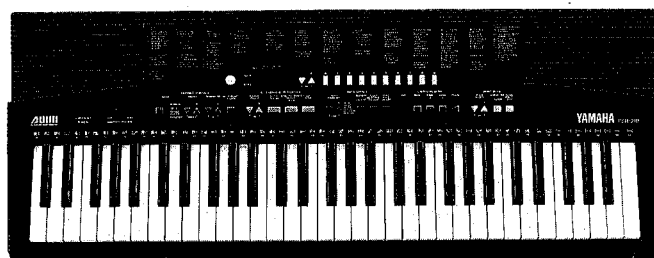
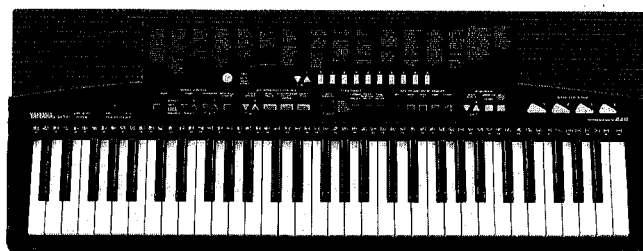


PORTATONE PSR-210/PSR-310

SERVICE MANUAL



PSR-210



PSR-310

PSR-210/PSR-310

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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: The 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 principle-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 buss in the unit (heavy gauge black wires connect to this buss).

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!.

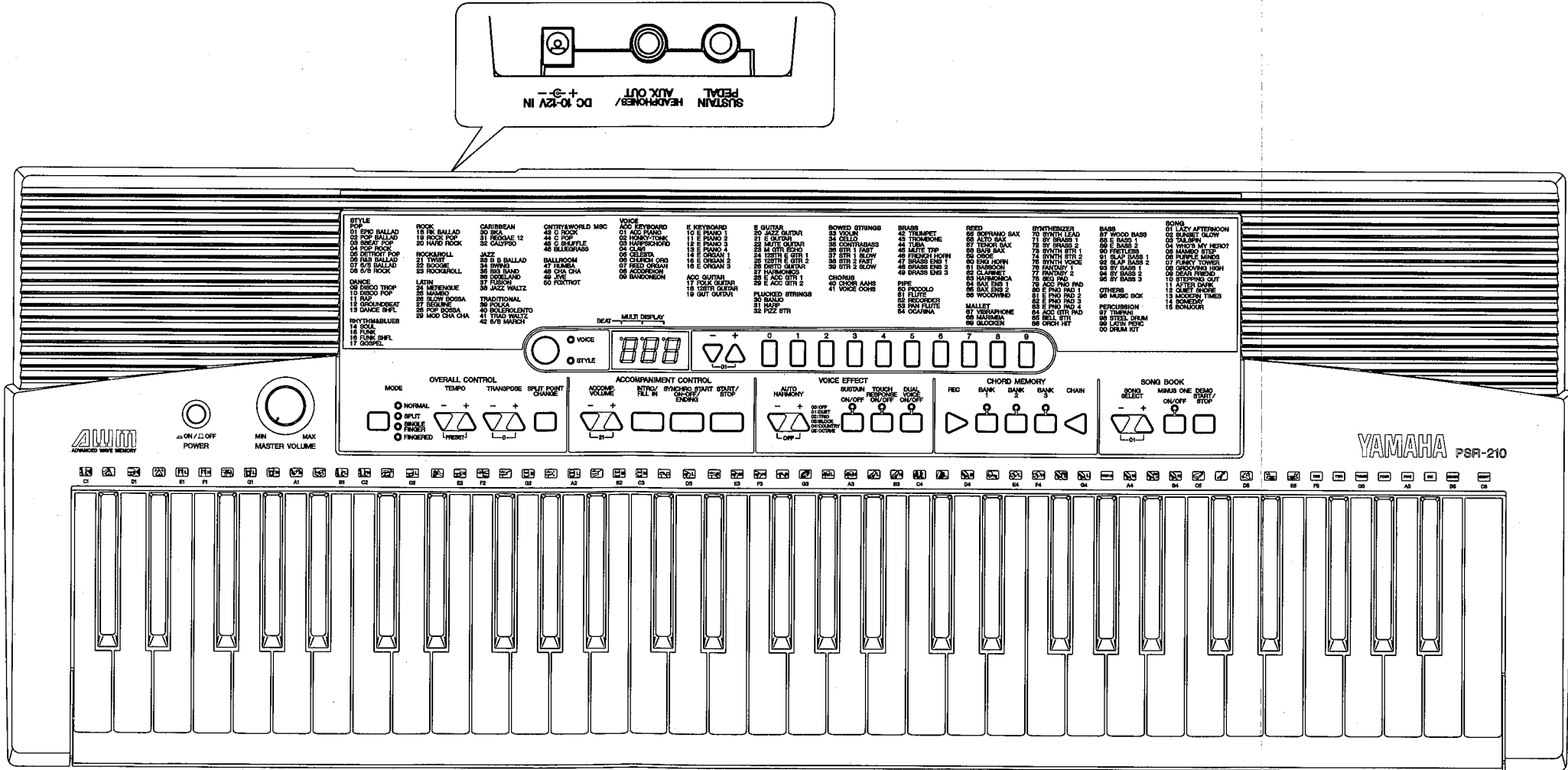
If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

■ SPECIFICATIONS (PSR-210)

Keys	61 regular sized keys (C1~C6) with Touch Response
Voices	100 AWM voices Maximum polyphony: 28
Styles	50 Accompaniment Styles
General controls	POWER switch : ON/OFF MASTER VOLUME: MIN~MAX VOICE/STYLE SELECTION button NUMERIC SELECTION buttons (0 ~ 9) +/- SELECTION buttons
Overall controls	NORMAL, SPLIT, SINGLE FINGER, FINGERED Selection button TEMPO: 40~240: +/- buttons TRANPOSE: -12~+12: +/- buttons SPLIT POINT CHANGE
Voice effect controls	AUTO HARMONY: 00~05: +/- buttons SUSTAIN : ON/OFF TOUCH RESPONSE: ON/OFF DUAL VOICE: ON/OFF
Accompaniment controls	ACCOMPANIMENT VOLUME: 0~24: +/- buttons INTRO/FILL IN, SYNCHRO START ON-OFF/ENDING, START/STOP

Song Book (Demonstration & Minus One)	15 Songs : 01~15: +/- buttons MINUS ONE: ON/OFF DEMO: START/STOP
Chord Memory	CHORD recording, REC button, 3 Banks, CHAIN
Built-in ports	DC IN, Headphones/AUX. output, SUSTAIN pedal
Maximum amplifier output	2W x 2 (When AC power adaptor PA-3 is used) 2W x 2 (When batteries are used) HEADPHONES/AUX. OUT: output impedance 50 Ω
Dimensions	908 x 344 x 110 mm (WxDxH)
Weight	5.1 kg (without batteries)
Speaker	10cm x 2
Optional Accessories	Headphones HPE-3 Keyboard Stand L-2C AC Power Adaptor PA-4, PA-40 Foot switch FC-4, FC-5
Supplied Accessories	Music Stand

■ PANEL LAYOUT (PSR-210)



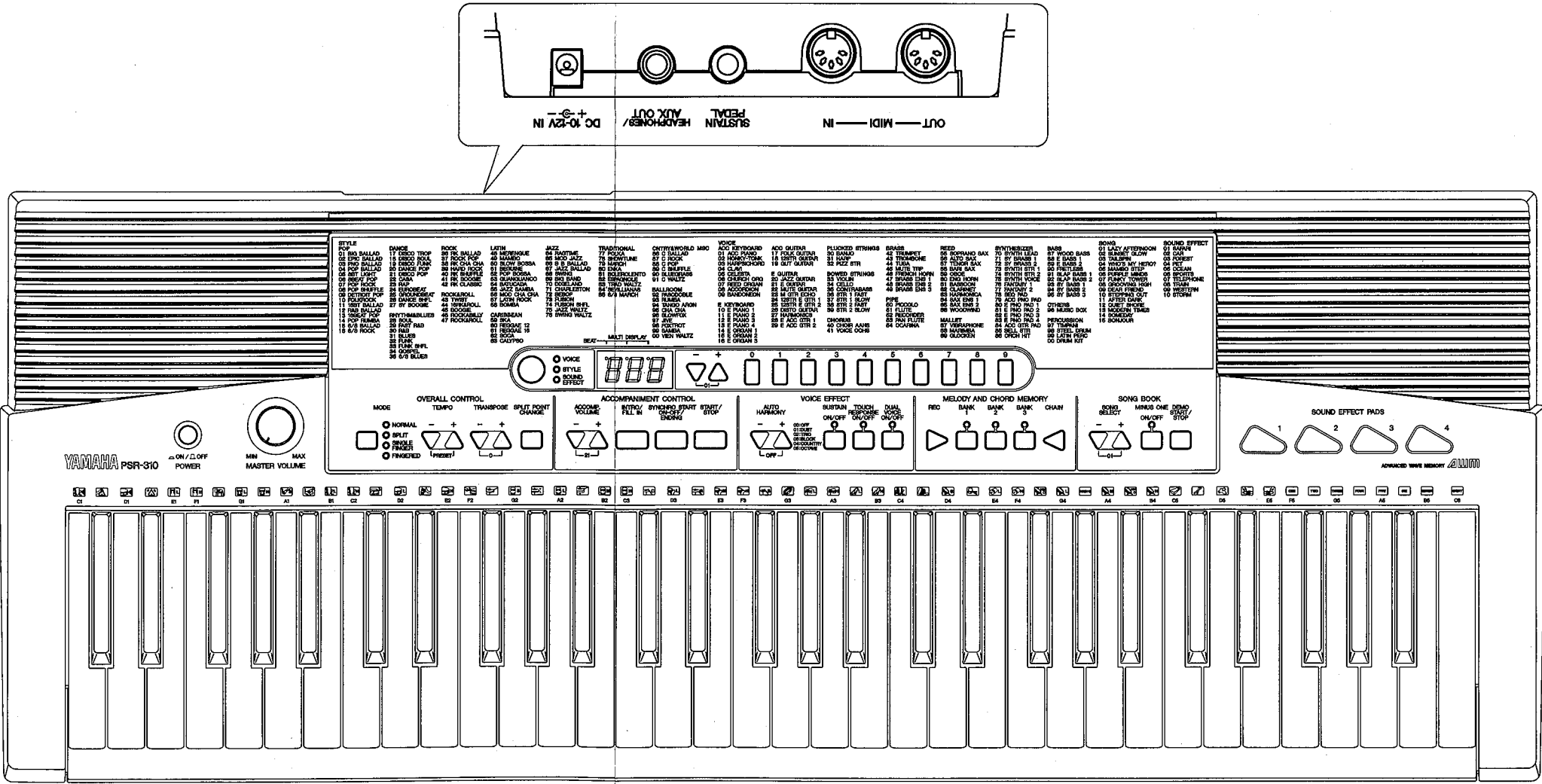
■ SPECIFICATIONS (PSR-310)

Keys	61 regular sized keys (C1~C6) with Touch Response
Voices	100 AWM voices Maximum polyphony: 28
Styles	100 Accompaniment Styles
General controls	POWER switch : ON/OFF MASTER VOLUME: MIN~MAX VOICE/STYLE SELECTION button NUMERIC SELECTION buttons (0 ~ 9) +/- SELECTION buttons
Overall controls	NORMAL, SPLIT, SINGLE FINGER, FINGERED Selection button TEMPO: 40~240: +/- buttons TRANPOSE: -12~+12: +/- buttons SPLIT POINT CHANGE
Voice effect controls	AUTO HARMONY: 00~05: +/- buttons SUSTAIN : ON/OFF TOUCH RESPONSE: ON/OFF DUAL VOICE: ON/OFF
Accompaniment controls	ACCOMPANIMENT VOLUME: 0~24: +/- buttons INTRO/FILL IN, SYNCHRO START ON-OFF/ENDING, START/STOP

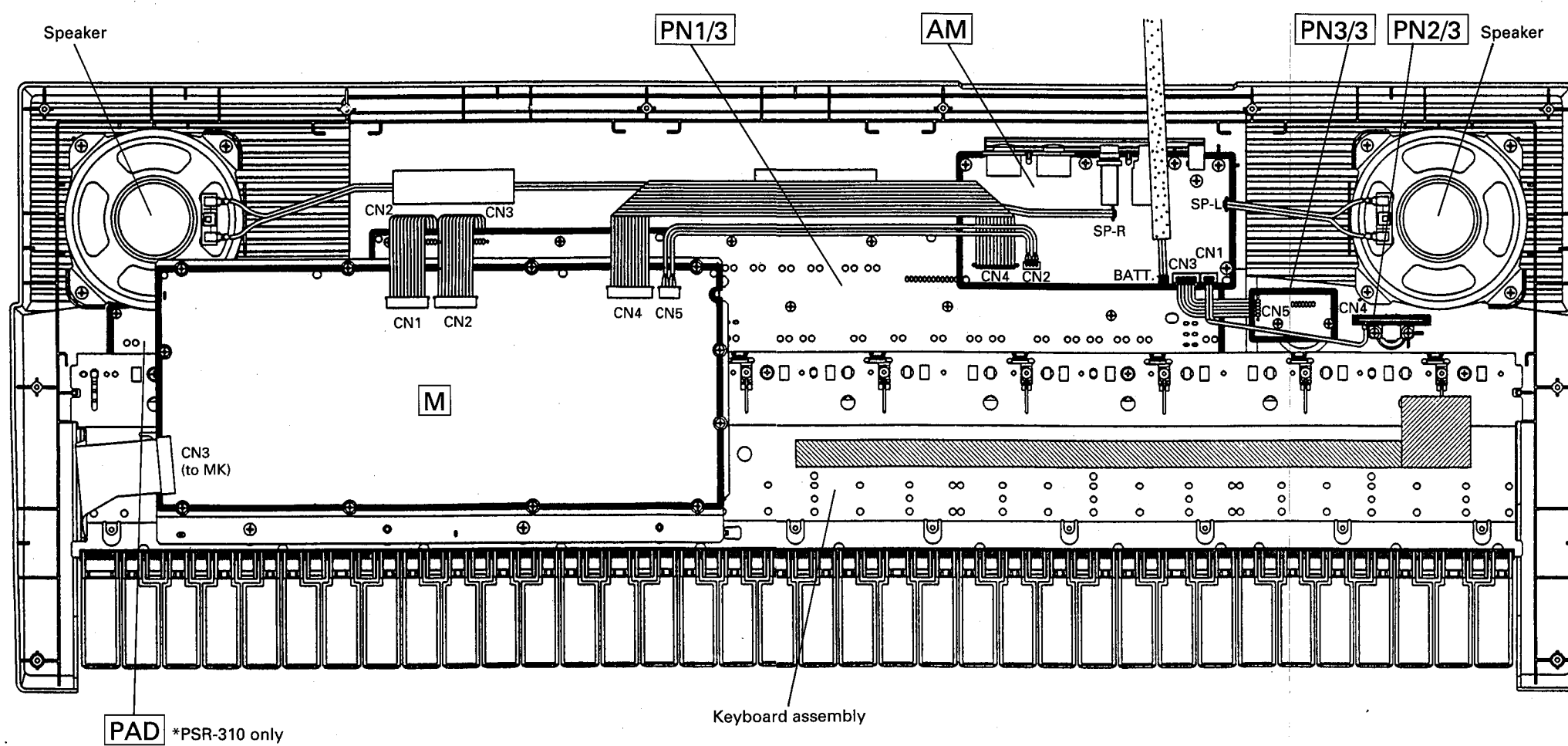
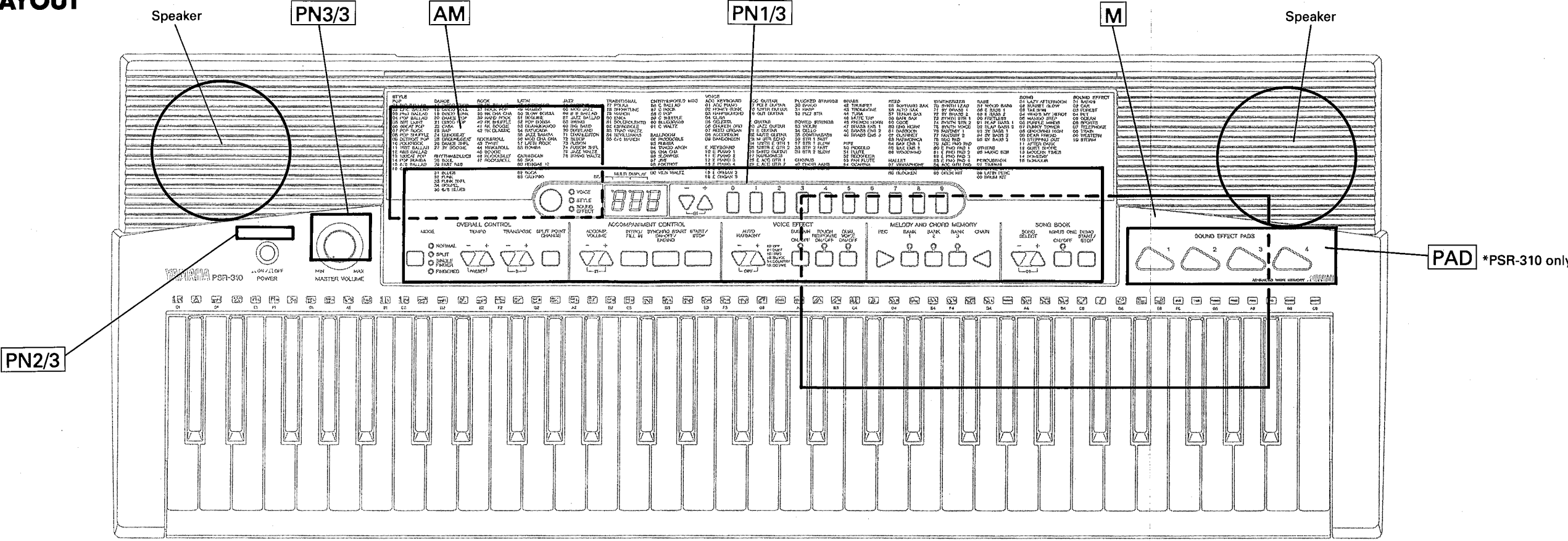
Song Book (Demonstration & Minus One)	15 Songs : 01~15: +/- buttons MINUS ONE: ON/OFF DEMO: START/STOP
Melody and Chord Memory	MELODY & CHORD recording: REC button, 3 Banks, CHAIN
Sound Effects	4 x 10 voices
MIDI	Remote Control mode Multi mode
Built-in ports	DC IN, Headphones/AUX. output, SUSTAIN pedal, MIDI IN and OUT
Maximum amplifier output	2W x 2 (When AC power adaptor PA-3 is used) 2W x 2 (When batteries are used) HEADPHONES/AUX. OUT: output impedance 50 Ω
Dimensions	908 x 344 x 110 mm (WxDxH)
Weight	5.1 kg (without batteries)
Speaker	10cm x 2
Optional Accessories	Headphones Keyboard Stand AC Power Adaptor Foot switch HPE-3 L-2C PA-3*, PA-4, or PA-40 FC-4, FC-5
Supplied Accessories	Music Stand Foot pedal*

* Foot pedal and PA-3 are included only in the PSR-310M package.

