

PortableGrand

DGX-220 / YPG-225

SERVICE MANUAL



DGX-220



YPG-225

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IMPORTANT NOTICE

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

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

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

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

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

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

WARNING: 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 are not retained in memory when you turn off the power to the instrument. Save data you want to keep to the Registration Memory.
Saved data may be lost due to malfunction or incorrect operation.
Save important data to a USB storage device/or other external device such as a computer.

Backing up the USB storage device/external media



Be sure to perform it

To protect against data loss through media damage, we recommend that you save your important data onto two USB storage devices/external media.

■ SPECIFICATIONS

Keyboards

- 76 box type keys (E0–G6), with Touch Response.

Display

- LCD display (backlit)

Setup

- STANDBY/ON
- MASTER VOLUME:MIN–MAX

Panel Controls

- SONG, VOICE, STYLE, EASY SONG ARRANGER, P.A.T. ON/OFF, LESSON L, LESSON R, LESSON START, METRONOME ON/OFF, PORTABLE GRAND, DEMO, FUNCTION, MUSIC DATABASE, HARMONY ON/OFF, DUAL ON/OFF, SPLIT ON/OFF, TEMPO/TAP, [0]–[9], [+], [–], CATEGORY, Dial, REPEAT & LEARN (ACMP ON/OFF), A-B REPEAT (INTRO/ENDING/rit.), PAUSE (SYNC START), START/STOP, REW (MAIN/AUTO FILL), FF (SYNC STOP), REGIST MEMORY ([MEMORY/BANK], [1], [2]), SONG MEMORY (REC, [1]–[5], [A])

Realtime Control

- Pitch Bend Wheel

Voice

- 116 panel voices + 12 drum/SFX kits + 361 XGlite voices
- Polyphony: 32
- DUAL
- SPLIT

Style

- 150 Preset Styles + 1 User Style File
- Style Control:ACMP ON/OFF, SYNC STOP, SYNC START, START/STOP, INTRO/ENDING/rit., MAIN/AUTO FILL
- Fingering: Multi Finger, Full Keyboard
- Style Volume

Music Database

- 267

Education Feature

- Dictionary
- Lesson 1–3, Repeat & Learn

Registration Memory

- 8 banks x 2 types

Function

- VOLUME: Style Volume, Song Volume
- OVERALL: Tuning, Transpose, Split Point, Touch Sensitivity, Pitch Bend Range, Chord Fingering
- MAIN VOICE: Volume, Octave, Pan, Reverb Level, Chorus Level
- DUAL VOICE: Voice, Volume, Octave, Pan, Reverb Level, Chorus Level
- SPLIT VOICE: Voice, Volume, Octave, Pan, Reverb Level, Chorus Level
- EFFECT: Reverb Type, Chorus Type, Master EQ Type Sustain
- HARMONY: Harmony Type, Harmony Volume
- Performance assistant technology: Performance assistant technology Type
- SFF Load: Style File Load
- PC: PC Mode
- MIDI: Local On/Off, External Clock, Initial Send, Keyboard Out, Style Out, Song Out
- METRONOME: Time Signature Numerator, Time Signature Denominator, Metronome Volume
- LESSON: Lesson Track (R), Lesson Track (L), Grade
- UTILITY: 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
- Song Control: REPEAT & LEARN, A-B REPEAT, PAUSE, REW, FF, START/STOP

Performance assistant technology

- Chord, Chord/Free

Recording

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

MIDI

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

Auxiliary jacks

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

Amplifier

- 6W + 6W

Speakers

- 12cm x 2 + 3cm x 2

Power Consumption

- 20W

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 137 mm (46-3/8" x 16-1/4" x 5-3/8")

Weight

- 8.3kg (18 lbs. 5 oz.) (not including batteries)

Supplied Accessories

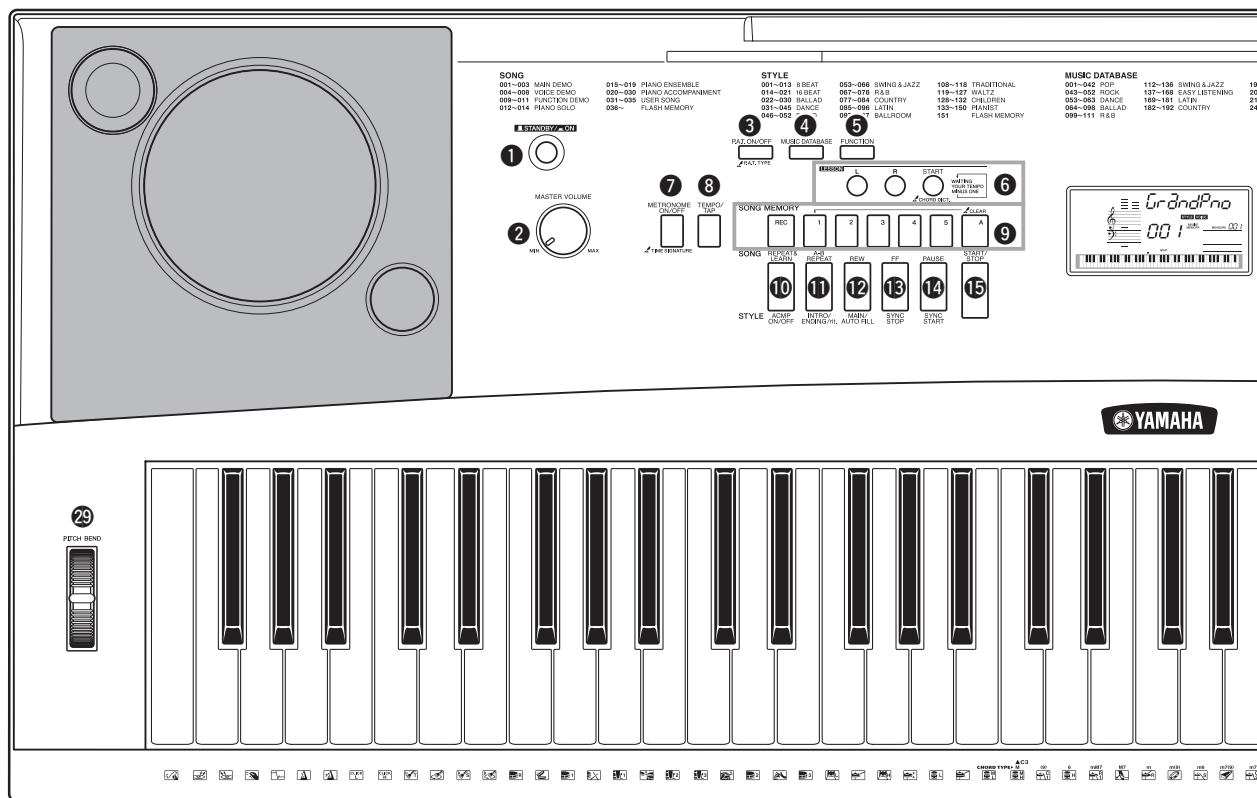
- Music Rest
- Accessory CD-ROM
- Owner's Manual

Optional Accessories

- AC Power Adaptor: PA-5D
- Footswitch: FC4/FC5
- Keyboard Stand: LW-16
- Headphones: HPE-150

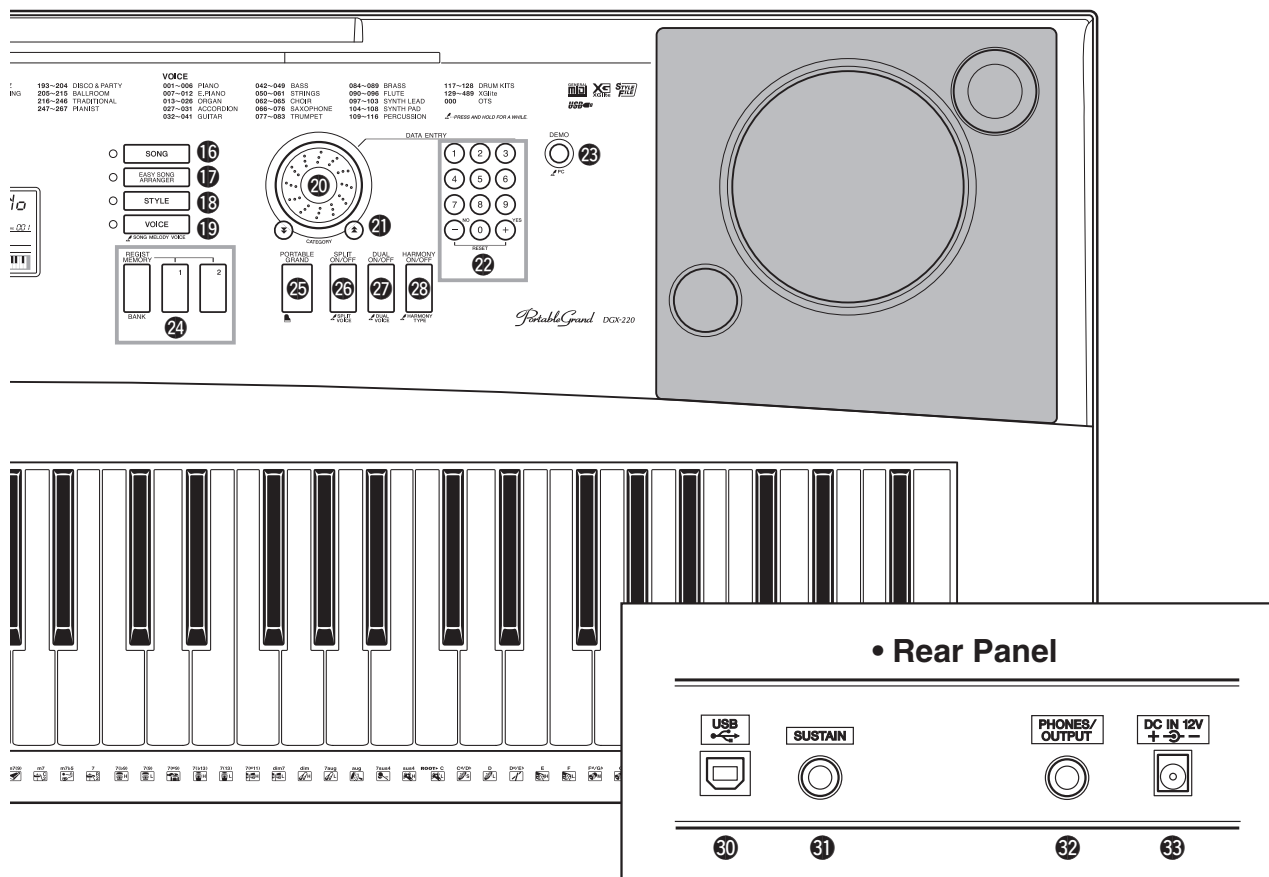
PANEL LAYOUT

• Front Panel



• Front Panel

- | | |
|---|---------------------------------|
| ① [STANDBY/ON] switch | ⑫ [REW]/[MAIN/AUTO FILL] button |
| ② [MASTER VOLUME] control | ⑬ [FF]/[SYNC STOP] button |
| ③ [P.A.T. ON/OFF] button | ⑭ [PAUSE]/[SYNC START] button |
| ④ [MUSIC DATABASE] button | ⑮ [START/STOP] button |
| ⑤ [FUNCTION] button | ⑯ [SONG] button |
| ⑥ LESSON [L], [R], [START] buttons | ⑰ [EASY SONG ARRANGER] button |
| ⑦ [METRONOME ON/OFF] button | ⑱ [STYLE] button |
| ⑧ [TEMPO/TAP] button | ⑲ [VOICE] button |
| ⑨ SONG MEMORY
[REC], [1]–[5], [A] buttons | ⑳ Dial |
| ⑩ [REPEAT & LEARN]/
[ACMP ON/OFF] button | ㉑ CATEGORY [▲] and [▼] buttons |
| ⑪ [A-B REPEAT]/
[INTRO/ENDING/rit.] button | |



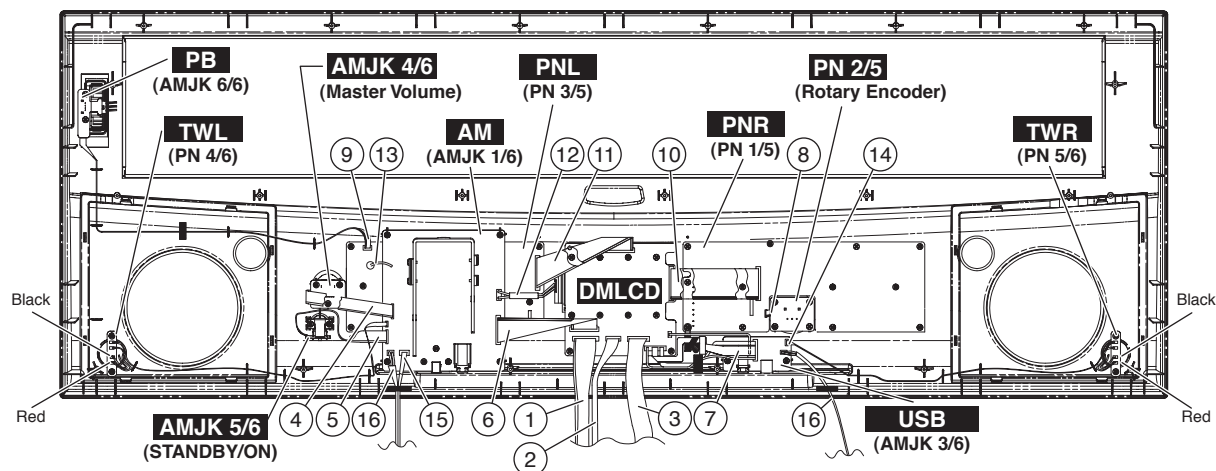
- 22 Number buttons [0]–[9],[+] and [-] buttons
- 23 [DEMO] button
- 24 REGIST MEMORY [MEMORY/BANK], [1], [2] buttons
- 25 [PORTABLE GRAND] button
- 26 [SPLIT ON/OFF] button
- 27 [DUAL ON/OFF] button
- 28 [HARMONY ON/OFF] button
- 29 PITCH BEND wheel

• Rear Panel

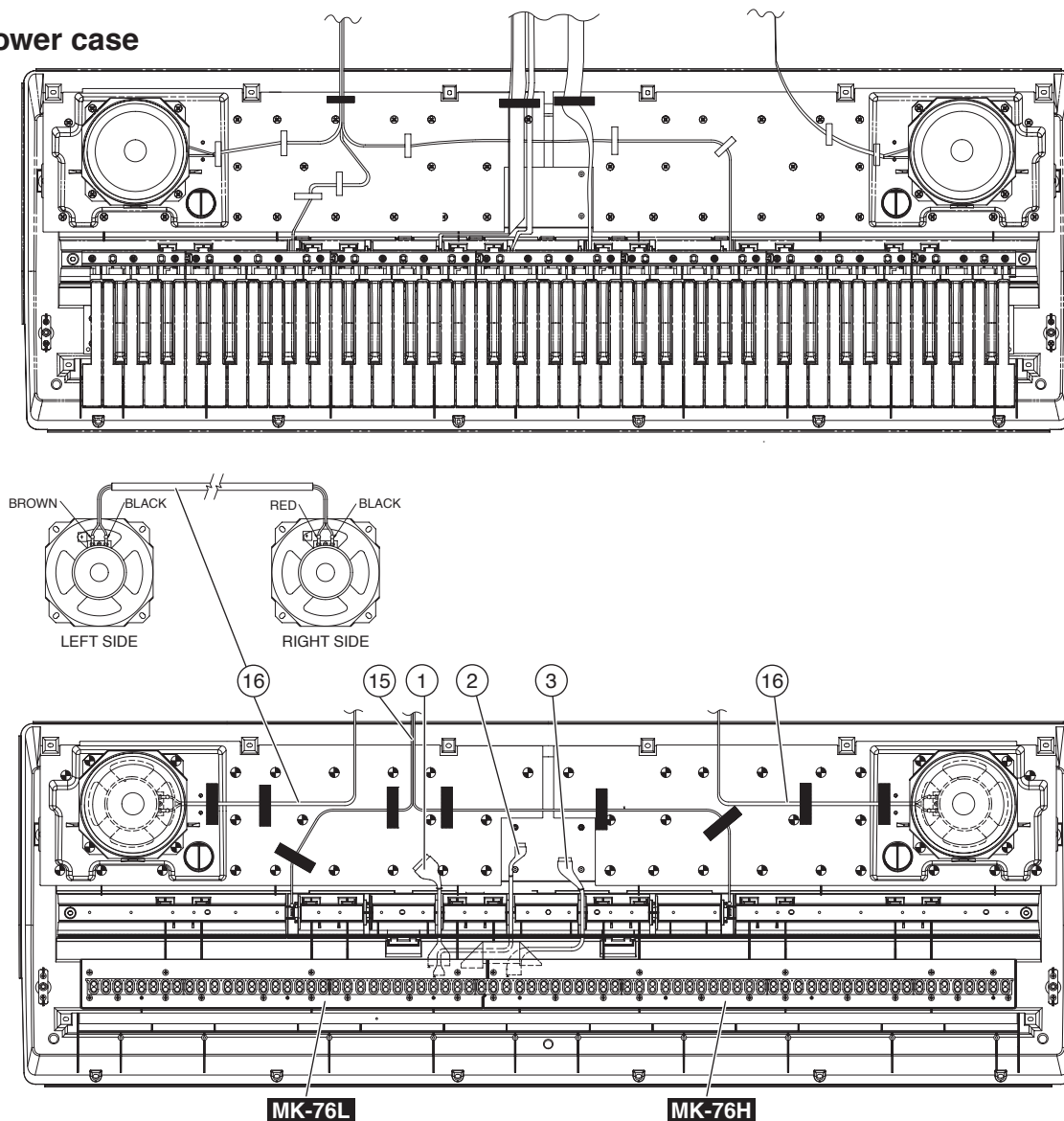
- 30 USB terminal
- 31 SUSTAIN jack
- 32 PHONES/OUTPUT jack
- 33 DC IN 12V jack

■ CIRCUIT BOARDS LAYOUT & WIRING

• Upper case



• Lower case



No.	Location	Part No.	Connector Assembly		Destination					Remarks
①	30	WC601000	MK1	MK-76L-CN4	*1	*5	DMLCD-CN401	*1	*5	12P
②	40	WC601400	MK4	MK-76L-CN5	*1	*5	DMLCD-CN404	*1	*5	6P
③	50	WC601500	MK5	MK-76H-CN1	*1	*5	DMLCD-CN405	*1	*5	8P
④	WH551	WG332600	VR3	AM-CN551	*2	*5	AM-CN552	*2	*5	5P
⑤	WH153	WG332700	STB2	AM-CN153	*2	*5	AM-CN154	*2	*5	4P
⑥	WH155	WG342900	AMDM2	AM-CN155	*2	*5	DMLCD-CN101	*1	*5	13P
⑦	WH854	WG332500	JK2	USB-CN854	*2	*5	DMLCD-CN802	*1	*5	9P
⑧	WH782	WG331300	ENC	PNR-CN782	*2	*5	PNR-CN783	*2	*5	3P
⑨	WH855	WG331500	PB2	PB-CN855	*2	*5	PML-CN785	*1	*5	3P
⑩	WH781	WG331900	PN3	PNR-CN781	*2	*5	DMLCD-CN701	*1	*5	16P
⑪	WH784	WG332000	PN4	PNL-CN784	*2	*5	DMLCD-CN703	*1	*5	16P
⑫	--	WC602600	BL	+/-	*3	*6	AM-CN152	1	*5	2P
⑬	WH553	WB342800	TW4	AM-CN553	*2	*5	TWL +/-	*3	*6	2P
⑭	WH558	WG342600	TW2	USB-CN558	*2	*5	TWR +/-	*3	*6	2P
⑮	130	V8735600	BAT	--	*3	*10	AM-CN151	*1	*10	3P
⑯	220	WG324100	SPL	+/-	*3	*10	AM-CN554 USB-CN557	*1	*10	2P

* The parts with "--" in "Part No." are not available as spare parts.

