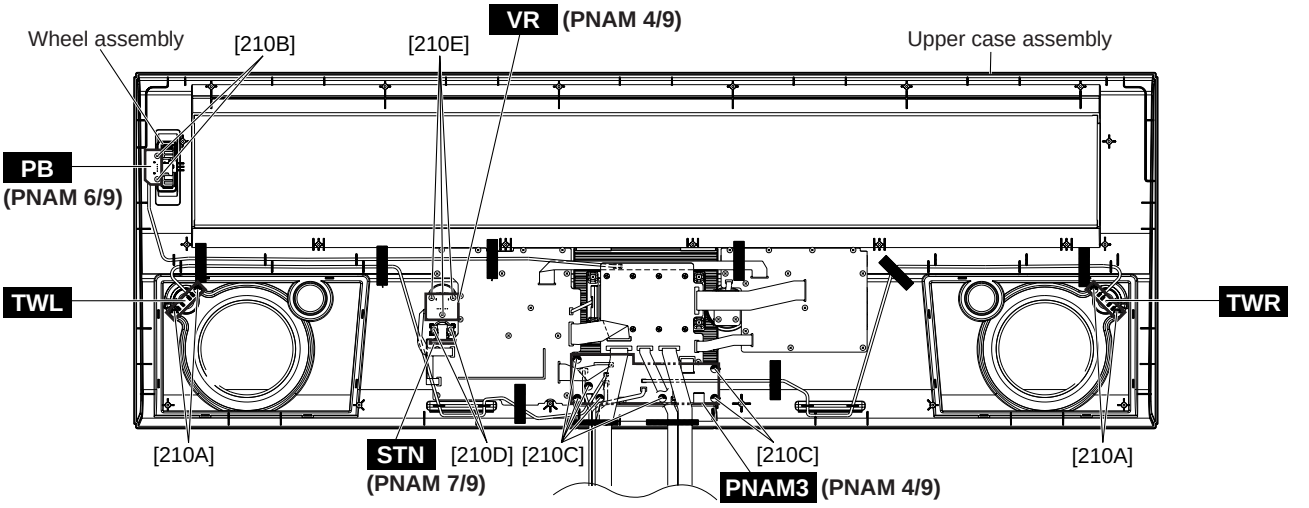
3-2. Remove two (2) screws [210A], then remove the TWL circuit board (TWR circuit board). (Fig. 4)

3-3. Remove the speaker (tweeter). (Photo 1)



*** The TWR circuit board can be removed in the same way.**

Photo.1



[210]: Bind Head Tapping Screw-B 3.0 x 8 MFZN2Y (EP600250)

Fig.4

4. PB (PNAM 6/9) Circuit Board (Time required: About 4 minutes)

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

4-2. Remove two (2) screws [210B], then remove the PB (PNAM 6/9) circuit board and the wheel assembly. (Fig. 4)

* The wheel assembly is inserted and mounted on the volume shaft of the PB (PNAM 6/9) circuit board.

5. PNAM3 (PNAM 3/9) Circuit Board (Time required: About 5 minutes)

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

5-2. Remove seven (7) screws [210C], then remove the PNAM3 (PNAM 3/9) circuit board. (Fig. 4)

6. STN (PNAM 7/9) Circuit Board (Time required: About 4 minutes)

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

6-2. Remove two (2) screws [210D], then remove the STN (PNAM 7/9) circuit board. (Fig. 4)

7. VR (PNAM 4/9) Circuit Board (Time required: About 5 minutes)

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

7-2. Remove the master volume from the control panel. (Fig. 5)

7-3. Remove three (3) screws [210E], then remove the VR (PNAM 4/9) circuit board. (Fig. 4)

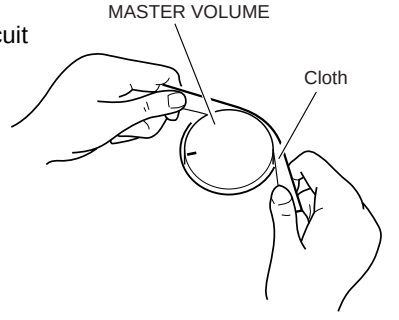
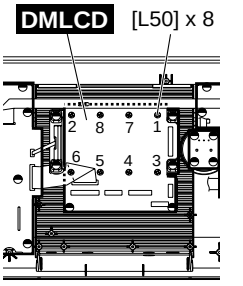


Fig.5

8. LCD Unit, DMLCD Circuit Board (Time required: About 7 minutes)

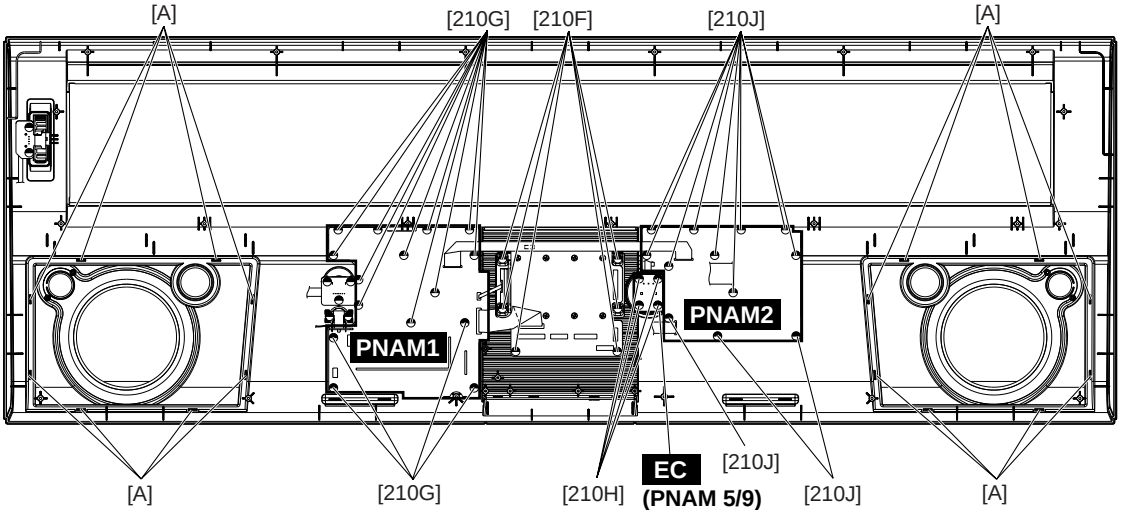
8-1. Remove the lower case assembly. (See procedure 1.)
8-2. Remove the PNAM3 (PNAM 3/9) circuit board. (See procedure 5.)
8-3. Remove six (6) screws [210F], then remove the LCD unit. (Fig. 6)
8-4. Remove eight (8) screws [L50], then remove the DMLCD circuit board form the LCD unit. (Fig. 6-1)

* When installing the DMLCD circuit board, tighten the screws from No. 1 through No. 8 in order as shown in Fig. 6-1.



[L50]: Bind Head Tapping Screw-P 3.0 x 12 MFZN2Y (VE683000)

Fig.6-1



[210]: Bind Head Tapping Screw-B 3.0 x 8 MFZN2Y (EP600250)

Fig.6

9. PNAM1 Circuit Board, PNAM2 Circuit board (Time required: About 7 minutes for each)

9-1. Remove the lower case assembly. (See procedure 1.)
9-2. Remove the STN (PNAM 7/9) circuit board. (See procedure 6.)
9-3. Remove the VR (PNAM 4/9) circuit board. (See procedure 7.)

9-4. PNAM1 Circuit Board

9-4-1. Remove fifteen (15) screws [210G], then remove the PNAM1 circuit board. (Fig. 6)

9-5. PNAM2 Circuit Board

9-5-1. Remove twelve (12) screws [210J], then remove the PNAM2 circuit boards. (Fig. 6)

* The CN505 connector on the PNAM1 circuit board and the CN502 connector on the PNAM2 circuit board, which is connected to the CN505 connector cannot be removed.

10. EC (PNAM 5/9) Circuit Board

(Time required: About 5 minutes)

10-1. Remove the lower case assembly. (See procedure 1.)
10-2. Remove the encoder knob from the control panel. (Fig. 7)
10-3. Remove four (4) screws [210H], then remove the EC (PNAM 5/9) circuit board. (Fig. 6)

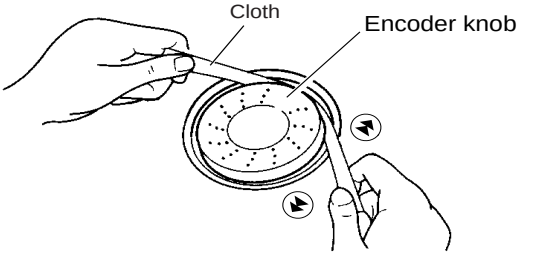


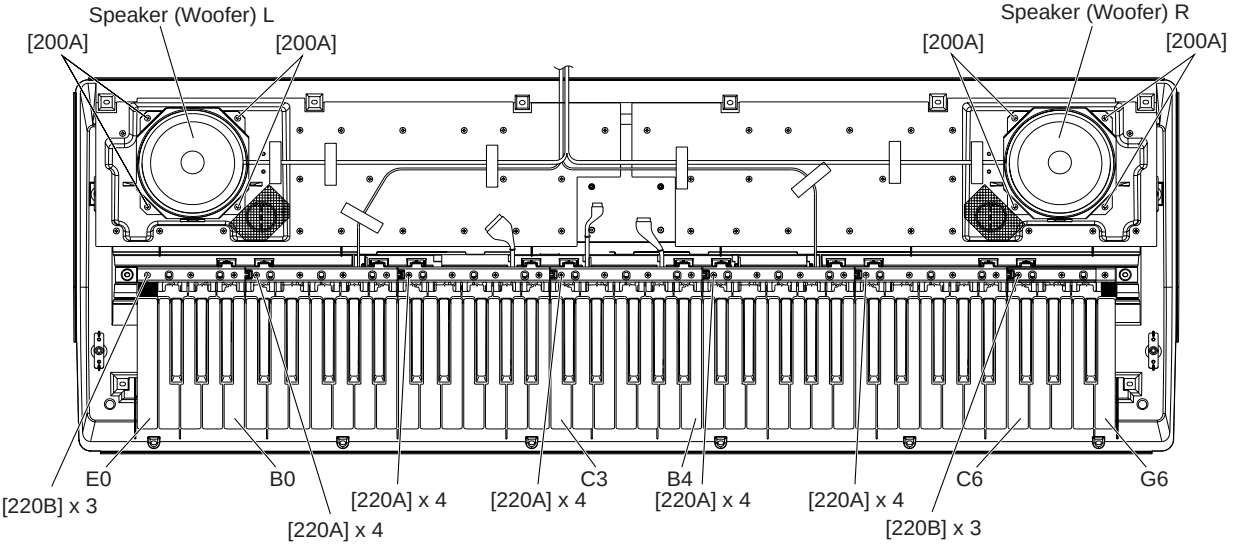
Fig.7

11. Speaker (Woofer) (Time required: About 4 minutes)

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

11-2. Remove four (4) screws [200A], then remove the speaker (woofer). (Fig. 8)

* Left and right speakers (woofers) can be removed in the same manner.



[200]: Bind Head Tapping Screw-B 4.0 x 10 MFZN2Y (EP640130)
[220]: Bind Head Tapping Screw-P 3.0 x 20 MFZN2 (VT069800)

Fig.8

12. White and Black Keys

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

12-2. Remove four (4) screws [220A] fixing the white/black keys for each octave (C through B), then remove the white/black keys for one (1) octave. (Fig. 8)
At that time, push hooks on the black keys to lift the rear part, then pull and slide the keys toward you to remove it. (Photo 2)

12-3. For the E0-B0 keys and C6-G6 keys, remove three (3) screws [220B], push hooks on the black keys to lift the rear part, and then pull and slide the keys toward you to remove it. (Fig. 8)

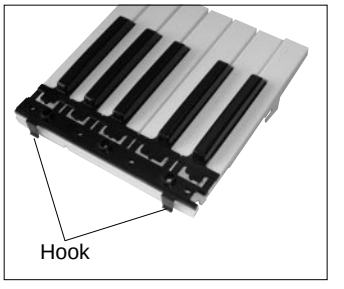


Photo.2

13. MK-76L Circuit Board, MK-76H Circuit Board (Time required: About 7 minutes for each)

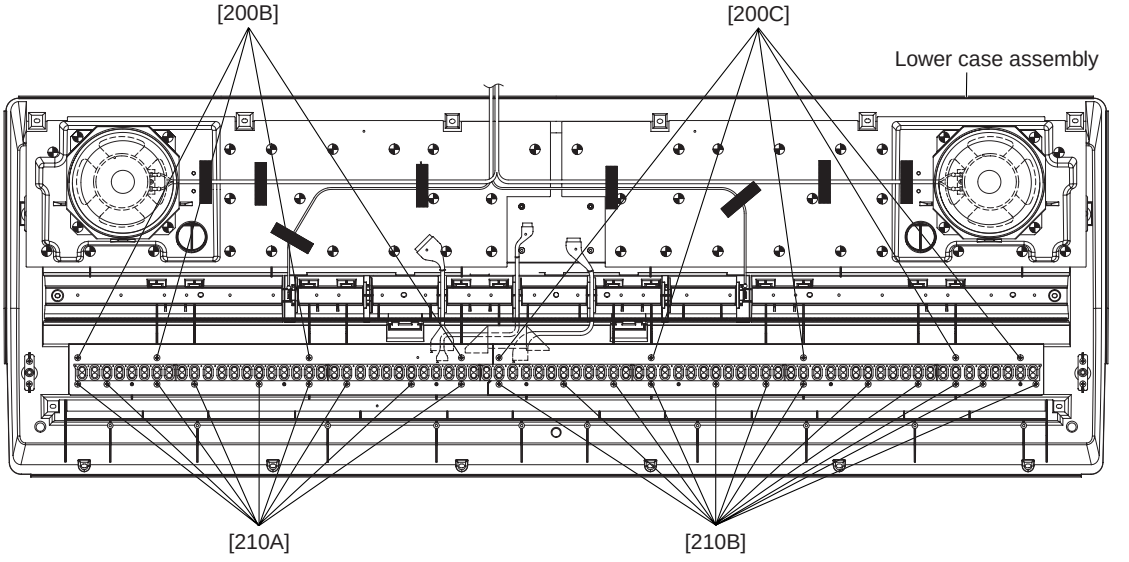
13-1. Remove the lower case assembly. (See procedure 1.)

13-2. Remove the E0-B4 white/black keys. (See procedure 12.)
Remove four (4) screws [200B] and nine (9) screws [210A], then remove the MK-76L circuit board. (Fig. 9)

13-3. Remove the C3-G6 white/black keys. (See procedure 12.)
Remove five (5) screws [200C] and twelve (12) screws [210B], then remove the MK-76H circuit board. (Fig. 9)

* When installing the MK-76L circuit board, tighten the screws from No. 1 through No. 13 in order as shown in Fig. 9-1.

* When installing the MK-76H circuit board, tighten the screws from No. 1 through No. 17 in order as shown in Fig. 9-1.