■ PANEL LAYOUT (PSR-310)

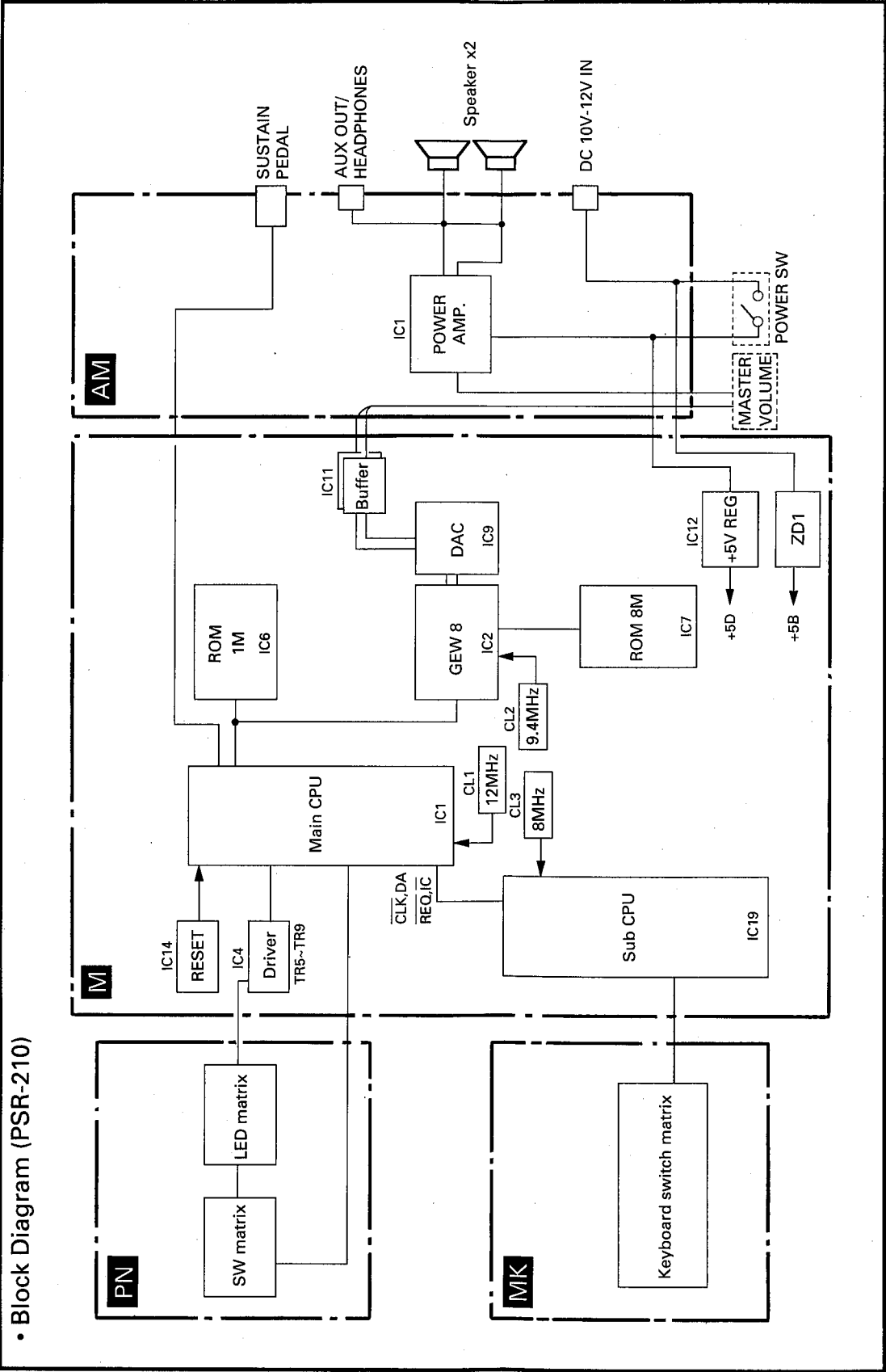


■ CIRCUIT BOARD LAYOUT

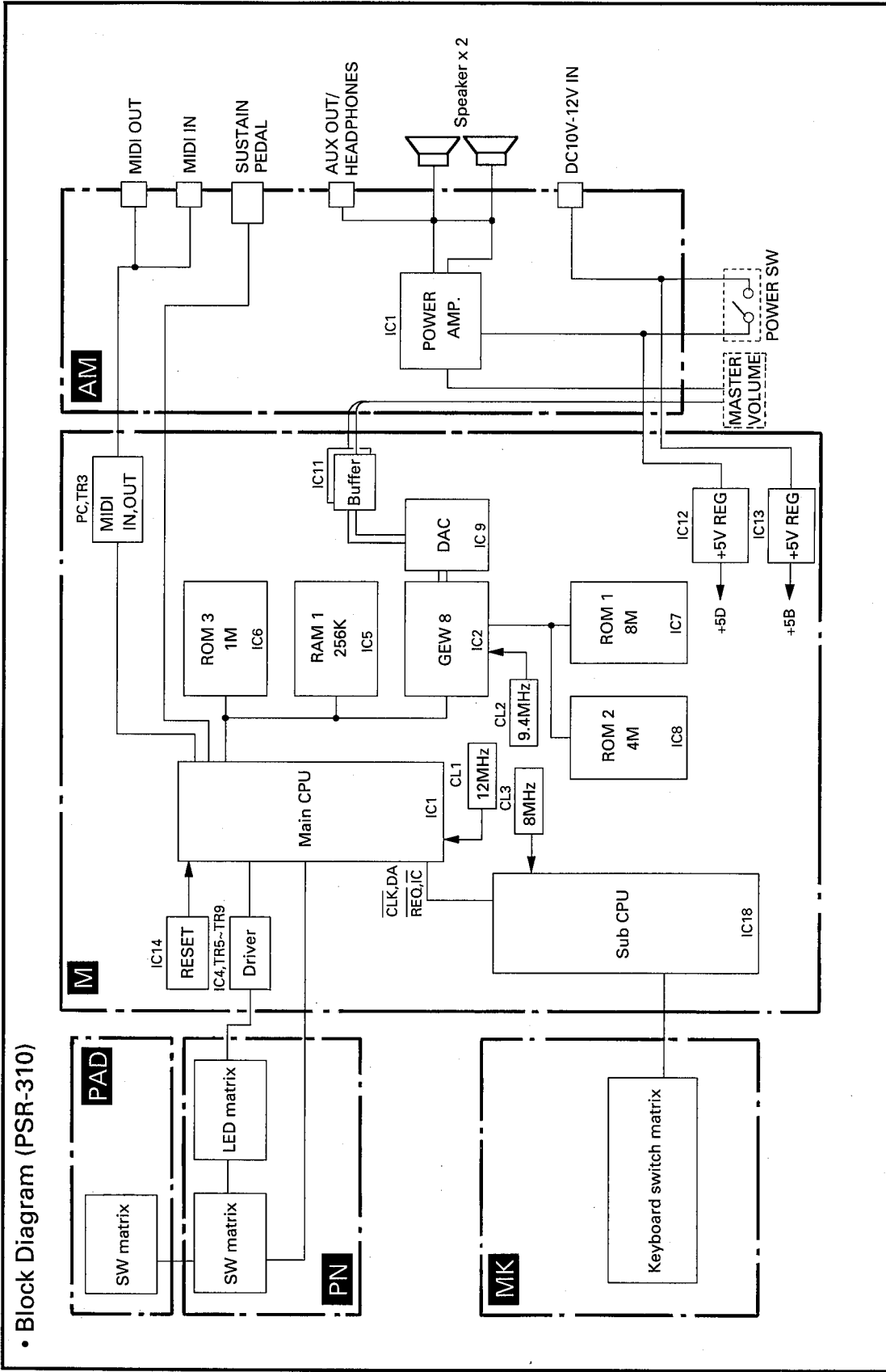


■ BLOCK DIAGRAM

• PSR-210



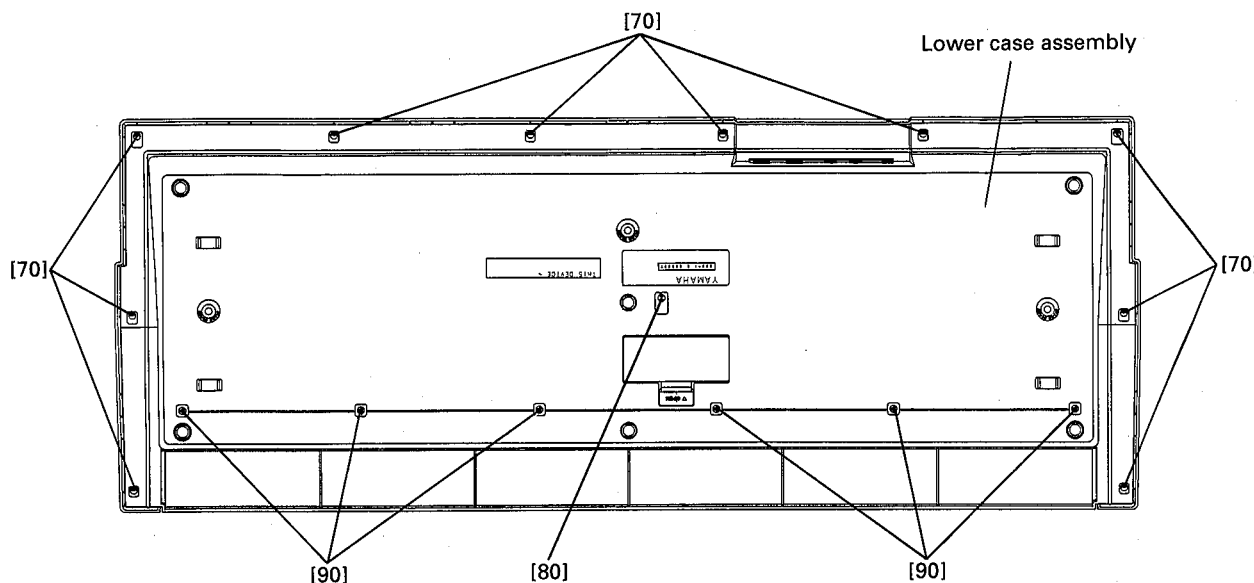
• PSR-310



■ DISASSEMBLY PROCEDURE

1 Lower Case Assembly

- 1-1 Remove the six (6) screws marked [90], the screw marked [80] and ten (10) screws marked [70], then the lower case assembly can be removed. (Fig. 1)



- [70]: Bind Head Tapping Screw-P 3.0 × 10 ZMC2Y (EP600270)
 [80]: Bind Head Tapping Screw-P 3.0 × 25 ZMC2Y (VK228100)
 [90]: Bind Head Tapping Screw-S 3.0 × 8 ZMC2BL (EP600530)

(Fig. 1)

2 M Circuit Board

- 2-1 Remove the lower case assembly. (see procedure 1)
 2-2 Remove the eleven (11) screws marked [280], consequently the M circuit board can be removed. (Fig. 2)

3 AM Circuit Board

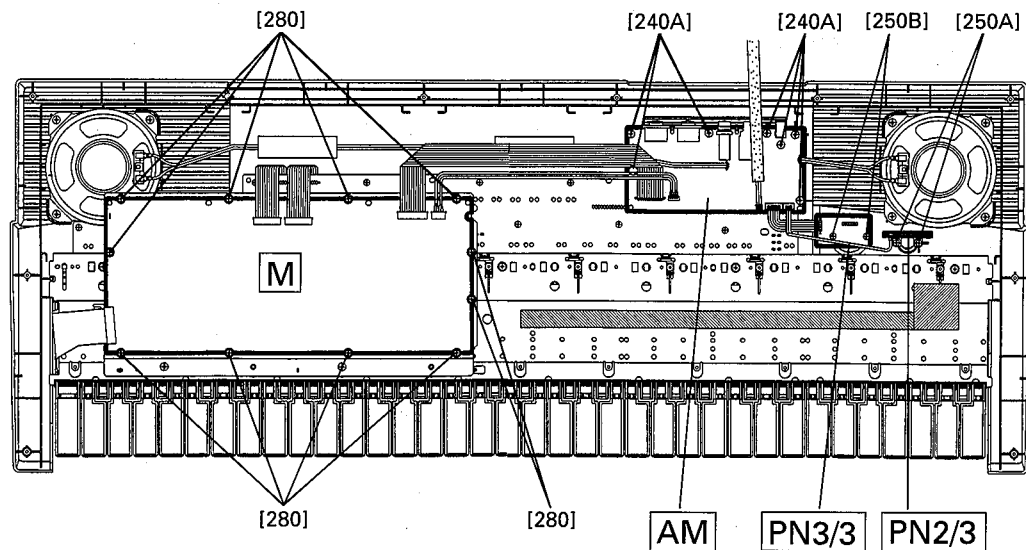
- 3-1 Remove the lower case assembly. (see procedure 1)
 3-2 Remove the seven (7) screws marked [240A], then the AM circuit board can be removed. (Fig. 2)

4 PN2/3 Circuit Board

- 4-1 Remove the lower case assembly. (see procedure 1)
 4-2 Remove the two (2) screws marked [250A], then the PN2/3 circuit board can be removed. (Fig. 2)
 4-3 Pull off the POWER switch knob.

5 PN3/3 Circuit Board

- 5-1 Remove the lower case assembly. (see procedure 1)
 5-2 Pull off the MASTER VOLUME knob.
 5-3 Remove the two (2) screws marked [250B], then the PN3/3 circuit board can be removed. (Fig. 2)



[240A]: Bind Head Tapping Screw-P 3.0 x 8 ZMC2Y (EP600280)

[250B]: Bind Head Tapping Screw-P 2.6 x 8 ZMC2Y (EP620100)

[250A]: Bind Head Tapping Screw-P 2.6 x 8 ZMC2Y (EP620100)

[280]: BW Head Tapping Screw-S 2.6 x 6 ZMC2BL (VQ474800)

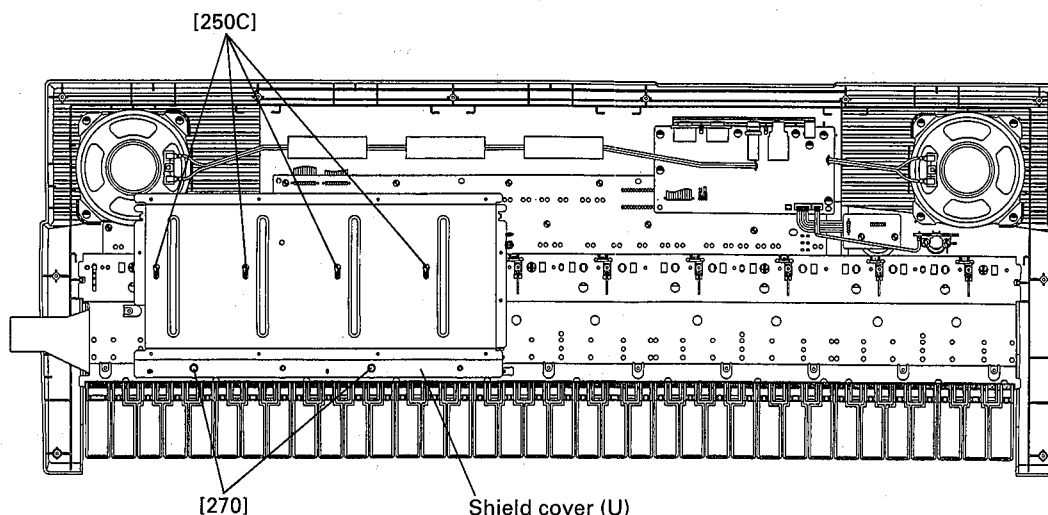
(Fig. 2)

6 Keyboard Assembly

- 6-1 Remove the lower case assembly. (see procedure 1)
 - 6-2 Remove the four (4) screws marked [250C] and two (2) screws marked [270], then remove the shield cover-U. (Fig. 3)
 - 6-3 Remove the five (5) screws marked [260], then the keyboard assembly can be removed. (Fig. 4)
- * When you replace the keyboard assembly in the unit, tighten the center screw at first.