* 1 : Installation

* 2 : Dip soldering

* 3 : Manual soldering

* 4 : The conductor of a cable and the point of contact of a connector are untited.

* 5 : Edge mark is adjusted to Pin 1 (△) side.

* 6 : Edge mark is connected to + side.

* 7 : Edge mark is connected to + terminal.

* 8 : White wire is adjusted to Pin 1 (△) side.

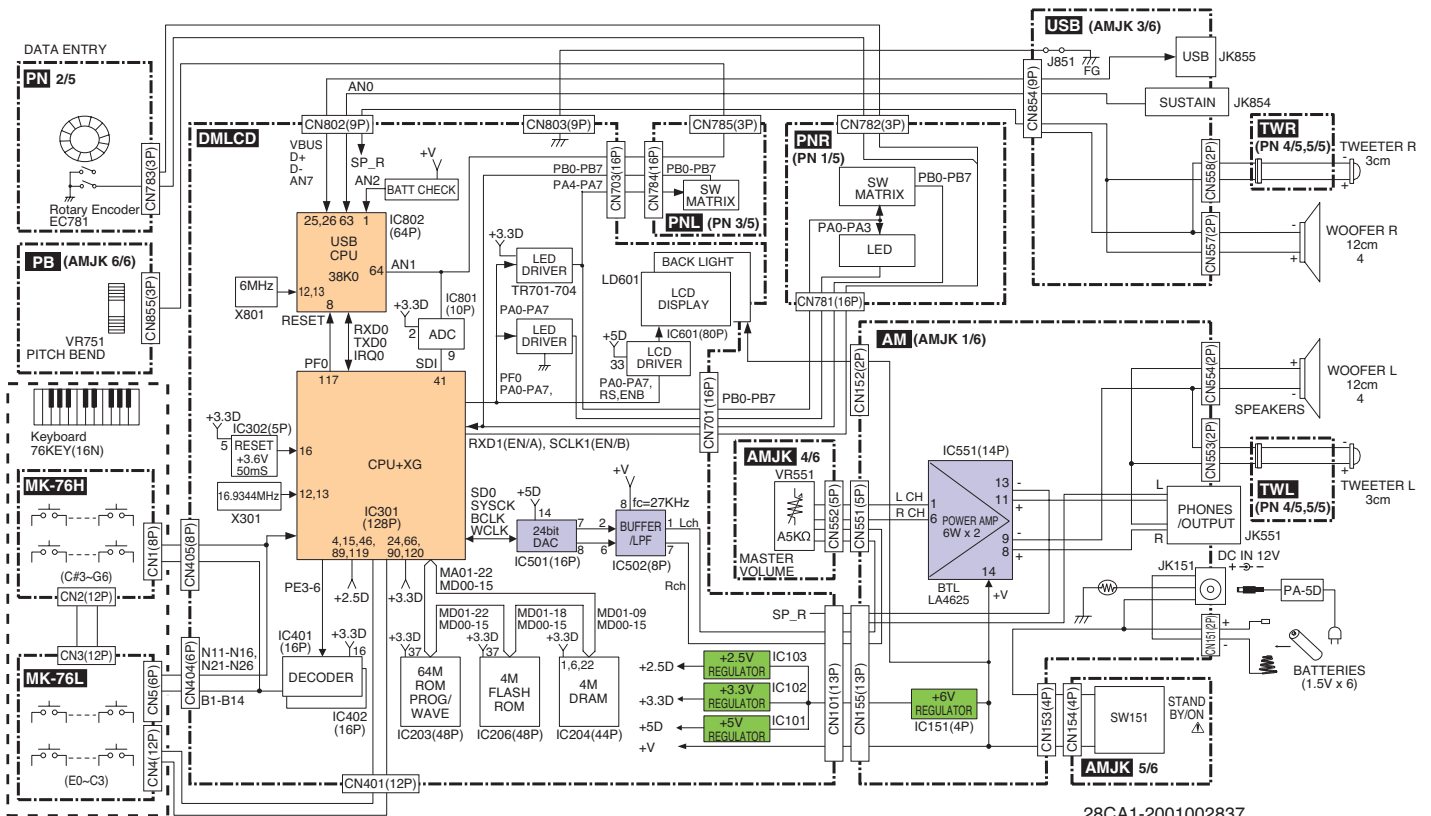
* 9 : White wire is connected to + terminal.

* 10 : Red wire is connected to + terminal.

* 11 : Connected

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

BLOCK DIAGRAM

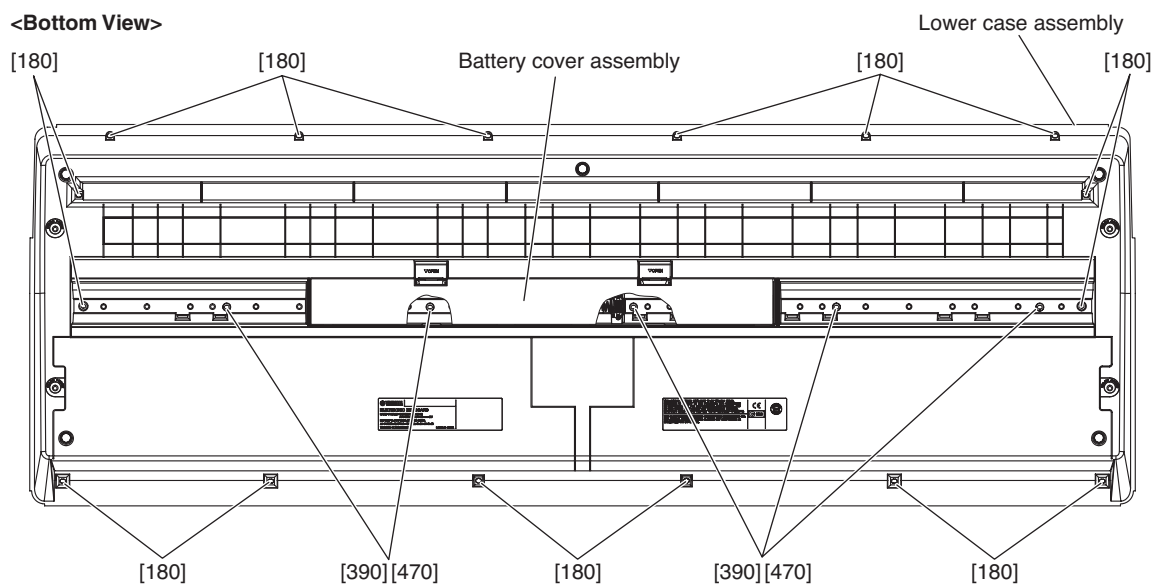


28CA1-2001002837

■ 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 [180], the five (5) screws marked [390] and the ten (10) spacers marked [470].
The lower case assembly can then be removed. (Fig.1)



(Fig.1)

[180]: Bind Head Tapping Screw-B 3.0X8 MFZN2W3 (WE774300)
 [390]: Bind Head Tapping Screw-B 3.0X30 MFZN2W3 (WF491000)
 [470]: Spacer (WG387800)

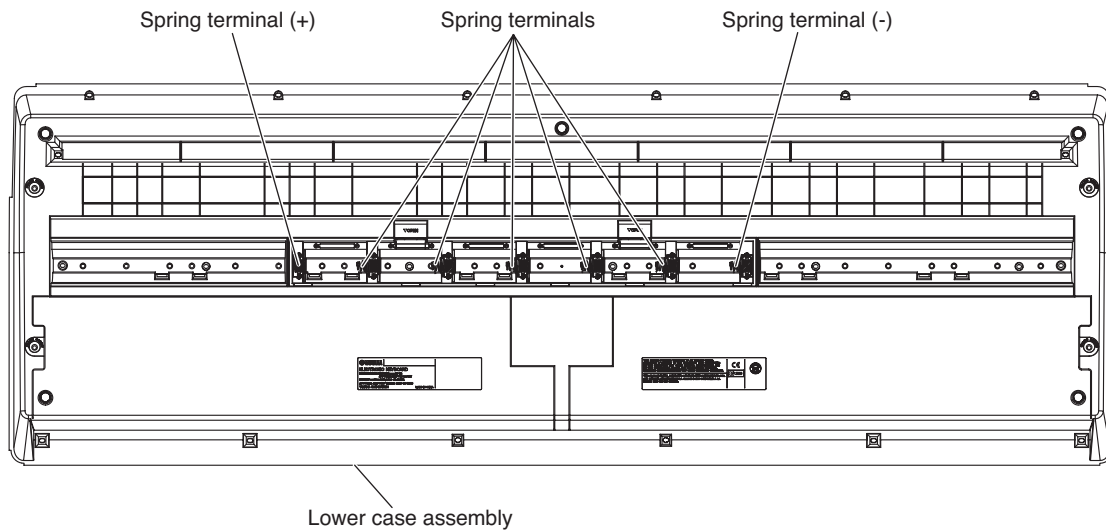
2. Spring Terminal

A. Spring Terminal (+) and (-)

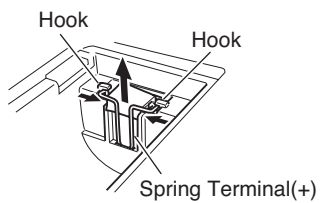
- 2-1 Remove the Lower case assembly. (See procedure 1.)
- 2-2 Remove the battery harness soldered to the spring terminal (+) or (-). (Fig.2)
- 2-3 Remove the hooks (two at each place) and pull out the spring terminal (+) or (-). (Fig.3, Fig.4)

B. Spring Terminal

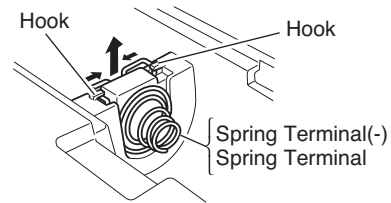
- 2-1 Remove the Lower case assembly. (See procedure 1.)
- 2-2 Remove spring terminal hooks (two at each place) and pull out the spring terminal. (Fig.4).



(Fig.2)



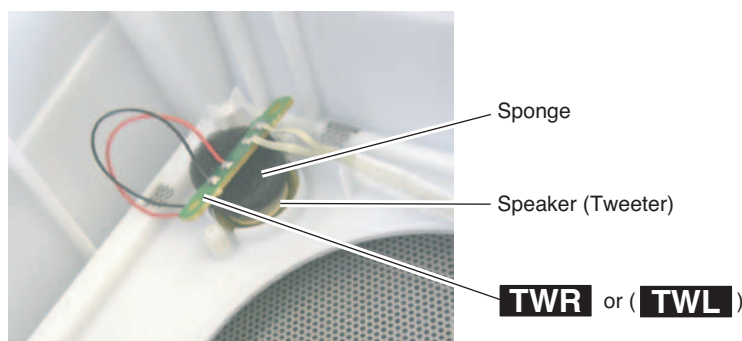
(Fig.3)



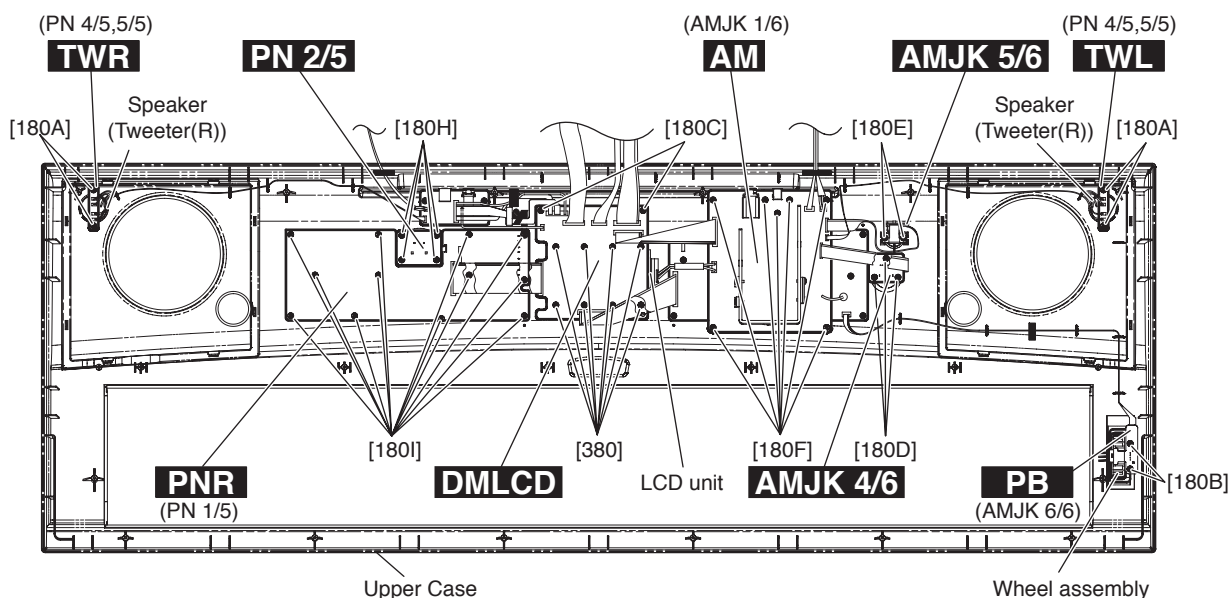
(Fig.4)

3. TWL and TWR(PN 4/5, 5/5) Circuit Boards, 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 marked [180A]. The TWL(PN 4/5, 5/5) circuit board can then be removed. (Fig.6)
- 3-3 Remove the speaker (tweeter). (Fig.5)
- * The TWR circuit board can be removed in the same manner.



(Fig.5)



(Fig.6)

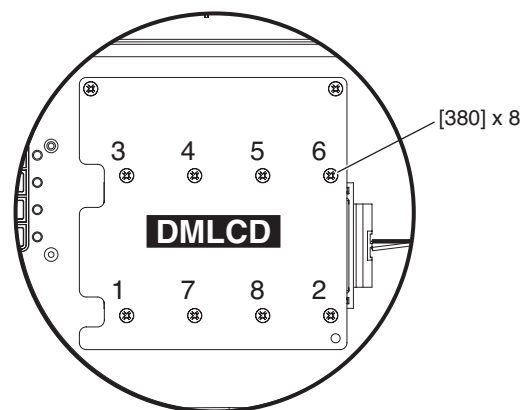
[180]: Bind Head Tapping Screw-B 3.0X8 MFZN2W3 (WE774300)
[380]: Bind Head Tapping Screw-B 3.0X12 MFZN2W3 (WE987400)

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

- 4-1 Remove the lower case assembly. (See procedure 1.)
- 4-2 Remove two (2) screws marked [180B]. The PB (AMJK 6/6) circuit board and the wheel assembly can then be removed. (Fig.6)
- * The wheel assembly is inserted and mounted on the volume shaft of the PB (AMJK 6/6) circuit board.

5. DMLCD Circuit Board, LCD Unit (Time required: About 5 minutes)

- 5-1 Remove the lower case assembly. (See procedure 1.)
- 5-2 Remove two (2) screws marked [180C] and eight (8) screws marked [380]. The DMLCD circuit board and LCD unit can then be removed. (Fig.6)
- * When installing the DMLCD circuit board, tighten the screws from No.1 through No.8 in order as shown in Fig.7.



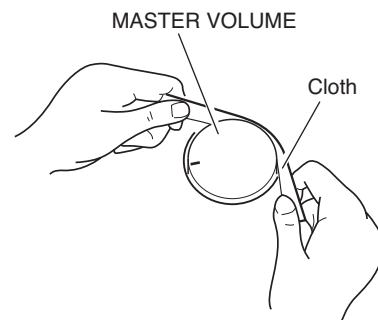
(Fig.7)

[380]: Bind Head Tapping Screw-B 3.0X12 MFZN2W3 (WE987400)

6. AM (AMJK 1/6), AMJK 4/6 and AMJK 5/6 Circuit Boards

(Time required: About 6 minutes)

- * The AMJK 4/6 and AMJK 5/6 circuit boards are connected to the AM (AMJK 1/6) circuit board via wirings.
- 6-1 Remove the lower case assembly. (See procedure 1.)
- 6-2 Remove the master volume knob from the control panel. (Fig.8)
- 6-3 Remove three (3) screws marked [180D]. The AMJK 4/6 circuit board can then be removed from the upper case. (Fig.6)
- 6-4 Remove two (2) screws marked [180E]. The AMJK 5/6 circuit board can then be removed from the upper case. (Fig.6)
- 6-5 Remove seven (7) screws marked [180F]. The AM(AMJK 1/6), AMJK 4/6 and AMJK 5/6 circuit boards can then be removed. (Fig.6)

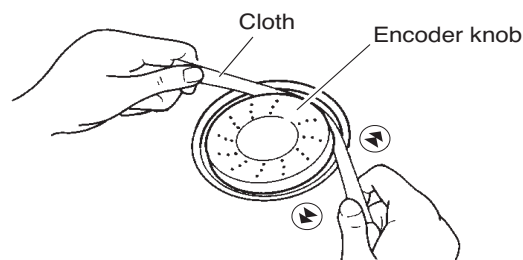


(Fig.8)

7. PNR (PN 1/5) and PN 2/5 Circuit Boards

(Time required: About 6 minutes)

- * The PN 2/5 circuit board is connected to the PNR (PN 1/5) circuit board via a wiring.
- 7-1 Remove the lower case assembly. (See procedure 1.)
- 7-2 Remove the encoder knob from the control panel. (Fig.9)
- 7-3 Remove four (4) screws marked [180H]. The PN 2/5 circuit board can then be removed from the upper case. (Fig.6)
- 7-4 Remove twelve (12) screws marked [180I]. The PNR (PN 1/5) and PN 2/5 circuit boards can then be removed. (Fig.6)

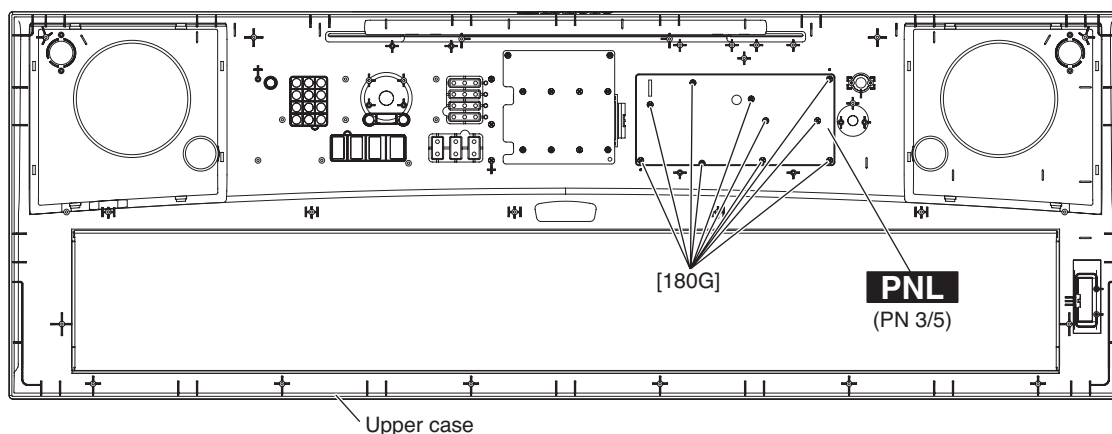


(Fig.9)