[200]: Bind Head Tapping Screw-B 3.0 x 8 MFZN2Y (EP600250)
[210]: Bind Head Tapping Screw-P 3.0 x 12 MFZNBL (VZ313100)

Fig.9

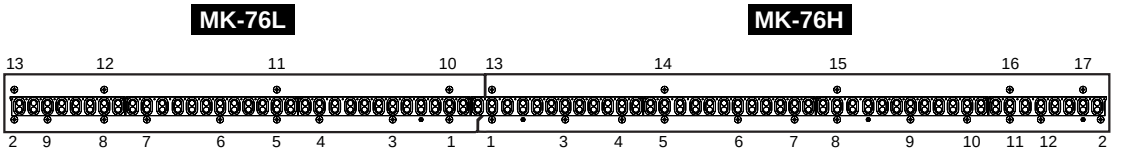


Fig.9-1

14. Rubber Contact

14-1. Remove the lower case assembly. (See procedure 1.)

14-2. Remove the keyboard assembly corresponding to the rubber contact to remove. (See procedure 12.)

14-3. Remove the rubber contact. (Photo 3.)

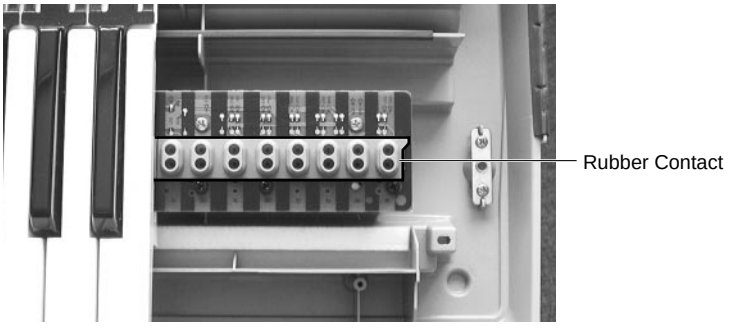


Photo.3

LSI PIN DESCRIPTION

• YMW767-V (X3271A00) CPU

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)	Ish	TEST Pin	66	IOV_{DD}		Power supply
3	PLLBPN	Ish	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	Ish	Initial clear	80	MD12	I/O+	
17	ECSN	Ish	Chip select	81	MD05	I/O+	
18	EWRN/PD5	Ish	Write enable	82	MD13	I/O+	Memory data bus
19	ERDN/PD4	Ish	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	Ish	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 /

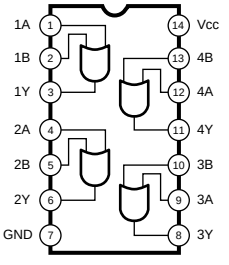
● ML9040A-B01GA (XZ987A00) LCD DRIVER

DMLCD: IC801

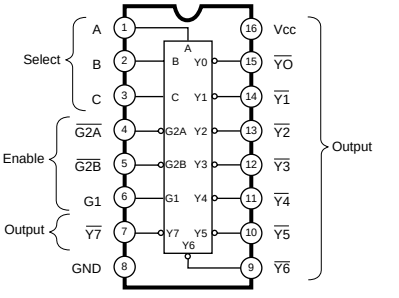
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	S22	O		41	DB2	I/O	
2	S21	O		42	DB3	I/O	
3	S20	O		43	DB4	I/O	
4	S19	O		44	DB5	I/O	Data interface
5	S18	O		45	DB6	I/O	
6	S17	O		46	DB7	I/O	
7	S16	O		47	C1	O	
8	S15	O		48	C2	O	
9	S14	O		49	C3	O	
10	S13	O		50	C4	O	
11	S12	O		51	C5	O	
12	S11	O	Segment signal output for LCD driving	52	C6	O	
13	S10	O		53	C7	O	
14	S9	O		54	C8	O	Common signal output for LCD driving
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	
24	OSC1	I	Oscillator	64	S39	O	
25	OSC2	O	Oscillator	65	S38	O	
26	V1			66	S37	O	
27	V2			67	S36	O	
28	V3		Power supply	68	S35	O	
29	V4			69	S34	O	
30	V5			70	S33	O	
31	CLK1	O	Data latch clock	71	S32	O	Segment signal output for LCD driving
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

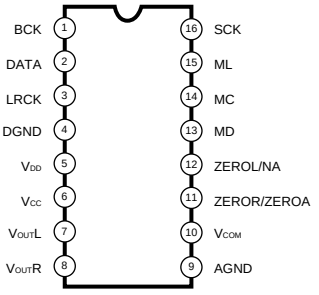
● **HD74LV32AFPEL** (IS003200)
SN74LV32ANSR SOP (X4176A00)
Quad 2 Input OR
DMLCD: IC204

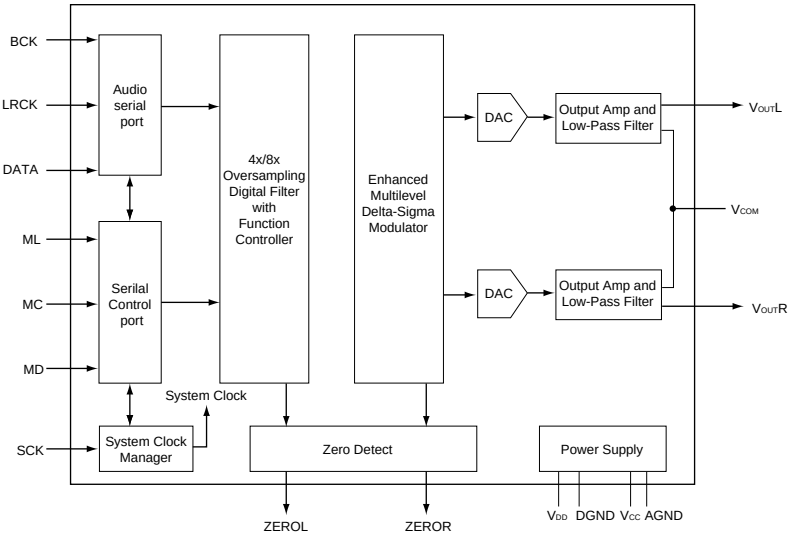


● **SN74LV138ANSR** (IS013810)
3 to 8 Demultiplexer
DMLCD: IC401,402

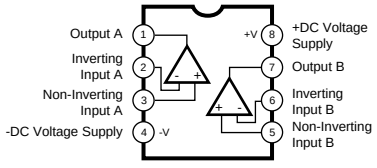


● **PCM1742KE/2K** (X3538A00)
DAC
DMLCD: IC501





● **NJM4580E T2** (X2331A00)
Dual Operational Amplifier
DMLCD: IC502

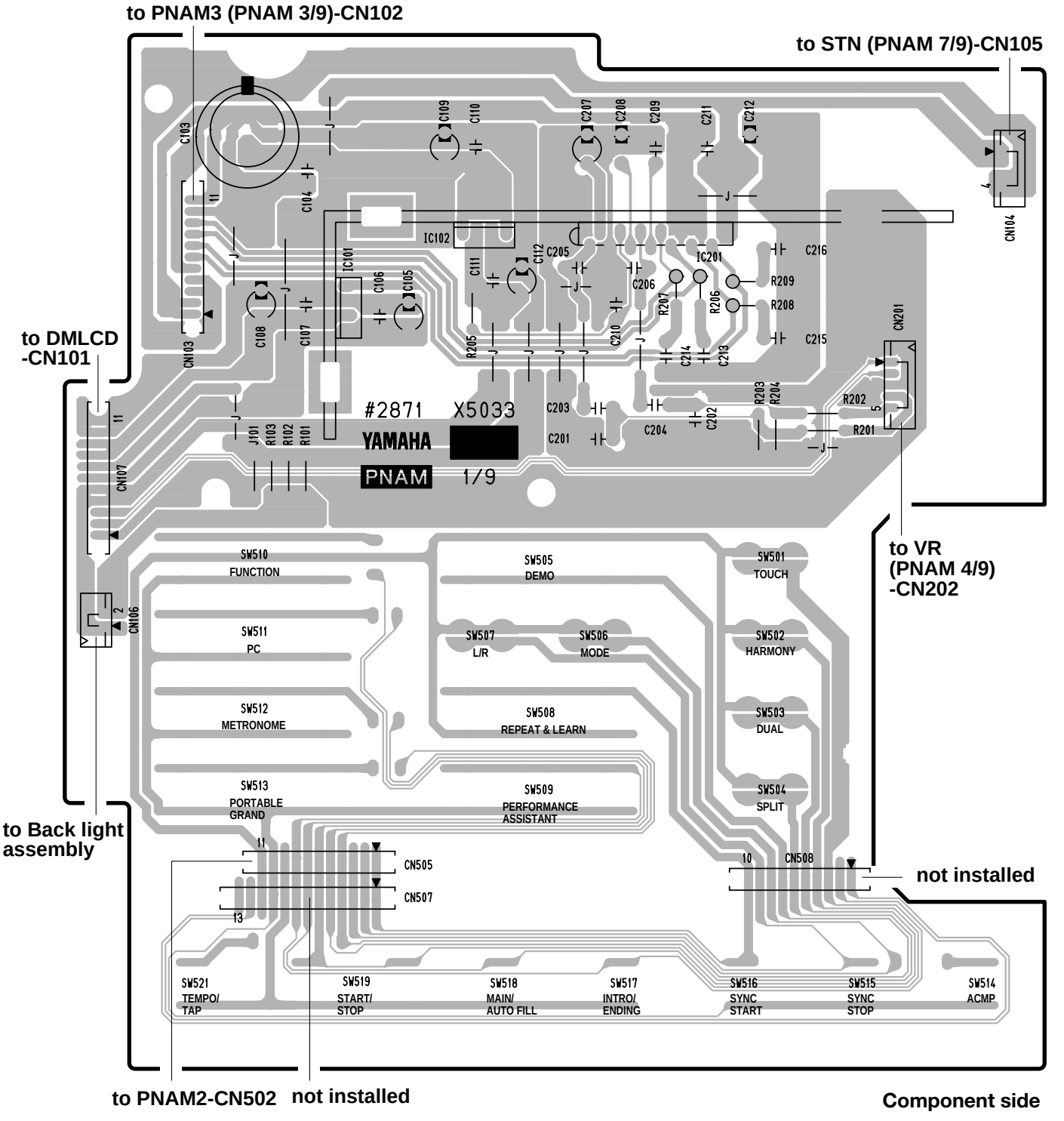


■ CIRCUIT BOARDS

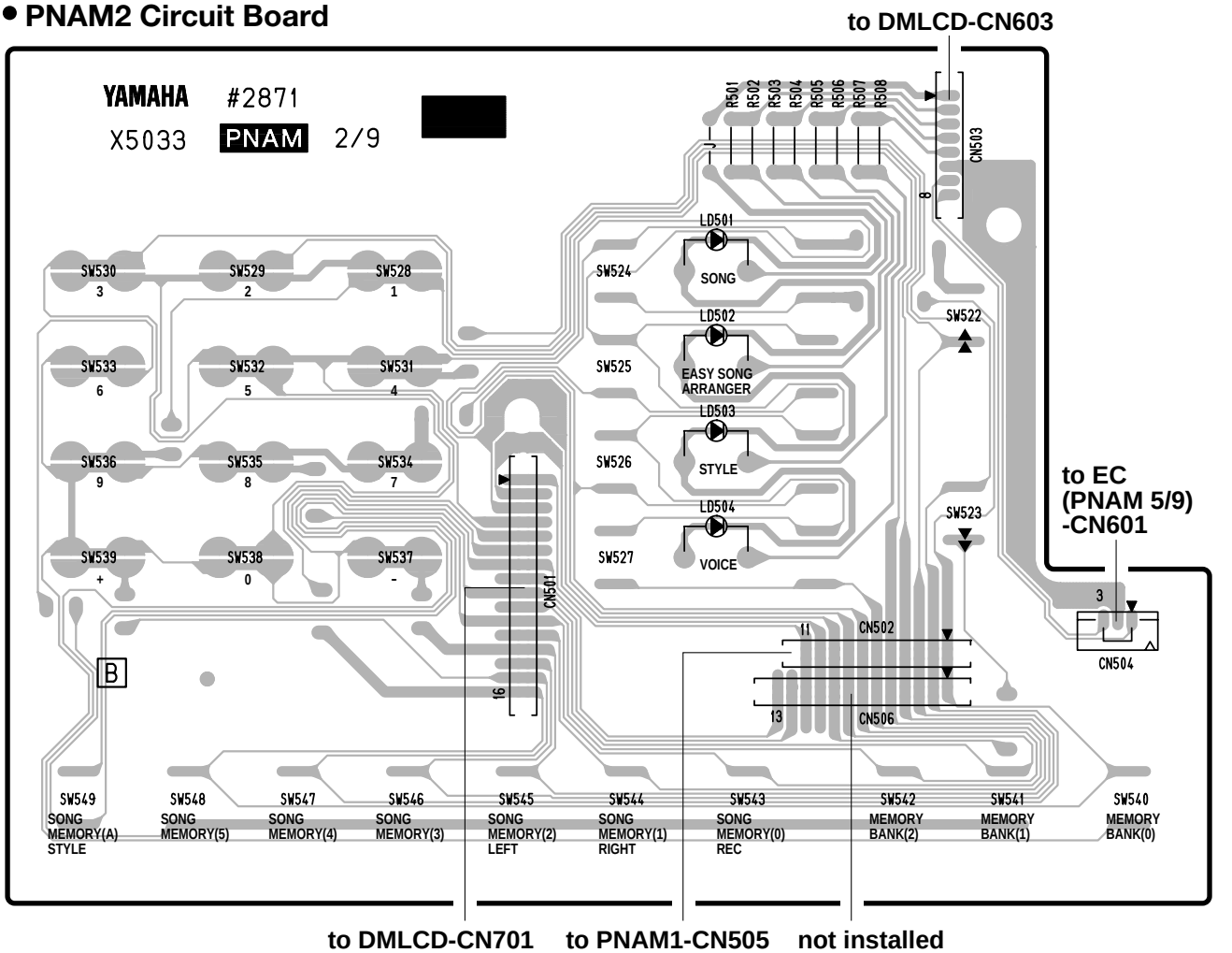
DMLCD Circuit Board (X5032C0) **18**
EC (PNAM 5/9) Circuit Board (X5033B0) **18**
MK-76H Circuit Board (X2333F0) **20**
MK-76L Circuit Board (X2334F0) **21**
PB (PNAM 6/9) Circuit Board (X5033B0) **19**
PNAM1 Circuit Board (WC59950) **16**
PNAM2 Circuit Board (WC59980) **17**
PNAM3 (PNAM 3/9) Circuit Board (X5033B0) **17**
STN (PNAM 7/9) Circuit Board (X5033B0) **19**
TWL (PNAM 8/9) Circuit Board (X5033B0) **19**
TWR (PNAM 9/9) Circuit Board (X5033B0) **19**
VR (PNAM 4/9) Circuit Board (X5033B0) **18**