7 Right Speaker

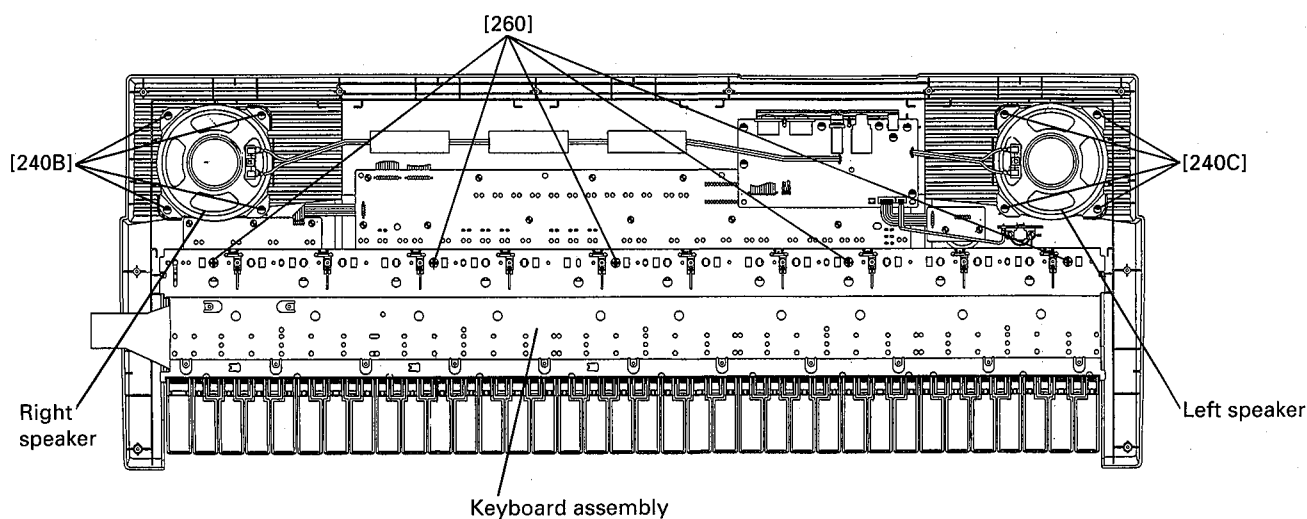
- 7-1 Remove the lower case assembly. (see procedure 1)
- 7-2 Remove the M circuit board. (see procedure 2)
- 7-3 Remove the four (4) screws marked [250C] and two (2) screws marked [270], then remove the shield cover-U. (Fig. 3)
- 7-4 Remove the four (4) screws marked [240B], then the right speaker can be removed. (Fig. 4)
- 7-5 The left speaker can be removed by removing the four (4) screws marked [240C] after the lower case assembly has been removed. (Fig. 4)



[250C]: Bind Head Tapping Screw-P 2.6 x 8 ZMC2Y (EP620100)

[270]: Bind Head Tapping Screw-S 3.0 x 8 ZMC2BL (EP600530)

(Fig. 3)



- [240B]: Bind Head Tapping Screw-P 3.0 8 ZMC2Y (EP600280)
 [240C]: Bind Head Tapping Screw-P 3.0 x 8 ZMC2Y (EP600280)
 [260]: BW Head Tapping Screw-P 3.0 x 20-8 ZMC2Y (VK528100)

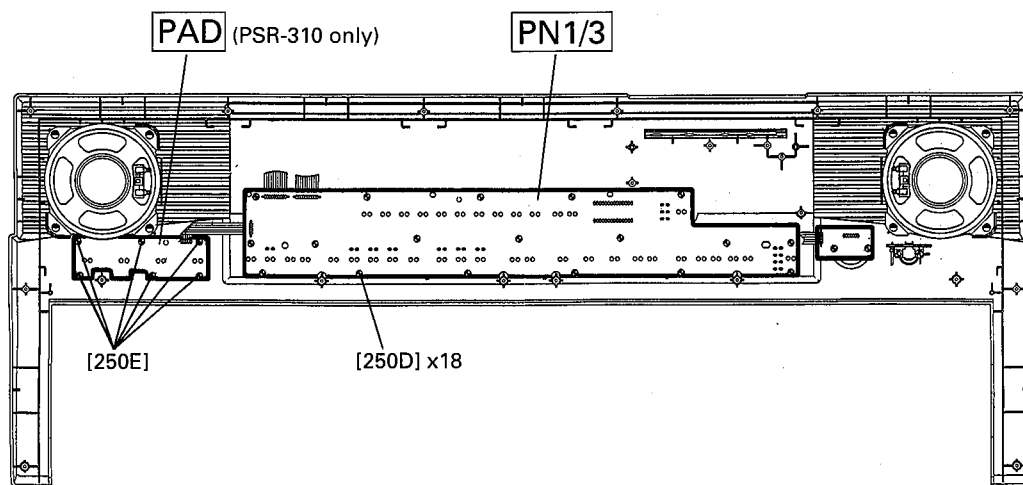
(Fig. 4)

8 PN1/3 Circuit Board

- 8-1 Remove the lower case assembly. (see procedure 1)
- 8-2 Remove the M circuit board. (see procedure 2)
- 8-3 Remove the AM circuit board. (see procedure 3)
- 8-4 Remove the keyboard assembly. (see procedure 6)
- 8-5 Remove the eighteen (18) screws marked [250D], so the PN1/3 circuit board can be removed. (Fig. 5)

9 PAD Circuit Board (PSR-310 only)

- 9-1 Remove the lower case assembly. (see procedure 1)
- 9-2 Remove the M circuit board. (see procedure 2)
- 9-3 Remove the AM circuit board. (see procedure 3)
- 9-4 Remove the keyboard assembly. (see procedure 6)
- 9-5 Remove the six (6) screws marked [250E], then the PAD circuit board can be removed. (Fig. 5)



- [250D]: Bind Head Tapping Screw-P 2.6 x 8 ZMC2Y (EP620100)
 [250E]: Bind Head Tapping Screw-P 2.6 x 8 ZMC2Y (EP620100)

(Fig. 5)

■ LSI PIN DESCRIPTION

- μ PD78213CW (XM619A00) CPU
- μ PD78P218 (XN058A00) CPU

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	P03		Port 0	33	P41		Port 4
2	P04			34	P40		
3	P05			35	ASTB		
4	P06			36	P20		Port 2
5	P07		Port 6	37	P21		
6	P67			38	P22		
7	P66			39	P23		
8	P65		Port 6	40	P24		Port 3
9	P64			41	P25		
10	P63			42	P26		
11	P62			43	P27		Port 3
12	P61		Reset	44	P30		
13	P60			45	P31		
14	RESET			46	P32		
15	X2		Clock	47	P33		Power supply
16	X1			48	EA		
17	Vss			49	Vdd		
18	P57			50	AVSS		
19	P56		Ground	51	AVREF		Analog ground
20	P55			52	P75		
21	P54			53	P74		
22	P53			54	P73		Port 7
23	P52		Port 5	55	P72		
24	P51			56	P71		
25	P50			57	P70		
26	P47		Port 4	58	P34		Port 3
27	P46			59	P35		
28	P45			60	P36		
29	P44			61	P37		Port 0
30	P43		Ground	62	P00		
31	P42			63	P01		
32	Vss			64	P02		

- YMW-258-F (XJ427A00) GEW8 (AWM & FM Tone Generator)

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	NC		Ground	41	Vss		Ground
2	Vss			42	NC		
3	D0	I/O		43	Vss		
4	D7	I/O		44	AB0	O	Voice memory address bus
5	A0	I	CPU address bus	45	DB7	I/O	
6	A1	I		46	AB1	O	
7	A2	I		47	AB2	O	
8	A3	I	Chip select	48	AB10	O	Voice memory address bus
9	CS	I		49	AB3	O	
10	RD	I		50	AB4	O	
11	WR	I		51	AB11	O	Voice memory address bus
12	XIN		Clock	52	AB5	O	
13	XOUT			53	AB9	O	
14	IC	I		54	AB6	O	
15	TST0		Test pin	55	AB8	O	Ground
16	TST1			56	AB7	O	
17	Vss			57	AB13	O	
18	DITHER			58	AB12	O	Voice memory address bus
19	DACL	O	Data output, L channel	59	AB14	O	
20	DACDCLK	O		60	AB15	O	
21	DACRD	O		61	AB17	O	
22	DACLE	O	Word clock output to DAC	62	Vss		Ground
23	NC			63	Vss		
24	DACMC	O		64	Vss		
25	CH27			65	Vss		Voice memory address bus
26	DSPSYW		Not used	66	AB16	O	
27	DSPSEND			67	AB18	O	
28	DSPRET			68	AB19	O	
29	DSPIC		Power supply	69	AB20	O	Memory read control
30	DSPCDS			70	AB21	O	
31	DSPCLK			71	MRD(MWR)	O	
32	Vdd			72	Vdd		Memory write control
33	DB3	I/O	Voice memory data bus	73	MWR(MRD)	O	
34	DB2	I/O		74	D3	I/O	
35	DB4	I/O		75	D4	I/O	CPU data bus
36	DB1	I/O		76	D2	I/O	
37	DB5	I/O	Ground	77	D5	I/O	
38	DB0	I/O		78	D1	I/O	
39	DB6	I/O		79	D6	I/O	Ground
40	NC			80	Vss		

• **HD63B05 (XM602C00) CPU**

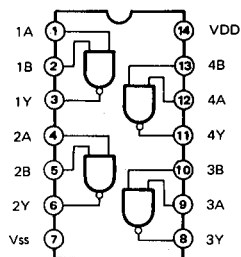
Pin No.	Name	I/O	Function	Pin No.	Name	I/O	Function
1	RES	I	Reset	21	C7	I/O	Port C
2	INT	I	Interrupt request	22	C6	I/O	
3	NUM	I	Non-maskable interrupt	23	C5	I/O	
4	A7	I/O	Port A	24	C4	I/O	
5	A6	I/O		25	C3	I/O	
6	A5	I/O		26	C2	I/O	Port D
7	A4	I/O		27	C1	I/O	
8	A3	I/O		28	C0	I/O	
9	A2	I/O		29	D0	I/O	
10	A1	I/O		30	D1	I/O	
11	A0	I/O	Port B	31	D2	I/O	
12	B0	I/O		32	TX	O	Serial data output
13	B1	I/O		33	RX	I/O	Clock for serial operation
14	B2	I/O		34	CK	O	
15	B3	I/O		35	INT2	I/O	Standby mode signal
16	B4	I/O		36	STBY	I	
17	B5	I/O		37	TIMER	I	Timer
18	B6	I/O	Ground	38	XTAL	I	Clock
19	B7	I/O		39	EXTAL	I	
20	VSS		Ground	40	VCC		Power supply

• **PCM69AP-3 (XM051A00) DAC (Digital to Analog Converter)**

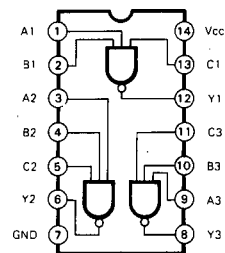
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	+Vcc		Analog power supply	9	DGND		Digital ground
2	VC, L	O	V-common, L channel	10	DA, R	I	Data input, R channel
3	IO, L		Current output, L channel	11	BCK	I	Bit clock
4	SER		Servo filter	12	CLK	I	System clock
5	REF	O	Reference filter	13	WDCK	I	Word clock
6	IO, R		Current output, R channel	14	DA, L	I	Data input, L channel
7	VC, R		V-common, R channel	15	TP1		Test pin
8	AGND		Analog ground	16	+VDD		Digital power supply

■ IC BLOCK DIAGRAM

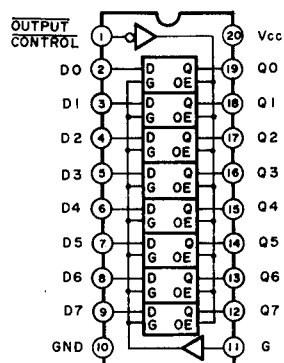
- TC74HC00AP (IR000000)
 - HD74HC00P (IR000010)
 - HD74AC00P (XK273A00)
- Quad 2 INPUT NAND



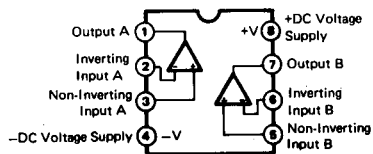
- TC74HC10AP (IR001000)
 - HD74HC10P (IR001010)
- Triple 3 Input NAND



- HD74HC573P (IR057310)
 - TC74HC573AP (IR057300)
- Octal 3-State D-Latches

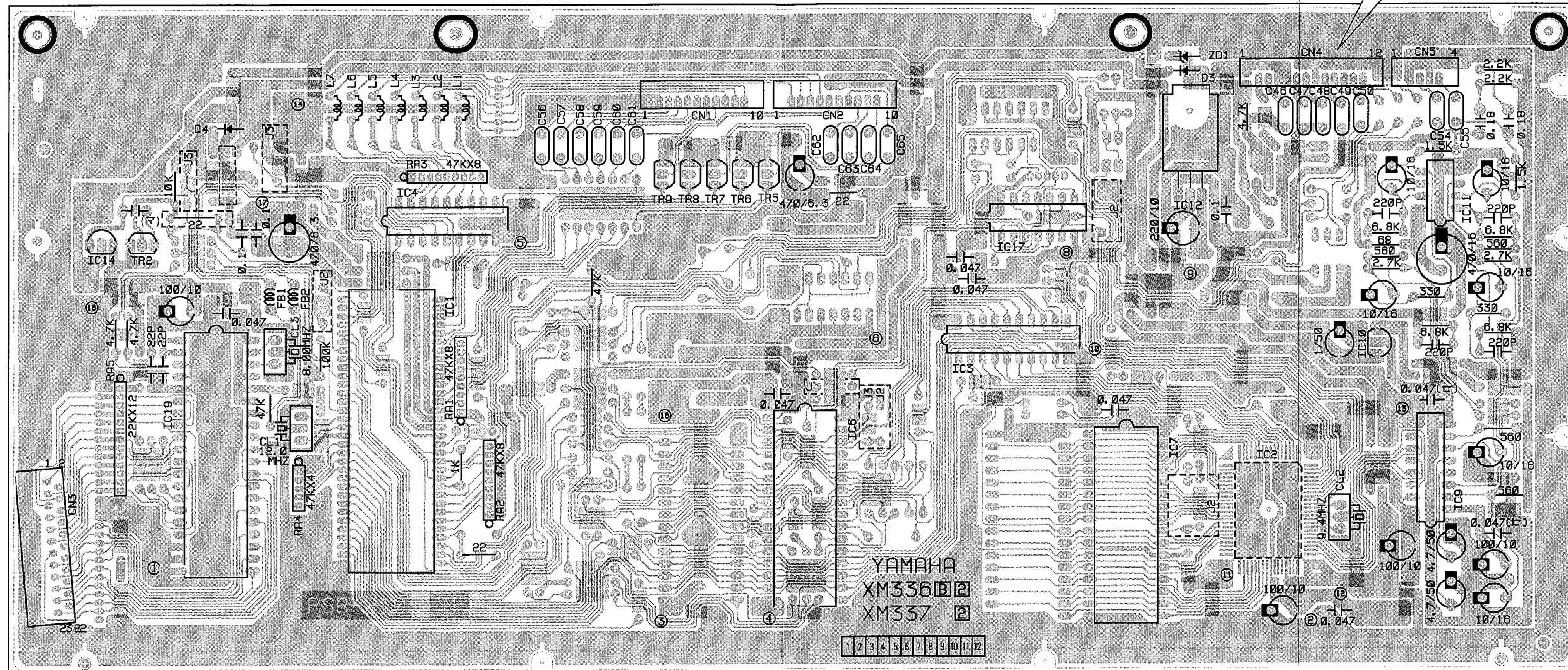


- μ PC4570C (XC520A00)
- Dual Operational Amplifier



CIRCUIT BOARD

M Circuit Board (PSR-210)