8. PNL(PN 3/5) Circuit Board

(Time required: About 8 minutes)

- 8-1 Remove the lower case assembly. (See procedure 1.)
- 8-2 Remove the AM(AMJK 1/6), AMJK 4/6 and AMJK 5/6 circuit boards. (See procedure 6.)
- 8-3 Remove ten (10) screws marked [180G]. The PNL (PN 3/5) circuit board can then be removed. (Fig.10)

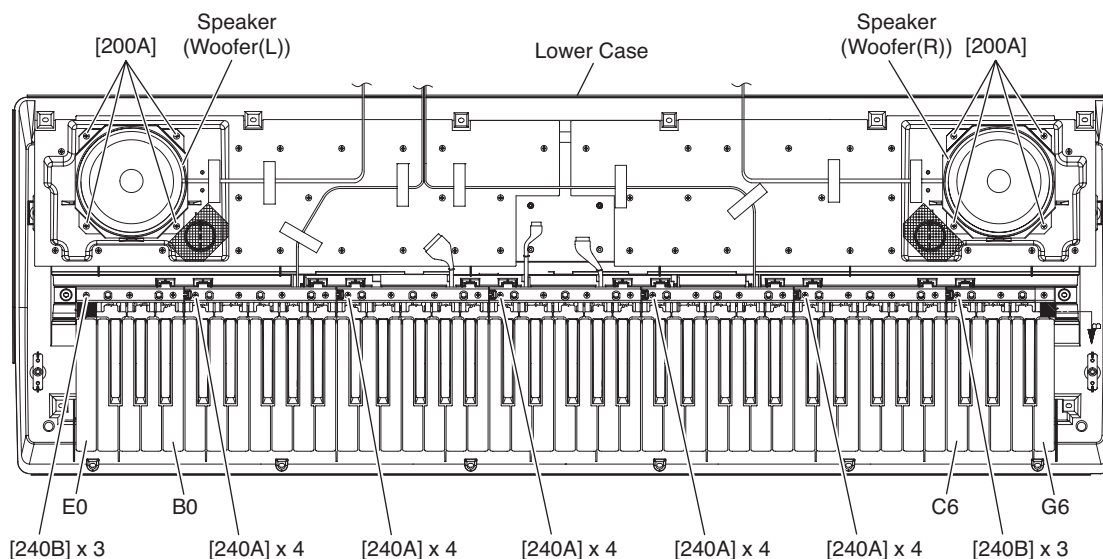


(Fig.10)

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

9. Speaker (Woofers) (Time required: About 4 minutes)

- 9-1 Remove the lower case assembly. (See procedure 1.)
- 9-2 Remove four (4) screws marked [200A], then remove the speaker (woofer). (Fig.11)
- * Left and right speakers (woofers) can be removed in the same manner.

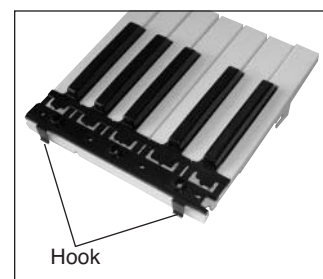


(Fig.11)

[200]: Bind Head Tapping Screw-B 4.0X10 MFZN2W3 (WE974500)
 [240]: Bind Head Tapping Screw-P 3.0X20 MFZN2W3 (WF492000)

10. White and Black Keys

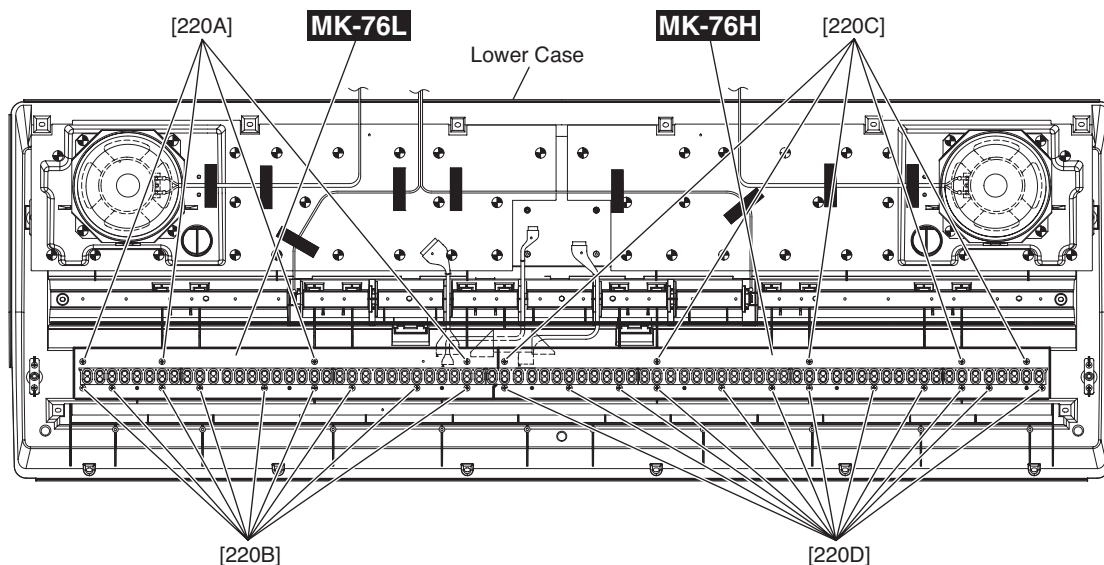
- 10-1 Remove the lower case assembly. (See procedure 1.)
- 10-2 Remove four (4) screws marked [240A] fixing the white/black keys for each octave (C through B), then remove the white/black keys for one (1) octave. (Fig.11)
- At that time, push hooks on the black keys to lift the rear part, then pull and slide the keys toward you to remove it. (Fig.12)
- 10-3 For the E0-B0 keys and C6-G6 keys, remove three (3) screws [240B], push hooks on the black keys to lift the rear part, and then pull and slide the keys toward you to remove it. (Fig.11)



(Fig.12)

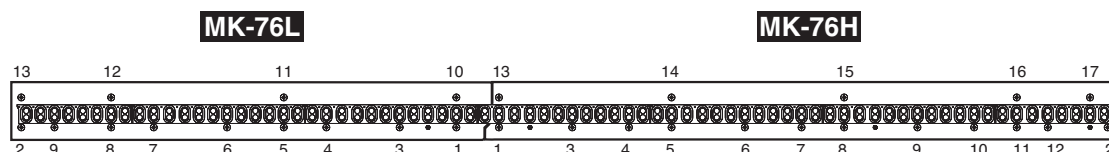
11. MK-76L and MK-76H Circuit Boards (Time required: About 7 minutes for each)

- 11-1 Remove the lower case assembly. (See procedure 1.)
- 11-2 Remove the E0-B3 white/black keys. (See procedure 10.)
Remove four (4) screws [220A] and nine (9) screws [220B]. The MK-76L circuit board and the key guide can then be removed. (Fig.13)
- 11-3 Remove the C3-G6 white/black keys. (See procedure 10.)
Remove five (5) screws [220C] and twelve (12) screws [220D]. The MK-76H circuit board and the key guide can then be removed. (Fig.13)
- * When installing the MK-76L circuit board, tighten the screws from No. 1 through No. 13 in order as shown in Fig.14.
- * When installing the MK-76H circuit board, tighten the screws from No. 1 through No. 17 in order as shown in Fig.14.



(Fig.13)

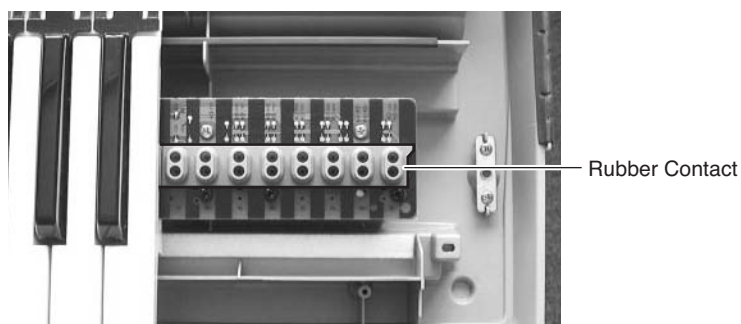
[220]: Bind Head Tapping Screw-B 3.0X10 MFZN2W3 (WE774200)



(Fig.14)

12. Rubber Contact

- 12-1 Remove the lower case assembly. (See procedure 1.)
- 12-2 Remove the keyboard assembly corresponding to the rubber contact. (See procedure 10.)
- 12-3 Remove the rubber contact. (Fig.15)



(Fig.15)

■ LSI PIN DESCRIPTION

M38K07M4L-307HP (X5186100) CPU(USB)	15
YMW767-VTZ (X6055A00) CPU	16
NT3881DFG-01 (X3148A00) LCD DRIVER	17
AK4385ET (X6040A00) DAC	17

● M38K07M4L-307HP (X5186100) CPU (USB)

DMLCD:IC802

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	P12/DQ2/AN2	I/O	Port P1 (In/output)	33	P26	I/O	Port P2 (In/output)
2	P13/DQ3/AN3	I/O		34	P27	I/O	
3	P14/DQ4/AN4	I/O		35	P50/INT0	I/O	Port P5 (In/output)/Interruption input
4	P15/DQ5/AN5	I/O		36	P51/CNTR0	I/O	Port P5 (In/output)/Timer X function
5	P16/DQ6/AN6	I/O		37	P52/INT1	I/O	Port P5 (In/output)/Interruption input
6	P17/DQ7/AN7	I/O		38	P53	I/O	Port P5 (In/output)
7	CNVSS	-	Ground	39	P54	I/O	
8	RESET	I	System reset input	40	P55	I/O	
9	EccE	-	Analog power supply +3.3V	41	P56	I/O	
10	VREF	I	Reference voltage input	42	P57	I/O	Port P0 (In/output)
11	Vss	-	Ground	43	P00	I/O	
12	XIN	I	Clock input	44	P01	I/O	
13	XOUT	O	Clock output	45	P02	I/O	
14	Vcc	-	Power supply +3.3V	46	P03	I/O	
15	CNVSS2	-	Ground	47	P04	I/O	
16	P60(LED0)	I/O	Port P6 (In/output)	48	P05	I/O	Port P4 (In/output)/External bus interface/Serial I/O
17	P61(LED1)	I/O		49	P06	I/O	
18	P62(LED2)	I/O		50	P07	I/O	
19	P63(LED3)	I/O		51	P40/ExDREQ/RxD	I/O	
20	PVss	-	Analog power supply +3.3V	52	P41/ExDACK/TxD	I/O	
21	PVcc	-		53	P42/ExTC/SCLK	I/O	
22	DVcc	-		54	P43/ExA1/SrDY	I/O	Port P3 (In/output)
23	USBVREF	-	USB reference power supply	55	P30	I/O	
24	TrON	O	USB reference voltage output	56	P31	I/O	
25	D0+	I/O	USB upstream in/output	57	P32	I/O	Port P3 (In/output)/External bus interface
26	D0-	I/O		58	P33/ExINT	I/O	
27	P20	I/O	Port P2 (In/output)	59	P34/ExCS	I/O	
28	P21	I/O		60	P35/ExWR	I/O	
29	P22	I/O		61	P36/ExRD	I/O	
30	P23	I/O		62	P37/ExA0	I/O	
31	P24	I/O		63	P10/DQ0/AN0	I/O	Port P1 (In/output)
32	P25	I/O		64	P11/DQ1/AN1	I/O	

● YMW767-VTZ (X6055A00) CPU

DMLCD: IC301

Pin No.	NAME	I/O	FUNCTION	Pin No.	NAME	I/O	FUNCTION
1	VSS	-	VSS	65	VSS	-	VSS
2	TESTN	I	Input for TEST	66	IOVDD	-	IOVDD +3.3V
3	PLLBPN	I	PLL bypass select	67	LBN/LWRN/PF6	O	External memory lower-byte enable
4	PLLVD	-	PLLVD +2.5V	68	UBN/UWRN/PF7	O	External memory upper-byte enable
5	CIN	-	Capacitor terminal for PLL	69	RDN/PF4	O	External memory read enable
6	PLLVS	-	PLLVS	70	MD00	I/O	External memory data bus
7	TRSTN	I	JTAG input	71	MD08	I/O	
8	TMS	I		72	MD01	I/O	
9	TCK	I		73	MD09	I/O	
10	TDI	I		74	MD02	I/O	
11	TD0	O	JTAG output	75	MD10	I/O	VSS
12	XI	I	Crystal oscillator	76	MD03	I/O	
13	XO	O	Crystal oscillator	77	VSS	-	
14	VSS	-	VSS	78	MD11	I/O	
15	VDD	-	VDD +2.5V	79	MD04	I/O	
16	ICN	I	Hardware reset	80	MD12	I/O	External memory data bus
17	ECSN	I	CPU I/F chip select	81	MD05	I/O	
18	EWRN/PD5	I	CPU I/F write enable	82	MD13	I/O	
19	ERDN/PD4	I	CPU I/F read enable	83	MD06	I/O	
20	EA3/PD3	I	CPU I/F address bus	84	MD14	I/O	
21	EA2/PD2	I		85	MD07	I/O	External memory write enable
22	EA1/PD1	I		86	MD15	I/O	
23	EA0/PD0	I		87	WRN/PF5	O	
24	IOVDD	-	IOVDD +3.3V	88	VSS	-	VSS
25	ED0/PC0	I/O	CPU I/F data bus	89	VDD	-	VDD +2.5V
26	ED1/PC1	I/O		90	IOVDD	-	IOVDD +3.3V
27	ED2/PC2	I/O		91	MA17	O	External memory address bus
28	ED3/PC3	I/O		92	MA16	O	
29	ED4/PC4	I/O		93	MA15	O	
30	ED5/PC5	I/O		94	MA14	O	
31	ED6/PC6	I/O		95	MA13	O	
32	ED7/PC7	I/O		96	MA12	O	
33	VSS	-	VSS	97	MA11	O	VSS
34	IRQON/PH0	I	Interrupt input	98	MA10	O	
35	TxD0	O	Serial output	99	MA09	O	
36	RxD0	I	serial input	100	MA08	O	
37	TxD1/PG2	O	Serial output	101	MA07	O	
38	RxD1/PH1	I	serial input	102	MA06	O	
39	SCLK1/PH2	I	External synchronization clock	103	MA05	O	
40	SD0	O	Serial output	104	VSS	-	VSS
41	SDI/PH3	I	serial input	105	MA04	O	External memory address bus
42	BCLK	O	Bit clock output	106	MA03	O	
43	WCLK/SY0	O	Word clock output	107	MA02	O	
44	SYSCLK/PG3	O	Clock output	108	MA01	O	External memory chip select
45	VSS	-	VSS	109	CS0N/PG0	O	
46	VDD	-	VDD +2.5V	110	MA18	O	External memory address bus
47	IOVDD	-	IOVDD +3.3V	111	MA19	O	
48	PA0	I/O	I/O port	112	MA21/PF1	O	
49	PA1	I/O		113	MA22/PF2	O	External memory address bus
50	PA2	I/O		114	MA20	O	
51	PA3	I/O		115	MA23/PF3	O	
52	PA4	I/O		116	CS1N/PG1	O	External memory chip select
53	PA5	I/O		117	MA00/PF0	O	VSS
54	PA6	I/O		118	VSS	-	
55	PA7	I/O	I/O port	119	VDD	-	VDD +2.5V
56	VSS	-		120	IOVDD	-	IOVDD +3.3V
57	PB0	I/O		121	CS2N/PE0	O	External memory chip select
58	PB1	I/O		122	CS3N/PE1	O	
59	PB2	I/O		123	CS4N/CASN/PE2	O	
60	PB3	I/O		124	CS5N/PE3	O	
61	PB4	I/O		125	CS50RDN/PE4	O	
62	PB5	I/O		126	CS51WRN/PE5	O	
63	PB6	I/O		127	CS52WRN/PE6	O	
64	PB7/SYI	I/O		128	CS53WRN/RASN/PE7	O	

● NT3881DFG-01 (X3148A00) LCD DRIVER

DMLCD:IC601

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	Common signal output for LCD driving
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		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	Segment signal output for LCD driving
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		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	Alternated signal for LCD driver output	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	

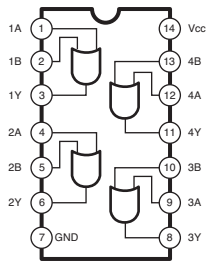
● AK4385ET (X6040A00) DAC (Digital to Analog Converter)

DMLCD:IC501

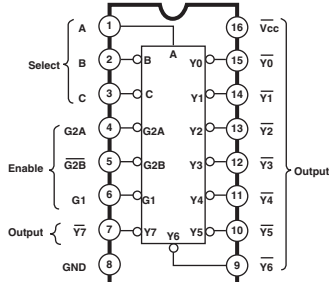
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	MCLK	I	Master Clock	9	AOUTR-	O	Rch Analog out(-)
2	BICK	I	Audio Serial Data Clock	10	AOUTR+	O	Rch Analog out(+)
3	SDTI	I	Audio Serial Data Input	11	AOUTL-	O	Lch Analog out(-)
4	LRCK	I	L/R Clock	12	AOUTL+	O	Lch Analog out(+)
5	PDN	I	Power Down mode	13	Vss	-	Ground
6	CSN	I	Chip Select	14	VDD	-	Power Supply
7	CCLK	I	Control Data Input	15	DZFR	O	Rch Data Zero Input Detect
8	CDTI	I	Control Data Input	16	DZFL	O	Lch Data Zero Input Detect

IC BLOCK DIAGRAM

● **SN74LV32APWR** (X5647A00)
Quad 2 Input OR
DMLCD:IC207

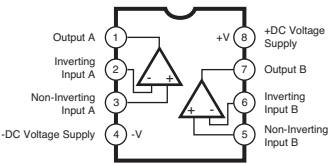


● **SN74LV138APWR**(X7284A00)
DECODER
DMLCD: IC401,402

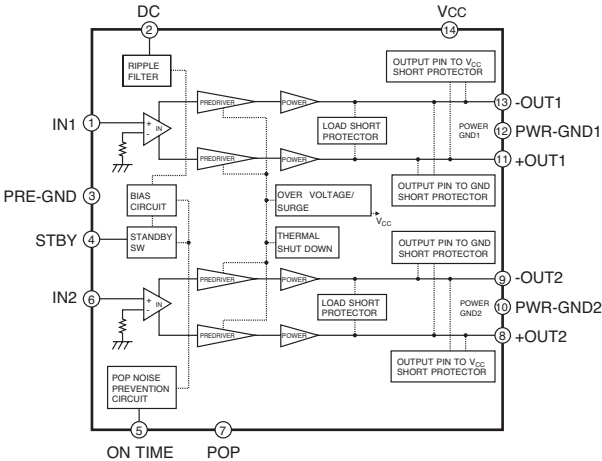


ENABLE INPUTS			SELECT INPUTS			OUTPUTS							
G1	G2A	G2B	C	B	A	Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7
X	X	X	X	X	X	H	H	H	H	H	H	H	H
X	X	X	X	X	X	H	H	H	H	H	H	H	H
L	L	L	L	L	L	L	H	H	H	H	H	H	H
H	L	L	L	L	L	H	L	H	H	H	H	H	H
H	L	L	L	L	L	H	L	H	H	H	H	H	H
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H	L	L	L	L	L	H	L	H	H	H	H	H	H
H	L	L	L	L	L	H	L	H	H				