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

• PNAM1 Circuit Board

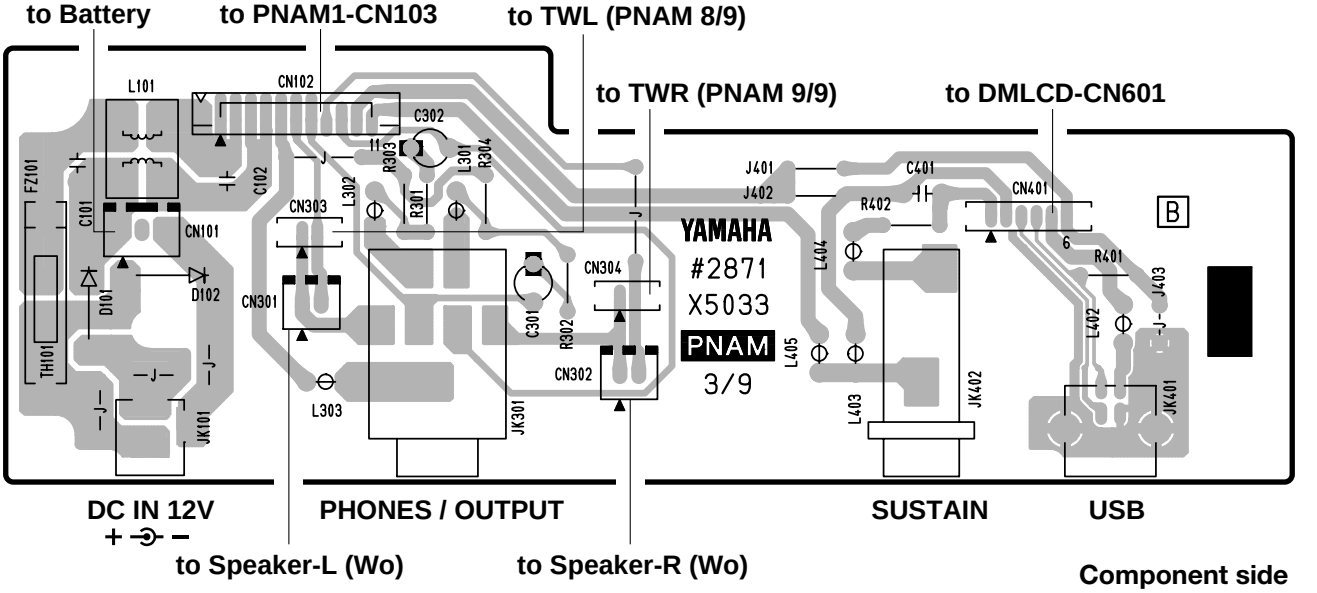


• PNAM2 Circuit Board



Component side

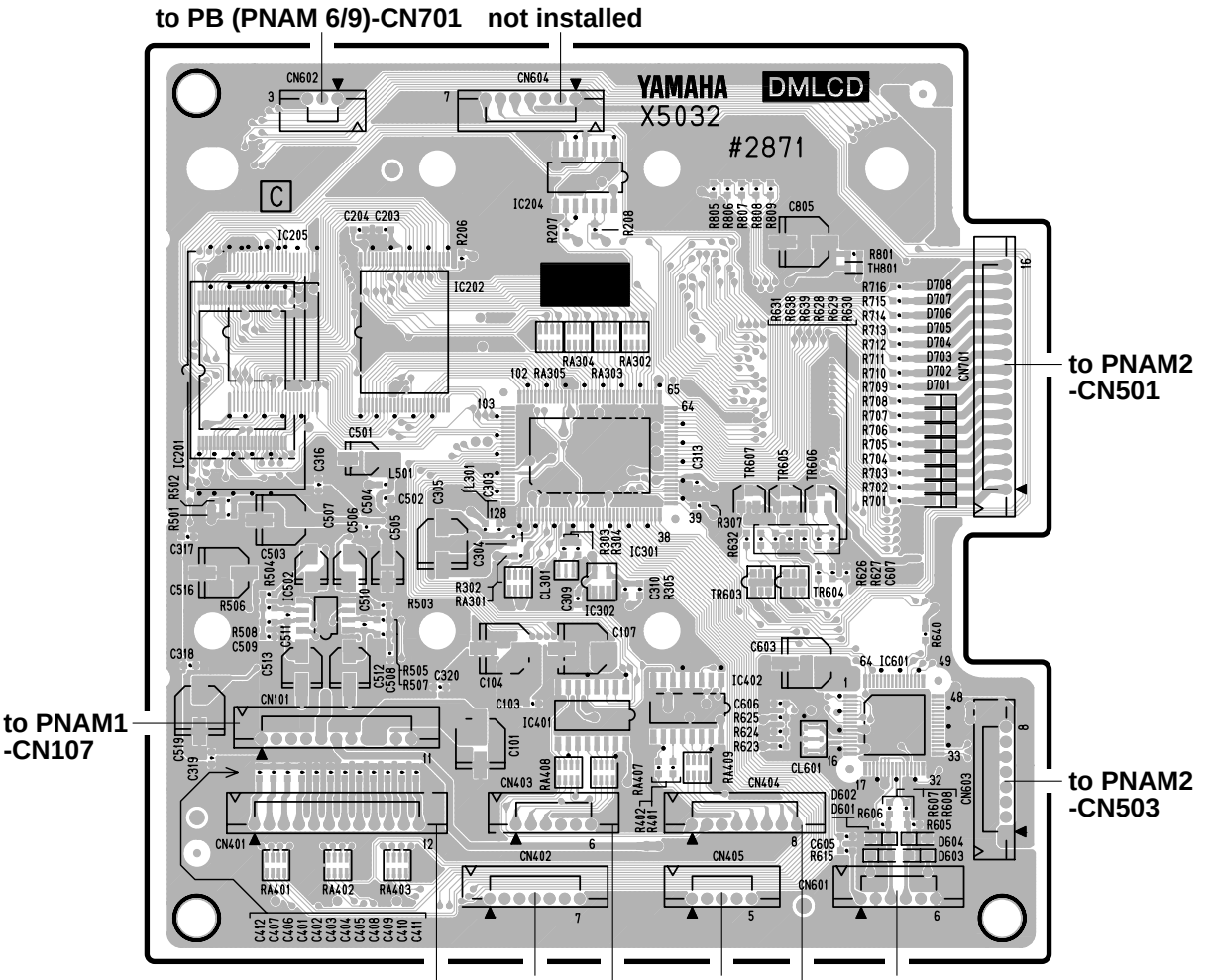
• PNAM3 (PNAM 3/9) Circuit Board



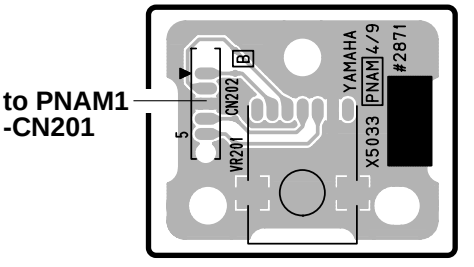
Component side

2NA-WC59830-1

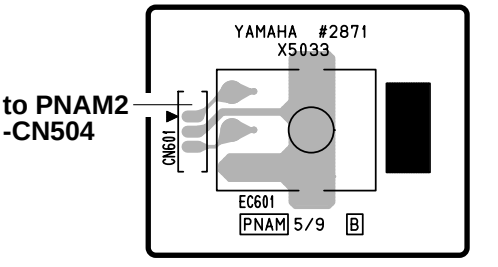
• DMLCD Circuit Board



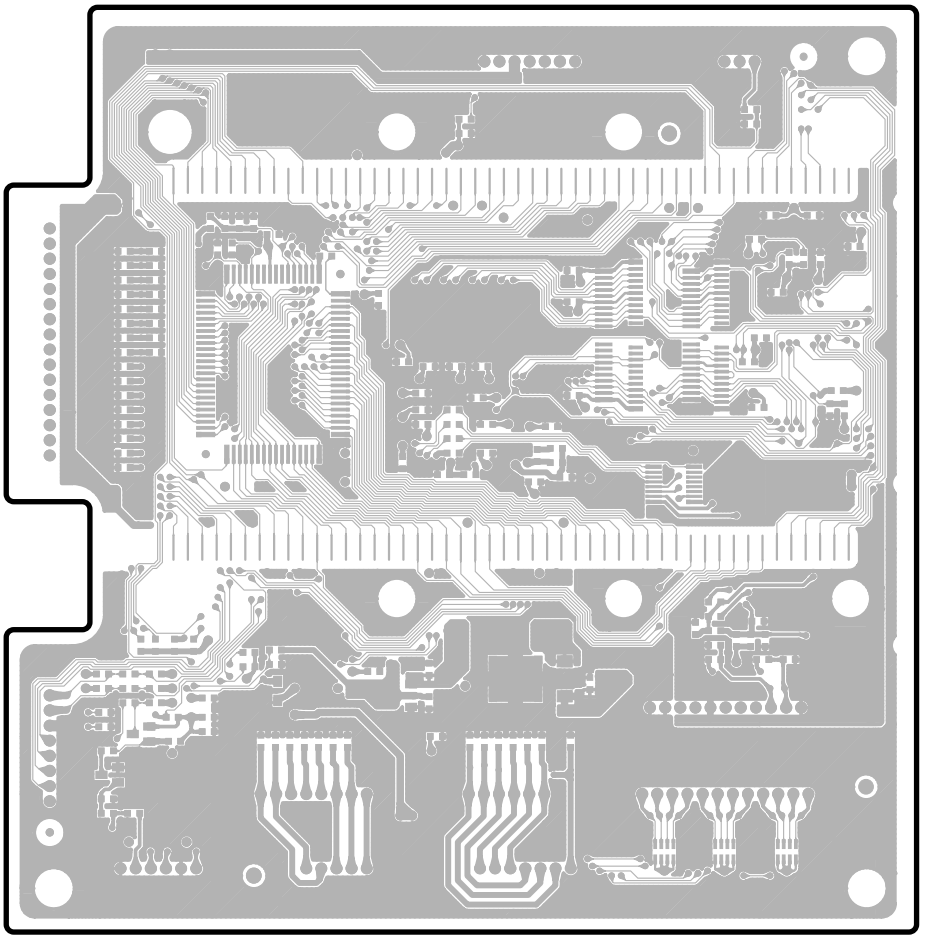
• VR (PNAM 4/9) Circuit Board



• EC (PNAM 5/9) Circuit Board

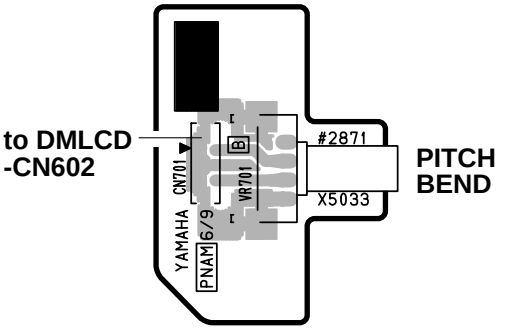


DMLCD: 2NA-WC59750-1
VR, EC: 2NA-WC59830-1



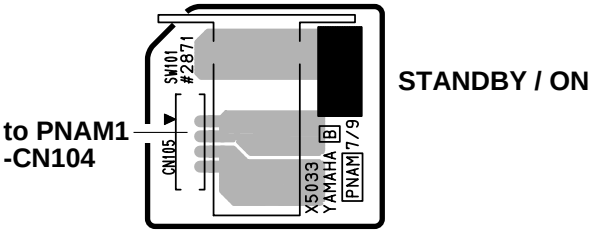
Pattern side

• PB (PNAM 6/9) Circuit Board



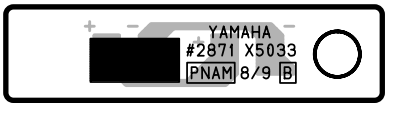
Component side

• STN (PNAM 7/9) Circuit Board



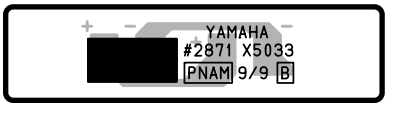
Component side

• TWL (PNAM 8/9) Circuit Board



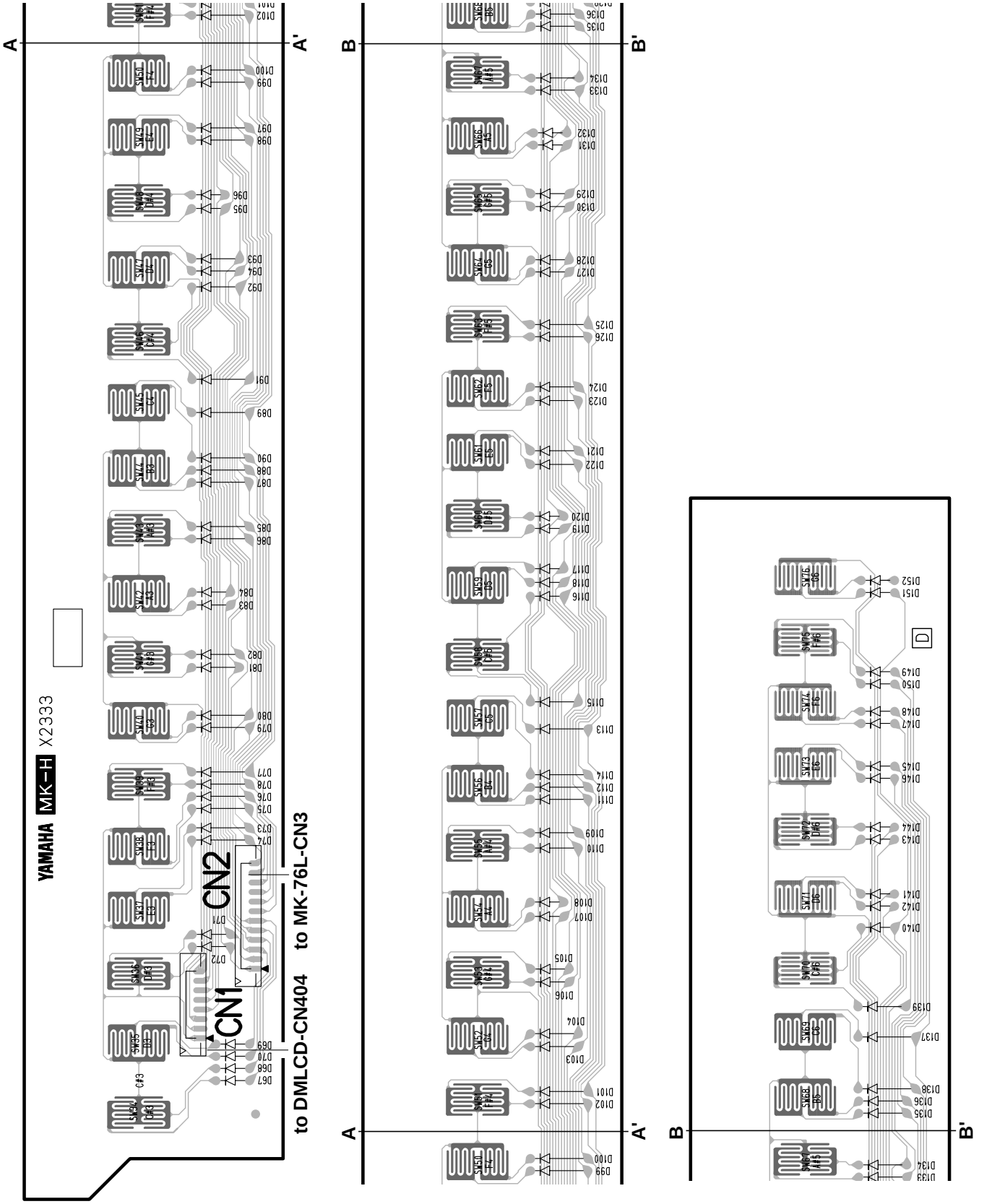
Component side

• TWR (PNAM 9/9) Circuit Board



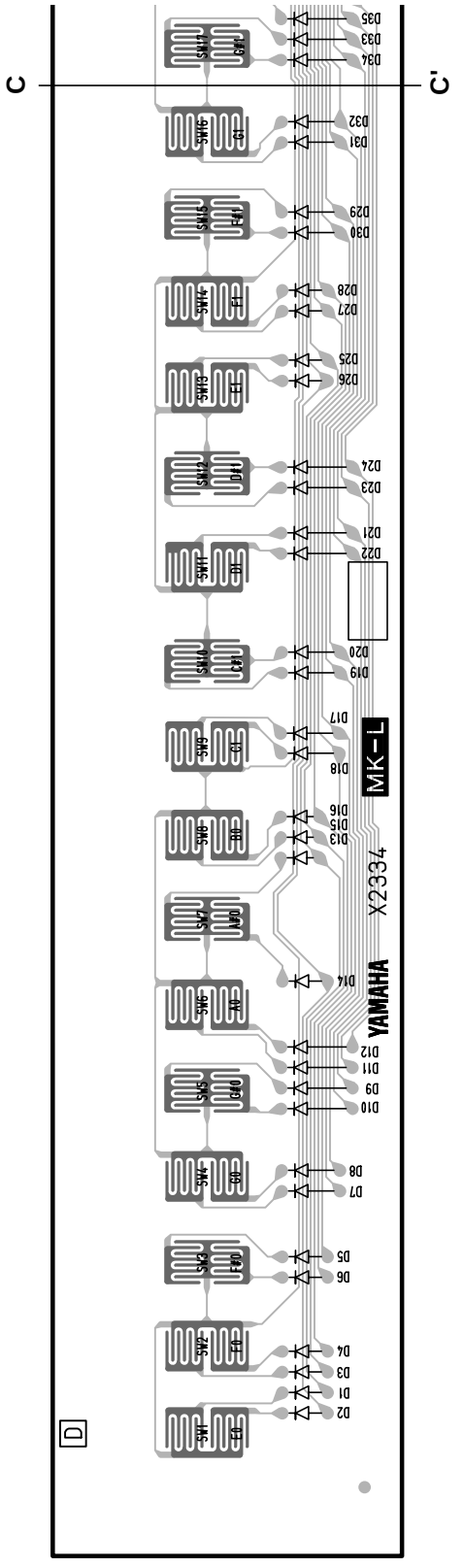
Component side

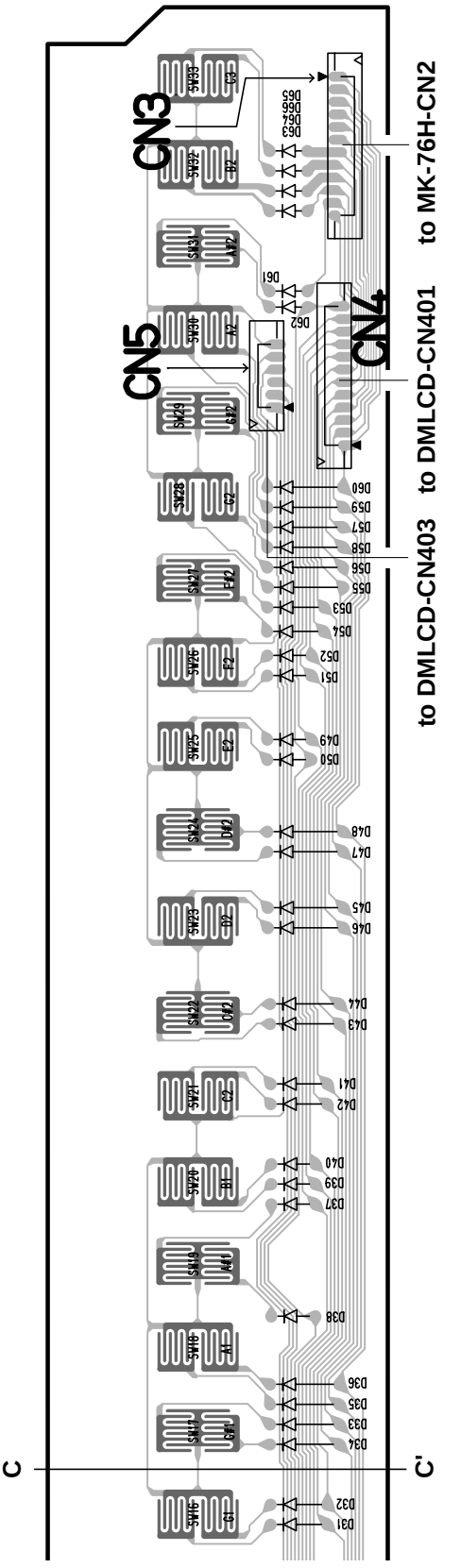
• MK-76H Circuit Board



Component side

• MK-76L Circuit Board





Component side

TEST PROGRAM

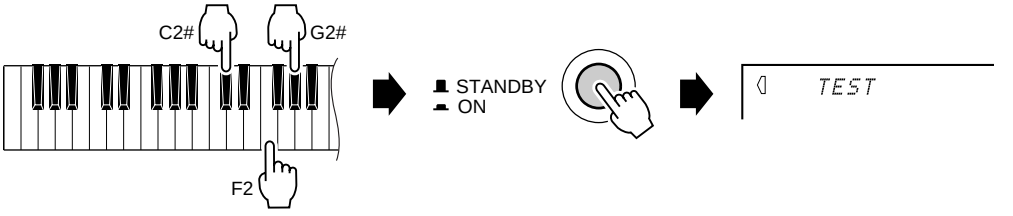
* If you execute the test No. 47, Factory Set, then preset data may be lost.

A. PREPARATION

1) PA-5D or PA-51 (AC adaptor) is used.
2) Measuring instruments : frequency counter, level meter (with JIS-C filter)
   Note : Connect a stereo plug to the [PHONES/OUTPUT] jack at 33 ohms.
3) Jigs : foot switch (FC-4 or FC-5), USB cable, PC

B. HOW TO ENTER THE TEST PROGRAM

While pressing the C2#, F2 and G2# keys, turn the [STANDBY/ON] switch on.



C. PROCEEDING THROUGH THE TEST PROGRAM

1) When the test program is started, "TEST" appears on the LCD.
2) Select the test program item to be executed by pressing the [-] or [+] button.
3) Press the [START/STOP] button to execute testing.

- When the test result is OK, press the [START/STOP] button to return to the test item name on display. Proceed to the next test by pressing the [-] or [+] button.
  When the test result is OK, a cursor (_) is added under the first character of the test item name on display.
- When the test result is NG, press the [DEMO] button or the lowest (leftmost) white key on the keyboard to return to the test item name on display and then turn off the [STANDBY/ON] switch to end the test program.

D. TEST PROGRAM LIST

TEST No.	LCD (initial)	Test Functions and Judgment Criteria
1	Version 001	ROM Version Display. The ROM (Program) version and the USB CPU version are alternatively displayed.
2	Rom Chk1 002	Checks the ROMs that are connected to the CPU. The test results appear on the LCD. Check that the LCD displays "Rom OK".
3	Ram Chk1 003	Checks all the RAMs that are connected to the CPU. The test results appear on the LCD. Check that the LCD displays "Ram OK".
6	FRomChk1 006	Flash ROMs Check that are connected to the CPU. The check results appear. Check that the "FRom OK" is displayed. It takes about 3 seconds.
11	TG1 Chk 011	Outputs the sine wave by changing the channels in sequence from C2 to G4. Check the sound by hearing that there is not noise or abnormal sound. After auto-scaling is finished, individual keys can be played. (If playing two or more keys simultaneously, the first pressed key has priority to make a sound.)
13	Pit Chk 013	Connect the frequency counter to the [PHONES/OUTPUT] jack. (L or R) Sets PAN to Center and produces a signal at 440.0 Hz ± 1.76 Hz Check that the correct signal is produced.
14	Output R 014	Connect the level meter (with a JIS-C filter) to the [PHONES/OUTPUT] jack. (33 ohm load) Set the [MASTER VOLUME] at maximum and check the output level (1 kHz sine wave, PAN=R). PHONES L : less than -60.0 dBm PHONES R : -9.5 dBm ± 2 dB
15	Output L 015	Connect the level meter (with a JIS-C filter) to the [PHONES/OUTPUT] jack. (33 ohm load) Set the [MASTER VOLUME] at maximum and check the output level (1 kHz sine wave, PAN=L). PHONES L : -9.5 dBm ± 2 dB PHONES R : less than -60.0 dBm

TEST No.	LCD (initial)	Test Functions and Judgment Criteria
19	Noise 019	Connect the level meter (with a JIS-C filter) to the [PHONES/OUTPUT] jack. (33 ohm load) Set the [MASTER VOLUME] at maximum. Check D/A converter noise. PHONES L/R : Less than -76.0 dBm