Component side

Notes

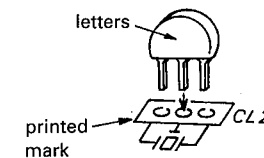
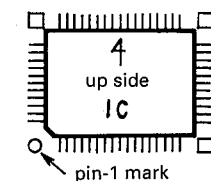
Circuit Board:	M (VQ594000) J,X,B (XM931A0) M (VQ593900) U,D (XM93110)
1. IC	
IC 1:	UPD78218 (XN058A00) CPU (MAIN)
IC 2:	YMW258-F (XJ427A00) GEW8
IC 3:	TC74HC573AP (IR057300) LATCH or HD74HC573P (IR057310) LATCH (XM928B00) ROM (PROGRAM)
IC 6:	HN62318BPC50 (XM930A00) ROM 8M (WAVE)
IC 7:	PCM69AP-3 (XM051A00) DAC
IC 9:	AN8005 (XJ264A00) REGULATOR +5V or AN8005 (XL559A00) REGULATOR +5V
IC10:	UPC4570C (XC520A00) OP AMP
IC11:	UPC24M05HF (XH730A00) REGULATOR +5V
IC12:	RE5VL45CA-TZ (XM618A00) RESET or RE5VA45CA-TZ (XM717A00) RESET
IC14:	TC74HC10AP (IR001000) NAND or HD74HC10P (IR001010) NAND
IC17:	HD63B05 (XM602C00) CPU (SUB)
IC19:	
2. Transistor Array	
IC 4:	AN90B22 (VH480900)
3. Digital Transistor	
TR 2:	DTC123JS TP (VK165500)
TR 5-9:	DTB123ES TP (VJ337600)

4. Diode	
D 3,4:	1SS133,176,HSS104 (VD631600)
5. Zener Diode	
ZD 1:	MTZ J 5.6C 5.6V (VG437800)
6. Mylar Cap.	
	0.0470 50V J (UA654470) 0.1800 50V J (UA655180)
7. Ceramic Cap.	
	CL 22P 50V J (VG276800) B 220P 50V K (VG278400) F 0.047 16V Z (VJ599000)
8. Electrolytic Cap.	
	470.00 6.3V (UJ818470) 220.00 10.0V (UI528220) 100.00 10.0V (UJ828100) 10.00 16.0V (UJ837100) 470 16.0V (VP104500) 470.00 25.0V (VJ847470) 1.00 50.0V (UJ866100) 4.70 50.0V (UJ866470)
9. Semiconductive Cera. Cap.	
	0.1000 25V Z (VC694800)
10. Coil	
FB 1,2:	BL03RN2-R62T4 (VL409500) 0.45u

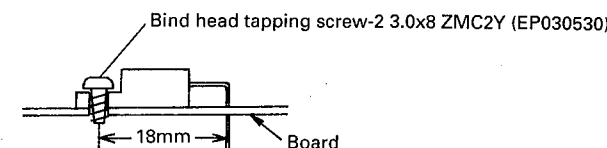
11. Resistor Array	
RA 1-3:	RGLE8X473J (VF238600)
RA 4:	RGLE4X473J (VF773900)
RA 5:	RGLE12X223J (VL674500)
12. Ceramic Resonator	
CL 1:	12.0MHz (VJ539700)
CL 2:	9.40MHz (VJ338000)
CL 3:	8.00MHz (VH902200) or 8.00MHz (VN002100)
13. Ceramic Cap. Array	
	220P 50V N (VJ944300)
14. Connector	
CN 1:	52151-10P SE (VK02690) to PN-CN2
CN 1:	52151-10P SE (VK02690) to PN-CN3
CN 3:	52044-23P SE (VQ04530) to MK
CN 4:	52151-9P SE (VK02680) to AM-CN4
CN 5:	PH-4P SE (VB858300) to AM-CN2
15. C49,C50	
(U,D):	Coil = BL03RN2-R62T4 (VL409500) 0.45u
(J,X,B):	Jumper Wire
16. L1-L7	
Carbon Resistor	100.0 1/4 J (HC85510)

IC2,GEW8 installing

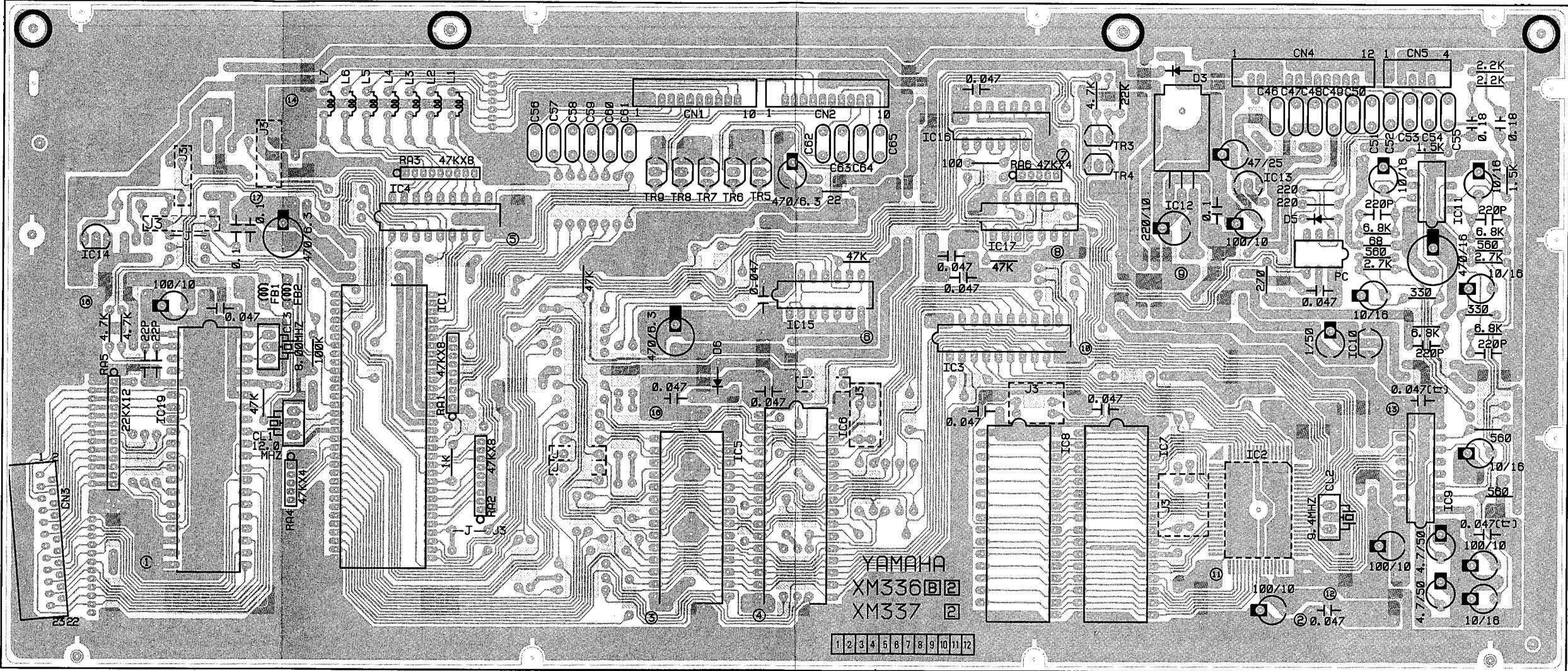
Ceramic resonator, CL2 installing



IC12 installing



• M Circuit Board (PSR-310)



Component side

Notes)

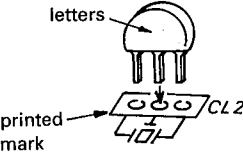
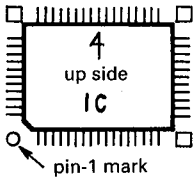
- Circuit Board: M (VQ112100) J,X,B (XM33620)
M (VQ112000) U,D (XM33720)
1. IC
IC 1: UPD78213CW (XM619A00) CPU (MAIN)
IC 2: YMV258-F (XJ427A00) GEW8
IC 3: TC74HC573AP (IR057300) LATCH or
HD74HC573P (IR057310) LATCH
IC 5: TC51832APL-85 (XL977A00) PSRAM 256K
IC 6: TMS27C010A (XM598C00) ROM 1M (PROGRAM)
IC 7: HN62318BPC50 (XM930A00) ROM 8M (WAVE1)
IC 8: MSM534001B (XM944A00) ROM 4M (WAVE2)
IC 9: PCM69AP-3 (XM051A00) DAC
IC10: AN8005 (XJ264A00) REGULATOR +5V or
AN8005-(TA) (XL559A00) REGULATOR +5V
IC11: UPC4570C (XC520A00) OP AMP
IC12: UPC24M05HF (XH730A00) REGULATOR +5V
IC13: S-81350HG (XM939A00) REGULATOR +5V
IC14: RESVL45CA-TZ (XM618A00) RESET or
RESVA45CA-TZ (XM717A00) RESET
IC15: TC74HC10AP (IR001000) NAND or
HD74HC10P (IR001010) NAND
IC16: TC74HC00AP (IR000000) NAND or
HD74HC00P (IR000010) NAND
IC17: HD74AC00P (XK273A00) NAND
IC19: HD63B05 (XM602C00) CPU (SUB)
2. Transistor Array
IC 4: AN90B22 (VH480900)

3. Digital Transistor
TR 3: DTC123JS TP (VK165500)
TR 5-9: DTB123ES TP (VJ337600)
4. Transistor
TR 4: 2SC2603 E,F (IC260320)
5. Diode
D 3,5,6: 1SS133,176 (VD631600)
6. Zener Diode
ZD 1: MTZ J 5.6C 5.6V (VG437800)
7. Photo Coupler
PC: PC-900V (VG181900)
8. Mylar Cap.
0.1800 50V J (UA655180)
9. Ceramic Cap.
SL 22P 50V J (VG276600)
B 220P 50V K (VG278400)
F 0.047 16V Z (VJ599000)
10. Electrolytic Cap.
220.00 10.0V (UI528220)
470.00 6.3V (UJ818470)
100.00 10.0V (UJ828100)
10.00 16.0V (UJ837100)
47.00 25.0V (UJ847470)
1.00 50.0V (UJ866100)
4.70 50.0V (UJ866470)
470 16.0V (VP104500)

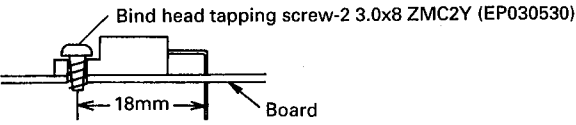
11. Semiconductive Cera. Cap.
0.1000 25V Z (VC694800)
12. Resistor Array
RA 1-3: RGL8X473J (VF238600)
RA 4,6: RGL4X473J (VF773900)
RA 5: RGL12X223J (VL674500)
13. Coil
FB 1,2: BL03RN2-R62T4 (VL409500) 0.45u
14. Ceramic Resonator
CL 1: 12.0MHz (VJ539700)
CL 2: 9.40MHz (VJ338000)
CL 3: 8.00MHz (VH902200) or
8.00MHz (VN002100) or
8.00MHz (VQ305500)
15. Connector
CN 1: 52151-10P SE (VK02690) to PN-CN2
CN 2: 52151-10P SE (VK02690) to PN-CN3
CN 3: 52044-23P SE (VQ04530) to MK
CN 4: 52151-12P SE (VK02710) to AM-CN4
CN 5: PH-4P SE (VB858300) to AM-CN2
16. C49,C50
(U,D): Coil = BL03RN2-R62T4 (VL409500) 0.45u
(J,X,B): Jumper Wire
17. L1-L7
Carbon Resistor 100.0 1/4 J (HC85510)

• IC2,GEW8 installing

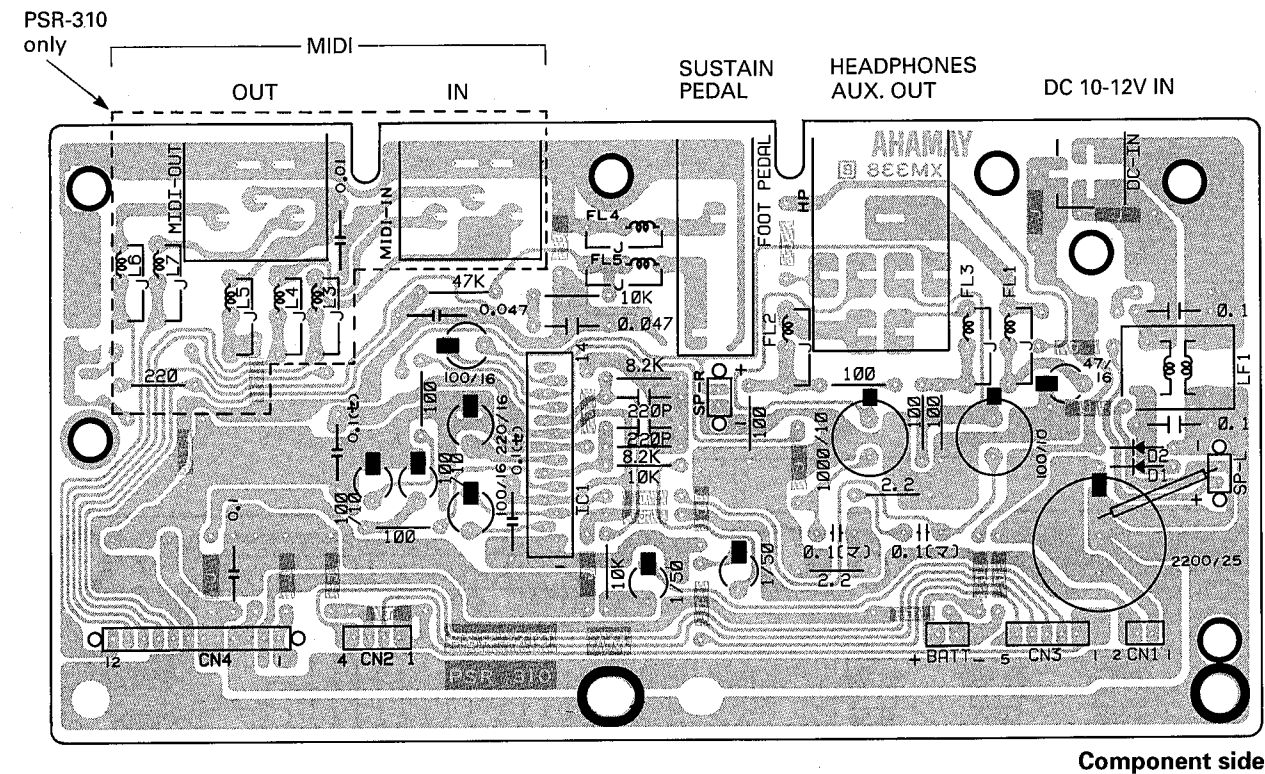
• Ceramic resonator, CL2 installing



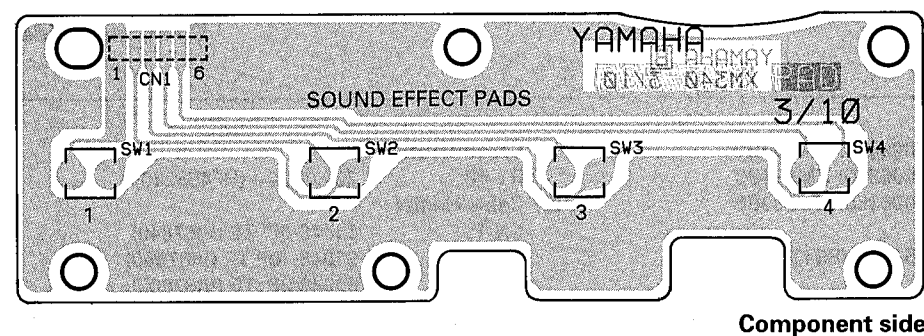
• IC12 installing



• AM Circuit Board (PSR-210/PSR-310)



• PAD Circuit Board (PSR-310)



Notes)

Circuit Board: PAD (VQ113200) XM340B0

1. Tact Switch

SW 1-4: SKHBE091A (VQ320400)

2NA-VQ32630 : AM

2NA-VQ11270 : PAD

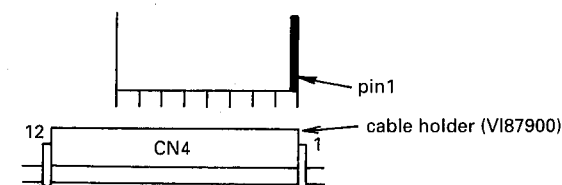
• PSR-210

Notes)

Circuit Board: AM (VQ778600) J,X,B (XM338B0)
AM (VQ326200) U,D (XM338B0)

1. IC
IC 1: LA4598 (XM623A00) POWER AMP
2. Diode
D 1,2: 1SR35-100A (IH001420) or
11ES4 TA1 (VF195600) or
10E-1
3. Mylar Cap.
0.1000 50V J (UA655100)
4. Ceramic Cap.
F 0.1 25V Z (VD829500)
F 0.047 16V Z (VJ599000)
B 220P 50V K (VG278400)
5. Electrolytic Cap.
100.00 10.0V (UJ828100)
1000 10.0V (UJ829100)
47.00 16.0V (UJ837470)
220.00 16.0V (UJ838220)
2200 25.0V (UJ749220)
1.00 50.0V (UJ866100)
6. Line Filter
LF 1: UF1717V-200Y1R0 (VL346200)
11. Coil
FL 1-5: FL5R200QNT 20u (VB835000) U,D
12. Phone Jack
HP: YKB21-5006 (LB101870) PHONES/
AUX. OUT
FOOT PEDAL: YKB21-5014 BL (VC687500) SUSTAIN
PEDAL
13. DC IN Connector
DC-IN: HEC2305 (VC664500) DC 10-12V IN
14. Cable Holder
SP-L,SP-R: 51048-2P TE (VI87800)
CN 4: 51048-12P TE (VI87900)
15. Connector
CN 1: 52147-2P TE (VK02460) to PN2/3-CN4
CN 2: CN2 4P (VQ11370) to M-CN5
CN 3: 52147-5P TE (VK02490) to PN3/3-CN5
CN 4: CN4 9P (VQ33200) to M-CN4
BATT: XH-2P TE (LB918020) to the batteries
SP-R: RSP 2P (VQ32590) to the right
speaker
SP-L: LSP 2P (VQ32600) to the left speaker