● **BA4510F-E2** (X7300A00)
Dual Operational Amplifier
DMLCD: IC502



● **LA4625** (XY209A00)
Power Amplifier
AMJK: IC551

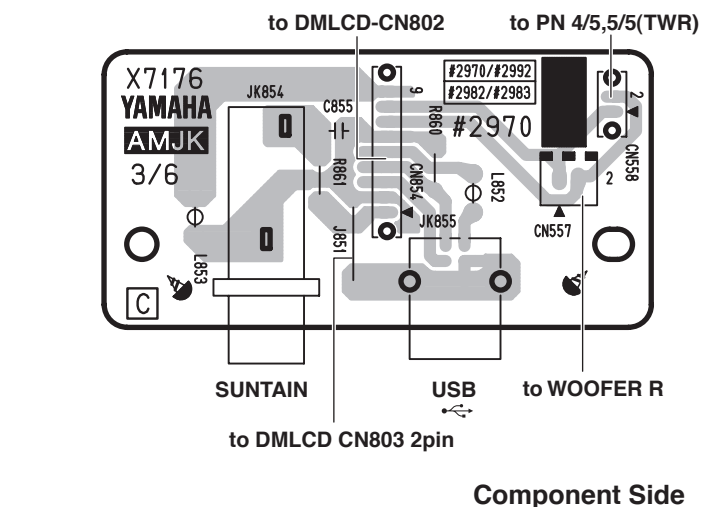


■ CIRCUIT BOARDS

CONTENTS

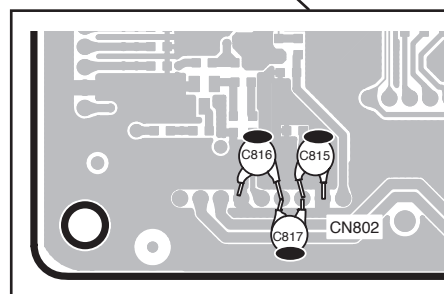
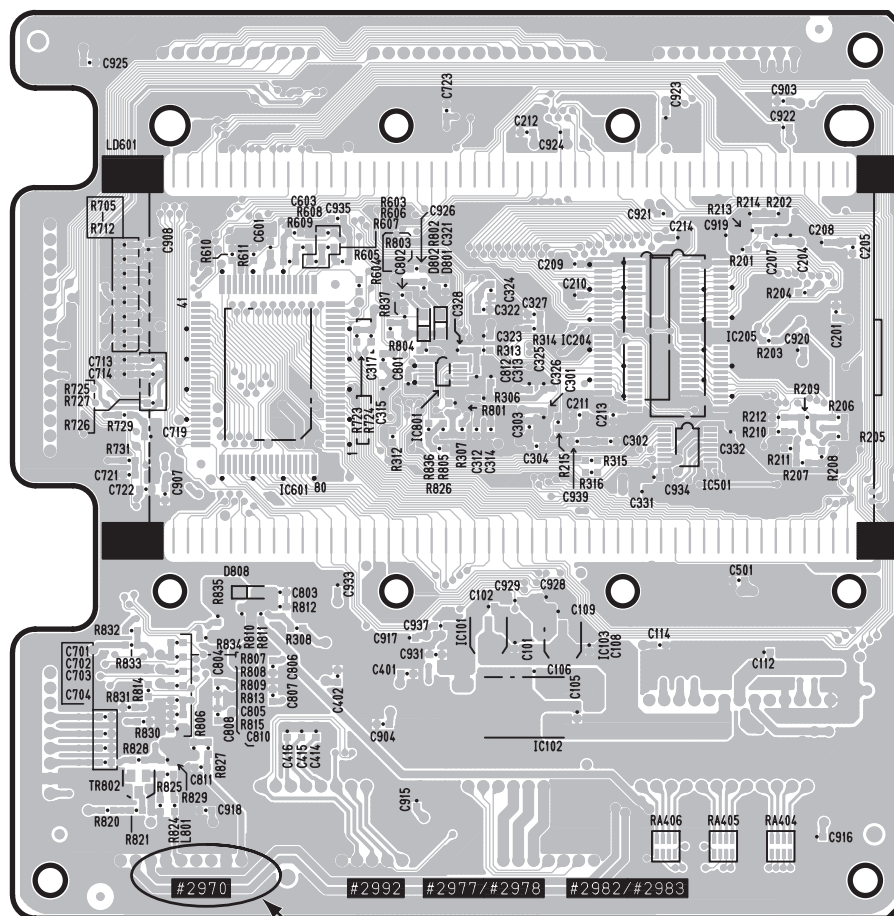
AM (AMJK 1/6) Circuit Board (X7176C0)	22
AMJK 4/6 (Master Volume) Circuit Board (X7176C0)	22
AMJK 5/6 (Standby/ON) Circuit Board (X7176C0)	22
DMLCD Circuit Board (X7174C0)	20
MK-76H Circuit Board (X2333F0)	25
MK-76L Circuit Board (X2334F0)	27
PB (AMJK 6/6) Circuit Board (X7176C0)	21
PN 2/5 (Rotary Encoder) Circuit Board (X7178C0)	24
PNL (PN 3/5) Circuit Board (X7178C0)	23
PNR (PN 1/5) Circuit Board (X7178C0)	24
TWL (PN 4/5, 5/5) Circuit Board (X7178C0)	21
TWR (PN 4/5, 5/5) Circuit Board (X7178C0)	21
USB (AMJK 3/6) Circuit Board (X7176C0)	20

- **USB (AMJK 3/6) Circuit Board**



USB (AMJK 3/6): 2NA-WG23590

• DMLCD Circuit Board



Ceramic capacitor (C815) is soldered between 2 pin and 3 pin of CN802.

Ceramic capacitor (C816) is soldered between 4 pin and 6 pin of CN802.

Ceramic capacitor (C817) is soldered between 3 pin and 4 pin of CN802.

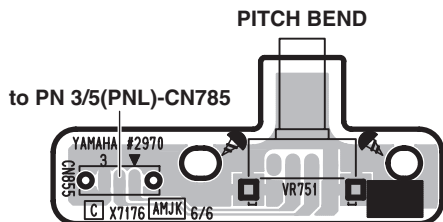
● Fix by bond.

Pattern side

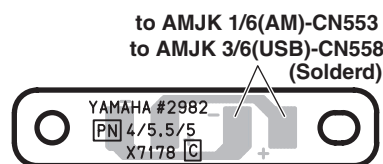
• PB (AMJK 6/6) Circuit Board

• TWL (PN 4/5, 5/5) Circuit Board

• TWR (PN 4/5, 5/5) Circuit Board



Component side

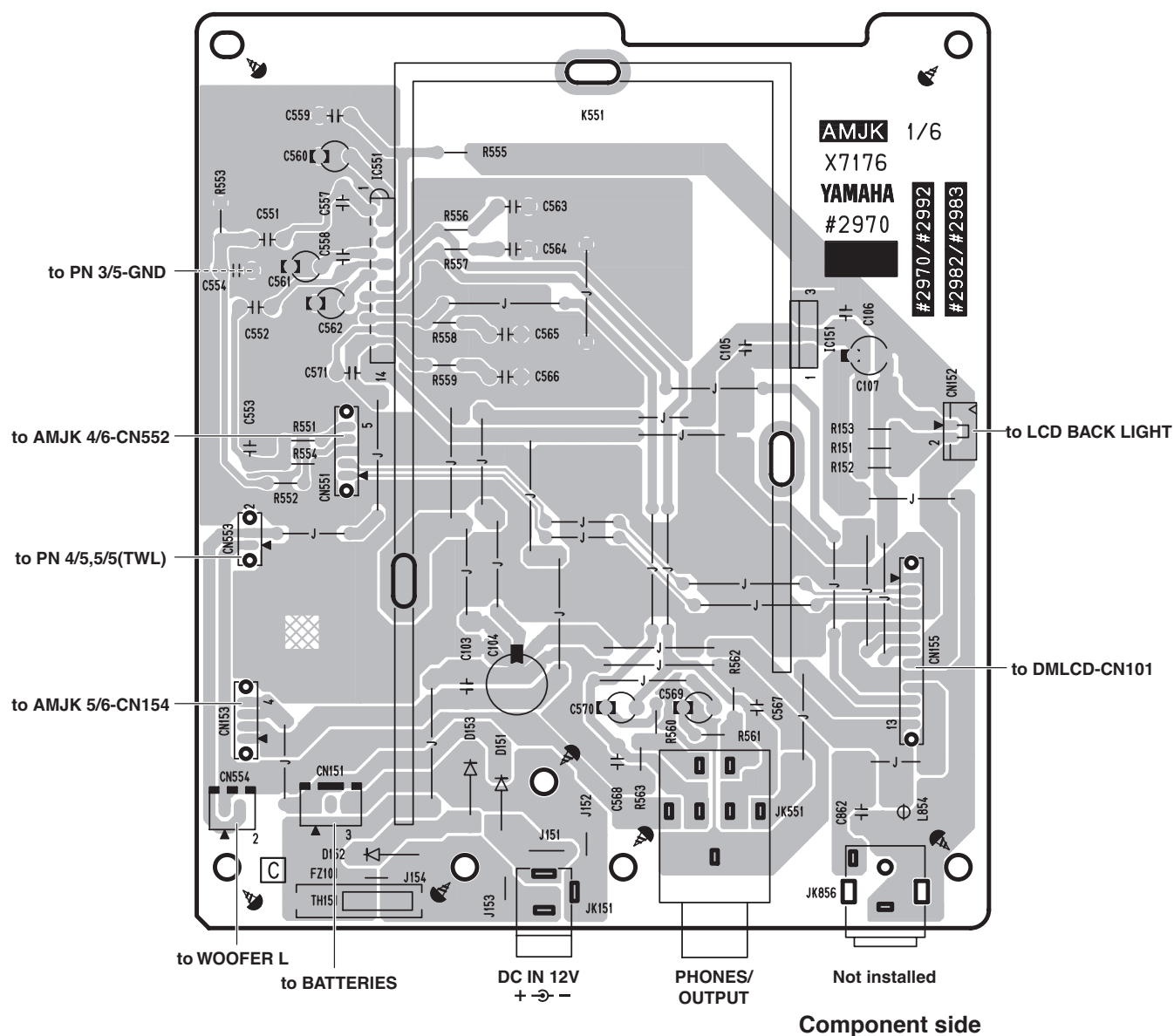


Component side

DMLCD : 2NA-WG23540
PB (AMJK 6/6) : 2NA-WG23590
TWL,TWR (PN 4/5, 5/5) : 2NA-WG23620

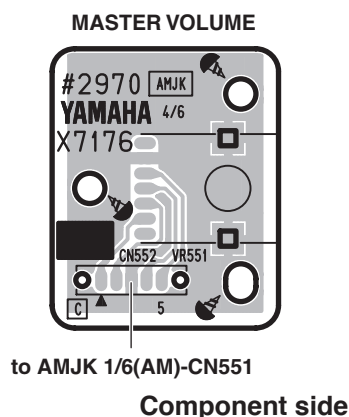
Note: See parts list for details of circuit board component parts.

• AM (AMJK 1/6) Circuit Board

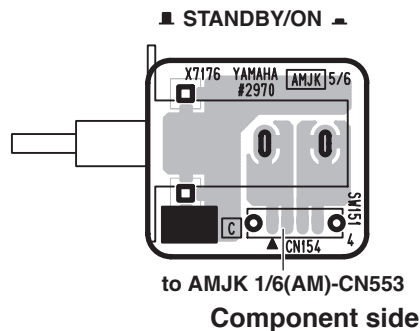


Component side

• AMJK 4/6 Circuit Board



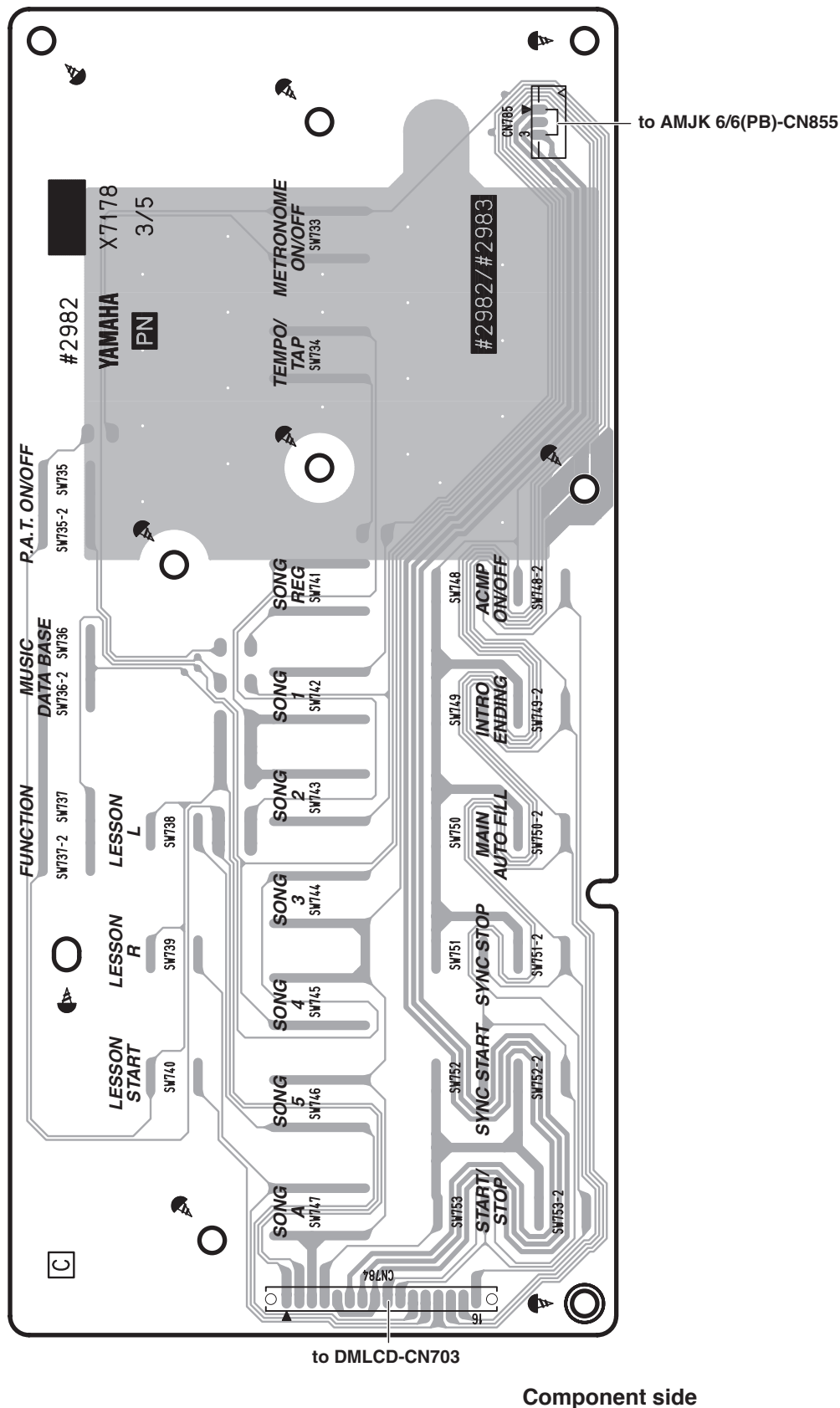
• AMJK 5/6 Circuit Board



AM (AMJK 1/6) : 2NA-WG23590
 AMJK 4/6 : 2NA-WG23590
 AMJK 5/6 : 2NA-WG23590

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

• PNL(PN 3/5) Circuit Board



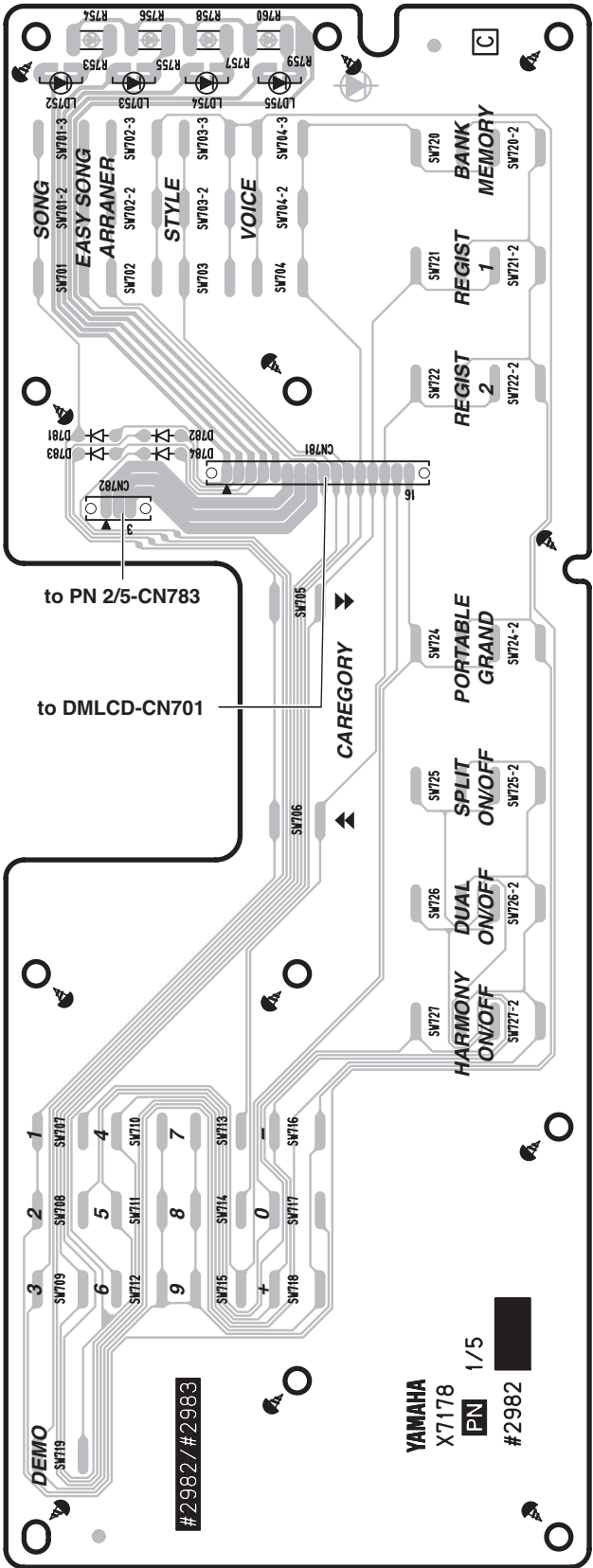
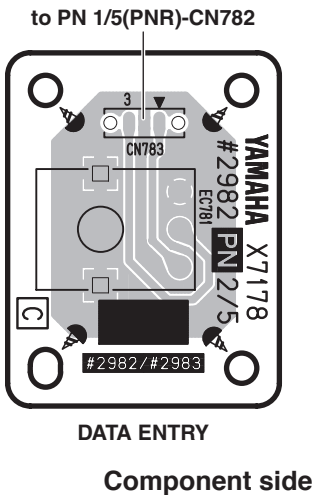
PNL (PN 3/5): 2NA-WG23620