20	SW Chk 020	Check the switches on the panel. Press the switches on the LCD as instructed. A pre-assigned note is output when the switch is pressed. (See "table 1".) As the check result appears on the LCD when all the switches are pressed as instructed. Check that "SW OK" is displayed. (To stop this check before reaching its end, press the lowest (leftmost) white key on the keyboard to return to the test item name on display.)
21	A.LedChk 021	Check that the all LEDs on the panel are on.
28	LCD On 028	Check that all LCD dots are on.
29	LCD Off 029	Check that all LCD dots are off.
31	PD1 Chk 031	Connect the foot switch (FC-4 or FC-5) to the [FOOT SWITCH] jack. Check that the C3 note is output when the [START/STOP] button is pressed while stepping the pedal and the C4 note is output when releasing the pedal. The sound stops when stepping the pedal again. Check that the LCD displays "PD1 OK".
33	PB Chk 033	Checks the pitch bend wheel. Check that the C3 note is output when rotating the [PITCH BEND]wheel to minimum and the C4 note is output when rotating it to maximum. Check that the LCD displays "PB OK".
37	USB Chk 037	USB Check. Connect a PC installed with drivers to the main unit with a USB cable, and execute the test. Produce a C4 sound, and check that the LCD displays "USB OK".
40	Battery 040	Check the battery. Removing the AC adapter sets to the Battery Check mode. (In advance, install the batteries.) The A/D value of the battery is detec ted and displayed with hexadecimal number on the LCD. Bat:xx (83-A0)
41	Rom Chk2 041	Checks the ROMs that are connected to the CPU. The test results appear on the LCD. Check that the LCD displays "Rom OK". It takes about 15 seconds.
42	Ram Chk2 042	Checks the RAMs that are connected to the CPU. The test results appear on the LCD. Check that the LCD displays "Ram OK".
45	FRomChk2 045	Check for all addresses of Flash ROM. The check results appear on the LCD. Check that the "FRom OK" is displayed. It takes about 35 seconds.
47	Factory 047	All Backup domains are initialized and it changes into a factory-shipments state. Check that the LCD displays "Fact End".
48	TestExit 048	Exit from the test program after executing this test.

● TABLE 1

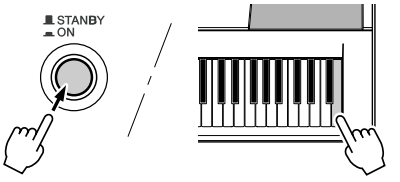
No.	SW Name	Display	Note No.
1	DIAL UP	Dial UP	C2
2	DIAL DOWN	Dial DW	C#2
3	TOUCH	Touch	D2
4	HARMONY	Harmony	D#2
5	DUAL	Dual	E2
6	SPLIT	Split	F2
7	DEMO	Demo	F#2
8	LESSON MODE	LessonMd	G2
9	LESSON L/R	LessonLR	G#2
10	REP & LEARN	Rep & Lean	A2
11	P.A.T.	P.A.T.	A#2
12	FUNCTION	Function	B2
13	PC	PC	C3
14	METRONOME	Metro	C#3
15	PORTABLE GRAND	Piano	D3
16	CATEGORY +	Catego +	D#3
17	CATEGORY –	Catego –	E3
18	SONG	Song	F3
19	EASY SONG ARRANGE	E.S.A.	F#3
20	STYLE	Style	G3
21	VOICE	Voice	G#3
22	Tenkey 1	Tenkey 1	A3
23	Tenkey 2	Tenkey 2	A#3
24	Tenkey 3	Tenkey 3	B3
25	Tenkey 4	Tenkey 4	C4
26	Tenkey 5	Tenkey 5	C#4
27	Tenkey 6	Tenkey 6	D4
28	Tenkey 7	Tenkey 7	D#4
29	Tenkey 8	Tenkey 8	E4
30	Tenkey 9	Tenkey 9	F4
31	Tenkey –	Tenkey –	F#4
32	Tenkey 0	Tenkey 0	G4
33	Tenkey +	Tenkey +	G#4
34	ACMP	ACMP	A4
35	SYNC.STOP	S.Stop	A#4
36	SYNC.START	S.Start	B4
37	INTRO/ENDING	Intro	C5
38	MAIN/AUTO FILL	Main/Fil	C#5
39	START/STOP	Str/Stp	D5
40	TEMPO/TAP	Temp/TAP	D#5
41	BANK/MEMORY	Memory	E5
42	REGIST 1	Regist 1	F5
43	REGIST 2	Regist 2	F#5
44	REC	REC	G5
45	SONG 1	Song 1	G#5
46	SONG 2	Song 2	A5
47	SONG 3	Song 3	A#5
48	SONG 4	Song 4	B5
49	SONG 5	Song 5	C5
50	SONG A	Song A	C#5

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.

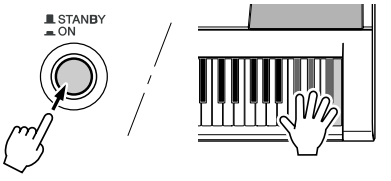
Backup Clear

To clear data backed up to the internal flash memory – panel user setting, registration memory, user songs – 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.



Flash Clear

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



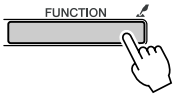
When you execute the Flash Clear operation song data you have purchased will also be cleared. Be sure to save data you want to keep to a computer.

USER DATA BACKUP

Use the Bulk Send function when backing up the user data to an external device.

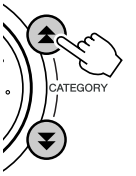
* The Bulk Send function allows to back up user-recorded data and registration data.
* The data transmitted from a computer to the main unit with supplied software "Musicsoft Downloader" cannot be sent, using the Bulk Send function. If you lost data in servicing, transmit the data again from the computer to the main unit.