• CN4 of PSR-210 connecting



• PSR-310

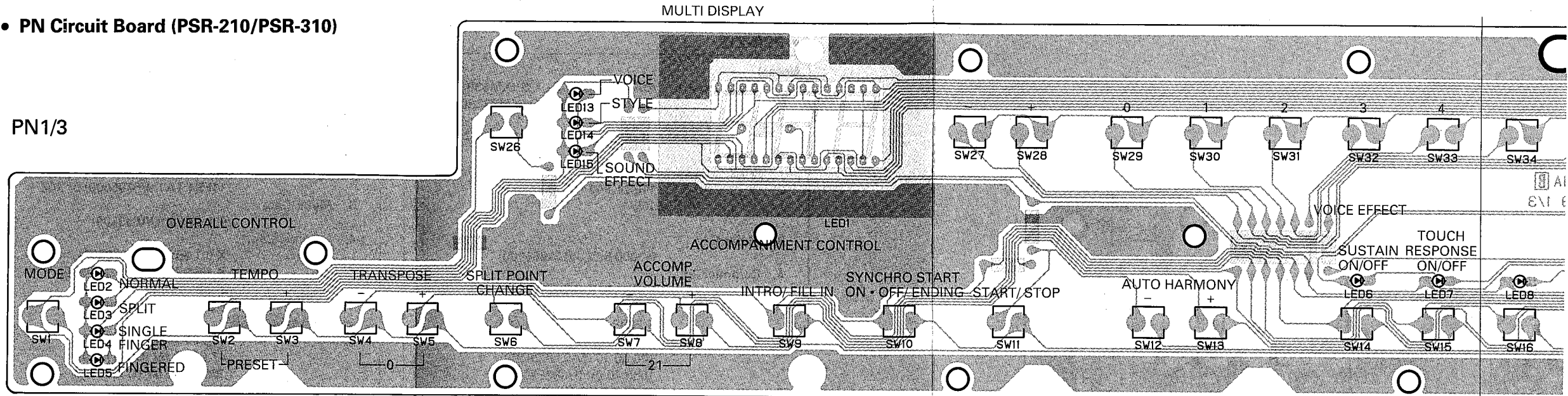
Notes)

Circuit Board: AM (VQ778400) J,X,B (XM338B0)
AM (VQ321500) U,D (XM338B0)

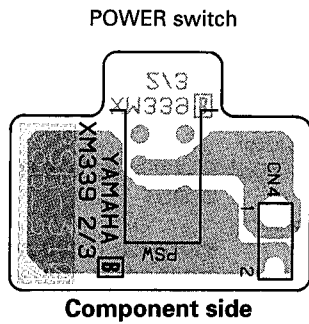
1. IC
IC 1: LA4598 (XM623A00) POWER AMP
2. Diode
D 1,2: 1SR35-100A (IH001420) or
11ES4 TA1 (VF195600) or 10E-1
3. Mylar Cap.
0.1 50V J (UA655100)
4. Ceramic Cap.
X 0.1 25V Z (VD829500)
X 1500P16V N (VG279200)
Y 0.01 16V M (VF467300)
F 0.047 16V Z (VJ599000)
5. Electrolytic Cap.
100.00 10.0V (UJ828100)
47.00 16.0V (UJ837470)
100.00 16.0V (UJ838100)
220.00 16.0V (UJ838220)
1.00 50.0V (UJ866100)
2200 25.0V (UJ749220)
1000 10.0V (UJ829100)
6. Line Filter
LF 1: UF1717V-200Y1R0 (VL346200)
7. Coil
L 3-7: FL5R200QNT 20u (VB835000)
FL 1-5: FL5R200QNT 20u (VB835000)
8. Phone Jack
HP: YKB21-5006 (LB101870)
HEADPHONES/AUX. OUT
FOOT PEDAL: YKB21-5014 BL (VC687500)
SUSTAIN PEDAL
9. DC IN Connector
DC-IN: HEC2305 (VC664500) DC 10-12V IN
10. DIN Connector
MIDI-IN,MIDI-OUT: 5P YKF51-5050 (VJ107200) MIDI
IN,OUT
11. Cable Holder
CN 4: 51048-12P TE (VI87900)
SP-L,SP-R: 51048-2P TE (VI87800)
12. Connector
CN 1: 52147-2P TE (VK02460) to PN2/3-CN4
CN 2: CN2 4P (VQ11370) to M-CN5
CN 3: 52147-5P TE (VK02490) to PN3/3-CN5
CN 4: CN4 12P (VQ11360) to M-CN4
BATT: XH-2P TE (LB918020) to the batteries
SP-R: RSP 2P (VQ32590) to the right
speaker
SP-L: LSP 2P (VQ32600) to the left speaker

• PN Circuit Board (PSR-210/PSR-310)

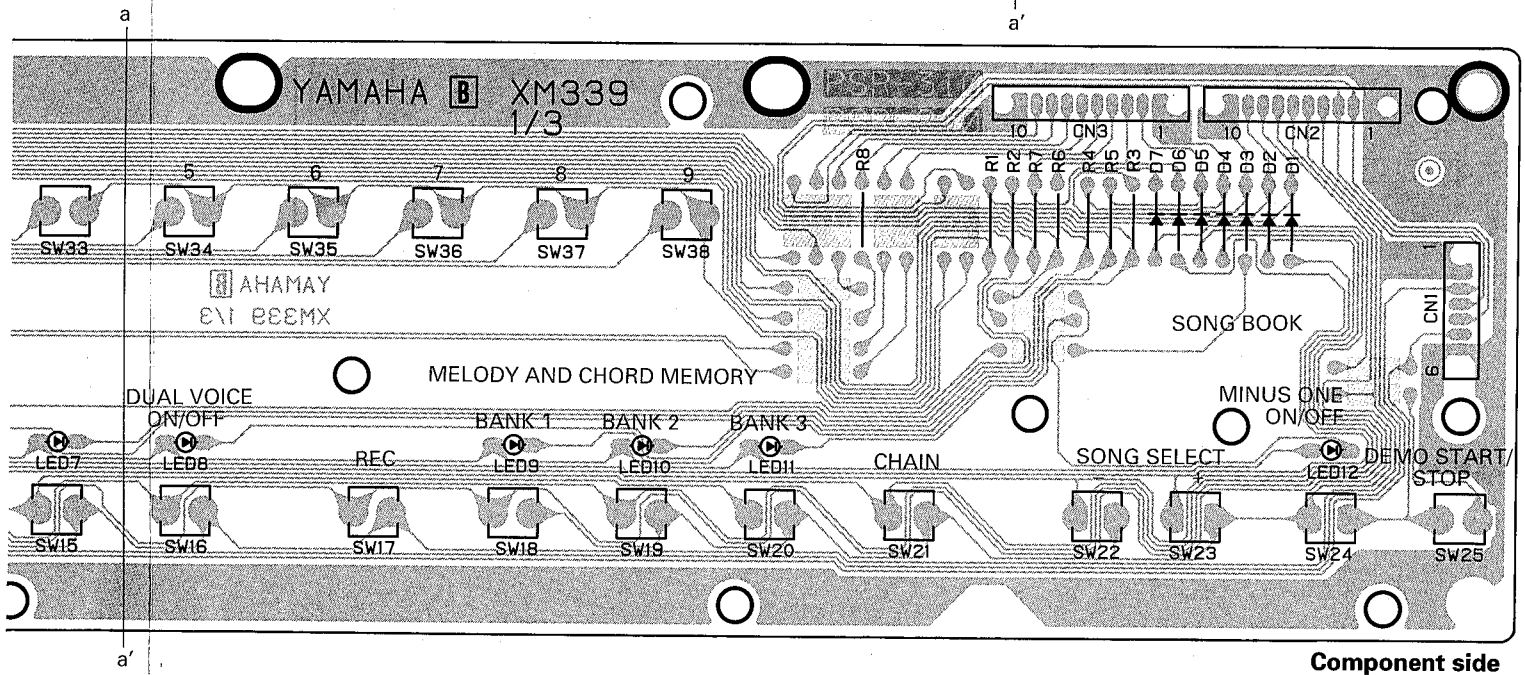
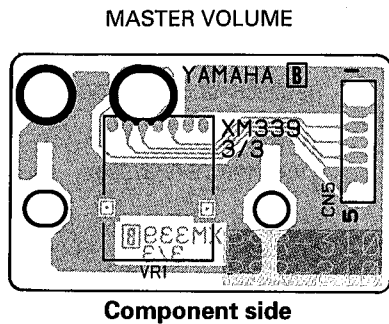
PN1/3



PN2/3



PN3/3



• PSR-210

Notes)	
Circuit Board:	PN 1/3 (NX006360) XM339B0 PN 2/3 (NX006370) XM339B0 PN 3/3 (NX006380) XM339B0
1. Diode	D 1-7: 1SS133,1SS176 (VB941200)
2. LED	LED 2-13,15: SLZ190B14T1 RE (VQ320100)
3. LED Display	LED 1: LB-603VLF (VL086000) MULTI DISPLAY
4. Variable Resistor	VR 1: A10Kx2 (VQ320200) MASTER VOLUME
5. Tact Switch	SW 1-38: SKHBE091A (VQ320400)
6. Push Switch	PSW: SPUL (VQ751400) POWER SW
7. Carbon Resistor	R1-R8: 220.0 1/4 J (HF455220)
8. Cable Holder	CN 1: 51048-6P TE (VI87840) CN 2,3: 51048-10P TE (VI87880) CN 4: 51048-2P TE (VI87800) CN 5: 51048-5P TE (VI87830)
9. Connector Assembly	CN 2: PN1 10P (VQ11340) to M-CN1 CN 3: PN1 10P (VQ11340) to M-CN2 CN 4: PSW 2P (VQ32580) to AM-CN1 CN 5: VR 5P (VQ11380) to AM-CN3

• PSR-310

Notes)	
Circuit Board:	PN 1/3 (NX006330) XM339B0 PN 2/3 (NX006340) XM339B0 PN 3/3 (NX006350) XM339B0
1. Diode	D 1-7: 1SS133,1SS176 (VB941200)
2. LED	LED 2-15: SLZ190B14T1 RE (VQ320100)
3. LED Display	LED 1: LB-603VLF (VL086000) MULTI DISPLAY
4. Variable Resistor	VR 1: A10Kx2 (VQ320200) MASTER VOLUME
5. Tact Switch	SW 1-38: SKHBE091A (VQ320400)
6. Push Switch	PSW: SPUL (VQ751400) POWER SW
7. Carbon Resistor	R1-R8: 220.0 1/4 J (HF455220)
8. Cable Holder	CN 1: 51048-6P TE (VI87840) CN 2,3: 51048-10P TE (VI87880) CN 4: 51048-2P TE (VI87800) CN 5: 51048-5P TE (VI87840)
9. Connector Assembly	CN 1: PAD 6P (VQ11330) to PAD-CN1 CN 2: PN1 10P (VQ11340) to M-CN1 CN 3: PN1 10P (VQ11340) to M-CN2 CN 4: PSW 2P (VQ32580) to AM-CN1 CN 5: VR 5P (VQ11380) to AM-CN3

■ TEST PROGRAM

1. POWER SWITCH

Before entering the test, always turn on the power switch and check that the power is on.

2. TEST ENTRY

While pressing the C6 and B5 keys on the keyboard, turn the POWER switch on.

3. MEMORY BACKUP CHECK

When the test program is initiated, memory backup check is performed automatically. If the test is OK, the program proceeds to the next test. If the test is NG (No Good), "Er1" is displayed on the [MULTI DISPLAY] to indicate an error has occurred.

4. GEW8 WIRING CHECK AND VOICE ROM CHECK

Performs the GEW8 and WAVE ROM circuit connections check. If the test is OK, the program will proceed to the version display mode. If the test is NG, "Er2" is displayed on the [MULTI DISPLAY].

5. PROGRAM ROM VERSION, VOICE ROM VERSION DISPLAY

[MULTI DISPLAY] left digit : X10 digit of program ROM version
 [MULTI DISPLAY] middle digit: X1 digit of program ROM version
 [MULTI DISPLAY] right digit : Voice ROM version
 Dot, LED : All on

6. PANEL SWITCH CHECK, AUDIO LEVEL CHECK, LED CHECK

A sine wave is generated at the interval shown in the table below during the panel switch is pressed ON. The LED adjacent to the switch is turned on and off alternately each time the switch is pressed. The [MODE/STYLE/SOUND EFFECT] switch LEDs light one at a time in MODE, STYLE, and SOUND EFFECT order each time the switch is pressed. The numeric displayed on the pressed numeric key will appear on the [MULTI DISPLAY].

When two or more switches are pressed simultaneously, "—" is displayed on the [MULTI DISPLAY].

SWITCH NAME	NOTE	MULTI DISPLAY
STYLE/VOICE/SOUND EFFECT	C2	
DEC (-)	C#2	
INC (+)	D2	
0	D#2	000
1	E2	111
2	F2	222
3	F#2	333
4	G2	444
5	G#2	555
6	A2	666
7	A#2	777
8	B2	888
9	C3	999
MODE	D#3	
TEMPO +	D3	
TEMPO -	D#3	
TRANSPOSE +	E3	
TRANSPOSE -	F3	
SPLIT POINT CHANGE	F#3	
ACCOMP +	G3	
ACCOMP -	G#3	

SWITCH NAME	NOTE	REMARK
INTRO/FILL IN	A3	
SYNCHRO START/ENDING	A#3	
START/STOP	B3	
HARMONY TYPE +	C4	
HARMONY TYPE -	C#4	
SUSTAIN	D4	
TOUCH RESPONSE ON/OFF	D#4	
DUAL VOICE ON/OFF	E4	
REC	F4	
BANK1	F#4	
BANK2	G4	
BANK3	G#4	
CHAIN	A4	
SONG SELECT +	A#4	
SONG SELECT -	B4	
MINUS ONE ON/OFF	C5	
DEMO START/STOP	C#5	
SOUND EFFECT PAD1	D5	PSR310 only
SOUND EFFECT PAD2	D#5	PSR310 only
SOUND EFFECT PAD3	E5	PSR310 only
SOUND EFFECT PAD4	F5	PSR310 only

7. KEYBOARD SWITCH CHECK

Play a scale on the keyboard from C1 to C6. At this time, the voice of the generated sound differs in accordance with the velocity value when a key was played and the velocity value is displayed on the [MULTI DISPLAY].

Velocity value 1 ~ 10 : Click LOW

Velocity value 11 ~ 126 : Sine wave

Velocity value 127 : Click HIGH

If the voice of the generated sound is a sine wave, the keyboard switch test is OK. If the voice is not a sine wave, the test is NG.

8. MIDI IN/OUT CHECK (PSR310 only)

Connect the [MIDI IN] to the [MIDI OUT] via a MIDI cable. If the MIDI test is OK, a sine wave of A3 is generated. The generation period is about 250 msec. for both the on and off times.

9. OUTPUT LEVEL CHECK

Set the [MASTER VOLUME] at maximum. Check that when the C3, D3, E3, F3, G3, A3, and B3 keys are pressed simultaneously, a -10 ± 3 dBm output signal is obtained at the AUX OUT/HEADPHONES terminal. (Load resistance 30 ohm) A level meter must be used during this measurement with a JIS-C curve filter.

*JIS: Japanese Industrial Standard

10. NOISE LEVEL CHECK

Check that the signal/noise level at all the output and speaker terminals is greater than 60dB. The signal measurement conditions are the same as those for output level check. (However, the load is not specified.) Measure the noise when sound is not generated.

11. EXIT

To exit the test program, turn the power off.

■ RESETTING THE UNIT

Each of the following PSR210/PSR310 functions can be reset separately. These operations restore the original default settings of the unit.

1. RESETTING THE (MELODY AND) CHORD MEMORY

While pressing and holding down the [BANK] button, turn the POWER switch on. Only data of the selected bank will be initialized. To delete data from the other banks repeat the same procedure while holding down the other bank buttons.

2. RESETTING THE CHAIN MEMORY

While holding down the [CHAIN] button, turn the POWER switch on, then the all chain data will be initialized.

3. RESETTING THE SPLIT POINT

While pressing down the [SPLIT POINT CHANGE] button, turn the POWER switch on. Then all split points for the SPLIT, SINGLE FINGER and FINGERED modes will be reset.

■ MIDI IMPLEMENTATION CHART

• Multi mode

YAMAHA [PortaTone]
Model PSR-310.