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

• PNR (PN 1/5) Circuit Board

SCALE:85/100

• PN 2/5 Circuit Board

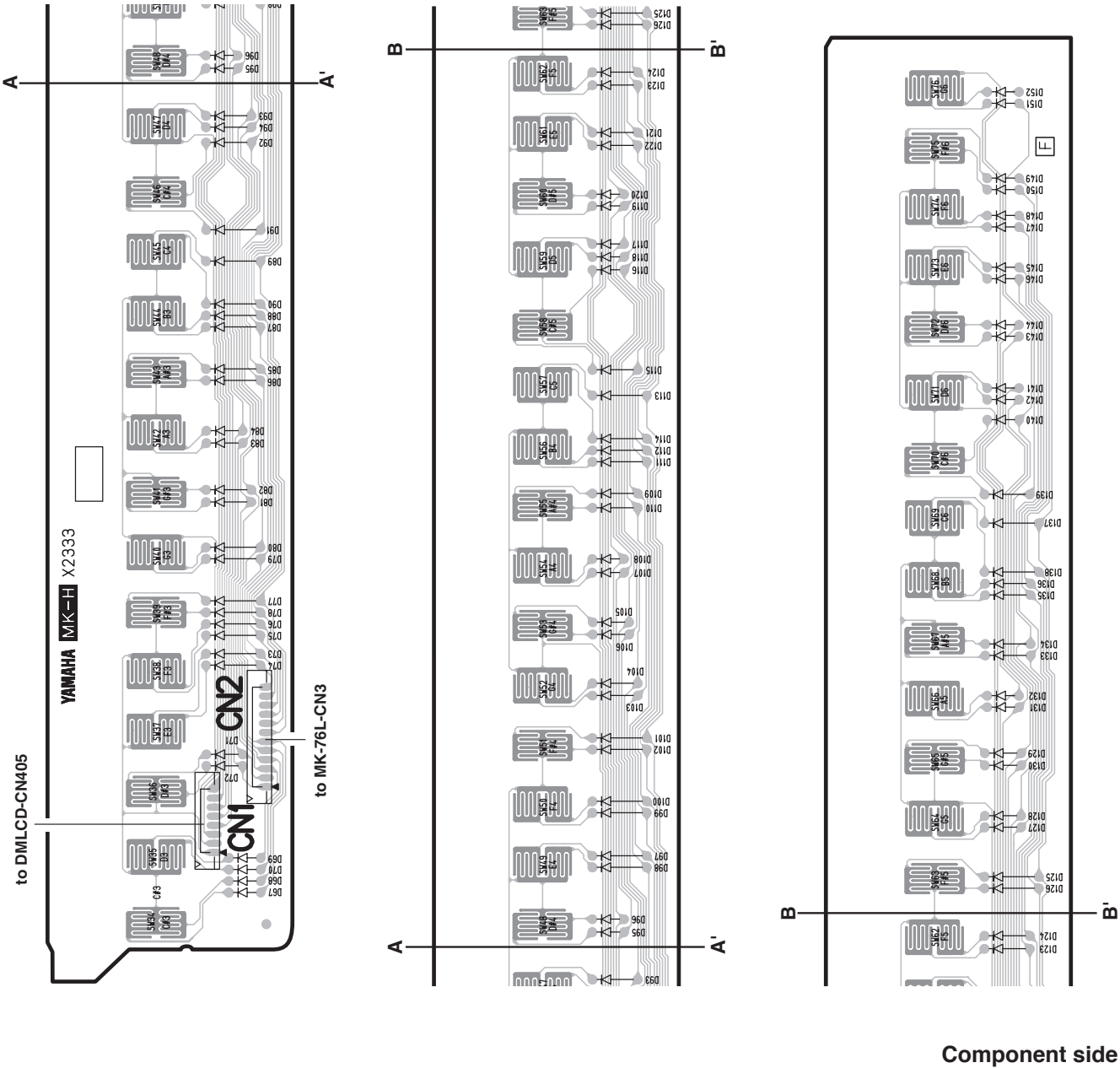


Component side

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

PNR (PN 1/5) : 2NA-WG23620
PN 2/5 : 2NA-WG23620

• MK-76H Circuit Board



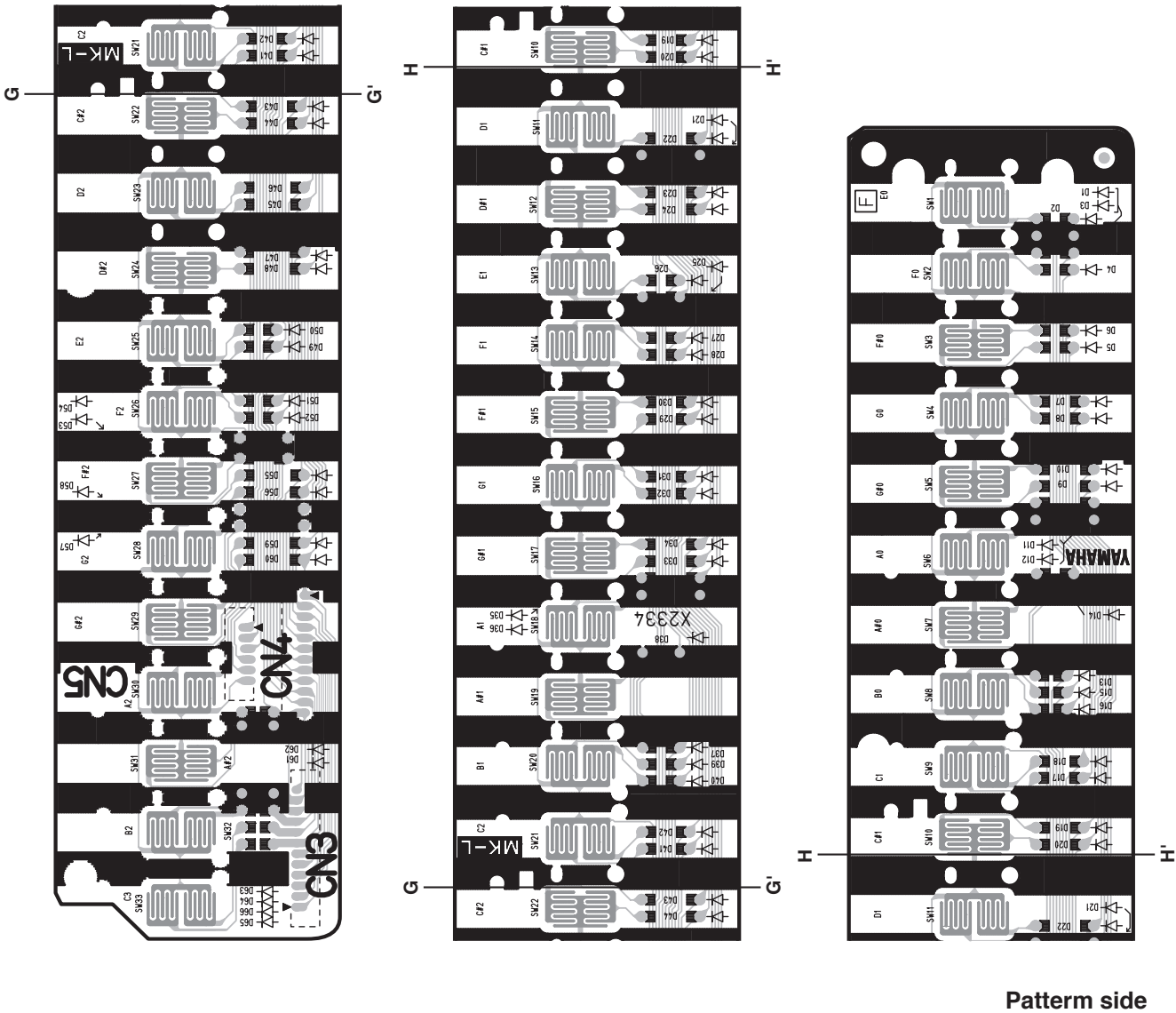
Note: See parts list for details of circuit board component parts.





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

• MK-76L Circuit Board



Pattern side

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

■ TEST PROGRAM

* If you execute the test No.47(Factory Set), then the user's preset data may be lost.
Therefore, back up the user's data in advance.

A. PREPARATION

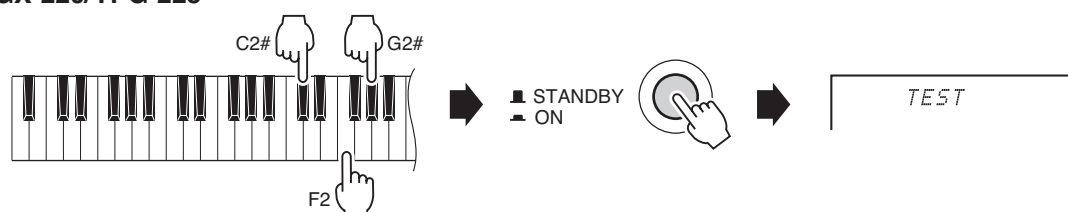
- 1) PA-5D or PA-51(AC adaptor) is used.
- 2) Measuring instruments: frequency counter, level meter (with JIS-C filter)
Note: Connect a stereo plug to the [PHONES/OUTPUT] jack at 33 ohms.
- 3) Jigs: Foot switch (FC-4 or FC-5), USB cable, USB-MIDI driver(*1)
PC (Install a USB-MIDI driver(*1) in PC and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

*1 Obtain the USB-MIDI driver from CD-ROM (X7225A00) for DGX-220/YPG-225 or Yamaha official website.
(URL>><http://www.yamahapclub.com>)

B. HOW TO ENTER THE TEST PROGRAM

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

DGX-220/YPG-225



C. 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 test result is OK, or the test item is completed, press the [START/STOP] button again to return to the test item selection display.

* Press the [-] or [+] button of the number buttons to select the next test program item.

* When the test result is OK, a cursor () is added under the first character of the test item name on display.
If the test result is NG, press the [DEMO] button or the lowest (leftmost) white key to return to the test item selection display.

D. TEST PROGRAM LIST (dBu=dBm)

(dBu=dBm)

TEST No.	LCD Display	Test Descriptions, Judgment Criteria
1	001Version	Displays versions. This test program displays ROM(Program) and USB CPU versions. (In case of OK: Prog "XXX",USB "XXX", NG: Prog "Err",USB "Err")
2	002Rom Chk1	Checks the ROM that is connected to the CPU bus. (OK:"Rom OK", NG:"Rom NG") The test results appear on the LCD. Check that the LCD displays "Rom OK".
3	003 Ram Chk1	Checks the RAM that is connected to the CPU bus. (OK:"Ram OK", NG:"Ram NG") The test results appear on the LCD. Check that the LCD displays "Ram OK".

TEST No.	LCD Display	Test Descriptions, Judgment Criteria
6	006 FFromChk1	Checks the flash ROM that is connected to CPU bus. The check result appears on the LCD. Check that the LCD displays "FFrom OK". (OK:"FFrom OK", NG:"FFrom NG")
11	011 TG1 Chk	Outputs the sine wave by changing the channels in sequence from C2 to G4.[32 notes] Check the sound by hearing that there is no 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	013 Pit Chk	Connect the frequency counter to the [PHONES/OUTPUT] jack. (L or R) Sets PAN to Center and produces a signal at 440.14 Hz $\pm$ 0.22 Hz. Check that the correct signal is produced.
--	--	Output Level Check (33 ohm load) Connect the level meter(with a JIS-C filter) to the [PHONES/OUTPUT] jack. (L and R) Set the [MASTER VOLUME] at maximum and check the output level. PHONES L : -6.0 dBu PHONES R : -6.0 dBu (dBu=dBm)
--	--	Volume Decline Value Check (33 ohm load) Connect the level meter(with a JIS-C filter) to the [PHONES/OUTPUT] jack. (L and R) Set the [MASTER VOLUME] at minimum and check the output level. PHONES L : less than -70.0 dBu PHONES R : less than -70.0 dBu (dBu=dBm)
14	014 Output R	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 -55.0 dBu PHONES R : -6.0 dBu
15	015 Output L	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 : -6.0 dBu PHONES R : less than -55.0 dBu
20	020 SW Chk	Checks the switches on the panel. Press the switches on the LCD as instructed. A pre-assigned note is output when the switch is pressed.A rotary encoder is clockwise set up to UP and is counterclockwise set to DOWN. (See P.32 "Table 1".)The check result appears on the LCD when all the switches are pressed as instructed. Check that "SW OK" is displayed. Also, check that no key stick is existed. (OK:"SW OK", NG:"SW NG", When multiple switches are pressed at the same time:"Over Two")
21	021 A.LedChk	Check that all the LEDs on the panel are on.
28	028 LCD On	Check that all LCD dots are on.
29	029 LCD Off	Check that all LCD dots are off.
31	031 PD1 Chk	Connect the foot switch (FC-4 or FC-5) to the [SUSTAIN] 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". (OK:"PD1 OK", NG:"PD1 NG")
33	033 PB Chk	Checks the pitch bend wheel. (First, it checks if the center position of the wheel is correct or not.) Check that the C3 note is output when rotating the [PITCH BEND] wheel to minimum from center and the C4 note is output when rotating it to maximum. (OK:"PB OK", NG:"PB NG", If the center position of the wheel is not correct:"PB C NG")

TEST No.	LCD Display	Test Descriptions, Judgment Criteria
37	037 MIDI Chk	Connect a PC which has installed the driver and main unit USB terminal with a USB cable. Set the through mode on PC and execute the test. Confirm that the C4 note is output and "MIDI OK" is displayed on LCD.
41	041 Rom Chk2	Checks the ROM that is connected to the CPU. The test result appears on the LCD. Check that the LCD displays "Rom OK". It takes about 15 seconds. (OK:"Rom OK", NG:"Rom NG")
42	042 Ram Chk2	Check the RAM that is connected to the CPU. The test results appear on the LCD. Check that the LCD displays "Ram OK". (OK:"Ram OK", NG:"Ram NG")
45	045 FRomChk2	Checks the flash ROM that is connected to CPU bus. The check result appears on the LCD. Check that the LCD displays "FRom OK". It takes about 30 seconds. (OK:"FRom OK", NG:"FRom NG")
47	047 Factory	All backup domains are initialized and it changes into a factory-shipments state when executing this test. (While executing the test: "Fact --", After finishing the test: "Fact End")
48	048 TestExit	Exit from the test program after executing this test.
--	--	Noise Level Check (in the normal mode) (33 ohm load) Connect the level meter(with a JIS-C filter) to the [PHONES/OUTPUT] jack. (L and R) Set the [MASTER VOLUME] at maximum and check that the noise level is within the range below. PHONES L/R: less than -78.0 dBu

* Note: As for the test no.41 - 45, it takes time. If you want to skip them, press the [+ / YES] button several times to go to the test no.47 (Factory).

Table 1

No.	SW Name	Display	Note No.
1	DIAL UP	Dial Up	C2
2	DIAL DOWN	Dial Dwn	C#2
3	P.A.T.	P. A.T.	D2
4	MUSIC DATABASE	M.D.B.	D#2
5	FUNCTION	Function	E2
6	LESSON L	Lesson L	F2
7	LESSON R	Lesson R	F#2
8	LESSON START	LsnStart	G2
9	METRONOME	Metro	G#2
10	TEMPO/TAP	Temp/TAP	A2
11	SONG REC	Song REC	A#2
12	SONG 1	Song 1	B2
13	SONG 2	Song 2	C3
14	SONG 3	Song 3	C#3
15	SONG 4	Song 4	D3
16	SONG 5	Song 5	D#3
17	SONG A	Song A	E3
18	ACMP	ACMP	F3
19	INTRO/ENDING	Intro	F#3
20	MAIN/AUTO FILL	Main/Fil	G3
21	SYNC STOP	S. Stop	G#3
22	SYNC START	S. Start	A3
23	START/STOP	Str/Stp	A#3
24	SONG	Song	B3
25	EASY SONG ARRANGER	E.S.A.	C4
26	STYLE	Style	C#4
27	VOICE	Voice	D4
28	CATEGORY -	Catego -	D#4
29	CATEGORY +	Catego +	E4
30	TENKEY 1	Tenkey 1	F4
31	TENKEY 2	Tenkey 2	F#4
32	TENKEY 3	Tenkey 3	G4
33	TENKEY 4	Tenkey 4	G#4
34	TENKEY 5	Tenkey 5	A4
35	TENKEY 6	Tenkey 6	A#4
36	TENKEY 7	Tenkey 7	B4
37	TENKEY 8	Tenkey 8	C5
38	TENKEY 9	Tenkey 9	C#5
39	TENKEY -	Tenkey -	D5
40	TENKEY 0	Tenkey 0	D#5
41	TENKEY +	Tenkey +	E5
42	BANK/MEMORY	Memory	F5
43	REGIST 1	Regist 1	F#5
44	REGIST 2	Regist 2	G5
45	PORTABLE GRAND	Piano	G#5
46	SPLIT	Split	A5
47	DUAL	Dual	A#5
48	HARMONY	Harmony	B5
49	DEMO	Demo	C6

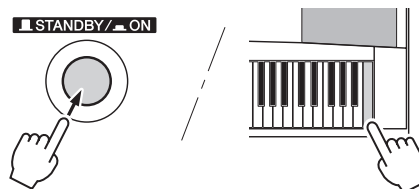
■ INITIALIZATION

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

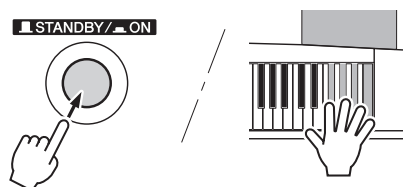
To clear data backed up to the internal flash memory - panel user setting, registration memory, user songs, style file - turn the power on by pressing the [STANDBY/ON] switch while holding the highest white key on the keyboard.

The backed up data will be erased and the default values restored.



Flash Clear

To clear song data and style files that have 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

To backup user data to external devices, use the "Musicsoft Downloader (bundled software)".

You can use the Musicsoft Downloader to transfer "Backup Files" including the five User Songs stored on the instrument, to a computer.