1 Press the [FUNCTION] button.



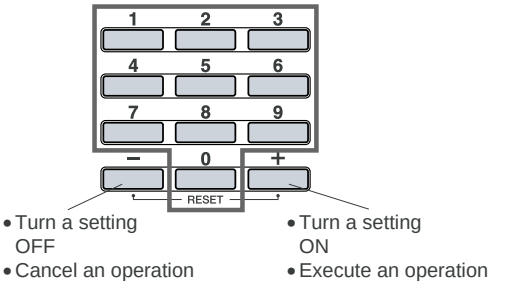


2 Use the CATEGORY [▲▲] and [▼▼] buttons to select the “Bulk Send”.



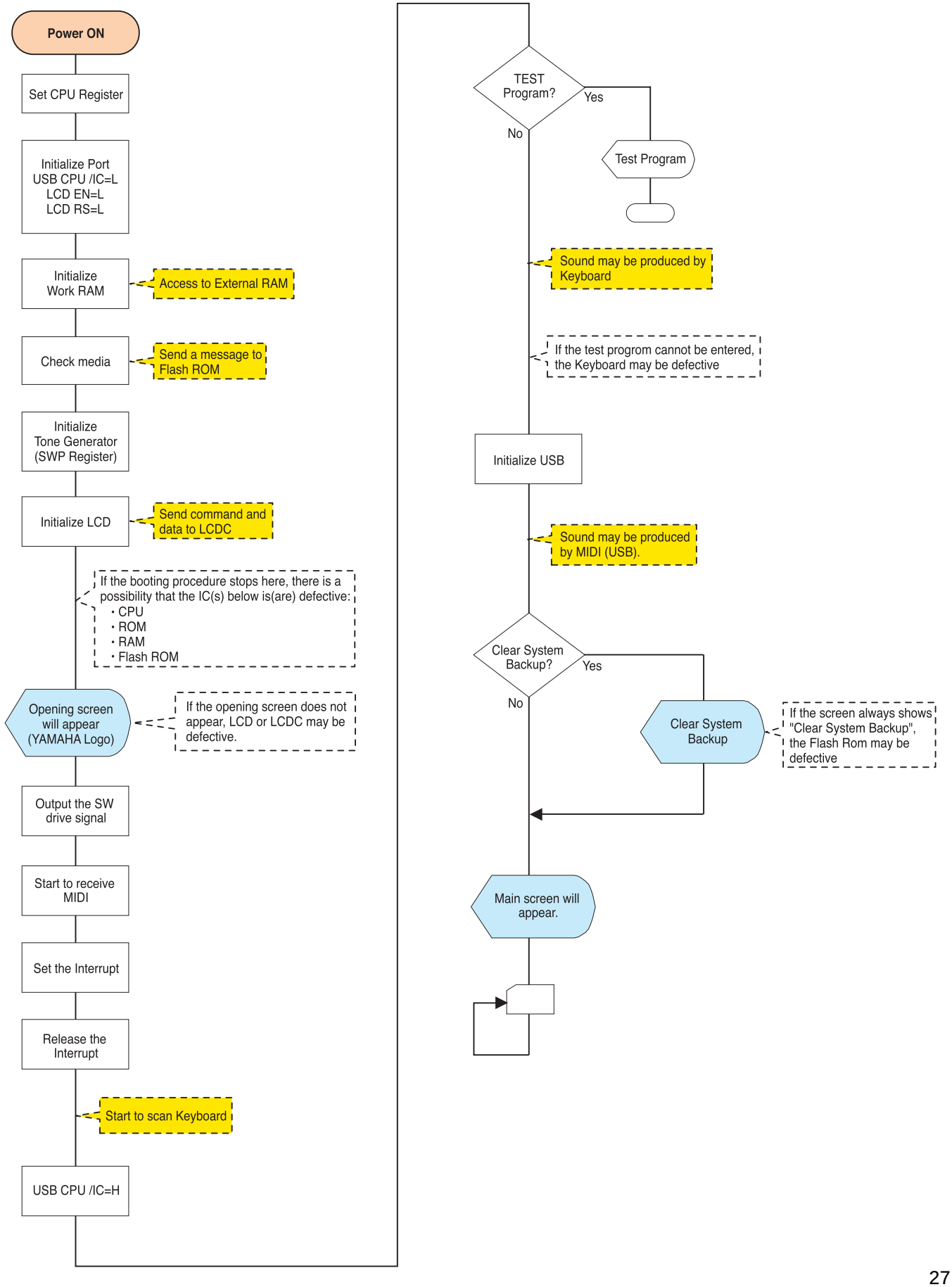


3 For ON/OFF settings use the [+] button to turn the function ON and the [-] button to turn the function OFF.



User song and registration memory data can be transmitted as bulk data to sequence software running on your computer, where it can be stored for later retrieval and use. The instrument must be connected to a computer on which the appropriate USB MIDI driver is installed. With Bulk Send showing on the instrument's display, press [+] to begin bulk data transmission. Press [-] to cancel the transmission.

SYSTEM BOOTING FLOWCHART



YAMAHA [Portable Grand] Date:27-Jan-2004
Model DGX-205/203 MIDI Implementation Chart Version : 1.0

Function...		Transmitted		Recognized	Remarks
Basic	Default	1 - 16		1 - 16	
Channel	Changed	x		x	
Mode	Default	3		3	
	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	
Control Change	0,32	o		o	Bank Select
	1	x	*1	o	Modulation wheel
	6	o		o	Data Entry(MSB)
	38	o		o	Data Entry(LSB)
	7	o		o	Part Volume
	10	o		o	Pan
	11	x	*1	o	Expression
	64	o		o	Sustain
	84	x	*1	o	Portamento Cntrl
	71	x	*1	o	Harmonic Content
	72	o		o	Release Time
	73	x	*1	o	Attack Time
	74	x	*1	o	Brightness
	91,93	o		o	Effect 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	
Common :	Song Pos.	x		x	
	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	

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

*1 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.

PortableGrand™

DGX-203/DGX-205

PARTS LIST

■ CONTENTS

OVERALL ASSEMBLY 2
LOWER CASE ASSEMBLY 5
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ELECTRICAL PARTS 9

Notes : DESTINATION ABBREVIATIONS

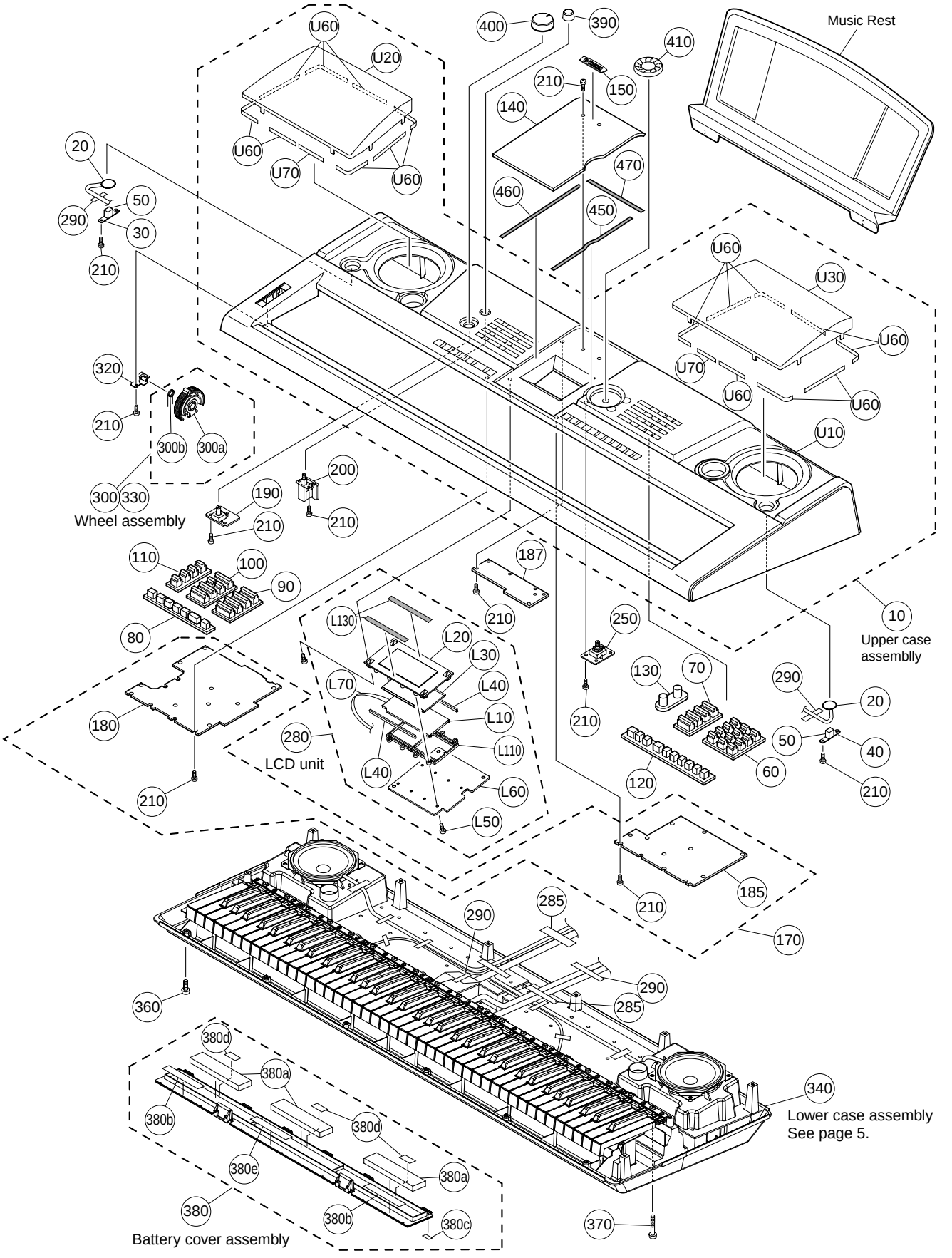
A :	Australian model	M :	South African model
B :	British model	O :	Chinese model
C :	Canadian model	Q :	South-east Asia model
D :	German model	T :	Taiwan model
E :	European model	U :	U.S.A. model
F :	French model	V :	General export model (110V)
H :	North European model	W:	General export model (220V)
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	FE		DGX-203 W.O.C (WC35620)		
		--	OVERALL ASSEMBLY			DGX-205 (WC34090)		
*	10	**WC356400**	Upper Case Assembly			DGX-203		
*	10	**WC341300**	Upper Case Assembly			DGX-205		
	20	**X0159A00**	Speaker	3.0cm		TWEETER	2	01
*	30	**WC600200**	Circuit Board	TWL(PNAM8/9)				
*	40	**WC600300**	Circuit Board	TWR(PNAM9/9)				
	50	**V3645500**	Sponge	20X10X10			2	01
*	60	**WC341500**	Panel Switch	x12		0-9,-,+		
*	70	**WC341600**	Panel Switch	x4		SONG,EASY SONG ARRANGER,		
*	80	**WC342200**	Panel Switch	x7		STYLE,VOICE SONG/STYLE(ACMP,...,TEMPO /TAP)		
*	90	**WC341800**	Panel Switch	x4		FUNCTION,PC,METRONOME, PORTABLE GRAND)		
*	100	**WC341900**	Panel Switch	x5		DEMO,LESSON MODE, LESSON L/R,LESSON REPEAT, PERFORMANCE ASSISTANT		
*	110	**WC342000**	Panel Switch	x4		TOUCH,HARMONY,DUAL,SPLIT		
*	120	**WC342100**	Panel Switch	x10		REGIST.MEMORY(BANK,1,2)		
*	130	**WC522500**	Panel Switch	x2		SONG MEMORY(REC,...,STYLE) CATEGORY		
*	140	**WC567600**	LCD Panel					
	150	**V7660600**	Emblem	YAMAHA				01
*	170	**AAX57330**	Circuit Board	PNAM1,2(1/9,2/9)				
	180	--	Circuit Board	PNAM1		(WC59950)		
	185	--	Circuit Board	PNAM2		(WC59980)		
*	187	**WC600000**	Circuit Board	PNAM3(PNAM3/9)				
*	190	**WC599700**	Circuit Board	VR(PNAM4/9)				
*	200	**WC600100**	Circuit Board	STN(PNAM7/9)				
	210	**EP600250**	Bind Head Tapping Screw-B	3.0X8 MFZN2Y			57	01
*	250	**WC599600**	Circuit Board	EC(PNAM5/9)				
	280	--	LCD Unit	PT (04B)		(WC34670)		
	285	--	Adhesive Tape	12X90		(V591240)	4	
	285	--	PET Tape	MY7# 12X90		(WB79400)	4	
	290	**VA126100**	Adhesive Tape	12X50			9	03
	290	--	PET Tape	MY7# 12X50		(WB79380)	9	
	300	**VY793100**	Wheel Assembly					04
	300a	**VY750800**	Wheel			PITCH BEND		03
	300b	**VT440100**	Spring					03
*	320	**WC599000**	Circuit Board	PB(PNAM6/9)				
	330	**TX920280**	Grease	G-31KA 50g		(VE96850)		10
	340	--	Lower Case Assembly	PT		(WC62040)		
	360	**VE683000**	Bind Head Tapping Screw-B	3.0X12 MFZN2Y			16	01
	370	**V7213700**	Bind Head Tapping Screw-B	3.0X30 MFZN2Y			5	01
	380	**V9259700**	Battery Cover Assembly	PT				03
	380a	--	Battery Cushion White			(V710060)	3	
	380b	--	Cushion	PE		(V796870)	2	
	380c	--	Nonwoven Fabric Cloth	15X3X0.5		(V925980)	6	
	380d	--	Cushion	PE 55X8X1		(WA10190)	3	
	380e	--	Cushion	PE 100X12X2		(WA21920)		
	390	**VQ218800**	Push Knob Red			STANDBY/ON		03
	400	**V8361300**	Knob Gray			MASTER VOLUME		01
	410	**V8866500**	Encoder Knob Gray			DATA Dial		01
	450	--	Protection Dust Cushion	1		(WC95110)		
	460	--	Protection Dust Cushion	2		(WC95120)		
	470	--	Protection Dust Cushion	3		(WC95130)	2	
*		**WC356400**	Upper Case Assembly			DGX-203		
*		**WC341300**	Upper Case Assembly			DGX-205		
	U10	--	Upper Case			DGX-203 (WC32050)		
	U10	--	Upper Case			DGX-205 (WC32040)		
*	U20	**WC345100**	Speaker Grille L	LEFT				
*	U30	**WC345200**	Speaker Grille R	RIGHT				
	U60	--	Nonwoven Fabric cloth	72X6X0.5		(WC95650)	16	
	U70	--	Nonwoven Fabric cloth	60X6X0.5		(WC95660)	2	
		--	LCD Unit	PT (04B)		(WC34670)		
	L10	**V8804100**	Back Light Assembly	PT E				08
	L10	**WB491100**	Back-lit Assembly	PT				