MIDI Implementation Chart

Date : 01/11/1993
Version : 1.0

Function		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1 - 16 1 - 16	1 - 16 1 - 16	
Mode	Default Messages Altered	3 X *****	1 *1 X X	
Note Number	: True voice	36 - 96 *****	24 - 127 24 - 127	
Velocity	Note ON Note OFF	○ 9nH, v = 1 - 127 X 9nH, v = 0	○ 9nH, v = 1 - 127 X 9nH, v = 0, 8nH	
After Touch	Key's Ch's	X X	X X	
Pitch Bend		X	X	
Control Change	10 64	X ○	○ ○	PAN SUSTAIN
Program Change	: True #	○ 0 - 99 *****	○ 0 - 99 *2 0 - 99	
System Exclusive		X	X	
System Common	: Song Pos : Song Sel : Tune	X X X	X X X	
System Real Time	: Clock : Commands	X X	X X	
Aux Messages	: Local ON/OFF : All Notes OFF : Active Sense : Reset	X X ○ X	X X ○ X	
Notes		*1: 16 channel Multi Timbre *2: Except channel 16		

Mode 1: OMNI ON, POLY
Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO
Mode 4: OMNI OFF, MONO

○ : Yes
X : No

PSR-210/PSR-310

• Remote control mode

YAMAHA [PortaTone]
Model PSR-310

MIDI Implementation Chart

Date : 01/11/1993
Version : 1.0

Function		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1 1 - 16	OMNI ON 1 - 16, OMNI ON	
Mode	Default Messages Altered	3 X *****	1 X X	
Note Number	: True voice	36 - 96 *****	24 - 127 24 - 127	
Velocity	Note ON Note OFF	○ 9nH, v = 1 - 127 X 9nH, v = 0	○ 9nH, v = 1 - 127 X 9nH, v = 0, 8nH	
After Touch	Key's Ch's	X X	X X	
Pitch Bend		X	X	
Control Change	10 64	X ○	○ ○	PAN SUSTAIN
Program Change	: True #	○ 0 - 99 *****	○ 0 - 99 0 - 99	
System Exclusive		X	X	
System Common	: Song Pos : Song Sel : Tune	X X X	X X X	
System Real Time	: Clock : Commands	○ ○	○ ○	
Aux Messages	: Local ON/OFF : All Notes OFF : Active Sense : Reset	X X ○ X	X X ○ X	
Notes				

Mode 1: OMNI ON, POLY
Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO
Mode 4: OMNI OFF, MONO

○ : Yes
X : No

PORTATONE

PSR-210

PSR-310

PARTS LIST

■ CONTENTS

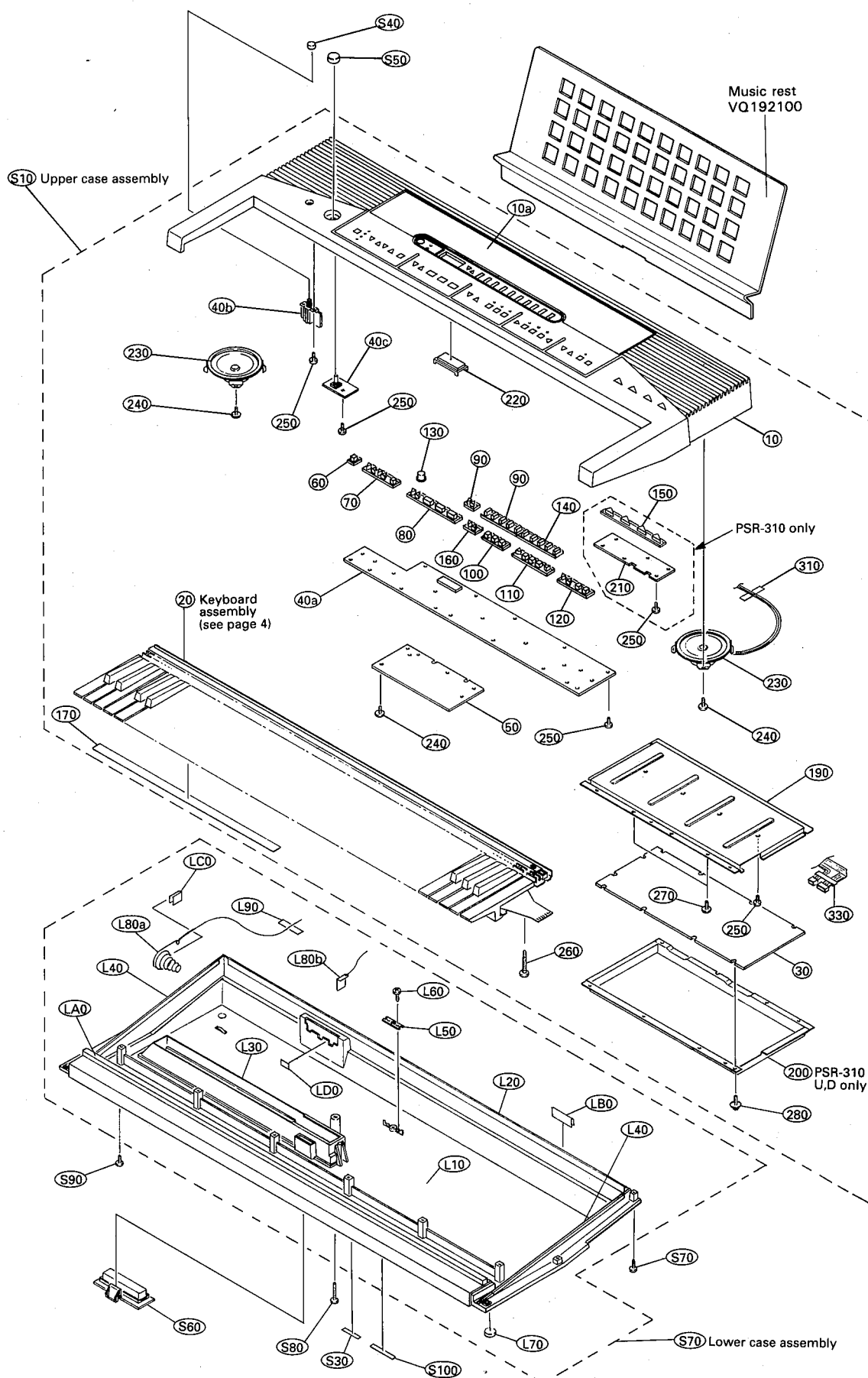
OVERALL ASSEMBLY	1
KEYBOARD ASSEMBLY	4
PEDAL ASSEMBLY	5
ELECTRICAL PARTS (PSR-210)	6
ELECTRICAL PARTS (PSR-310)	8

Note) DESTINATION ABBREVIATIONS

J : Japanese model	A : Australian model
U : U.S. model	E : European model
C : Canadian model	D : German model
X : General model	B : British model
M : South African model	I : Indonesian model
H : North European model	

- The numbers with "pc." or "pcs" in "Remarks" show quantities for each unit.
- The parts with "--" in "Part No." are not available as spare parts.

OVERALL ASSEMBLY



• Overall Assembly (PSR-210)

Ref. No.	Part No.	Description	部品名	Remarks	ランク
S10	--	<OVERALL ASSEMBLY>	<総組立>	PSR210	
S10	--	Upper Case Assembly	上ケース A s s y	J,X,B (VQ27970)	
S20	VQ291300	Lower Case Assembly	下ケース A s s y	U,D (VQ27980)	
S30	--	Label	規格・製番ラベル		
S40	VQ218800	Knob	ブッシュツマミ	POWER SW	
S50	VQ218900	Knob	V-ツマミ	MASTER VOLUME	
S60	VQ428500	Battery Cover Assembly	バッテリーカバー A s s y		
S70	EP600270	Bind Head Tapping Screw-P	+ バインド P タイ	10pcs	01
S80	VK228100	Bind Head Tapping Screw-P	+ バインド P タイ	1pc.	01
S90	EP600530	Bind Head Tapping Screw-S	+ バインド S タイ	6pcs	01
S100	--	Label	F C C 承認ラベル	U (VP60330)	
A	VQ192100	Music Rest	<付属品>		08
B	VF104000	AC Adapter	譜面立て	J	08
C	VQ279600	Japanese Guide Sheet	和文シート	J	

• Upper Case Assembly (PSR-210)

Ref. No.	Part No.	Description	部品名	Remarks	ランク
10	VQ279900	<UPPER CASE ASSEMBLY>	<上ケース A s s y>	PSR210 (VQ27970)	
10a	VQ291100	Upper Case Sub-assembly	上ケースサブ A s s y		
20	VQ005200	Panel Seal	パネルシール		
30	VQ0594000	Keyboard Assembly	16 F 鍵盤 A s s y	J,X,B	
30	VQ594000	Circuit Board	Mシート	U,D	
30	VQ593900	Circuit Board	Mシート		
40a	NX006360	Circuit Board	PN1 / 3 シート		
40b	NX006370	Circuit Board	PN2 / 3 シート		
40c	NX006380	Circuit Board	PN3 / 3 シート		
50	VQ778600	Circuit Board	AMシート	J,X,B	
50	VQ326200	Circuit Board	AMシート	U,D	
60	VQ217800	Knob	ツマミ A	MODE	
70	VQ217900	Knob	ツマミ B	OVERALL CNTRL	
80	VQ218000	Knob	ツマミ C	ACCOMP CNTRL	
90	VQ218100	Knob	ツマミ D	01 +/-	
100	VQ218200	Knob	ツマミ E	VOICE EFFECT	
110	VQ218300	Knob	ツマミ F	MELODY MEMORY	
120	VQ218400	Knob	ツマミ G	SONG BOOK	
130	VQ218500	Knob	ツマミ H	VOICE / STYLE	
140	VQ218600	Knob	ツマミ I	0~4.5~9 (2pcs)	
160	VQ277600	Knob	ツマミ D	AUTO HARMONY	
170	--	Insulation Tape	絶縁テープ	(VQ69820)	
190	VQ277900	Shield Cover	シールドカバー		
220	VQ219000	LED Cover	LEDカバー		
230	XE657A00	Speaker	スピーカ	2pcs	05
240	EP600280	Bind Head Tapping Screw-P	+ バインド P タイ	15pcs	01
250	EP620100	Bind Head Tapping Screw-P	+ バインド P タイ	28pcs	01
260	VK528100	BW Head Tapping Screw-P	+ B W H P タイ	5pcs	
270	EP600530	Bind Head Tapping Screw-S	+ バインド S タイ	2pcs	
280	VQ474800	BW Head Tapping Screw-S	+ B W H S タイ	11pcs	
310	--	Filament Tape	粘着テープ	5pcs (VF29880)	
330	--	Vibration-proof Tape	防振フォーム	2pcs (VQ76100)	

• Lower Case Assembly (PSR-210)

Ref. No.	Part No.	Description	部品名	Remarks	ランク
L10	VQ291300	<LOWER CASE ASSEMBLY>	<下ケース A s s y>	PSR210	
L20	--	Lower Case	下ケース成形品	(VQ19470)	
L30	--	Vibration-proof Tape	防振テープ	(VQ27820)	
L40	--	Vibration-proof Tape	防振テープ	2pcs (VQ27830)	
L50	AA056250	Holder, Leg	脚取り付け金具	3pcs	01
L60	EP600280	Bind Head Tapping Screw-P	+ バインド P タイ	7pcs	01
L70	CB043750	Foot	ゴム足	6pcs	01
L80	--	Connector Assembly	電池線 A s s y	(VQ29270)	
L80a	VQ292800	Spring Terminal	接点パネ		
L80b	BB005570	Terminal	端子板		01
L80c	LB009020	Connector Housing	コネクタハウジング		01
L80d	LB101130	Connector Pin	圧着端子		01
L90	VA126100	Filament Tape	粘着テープ		03
LA0	--	Felt	フェルト	(VQ78860)	
LBO	--	Vibration-proof Tape	防振テープ	2pcs (VQ14860)	
LCO	--	Vibration-proof Tape	防振テープ	1pc. (VQ76080)	
LDO	--	Vibration-proof Tape	防振テープ	1pc. (VQ76090)	

* : New Parts (新規部品) NR

ランク : Japan Only

• Overall Assembly (PSR-310)

Ref. No.	Part No.	Description	部品名	Remarks	ランク
S10	--	<OVERALL ASSEMBLY>	<総組立>	PSR310	
S10	--	Upper Case Assembly	上ケース A s s y	J,X,B (VQ27720)	
S20	VQ277400	Lower Case Assembly	下ケース A s s y	U,D (VQ27730)	
S30	--	Label	規格・製番ラベル		
S40	VQ218800	Knob	ブッシュツマミ	POWER SW	
S50	VQ218900	Knob	V-ツマミ	MASTER VOLUME	
S60	VQ428500	Battery Cover Assembly	バッテリーカバー A s s y		
S70	EP600270	Bind Head Tapping Screw-P	+ バインド P タイ	10pcs	01
S80	VK228100	Bind Head Tapping Screw-P	+ バインド P タイ	1pc.	01
S90	EP600530	Bind Head Tapping Screw-S	+ バインド S タイ	6pcs	01
S100	--	Label	F C C 承認ラベル	U (VP60330)	
A	VQ192100	Music Rest	<付属品>		08
B	VF104000	AC Adapter	譜面立て	J	08
C	VQ277100	Japanese Guide Sheet	和文シート	J (PSR310M)	08
D	VL508100	Pedal Assembly	ペダル A s s y	U (PSR310M)	10

• Upper Case Assembly (PSR-310)

Ref. No.	Part No.	Description	部品名	Remarks	ランク
10	--	<UPPER CASE ASSEMBLY>	<上ケース A s s y>	PSR310	
10a	VQ291000	Upper Case Sub-assembly	上ケースサブ A s s y	(VQ27750)	
20	VQ005200	Panel Seal	パネルシール		
30	VQ112100	Keyboard Assembly	16 F 鍵盤 A s s y	J,X,B	
30	VQ112000	Circuit Board	Mシート	U,D	
40a	NX006330	Circuit Board	PN1 / 3 シート		
40b	NX006340	Circuit Board	PN2 / 3 シート		
40c	NX006350	Circuit Board	PN3 / 3 シート		
50	VQ778400	Circuit Board	AMシート	J,X,B	
50	VQ326300	Circuit Board	AMシート	U,D	
60	VQ217800	Knob	ツマミ A	MODE	
70	VQ217900	Knob	ツマミ B	OVERALL CNTRL	
80	VQ218000	Knob	ツマミ C	ACCOMP CNTRL	
90	VQ218100	Knob	ツマミ D	01 +/-	
100	VQ218200	Knob	ツマミ E	VOICE EFFECT	
110	VQ218300	Knob	ツマミ F	MELODY MEMORY	
120	VQ218400	Knob	ツマミ G	SONG BOOK	
130	VQ218500	Knob	ツマミ H	VOICE / STYLE	
140	VQ218600	Knob	ツマミ I	0~4.5~9 (2pcs)	
150	VQ218700	Knob	ツマミ J	SOUND EFFECT	
160	VQ277600	Knob	ツマミ D	AUTO HARMONY	
170	--	Insulation Sheet	絶縁テープ	(VQ69820)	
190	VQ277900	Shield Cover	シールドカバー		
200	VQ278000	Shield Cover	シールドカバー	U,D	
210	VQ113200	Circuit Board	PAD		
220	VQ219000	LED Cover	LEDカバー		
230	XE657A00	Speaker	スピーカ	2pcs	05
240	EP600280	Bind Head Tapping Screw-P	+ バインド P タイ	15pcs	01
250	EP620100	Bind Head Tapping Screw-P	+ バインド P タイ	32pcs	01
260	VK528100	BW Head Tapping Screw-P	+ B W H P タイ	5pcs	
270	EP600530	Bind Head Tapping Screw-S	+ バインド S タイ	2pcs	
280	VQ474800	BW Head Tapping Screw-S	+ B W H S タイ	11pcs	
310	--	Filament Tape	粘着テープ	5pcs (VF29880)	
330	--	Vibration-proof Tape	防振テープ	2pcs (VQ76100)	