List of data that can be backed up

- User Songs
- Style Files
- Registration Memory
- FUNCTION Settings: Tuning, Split Point, Touch Sensitivity, Style Volume, Song Volume, Metronome Volume, Grade, Demo Cancel, Master EQ type

PREPARATION

PC (Personal Computer)

USB Cable (A - B Type)

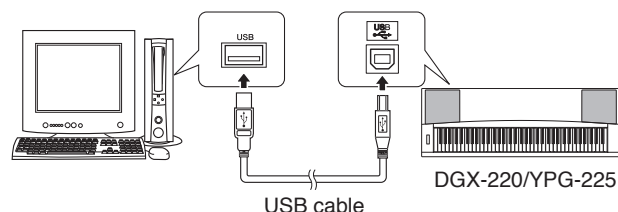
MIDI-USB Driver *1

Musicsoft Downloader (MSD) *1

*1: Obtain these programs from CD-ROM (X7225A00) of the attachment for DGX-220/YPG-225 or Yamaha official website.

(URL>> <http://www.yamahapkclub.com>)

Install these software in PC beforehand.



BACKUP PROCEDURE

1. Turn off the power of DGX-220/YPG-225.
2. End all the application software.
3. Connect the DGX-220/YPG-225 to the PC with a USB cable.
4. Turn on the power of DGX-220/YPG-225.
5. Click the Control Panel on PC.
6. Click "USB-MIDI Driver" on the Control Panel to open the dialog box.
7. Remove the check from the check box next the word "Thru ON/OFF" in the dialog box.
8. Start up the Musicsoft Downloader.
9. If you click "Electronic Musical Instruments" in the Musicsoft Downloader display, and then "System Drive", a file named "06PG76.BUP" will appear in the lower right corner of the Musicsoft Downloader display.
This is the backup file. For details about how to transmit backup file using the Musicsoft Downloader application, refer to the Online help in the application.

NOTE:

- * Preset Song data cannot be transmitted from the instrument.

CAUTION:

- * We recommend that you use a power adaptor rather than batteries when transferring data. The data can be corrupted if the batteries fail during the transfer.
- * Do not rename the backup file on the computer. If you do so, it will not be recognized when transferred to the instrument.

MIDI IMPLEMENTATION CHART

YAMAHA [Portable Grand]

Date:17-NOV-2005

Model DGX-220/YPG-225 MIDI Implementation Chart

Version:1.0

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1 - 16 x	1 - 16 x	
Mode	Default Messages Altered	3 x *****	3 x x	
Note Number	: True voice	0 - 127 *****	0 - 127 0 - 127	
Velocity	Note ON Note OFF	o 9nH,v=1-127 x 9nH,v=0	o 9nH,v=1-127 x	
After Touch	Key's Ch's	x x	x x	
Pitch Bend		o 0-24 semi	o 0-24 semi	
Control Change	0,32 1,11,84 6,38 7,10 64 71 72 73 74 91,93 96-97 100-101	o x *1 o o o x *1 o x *1 x *1 o x *1 o o	o o o o o o o o o o o o	Bank Select Data Entry Sustain Harmonic Content Release Time Attack Time Brightness Effect Depth RPN Inc,Dec RPN LSB,MSB
Prog Change	: True #	o 0 - 127 *****	o 0 - 127	
System Exclusive		o	o	
Common	: Song Pos. : Song Sel. : Tune	x x x	x x x	
System	: Clock Real Time: Commands	o o	o o	
Aux	:All Sound OFF :Reset All Cntrls :Local ON/OFF :All Notes OFF Mes- :Active Sense sages:Reset	x x x x o x	o(120,126,127) o(121) o(122) o(123-125) o x	

*1 Refer to MIDI DATA FORMAT.

Mode 1 : OMNI ON , POLY

Mode 2 : OMNI ON ,MONO

o : Yes

Mode 3 : OMNI OFF, POLY

Mode 4 : OMNI OFF,MONO

x : No

■ MIDI DATA FORMAT

NOTE:

- 1 By default (factory settings) the instrument ordinarily functions as a 16-channel multi-timbral tone generator, and incoming data does not affect the panel voices or panel settings. However, the MIDI messages listed below do affect the panel voices, auto accompaniment, and songs.
 - MIDI Master Tuning
 - System exclusive messages for changing the Reverb Type and Chorus Type.
- 2 Messages for these control change numbers cannot be transmitted from the instrument itself. However, they may be transmitted when playing the accompaniment, song or using the Harmony effect.
- 3 Exclusive
 - <GM System ON> F0H, 7EH, 7FH, 09H, 01H, F7H
 - This message automatically restores all default settings for the instrument, with the exception of MIDI Master Tuning.
 - <MIDI Master Volume> F0H, 7FH, 7FH, 04H, 01H, II, 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 "II" are ignored.)

<MIDI Master Tuning> F0H, 43H, 1nH, 27H, 30H, 00H, 00H, mm, II, cc, F7H

- This message simultaneously changes the tuning value of all channels.
- The values of "mm" and "II" are used for MIDI Master Tuning.
- The default value of "mm" and "II" are 08H and 00H, respectively. Any values can be used for "n" and "cc".

<Reverb Type> F0H, 43H, 1nH, 4CH, 02H, 01H, 00H, mmH, IIH, F7H

- mm : Reverb Type MSB
 - II : Reverb Type LSB
- Refer to the Effect Map for details.

<Chorus Type> F0H, 43H, 1nH, 4CH, 02H, 01H, 20H, mmH, IIH, F7H

- mm : Chorus Type MSB
 - II : Chorus Type LSB
- Refer to the Effect Map for details.

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

5 Local ON/OFF

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

■ Effect map

*When a Type LSB value is received that corresponds to no effect type, a value corresponding to the effect type (coming the closest to the specified value) is automatically set.

*The numbers in parentheses in front of the Effect Type names correspond to the number indicated in the display.

● REVERB

TYPE MSB	TYPE LSB								
	00	01	02	08	16	17	18	19	20
000	No Effect								
001	(01)Hall1				(02)Hall2	(03)Hall3			
002	Room					(04)Room1		(05)Room2	
003	Stage				(06)Stage1	(07)Stage2			
004	Plate				(08)Plate1	(09)Plate2			
005...127	No Effect								

● CHORUS

TYPE MSB	TYPE LSB								
	00	01	02	08	16	17	18	19	20
000...063	No Effect								
064	Thru								
065	Chorus		(02)Chorus2						
066	Celeste					(01)Chorus1			
067	Flanger			(03)Flanger1		(04)Flanger2			
068...127	No Effect								

PortableGrand

DGX-220 / YPG-225

PARTS LIST

■ CONTENTS

OVERALL ASSEMBLY	2
LOWER CASE ASSEMBLY	5
KEYBOARD ASSEMBLY	7
ELECTRICAL PARTS	9

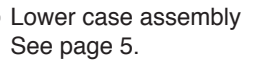
Note) DESTINATION ABBREVIATIONS

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 specifications equal to those originally installed.

- The numbers in "QTY" shows quantities for each unit.
- The parts with "--" in "Part No." are not available as spare parts.
- The 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.



REF NO.	PART NO.	DESCRIPTION		部 品 名	REMARKS	QTY	RANK
	--	OVERALL ASSEMBLY		総 組 立	DGX-220/YPG-225		
	--	Overall Assembly		総 組 立	DGX-220 U,C,W,J,O (WG27900)		
	--	Overall Assembly		総 組 立	YPG-225 U,C,W (WG27910)		
* 10	WG279400	Upper Case Assembly		上 ケ ー ス A s s ' y	DGX-220		
* 10	WG279500	Upper Case Assembly		上 ケ ー ス A s s ' y	YPG-225		
20	X0159A00	Speaker	3.0cm	ス ピ ー カ	TWEETER	2	01
* 30	WG308100	Circuit Board	TWL(PN 4/5,5/5)	T W L シ ー ト	(WG23620)(X7178C0)		
* 35	WG308200	Circuit Board	TWR(PN 4/5,5/5)	T W R シ ー ト	(WG23620)(X7178C0)		
* 40	WF835300	PN Switch	x2	P N ス イ ッ チ	METRONOME ON/OFF		
					TEMPO/TAP		
* 50	WF834900	PN Switch	x3	P N ス イ ッ チ	P.A.T.ON/OFF,FUNCTION,		
					MUSIC DATABASE		
* 60	WG287600	PN Switch	x7	P N ス イ ッ チ 印 刷 品	SONG MEMORY(REC,1-5,A)		
* 70	WF835100	PN Switch	x6	P N ス イ ッ チ	SONG/STYLE(REPEAT&LEARN		
					A-B REPEAT,...,START/STOP)		
* 80	WG287500	PN Switch	x4	P N ス イ ッ チ 印 刷 品	SONG,EASY SONG ARRANGER,		
					STYLE,VOICE		
* 90	WG287900	PN Switch	x3	P N ス イ ッ チ 印 刷 品	REGIST MEMORY,1,2,BANK		
* 100	WF835800	PN Switch	x4	P N ス イ ッ チ	PORTABLE GRAND,		
					SPLIT ON/OFF,DUAL ON/OFF,		
					HARMONY ON/OFF		
* 110	WG287100	PN Switch	x12	P N ス イ ッ チ 印 刷 品	-,0,+,1-9		
* 115	WF834800	PN Switch	x3	P N ス イ ッ チ	LESSON(L,R,START)		
* 120	WG287700	PN Switch	x2	P N ス イ ッ チ 印 刷 品	CATEGORY(UP,DOWN)		
* 125	WG283500	PN Switch	x1	P N ス イ ッ チ	DEMO		
* 140	WG307900	Circuit Board	PNL(PN 3/5)	P N L シ ー ト	(WG23620)(X7178C0)		
* 150	WG308000	Circuit Board	PNR(PN 1/5)	P N R シ ー ト	(WG23620)(X7178C0)		
180	WE774300	Bind Head Tapping Screw-B	3.0X8 MFZN2W3	B タ イ ト + B I N D		58	01
220	VA126100	Adhesive Tape	12X50	粘 着 テ ー プ		5	03
220	--	Adhesive Tape	MY7# 12X50	P E T テ ー プ	(WB79380)	5	
230	VY793100	Wheel Assembly	PSR730	ホ イ ー ル A s s ' y			04
230a	VY750800	Wheel	PSR730	ホ イ ー ル	PITCH BEND		03
230b	VT440100	Spring	PSR620	ホ イ ー ル バ ネ			03
240	V7660600	Emblem		エ ン ブ レ ム			01
* 250	WG307400	Circuit Board	PB(AMJK 6/6)	P B シ ー ト	(WG23600)(X7176C0)		
260	VE968500	Grease	G-31KA	グ リ ス			38
300	WG455700	Encoder Knob	BLACK	エ ン コ ー ダ ツ マ ミ	DATA ENTRY		
* 320	WG307200	Circuit Board	AM(AMJK 1/6)	A M シ ー ト	(WG23600)(X7176C0)		
* 340	WG307300	Circuit Board	USB(AMJK 3/6)	U S B シ ー ト	(WG23600)(X7176C0)		
360	--	Lower Case Assembly		下 ケ ー ス A s s ' y	(WG29200)		
380	WE987400	Bind Head Tapping Screw-B	3.0X12 MFZN2W3	B タ イ ト + B I N D		8	01
390	WF491000	Bind Head Tapping Screw-B	3.0X30 MFZN2W3	B タ イ ト + B I N D		5	01
400	V9259700	Battery Cover Assembly	PT	バ ッ テ リ ー カ バ ー A s s y			03
400a	--	Battery Cushion White		バ ッ テ リ ー ク ッ シ ョ ン	(V710060)	3	
400b	--	Cushion	PE	ク ッ シ ョ ン (P E)	(V796870)	2	
400c	--	Nonwoven Fabric Cloth	15X3X0.5	不 織 布	(V925980)	6	
400d	--	Cushion	X8X1	ク ッ シ ョ ン (P E)	(WA10190)	3	
400e	--	Cushion	0X12X2	ク ッ シ ョ ン (P E)	(WA21920)		
410	V7151200	Push Knob	BLACK	プ ッ シ ュ ツ マ ミ ク ロ	STANDBY/ON		01
420	VU432400	Knob,V	PSR78	V ツ マ ミ	MASTER VOLUME		01
440	--	Adhesive Tape	12X90	粘 着 テ ー プ	(V591240)	2	
440	--	Adhesive Tape	MY7# 12X90	P E T テ ー プ	(WB79400)	2	
* 470	WG387800	Spacer		ス ペ ー サ ー		10	
600	WD365700	Sponge	27	ス ポ ン ジ		2	01
700	WB491100	Back-lit Assembly	PT	バ ッ ク ラ イ ト A s s ' y			08
* 710	WF817200	LCD		液 晶 デ ィ ス プ レ イ			
720	V7838000	Rubber Connector	ZTT-410	ゴ ム コ ネ ク タ ー		2	03
* 740	WG306500	Circuit Board	DMLCD	D M L C D シ ー ト	(WG23560)(X7174C0)		
750	--	Connector Assembly	BL 2P L=70	B L 束 線	(WC60260)		
750a	--	Sponge	P	防 振 ス ポ ン ジ P	(WC60930)	2	
780	V8671300	LCD Holder		L C D ホ ル ダ ー			01
800	CB817510	Cord Binder	S-14B-E	束 線 止 め			03
* 10	WG279400	Upper Case Assembly		上 ケ ー ス A s s ' y	DGX-220		
* 10	WG279500	Upper Case Assembly		上 ケ ー ス A s s ' y	YPG-225		
U10	--	Upper Case		上 ケ ー ス 塗 装 印 刷 品	DGX-220 (WG27960)		
U10	--	Upper Case		上 ケ ー ス 塗 装 印 刷 品	YPG-225 (WG27970)		
* U20	WG454800	Speaker Grille L	LEFT	S P グ リ ル L 塗 装 品			
* U30	WG454900	Speaker Grille R	RIGHT	S P グ リ ル R 塗 装 品			
* U40	WG505500	Nonwoven Fabric Cloth	90 6 WHITE	不 織 布 S P G R I L		6	

*: New part

RANK : Japan only

[illegible]

* : New parts

RANK : Japan only

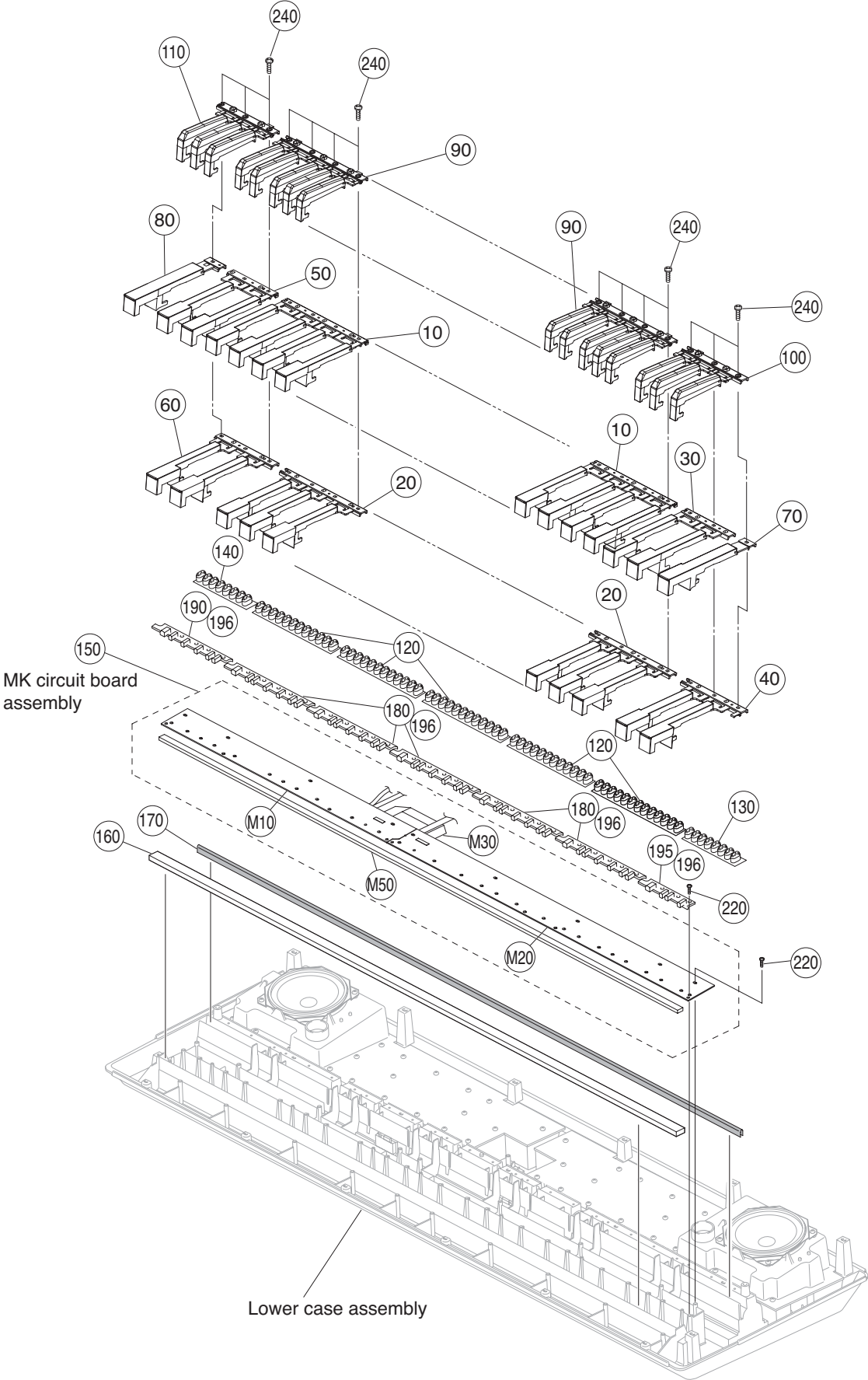


REF NO.	PART NO.	DESCRIPTION		部 品 名	REMARKS	QTY	RANK
		LOWER CASE ASSEMBLY		下 ケ ー ス A s s ' y	DGX-220/YPG-225		
	--	Lower Case Assembly		下 ケ ー ス A s s ' y	(WG29200)		
* 10	WG292100	Lower Case Sub Assembly		下 ケ ー ス サ ブ A s s ' y			
20	--	Keyboard Assembly	W	1 6 N - E 7 6 鍵 盤	(V882340)		
30	WC601000	Connector Assembly	MK1 12P L=600	M K 1 束 線			
30a	--	Sponge	A	防 振 ス ポ ン ジ A	(WC60730)	2	
* 40	WC601400	Connector Assembly	MK4 6P L=600	M K 4 束 線			
40a	--	Sponge	D	防 振 ス ポ ン ジ D	(WC60790)	2	
* 50	WC601500	Connector Assembly	MK5 8P L=550	M K 5 束 線			
50a	--	Sponge	E	防 振 ス ポ ン ジ E	(WC60800)	2	
* 60	WC620300	Filter	GLAY	フ ィ ル タ ー		2	
70	--	Nonwoven Fabric Cloth	20X15	不 織 布	(WC93090)	2	
80	--	Nonwoven Fabric Cloth	40X13X0.5	不 織 布	(V771130)	6	
90	--	Nonwoven Fabric Cloth	13X13X0.5	不 織 布	(V771140)		
100	V7060500	Contact Spring		接 点 バ ネ (+)			01
110	V7060700	Contact Spring		接 点 バ ネ (-)			01
120	V7060200	Spring Terminal		接 点 バ ネ		5	01
130	--	Connector Assembly	BAT 2P	B A T 束 線	(V873560)		
170	VA126100	Adhesive Tape	12X50	粘 着 テ ー プ		9	03
170	--	Adhesive Tape	MY7# 12X50	P E T テ ー プ	(WB79380)	9	
180	V8757500	Speaker Box R Assembly	RIGHT	S P ボ ッ ク ス R A s s ' y			
180a	--	Packing	PE	パ ッ キ ン S P	(VZ16540)		
180b	--	Cushion	1600X15X1.0	ク ッ シ ョ ン (P E)	(V901030)		
180c	--	Cushion	60X15X1.0	ク ッ シ ョ ン (P E)	(V956150)		
190	V8757600	Speaker Box L Assembly	LEFT	S P ボ ッ ク ス L A s s ' y			
190a	--	Packing	SP PE	パ ッ キ ン S P	(VZ16540)		
190b	--	Cushion	1600X15X1.0	ク ッ シ ョ ン (P E)	(V901030)		
190c	--	Cushion	60X15X1.0	ク ッ シ ョ ン (P E)	(V956150)		
200	WE974500	Bind Head Tapping Screw-B	4.0X10 MFZN2W3	B タ イ ト + B I N D		48	01
210	X2549A00	Speaker	12.0cm 4 ohm 8W	ス ピ ー カ	WOOFER	2	05
220	--	Connector Assembly	SPL AWG#24	S P L 束 線	(WG32410)	2	
220a	--	Sponge	Z	防 振 ス ポ ン ジ Z	(WG33010)	2	
* L10	WG292100	Lower Case Sub Assembly		下 ケ ー ス サ ブ A s s ' y			
	--	Lower Case		下 ケ ー ス 成 形 品	(WG29230)		
L20	V1104400	Holder		脚 取 り 付 け 金 具 天 津 製		4	
L30	WE774300	Bind Head Tapping Screw-B	3.0X8 MFZN2W3	B タ イ ト + B I N D		8	01
L40	CB043750	Foot	T1.6	ゴ ム 脚		5	01
L60	--	Cushion	273X15X1.0	ク ッ シ ョ ン (P E)	(WD55510)	2	
L70	--	Cushion	1117X15X1.0	ク ッ シ ョ ン (P E)	(WD55520)		
L80	--	Cushion	1142X15X1.0	ク ッ シ ョ ン (P E)	(WD55530)		