✻: New Parts

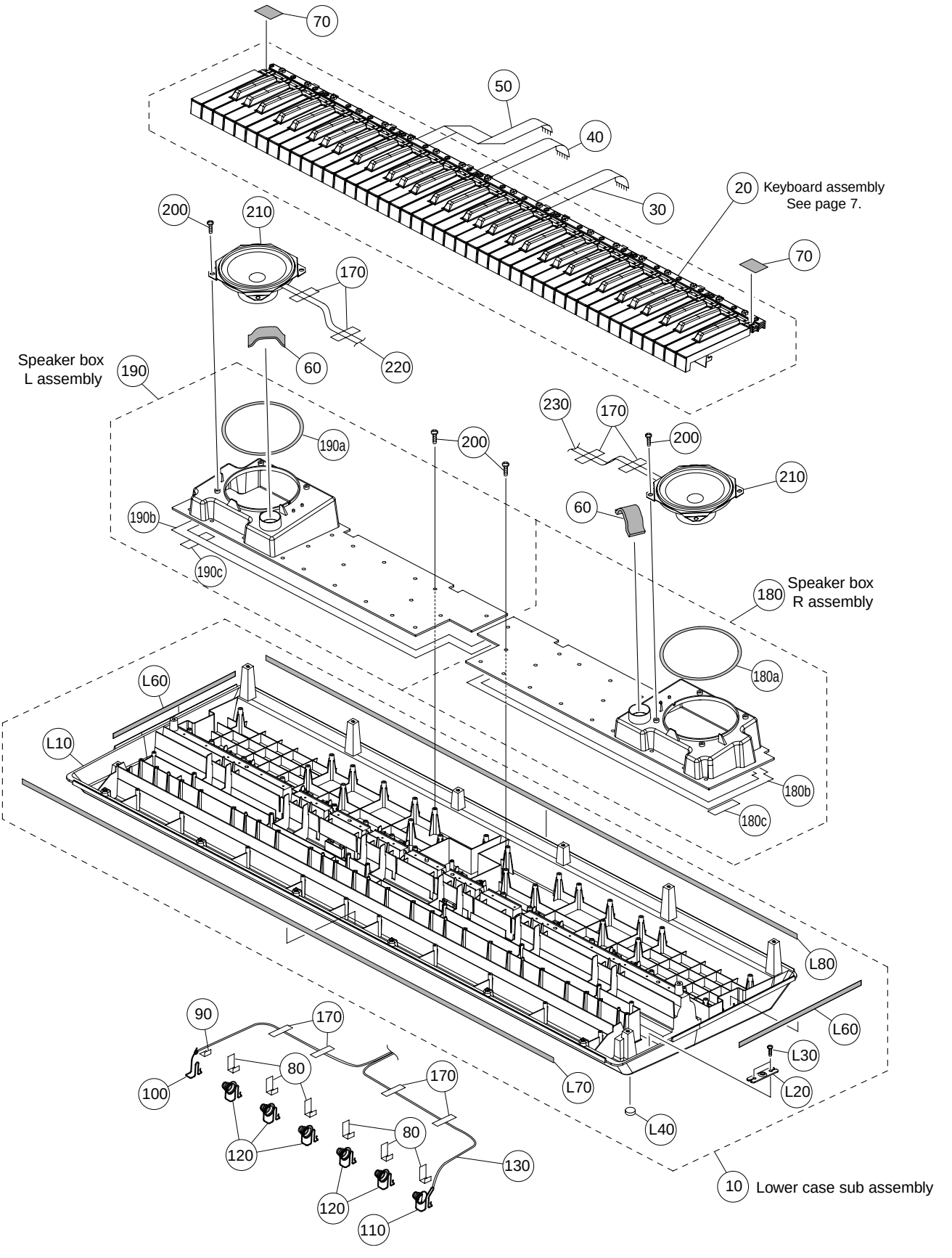
RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	L20	**WC568200**	LCD Frame	PH-55Y CHIMEI				
*	L30	**WC346900**	LCD	76				
	L40	**V7838000**	Rubber Connector	ZTT-410		}	2	03
	L40	**--**	Rubber Connector			} (V891750)	2	
	L50	**VE683000**	Bind Head Tapping Screw-B	3.0X12 MFZN2Y			8	01
	L60	**WC598200**	Circuit Board	DMLCD				
	L70	**--**	Connector Assembly	BL 2P L=70		(WC60260)		
	L110	**V8671300**	LCD Holder					
	L130	**--**	Nonwoven Fabric Cloth	0.5X95X8		(V706870)	2	
			ACCESSORIES					
		V8696800	Music Rest					05
		X5438A00	CD-ROM, Accessory	04PKL 12cm		W,U,C,O		
⚠		**VY944500**	AC Adaptor	PA-51 CH		O (Chinese model) DGX-205		
*		**WC352200**	Chinese Guide Sheet			O DGX-205		

*: New Parts

RANK: Japan only

LOWER CASE ASSEMBLY

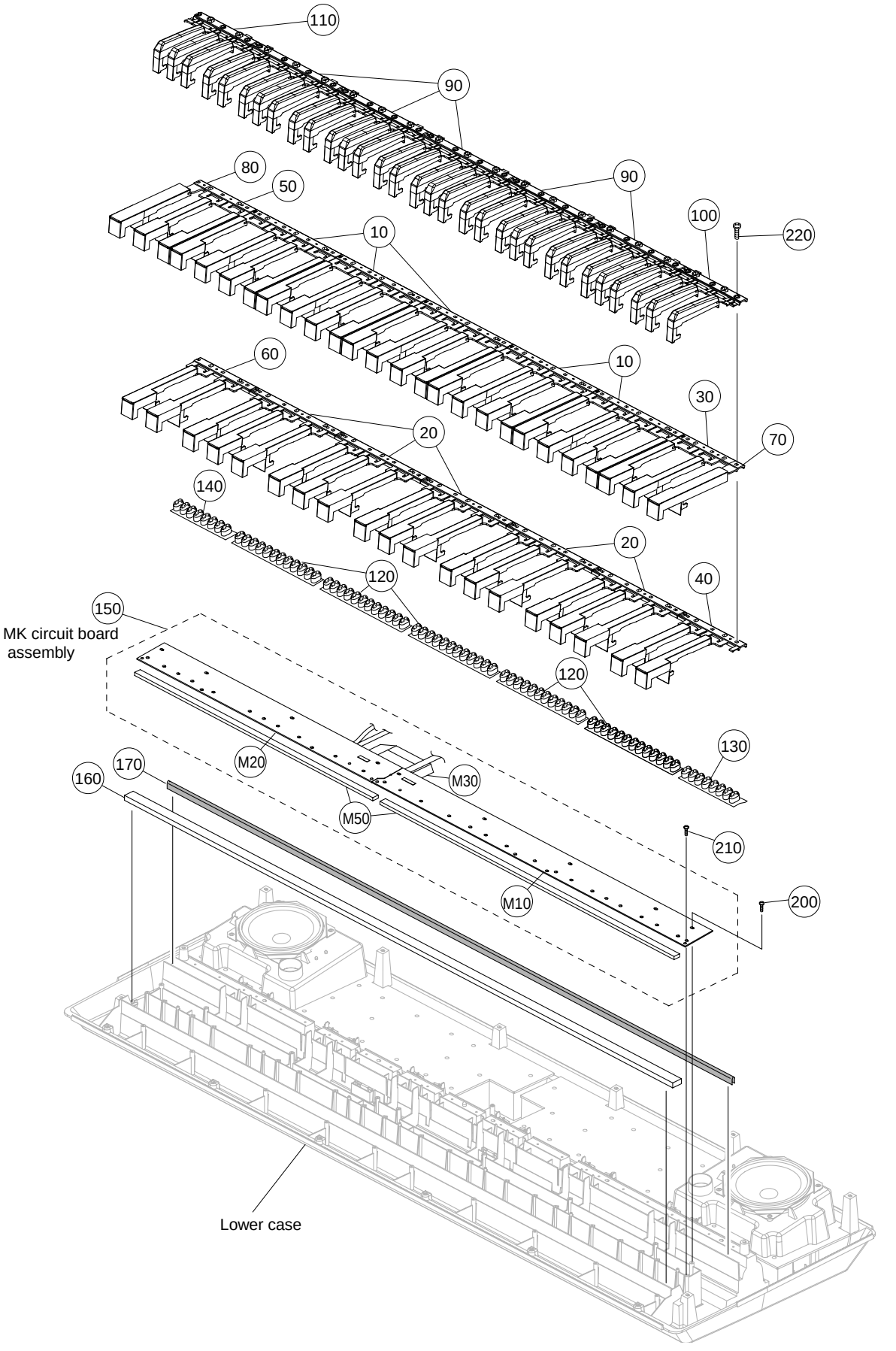


	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
		--	LOWER CASE ASSEMBLY	PT		DGX-203/DGX-205 (WC62040)		
*	10	**WD555400**	Lower Case Sub Assembly					
	20	--	Keyboard Assembly	16N-E76		(V869910)		
	30	--	Connector Assembly	MK5 8P L=550		(WC60150)		
	40	--	Connector Assembly	MK4 6P L=600		(WC60140)		
	50	--	Connector Assembly	MK1 12P L=600		(WC60100)		
	60	--	Filter Gray			(WC62030)	2	
	70	--	Nonwoven Fabric Cloth	20 15		(WC93090)	2	
	80	--	Nonwoven Fabric Cloth	40X13X0.5		(V771130)	6	
	90	--	Nonwoven Fabric Cloth	13X13X0.5		(V771140)		
	100	**V7060500**	Spring Terminal	(+)				01
	110	**V7060700**	Spring Terminal	(-)				01
	120	**V7060200**	Spring Terminal				5	01
	130	--	Connector Assembly	BAT 2P XH3P RE/BL		(V873560)		
	170	**VA126100**	Adhesive Tape	12X50			8	03
	170	--	PET Tape	MY7# 12X50		(WB79380)	8	
	180	**V8757500**	Speaker Box R Assembly	RIGHT				
	180a	--	Packing	PE		(VZ16540)		
	180b	--	Cushion	1600X15X1.0 PE		(V901030)		
	180c	--	Cushion	60X15X1.0 PE		(V956150)		
	190	**V8757600**	Speaker Box L Assembly	LEFT				
	190a	--	Packing	SP PE		(VZ16540)		
	190b	--	Cushion	1600X15X1.0 PE		(V901030)		
	190c	--	Cushion	60X15X1.0 PE		(V956150)		
	200	**EP640130**	Bind Head Tapping Screw-B	4.0X10 MFZN2Y			48	01
	210	**X2549A00**	Speaker	12.0cm 4 Ohm 8W		WOOFER	2	05
	220	--	Connector Assembly	SP-L XH 2P BR/BL		(V901490)		
	230	--	Connector Assembly	SP-R XH 2P RE/BL		(V901510)		
*		**WD555400**	Lower Case Sub Assembly					
	L10	--	Lower Case			(V875180)		
	L20	**VI104400**	Holder	CH			4	
	L30	**EP600250**	Bind Head Tapping Screw-B	3.0X8 MFZN2Y			8	01
	L40	**CB043750**	Foot Black	T1.6			5	01
	L60	--	Cushion	PE 273X15X1.0		(WD55510)	2	
	L70	--	Cushion	PE 1117X15X1.0		(WD55520)		
	L80	--	Cushion	PE 1142X15X1.0		(WD55530)		

*: New Parts

RANK: Japan only

KEYBOARD ASSEMBLY



REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	--	KEYBOARD ASSEMBLY	16N E76		DGX-203/DGX-205 (V869910)		
010	**V3412600**	White Key	16N CEGB			5	
010	**WB125200**	White Key	16N CEGB			5	
020	**V3412700**	White Key	16N DFA			5	
020	**WB125300**	White Key	16N DFA			5	
030	**V3412800**	White Key	16N CE				02
030	**WB124700**	White Key	16N CE				
040	**V3412900**	White Key	16N DF				02
040	**WB125500**	White Key	16N DF				
050	**V3413000**	White Key	16N GB				02
050	**WB124600**	White Key	16N GB				
060	**V3413100**	White Key	16N FA				02
060	**WB125600**	White Key	16N FA				
070	**V3413200**	White Key	16N G				03
080	**V3413300**	White Key	16N E				03
090	**VZ271700**	Black Key	16N			5	06
100	**V3413400**	Black Key	16N 76#H				05
110	**V3413500**	Black Key	16N 76#L				05
120	**V3413600**	Rubber Contact	16N-2M OCT 2M			5	04
130	**V3413700**	Rubber Contact	16N-2M 76H 2M		C6-G6		04
140	**V3413800**	Rubber Contact	16N-2M 76L 2M		E0-B0		04
150	--	MK Circuit Board Assembly	MK 16N2M E76-P P2		(V868640)		
160	**V3414000**	Felt L	76L 1036X11 WHITE				03
170	**V8696600**	Rubber Support	16N E76P				04
200	**EP600250**	Bind Head Tapping Screw-B	3.0X8 MFZN2Y			9	01
210	**VZ313100**	Bind Head Tapping Screw-P	SP 3.0X12 MFZNBL			21	01
220	**EP600680**	Bind Head Tapping Screw-P	3.0X20 MFZN2Y			26	01
220	**VT069800**	Bind Head Tapping Screw-P	3.0X20 MFZN2			26	01
	--	MK Circuit Board Assembly	MK 16N2M E76-P P2		(V868640)		
M10	**V8687400**	Circuit Board	76L 16N2M E76-P P2				07
M20	**V8687200**	Circuit Board	76H 16N2M E76-P P2				07
M30	**V8696300**	Connector Assembly	16N-2M-E76 L=105				01
M50	**V3413900**	Connector Assembly	76U 5 WHITE				02

✻: New Parts

RANK: Japan only

■ ELECTRICAL PARTS

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
			ELECTRICAL PARTS			DGX-203/DGX-205		
*		**WC598200**	Circuit Board	DMLCD		(WC59810)(X5032C0)		
		V8687200	Circuit Board	MK-76H		(V868750)(X2333F0)		07
		V8687400	Circuit Board	MK-76L		(V868760)(X2334F0)		07
*		**WC599600**	Circuit Board	EC(PNAM5/9)		(WC59940)(X5033B0)		
*		**WC599000**	Circuit Board	PB(PNAM6/9)		(WC59940)(X5033B0)		
*		**AAX57330**	Circuit Board	PNAM1,2(1/9,2/9)		(WC59940)(X5033B0)		
		--	Circuit Board	PNAM1		(WC59950)		
		--	Circuit Board	PNAM2		(WC59980)		
*		**WC600000**	Circuit Board	PNAM3(PNAM3/9)		(WC59940)(X5033B0)		
*		**WC600100**	Circuit Board	STN(PNAM7/9)		(WC59940)(X5033B0)		
*		**WC600200**	Circuit Board	TWL(PNAM8/9)		(WC59940)(X5033B0)		
*		**WC600300**	Circuit Board	TWR(PNAM9/9)		(WC59940)(X5033B0)		
*		**WC599700**	Circuit Board	VR(PNAM4/9)		(WC59940)(X5033B0)		
*		**WC598200**	Circuit Board	DMLCD		(WC59810)(X5032C0)		
	C0101	**UF028100**	Electrolytic Cap. (chip)	100 10V				01
	C0102	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0103	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0104	**UF028100**	Electrolytic Cap. (chip)	100 10V				01
	C0105	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0106	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0107	**UF028100**	Electrolytic Cap. (chip)	100 10V				01
	C0201	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	-0208	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0301	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	-0304	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0305	**UF028100**	Electrolytic Cap. (chip)	100 10V				01
	C0306	**US062220**	Ceramic Capacitor-SL(chip)	220P 50V J				01
	C0307	**US063470**	Ceramic Capacitor-B (chip)	4700P 50V K				01
	C0308	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0309	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0310	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J				01
	C0311	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	-0327	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0401	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J				01
	-0426	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J				01
	C0427	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0428	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0501	**UF037100**	Electrolytic Cap. (chip)	10 16V				01
	C0502	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0503	**UF028100**	Electrolytic Cap. (chip)	100 10V				01
	C0504	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0505	**UF037100**	Electrolytic Cap. (chip)	10 16V				01
	-0507	**UF037100**	Electrolytic Cap. (chip)	10 16V				01
	C0508	**US063150**	Ceramic Capacitor-B (chip)	1500P 50V K				01
	C0509	**US063150**	Ceramic Capacitor-B (chip)	1500P 50V K				01
	C0510	**US062560**	Ceramic Capacitor-SL(chip)	560P 50V J				01
	C0511	**US062560**	Ceramic Capacitor-SL(chip)	560P 50V J				01
	C0512	**UF066470**	Electrolytic Cap. (chip)	4.7 50V				01
	C0513	**UF066470**	Electrolytic Cap. (chip)	4.7 50V				01
	C0514	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J				01
	C0515	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J				01
	C0516	**UF028100**	Electrolytic Cap. (chip)	100 10V				01
	C0517	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0518	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0519	**UF028100**	Electrolytic Cap. (chip)	100 10V				01
	C0601	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0602	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0603	**UF028100**	Electrolytic Cap. (chip)	100 10V				01
	C0604	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0605	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J				01
	-0610	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J				01
	C0701	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J				01
	-0716	**US062100**	Ceramic Capacitor-SL(chip)	100P 50V J				01
	C0801	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	-0804	**US145100**	Ceramic Capacitor-F (chip)	0.1000 25V Z				01
	C0805	**UF028100**	Electrolytic Cap. (chip)	100 10V				01
	CL301	**WA321100**	Ceramic Resonator	16.9344M CSTCE16M9				02
	CL601	**WA698700**	Ceramic Resonator	6M CSTCR6M00G15045				