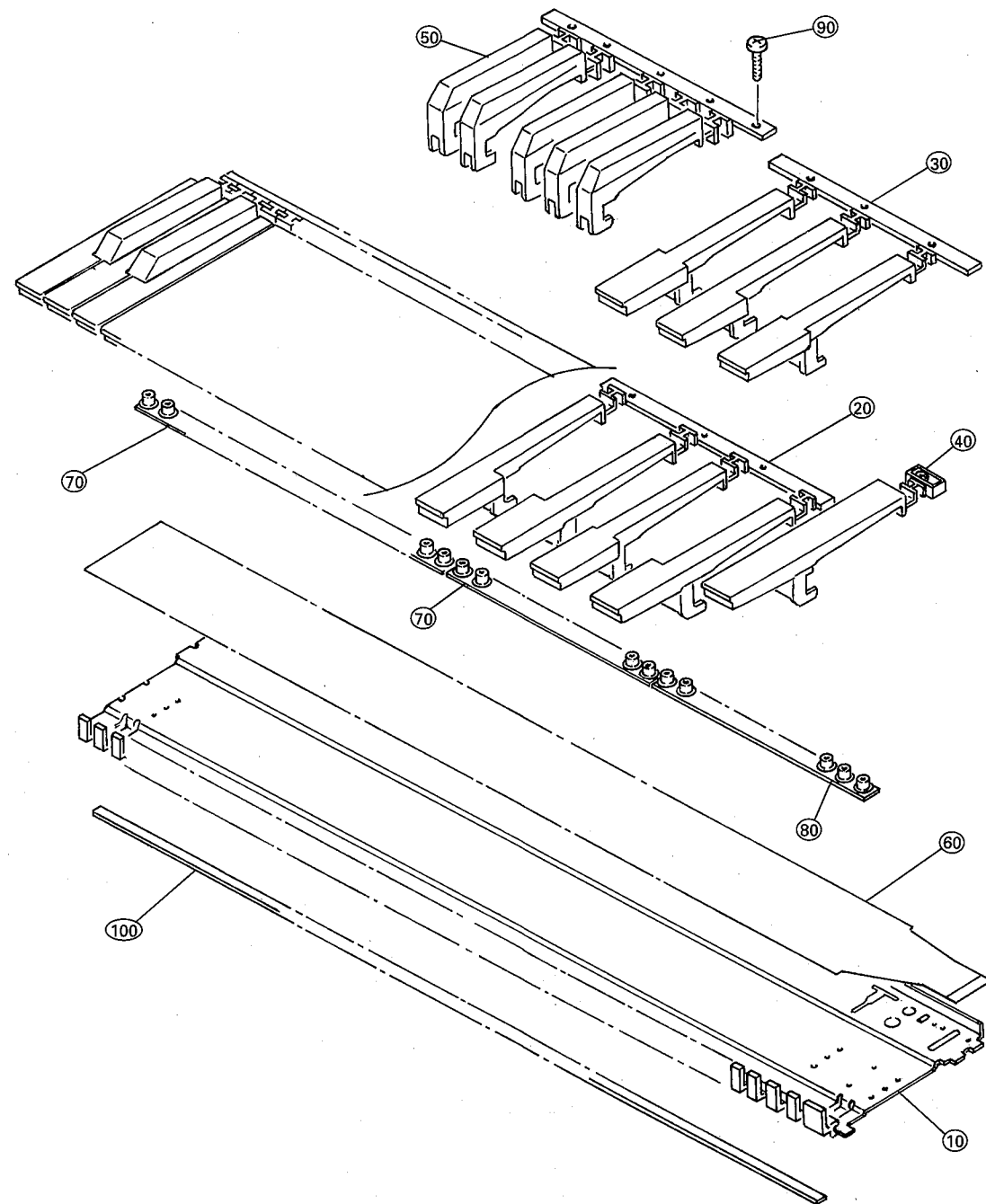
• Lower Case Assembly (PSR-310)

Ref. No.	Part No.	Description	部品名	Remarks	ランク
L10	VQ277400	<LOWER CASE ASSEMBLY>	<下ケース A s s y>	PSR310	
L20	--	Lower Case	下ケース成形品	(VQ19460)	
L30	--	Vibration-proof Tape	防振テープ	(VQ27820)	
L40	--	Vibration-proof Tape	防振テープ	2pcs (VQ27830)	
L50	AA056250	Holder, Leg	脚取り付け金具	3pcs	01
L60	EP600280	Bind Head Tapping Screw-P	+ バインド P タイ	7pcs	01
L70	CB043750	Foot	ゴム足	6pcs	01
L80	--	Connector Assembly	電池線 A s s y	(VQ29270)	
L80a	VQ292800	Spring Terminal	接点パネ		
L80b	BB005570	Terminal	端子板		01
L80c	LB009020	Connector Housing	コネクタハウジング		01
L80d	LB101130	Connector Pin	圧着端子		01
L90	VA126100	Filament Tape	粘着テープ		03
LA0	--	Felt	フェルト	(VQ78860)	
LBO	--	Vibration-proof Tape	防振テープ	2pcs (VQ14860)	
LCO	--	Vibration-proof Tape	防振テープ	1pc. (VQ76080)	
LDO	--	Vibration-proof Tape	防振テープ	2pcs (VQ76090)	

* : New Parts (新規部品) NR

ランク : Japan Only

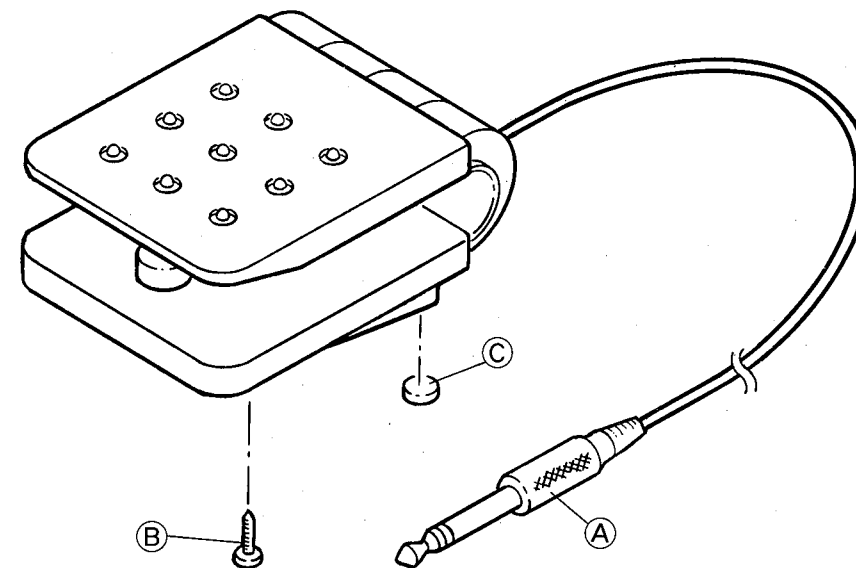
■ KEYBOARD ASSEMBLY



Ref. No.	Part No.	Description	部 品 名	Remarks	ランク
	VQ005200	<KEYBOARD ASSEMBLY>	< 16 F 鍵盤 A s s y >		
	--	MK Frame	M K フ レーム	(VQ00020)	
	20 VQ002100	White Key	白 鍵 C E G B	5pcs	
	30 VQ002200	White Key	白 鍵 C F A	5pcs	
	40 VQ002300	White Key	白 鍵 C	1pc.	
	50 VQ002400	Black Key	黒 鍵	5pcs	
	60 VQ003600	Circuit Board	M K シー ト 集 成		
	70 VQ002800	Rubber Contact	接 点 ゴ ム 2 M	4pcs	
	80 VQ002900	Rubber Contact	接 点 ゴ ム 2 M	1pc.	
	90 VF549100	Bind Head Tapping Screw-S	ナ イ ト ス タ イ ト	21pcs	
	100 VQ584400	Felt	フェルト (白)		

■ PEDAL ASSEMBLY

*The pedal assembly is included only in the PSR-310M package.

[illegible]

■ ELECTRICAL PARTS (PSR-210)

Ref. No.	Part No.	Description	部 品 名	Remarks	ランク
***	VQ778600	<ELECTRICAL PARTS> Circuit Board	<電 気 部 品> A M シー ト	PSR210 J, X, B	
	VQ326200	Circuit Board	A M シー ト	U, D	
	VQ594000	Circuit Board	M シー ト	J, X, B	
	VQ593900	Circuit Board	M シー ト	U, D	
***	NX006360	Circuit Board	P N 1 / 3 シー ト		
	NX006370	Circuit Board	P N 2 / 3 シー ト		
	NX006380	Circuit Board	P N 3 / 3 シー ト		
	VQ778600	Circuit Board	A M シー ト	J, X, B	
**	VQ326200	Circuit Board	A M シー ト	U, D	
	XM623A00	IC	I C	POWER AMP	01
	IH001420	Diode	ダイ オード	(VD55790)	
	--	Diode	ダイ オード		
***	VF195600	Diode	11ES4 TA1		
	UA655100	Mylar Cap.	0.1000 50V J	マイ ラー コン	01
	VD829500	Ceramic Cap.-F	0.10 25V Z	円 筒 セ ラ (F)	01
	VG278400	Ceramic Cap.-B	220P 50V K	円 筒 セ ラ (B)	01
***	VJ599000	Ceramic Cap.-F	0.047 16V Z	円 筒 セ ラ (F)	01
	UJ828100	Electrolytic Cap.	100.00 10.0V	ケ ミ コ ン	01
	UJ837470	Electrolytic Cap.	47.00 16.0V	ケ ミ コ ン	01
	UJ838100	Electrolytic Cap.	100.00 16.0V	ケ ミ コ ン	01
***	UJ838220	Electrolytic Cap.	220.00 16.0V	ケ ミ コ ン	01
	UJ866100	Electrolytic Cap.	1.00 50.0V	ケ ミ コ ン	01
	UJ749220	Electrolytic Cap.	2200 25.0V	ケ ミ コ ン	03
	UJ829100	Electrolytic Cap.	1000 10.0V	ケ ミ コ ン	01
***	HF453220	Carbon Resistor	2.2 1/4 J	カー ボン 抵 抗	01
	HF455100	Carbon Resistor	100.0 1/4 J	カー ボン 抵 抗	01
	HF456820	Carbon Resistor	8.2K 1/4 J	カー ボン 抵 抗	01
	HF457100	Carbon Resistor	10.0K 1/4 J	カー ボン 抵 抗	01
***	HF457150	Carbon Resistor	15.0K 1/4 J	カー ボン 抵 抗	01
	HF457470	Carbon Resistor	47.0K 1/4 J	カー ボン 抵 抗	01
	VL346200	Line Filter	UF1717V-200V1R0	ライ ン フィ ル ター	03
	VB835000	Coil	FL5R200QNT 20u	コ イ ル	01
***	LB101870	Phone Jack	YKB21-5006	ホ ー ン ジャ ッ ク	03
	VC687500	Phone Jack	YKB21-5014 BL	ホ ー ン ジャ ッ ク (黒)	01
	VC664500	DC IN Connector	HEC2305	電 源 コ ネ ク ター	01
	LB918020	Base Post Connector	XH-2P TE	ベ ー ス ポ ス ト コ ン ネ ク ター	01
***	--	Cable Holder	51048-2P TE	ベ ー ス プ ル ホ ル ダー	(VI87800)
	--	Cable Holder	51048-12P TE	ケ ー ブ ル ホ ル ダー	(VI87900)
	--	Wire Trap	52147-2P TE	ワイ ヤー ト ラ ッ プ	(VK02460)
	--	Wire Trap	52147-5P TE	ワイ ヤー ト ラ ッ プ	(VK02490)
***	--	Connector Assembly	CN2 4P	C N 2 束 線	(VQ11370)
	--	Connector Assembly	RSP 2P	R S P 束 線	(VQ32590)
	--	Connector Assembly	LSP 2P	L S P 束 線	(VQ32600)
	--	Connector Assembly	CN4 9P	C N 4 束 線	(VQ33220)
***	VQ594000	Circuit Board	M	M シー ト	J, X, B
	VQ593900	Circuit Board	M	M シー ト	U, D
	XC520A00	IC	UPC4570C	I C	OP AMP
	XM730A00	IC	UPC24M05HF	I C	REGULATOR +5V
***	XM618A00	IC	RE5VL45CA-TZ	I C	RESET
	XM717A00	IC	RE5VA45CA-TZ	I C	RESET
	XM058A00	IC	UPD78218	I C	CPU (MAIN)
	XM602C00	IC	HD63B05	I C	CPU (SUB)
***	XM928A00	IC	M27C512-12	I C	ROM512K (PROGRAM)
	XM930A00	IC	HN62318BPC50	I C	ROM 8M (WAVE)
	XJ427A00	IC	YMW258-F	I C	GEW8
	XM051A00	IC	PCM69AP-3	I C	DAC
***	XJ264A00	IC	AN8005	I C	REGULATOR +5V
	XL559A00	IC	AN8005	I C	REGULATOR +5V
	IR057300	IC	TC74HC573AP	I C	LATCH
	IR057310	IC	HD74HC573P	I C	LATCH
***	IR000000	IC	TC74HC00AP	I C	NAND
	IR000010	IC	HD74HC00P	I C	NAND
	VH480900	Transistor Array	AN90B22	ト ラ ン ジ ス タ ア レ イ	02
	VJ337600	Digital Transistor	DTB123ES TP	デ ジ タ ル ト ラ ン ジ ス タ	01
***	VK165500	Digital Transistor	DTC123JS TP	デ ジ タ ル ト ラ ン ジ ス タ	01
	VD631600	Diode	1SS133, 176, HSS104	ダイ オード	01
***	VG437800	Zener Diode	MTZ J 5.6C	ツ ェ ナー ダイ オード	01
	UA654470	Mylar Cap.	5.6V		
	UA655180	Mylar Cap.	0.0470 50V J	マイ ラー コン	01
	VG276600	Ceramic Cap.-SL	0.1800 50V J	マイ ラー コン	01
***	VG278400	Ceramic Cap.-B	22P 50V J	円 筒 セ ラ (S L)	01
	VJ599000	Ceramic Cap.-F	220P 50V K	円 筒 セ ラ (B)	01
	UJ528220	Electrolytic Cap.	0.047 16V Z	円 筒 セ ラ (F)	01
	UJ818470	Electrolytic Cap.	220.00 10.0V	ケ ミ コ ン	01
***			470.00 6.3V	ケ ミ コ ン	01

* New Part (NR)

ランク : Japan only

PSR-210/PSR-310

Ref. No.	Part No.	Description	部 品 名	Remarks	ランク
	UJ828100	Electrolytic Cap.	100.00 10.0V	ケミコン	01
	UJ837100	Electrolytic Cap.	10.00 16.0V	ケミコン	01
	UJ847470	Electrolytic Cap.	47.00 25.0V	ケミコン	01
	UJ866100	Electrolytic Cap.	1.00 50.0V	ケミコン	01
	UJ866470	Electrolytic Cap.	4.70 50.0V	ケミコン	01
	VP104500	Electrolytic Cap.	470 16.0V	ケミコン	01
	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z	半導体セラコン	01
	VJ944300	Ceramic Cap. Array	220P 50V N	セラコンアレイ	01
	VL409500	Coil	BL03RN2-R62T4	コイル	01
	--	Carbon Resistor	100.0 1/4 J	カーボン抵抗	(HC85510)
	HF454220	Carbon Resistor	22.0 1/4 J	カーボン抵抗	01
	HF454680	Carbon Resistor	68.0 1/4 J	カーボン抵抗	01
	HF455100	Carbon Resistor	100.0 1/4 J	カーボン抵抗	01
	HF455220	Carbon Resistor	220.0 1/4 J	カーボン抵抗	01
	HF455270	Carbon Resistor	270.0 1/4 J	カーボン抵抗	01
	HF455330	Carbon Resistor	330.0 1/4 J	カーボン抵抗	01
	HF455560	Carbon Resistor	560.0 1/4 J	カーボン抵抗	01
	HF456100	Carbon Resistor	1.0K 1/4 J	カーボン抵抗	01
	HF456150	Carbon Resistor	1.5K 1/4 J	カーボン抵抗	01
	HF456220	Carbon Resistor	2.2K 1/4 J	カーボン抵抗	01
	HF456270	Carbon Resistor	2.7K 1/4 J	カーボン抵抗	01
	HF456470	Carbon Resistor	4.7K 1/4 J	カーボン抵抗	01
	HF456680	Carbon Resistor	6.8K 1/4 J	カーボン抵抗	01
	HF457100	Carbon Resistor	10.0K 1/4 J	カーボン抵抗	01
	HF457220	Carbon Resistor	22.0K 1/4 J	カーボン抵抗	01
	HF457470	Carbon Resistor	47.0K 1/4 J	カーボン抵抗	01
	HF458100	Carbon Resistor	100.0K 1/4 J	カーボン抵抗	01
	VP238600	Resistor Array	RGLE8X473J	抵抗アレイ	01
	VF773900	Resistor Array	RGLE4X473J	抵抗アレイ	01
	VL674500	Resistor Array	RGLE12X223J	抵抗アレイ	01
	VJ338000	Ceramic Resonator	9.40MHz	セラミック共振子	02
	VJ539700	Ceramic Resonator	12.0MHz	セラミック共振子	02
	VH902200	Ceramic Resonator	8.00MHz	セラミック共振子	02
	VN002100	Ceramic Resonator	8.00MHz	セラミック共振子	02
	VJ532800	IC Socket	DICF-32CS-E	ICソケット	02
	--	IC Socket	DICF-28CS-E	ICソケット	(VL18470)
	VB858300	Base Post Connector	PH-4P SE	コネクタベースポスト	01
	--	Wire Trap	52151-9P SE	ワイヤートラップ	(VK02680)
	--	Wire Trap	52151-10P SE	ワイヤートラップ	(VK02690)
	--	PFC Connector	52044-23P SE	FFCコネクタ	(VQ04530)
	EP030530	Bind Head Tapping Screw-2	3.0X8 ZMC2Y	ナット	01
	NX006360	Circuit Board	PN1/3	PN1 / 3 シート	
	NX006370	Circuit Board	PN2/3	PN2 / 3 シート	
	NX006380	Circuit Board	PN3/3	PN3 / 3 シート	
	VB941200	Diode	1SS133, 1SS176	ダイオード	01
	VQ320100	LED	SLZ190B14T1 RE	LED	
	VL086000	LED Display	LB-603VLF	LEDディスプレイ	MULTI DISPLAY
	--	LED Display	SL-9351S	LEDディスプレイ	(VQ32390)
	HF455220	Carbon Resistor	220.0 1/4 J	カーボン抵抗	01
	VQ320200	Variable Resistor	A10Kx2	二連ロータリーVR	MASTER VOLUME
	VQ320400	Tact Switch	SKHBE091A	タクトスイッチ	
	VQ751400	Push Switch	SPUL12430A	プッシュスイッチ	POWER SW
	--	Cable Holder	51048-2P TE	ケーブルホルダー	(VI87800)
	--	Cable Holder	51048-5P TE	ケーブルホルダー	(VI87830)
	--	Cable Holder	51048-6P TE	ケーブルホルダー	(VI87840)
	--	Cable Holder	51048-10P TE	ケーブルホルダー	(VI87880)
	--	Connector Assembly	PAD 6P	PAD 束線	(VQ11330)
	--	Connector Assembly	PN1 10P	PN1 束線	(VQ11340)
	--	Connector Assembly	VR 5P	VR 束線	(VQ11380)
	--	Connector Assembly	PSW 2P	PSW 束線	(VQ32580)
230	XE657A00	Speaker	10cm 4ohm 3W	スピーカ	2pcs 05