*: New parts

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■ KEYBOARD ASSEMBLY



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ELECTRICAL PARTS

REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	QTY	RANK
		ELECTRICAL PARTS	電 気 部 品	DGX-220/YPG-225		
*	WG307200	Circuit Board	AM(AMJK 1/6)	(WG23600)(X7176C0)		
	--	Circuit Board	AMJK 4/6	(WG23600)(X7176C0)		
	--	Circuit Board	AMJK 5/6	(WG23600)(X7176C0)		
*	WG307400	Circuit Board	PB(AMJK 6/6)	(WG23600)(X7176C0)		
*	WG307300	Circuit Board	USB(AMJK 3/6)	(WG23600)(X7176C0)		
*	WG306500	Circuit Board	DMLCD	(WG23560)(X7174C0)		
	V8687200	Circuit Board	MK-76H 16N2M	(V868750)(X2333F0)	07	
	V8687400	Circuit Board	MK-76L 16N2M	(V868760)(X2334F0)	07	
*	WG307900	Circuit Board	PNL(PN 3/5)	(WG23620)(X7178C0)		
	--	Circuit Board	PN 2/5	(WG23620)(X7178C0)		
*	WG308000	Circuit Board	PNR(PN 1/5)	(WG23620)(X7178C0)		
*	WG308100	Circuit Board	TWL(PN 4/5,5/5)	(WG23620)(X7178C0)		
*	WG308200	Circuit Board	TWR(PN 4/5,5/5)	(WG23620)(X7178C0)		
*	WG307200	Circuit Board	AM(AMJK 1/6)	(WG23600)(X7176C0)		
	--	Circuit Board	AMJK 4/6	(WG23600)(X7176C0)		
	--	Circuit Board	AMJK 5/6	(WG23600)(X7176C0)		
*	WG307400	Circuit Board	PB(AMJK 6/6)	(WG23600)(X7176C0)		
*	WG307300	Circuit Board	USB(AMJK 3/6)	(WG23600)(X7176C0)		
	WE774300	Bind Head Tapping Screw-B	3.0X8 MFZN2W3	B タ イ ト + B I N D	3	01
	VA078900	Jumper Wire	0.55 TIN	ジ ャ ン パ ー 線	30	
C103	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z TATET	半 導 体 セ ラ コ ン		01
C104	V3510100	Electrolytic Cap.	1000.0 25.0V TP	ケ ミ コ ン		
C104	UR849100	Electrolytic Cap.	1000 25.0V RX TP	ケ ミ コ ン		01
C105	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z TATET	半 導 体 セ ラ コ ン		01
C106	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z TATET	半 導 体 セ ラ コ ン		01
C107	UR828220	Electrolytic Cap.	220.00 10.0V RX TP	ケ ミ コ ン		01
C107	V3507400	Electrolytic Cap.	220.00 10.0V TP	ケ ミ コ ン		01
C551	V5516600	Mylar Capacitor	1.0000 50V J	マ イ ラ ー コ ン		
C551	VE327200	Monolithic Mylar Capacitor	1.0 50V J RX TP	積 層 マ イ ラ ー コ ン		02
C551	VU838100	Monolithic Mylar Capacitor	ECQ-V1H105JL3	積 層 マ イ ラ ー コ ン		
C552	V5516600	Mylar Capacitor	1.0000 50V J	マ イ ラ ー コ ン		
C552	VE327200	Monolithic Mylar Capacitor	1.0 50V J RX TP	積 層 マ イ ラ ー コ ン		02
C552	VU838100	Monolithic Mylar Capacitor	ECQ-V1H105JL3	積 層 マ イ ラ ー コ ン		
C557	FG612470	Ceramic Capacitor-B	470P 50V K RX TP	セ ラ コ ン (B)		01
C557	VR025800	Ceramic Capacitor	470P 63V K FORMING	セ ラ コ ン 2 B 天 津 製		
C558	FG612470	Ceramic Capacitor-B	470P 50V K RX TP	セ ラ コ ン (B)		01
C558	VR025800	Ceramic Capacitor	470P 63V K FORMING	セ ラ コ ン 2 B 天 津 製		
C559	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z TATET	半 導 体 セ ラ コ ン		01
C560	UR838100	Electrolytic Cap.	100.00 16.0V RX TP	ケ ミ コ ン		01
C560	V3508500	Electrolytic Cap.	100.00 16.0V TP	ケ ミ コ ン		
C561	UR827330	Electrolytic Cap.	33.00 10.0V RX TP	ケ ミ コ ン		01
C561	V3508300	Electrolytic Cap.	33.00 16.0V TP	ケ ミ コ ン		
C562	UR867100	Electrolytic Cap.	10.00 50.0V RX TP	ケ ミ コ ン		01
C562	V3512300	Electrolytic Cap.	10.00 50.0V TP	ケ ミ コ ン		
C563	UA654470	Mylar Capacitor	0.0470 50V J RX TP	マ イ ラ ー コ ン		01
C563	--	Mylar Capacitor	0.0470 50V J	マ イ ラ ー コ ン	(V551500)	
C563	--	Mylar Capacitor	0.0470 100V K TE	マ イ ラ ー コ ン	(VS88420)	
C564	UA654470	Mylar Capacitor	0.0470 50V J RX TP	マ イ ラ ー コ ン		01
C564	--	Mylar Capacitor	0.0470 50V J	マ イ ラ ー コ ン	(V551500)	
C564	--	Mylar Capacitor	0.0470 100V K TE	マ イ ラ ー コ ン	(VS88420)	
C565	UA654470	Mylar Capacitor	0.0470 50V J RX TP	マ イ ラ ー コ ン		01
C565	--	Mylar Capacitor	0.0470 50V J	マ イ ラ ー コ ン	(V551500)	
C565	--	Mylar Capacitor	0.0470 100V K TE	マ イ ラ ー コ ン	(VS88420)	
C566	UA654470	Mylar Capacitor	0.0470 50V J RX TP	マ イ ラ ー コ ン		01
C566	--	Mylar Capacitor	0.0470 50V J	マ イ ラ ー コ ン	(V551500)	
C566	--	Mylar Capacitor	0.0470 100V K TE	マ イ ラ ー コ ン	(VS88420)	
C569	UR837470	Electrolytic Cap.	47.00 16.0V RX TP	ケ ミ コ ン		01
C569	V3508400	Electrolytic Cap.	47.00 16.0V TP	ケ ミ コ ン		
C570	UR837470	Electrolytic Cap.	47.00 16.0V RX TP	ケ ミ コ ン		01
C570	V3508400	Electrolytic Cap.	47.00 16.0V TP	ケ ミ コ ン		
C571	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z TATET	半 導 体 セ ラ コ ン		01
C855	FG612100	Ceramic Cap.-B	100P 50V K RX TP	セ ラ コ ン B		01
C855	VR025000	Ceramic Capacitor	100P 63V K FORMING	セ ラ コ ン 2 B 天 津 製		
CN151	LB918030	Base Post Connector	XH 3P TE	ベ ー ス ツ キ ポ ス ト		01
CN152	VK024600	Wire Trap	52147 2P TE	ワ イ ヤ ー ト ラ ッ プ		01
CN153	V1878200	Cable Holder	51048 4P TE	ケ ー ブ ル ホ ル ダ ー		01
CN153	VY668400	Cable Holder	51048 4P TE	ケ ー ブ ル ホ ル ダ ー 天 津		
CN154	V1878200	Cable Holder	51048 4P TE	ケ ー ブ ル ホ ル ダ ー		01

*: New part

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REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	QTY	RANK
* CN154	VY668400	Cable Holder	51048 4P TE	ケーブルホルダー天津	(VY66900)	01
CN155	V1879100	Cable Holder	51048 13P TE	ケーブルホルダー		
CN155	--	Cable Holder	51048 13P TE	ケーブルホルダー天津		
CN551	V1878300	Cable Holder	51048 5P TE	ケーブルホルダー		
CN551	VZ341700	Cable Holder	51048 5P TE	ケーブルホルダー天津	01	01
CN552	V1878300	Cable Holder	51048 5P TE	ケーブルホルダー		
CN552	VZ341700	Cable Holder	51048 5P TE	ケーブルホルダー天津		
CN553	V1878000	Cable Holder	51048 2P TE	ケーブルホルダー		
CN553	VY668300	Cable Holder	51048 2P TE	ケーブルホルダー天津	01	01
CN554	LB918020	Base Post Connector	XH 2P TE	ベースツキポスト		
CN557	LB918020	Base Post Connector	XH 2P TE	ベースツキポスト		
CN558	V1878000	Cable Holder	51048 2P TE	ケーブルホルダー		
CN558	VY668300	Cable Holder	51048 2P TE	ケーブルホルダー天津	01	01
CN854	V1878700	Cable Holder	51048 9P TE	ケーブルホルダー		
CN854	VZ341900	Cable Holder	51048 9P TE	ケーブルホルダー天津		
CN855	V1878100	Cable Holder	51048 3P TE	ケーブルホルダー	01	01
CN855	VZ341600	Cable Holder	51048 3P TE	ケーブルホルダー天津		
D151	V8603100	Diode	2A02G-01 X0 JI	ダイオード		
D151	VV731400	Diode	2A02-05 X0	ダイオード		
D152	WB880900	Diode	10EDA40-TA1B2 26	ダイオード	01	01
D153	WB880900	Diode	10EDA40-TA1B2 26	ダイオード		
IC151	X6980A00	IC	BA60BC0T	IC		
IC551	XY209A00	IC	LA4625	IC		
J151	VA078900	Jumper Wire	0.55 TIN	ジャンパー線	05	05
-153	VA078900	Jumper Wire	0.55 TIN	ジャンパー線		
J851	VA078900	Jumper Wire	0.55 TIN	ジャンパー線		
JK151	LB302260	Connector	HEC0470-01-630	電源コネクタ		
JK151	V6557600	Connector	HTJ-020-05AZ	電源コネクタ	02 04 03 02	02 04 03 02
JK551	LB101870	Phone Jack	JACK YKB21-5006	ホーンコネクタ		
JK551	VV943300	Phone Jack	HTJ064-04A	ホーンコネクタ		
JK854	VC687500	Phone Jack	JACK YKB21-5014	ホーンコネクタ (黒)		
JK854	WE245200	Phone Jack	JY-6314-01-020	ホーンコネクタ (黒)	01	01
JK855	V6802600	Jack, USB	USB 4P SE	USB		
K551	--	Heat Sink		放熱板		
L852	V7634400	Coil	BD-FL20-03 TATEJI	コイル 20UH		
L852	VB835000	Coil	FL05RD200AT TATETE	コイル 20UH	01	01
L852	VT279200	Coil	DX001-20UH TATEJI	コイル 20UH 天津		
L853	V7634400	Coil	BD-FL20-03 TATEJI	コイル 20UH		
L853	VB835000	Coil	FL05RD200AT TATETE	コイル 20UH		
L853	VT279200	Coil	DX001-20UH TATEJI	コイル 20UH 天津	01	01
R151	V2548300	Carbon Resistor	180.0 1/6J 26TP	カーボン抵抗		
R152	V2548200	Carbon Resistor	150.0 1/6J 26TP	カーボン抵抗		
R551	V2550400	Carbon Resistor	10.0K 1/6J 26TP	カーボン抵抗	01	01
R552	V2550400	Carbon Resistor	10.0K 1/6J 26TP	カーボン抵抗		
R553	V2549500	Carbon Resistor	1.8K 1/6 J 26TP	カーボン抵抗		
R554	V2549500	Carbon Resistor	1.8K 1/6 J 26TP	カーボン抵抗		
R555	V2550400	Carbon Resistor	10.0K 1/6J 26TP	カーボン抵抗	01	01
R556	WD556700	Flame Proof C. Resistor	2.2 1/4 J TE-26	不燃化カーボン抵抗		
-559	WD556700	Flame Proof C. Resistor	2.2 1/4 J TE-26	不燃化カーボン抵抗		
R560	V2548000	Carbon Resistor	100.0 1/6J 26TP	カーボン抵抗		
R561	V2548000	Carbon Resistor	100.0 1/6J 26TP	カーボン抵抗	03	03
R562	V2548600	Carbon Resistor	330.0 1/6J 26TP	カーボン抵抗		
R563	V2548600	Carbon Resistor	330.0 1/6J 26TP	カーボン抵抗		
R817	V2547300	Carbon Resistor	27.0 1/6J 26TP	カーボン抵抗		
R818	V2547300	Carbon Resistor	27.0 1/6J 26TP	カーボン抵抗	02 03 02 03	02 03 02 03
R861	V2549200	Carbon Resistor	1.0K 1/6 J 26TP	カーボン抵抗		
SW151	VY980400	Push Switch	SDDL15700 J,UC,CE	プッシュスイッチ		
TH151	V8132800	Fuse	MF-R185-AP	マルチヒューズ	03 02 03 02	03 02 03 02
TH151	VU847300	Poly Switch	RUEF185 1.85A 30V	ポリスイッチ		
VR551	WC709800	Rotary Variable Resistor	A 5.0K XV014111YGP	二連ロータリーVR		
VR751	VZ486300	Rotary Variable Resistor	B10K EVJ05DF20B14	ロータリーVR		
WH153	--	Connector Assembly	STB2 NX26AWG	STB 2 束線	2	2
H153a	--	Sponge	U	防振スポンジ		
WH155	--	Connector Assembly	AMDM2 NX26AWG	AMD 2 束線		
H155a	--	Sponge	4	防振スポンジ		
WH551	--	Connector Assembly	VR3 NX26AWG	VR 3 束線	2	2
H551a	--	Sponge	T	防振スポンジ		
WH553	--	Connector Assembly	TW4 NX26AWG	TW 3 束線		
H553a	--	Sponge	3	防振スポンジ		
WH558	--	Connector Assembly	TW2 NX26AWG	TW 3 束線	2	2

*: New parts

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REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	QTY	RANK
H558a	--	Sponge	1	防 振 ス ポ ン ジ 1	(WG33500)	2
WH560	--	Wiring GND	UL2008P NX26A	G N D 線 材	(WH31900)	
WH854	--	Connector Assembly	JK4 NX26AWG	J K 4 束 線	(WH47210)	
WH855	--	Connector Assembly	PB2 NX26AWG	P B 2 束 線	(WG33150)	
WH856	--	Connector Assembly	GND3	G N D 3 線 材	(WH47240)	
WH857	--	Connector Assembly	PLD	P L D 束 線	(WH48240)	
WH858	--	Connector Assembly	JK5	J K 5 束 線	(WH47220)	
* C101	WG306500	Circuit Board	DMLCD	D M L C D シ ー ト	(WG23560)(X7174C0)	
C102	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C103	UF037100	Electrolytic Cap. (chip)	10 16V	チ ッ プ ケ ミ コ ン		01
C104	UF037100	Electrolytic Cap. (chip)	10 16V	チ ッ プ ケ ミ コ ン		01
C105	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C106	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C107	UF037100	Electrolytic Cap. (chip)	10 16V	チ ッ プ ケ ミ コ ン		01
C108	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C109	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C110	UF037100	Electrolytic Cap. (chip)	10 16V	チ ッ プ ケ ミ コ ン		01
C111	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.	チ ッ プ セ ラ (B)		01
C112	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
-114	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C201	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
-205	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C207	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
-216	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C301	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
-304	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C305	UF028100	Electrolytic Cap. (chip)	100 10V	チ ッ プ ケ ミ コ ン		01
C306	US062220	Ceramic Capacitor-SL(chip)	220P 50V J RECT.	チ ッ プ セ ラ (S L)		01
C307	US063470	Ceramic Capacitor-B (chip)	4700P 50V K RECT.	チ ッ プ セ ラ (B)		01
C308	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C309	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.	チ ッ プ セ ラ (S L)		01
C310	US061220	Ceramic Capacitor-CH(chip)	22P 50V J RECT.	チ ッ プ セ ラ (C H)		01
C311	US061220	Ceramic Capacitor-CH(chip)	22P 50V J RECT.	チ ッ プ セ ラ (C H)		01
C312	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
-326	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C327	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.	チ ッ プ セ ラ (S L)		01
C328	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.	チ ッ プ セ ラ (S L)		01
C329	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
-332	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C401	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C402	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C403	US061470	Ceramic Capacitor-CH(chip)	47P 50V J RECT.	チ ッ プ セ ラ (C H)		01
-416	US061470	Ceramic Capacitor-CH(chip)	47P 50V J RECT.	チ ッ プ セ ラ (C H)		01
C501	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C502	UF037100	Electrolytic Cap. (chip)	10 16V	チ ッ プ ケ ミ コ ン		01
C503	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C504	UF037100	Electrolytic Cap. (chip)	10 16V	チ ッ プ ケ ミ コ ン		01
C505	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C506	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C507	US063150	Ceramic Capacitor-B (chip)	1500P 50V K RECT.	チ ッ プ セ ラ (B)		01
C508	US063150	Ceramic Capacitor-B (chip)	1500P 50V K RECT.	チ ッ プ セ ラ (B)		01
C509	US062560	Ceramic Capacitor-SL(chip)	560P 50V J RECT.	チ ッ プ セ ラ (S L)		01
-512	US062560	Ceramic Capacitor-SL(chip)	560P 50V J RECT.	チ ッ プ セ ラ (S L)		01
C514	UF066100	Electrolytic Cap. (chip)	1 50V	チ ッ プ ケ ミ コ ン		01
C515	UF066100	Electrolytic Cap. (chip)	1 50V	チ ッ プ ケ ミ コ ン		01
C516	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.	チ ッ プ セ ラ (S L)		01
C517	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.	チ ッ プ セ ラ (S L)		01
C518	UF028100	Electrolytic Cap. (chip)	100 10V	チ ッ プ ケ ミ コ ン		01
C519	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C601	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
-604	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C605	UF037100	Electrolytic Cap. (chip)	10 16V	チ ッ プ ケ ミ コ ン		01
C701	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.	チ ッ プ セ ラ (S L)		01
-716	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.	チ ッ プ セ ラ (S L)		01
C717	US061470	Ceramic Capacitor-CH(chip)	47P 50V J RECT.	チ ッ プ セ ラ (C H)		01
C718	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.	チ ッ プ セ ラ (S L)		01
-723	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.	チ ッ プ セ ラ (S L)		01
C724	US061470	Ceramic Capacitor-CH(chip)	47P 50V J RECT.	チ ッ プ セ ラ (C H)		01