*: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	CN101	**VK025500**	Wire Trap	52147 11P TE				01
	CN401	**VK025600**	Wire Trap	52147 12P TE				01
	CN403	**VF728300**	Wire Trap	52147 6P TE				01
	CN404	**VK025200**	Wire Trap	52147 8P TE				01
	CN601	**VF728300**	Wire Trap	52147 6P TE				01
	CN602	**VK024700**	Wire Trap	52147 3P TE				01
	CN603	**VK025200**	Wire Trap	52147 8P TE				01
	CN701	**VJ861600**	Wire Trap	52147 16P TE				01
	D0601	**V2376600**	Diode	RB500V-40				01
	-0604	**V2376600**	Diode	RB500V-40				01
	D0605	**VT332900**	Diode	1SS355 TE-17				01
	D0701	**VT332900**	Diode	1SS355 TE-17				01
	-0708	**VT332900**	Diode	1SS355 TE-17				01
	IC101	**XS516A00**	IC	UPC2933T-E1		REGULATOR +3.3V		03
	IC102	**X3679A00**	IC	RH5RZ25CA-T1 SOT89		REGULATOR +2.5V		03
*	IC201	**X5181100**	IC	PROG/WAV		MASK ROM		
	IC202	**X2310A00**	IC	MX29LV400BTC-70		FLASH ROM 4M		06
*	IC202	**X4490A00**	IC	MBM29LV400BC-70PFT				
	IC203	**X2725A00**	IC	MSM51V4265E-60TS-K		DRAM 4M		05
	IC203	**X2726A00**	IC	GLT440L16-40TC				05
	IC204	**IS003200**	IC	HD74LV32AFPEL		OR		01
*	IC204	**X4176A00**	IC	SN74LV32ANSR SOP				
	IC301	**X3271A00**	IC	YMW767-V		CPU		32
	IC302	**X4374A00**	IC	S-80136ANMC-JCV-T2		SYSTEM RESET		
	IC401	**IS013810**	IC	SN74LV138ANSR		DECODER		01
	IC402	**IS013810**	IC	SN74LV138ANSR		DECODER		01
	IC501	**X3538A00**	IC	PCM1742KE/2K		DAC		05
	IC502	**X2331A00**	IC	NJM4580E TE2		OP AMP		01
*	IC601	**X5186100**	IC	M38K07M4L-307HP		USB CPU		
	IC801	**XZ987A00**	IC	ML9040A-B01GA		LCD DRIVER		05
	L0301	**VY657200**	Chip Inductance	600 BK1608HM601				01
	L0302	**VY657200**	Chip Inductance	600 BK1608HM601				01
	L0501	**VY657200**	Chip Inductance	600 BK1608HM601				01
	L0601	**VY657200**	Chip Inductance	600 BK1608HM601				01
	RA301	**RE047100**	Resistor Array	10KX4				01
	RA302	**RE044680**	Resistor Array	68X4				01
	-305	**RE044680**	Resistor Array	68X4				01
	RA401	**RE046100**	Resistor Array	1KX4				01
	-403	**RE046100**	Resistor Array	1KX4				01
	RA404	**RE046470**	Resistor Array	4.7KX4				01
	-406	**RE046470**	Resistor Array	4.7KX4				01
	RA407	**RE045100**	Resistor Array	100X4				01
	-409	**RE045100**	Resistor Array	100X4				01
	R0202	**RD357100**	Carbon Resistor (chip)	10.0K 63M J				01
	R0203	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
	-0209	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
	R0301	**RD356100**	Carbon Resistor (chip)	1.0K 63M J				01
	R0303	**RD359100**	Carbon Resistor (chip)	1.0M 63M J				01
	R0304	**RD355470**	Carbon Resistor (chip)	470.0 63M J				01
	R0305	**RD357100**	Carbon Resistor (chip)	10.0K 63M J				01
	R0306	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
	R0307	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
	R0401	**RD355100**	Carbon Resistor (chip)	100.0 63M J				01
	R0402	**RD355100**	Carbon Resistor (chip)	100.0 63M J				01
	R0501	**RD355390**	Carbon Resistor (chip)	390.0 63M J				01
	R0502	**RD355390**	Carbon Resistor (chip)	390.0 63M J				01
	R0503	**RD356470**	Carbon Resistor (chip)	4.7K 63M J				01
	-0510	**RD356470**	Carbon Resistor (chip)	4.7K 63M J				01
	R0511	**RD355100**	Carbon Resistor (chip)	100.0 63M J				01
	R0512	**RD355100**	Carbon Resistor (chip)	100.0 63M J				01
	R0513	**RD356120**	Carbon Resistor (chip)	1.2K 63M J				01
	R0514	**RD356150**	Carbon Resistor (chip)	1.5K 63M J				01
	R0515	**RD354680**	Carbon Resistor (chip)	68.0 63M J				01
	R0516	**RD354680**	Carbon Resistor (chip)	68.0 63M J				01
	R0517	**RD354470**	Carbon Resistor (chip)	47.0 63M J				01
	-0520	**RD354470**	Carbon Resistor (chip)	47.0 63M J				01
	R0601	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
	R0604	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
	R0605	**RD358100**	Carbon Resistor (chip)	100.0K 63M J				01
	R0606	**RD356150**	Carbon Resistor (chip)	1.5K 63M J				01

*: New Parts

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REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
R0607	**RD354270**	Carbon Resistor (chip)	27.0 63M J				01
R0608	**RD354270**	Carbon Resistor (chip)	27.0 63M J				01
R0609	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
R0610	**RD357100**	Carbon Resistor (chip)	10.0K 63M J				01
R0611	**RD356100**	Carbon Resistor (chip)	1.0K 63M J				01
R0612	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
R0613	**RD356270**	Carbon Resistor (chip)	2.7K 63M J				01
R0614	**RD356220**	Carbon Resistor (chip)	2.2K 63M J				01
R0615	**RD357100**	Carbon Resistor (chip)	10.0K 63M J				01
R0616	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
-0619	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
R0621	**RD358330**	Carbon Resistor (chip)	330.0K 63M J				01
R0622	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
R0623	**RD357820**	Carbon Resistor (chip)	82.0K 63M J				01
R0624	**RD357220**	Carbon Resistor (chip)	22.0K 63M J				01
R0626	**RD356100**	Carbon Resistor (chip)	1.0K 63M J				01
R0627	**RD357100**	Carbon Resistor (chip)	10.0K 63M J				01
R0629	**RD356150**	Carbon Resistor (chip)	1.5K 63M J				01
R0630	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
R0631	**RD350000**	Carbon Resistor (chip)	0 63M J				01
R0632	**RD350000**	Carbon Resistor (chip)	0 63M J				01
R0633	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
R0634	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
R0635	**RD356100**	Carbon Resistor (chip)	1.0K 63M J				01
R0636	**RD356100**	Carbon Resistor (chip)	1.0K 63M J				01
R0637	**RD357100**	Carbon Resistor (chip)	10.0K 63M J				01
R0701	**RD355100**	Carbon Resistor (chip)	100.0 63M J				01
-0708	**RD355100**	Carbon Resistor (chip)	100.0 63M J				01
R0709	**RD356100**	Carbon Resistor (chip)	1.0K 63M J				01
-0716	**RD356100**	Carbon Resistor (chip)	1.0K 63M J				01
R0717	**RD357330**	Carbon Resistor (chip)	33.0K 63M J				01
-0724	**RD357330**	Carbon Resistor (chip)	33.0K 63M J				01
R0801	**RD356150**	Carbon Resistor (chip)	1.5K 63M J				01
R0802	**RD355220**	Carbon Resistor (chip)	220.0 63M J				01
R0803	**RD354680**	Carbon Resistor (chip)	68.0 63M J				01
R0804	**RF457910**	Carbon Resistor (chip)	91.0K D				
R0805	**RD356220**	Carbon Resistor (chip)	2.2K 63M J				01
-0809	**RD356220**	Carbon Resistor (chip)	2.2K 63M J				01
R0810	**RD357470**	Carbon Resistor (chip)	47.0K 63M J				01
R0811	**RD357100**	Carbon Resistor (chip)	10.0K 63M J				01
TH801	**V9140600**	Thermistor (chip)	ERTJ1VT152J 1.5K				
TR601	**VV556500**	Transistor	2SA1037AK Q,R,S		}		01
TR601	**V8819500**	Transistor	2SA1235A E,F		}		
TR602	**VV556400**	Transistor	2SC2412K Q,R,S		}		01
TR602	**V4767500**	Transistor	2SD601A-(TX) Q,R,S		}		01
TR603	**WB107300**	Transistor Array	IMH10A T110				05
TR604	**WB107300**	Transistor Array	IMH10A T110				05
TR605	**VV556400**	Transistor	2SC2412K Q,R,S		}		01
TR605	**V4767500**	Transistor	2SD601A-(TX) Q,R,S		}		01
TR606	**VV556500**	Transistor	2SA1037AK Q,R,S		}		01
TR606	**V8819500**	Transistor	2SA1235A E,F		}		
	V8687200	Circuit Board	MK-76H		(V868750)(X2333F0)		07
10	**VQ769500**	Masking Tape	W=15				
CN01	**VK025200**	Wire Trap	52147 8P TE				01
CN02	**VK025600**	Wire Trap	52147 12P TE				01
D067	**VV437800**	Diode	1N4148(DO-34)				01
-152	**VV437800**	Diode	1N4148(DO-34)				01
	V8687400	Circuit Board	MK-76L		(V868760)(X2334F0)		07
10	**VQ769500**	Masking Tape	W=15				
CN03	**VK025600**	Wire Trap	52147 12P TE				01
CN04	**VK025600**	Wire Trap	52147 12P TE				01
CN05	**VF728300**	Wire Trap	52147 6P TE				01
D001	**VV437800**	Diode	1N4148(DO-34)				01
-066	**VV437800**	Diode	1N4148(DO-34)				01
*	**WC599600**	Circuit Board	EC(PNAM5/9)		(WC59940)(X5033B0)		
*	**WC599000**	Circuit Board	PB(PNAM6/9)		(WC59940)(X5033B0)		
*	**AAX57330**	Circuit Board	PNAM1,2(1/9,2/9)		(WC59940)(X5033B0)		

❇: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
		--	Circuit Board	PNAM1		(WC59950)		
		--	Circuit Board	PNAM2		(WC59980)		
*		**WC600000**	Circuit Board	PNAM3(PNAM3/9)		(WC59940)(X5033B0)		
*		**WC600100**	Circuit Board	STN(PNAM7/9)		(WC59940)(X5033B0)		
*		**WC600200**	Circuit Board	TWL(PNAM8/9)		(WC59940)(X5033B0)		
*		**WC600300**	Circuit Board	TWR(PNAM9/9)		(WC59940)(X5033B0)		
*		**WC599700**	Circuit Board	VR(PNAM4/9)		(WC59940)(X5033B0)		
		EP600190	Bind Head Tapping Screw-B	3.0X8 MFZN2BL			4	01
		--	Silicon Grease	X-113A G746		(VA79810)		
		--	Jumper Wire	0.55		(VA07890)		
	K1	--	Heat Sink			(WC28360)		
	C0101	**UA654470**	Mylar Capacitor	0.0470 50V J				01
	C0102	**UA654470**	Mylar Capacitor	0.0470 50V J				01
	C0103	**UR749220**	Electrolytic Cap.	2200 25.0V				03
	C0103	--	Electrolytic Cap.	2200 25.0V		(V252410)		
	C0104	**VC694800**	Semiconductive Cera. Cap.	0.1000 25V Z				01
	C0105	**UR867100**	Electrolytic Cap.	10.00 50.0V				01
	C0106	**VC694800**	Semiconductive Cera. Cap.	0.1000 25V Z				01
	C0107	**VC694800**	Semiconductive Cera. Cap.	0.1000 25V Z				01
	C0108	**UR867100**	Electrolytic Cap.	10.00 50.0V				01
	C0109	**UR867100**	Electrolytic Cap.	10.00 50.0V				01
	C0110	**VC694800**	Semiconductive Cera. Cap.	0.1000 25V Z				01
	C0111	**VC694800**	Semiconductive Cera. Cap.	0.1000 25V Z				01
	C0112	**UR867100**	Electrolytic Cap.	10.00 50.0V				01
	C0201	**UA653150**	Mylar Capacitor	1500P 50V J				01
	C0202	**UA653150**	Mylar Capacitor	1500P 50V J				01
	C0203	**VE327200**	Monolithic Mylar Capacitor	1.0 50V J				02
	C0204	**VE327200**	Monolithic Mylar Capacitor	1.0 50V J				02
	C0205	**UA652470**	Mylar Capacitor	470P 50V J				01
	C0206	**UA652470**	Mylar Capacitor	470P 50V J				01
	C0207	**UR838100**	Electrolytic Cap.	100.00 16.0V				01
	C0208	**UR827330**	Electrolytic Cap.	33.00 10.0V				01
	C0209	**UR867100**	Electrolytic Cap.	10.00 50.0V				01
	C0210	**VC694800**	Semiconductive Cera. Cap.	0.1000 25V Z				01
	C0211	**VC694800**	Semiconductive Cera. Cap.	0.1000 25V Z				01
	C0212	**UR867100**	Electrolytic Cap.	10.00 50.0V				01
	C0213	**UA654470**	Mylar Capacitor	0.0470 50V J				01
	-0216	**UA654470**	Mylar Capacitor	0.0470 50V J				01
	C0301	**UR837470**	Electrolytic Cap.	47.00 16.0V				01
	C0302	**UR837470**	Electrolytic Cap.	47.00 16.0V				01
	C0401	**FG652100**	Ceramic Capacitor-SL	100P 50V J				01
	CN101	**LB918030**	Base Post Connector	XH 3P TE				01
	CN102	**VK025500**	Wire Trap	52147 11P TE				01
	CN103	**VI878900**	Cable Holder	51048 11P TE				01
	CN104	**VK024800**	Wire Trap	52147 4P TE				01
	CN105	**VI878200**	Cable Holder	51048 4P TE				01
	CN106	**VK024600**	Wire Trap	52147 2P TE				01
	CN107	**VI878900**	Cable Holder	51048 11P TE				01
	CN201	**VK024900**	Wire Trap	52147 5P TE				01
	CN202	**VI878300**	Cable Holder	51048 5P TE				01
	CN301	**LB918020**	Base Post Connector	XH 2P TE				01
	CN302	**LB918020**	Base Post Connector	XH 2P TE				01
	CN303	**VI878000**	Cable Holder	51048 2P TE				01
	CN304	**VI878000**	Cable Holder	51048 2P TE				01
	CN401	**VI878400**	Cable Holder	51048 6P TE				01
	CN501	**VI879400**	Cable Holder	51048 16P TE				01
	CN502	**VI878900**	Cable Holder	51048 11P TE				01
	CN503	**VI878600**	Cable Holder	51048 8P TE				01
	CN504	**VK024700**	Wire Trap	52147 3P TE				01
	CN505	**VI878900**	Cable Holder	51048 11P TE				01
	CN601	**VI878100**	Cable Holder	51048 3P TE				01
	CN701	**VI878100**	Cable Holder	51048 3P TE				01
⚠	D0101	**VV731400**	Diode	2A02M				01
⚠	D0101	**V8603100**	Diode	2A02GM				
⚠	D0102	**VV731400**	Diode	2A02M				01
⚠	D0102	**V8603100**	Diode	2A02GM				
	EC601	**VU481300**	Encoder	REB161 PVB 15F		DATA Dial		03
	IC101	**XU814A00**	IC	PQ05RD11 TO-220		REGULATOR +5V 1.0A		03
*	IC102	**X5231A00**	IC	PQ6RD083 TO-220		REGULATOR +6.3V 0.8A		
*	IC201	**XY209A00**	IC	LA4625 ZIL		POWER AMP. 13.5W		