* New Part (NR)

ランク : Japan only

ELECTRICAL PARTS (PSR-310)

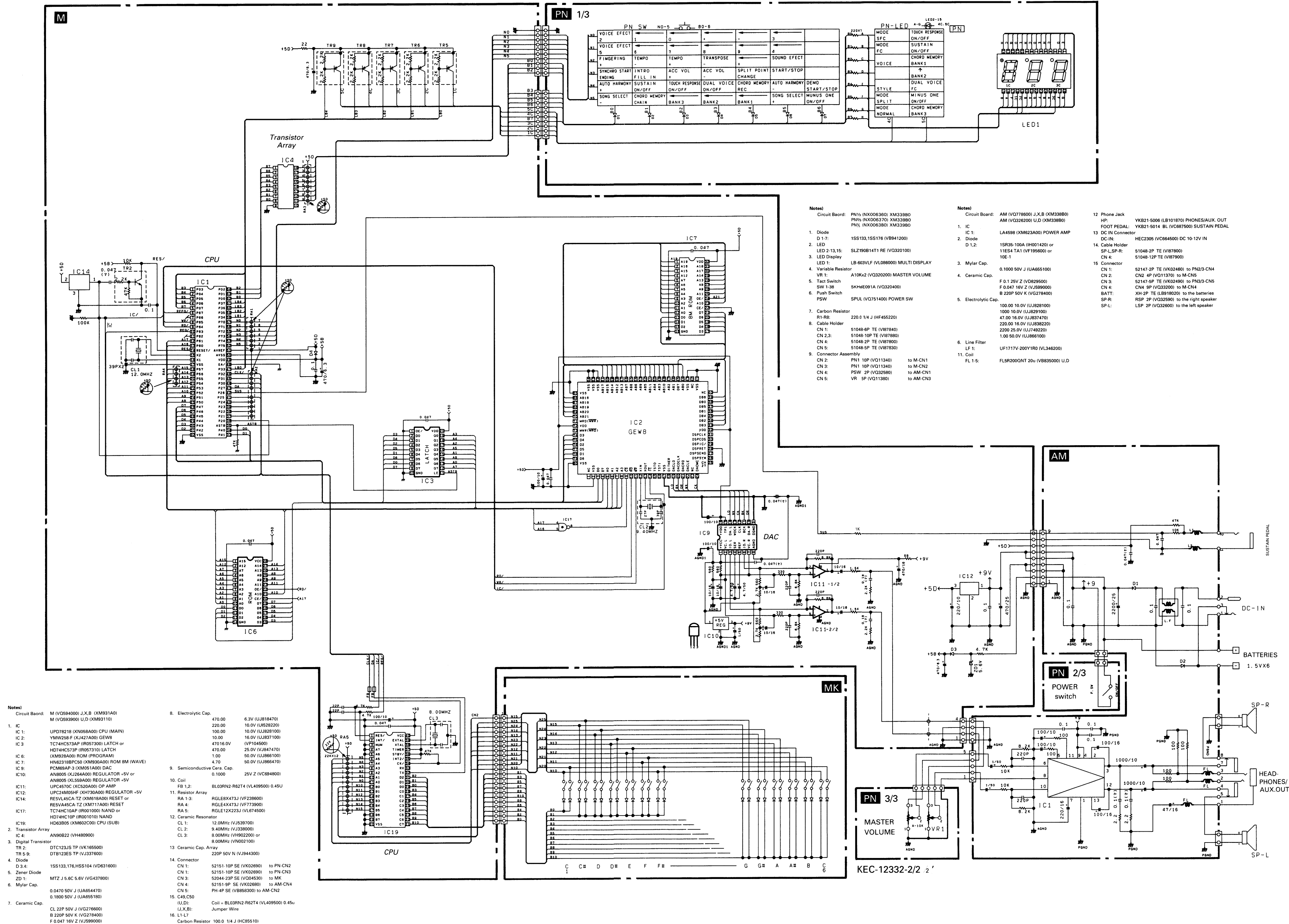
Ref. No.	Part No.	Description	部 品 名	Remarks	ランク
* * * * * * * * * *	VQ778400	<ELECTRICAL PARTS>	<電気部品>	PSR310	
	VQ326300	Circuit Board	AMシート	J,X,B	
	VQ112100	Circuit Board	AMシート	U,D	
	VQ112000	Circuit Board	Mシート	J,X,B	
	VQ113200	Circuit Board	Mシート	U,D	
	NX006330	Circuit Board	PADシート		
	NX006340	Circuit Board	PN1/3シート		
	NX006350	Circuit Board	PN2/3シート		
	NX006350	Circuit Board	PN3/3シート		
	NX006350	Circuit Board	PN3/3シート		
* * * * * * * * * *	VQ778400	Circuit Board	AMシート	J,X,B	
	VQ326300	Circuit Board	AMシート	U,D	
	XM623A00	IC	LA4598	POWER AMP	
	IH001420	Diode	1SR35-100A	(VD55790)	01
	IH001420	Diode	10E-1		
	VF195600	Diode	11ES4 TA1	ダイオード	
	UA855100	Mylar Cap.	0.1 50V Z	マイラコン	01
	VD829500	Ceramic Cap.-X	0.1 25V Z	円筒セラ (F)	01
	VF467300	Ceramic Cap.-Y	0.01 16V M	円筒セラ (Y)	01
	VG279200	Ceramic Cap.-X	1500P 16V N	円筒セラ (X)	01
* * * * * * * * * *	VJ599000	Ceramic Cap.-F	0.047 16V Z	円筒セラ (F)	01
	UJ828100	Electrolytic Cap.	100.00 10.0V	ケミコン	01
	UJ837470	Electrolytic Cap.	47.00 16.0V	ケミコン	01
	UJ838100	Electrolytic Cap.	100.00 16.0V	ケミコン	01
	UJ838220	Electrolytic Cap.	220.00 16.0V	ケミコン	01
	UJ866100	Electrolytic Cap.	1.00 50.0V	ケミコン	01
	UJ749220	Electrolytic Cap.	2200 25.0V	ケミコン	03
	UJ829100	Electrolytic Cap.	1000 10.0V	ケミコン	01
	HF453220	Carbon Resistor	2.2 1/4 J	カーボン抵抗	01
	HF455100	Carbon Resistor	100.0 1/4 J	カーボン抵抗	01
* * * * * * * * * *	HF455220	Carbon Resistor	220.0 1/4 J	カーボン抵抗	01
	HF457100	Carbon Resistor	10.0K 1/4 J	カーボン抵抗	01
	HF457150	Carbon Resistor	15.0K 1/4 J	カーボン抵抗	01
	HF457470	Carbon Resistor	47.0K 1/4 J	カーボン抵抗	01
	VL346200	Line Filter	HF1717V-200Y1R0	ラインフィルター	03
	VB835000	Coil	FL5R200QNT 20u	コイル	01
	LB101870	Phone Jack	YKB21-5006	ホーンジャック	03
	VC687500	Phone Jack	YKB21-5014 BL	ホーンジャック (黒)	01
	VC684500	DC IN Connector	HEC2305	電源コネクタ	01
	VJ107200	DIN Connector	5P YKF51-5050	DINコネクタ	01
* * * * * * * * * *	LB918020	Base Post Connector	XH-2P TE	ベースツキポスト	01
	--	Cable Holder	51048-2P TE	ケーブルホルダー	(VI87800)
	--	Cable Holder	51048-12P TE	ケーブルホルダー	(VI87900)
	--	Wire Trap	52147-2P TE	ワイヤートラップ	(VK02460)
	--	Wire Trap	52147-5P TE	ワイヤートラップ	(VK02490)
	--	Connector Assembly	CN4 12P	CN4 束線	(VQ11360)
	--	Connector Assembly	CN2 4P	CN2 束線	(VQ11370)
	--	Connector Assembly	RSP 2P	RSP 束線	(VQ32590)
	--	Connector Assembly	LSP 2P	LSP 束線	(VQ32600)
	--	Connector Assembly	LSP 2P	LSP 束線	(VQ32600)
* * * * * * * * * *	VQ112100	Circuit Board	Mシート	J,X,B	
	VQ112000	Circuit Board	Mシート	U,D	
	XM619A00	IC	UPD78213CW	CPU (MAIN)	
	XJ427A00	IC	YMW258-F	GEW8	09
	IR057300	IC	TC74HC573AP	LATCH	04
	IR057310	IC	HD74HC573P	LATCH	04
	XL977A00	IC	TC51832APL-85	PSRAM 256K	
	XM598C00	IC	TMS27C010A	ROM 1M (PROGRAM)	
	XM930A00	IC	HN62318BPC50	ROM 8M (WAVE1)	
	XM944A00	IC	MSM534001B	ROM 4M (WAVE2)	
* * * * * * * * * *	XM051A00	IC	PCM69AP-3	DAC	
	XJ264A00	IC	AN8005	REGULATOR +5V	02
	XL559A00	IC	AN8005-(TA)	REGULATOR +5V	
	XC520A00	IC	UPC4570C	OP AMP	01
	XH730A00	IC	UPC24M05HF	REGULATOR +5V	03
	XM939A00	IC	S-81350HG	REGULATOR +5V	
	XM618A00	IC	RE5V145CA-TZ	RESET	
	XM717A00	IC	RE5V445CA-TZ	RESET	
	IR001000	IC	TC74HC10AP	NAND	03
	IR001010	IC	HD74HC10P	NAND	03
* * * * * * * * * *	IR000000	IC	TC74HC00AP	NAND	03
	IR000010	IC	HD74HC00P	NAND	01
	XK273A00	IC	HD74AC00P	NAND	02
	XM602C00	IC	HD63B05	CPU (SUB)	
	VH480900	Transistor Array	AN90B22	トランジスタアレイ	02
	VJ337600	Digital Transistor	DTB123ES TP	デジタルトランジスタ	01
	VK165500	Digital Transistor	DTC123JS TP	デジタルトランジスタ	01
	IC260320	Transistor	2SC2603 E,F	トランジスタ	01
	VD631600	Diode	1SS133,176	ダイオード	01
	VD631600	Diode	1SS133,176	ダイオード	01

* New Part (NR)

ランク : Japan only

Ref. No.	Part No.	Description	部 品 名	Remarks	ランク
	VG437800	Zener Diode	MTZ J 5.6C 5.6V	ツェナーダイオード	01
	VG181900	Photo Coupler	PC-900V	フォトカブラ	03
	UA655180	Mylar Cap.	0.1800 50V J	マイラーコン	01
	VG276600	Ceramic Cap.-SL	22P 50V J	円筒セラ (S L)	01
	VG278400	Ceramic Cap.-B	220P 50V K	円筒セラ (B)	01
	VJ599000	Ceramic Cap.-F	0.047 16V Z	円筒セラ (F)	01
	UI528220	Electrolytic Cap.	220.00 10.0V	ケミコン	01
	UJ818470	Electrolytic Cap.	470.00 6.3V	ケミコン	01
	UJ828100	Electrolytic Cap.	100.00 10.0V	ケミコン	01
	UJ837100	Electrolytic Cap.	10.00 16.0V	ケミコン	01
	UJ847470	Electrolytic Cap.	47.00 25.0V	ケミコン	01
	UJ866100	Electrolytic Cap.	1.00 50.0V	ケミコン	01
	UJ866470	Electrolytic Cap.	4.70 50.0V	ケミコン	01
	VP104500	Electrolytic Cap.	470 16.0V	ケミコン	01
	VC694800	Semiconductive Cera. Cap.	0.1000 25V Z	半導体セラコン	01
	--	Carbon Resistor	100.0 1/4 J	カーボン抵抗	(HC85510) 01
	HF454220	Carbon Resistor	22.0 1/4 J	カーボン抵抗	01
	HF454680	Carbon Resistor	68.0 1/4 J	カーボン抵抗	01
	HF455100	Carbon Resistor	100.0 1/4 J	カーボン抵抗	01
	HF455220	Carbon Resistor	220.0 1/4 J	カーボン抵抗	01
	HF455270	Carbon Resistor	270.0 1/4 J	カーボン抵抗	01
	HF455330	Carbon Resistor	330.0 1/4 J	カーボン抵抗	01
	HF455560	Carbon Resistor	560.0 1/4 J	カーボン抵抗	01
	HF456100	Carbon Resistor	1.0K 1/4 J	カーボン抵抗	01
	HF456150	Carbon Resistor	1.5K 1/4 J	カーボン抵抗	01
	HF456220	Carbon Resistor	2.2K 1/4 J	カーボン抵抗	01
	HF456270	Carbon Resistor	2.7K 1/4 J	カーボン抵抗	01
	HF456470	Carbon Resistor	4.7K 1/4 J	カーボン抵抗	01
	HF456680	Carbon Resistor	6.8K 1/4 J	カーボン抵抗	01
	HF457220	Carbon Resistor	22.0K 1/4 J	カーボン抵抗	01
	HF457470	Carbon Resistor	47.0K 1/4 J	カーボン抵抗	01
	HF458100	Carbon Resistor	100.0K 1/4 J	カーボン抵抗	01
	VF773900	Resistor Array	RGLR4X473J	抵抗アレイ	01
	VL674500	Resistor Array	RGLR12X223J	抵抗アレイ	01
	VF238600	Resistor Array	RGLR8X473J	抵抗アレイ	01
	VL409500	Coil	BL03RN2-R62T4	コイル	0.45u 01
	VJ539700	Ceramic Resonator	12.0MHz	セラミック共振子	02
	VJ338000	Ceramic Resonator	9.40MHz	セラミック共振子	02
	VH902200	Ceramic Resonator	8.00MHz	セラミック共振子	02
	VN002100	Ceramic Resonator	8.00MHz	セラミック共振子	02
	VQ305500	Ceramic Resonator	8.00MHz	セラミック共振子	02
	--	Ceramic Resonator	8.00MHz	セラミック共振子	(VQ46930) 01
	--	FFC Connector	52044-23P SE	F F C コネクタ	(VQ04530) 01
	--	Wire Trap	52151-12P SE	ワイヤートラップ	(VK02710) 01
	VB858300	Base Post Connector	PH-4P SE	コネクタベースポスト	01
	--	Wire Trap	52151-10P SE	ワイヤートラップ	(VK02690) 02
	VJ532800	IC Socket	DICF-32CS-E	I C ソケット	01
	EP030530	Bind Head Tapping Screw-2	3.0X8 ZMC2Y	+ バインド T P 2 種溝	01
	VQ113200	Circuit Board	PAD	P A D シート	
	VQ320400	Tact Switch	SKHBE091A	タクトスイッチ	
	NX006330	Circuit Board	PN1/3	P N 1 / 3 シート	
	NX006340	Circuit Board	PN2/3	P N 2 / 3 シート	
	NX006350	Circuit Board	PN3/3	P N 3 / 3 シート	
	VB941200	Diode	1SS133, 1SS176	ダイオード	01
	VQ320100	LED	SLZ190B14T1 RE	L E D	
	VL086000	LED Display	LB-603VLF	L E D ディスプレイ	MULTI DISPLAY 05
	--	LED Display	SL-9351S	L E D ディスプレイ	(VQ32390) 01
	HF455220	Carbon Resistor	220.0 1/4 J	カーボン抵抗	
	VQ320200	Variable Resistor	A10Kx2	二連ロータリー V R	MASTER VOLUME 01
	VQ320400	Tact Switch	SKHBE091A	タクトスイッチ	
	VQ751400	Push Switch	SPUL12430A	プッシュスイッチ	POWER SW
	--	Cable Holder	51048-2P TE	ケーブルホルダー	(VI87800) 01
	--	Cable Holder	51048-5P TE	ケーブルホルダー	(VI87830) 01
	--	Cable Holder	51048-6P TE	ケーブルホルダー	(VI87840) 01
	--	Cable Holder	51048-10P TE	ケーブルホルダー	(VI87880) 01
	--	Connector Assembly	PAD 6P	P A D 束線	(VQ11330) 01
	--	Connector Assembly	PN1 10P	P N 1 束線	(VQ11340) 01
	--	Connector Assembly	VR 5P	V R 束線	(VQ11380) 01
	--	Connector Assembly	PSW 2P	P S W 束線	(VQ32580) 01
	XE657A00	Speaker	10cm 4ohm 3W	スピーカ	2pcs 05

OVERALL CIRCUIT DIAGRAM (PSR-210)



■ OVERALL CIRCUIT DIAGRAM (PSR-310)