*: New part

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	QTY	RANK
C725	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.	チ ッ プ セ ラ (S L)		01
C801	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C802	US063100	Ceramic Capacitor-B (chip)	1000P 50V K RECT.	チ ッ プ セ ラ (B)		01
C804	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C805	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.	チ ッ プ セ ラ (S L)		01
C806	US061220	Ceramic Capacitor-CH(chip)	22P 50V J RECT.	チ ッ プ セ ラ (C H)		01
C807	US061220	Ceramic Capacitor-CH(chip)	22P 50V J RECT.	チ ッ プ セ ラ (C H)		01
C808	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C809	UF028100	Electrolytic Cap. (chip)	100 10V	チ ッ プ ケ ミ コ ン		01
C810	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
C812	US062100	Ceramic Capacitor-SL(chip)	100P 50V J RECT.	チ ッ プ セ ラ (S L)		01
* C815	VR027500	Ceramic Capacitor-SL	27P 63V J FORM	セ ラ コ ン S L		
* -817	VR027500	Ceramic Capacitor-SL	27P 63V J FORM	セ ラ コ ン S L		
C901	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
-950	US145100	Ceramic Capacitor-F (chip)	0.1000 25V Z RECT.	チ ッ プ セ ラ (F)		01
CN101	VK025700	Wire Trap	52147 13P TE	ワ イ ヤ ー ト ラ ッ プ		01
CN401	VK025600	Wire Trap	52147 12P TE	ワ イ ヤ ー ト ラ ッ プ		01
CN404	VF728300	Wire Trap	52147 6P TE	ワ イ ヤ ー ト ラ ッ プ		01
CN405	VK025200	Wire Trap	52147 8P TE	ワ イ ヤ ー ト ラ ッ プ		01
CN701	VJ861600	Wire Trap	52147 16P TE	ワ イ ヤ ー ト ラ ッ プ		01
CN703	VJ861600	Wire Trap	52147 16P TE	ワ イ ヤ ー ト ラ ッ プ		01
CN802	VK025300	Wire Trap	52147 9P TE	ワ イ ヤ ー ト ラ ッ プ		01
CN803	VB389800	Base Pin	PH 2P TE	ベ ー ス ボ ス ト		01
D701	VT332900	Diode	1SS355 TE-17 TP	ダ イ オ ー ド		01
D804	V2376600	Diode	RB500V-40 TAPING	ダ イ オ ー ド		01
-807	V2376600	Diode	RB500V-40 TAPING	ダ イ オ ー ド		01
IC101	X6959A00	IC	RH5RZ50CA-T1-F	I	C REGULATOR +5V	
IC102	X5889A00	IC	BA33BC0FP	I	C REGULATOR +3.3V	03
IC103	X3679A00	IC	RH5RZ25CA-T1-F	I	C REGULATOR +2.5V	03
* IC203	X7319100	IC	MX23L6415TC-90G	I	C MASK ROM	
IC204	X2726A00	IC	GLT440L16P-40TC	I	C } DRAM 4M	05
IC204	X6504A00	IC	M11L416256SA-35TG	I	C }	05
* IC204	X6504B00	IC	M11L416256SA-35TG	I	C }	
IC206	X2310A00	IC	MX29LV400BTC-70G	I	C } FLASH ROM 4M	06
IC206	X7130A00	IC	MX29LV400CBTC-70G	I	C }	04
IC207	X5647A00	IC	SN74LV32APWR	I	C } OR	01
IC301	X6055A00	IC	YMW767-VTZ	I	C } CPU+XG	10
IC302	X4374A00	IC	S-80136ANMC-JCVT2G	I	C RESET	
IC302	X5888A00	IC	BD45365G	I	C	01
IC401	X7284A00	IC	SN74LV138APWR	I	C } DECODER	01
IC402	X7284A00	IC	SN74LV138APWR	I	C } DECODER	01
IC501	X6040A00	IC	AK4385ET	I	C D/A CONVERTER	03
IC502	X7300A00	IC	BA4510F-E2	I	C OPAMP	
IC601	X3148A00	IC	NT3881DFG-01	I	C LCD DRIVER	05
IC802	X5186100	IC	M38K07M4L-307HP	I	C CPU	10
L501	VY657200	Chip Inductance	600 BK1608HM601-T	チ ッ プ イ ン ダ ク タ		01
* L801	VY657200	Chip Inductance	600 BK1608HM601-T	チ ッ プ イ ン ダ ク タ		01
L803	WH469300	Coil	DLP31SN12ML2L	コ モ ン モ ー ド コ イ ル		
R206	RD350000	Carbon Resistor (chip)	0 63M J RECT.	チ ッ プ 抵 抗		01
R208	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ プ 抵 抗		01
R210	RD350000	Carbon Resistor (chip)	0 63M J RECT.	チ ッ プ 抵 抗		01
R211	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.	チ ッ プ 抵 抗		01
R212	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.	チ ッ プ 抵 抗		01
R213	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ プ 抵 抗		01
-220	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ プ 抵 抗		01
R301	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.	チ ッ プ 抵 抗		01
R304	RD359100	Carbon Resistor (chip)	1.0M 63M J RECT.	チ ッ プ 抵 抗		01
R305	RD355470	Carbon Resistor (chip)	470.0 63M J RECT.	チ ッ プ 抵 抗		01
R306	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.	チ ッ プ 抵 抗		01
R307	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ プ 抵 抗		01
R308	RD358100	Carbon Resistor (chip)	100.0K 63M J RECT.	チ ッ プ 抵 抗		01
R309	RD358100	Carbon Resistor (chip)	100.0K 63M J RECT.	チ ッ プ 抵 抗		01
R310	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ プ 抵 抗		01
R311	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ プ 抵 抗		01
R312	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.	チ ッ プ 抵 抗		01
R313	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.	チ ッ プ 抵 抗		01
R314	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.	チ ッ プ 抵 抗		01
R315	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.	チ ッ プ 抵 抗		01
R316	RD354470	Carbon Resistor (chip)	47.0 63M J RECT.	チ ッ プ 抵 抗		01
R401	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.	チ ッ プ 抵 抗		01

* : New parts

RANK : Japan only

REF NO.	PART NO.	DESCRIPTION	部 品 名	REMARKS	QTY	RANK
R402	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.	チ ッ ブ 抵 抗		01
R501	RD350000	Carbon Resistor (chip)	0 63M J RECT.	チ ッ ブ 抵 抗		01
R503	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.	チ ッ ブ 抵 抗		01
-514	RD356470	Carbon Resistor (chip)	4.7K 63M J RECT.	チ ッ ブ 抵 抗		01
R515	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.	チ ッ ブ 抵 抗		01
R516	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.	チ ッ ブ 抵 抗		01
R517	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R518	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R601	RD356150	Carbon Resistor (chip)	1.5K 63M J RECT.	チ ッ ブ 抵 抗		01
R602	RD355220	Carbon Resistor (chip)	220.0 63M J RECT.	チ ッ ブ 抵 抗		01
R603	RD354680	Carbon Resistor (chip)	68.0 63M J RECT.	チ ッ ブ 抵 抗		01
R604	RF457910	Carbon Resistor (chip)	91.0K D RECT.	チ ッ ブ 抵 抗		01
R605	RD356220	Carbon Resistor (chip)	2.2K 63M J RECT.	チ ッ ブ 抵 抗		01
-609	RD356220	Carbon Resistor (chip)	2.2K 63M J RECT.	チ ッ ブ 抵 抗		01
R610	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R701	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.	チ ッ ブ 抵 抗		01
-704	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R705	RD357330	Carbon Resistor (chip)	33.0K 63M J RECT.	チ ッ ブ 抵 抗		01
-712	RD357330	Carbon Resistor (chip)	33.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R713	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.	チ ッ ブ 抵 抗		01
-722	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R723	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R724	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R726	RD350000	Carbon Resistor (chip)	0 63M J RECT.	チ ッ ブ 抵 抗		01
R729	RD350000	Carbon Resistor (chip)	0 63M J RECT.	チ ッ ブ 抵 抗		01
-732	RD350000	Carbon Resistor (chip)	0 63M J RECT.	チ ッ ブ 抵 抗		01
R737	RD350000	Carbon Resistor (chip)	0 63M J RECT.	チ ッ ブ 抵 抗		01
-745	RD350000	Carbon Resistor (chip)	0 63M J RECT.	チ ッ ブ 抵 抗		01
R747	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ ブ 抵 抗		01
-754	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R756	RD350000	Carbon Resistor (chip)	0 63M J RECT.	チ ッ ブ 抵 抗		01
R759	RD350000	Carbon Resistor (chip)	0 63M J RECT.	チ ッ ブ 抵 抗		01
R801	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R802	RD350000	Carbon Resistor (chip)	0 63M J RECT.	チ ッ ブ 抵 抗		01
R803	RD350000	Carbon Resistor (chip)	0 63M J RECT.	チ ッ ブ 抵 抗		01
R806	RD358100	Carbon Resistor (chip)	100.0K 63M J RECT.	チ ッ ブ 抵 抗		01
-809	RD358100	Carbon Resistor (chip)	100.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R810	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R813	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R814	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R815	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R816	RD356150	Carbon Resistor (chip)	1.5K 63M J RECT.	チ ッ ブ 抵 抗		01
R819	RD358100	Carbon Resistor (chip)	100.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R820	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R821	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R822	RD356100	Carbon Resistor (chip)	1.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R823	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R824	RD356270	Carbon Resistor (chip)	2.7K 63M J RECT.	チ ッ ブ 抵 抗		01
R825	RD356220	Carbon Resistor (chip)	2.2K 63M J RECT.	チ ッ ブ 抵 抗		01
R826	RD350000	Carbon Resistor (chip)	0 63M J RECT.	チ ッ ブ 抵 抗		01
R827	RD357100	Carbon Resistor (chip)	10.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R828	RD350000	Carbon Resistor (chip)	0 63M J RECT.	チ ッ ブ 抵 抗		01
R829	RD358100	Carbon Resistor (chip)	100.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R830	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R831	RD357470	Carbon Resistor (chip)	47.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R832	RD350000	Carbon Resistor (chip)	0 63M J RECT.	チ ッ ブ 抵 抗		01
R833	RD358100	Carbon Resistor (chip)	100.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R834	RD358100	Carbon Resistor (chip)	100.0K 63M J RECT.	チ ッ ブ 抵 抗		01
R837	RD355100	Carbon Resistor (chip)	100.0 63M J RECT.	チ ッ ブ 抵 抗		01
RA401	RE045100	Resistor Array	100X4	抵 抗 ア レ イ		01
-403	RE045100	Resistor Array	100X4	抵 抗 ア レ イ		01
RA404	RE046100	Resistor Array	1KX4	抵 抗 ア レ イ		01
-406	RE046100	Resistor Array	1KX4	抵 抗 ア レ イ		01
RA407	RE047100	Resistor Array	10KX4	抵 抗 ア レ イ		01
-409	RE047100	Resistor Array	10KX4	抵 抗 ア レ イ		01
TH601	V9140600	Thermistor (chip)	ERTJ1VT152J 1.5K	チ ッ プ サ ー ミ ス タ		05
TR701	WB123200	Transistor Array	IMB10A T110	ト ラ ン ジ ス タ ア レ イ		05
-704	WB123200	Transistor Array	IMB10A T110	ト ラ ン ジ ス タ ア レ イ		01
TR705	VY677600	Digital Transistor	DTC123JKA TP	デ ジ タ ル ト ラ ン ジ ス タ		01
TR801	VV556500	Transistor	2SA1037AK Q,R,S TP	ト ラ ン ジ ス タ		01

*: New part

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REF NO.	PART NO.	DESCRIPTION		部 品 名	REMARKS	QTY	RANK
TR802	VV556400	Transistor	2SC2412K Q,R,S TP	ト ラ ン ジ ス タ			01
X301	WE194400	Quartz Crystal Unit	16.9344M HC-49S-SM	水 晶 振 動 子			01
X801	V4093500	Quartz Crystal Unit	6M SMD-49	水 晶 振 動 子			03
X801	WG138100	Quartz Crystal Unit	6.0000M HC-49S-SMD	水 晶 振 動 子			
10	V8687200	Circuit Board	MK-76H 16N2M	シ ー ト 7 6 H	(V868750)(X2333F0)		07
	VQ769500	Masking Tape	W=15	マ ス キ ン グ テ ー プ			
CN01	VK025200	Wire Trap	52147 8P TE	ワ イ ヤ ー ト ラ ッ プ			01
CN02	VK025600	Wire Trap	52147 12P TE	ワ イ ヤ ー ト ラ ッ プ			01
D067	VB941200	Diode	1SS133, 1S176	ダ イ オ ー ド			01
-152	VB941200	Diode	1SS133, 1S176	ダ イ オ ー ド			01
10	V8687400	Circuit Board	MK-76L 16N2M	シ ー ト 7 6 L	(V868760)(X2334F0)		07
	VQ769500	Masking Tape	W=15	マ ス キ ン グ テ ー プ			
CN03	VK025600	Wire Trap	52147 12P TE	ワ イ ヤ ー ト ラ ッ プ			01
CN04	VK025600	Wire Trap	52147 12P TE	ワ イ ヤ ー ト ラ ッ プ			01
CN05	VF728300	Wire Trap	52147 6P TE	ワ イ ヤ ー ト ラ ッ プ			01
D001	VB941200	Diode	1SS133, 1S176	ダ イ オ ー ド			01
-066	VB941200	Diode	1SS133, 1S176	ダ イ オ ー ド			01
*	WG307900	Circuit Board	PNL(PN 3/5)	P N L シ ー ト	(WG23620)(X7178C0)		
	--	Circuit Board	PN 2/5	P N 2 / 5 シ ー ト	(WG23620)(X7178C0)		
*	WG308000	Circuit Board	PNR(PN 1/5)	P N R シ ー ト	(WG23620)(X7178C0)		
*	WG308100	Circuit Board	TWL(PN 4/5,5/5)	T W L シ ー ト	(WG23620)(X7178C0)		
*	WG308200	Circuit Board	TWR(PN 4/5,5/5)	T W R シ ー ト	(WG23620)(X7178C0)		
CN781	VI879400	Cable Holder	51048 16P TE	ケ ー ブ ル ホ ル ダ ー			01
CN781	VY669100	Cable Holder	51048 16P TE	ケ ー ブ ル ホ ル ダ ー 天 津			
CN782	VI878100	Cable Holder	51048 3P TE	ケ ー ブ ル ホ ル ダ ー			01
CN782	VZ341600	Cable Holder	51048 3P TE	ケ ー ブ ル ホ ル ダ ー 天 津			
CN783	VI878100	Cable Holder	51048 3P TE	ケ ー ブ ル ホ ル ダ ー			01
CN783	VZ341600	Cable Holder	51048 3P TE	ケ ー ブ ル ホ ル ダ ー 天 津			
CN784	VI879400	Cable Holder	51048 16P TE	ケ ー ブ ル ホ ル ダ ー			01
CN784	VY669100	Cable Holder	51048 16P TE	ケ ー ブ ル ホ ル ダ ー 天 津			
CN785	VK024700	Wire Trap	52147 3P TE	ワ イ ヤ ー ト ラ ッ プ			01
D781	VB941200	Diode	1SS133,1SS176 TE	ダ イ オ ー ド			01
D781	VV437800	Diode	1N4148(DO-34)	ダ イ オ ー ド 天 津 製			
D782	VB941200	Diode	1SS133,1SS176 TE	ダ イ オ ー ド			01
D782	VV437800	Diode	1N4148(DO-34)	ダ イ オ ー ド 天 津 製			
D783	VB941200	Diode	1SS133,1SS176 TE	ダ イ オ ー ド			01
D783	VV437800	Diode	1N4148(DO-34)	ダ イ オ ー ド 天 津 製			
D784	VB941200	Diode	1SS133,1SS176 TE	ダ イ オ ー ド			01
D784	VV437800	Diode	1N4148(DO-34)	ダ イ オ ー ド 天 津 製			
EC781	VU481300	Encoder	REB161 PVB 15F	1 6 形 エ ン コ ー ダ			03
LD752	WG913000	LED	BL-S4537 RED	L E D	SONG		
LD753	WG913000	LED	BL-S4537 RED	L E D	EASY SONG ARRANGER		
LD754	WG913000	LED	BL-S4537 RED	L E D	STYLE		
LD755	WG913000	LED	BL-S4537 RED	L E D	VOICE		
R753	V2547900	Carbon Resistor	82.0 1/6J 26TP	カ ー ボ ン 抵 抗			
R755	V2547900	Carbon Resistor	82.0 1/6J 26TP	カ ー ボ ン 抵 抗			
R757	V2547900	Carbon Resistor	82.0 1/6J 26TP	カ ー ボ ン 抵 抗			
R759	V2547900	Carbon Resistor	82.0 1/6J 26TP	カ ー ボ ン 抵 抗			
WH781	--	Connector Assembly	PN3 NX26AWG	P N 3 束 線	(WG33190)		
H781a	--	Sponge	M	防 振 ス ポ ン ジ M	(WG32900)	2	
WH782	--	Connector Assembly	ENC NX26AWG	E N C 束 線	(WG33130)		
H782a	--	Sponge	G	防 振 ス ポ ン ジ G	(WG32840)	2	
WH784	--	Connector Assembly	PN4 NX26AWG	P N 4 束 線	(WG33200)		
H784a	--	Sponge	N	防 振 ス ポ ン ジ N	(WG32910)	2	
	X2549A00	Speaker	12.0cm 4 ohm 8W	ス ピ ー カ	WOOFER	2	05
	X0159A00	Speaker	3.0cm	ス ピ ー カ	TWEETER	2	01
*	WF817200	LCD		液 晶 デ ィ ス プ レ イ			
	WB491100	Back-lit Assembly	PT	バ ッ ク ラ イ ト A s s ' y			08

*: New parts

RANK : Japan only

DGY-220/YRG-225



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

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

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

DGX-220/YPG-225