*: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	J0101	--	Jumper Wire	0.55		(VA07890)		
	J0401	--	Jumper Wire	0.55		(VA07890)		
	-0403	--	Jumper Wire	0.55		(VA07890)		
⚠	JK101	**LB302260**	Connector	HEC0470-01-630		DC IN 12V		02
⚠	JK101	**V6557600**	Connector	HTJ-020-05AZ				04
	JK301	**LB101870**	Phone Jack	YKB21-5006		PHONES/OUTPUT		03
	JK401	**V6802600**	USB Jack	USB 4P SE		USB		02
	JK402	**VC687500**	Phone Jack Black	YKB21-5014		SUSTAIN		01
⚠	L0101	**VQ884000**	Line Filter	CM08RB01				03
⚠	L0101	**V6795600**	Line Filter	BDL40-01				
	L0301	**VB835000**	Coil	FL5R200QNT 20uH				01
	L0302	**VB835000**	Coil	FL5R200QNT 20uH				01
	L0303	--	Jumper Wire	0.55		(VA07890)		
	L0402	**VB835000**	Coil	FL5R200QNT 20uH				01
	-0405	**VB835000**	Coil	FL5R200QNT 20uH				01
*	LD501	**WC762200**	LED Red			SONG		
*	LD502	**WC762200**	LED Red			EASY SONG ARRANGER		
*	LD503	**WC762200**	LED Red			STYLE		
*	LD504	**WC762200**	LED Red			VOICE		
	R0101	**HF755180**	Carbon Resistor	180.0 1/4 J				01
	R0102	**HF755150**	Carbon Resistor	150.0 1/4 J				01
	R0201	**HF757100**	Carbon Resistor	10.0K 1/4 J				01
	R0202	**HF757100**	Carbon Resistor	10.0K 1/4 J				01
	R0203	**HF756220**	Carbon Resistor	2.2K 1/4 J				01
	R0204	**HF756220**	Carbon Resistor	2.2K 1/4 J				01
	R0205	**HF757100**	Carbon Resistor	10.0K 1/4 J				01
*	R0206	**HC853220**	Carbon Resistor	2.2 1/4 J				
*	-0209	**HC853220**	Carbon Resistor	2.2 1/4 J				
	R0301	**HF755100**	Carbon Resistor	100.0 1/4 J				01
	R0302	**HF755100**	Carbon Resistor	100.0 1/4 J				01
	R0303	**HF755330**	Carbon Resistor	330.0 1/4 J				01
	R0304	**HF755330**	Carbon Resistor	330.0 1/4 J				01
	R0401	**HF758100**	Carbon Resistor	100.0K 1/4 J				01
	R0402	**HF756100**	Carbon Resistor	1.0K 1/4 J				01
	R0501	**HF756120**	Carbon Resistor	1.2K 1/4 J				01
	-0508	**HF756120**	Carbon Resistor	1.2K 1/4 J				01
⚠	SW101	**VY980400**	Push Switch	SDDLB1 J,UC,CEE		STANDBY/ON		03
⚠	SW101	**V9661700**	Push Switch	SY16-32-4(U99S2)/T				03
⚠	TH101	**V8132800**	Protector Circuit	MF-R185-AP				
*	VR201	**WC709800**	Rotary Variable Resistor	A 5K XV014111YGPV		MASTER VOLUME		
	VR701	**VZ486300**	Rotary Variable Resistor	B10K EVJ05DF20B14		PITCH BEND		03
	WA102	--	Connector Assembly	AM 11P L=130		(WC60180)		
	WA105	--	Connector Assembly	STAN 4P L=130		(WC60170)		
	WA107	--	Connector Assembly	AM 11P L=130		(WC60180)		
	WA202	--	Connector Assembly	VOL 5P L=160		(WC60160)		
	WA303	--	Connector Assembly	TW7 2P L=760		(WC60280)		
	WA304	--	Connector Assembly	TW7 2P L=760		(WC60280)		
	WA401	--	Connector Assembly	JACK 6P L=70		(WC60190)		
	WA501	--	Connector Assembly	PN1 16P L=200		(WC60230)		
	WA502	--	Connector Assembly	PN3 11P L=350		(WC60250)		
	WA503	--	Connector Assembly	PN2 8P L=110		(WC60240)		
	WA504	--	Connector Assembly	ENC 3P L=70		(WC60210)		
	WA701	--	Connector Assembly	PB 3P L=720		(WC60220)		
		X2549A00	Speaker	12.0cm 4 Ohm 8W		WOOFER	2	05
		X0159A00	Speaker	3.0cm		TWEETER	2	01
		V8804100	Back Light Assembly	PT E				08
		WB491100	Back-lit Assembly	PT				
*		**WC346900**	LCD	76				

✻: New Parts

RANK: Japan only

■ DGX-203/DGX-205 OVERALL CIRCUIT DIAGRAM 1/2 (PNAM1, PNAM2, PNAM3 (PNAM 3/9), VR (PNAM 4/9), ENC (PNAM 5/9), PB (PNAM 6/9), STN (PNAM 7/9), TWL (PNAM 8/9), TWR (PNAM 9/9), MK-76H, MK-76L)

not installed

PNAM2
(PNAM 2/9)

SW522 SW523 SW524 SONG
SW525 EASY SONG ARRANGER
SW526 STYLE
SW527 VOICE
SW528 1
SW529 2
SW530 3
SW531 4
SW532 5
SW533 6
SW534 7
SW535 8
SW536 9
SW537 –
SW538 0
SW539 +
SW540 MEMORY BANK (0)
SW541 MEMORY BANK (1)
SW542 MEMORY BANK (2)
SW543 SONG MEMORY (0) REC
SW544 SONG MEMORY (1) RIGHT
SW545 SONG MEMORY (2) LEFT
SW546 SONG MEMORY (3)
SW547 SONG MEMORY (4)
SW548 SONG MEMORY (5)
SW549 SONG MEMORY (A) STYLE

LD501 SONG
LD502 EASY SONG ARRANGER
LD503 STYLE
LD504 VOICE

CN504 CN503 CN501 CN502

to DMLCD-CN603
to DMLCD-CN701

WA502 WA503 WA504

PNAM1
(PNAM 1/9)

SW501 TOUCH
SW502 HARMONY
SW503 DUAL
SW504 SPLIT
SW505 DEMO
SW506 MODE
SW507 L/R
SW508 REPEAT & LEARN
SW509 PAT/MAT
SW510 FUNCTION
SW511 PC
SW512 METRONOME
SW513 PORTABLE GRAND
SW514 ACMP
SW515 SYNC STOP
SW516 SYNC START
SW517 INTRO ENDING
SW518 MAIN AUTO FILL
SW519 START/STOP
SW521 TEMPO/TAP

CN505

POWER AMP

IC201 LA6565
IC202 LA6565

L ch
R ch

CN103

WA102

REGULATOR +5V
IC101 PQ05RD11
+5V

REGULATOR +6.3V
IC102 PQ06RD083
+6.3V

CN107 WA107
to DMLCD-CN101

CN106 R101 R102 R103
LCD BACK/LIGHT
LCD Unit

PNAM3
(PNAM 3/9)

USB
SUSTAIN
PHONES/OUTPUT
WOOFER L
WOOFER R
to Battery
DC-IN 12V

CN401 WA401
to DMLCD-CN601

CN304 WA304
CN302 CN303 CN301 WA303
CN102

TWR
(PNAM 9/9)
TW-R

TWL
(PNAM 8/9)
TW-L

STN
(PNAM 7/9)
CN105 WA105 CN104
SW101
STANDBY/ON

MK-76H
CN402 WA402
to DMLCD-CN404
(C#3~G6)

MK-76L
CN403 WA403
to DMLCD-CN401
to DMLCD-CN403
(E0~C3)

VR (PNAM 4/9)
MASTER VOLUME
A5.0K
VR201
CN202 WA202

ENC (PNAM 5/9)
CN601 WA601
EC601 REB161-PVB-15F
ROTARY ENCODER

PB (PNAM 6/9)
PITCH BEND
VR701 EVJGG20B14
CN701 WA701
to DMLCD-CN602

- 2A02M (VV731400)
- 2A02GM (V8603100)
  DIODE
  PNAM3: D0101,D0102

1: ANODE
2: CATHODE

- PQ05RD11 TO-220 (XU814A00)
  REGULATOR +5V 1.0A
  PNAM1: IC101

1: IN
2: OUT
3: GND
4: ON/OFcont.

- PQ06RD083 TO-220 (X5231A00)
  REGULATOR +6.3V 0.8A
  PNAM1: IC102

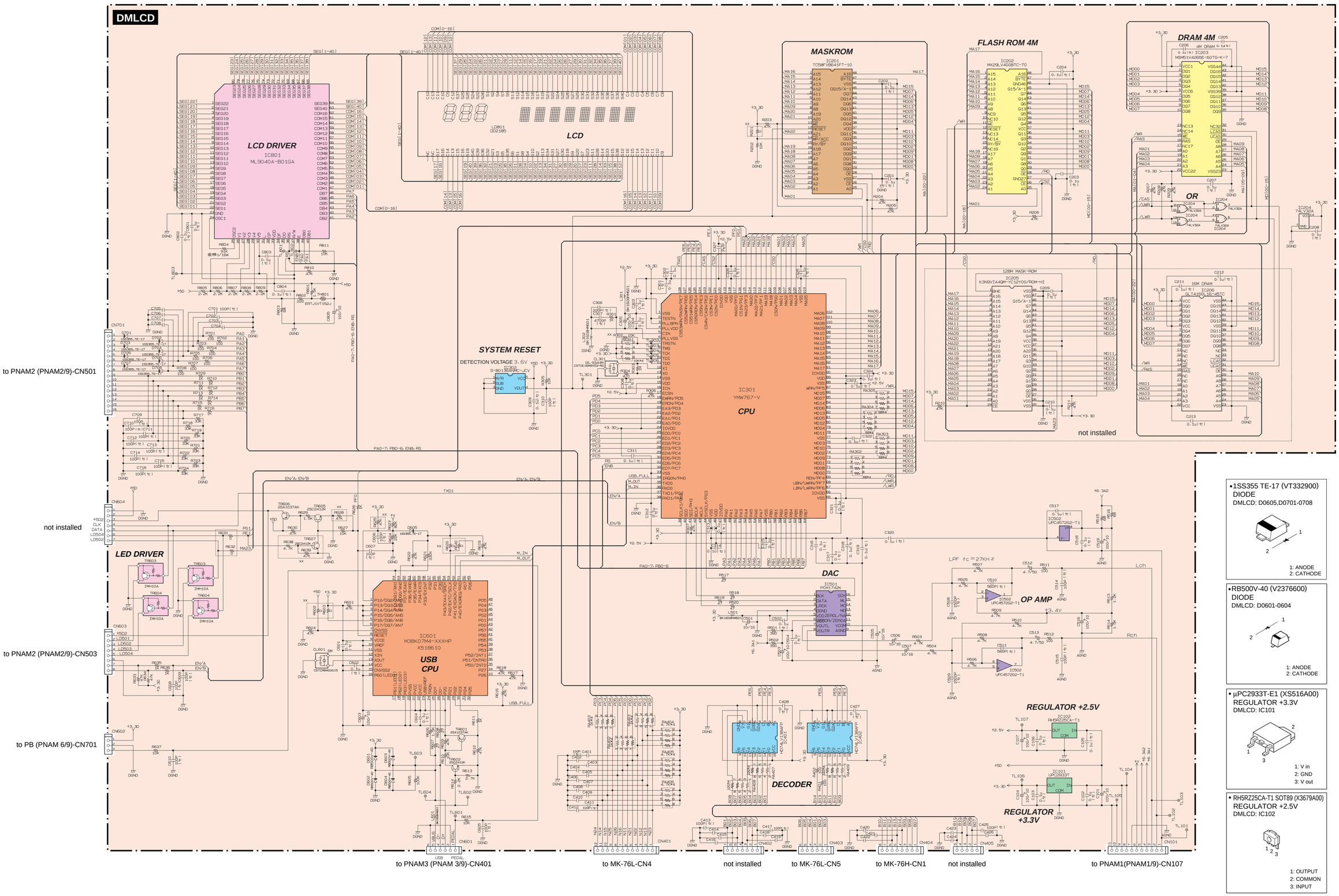
1: IN
2: OUT
3: GND
4: ON/OFcont.

PNAM : 28CC1-8831820 ⚠
MK-76H : 28CC1-8822435
MK-76L : 28CC1-8822434

(セ) : Ceramic Capacitor
(半セ) : Semiconductive Ceramic Capacitor
(マ) : Mylar Capacitor

■ DGX-203/DGX-205 OVERALL CIRCUIT DIAGRAM 1/2 (PNAM1, PNAM2, PNAM3 (PNAM 3/9), VR (PNAM 4/9), ENC (PNAM 5/9), PB (PNAM 6/9), STN (PNAM 7/9), TWL (PNAM 8/9), TWR (PNAM 9/9), MK-76H, MK-76L)

DGX-203/DGX-205 OVERALL CIRCUIT DIAGRAM 2/2 (DMLCD)



(セ) : Ceramic Capacitor
金被1/16W : Metal Film Resistor (chip)
XX : not installed

28CC1-8831821

DGX-203/DGX-205 OVERALL CIRCUIT DIAGRAM 2/2 (DMLCD)